



[HOME](#) / [ABOUT](#) / [SERVICES](#) / [CONTACT](#)

[BCIS Home](#) | [Log In](#) | [User Registration](#) | [Hot Topics](#) | [Submit Surcharge](#) | [Stats & Facts](#) | [Publications](#) | [Contact Us](#) | [BCIS Site Map](#) | [Links](#) | [Search](#)



Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**



FL #

FL1435-R26

Application Type

Revision

Code Version

2020

Application Status

Approved

FL1435.1
SH5400

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
jrosowski@pgtindustries.com

Technical Representative

Address/Phone/Email

Lynn Miller, P.E.
1070 Technology Dr
N Venice, FL 34275
(941) 486-0100 Ext 21142
lmiller@pgtindustries.com

Quality Assurance Representative

Address/Phone/Email

Category

Subcategory

Windows
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

12/31/2023

Validated By

Steven M. Urlich, PE

☒ Validation Checklist - Hardcopy Received

Certificate of Independence

[FL1435_R26_COI_Cert of Independence.pdf](#)

Referenced Standard and Year (of Standard)

Standard

Year

AAMA/WDMA/CSA 101/IS2/A440

2011

ASTM E1886

2013

ASTM E1996

2012

ASTM E283

2004

ASTM E330

2002

Equivalence of Product Standards
Certified By

Florida Licensed Professional Engineer or Architect

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

08/10/2022

Date Validated

08/14/2022

Date Pending FBC Approval

08/23/2022

Date Approved

10/11/2022

Summary of Products

FL #	Model, Number or Name	Description
1435.1	SH-5400	EnergyVue Vinyl Single Hung Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL1435_R26_II_SH5400FPA-NI.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1435_R26_AE_Eng_Eval - SH5400.pdf Created by Independent Third Party: No
1435.2	SH-5500	WinGuard Vinyl Single Hung Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL1435_R26_II_SH5500FPA-LM.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1435_R26_AE_Eng_Eval - SH5500.pdf Created by Independent Third Party: No

[Back](#)

[Next](#)

Contact Us :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida.](#) :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. *Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

Product Approval Accepts:



SERIES SH5400V NON-IMPACT RESISTANT, VINYL SINGLE HUNG WINDOW

- THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE CURRENT FLORIDA BUILDING CODE.
- SHUTTERS ARE REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS.
- 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.
- 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.
- 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.
- 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.

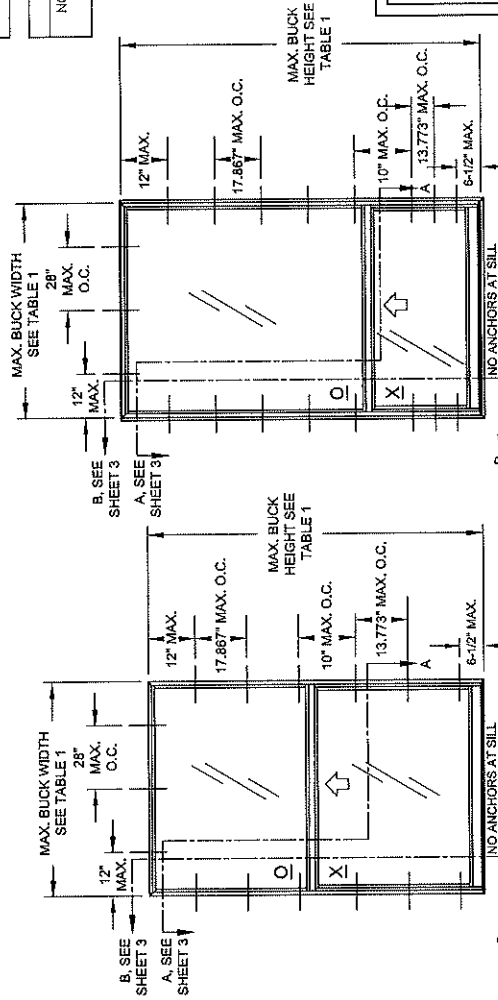
TABLE 1:

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

MIN. SASH HEIGHT = WINDOW BUCK HEIGHT - 50.136 (APPLIES TO ANY HEIGHT 91.78" OR LESS).

FLORIDA PRODUCT APPROVAL #1435

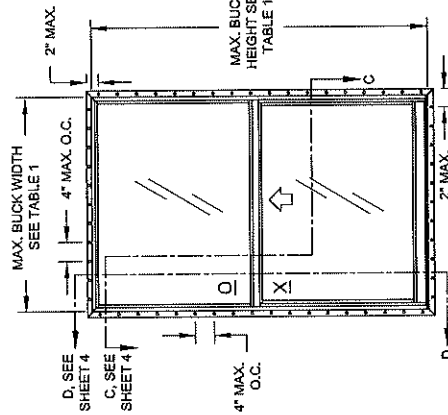
DESIGN PRESSURE RATING SEE TABLE 1
IMPACT RATING NOT RATED FOR IMPACT RESISTANCE



ELEVATION FOR TYP. EQUAL LEG FRAME,
EQUAL-LITE CONFIGURATION

ELEVATION FOR TYP. FLANGE FRAME,
PROVIEW/ORIEL CONFIGURATION
(COTTAGE SIMILAR)

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.



ELEVATION FOR TYP. FIN OR J-CHANNEL FRAME,
EQUAL-LITE CONFIGURATION
(SIMILAR ANCHOR DIMENSIONS FOR OTHER CONFIGURATIONS)

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600

REGISTRATION #29296
COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE
TO MAKE COPIES FOR PERMITTING.

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

1 OF 4

SH5400FPA-NI

JENS ROSOWSKI

DATE: 06/12/11

ELEVATION & GENERAL NOTES

ANTHONY LYNN MILLER
No. 58705
08/08/22
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

UPDATED CERT. METHOD	06/01/22	C
----------------------	----------	---

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 Stud, 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 Stud, 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. 3,000 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
3/16" Ultracon+ Max. DP of 50.0 psf	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 2.85 ksi)	1"	1-3/4"
1/4" Ultracon	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 3 ksi)	1"	1-1/4"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	Concrete (min. 3 ksi)	1-3/16"	1-3/4"
1/4" Ultracon+	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"
	Concrete (min. 3,275 ksi)	1-1/2"	1-3/8"
1/4" Aggre-Gator (18-8 S.S.)	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 3,275 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2"	1-1/4"
	Concrete (min. 3,275 ksi)	1"	1-3/8"

TABLE 3: ANCHORS INSTALLED THROUGH INTEGRAL FIN

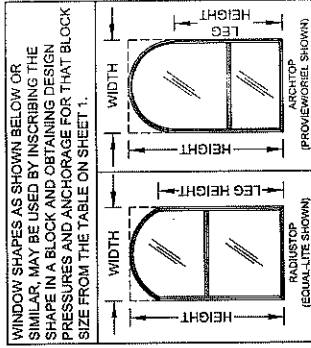
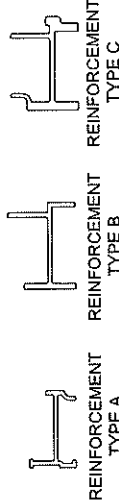
Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Common Nail Max. DP of 50.0	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	3/4"	1-3/8"
#10 SMS (steel, 18-8 S.S. or 410 S.S.)	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"
	Steel, A36	3/8"	0.050"

ANCHOR NOTES FOR TABLES 2 & 3:

- "UNGRADED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.
- PANHEAD, FLATHEAD OR HEXHEAD ARE ACCEPTABLE.
- ANCHOR LENGTH TO BE SO THAT A MIN. OF 3 THREADS EXTEND BEYOND THE METAL SUBSTRATE.

TABLE 4: REINFORCEMENT TYPES

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



Prepared by A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1800

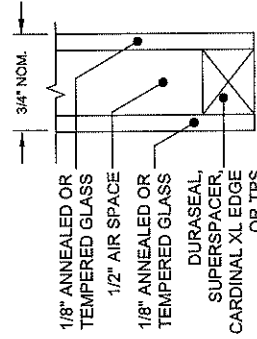
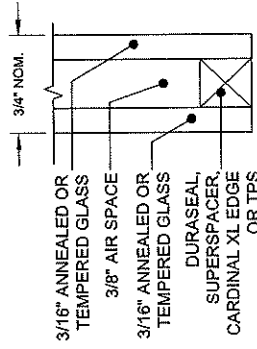
REGISTRATION #29298
COPYRIGHT © 2022 P.O.T. INC., LIMITED LICENSE
TO MAKE COPIES FOR PERMITTING.

ANCHOR & GLAZING DETAILS
VINYL SINGLE HUNG WINDOW (N)

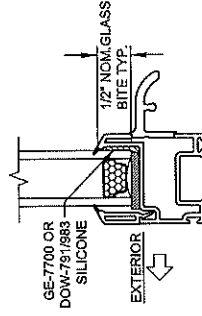
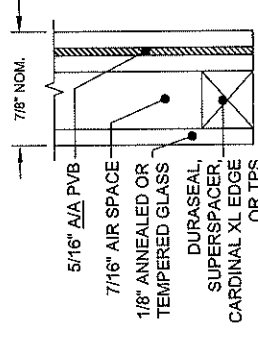
By: JENS ROSOWSKI
Date: 06/12/11

Sheet: 2 OF 4
DWG No.: SH5400VPA-NI

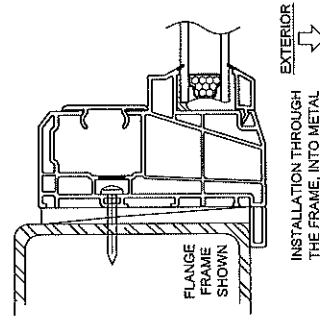
ANTHONY LYNN MILLER
No. 58705
08/08/22
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER P.E.
P.E.# 58705



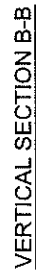
GLASS TYPES



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

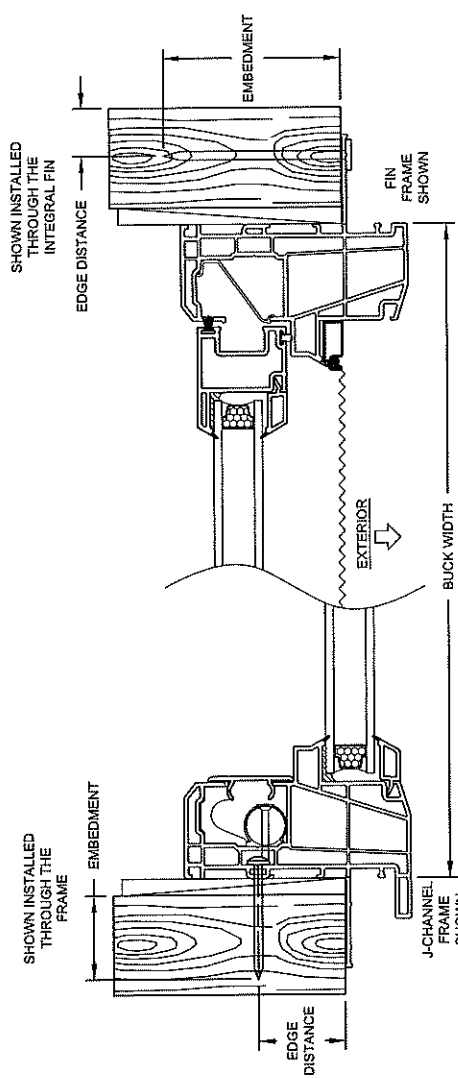


- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4".
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME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

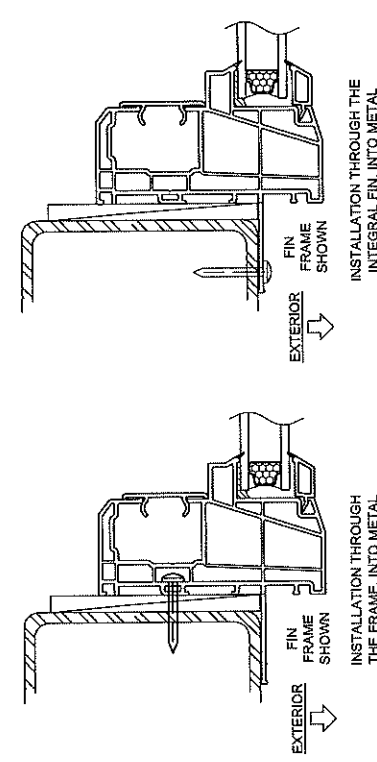


SH5400V		Sheet	4 OF 4
FIN INSTALLATION		Drawn By	JENS ROSOWSKI
VINYL SINGLE HUNG WINDOW (NI)		Date	06/12/11
1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600 PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600 REGISTRATION #29296 COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.			

ANTHONY LYNN MILLER
 LICENSE
 No. 58705
 08/08/22
 STATE OF
 FLORIDA
 PROFESSIONAL ENGINEER
 A. LYNN MILLER P.E.
 P.E.#58705

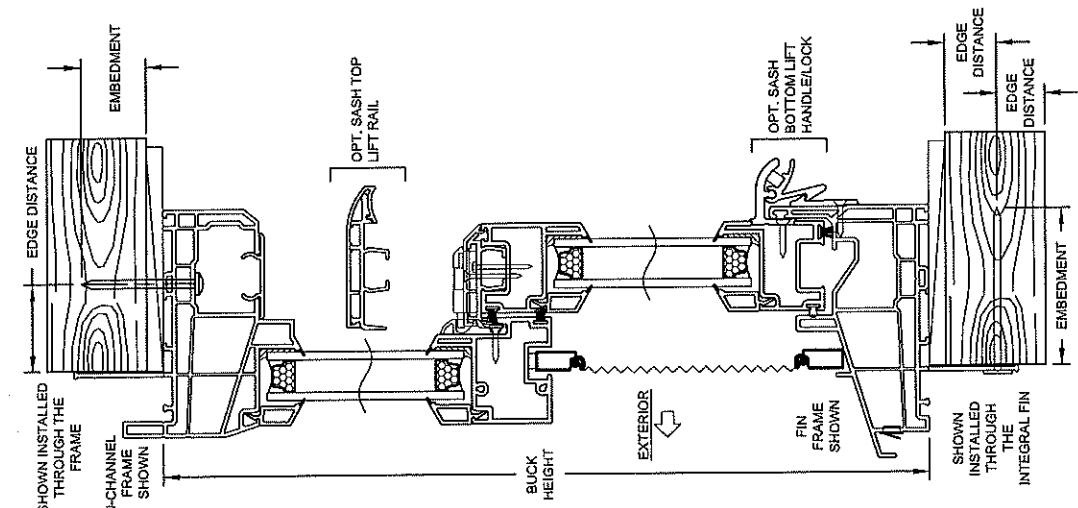


HORIZONTAL SECTION C-C



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.



VERTICAL SECTION D-D



Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**



FL #	FL331-R19										
Application Type	Revision										
Code Version	2020										
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 jrosowski@pgtindustries.com										
Technical Representative	Lynn Miller, P.E.										
Address/Phone/Email	1070 Technology Dr N Venice, FL 34275 (941) 486-0100 Ext 21142 lmiller@pgtindustries.com										
Quality Assurance Representative											
Address/Phone/Email											
Category	Exterior Doors										
Subcategory	Swinging Exterior Door Assemblies										
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	12/31/2023										
Validated By	Steven M. Urlich, PE  Validation Checklist - Hardcopy Received										
Certificate of Independence	FL331_R19_COI_Cert of Independence.pdf										
Referenced Standard and Year (of Standard)	<table border="0"> <thead> <tr> <th><u>Standard</u></th> <th><u>Year</u></th> </tr> </thead> <tbody> <tr> <td>AAMA 450</td> <td>2010</td> </tr> <tr> <td>AAMA/WDMA/CSA 101/I.S.2/A440</td> <td>2008</td> </tr> <tr> <td>ASTM E-1886</td> <td>2013</td> </tr> <tr> <td>ASTM E-1996</td> <td>2012</td> </tr> </tbody> </table>	<u>Standard</u>	<u>Year</u>	AAMA 450	2010	AAMA/WDMA/CSA 101/I.S.2/A440	2008	ASTM E-1886	2013	ASTM E-1996	2012
<u>Standard</u>	<u>Year</u>										
AAMA 450	2010										
AAMA/WDMA/CSA 101/I.S.2/A440	2008										
ASTM E-1886	2013										
ASTM E-1996	2012										
Equivalence of Product Standards Certified By	Florida Licensed Professional Engineer or Architect FL331_R19_Equiv_ASTM E1886-04-05 to E1886-13a and E1996-05-06-09 to E1996-17 Equivalency Letter 2020-09-09.pdf										

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

08/10/2022

Date Validated

08/14/2022

Date Pending FBC Approval

08/23/2022

Date Approved

10/11/2022

Date Revised

10/19/2023

Summary of Products

FL #	Model, Number or Name	Description
331.1	CD-290	Aluminum Hinged Cabana Door
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL331_R19_II_CD290FPA-NI.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL331_R19_AE_Eng_Eval - CD290.pdf Created by Independent Third Party: No
331.2	FD-5455	Vinyl French Door & Sidelite/Transom
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL331_R19_II_FD5455FPA-NI.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL331_R19_AE_Eng_Eval - FD5455.pdf Created by Independent Third Party: No
331.3	FD-5555	Vinyl French Door & Sidelite/Transom
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL331_R19_II_FD5555FPA-LM.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL331_R19_AE_Eng_Eval - FD5555.pdf Created by Independent Third Party: No

[Back](#)

[Next](#)

Contact Us :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

The State of Florida is an AA/EEO employer. Copyright 2007-2013 State of Florida. :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. *Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

Product Approval Accepts:



SERIES 5455, NON-IMPACT-RESISTANT, VINYL REINFORCED, OUTSWING
FRENCH DOOR & SIDE/LUTE/TRANSOM (SL/TR)

- 1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE.
- 2) SHUTTERS ARE REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS.
- 3) MATERIALS USED FOR ANCHOR EVALUATIONS WERE SOUTHERN PINE, ASTM C90 CONCRETE MASONRY UNITS AND CONCRETE WITH MIN. KSI PER ANCHOR TYPE.
- 4) MASONRY ANCHORS MAY BE USED INTO WOOD AS PER TABLE 1. THIS SHEET, 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.
- 5) IF SILL IS TIGHT TO SUBSTRATE, GROUT IS NOT REQUIRED. IF USED, NON-SHRINK, NON-METALLIC GROUT, 3400 PSI MIN. (DONE BY OTHERS) (MAX. 1/4" SHIM SPACE FOR GROUT) MUST FULLY SUPPORT THE ENTIRE LENGTH OF THE SILL THAT IS NOT TIGHT TO THE SUBSTRATE, AND TRANSFER SHEAR LOAD TO SUBSTRATE. IF SUBSTRATE IS WOOD, 30# FELT PAPER OR MASTIC IS REQUIRED BETWEEN THE GROUT AND WOOD SUBSTRATE, OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION, COMPLYING WITH THE FBC.
- 6) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT LENGTH TO ACHIEVE THE EMBEDMENT SHOWN ON TABLE 1. THIS SHEET, NARROW JOINT SEALANT IS USED ON ALL FOUR CORNERS OF THE FRAME. EXTERIOR INSTALLATION ANCHORS 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.
- 7) 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 DOOR, SIDE/LUTE OR TRANSOM.
- 8) DESIGN PRESSURES:
A. NEGATIVE DESIGN LOADS BASED ON STRUCTURAL TEST PRESSURE, FRAME ANALYSIS AND GLASS PER ASTM E1300.
B. POSITIVE DESIGN LOADS BASED ON WATER TEST PRESSURE, STRUCTURAL TEST PRESSURE, FRAME ANALYSIS AND GLASS PER ASTM E1300.
- 9) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WINDLOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.8 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.
- 10) ALL RIGID AND CELLULAR PVC MANUFACTURED BY ENERGI FENESTRATION SOLUTIONS USA, INC. OR VISION EXTRUSION, LTD. HAS BEEN TESTED TO COMPLY WITH THE FLORIDA BUILDING CODE FOR PLASTICS.
- 10) SIZES MUST BE VERIFIED FOR COMPLIANCE WITH EGRESS REQUIREMENTS PER THE FLORIDA BUILDING CODE.
- 11) REFERENCES: TEST REPORTS FTL-7401, 7416 & 7417.

TABLE 2:	
Glass Type	Description
1	7/8" IG (1/8" TP Cap - Airspace - 1/8" TP)
2	7/8" IG (3/16" TP Cap - Airspace - 3/16" TP)
3	1-3/16" LG (1/8" TP Cap - Airspace - 1/8" AN - .090" PVB - 1/8" AN)
4	1-3/16" LG (3/16" TP Cap - Airspace - 1/8" AN - .090" PVB - 1/8" AN)
5	1-3/16" LG (1/8" TP Cap - Airspace - 3/16" AN - .090" PVB - 3/16" AN)

PVB = KURARAY TROSIFOL PVB INTERLAYER BY KURARAY AMERICA, INC.
AN = ANNEALED
TP = TEMPERED

TABLE A:

Product	Size	DP	Product Rating
Mullion	96"	+/-70 psf	DP +/-70
Door	38-3/4" x 96" (X) 76" x 96" (XX)	+/-70 psf	R-PG70
Side/Lute or Transom	40" x 111" 111" x 40"	+/-70 psf	R-PG70

GUIDE TO SHEETS:

GENERAL NOTES.....	1
ELEVATIONS.....	2
GLAZING DETAILS.....	3
DESIGN PRESSURES.....	4-5
ANCHORAGE.....	6-8
INSTALLATION.....	9
EXTRUSION PROFILES.....	10
PARTS LIST.....	11
CORNER DETAILS.....	12
HARDWARE DETAILS.....	13

FLORIDA PRODUCT APPROVAL #331

TABLE 1:

Group	Anchor	Substrate	Min. Edge Distance	Min. Embedment
A	3/16" Ultracon	Concrete (min. 2.85 ksi)	1"	1-3/8"
		Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	3/16" Ultracon++	Concrete (min. 3 ksi)	1-1/8"	1-3/4"
		Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
B	#10 Steel SMS (G5)	P.T. Southern Pine (SG=0.55)	1/2"	1-3/8"
	#10 410 S.S. SMS	Aluminum, 6063-T5	5/16"	0.063"
	#10 18-8 S.S. SMS	Steel, A36	5/16"	0.063"
		Steel Stud, A653 Gr. 33	5/16"	0.063"
		P.T. Southern Pine (SG=0.55)	1/2"	1-3/8"
	3/16" Ultracon	GROUTED CMU, (ASTM C-90)	2-1/2"	2-1/4"
		Concrete (min. 2.85 ksi)	1"	1-3/8"
	3/16" Ultracon++	P.T. Southern Pine (SG=0.55)	1/2"	1-3/8"
C		Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
		Concrete (min. 3 ksi)	1-1/8"	1-3/4"
	1/4" Ultracon	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	1/4" Ultracon++	Ungrouted CMU, (ASTM C-90)	1-1/16"	1-1/4"
		P.T. Southern Pine (SG=0.55)	9/16"	1-3/8"
	#12 Steel SMS (G5)	Aluminum, 6063-T5	3/8"	0.071"
	#12 410 S.S. SMS	Steel, A36	3/8"	0.071"
	#12 18-8 S.S. SMS	Steel Stud, A653 Gr. 33	3/8"	0.071" (14 Ga)
		P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	1/4" Ultracon	GROUTED CMU, (ASTM C-90)	2-1/2"	1-3/4"
		Concrete (min. 2.85 ksi)	1"	1-3/8"
	1/4" Ultracon++	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
D		GROUTED CMU, (ASTM C-90)	1-1/8"	1-3/4"
		Concrete (min. 3 ksi)	1-1/4"	1-3/8"
	1/4" Ultracon	Concrete (min. 3.35 ksi)	1"	1-3/4"
	1/4" Ultracon++	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
		P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	1/4" 18-8 S.S. Aggie-Gator	Concrete (min. 3.27 ksi)	1-1/2"	1-3/8"
		Ungrouted CMU, (ASTM C-90)	4"	1-1/4"
	1/4" Ultracon	Concrete (min. 2.85 ksi)	2-1/2"	1-3/8"
	1/4" Ultracon++	Concrete (min. 3 ksi)	2-1/2"	1-3/8"
	1/4" 410 S.S. CreteFlex	Concrete (min. 3.35 ksi)	2-1/2"	1-3/4"

- 1) * MIN. OF 3 THREADS BEYOND THE METAL SUBSTRATE.
2) UNGROUTED CMU VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.
3) ALL ANCHOR HEAD TYPES ARE ACCEPTABLE.

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

REGISTRATION #29296
COPYRIGHT © 2022 POI, INC., LIMITED LICENSE
TO MAKE COPIES FOR PERMITTING.

DATE 06/12/11

VINYL FRENCH DOOR (NI)

1 OF 11

FD5455V

JENS ROSOWSKI

By

FD5455FPA-NI

ANTHONY LYNN MILLER
No. 58705
08/08/22
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

DESIGN PRESSURE RATING
VARIES, SEE SHEETS 4 & 5

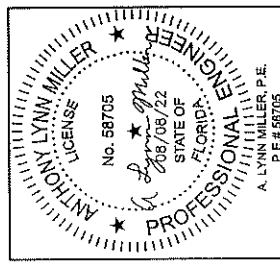
IMPACT RATING
NOT RATED FOR IMPACT
RESISTANCE

UPDATED CERT. METHOD
08/01/22

[illegible]

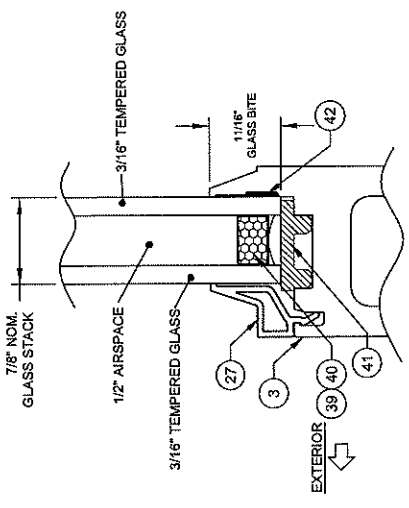
NOTES:
 1) SINGLE DOORS MAY BE LEFT OR RIGHT-HANDED.
 2) MILLIONS SHOWN ARE STANDARD 1" FRENCH DOOR MILLIONS PER THIS APPROVAL.
 3) MULLED CONFIGURATIONS NOT SHOWN MAY BE POSSIBLE USING OTHER MILLION TYPES. SEE SEPARATE APPROVAL.
 4) FRENCH DOOR MILLION IS LIMITED TO 96" IN VERTICAL APPLICATIONS AND 40" IN HORIZONTAL APPLICATIONS.
 5) CROWN OR WIDE STILES AND RAILS MAY BE MIXED WITHIN THE SAME SLIT/IT FOR MULDED ASSEMBLY.
 6) ADDITIONAL CONFIGURATIONS USING THE 1" FRENCH DOOR MILLION ARE POSSIBLE. USE THE ABOVE DRAWINGS AS A REFERENCE FOR SIZE LIMITATIONS.

FD455V		Sheet	2 OF 11	DNW	No.	FD5455FPA-NI
EXAMPLE CONFIGURATIONS		By		JENS ROSOWSKI		
VINTA FRENCH DOOR (NI)		Date		06/12/11		
1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1800		COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.				
REGISTRATION #29296 (941) 480-1600						
1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 PREPARED BY A. LYNN MILLER						

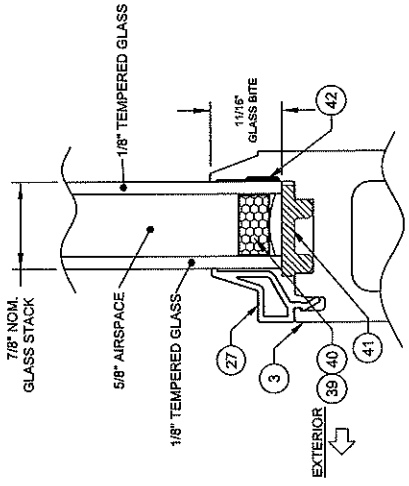


PREPARED BY A. LYNN MILLER
 1070 TECHNOLOGY DRIVE
 N. VENICE, FL 34275
 (941) 480-1800
 REGISTRATION #29296
 COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE
 TO MAKE COPIES FOR PERMITTING.
 Date: 06/12/11
 VINYL FRENCH DOOR (NI)
 GLASS TYPES
 JENS ROSOWSKI
 FDS456FPA-NI
 3 OF 11
 Sheet: 11

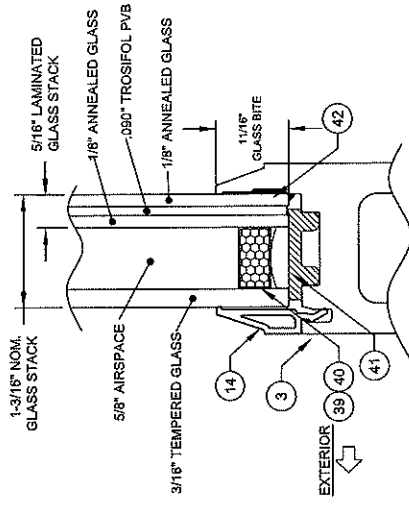
ANTHONY LYNN MILLER
 No. 58705
 License
 08/08/22
 STATE OF
 FLORIDA
 PROFESSIONAL ENGINEER
 A. LYNN MILLER P.E.
 P.E.# 58705



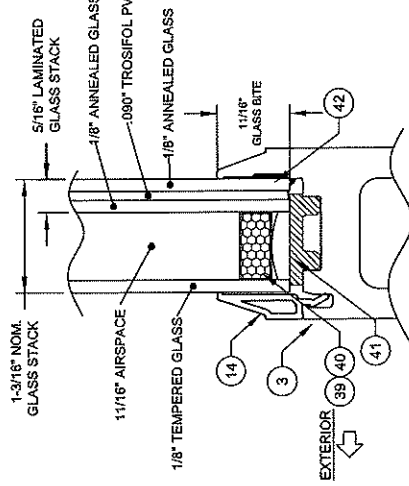
GLASS TYPE 2
 USED IN DOOR
 SIDELITE, TRANSOM



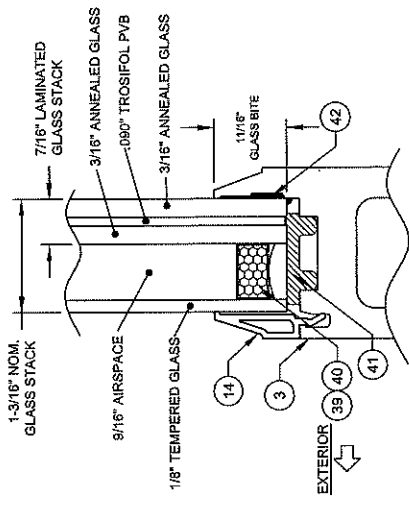
GLASS TYPE 1
 USED IN DOOR
 SIDELITE, TRANSOM



GLASS TYPE 4
 USED IN DOOR



GLASS TYPE 3
 USED IN DOOR



GLASS TYPE 5
 USED IN SIDELITE TRANSOM
 MAX. 28 FRAME SQ. FT.

TABLE 8:	WINDOW DESIGN PRESSURE	Glass Types 1, 2, 5
	+1-70.0 PSF	

Diagram 1 (Left):

- Top: 23-1/2" O.C. MAX. IF SHORT SIDE IS OVER 40"
- Right: 12" MAX (LONG SIDE)
- Bottom: 23-1/2" O.C. MAX. IF LONG SIDE IS OVER 40"
- Left: 28" O.C. MAX. IF SHORT SIDE IS 40" OR LESS
- Inner dimensions: 28" O.C. MAX. IF LONG SIDE IS 40" OR LESS
- Inner dimensions: 23-1/2" O.C. MAX. IF LONG SIDE IS OVER 40"
- Inner dimensions: 6" MAX. (SHORT SIDE)

Diagram 2 (Right):

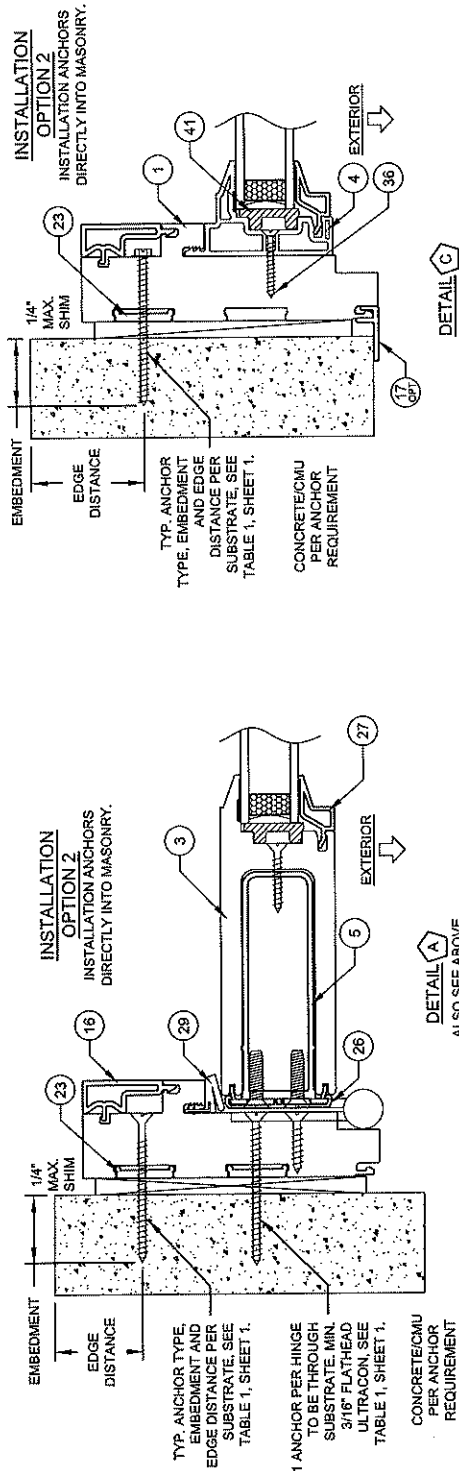
- Top: 23-1/2" O.C. MAX. IF SHORT SIDE IS OVER 40"
- Right: 12" MAX (LONG SIDE)
- Bottom: 23-1/2" O.C. MAX. IF LONG SIDE IS OVER 40"
- Left: 28" O.C. MAX. IF SHORT SIDE IS 40" OR LESS
- Inner dimensions: 28" O.C. MAX. IF LONG SIDE IS 40" OR LESS
- Inner dimensions: 23-1/2" O.C. MAX. IF LONG SIDE IS OVER 40"
- Inner dimensions: 6" MAX. (SHORT SIDE)

Both diagrams include the text: SEE TABLE 9, THIS SHEET FOR ANCHOR QUANTITY. SEE TABLE 1, SHEET 1 FOR ANCHOR TYPE.

NOTES:

- 1) NARROW OR WIDE STILES AND RAILS MAY BE MIXED WITHIN THE SAME SIDELITE/TRANSOM OR MULLED ASSEMBLY.
- 2) SIDELITE/TRANSOM MAY BE A SINGLE, STAND-ALONE UNIT.
- 3) FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE SHORT OR LONG DIMENSION.

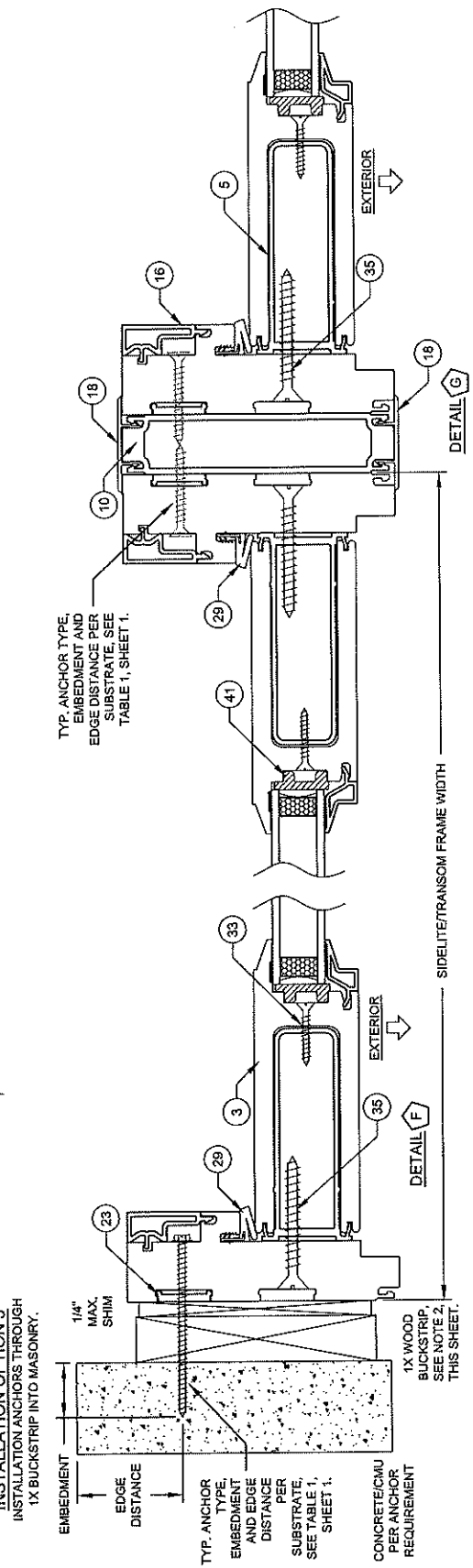
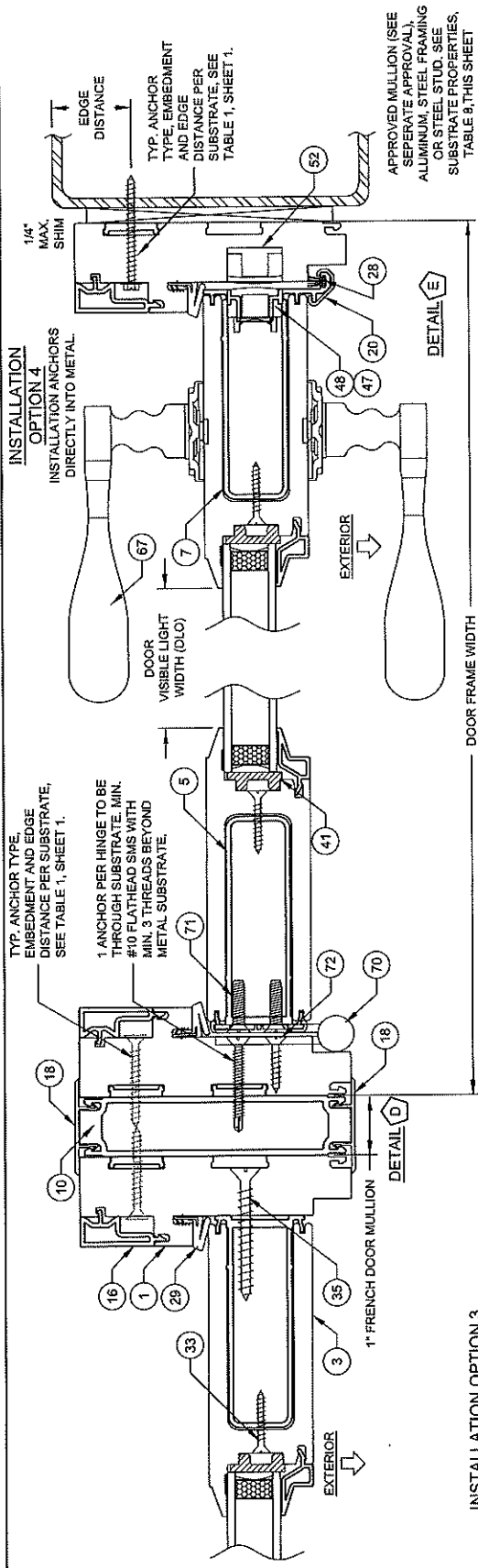
[illegible]



- 1) USE ONLY SUBSTRATE-APPROPRIATE ANCHORS LISTED ON TABLE 1. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE DOOR, SIDELITE OR TRANSOM.
- 2) WOOD BUCKS DEPICTED ON THIS SHEET AS "1X" ARE BUCKS WHOSE TOTAL THICKNESS IS LESS THAN 1-1/2". 1X WOOD BUCKS ARE OPTIONAL IF UNIT CAN BE INSTALLED DIRECTLY TO MASONRY. WOOD BUCKS DEPICTED AS "2X" ARE 1-1/2" THICK OR GREATER. INSTALLATION TO THE SUBSTRATE OF WOOD BUCKS TO BE ENGINEERED BY OTHERS OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- 3) FOR ATTACHMENT TO METAL: THE STRUCTURAL MEMBER SHALL BE OF A SIZE TO PROVIDE FULL SUPPORT TO THE FRAME OF THE DOOR, SIDELITE OR TRANSOM.
- 4) IF APPLICABLE, LOWEST DESIGN PRESSURE FROM DOOR, SIDELITE, TRANSOM OR MULLION APPLIES TO THE WHOLE SYSTEM.

PREPARED BY A. LYNN MILLER
 1070 TECHNOLOGY DRIVE
 N. VENICE, FL 34275
 (941) 480-1600
 REGISTRATION #28296
 COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE
 TO MAKE COPIES FOR PERMITTING.
 VINYL FRENCH DOOR (NI)
 08/12/11
 JENS ROSOWSKI
 7 OF 11
 7 OF 11
 FDS455V
 FDS455FPA-NI

ANTHONY LYNN MILLER
 No. 58705
 08/08/22
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 A. LYNN MILLER, P.E.
 P.E.# 58705



- INSTALLATION NOTES:**
- 1) USE ONLY SUBSTRATE-APPROPRIATE ANCHORS LISTED ON TABLE 1, SHEET 1. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE DOOR, SIDELITE OR TRANSOM.
 - 2) WOOD BUCKS DEPICTED ON THIS SHEET AS "1X" ARE BUCKS WHOSE TOTAL THICKNESS IS LESS THAN 1-1/2". 1X WOOD BUCKS ARE OPTIONAL IF UNIT CAN BE INSTALLED DIRECTLY TO MASONRY. WOOD BUCKS DEPICTED AS "2X" ARE 1-1/2" THICK OR GREATER. INSTALLATION TO THE SUBSTRATE OF WOOD BUCKS TO BE ENGINEERED BY OTHERS OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
 - 3) FOR ATTACHMENT TO METAL: THE STRUCTURAL MEMBER SHALL BE OF A SIZE TO PROVIDE FULL SUPPORT TO THE FRAME OF THE DOOR, SIDELITE OR TRANSOM.
 - 4) IF APPLICABLE, LOWEST DESIGN PRESSURE FROM DOOR, SIDELITE, TRANSOM OR MULLION APPLIES TO THE WHOLE SYSTEM.

Prepared by A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29296
COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE
TO MAKE COPIES FOR PERMITTING.

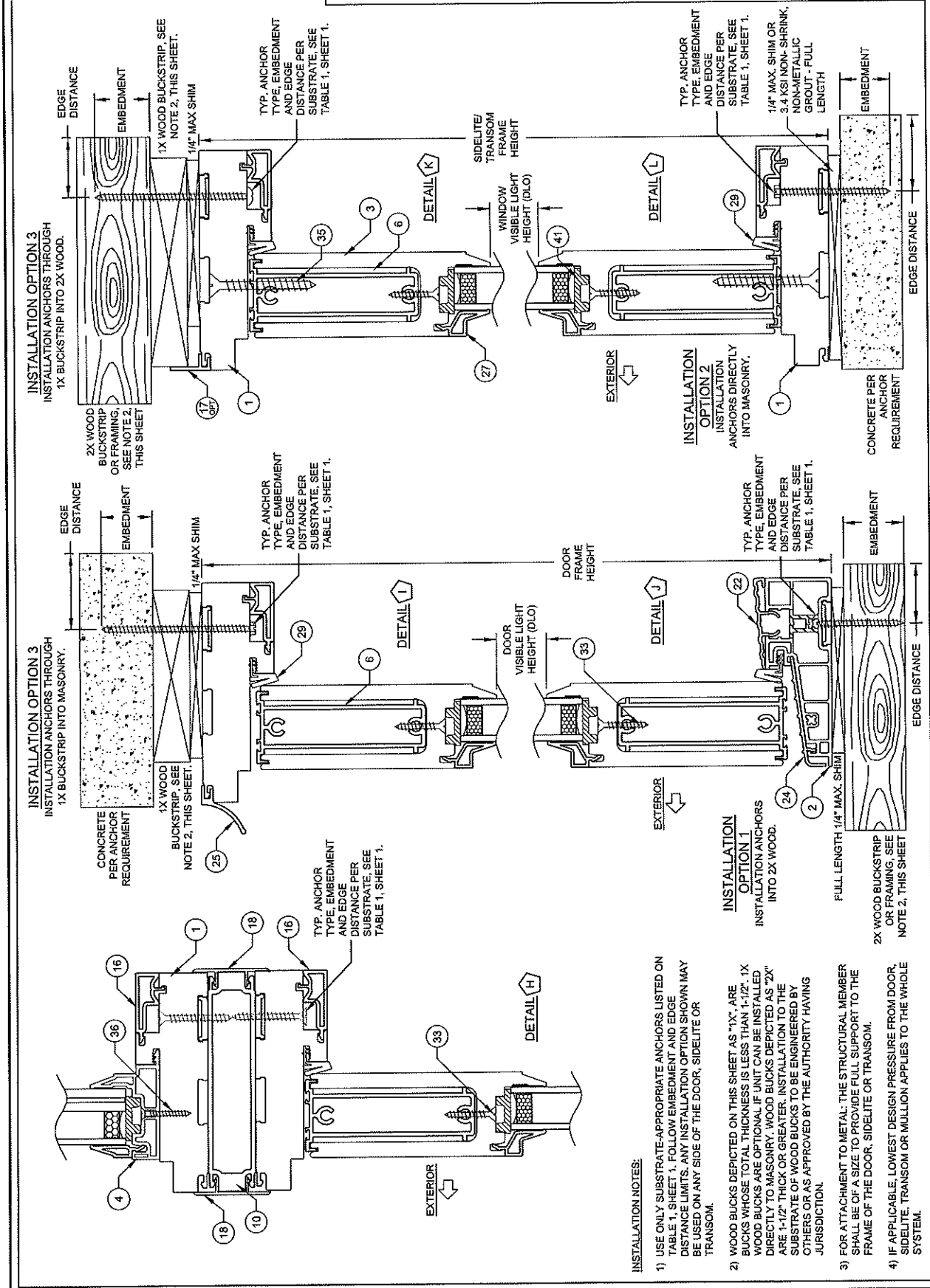
PGT
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29296
COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE
TO MAKE COPIES FOR PERMITTING.

FD5455V
8 OF 11
JENS ROSOWSKI
Date 06/12/11
Title VINYL FRENCH DOOR (NI)
INSTALLATION DETAILS

ANTHONY LYNN MILLER
No. 53705
August 08/08/22
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 53705

Revised: 08/01/22
Updated Cert. Method

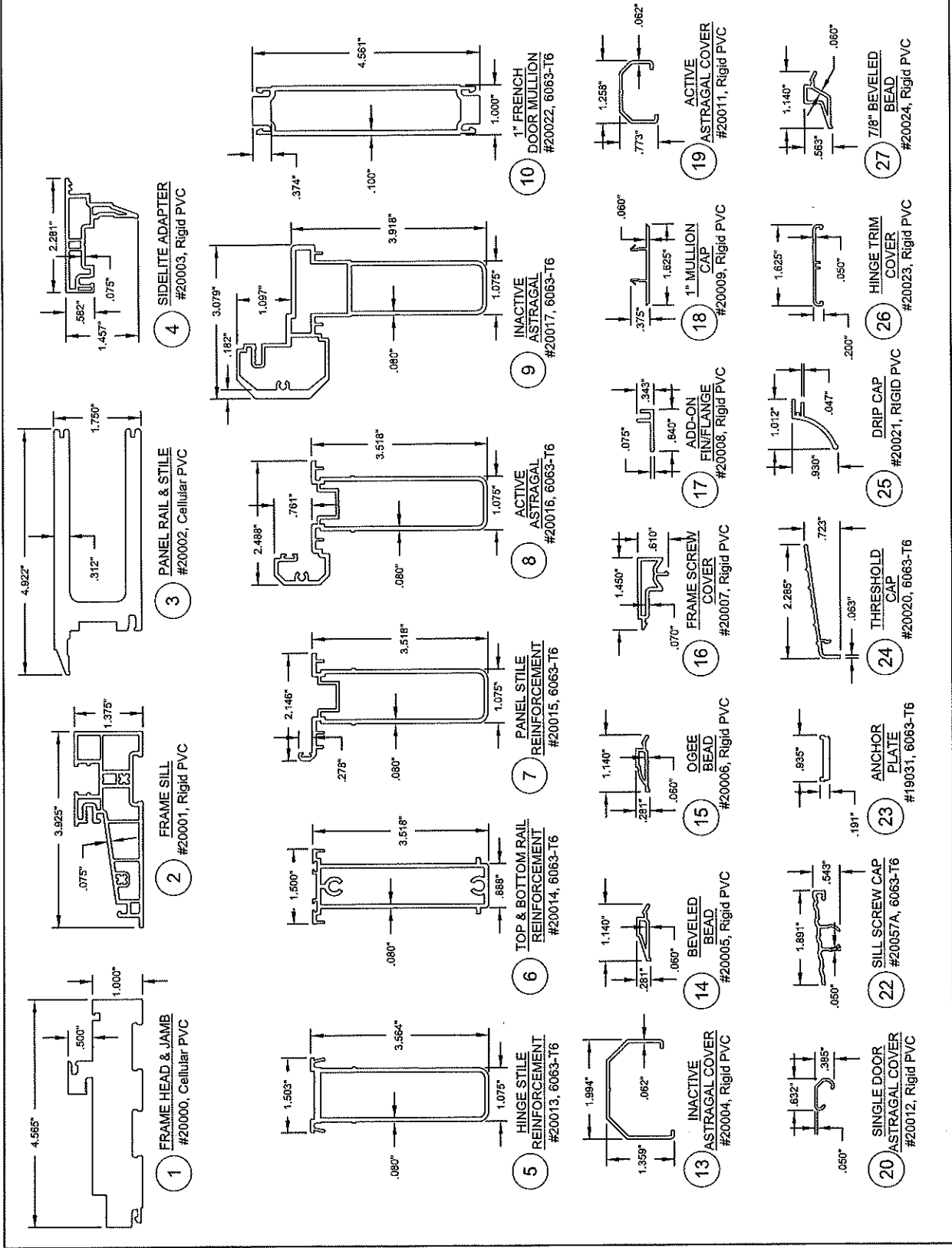
Sheet: 8 OF 11
Date: 06/12/11
Title: VINYL FRENCH DOOR (NI)
INSTALLATION DETAILS



- INSTALLATION NOTES:**
- 1) USE ONLY SUBSTRATE-APPROPRIATE ANCHORS LISTED ON TABLE 1, SHEET 1. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE DOOR, SIDELITE OR TRANSOM.
 - 2) WOOD BUCKS DEPICTED ON THIS SHEET AS "1X". ARE BUCKS WHOSE TOTAL THICKNESS IS LESS THAN 1-1/2". 1X WOOD BUCKS ARE OPTIONAL IF UNIT CAN BE INSTALLED DIRECTLY TO MASONRY. WOOD BUCKS DEPICTED AS "2X" ARE 1-1/2" THICK OR GREATER. INSTALLATION TO THE SUBSTRATE OF WOOD BUCKS TO BE ENGINEERED BY OTHERS OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
 - 3) FOR ATTACHMENT TO METAL: THE STRUCTURAL MEMBER SHALL BE OF A SIZE TO PROVIDE FULL SUPPORT TO THE FRAME OF THE DOOR, SIDELITE OR TRANSOM.
 - 4) IF APPLICABLE, LOWEST DESIGN PRESSURE FROM DOOR, SIDELITE, TRANSOM OR MULLION APPLIES TO THE WHOLE SYSTEM.

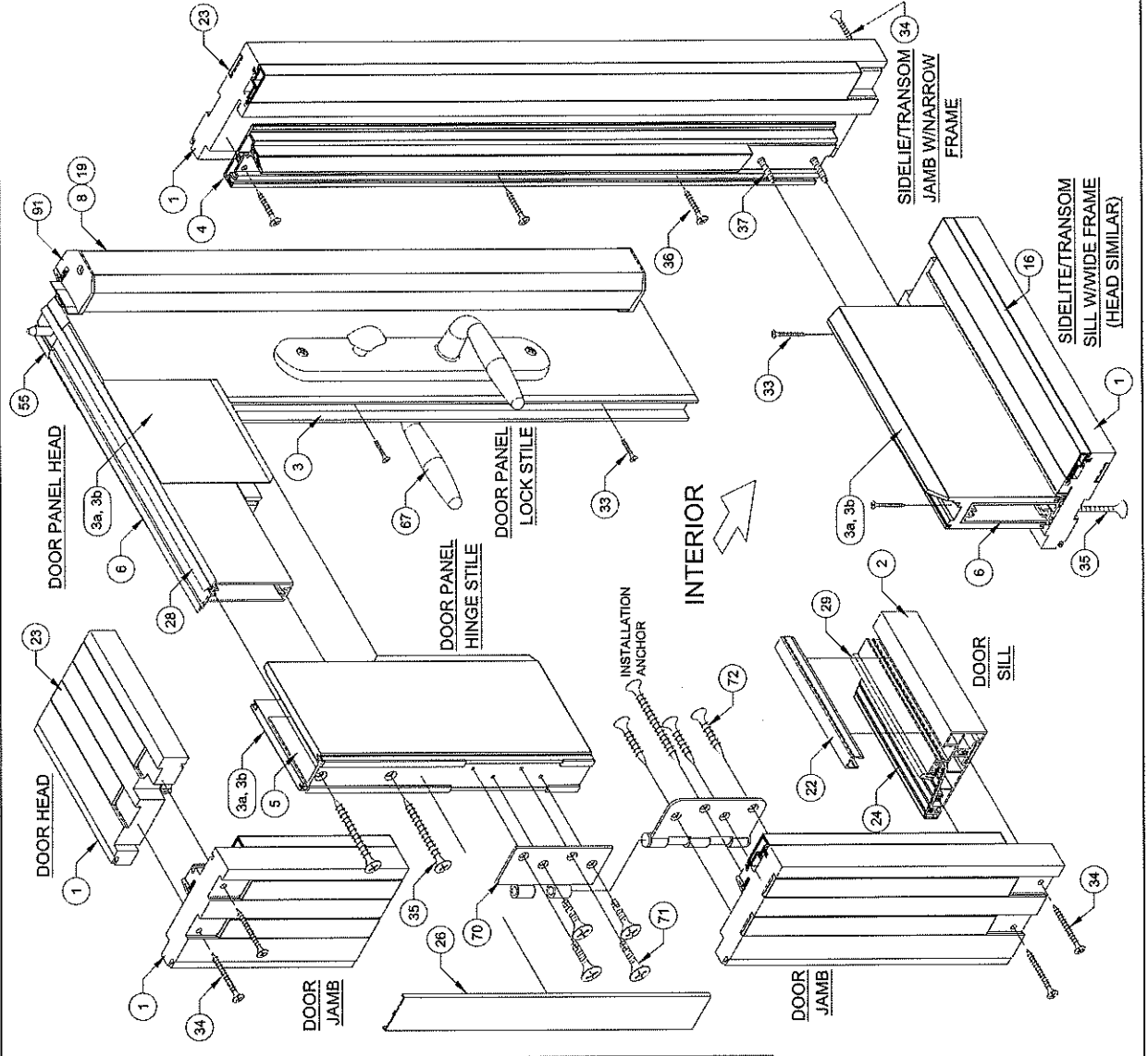
1070 TECHNOLOGY DRIVE
 N. VENICE, FL 34275
 (941) 480-1600
 REGISTRATION #22936
 COPYRIGHT © 2022 PGT, INC. LIMITED LICENSE
 TO MAKE COPIES FOR PERMITTING.
 PREPARED BY A. LYNN MILLER
 VINYL FRENCH DOOR (NI)
 06/12/11
 EXTRUSIONS
 JENS ROSOWSKI
 FD5455FPA-NI

ANTHONY LYNN MILLER
 No. 58705
 08/08/22
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 A. LYNN MILLER P.E.
 P.E.# 58705



FD5455V 10 OF 11
JENS ROSOWSKI
VINYL FRENCH DOOR (NI)
06/12/11
COPYRIGHT © 2022 PGT, INC. LIMITED LICENSE
REGISTRATION #29296
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1800
PREPARED BY A. LYNN MILLER
P.E. #58705
FLORIDA
STATE OF
ANTHONY LYNN MILLER
ENGINEER
LICENSE
No. 58705
08/01/22
UPDATED CERT. METHOD

FD5455V 10 OF 11
JENS ROSOWSKI
VINYL FRENCH DOOR (NI)
06/12/11
COPYRIGHT © 2022 PGT, INC. LIMITED LICENSE
REGISTRATION #29296
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1800
PREPARED BY A. LYNN MILLER
P.E. #58705
FLORIDA
STATE OF
ANTHONY LYNN MILLER
ENGINEER
LICENSE
No. 58705
08/01/22
UPDATED CERT. METHOD



#	PGT Part #	Description	Material
1	20000	Door & Sidelite/Transom Main Frame	Cellular PVC
2	20001	Door Frame Sill	Rigid PVC
3	20002	Panel Sill & Rail	Cellular PVC
4	20003	Sidelite Adapter	Rigid PVC
5	20013	Hinge Stile Reinforcement	Alum., 6063-T6
6	20014	Panel Rail Reinforcement	Alum., 6063-T6
7	20015	Panel Sill Reinforcement	Alum., 6063-T6
8	20016	Active Astragal	Alum., 6063-T6
9	20017	Inactive Astragal	Alum., 6063-T6
10	20022	1" French Door Mullion	Rigid PVC
13	20004	Inactive Astragal Cover	Rigid PVC
14	20005	1-3/16" Bevel Bead	Rigid PVC
15	20006	1-3/16" Ogee Bead	Rigid PVC
16	20007	Screw Cover	Rigid PVC
17	20008	Ad-on Fin/Flange	Rigid PVC
18	20009	1" Mullion Cap	Rigid PVC
19	20011	Active Astragal Cover	Rigid PVC
20	20012	Single Door Astragal Cover	Rigid PVC
22	20057A	Sill Screw Cover	Rigid PVC
23	19031	Anchor Plate	Alum., 6063-T6
24	20020	Threshold Cover	Alum., 6063-T6
25	20021	Drip Cap	Rigid PVC
26	20023	Hinge Trim Cover	Rigid PVC
27	20024	7/8" Beveled Bead	Rigid PVC
28		Fin Weatherstrip	
29	16713	Frame Weatherstrip	
31	714FPT1410XW	Frame-to-Wide Slab Screw: #14 X 1-1/2" Phil. FH	Stainless Steel
32	7S101X	Frame-to-Narrow Slab Screw: #10 X 1" Phil. FH	Stainless Steel
33	78XFP1410	Reinforcement Screw: #8 X 1" Phil. FH	Stainless Steel
34	7102FPFX	Frame Assembly Screw: #10 X 2" Phil. FH	Stainless Steel
35	714FPT1410XW	W-W Slab Assembly Screw: #14 X 1-1/2" Phil. FH	Stainless Steel
36	7S101X	N-N Slab Assembly Screw: #10 X 1" Phil. FH	Stainless Steel
37	71420X2.25	N-W Slab Assembly Screw: #14 X 2-1/4" Phil. FH	Stainless Steel
39		DuraSeal Spacer	
40	62689	SuperSpacer	
41	72026	Sitting Block, (Duro = 85 +/- 5)	EPDM
42		Backbedding: Dow-791, 983, 995 or GE-7700	Silicone
43		Argon Gas	
44	6H15140	Hot Melt Butyl	
47-73	see Hardware BOM, Table 9, Sheet 12		
90	20033	Inactive Astragal Cap	Acetal
91	20035	Active Astragal Cap	Acetal

DAYLITE OPENING (DLO) SIZES
 WHEN USING PART # 3: (WIDE RAILS OR STILES)
 X DOOR FRAME HEIGHT - 12.1 = DLO HEIGHT
 X DOOR FRAME WIDTH - 12.3 = DLO WIDTH
 (XX DOOR FRAME HEIGHT / 2) - 12.1 = DLO HEIGHT
 (XX DOOR FRAME WIDTH / 2) - 11.7 = DLO WIDTH
 SLT/TR FRAME HEIGHT - 12.1 = DLO HEIGHT
 SLT/TR FRAME WIDTH - 12.1 = DLO WIDTH
 WHEN USING PART # 4: (NARROW RAILS OR STILES)
 SLT/TR FRAME HEIGHT - 4.9 = DLO HEIGHT
 SLT/TR FRAME WIDTH - 4.9 = DLO WIDTH

HARDWARE DETAILS & LOCATIONS

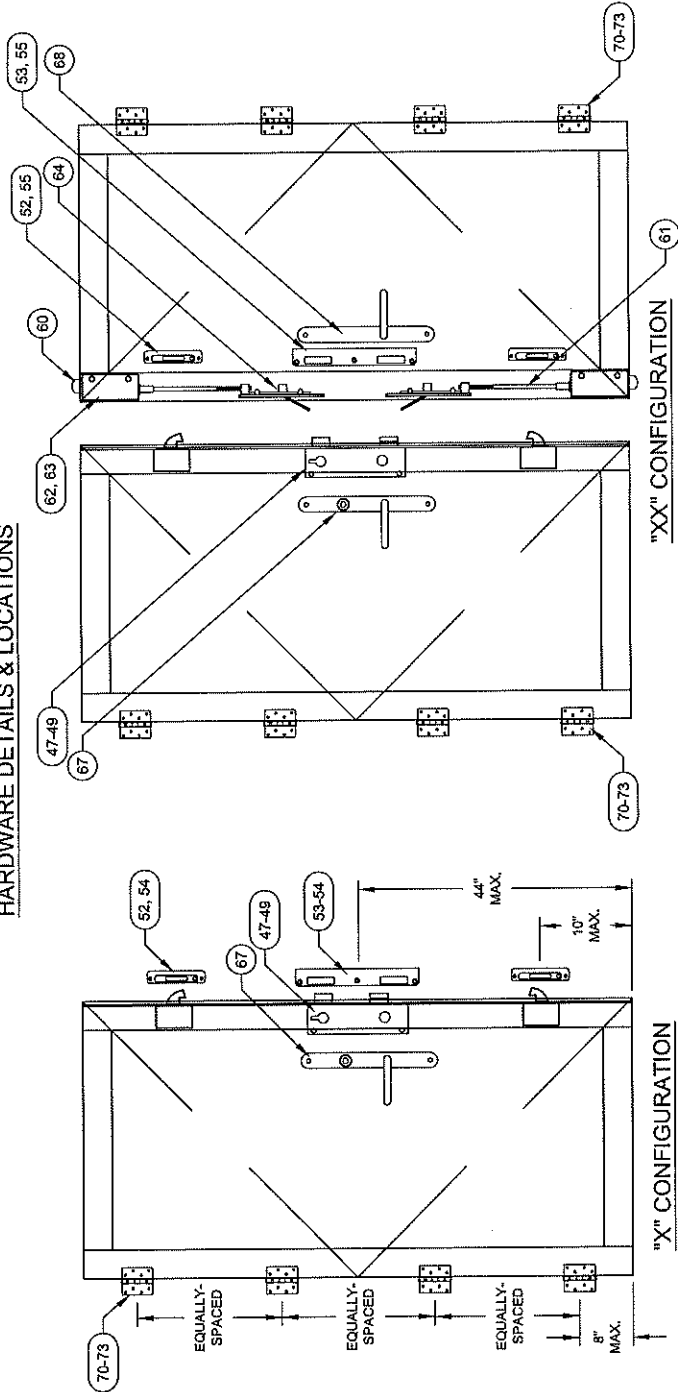
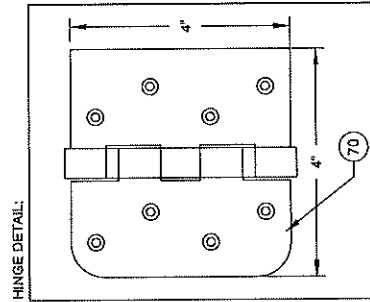


TABLE 11:

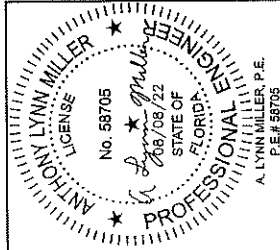
#	PST Part #	Description	Material
47	666032701	P3000 3-PT Rhino Lock (68")	
48	666032702	P3000 3-PT Rhino Lock (over 68")	
49	71032X1FPFX	Rhino Lock Screw: 10-32 X 1" Phil. FH	
52	20027	Adjustable Strike Plate Assembly	Stainless Steel
53	20028	Center Strike Plate Assembly	Stainless Steel
54	7S101X	Strike Plate Screw, (X): #10 X 1" Phil. FH	410 S.S.
55	78X12PFIUX	Strike Plate Screw, (XX): #8 X 1/2" Phil. FH	410 S.S.
60	7SB1202	Flush Bolt (XX)	
61	7803725	Flush Bolt Rod (XX)	
62	420034	Flush Bolt Guides (XX)	
63	7832X12FPXP	Flush Bolt Screw: 8-32 X 1/2" Phil. FH	
64	48033N	Guide Pin (XX)	
65	78036	Flush Bolt Strike Plate (XX)	Stainless Steel
66	7832X12FPXP	Flush Bolt Strike Plate Screw, (XX): #8 X 3/4" Phil. FH	410 S.S.
67	varies	Dummy Handle/Lever	
68	20025	Butt Hinge	Stainless Steel
70	71032X1FPFX	Hinge, Slab Screw: #10-32 X 1" Phil FH	Stainless Steel
72	7S101X	Hinge, Frame Screw: #10 X 1" Phil. FH	Stainless Steel



Prepared by A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34276
(941) 480-1600
REGISTRATION #229296
COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE
TO MAKE COPIES FOR PERMITTING.

DATE: 06/12/11
BY: JENS ROSOWSKI
TITLE: HARDWARE

DATE: 11 OF 11
DWG No.: FD5455FPA-NI



Rev: UPDATED CERT. METHOD
Date: 08/01/22
D



[DBPR HOME](#) | [ABOUT DBPR](#) | [DBPR DIVISIONS](#) | [CONTACT DBPR](#)

[BCIS Home](#) | [Log In](#) | [User Registration](#) | [Hot Topics](#) | [Submit Surcharge](#) | [Stats & Facts](#) | [Publications](#) | [Contact Us](#) | [BCIS Site Map](#) | [Links](#) | [Search](#)



Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**



FL #
Application Type
Code Version
Application Status

FL1844-R28
Revision
2020
Approved

FL1844.1
1pnl/3pnl 5400

Comments
Archived



Product Manufacturer
Address/Phone/Email

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

Authorized Signature

Jens Rosowski
jrosowski@pgtindustries.com

Technical Representative
Address/Phone/Email

Lynn Miller, P.E.
1070 Technology Dr
N Venice, FL 34275
(941) 486-0100 Ext 21142
lmiller@pgtindustries.com

Quality Assurance Representative
Address/Phone/Email

Category
Subcategory

Windows
Horizontal Slider

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
Florida License
Quality Assurance Entity
Quality Assurance Contract Expiration Date
Validated By

A. Lynn Miller, P.E.
PE-58705
Keystone Certifications, Inc.
12/31/2023
Steven M. Urlich, PE
☒ Validation Checklist - Hardcopy Received

Certificate of Independence

[FL1844_R28_COI_Cert of Independence.pdf](#)

Referenced Standard and Year (of Standard)

Standard	Year
AAMA/WDMA/CSA 101/I.S.2/A440	2011
ASTM E1886	2013
ASTM E1996	2012

Equivalence of Product Standards
Certified By

Florida Licensed Professional Engineer or Architect
[FL1844_R28_Equiv_ASTM E1886-04-05 to E1886-13a and E1996-05-06-09 to E1996-17_Equivalency Letter 2020-09-09.pdf](#)

Product Approval Method

Method 1 Option D

Date Submitted

08/10/2022

Date Validated

08/14/2022

Date Pending FBC Approval

08/19/2022

Date Approved

10/11/2022

Summary of Products

FL #	Model, Number or Name	Description
1844.1	HR-5410	EnergyVue Vinyl Horizontal Roller
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL1844_R28_II_HR5410FPA-NI.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1844_R28_AE_Eng_Eval - HR5410.pdf Created by Independent Third Party: No
1844.2	HR-5510	WinGuard Vinyl Horizontal Roller
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL1844_R28_II_HR5510FPA-LM.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1844_R28_AE_Eng_Eval - HR5510.pdf Created by Independent Third Party: No

[Back](#)

[Next](#)

Contact Us :: [2601 Blair Stone Road, Tallahassee FL 32399](#) Phone: 850-487-1824

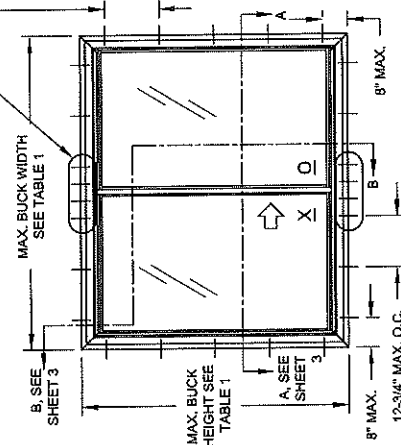
The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida.](#) :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. *Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

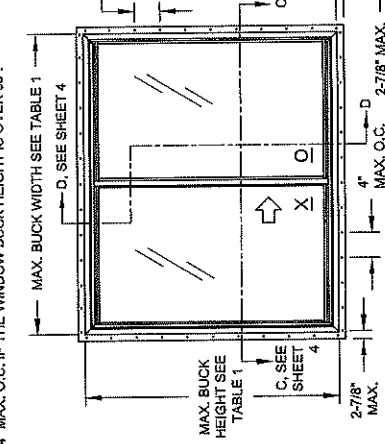
Product Approval Accepts:



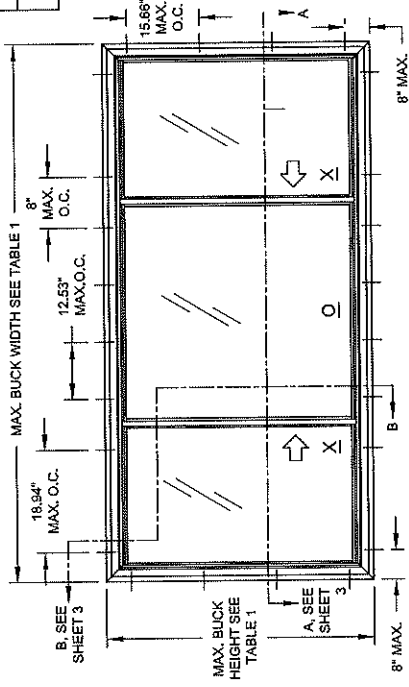
2 ANCHORS @ 8" MAX. O.C. IF THE WINDOW BUCK HEIGHT IS 63" OR LESS.
4 ANCHORS @ 4" MAX. O.C. IF THE WINDOW BUCK HEIGHT IS OVER 63".
18" MAX. O.C. IF THE WINDOW BUCK HEIGHT IS 63" OR LESS.
14" MAX. O.C. IF THE WINDOW BUCK HEIGHT IS OVER 63".



ELEVATION FOR TYP. EQUAL LEG/BOX
& FLANGE FRAME.
XO CONFIGURATION, OX SIMILAR



ELEVATION FOR TYP. FIN OR J-CHANNEL FRAME.
XO CONFIGURATION, OX & XOX SIMILAR



ELEVATION FOR TYP. EQUAL LEG/BOX
& FLANGE FRAME, XOX CONFIGURATION
MAX. SASH WIDTH = 30.36"
MAX. FIXED LITE (BUCK WIDTH - [2 X SASH WIDTH]) = 58.28"

DESIGN PRESSURE RATING SEE TABLE 1
IMPACT RATING NOT RATED FOR IMPACT RESISTANCE

Revised: 08/01/22
Updated Cert. Method

1 OF 4

HR5410V

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600

REGISTRATION #29296

COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE
TO MAKE COPIES FOR PERMITTING.

DATE: 06/12/11

DESIGNED BY: JENS ROSOWSKI

DATE: 06/12/11

PROJECT: ELEVATION & GENERAL NOTES

ANTHONY LYNN MILLER

No. 58705

08/08/22

STATE OF FLORIDA

PROFESSIONAL ENGINEER

A. LYNN MILLER P.E.

P.E.# 58705

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600

REGISTRATION #29296

COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE
TO MAKE COPIES FOR PERMITTING.

TABLE 1:

Window Buck Size	Height	Width	Configuration	Reinf. Level	Design Pressure		Product Rating
					(+) psf	(-) psf	
75"	54"	75"	XO/OX	R1	50.0	50.0	R-PG50
75"	54"	75"	XO/OX	R2	65.0	70.0	R-PG65
75"	63"	75"	XO/OX	R3	50.0	50.0	LC-PG50
75"	72"	75"	XO/OX	R4	65.0	70.0	LC-PG65
120"	63"	120"	XOX (1/4-1/2-1/4)	R3	50.0	50.0	LC-PG50
92"	63"	92"	XOX (1/3-1/3-1/3)	R3	50.0	50.0	LC-PG50
120"	63"	120"	XOX (1/4-1/2-1/4)	R4	65.0	70.0	LC-PG65
92"	63"	92"	XOX (1/3-1/3-1/3)	R4	65.0	70.0	LC-PG65

SEE SHEET 2 FOR GLASS TYPES

SERIES HR5410V NON-IMPACT RESISTANT, VINYL HORIZONTAL ROLLER

- THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE CURRENT FLORIDA BUILDING CODE.
- SHUTTERS ARE REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS.
- 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.
- 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.
- 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.
- 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.

TABLE 2: ANCHORS INSTALLED THROUGH FRAME

Anchor	Substrate	Min. Edge Distance	Min. Embedment
#10 SMS (steel, 18-8 S.S. or 410 S.S.)	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
Max. DP of 50.0 psf	Steel Stud, 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 Stud, 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	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
Max. DP of 50.0 psf	Concrete (min. 2.85 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
3/16" Ultracon+	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
Max. DP of 50.0 psf	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. 2.85 ksi)	1"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	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)	2-1/2"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
1/4" Aggre-Gator (18-8 S.S.)	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 3.275 ksi)	1-1/2"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2"	1-1/4"

1) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.

2) PANHEAD, FLATHEAD OR HEXHEAD ARE ACCEPTABLE.

3) ANCHOR LENGTH TO BE SO THAT A MIN. OF 3 THREADS EXTEND BEYOND THE METAL SUBSTRATE.

TABLE 3: ANCHORS INSTALLED THROUGH INTEGRAL FIN

Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Common Nail Max. DP of 60.0	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"

1) PANHEAD, FLATHEAD OR HEXHEAD ARE ACCEPTABLE.

TABLE 4: REINFORCEMENT TYPES

Level	Vent (4 sides)	Meeting Rail
R1	A	D
R2	A	E
R3	B	E
R4	C	F



REINFORCEMENT TYPE A



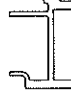
REINFORCEMENT TYPE B



REINFORCEMENT TYPE C



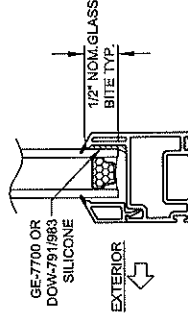
REINFORCEMENT TYPE D



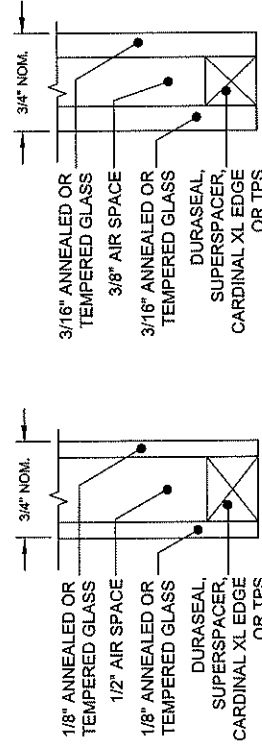
REINFORCEMENT TYPE E



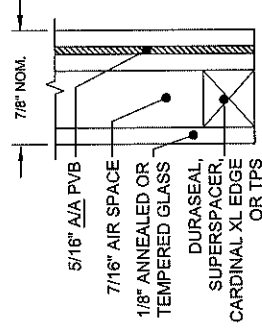
REINFORCEMENT TYPE F



TYP. GLAZING DETAIL



GLASS TYPES

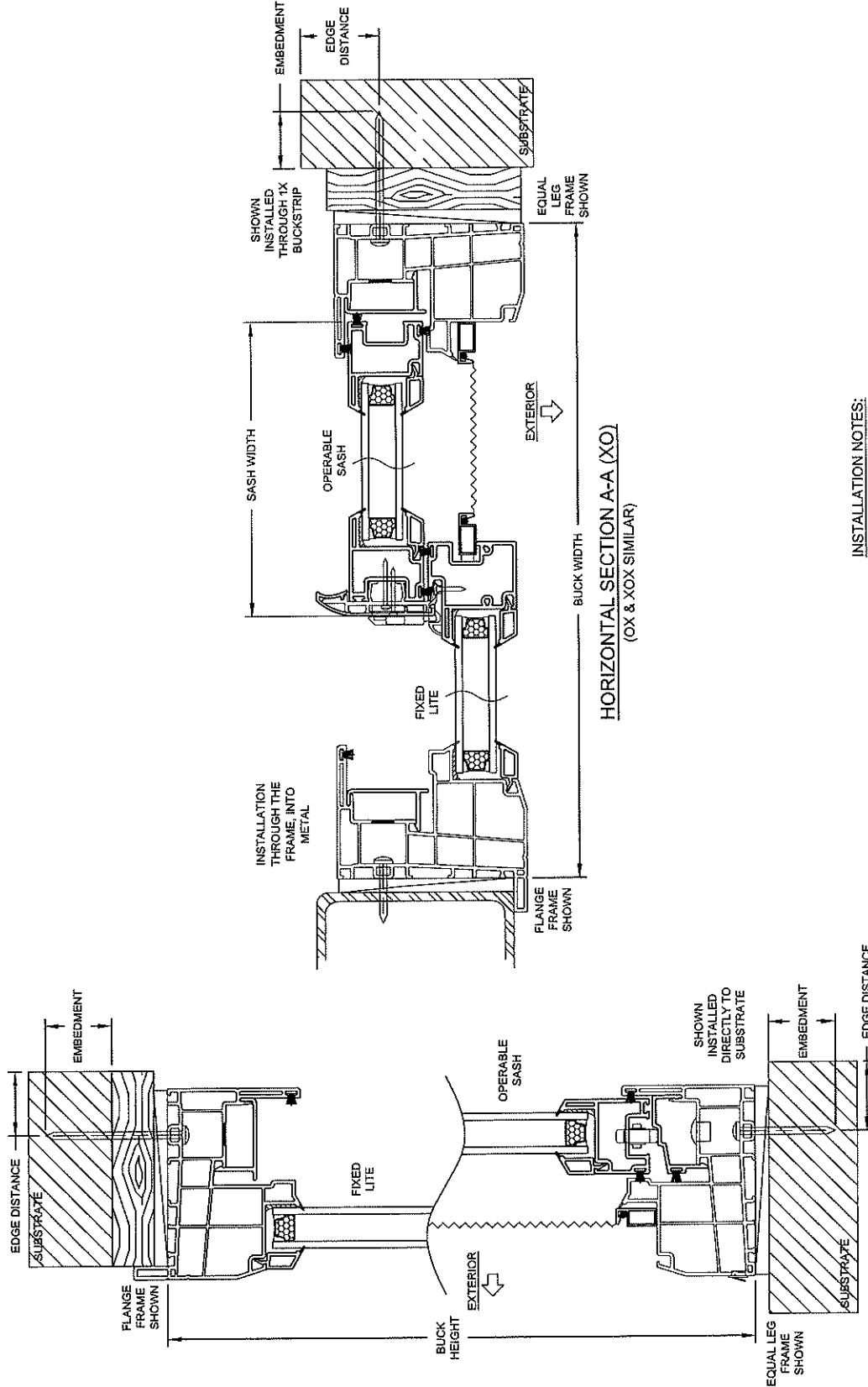
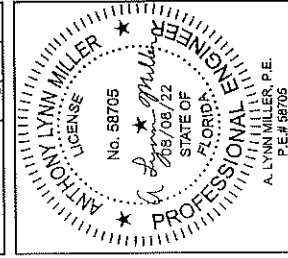
PVB = KURARAY TROSIFOL PVB
INTERLAYER BY KURARAY AMERICA, INC.
A = ANNEALED

Project	HR5410V
Sheet	2 OF 4
Drawn By	JENS ROSOWSKI
Date	06/12/11
Prepared By	A. LYNN MILLER
Check By	JENS ROSOWSKI
Approved By	JENS ROSOWSKI
Registration #	29298
Copyright © 2022 PGT, INC., LIMITED LICENSE	
TO MAKE COPIES FOR PERMITTING	
1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	
1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	
1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	

Professional Engineer A. LYNN MILLER P.E. P.E.# 58705
ANTHONY LYNN MILLER LICENSE No. 58705 08/08/22 STATE OF FLORIDA

Rev.	08/01/22
Updated Cert. Method	

Project	HR5410V
Sheet	3 OF 4
Drawn By	JENS ROSOWSKI
Date	06/12/11
Title	VINYL HORIZONTAL ROLLER (N)
Installation	FLANGE/EQUAL-LEG
PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600 REGISTRATION #22926 COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	



HORIZONTAL SECTION A-A (XO)
 (OX & XOX SIMILAR)

VERTICAL SECTION B-B

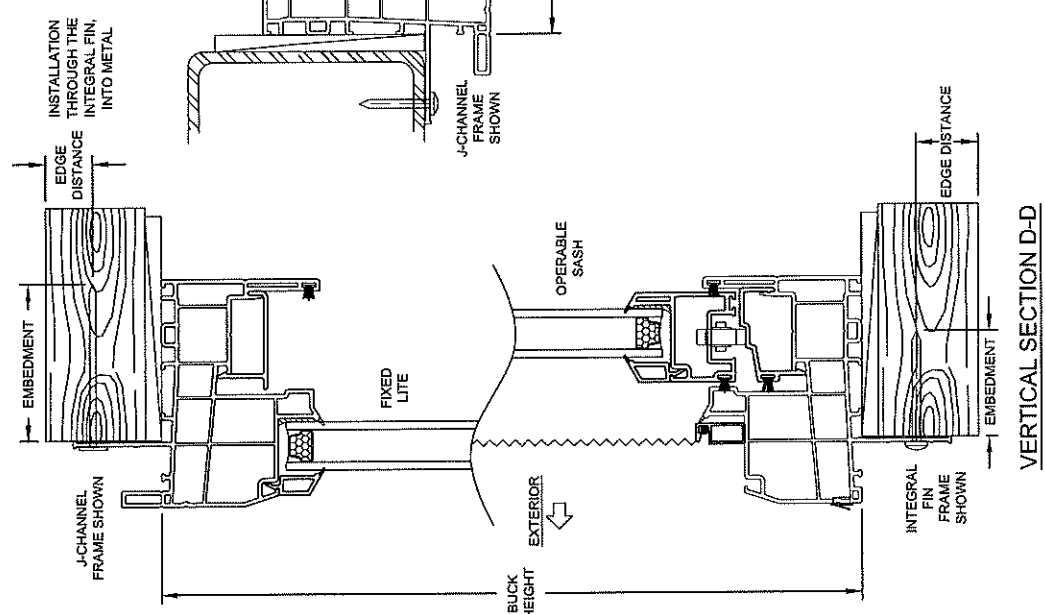
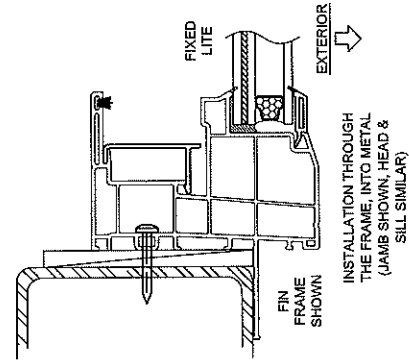
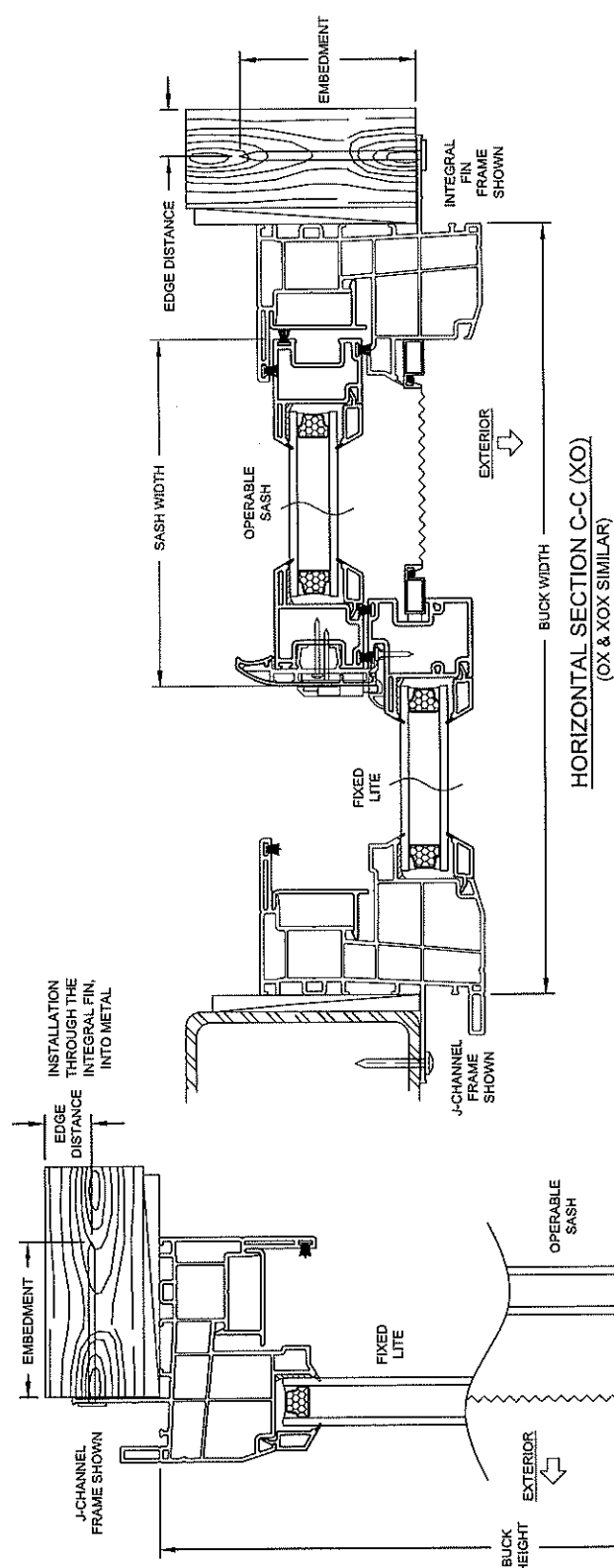
INSTALLATION NOTES:

- 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.

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600 REGISTRATION #29296 COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	VINYL HORIZONTAL ROLLER (N) Date: 06/12/11 Drawn By: JENS ROSOWSKI	HR5410V 4 OF 4 HR5410FPA-NI
--	--	-----------------------------------

Updated Cert. Method
 Date: 08/01/22
 Rev: D

ANTHONY LYNN MILLER
 No. 58705
 State of Florida
 PROFESSIONAL ENGINEER
 A. LYNN MILLER, P.E.
 P.E.# 58705



- 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.