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Product Approval
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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

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(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

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. Ulrich, 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

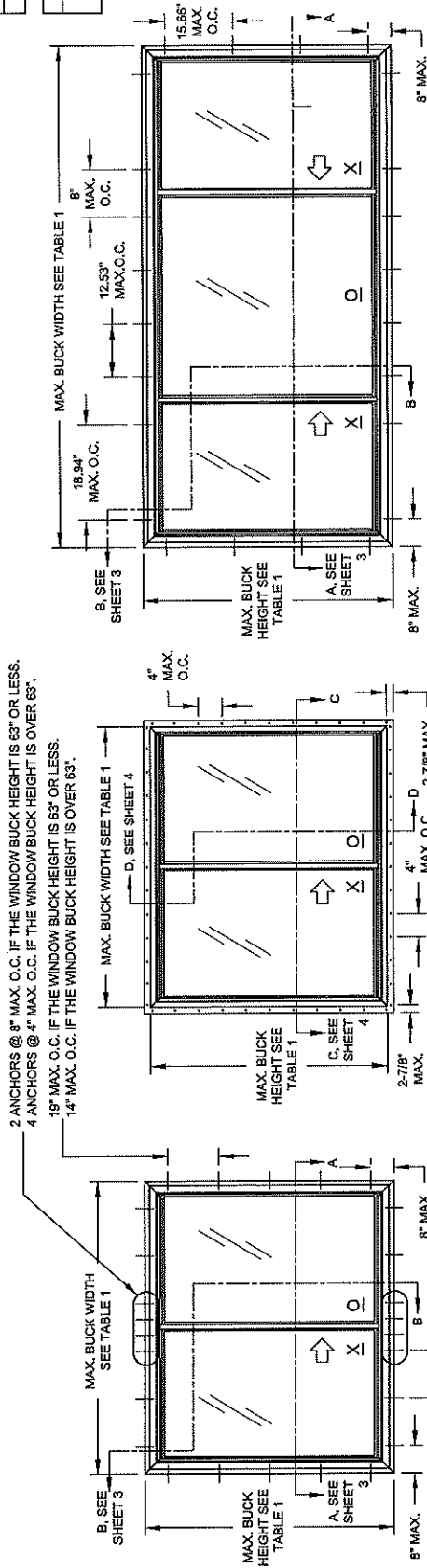
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Product Approval Accepts:





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 - 12 X SASH WIDTH) = 59.2"

SERIES HR5410V NON-IMPACT RESISTANT, VINYL HORIZONTAL ROLLER

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.

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

SEE SHEET 2 FOR GLASS TYPES



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

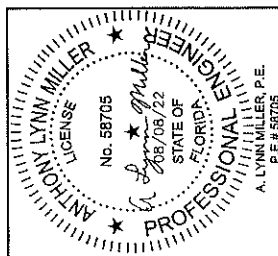


TABLE 2: ANCHORS INSTALLED THROUGH FRAME

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"
	Steel, A36	3/8"	0.050"
Max. DP of 50.0 psf	Steel Stud, A653 Gr. 33	3/8"	0.0345" (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"	0.0345" (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"	1-1/4"
3/16" Ultracon+	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
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. 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)	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"

1) "UNGRADED 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	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
Max. DP of 50.0			
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"	0.0345" (20 Ga.)
	Steel, A36	3/8"	0.050"

1) PANHEAD, FLATHEAD OR HEXHEAD ARE ACCEPTABLE.

TABLE 4: REINFORCEMENT TYPES

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



REINFORCEMENT TYPE A



REINFORCEMENT TYPE B



REINFORCEMENT TYPE C



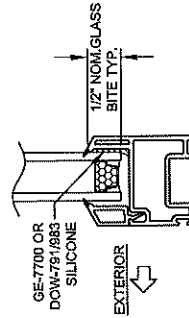
REINFORCEMENT TYPE D



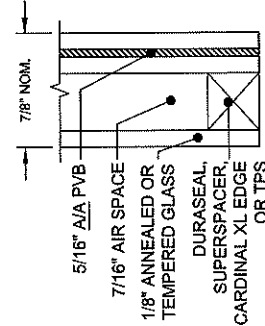
REINFORCEMENT TYPE E



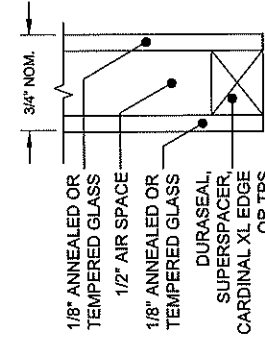
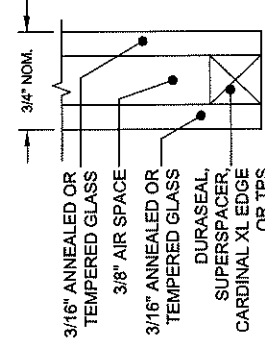
REINFORCEMENT TYPE F



TYP. GLAZING DETAIL



GLASS TYPES

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

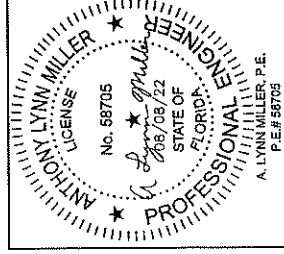
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PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600

ANCHORS AND GLAZING
VINYL HORIZONTAL ROLLER (N)

Date: 06/12/11
By: JENS ROSOWSKI

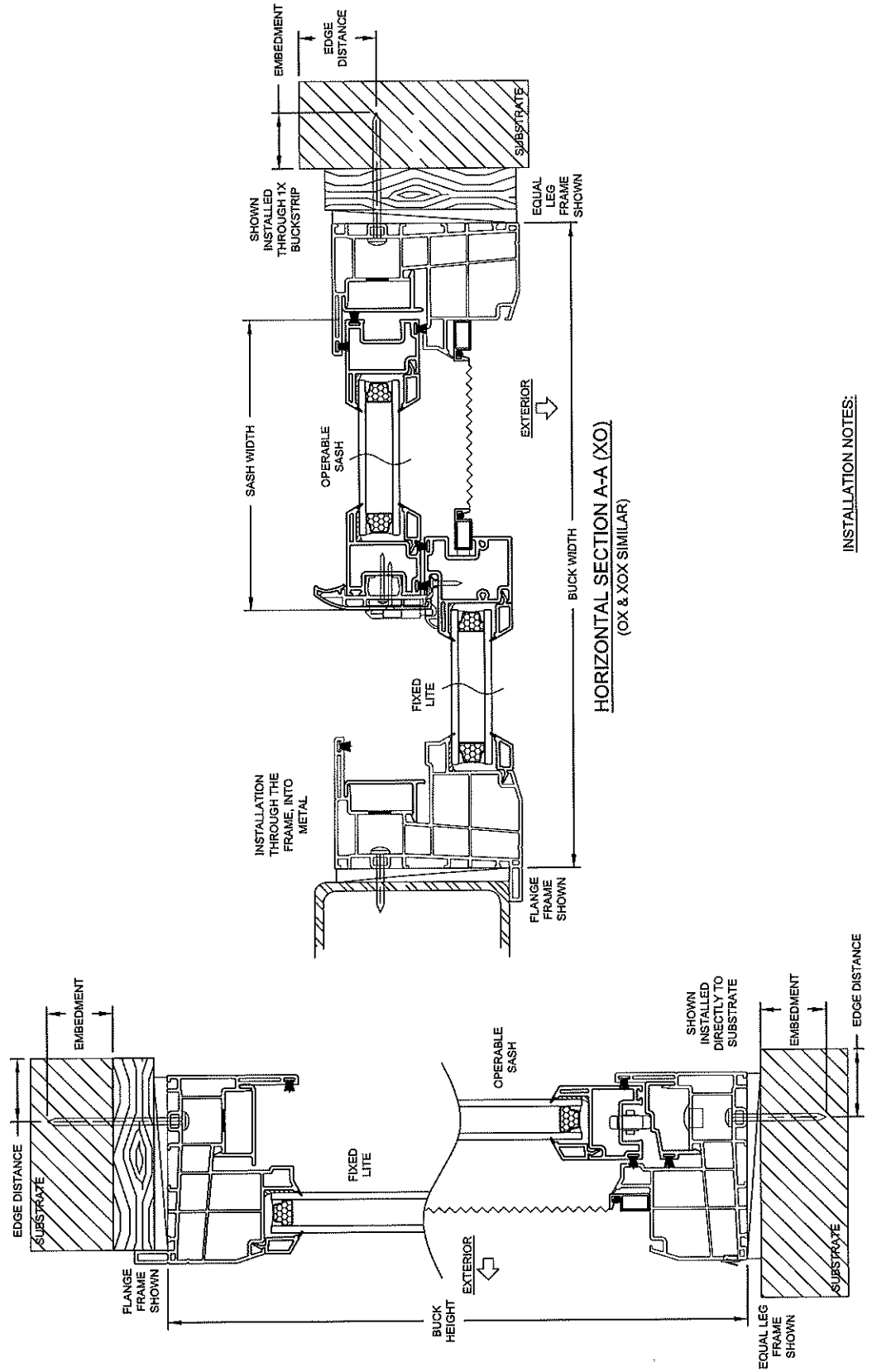
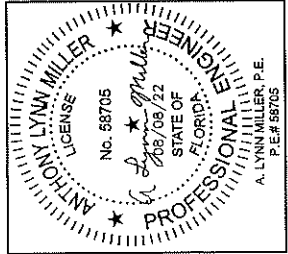
Sheet: 2 OF 4
DWG No: HR5410FPA-NI



Rev: /
Date: 08/01/22
D

UPDATED CERT. METHOD

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VINYL HORIZONTAL ROLLER (NI) Date 06/12/11 By JENS ROSOWSKI	FLANGE/EQUAL-LEG INSTALLATION HR5410V 3 OF 4 DWG No. HR5410FPA-NI



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

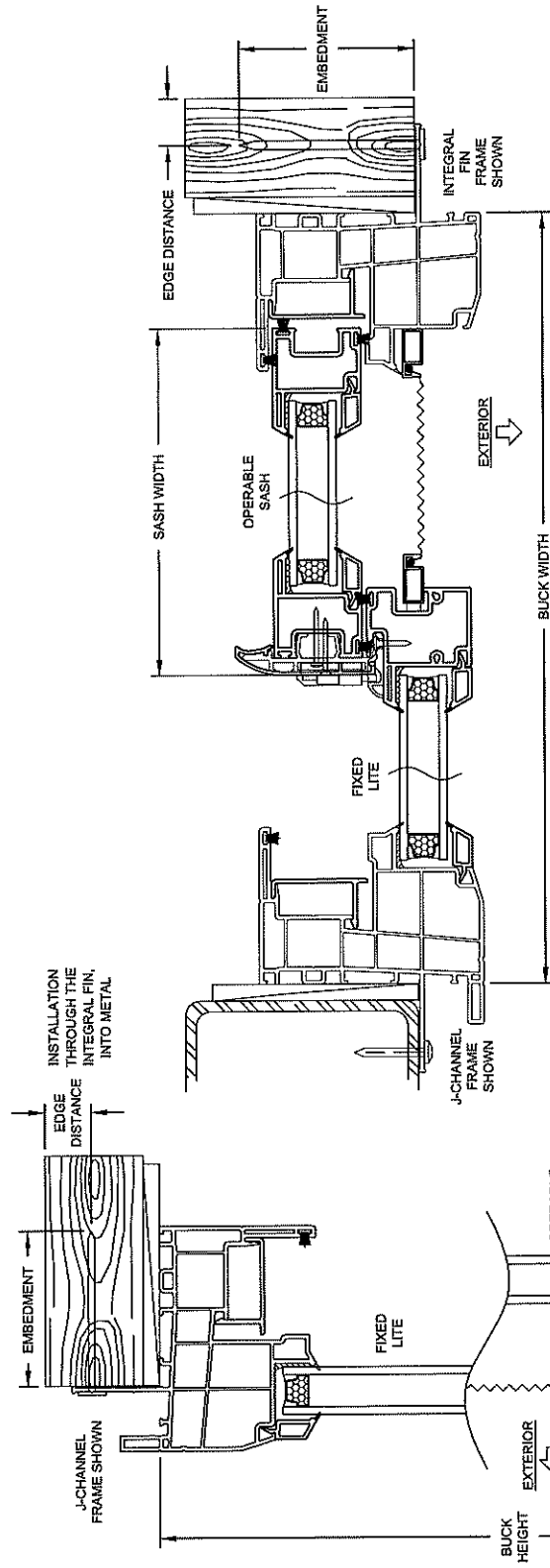
VERTICAL SECTION B-B

- 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.

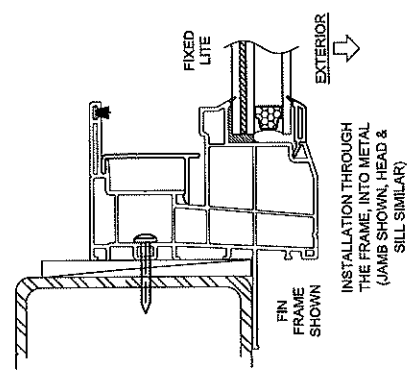
1070 TECHNOLOGY DRIVE N. VENICE, FL 34276 (941) 480-1600 REGISTRATION #29296 COPYRIGHT © 2022 PGT, INC. LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	VINYL HORIZONTAL ROLLER (NI) Date: 06/12/11 Drawn by: JENS ROSOWSKI	Sheet: HR5410V DWG No: 4 OF 4 Project: FIN INSTALLATION HR5410FPA-NI
---	---	---

PREPARED BY A. LYNN MILLER
 1070 TECHNOLOGY DRIVE
 N. VENICE, FL 34276
 (941) 480-1600

ANTHONY LYNN MILLER
 No. 68705
 State of Florida
 PROFESSIONAL ENGINEER
 A. LYNN MILLER, P.E.
 P.E.# 58705



HORIZONTAL SECTION C-C (XO)
 (OX & XOx SIMILAR)



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**

OFFICE OF THE
SECRETARY

FL #

FL1435-R26

Application Type

Revision

Code Version

2020

Application Status

Approved

FL1435.1
SH5400

Comments

Archived



Product Manufacturer

PGT Industries

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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

12/31/2023

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

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Next

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Product Approval Accepts:



SERIES SH5400V NON-IMPACT RESISTANT, VINYL SINGLE HUNG WINDOW

- 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.

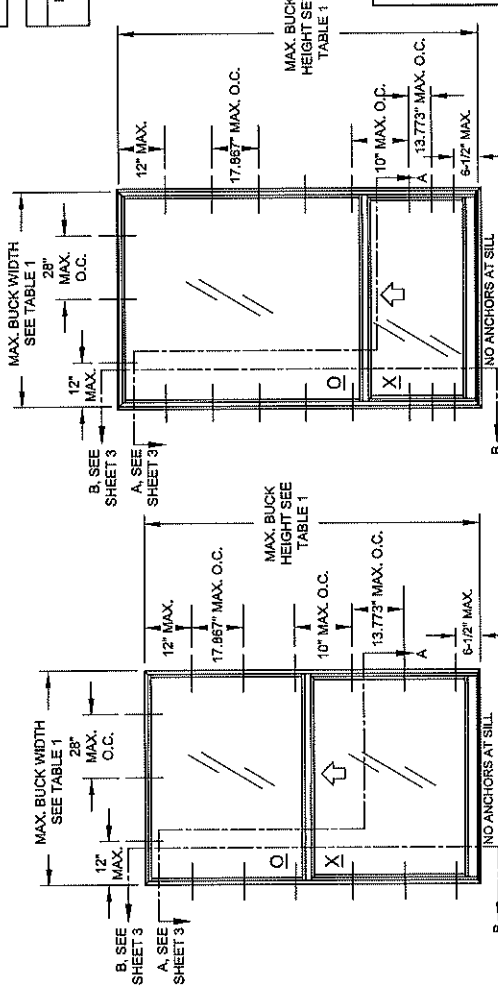
TABLE 1:

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

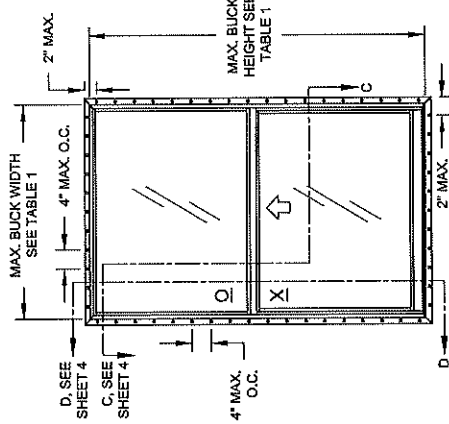
MIN. SASH HEIGHT = WINDOW BUCK HEIGHT - 50.136 (APPLIES TO ANY HEIGHT 91.78" OR LESS).

FLORIDA PRODUCT APPROVAL #1435

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



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)

SH5400V
ELEVATION & GENERAL NOTES
1 OF 4
JENS ROSOWSKI
08/12/11
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
REGISTRATION #29296
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ANTHONY LYNN MILLER
No. 58705
08/08/22
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. 3,000 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. 2,850 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"
	Concrete (min. 3 ksi)	1-3/16"	1-3/4"
	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. 3,350 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"
	Ungrouted CMU, (ASTM C-90)	2"	1-1/4"
	Concrete (min. 3,275 ksi)	1-1/2"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"

TABLE 3: ANCHORS INSTALLED THROUGH INTEGRAL FIN

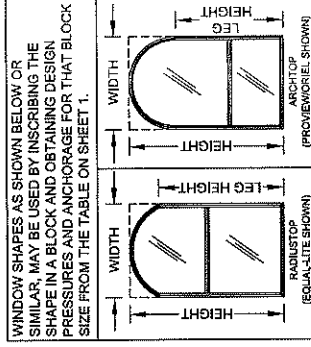
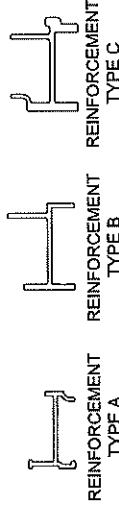
Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Common Nail Max. DP of 50.0	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	3/4"	1-3/8"
#10 SMS (steel, 18-8 S.S. or 410 S.S.)	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"
	Ungrouted CMU, (ASTM C-90)	2"	1-1/4"

ANCHOR NOTES FOR TABLES 2 & 3:

- 1) "UNGRADED 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 4: REINFORCEMENT TYPES

Level	Reinforcement			
	Upper 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



1070 TECHNOLOGY DRIVE
N. VINCE, FL 34275
(941) 480-1600
REGISTRATION #29296
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PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VINCE, FL 34275
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VINYL SINGLE HUNG WINDOW (N)

ANCHOR & GLAZING DETAILS

JENS ROSOWSKI

2 OF 4

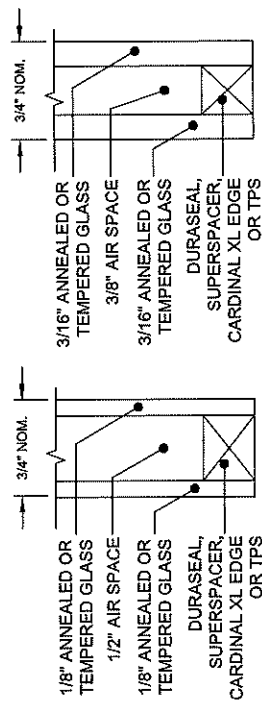
SH5400V

06/12/11

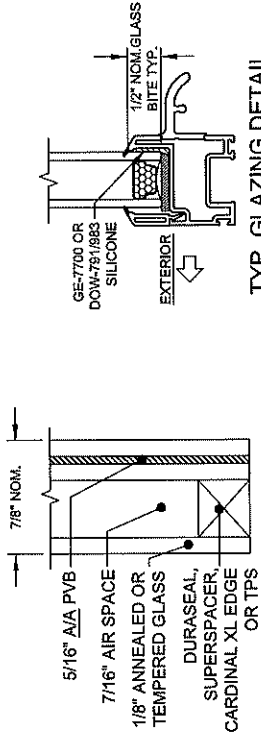
08/01/22

UPDATED CERT. METHOD

ANTHONY LYNN MILLER
No. 68705
08/08/22
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E. #55705

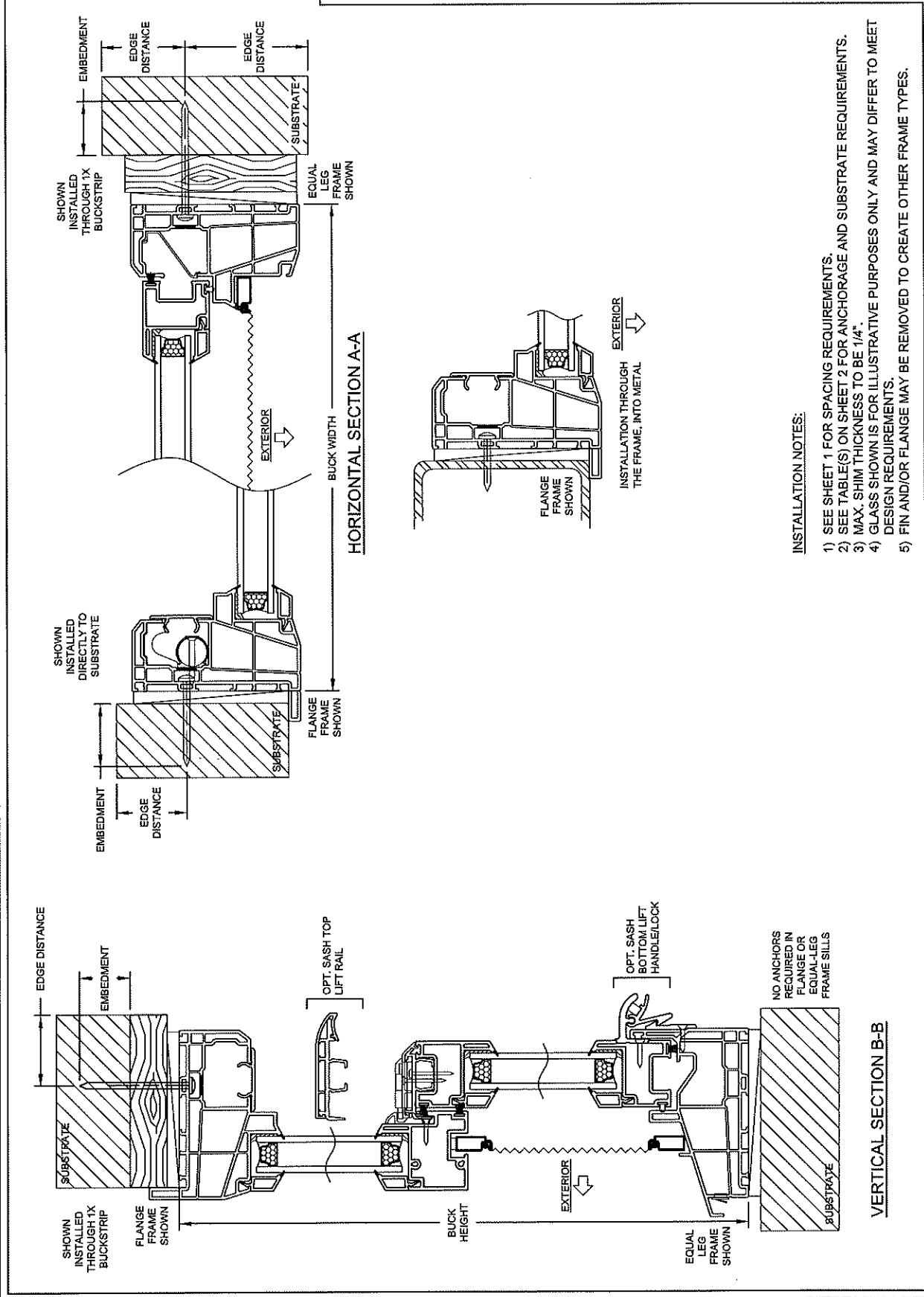
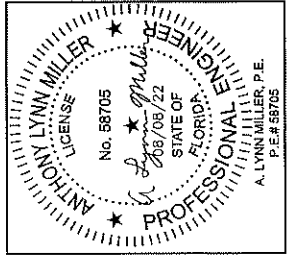


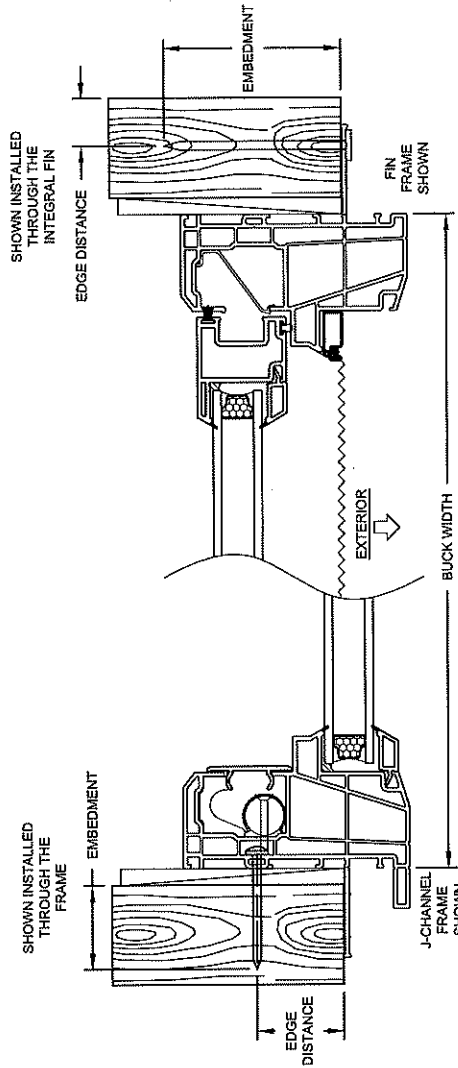
GLASS TYPES



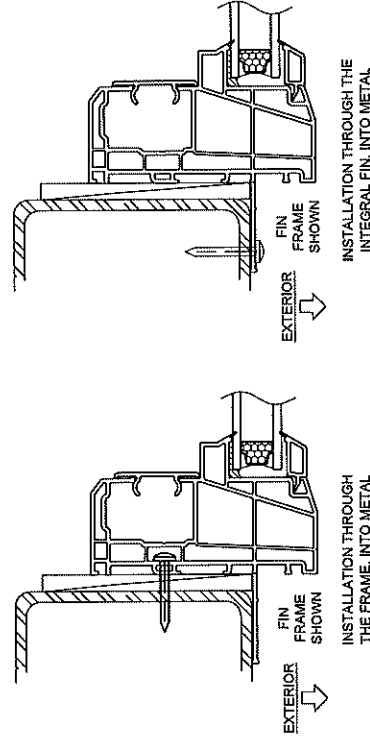
TYP. GLAZING DETAIL
PVB INTERLAYER MANUFACTURED BY
KURARAY AMERICA, INC.

Sheet	3 OF 4	SH5400V
Project	FLANGE INSTALLATION	
Client	VINYL SINGLE HUNG WINDOW (NI)	
Date	06/12/11	
Prepared by	JENS ROSOWSKI	
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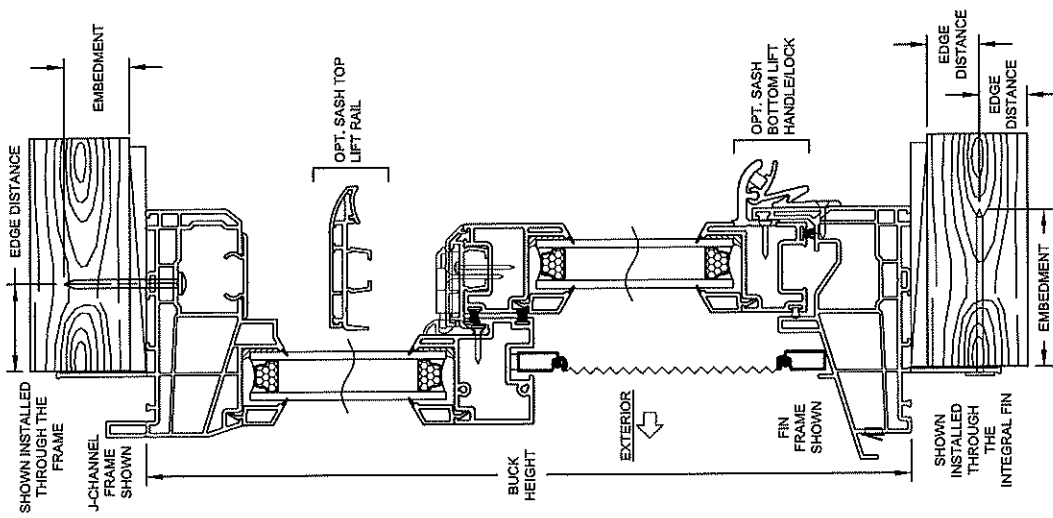


HORIZONTAL SECTION C-C



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