



Product Approval
USER: Public User

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OFFICE OF THE
SECRETARY

FL #

Application Type

Code Version

Application Status

FL331-R20

Revision

2023

Approved

FL331.2

5400 PD-F

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

Exterior Doors

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

12/31/2032

Validated By

Steven M. Urlich, PE

☒ Validation Checklist - Hardcopy Received

Certificate of Independence

[FL331_R20_COI_Cert of Independence.pdf](#)

Referenced Standard and Year (of Standard)

Standard

Year

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_R20_Equiv_ASTM E1886-04-05 to E1886-13a and E1996-05-06-09-12 to E1996-17 Equivalency Letter 2020-09-09.pdf](#)

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted 10/19/2023
 Date Validated 10/20/2023
 Date Pending FBC Approval 10/27/2023
 Date Approved 12/12/2023

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_R20_II_CD290_NI_Rev_C.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL331_R20_AE_Eng_Eval - CD290 - REV C.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_R20_II_FD5455FPA-NI - REV E.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL331_R20_AE_Eng_Eval - FD5455 - REV E.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_R20_II_FD5555FPA-LM - REV D.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL331_R20_AE_Eng_Eval - FD5555 - REV D1.pdf Created by Independent Third Party: No

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Next

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Product Approval Accepts:



SERIES FD5455, NON-IMPACT-RESISTANT, VINYL, REINFORCED, OUTSWING
FRENCH DOOR & SIDELITE/TRANSOM (SL/TR)

FLORIDA PRODUCT APPROVAL #331

DESIGN PRESSURE RATING VARIES, SEE SHEETS 4 & 5
IMPACT RATING NOT RATED FOR IMPACT RESISTANCE

TABLE 1:

Group	Anchor	Substrate	Min. Edge Distance	Min. Embedment
A	3/16" Ultracon+	Concrete (min. 3 ksi)	1-1/8"	1-3/4"
		Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
		P.T. Southern Pine (SG=0.55)	1/2"	1-3/8"
		Aluminum, 6063-T5*	5/16"	0.063"
B	3/16" Ultracon+	Steel, A36*	5/16"	0.063"
		Steel Stud, A553 Gr. 33*	5/16"	0.063"
		P.T. Southern Pine (SG=0.55)	1/2"	1-3/8"
		Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
C	1/4" Ultracon+	Concrete (min. 3 ksi)	1-1/8"	1-3/4"
		Ungrouted CMU, (ASTM C-90)	1-1/2"	1-1/4"
		P.T. Southern Pine (SG=0.55)	9/16"	1-3/8"
		Aluminum, 6063-T5*	3/8"	0.071"
D	1/4" 410 S.S. CretaFlex	Steel, A36*	3/8"	0.071"
		Steel Stud, A553 Gr. 33*	3/8"	0.071" (14 Ga)
		P.T. Southern Pine (SG=0.55)	1"	1-3/8"
		GROUTED CMU, (ASTM C-90)	1-1/4"	1-3/8"
E	1/4" 410 S.S. CretaFlex	Concrete (min. 3 ksi)	1"	1-3/8"
		Concrete (min. 3.35 ksi)	1-1/4"	1-3/8"
		Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
		Concrete (min. 3.35 ksi)	2-1/2"	1-3/4"

- 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. (DOONE 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, SIDELITE 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 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 STRESS 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.
- 11) 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	7/16" IG (1/8" TP Cap - Airspace - 1/8" TP)
2	7/16" 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 TROSGLO PVB INTERLAYER BY KURARAY AMERICA, INC.
AN = ANNEALED
TP = TEMPERED

TABLE A:

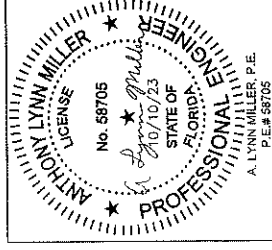
Product	Size	DP	Product Rating
Mullion	96"	+/-70 psf	DP +/-70
Door	38-3/4" x 96" (X) 76" x 96" (XX)	+/-70 psf	R-PG70
Sidelite or Transom	40" x 111" 111" x 40"	+/-70 psf	R-PG70

GUIDE TO SHEETS:

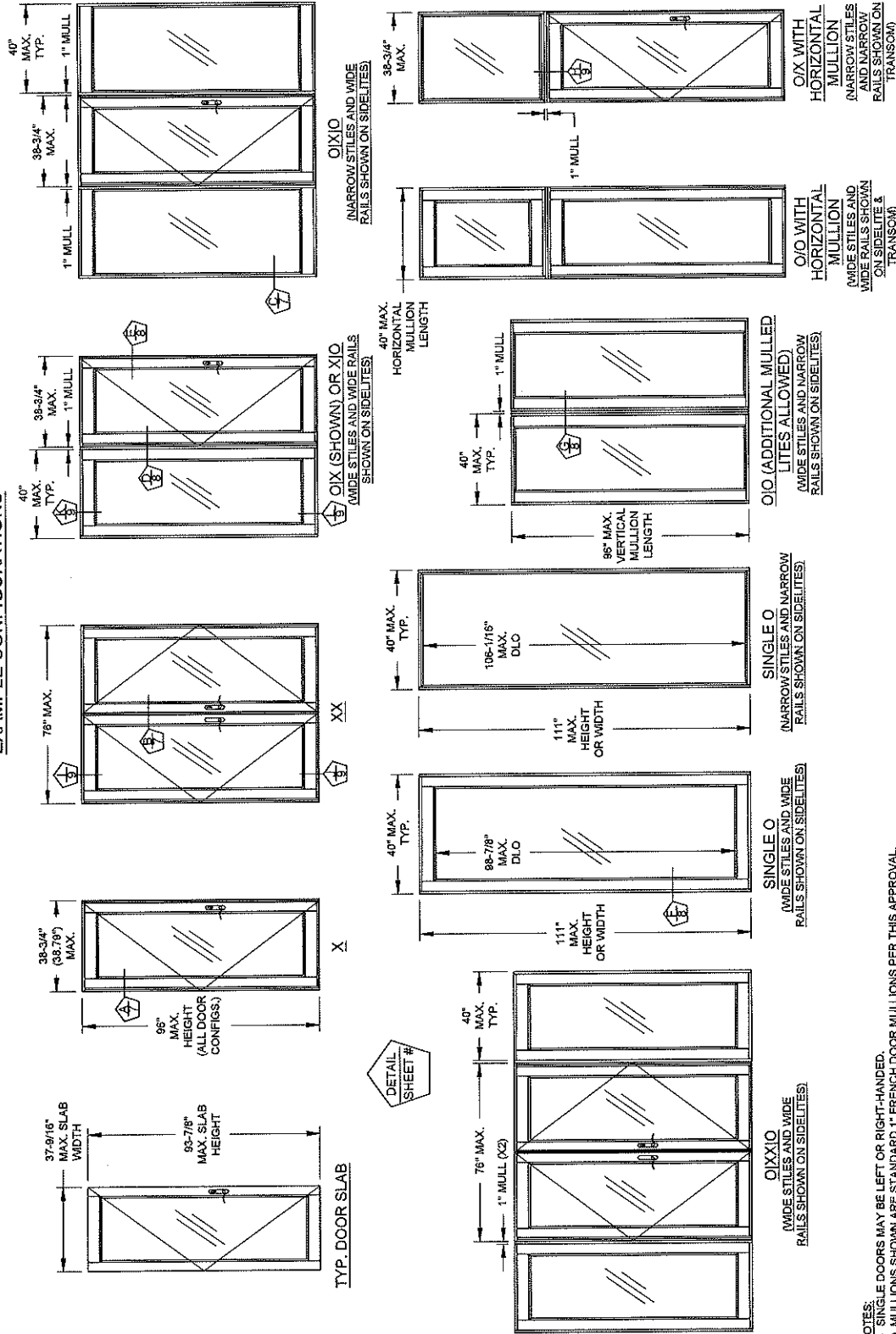
GENERAL NOTES.....	1
ELEVATIONS.....	2
GLAZING DETAILS.....	3
DESIGN PRESSURES.....	4-5
ANCHORAGE.....	4-5
INSTALLATION.....	8-9
EXTRUSION PROFILES.....	9
PARTS LIST.....	10
CORNER DETAILS.....	10
HARDWARE DETAILS.....	11

E) REMOVE 1/4" & 3/16"
ULTRA CON

Sheet	FD5455
1 OF 11	
Drawn By	A. MORLESIN
Date	06/12/11
REGISTRATION #29296	
PREPARED BY A LYNN MILLER	
1070 TECHNOLOGY DRIVE	
N. VENICE, FL 34275	
(941) 480-1600	
Custom Windows and Doors	
1070 TECHNOLOGY DRIVE	
N. VENICE, FL 34275	
(941) 480-1600	
PGT	
GENERAL NOTES.	
VINYL FRENCH DOOR (N)	
FD5455FPA-NI	



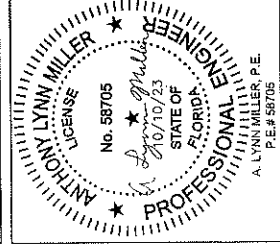
EXAMPLE CONFIGURATIONS



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

E) NO CHANGES IN THIS SHEET.

FD5455		Sheet	2 OF 11		DWG No.	FD5455FPA-NI		Rev.	E	
EXAMPLES CONFIGURATIONS.									Drawn By	A. MORLESIN
VINYL FRENCH DOOR (N)									Date	06/12/11
PGT			Custom Windows and Doors			1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600			REGISTRATION #29296	
PREPARED BY A. LYNN MILLER			(941) 480-1600			1070 TECHNOLOGY DRIVE N. VENICE, FL 34275				



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

PREPARED BY A. LYNN MILLER
CUSTOM WINDOWS AND DOORS
REGISTRATION #29296

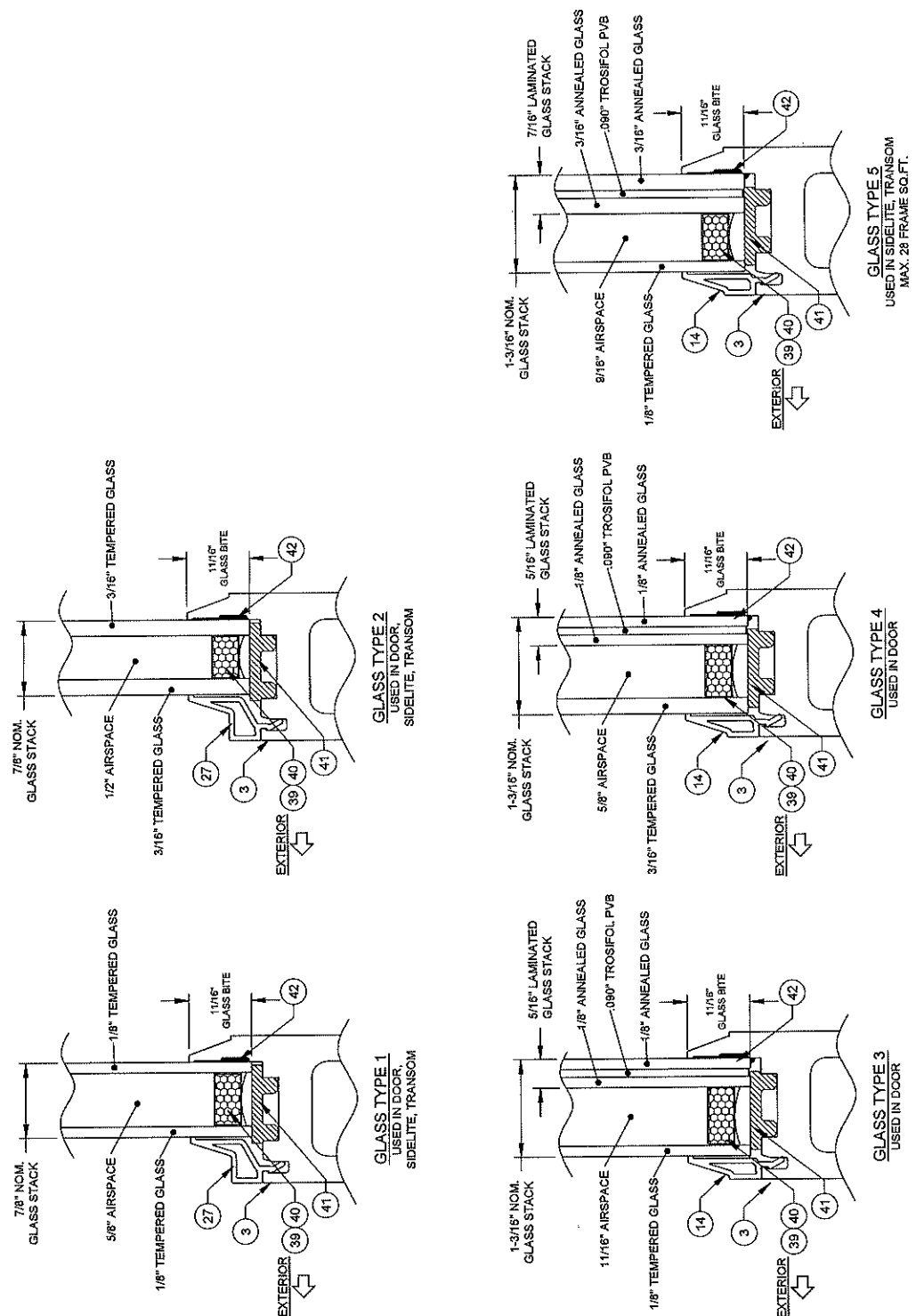
DATE: 06/12/11
DRAWN BY: A. MORLESIN
SHEET: 3 OF 11
DWG NO: FD5455FPA-NI

GLASS TYPES.

VINYL FRENCH DOOR (NI)

ANTHONY LYNN MILLER
No. 58705
10/10/23
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E. # 58705

E) NO CHANGES IN THIS SHEET.



SINGLE DOOR INSTALLATION (X)

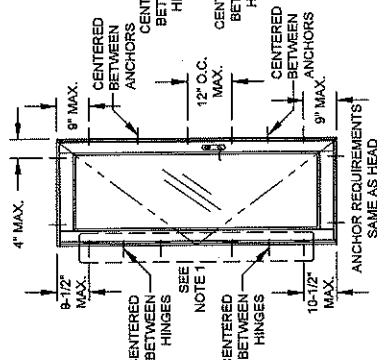


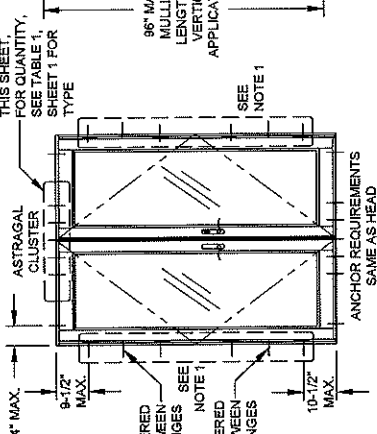
TABLE 3:
DOOR DESIGN PRESSURE

+/-50.0 PSF	Glass Types 1, 3, 4
+/-70.0 PSF	Glass Type 2

TABLE 4:
XX Door: Astragal Cluster Anchors Required
@ Head & Sill

Door Height (in)	Door Width (in)					
	48	60	72	76	80	96
Anchor A-D	4	4	4	4	4	4
Anchor A&B	4	4	4	4	4	4
Anchor C&D	4	4	4	4	4	4
Anchor A&B	4	4	4	4	4	4
Anchor C&D	4	4	4	4	4	4
Anchor A&B	4	4	4	4	4	4
Anchor C&D	4	4	4	4	4	4

DOUBLE DOOR INSTALLATION (XX)



XX, (USING ASTRAGAL)

SIDELITE-TO-SIDELITE MULLION INSTALLATION (OIO, OIOIO, ETC.)

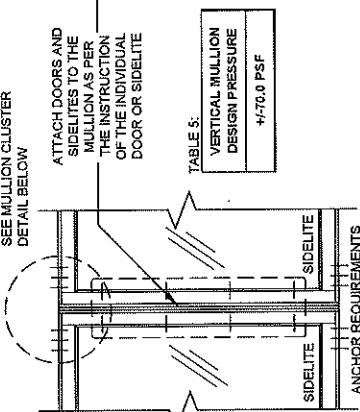
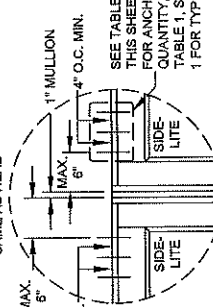


TABLE 5:
VERTICAL MULLION
DESIGN PRESSURE

+/-70.0 PSF



SIDELITE-TO-DOOR MULLION INSTALLATION (XIO, OIX, XIX, OXIO, XIOX, OXXIO, ETC.)

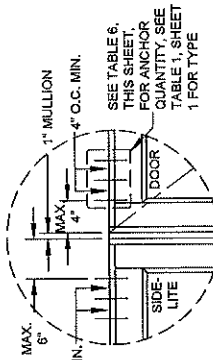
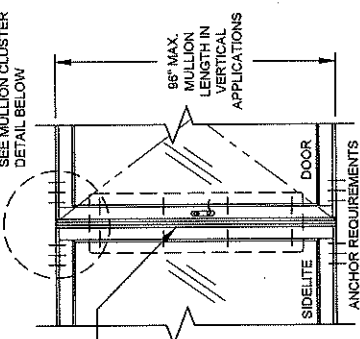


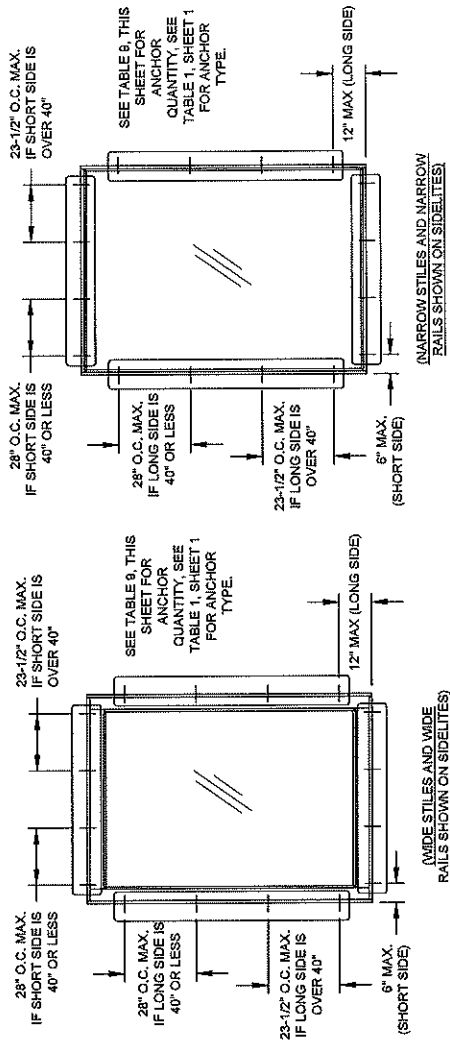
TABLE 6: Anchors Required for a Vertical Mullion (each mullion end)										FOR "OXXIO" AND SIMILAR CONFIGURATIONS CONTAINING A DOUBLE DOOR (XX), USE ONLY HALF OF THE FRAME WIDTH OF THE DOUBLE DOOR WHEN USING THIS TABLE.
		Door or Sidelite/Transom Width (in)						40		
		12	24	32	36-3/4					
Door SL/TT	Mullion Height (in)	Anchor Group A-D	Anchor Group A-C	Anchor Group A&B	Anchor Group C	Anchor Group D	Anchor Group A&B	Anchor Group C	Anchor Group D	
	80	1	2	2	2	3	2	1	N/A	
Door SL/TT	56	1	2	1	2	1	3	2	3	
	40	N/A	2	1	3	2	1	3	2	

SIDELITE/TRANSOM INSTALLATION (C)

TABLE 8:

WINDOW DESIGN PRESSURE	
+/-70.0 PSF	Glass Types 1, 2, 5

NOTE: GLASS TYPE 5 LIMITED TO MAX. CF 28 SQ.FT.



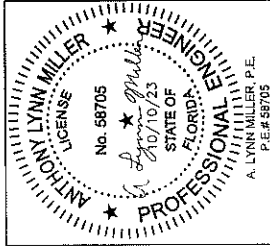
- NOTES:
- 1) NARROW OR WIDE STILES AND RAILS MAY BE MIXED WITHIN THE SAME SIDELITE/TRANSOM OR MULLED ASSEMBLY.
 - 2) SIDELITE/TRANSOM MAY BE A SINGLE STAND-ALONE UNIT.
 - 3) FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE SHORT OR LONG DIMENSION.

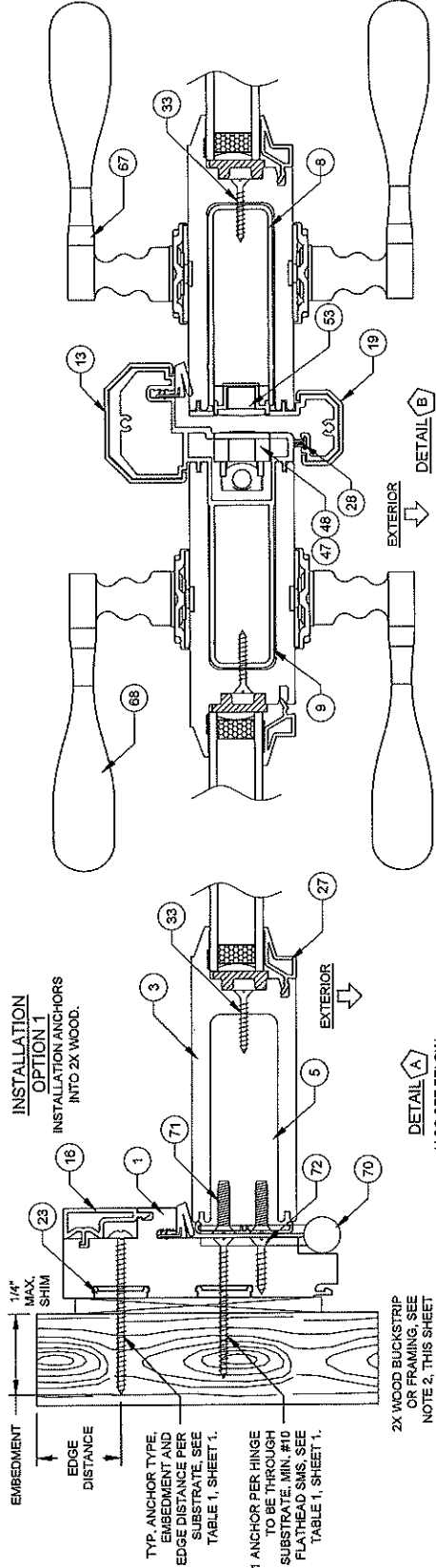
TABLE 9:

		Sidelite/Transom Anchor Quantity															
		Long Side (in)															
Short Side (in)	Long Side (in)	63-3/16	66-5/8	68	70	72	76	78	82	84	88	92	96	98	104	108	111
		Anchor Group A	Anchor Group B-D	Anchor Group A	Anchor Group B-D	Anchor Group A	Anchor Group B-D	Anchor Group A	Anchor Group B-D	Anchor Group A	Anchor Group B-D	Anchor Group A	Anchor Group B-D	Anchor Group A	Anchor Group B-D	Anchor Group A	Anchor Group B-D
24	Short Side	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Long Side	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
28	Short Side	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Long Side	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
32	Short Side	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Long Side	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
36	Short Side	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Long Side	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
38-3/4	Short Side	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Long Side	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
40	Short Side	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Long Side	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

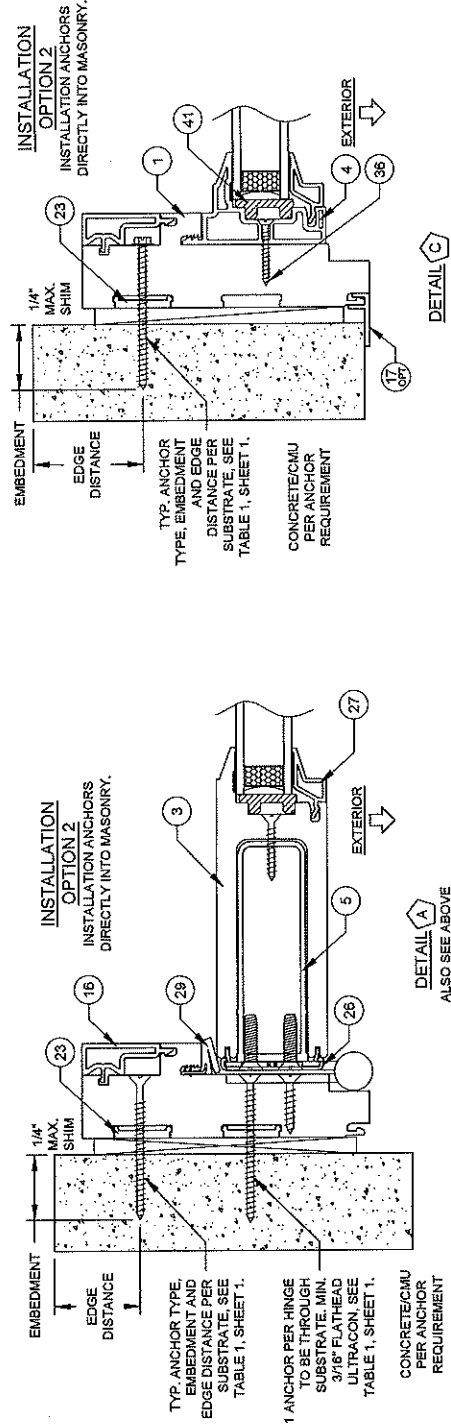
E) NO CHANGES IN THIS SHEET.

PREPARED BY A. LYNN MILLER
 1070 TECHNOLOGY DRIVE
 N. VENICE, FL 34275
 (941) 480-1600
 CUSTOM WINDOWS AND DOORS
 REGISTRATION #29296
 DATE 06/12/11
 DRAWN BY A. MORLESIN
 DWG NO. 5 OF 11
 SHEET FD5455
 DP & ANCHORAGES
 VINYL FRENCH DOOR (N)





DETAIL A
ALSO SEE BELOW



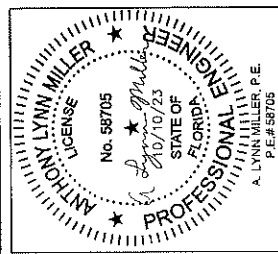
DETAIL A
ALSO SEE ABOVE

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.

Revision:
E) NO CHANGES IN THIS SHEET.

PGT 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (841) 480-1600 CUSTOM WINDOWS AND DOORS PREPARED BY A. LYNN MILLER		Title: VINYL FRENCH DOOR (NI) Date: 06/12/11 Drawn By: A. MORLESIN Check By: A. MORLESIN Sheet: 6 OF 11 Project: FD5455FPA-NI
REGISTRATION #29296		



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

PREPARED BY A. LYNN MILLER
 REGISTRATION #29296

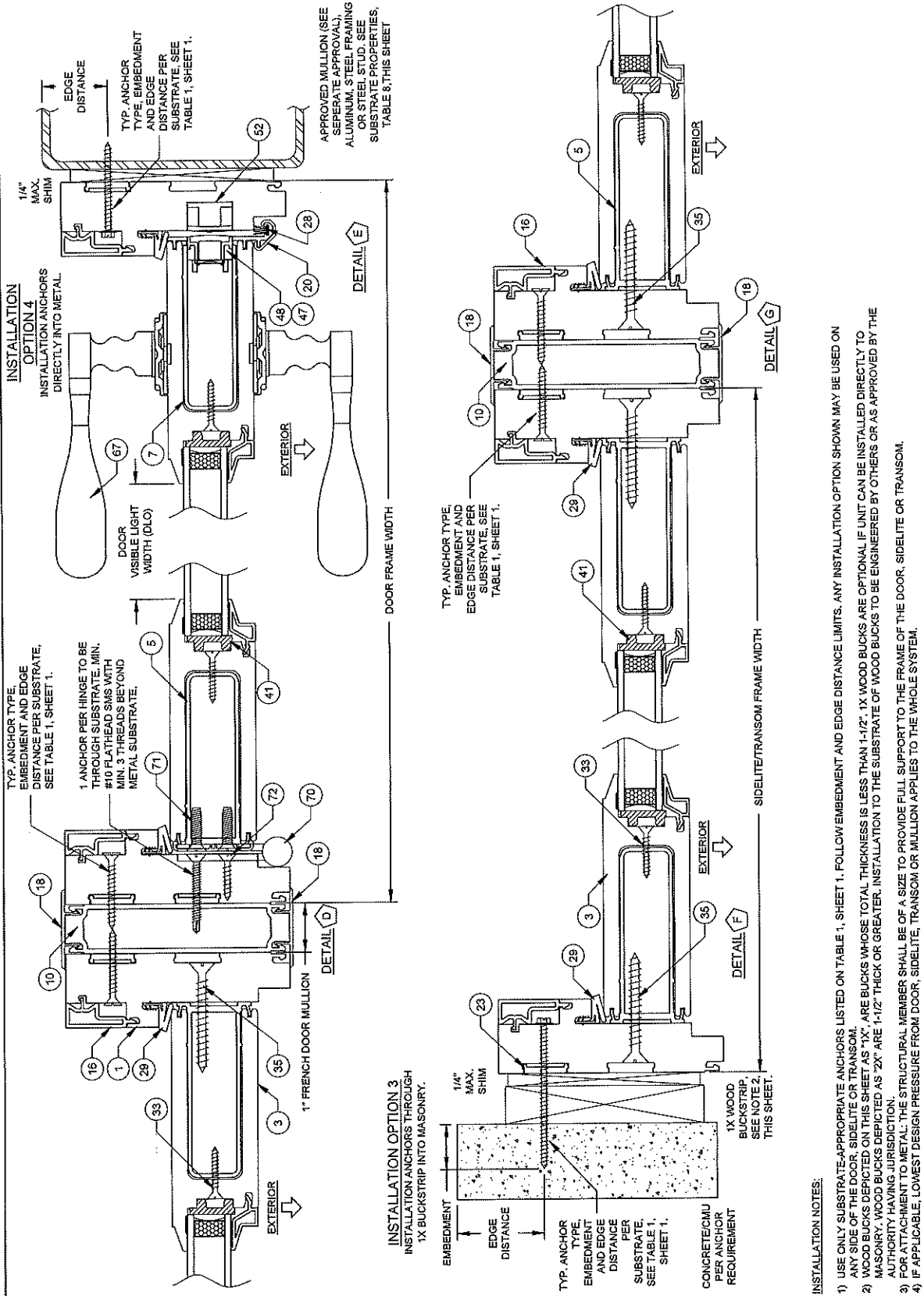
INSTALLATION DETAILS

Serial Desc: Title
 FD5455 VINYL FRENCH DOOR (NI)
 7 OF 11
 06/12/11

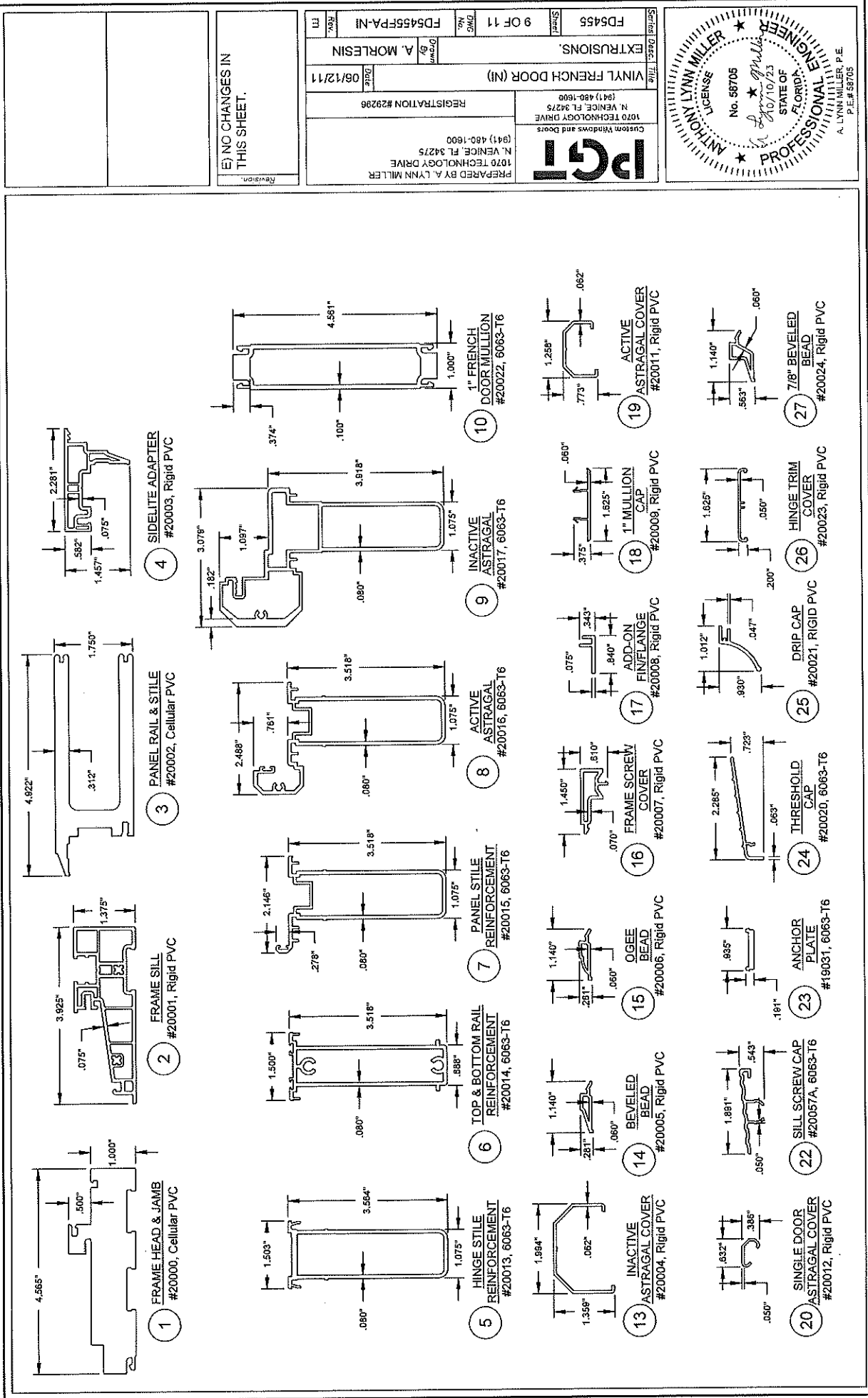
Author: A. MORLESIN
 Date: 06/12/11

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

E) NO CHANGES IN THIS SHEET.



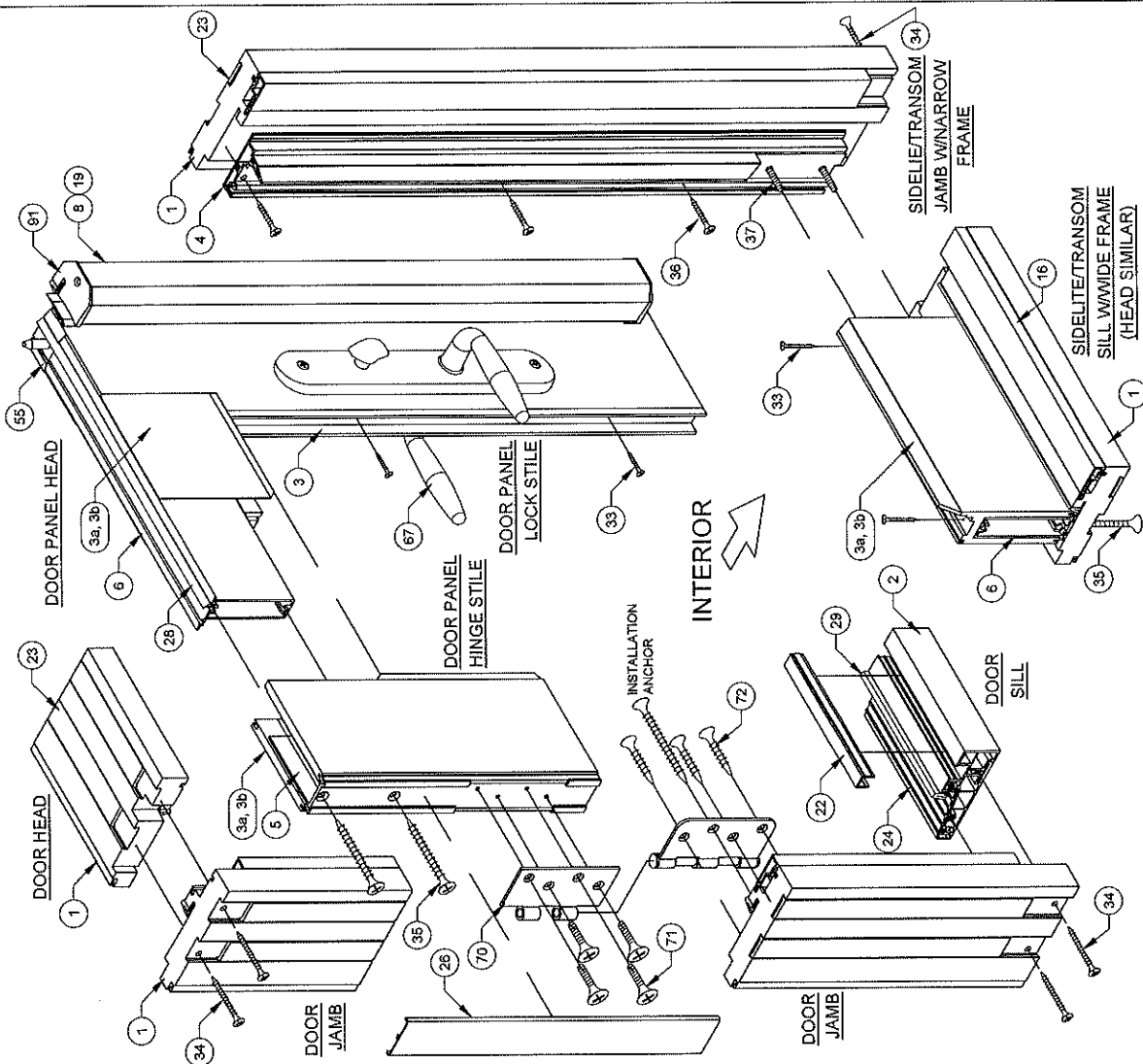
- INSTALLATION NOTES:**
- 1) USE ONLY SUBSTRATE APPROPRIATE ANCHORS LISTED ON TABLE 1. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE DOOR, SIDELITE OR TRANSOM.
 - 2) WOOD BUCKS DEPICTED ON THIS SHEET AS "1X" ARE BUCKS WHOSE TOTAL THICKNESS IS 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 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.



#	PGT Part #	Description	Material
1	2000	Door & Sidelite/Transom Main Frame	Cellular PVC
2	2001	Door Frame Sill	Rigid PVC
3	2002	Panel Sillie & Rail	Cellular PVC
4	2003	Sidelite Adapter	Rigid PVC
5	20013	Hinge Sillie Reinforcement	Alum. 6063-T6
6	20014	Panel Rail Reinforcement	Alum. 6063-T6
7	20015	Panel Sillie Reinforcement	Alum. 6063-T6
8	20016	Active Astragal	Alum. 6063-T6
9	20017	Inactive Astragal	Alum. 6063-T6
10	20022	1" French Door Mullion	Alum. 6063-T6
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	Add-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
21	20057A	Sill Screw Cover	Rigid PVC
22	19031	Anchor Plate	Alum. 6063-T6
23	20020	Threshold Cover	Alum. 6063-T6
24	20021	Drip Cap	Rigid PVC
25	20023	Hinge Trim Cover	Rigid PVC
26	20024	7/8" Beveled Bead	Rigid PVC
28	18713	Fin Weatherstrip	Fin Weatherstrip
29	174FPT410XW	Frame-to-Vitrue Slab Screw: #14 X 1-1/2" Phil. FH	Stainless Steel
31	75101X	Frame-to-Narrow Slab Screw: #10 X 1" Phil. FH	Stainless Steel
32	75101X	Reinforcement Screw: #8 X 1" Phil. FH	Stainless Steel
33	75101X	Frame Assembly Screw: #10 X 2" Phil. FH	Stainless Steel
34	7102FPFAX	Frame Assembly Screw: #10 X 2" Phil. FH	Stainless Steel
35	714FPT410XW	Vitrue Slab Assembly Screw: #14 X 1-1/2" Phil. FH	Stainless Steel
36	75101X	N-H 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	Setting Block: (Dura-Seal +/- .5)	EPDM
42		Backbedding: Dow-791, 953, 995 or GE-7700	Silicone
43		Argon Gas	
44	6H-L5140	Hot Melt Butyl	
47	73	see Hardware BOM, Table B, Sheet 12	
50	20033	Inactive Astragal Cap	Acetal
51	20035	Active Astragal Cap	Acetal

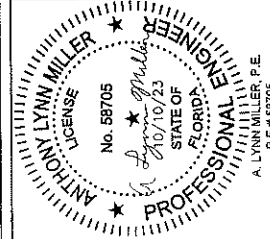
DAYLITE OPENING (DLO) SIZES

WHEN USING PART #3: (WIDE RAILS OR STILES)
 X DOOR FRAME HEIGHT - 12.1 = DLO HEIGHT
 X DOOR FRAME WIDTH - 12.1 = DLO WIDTH
 XX DOOR FRAME HEIGHT / 20 - 12.1 = DLO HEIGHT
 XX DOOR FRAME WIDTH / 20 - 11.7 = DLO WIDTH
 SLITTR FRAME HEIGHT - 12.1 = DLO HEIGHT
 SLITTR FRAME WIDTH - 12.1 = DLO WIDTH
 WHEN USING PART #4: (NARROW RAILS OR STILES)
 SLITTR FRAME HEIGHT - 4.9 = DLO HEIGHT
 SLITTR FRAME WIDTH - 4.9 = DLO WIDTH

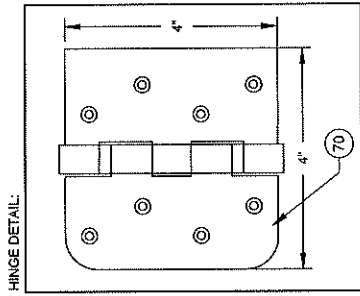
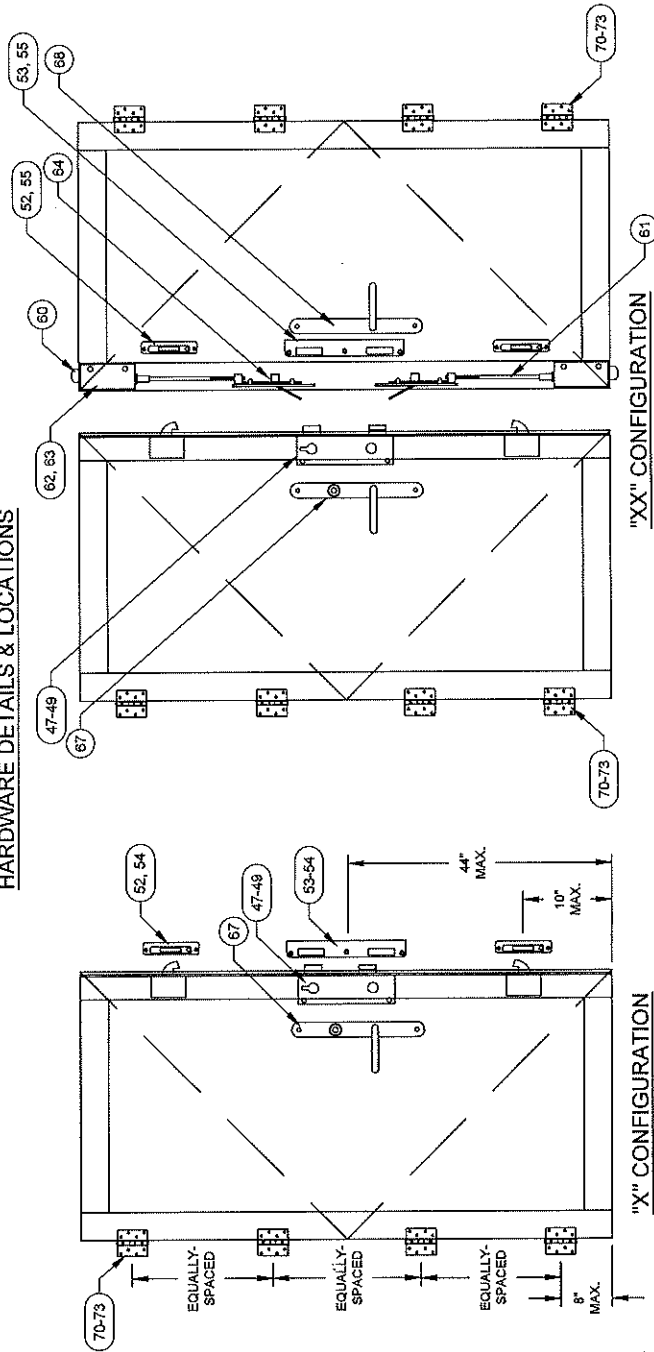


E) NO CHANGES IN THIS SHEET.

PGT Custom Windows and Doors 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		PREPARED BY A. LYNN MILLER REGISTRATION #28296 DATE 06/12/11
BOM & ASSEMBLY DETAILS. VINYL FRENCH DOOR (NI) Drawn By: A. MORLESIN Date: 06/12/11		Sheet: FD6455 10 OF 11 No. FD6455PA-NI



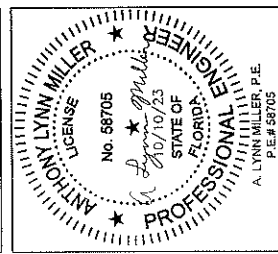
HARDWARE DETAILS & LOCATIONS



#	PGT Part #	Description	Material
47	866032701	P3000 3-PT Rhino Lock (68")	
48	866032702	P3000 3-PT Rhino Lock (over 68")	
49	71032X1FFPX	Rhino Lock Screw: 10-32 X 1" Phil. FH	
50	20027	Adjustable Strike Plate Assembly	Stainless Steel
51	20028	Center Strike Plate Assembly	Stainless Steel
52	75101X	Strike Plate Screw, (X): #10 X 1" Phil. FH	410 S.S.
54	78X12P1HUX	Strike Plate Screw, (XX): #8 X 1/2" Phil. FH	410 S.S.
60	75B1202	Flush Bolt (XX)	
61	7803725	Flush Bolt Rod (XX)	
62	420034	Flush Bolt Guides (XX)	
63	7832X12FPXP	Flush Bolt Screw: 6-32 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	Handle/Lever	
68	varies	Dummy Handle/Lever	
70	20025	Butt Hinge	Stainless Steel
71	71032X1FFPX	Hinge, Stab Screw: #10-32 X 1" Phil FH	Stainless Steel
72	75101X	Hinge, Frame Screw: #10 X 1" Phil. FH	Stainless Steel

E) NO CHANGES IN THIS SHEET.

PGT
 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 #29298
 Date: 06/12/11
 By: A. MORLESIN
 Title: HARDWARE
 Sheet: 11 OF 11
 DWG No: FD6455FPA-NI
 Rev: M





Product Approval
USER: Public User

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



FL #

Application Type

Code Version

Application Status

FL1435-R27

Revision

2023

Approved

FL1435.1

5400 SH

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

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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

12/31/2032

Validated By

Steven M. Ulrich, PE

☒ Validation Checklist - Hardcopy Received

Certificate of Independence

[FL1435 R27 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

10/19/2023

Date Validated

10/20/2023

Date Pending FBC Approval

10/27/2023

Date Approved

12/12/2023

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 R27 II SH5400-NI - REV D.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1435 R27 AE Eng Eval - SH5400 - REV D.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 R27 II SH5500LMI - REV C.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1435 R27 AE Eng Eval - SH5500 - REV C1.pdf Created by Independent Third Party: No

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Product Approval Accepts:



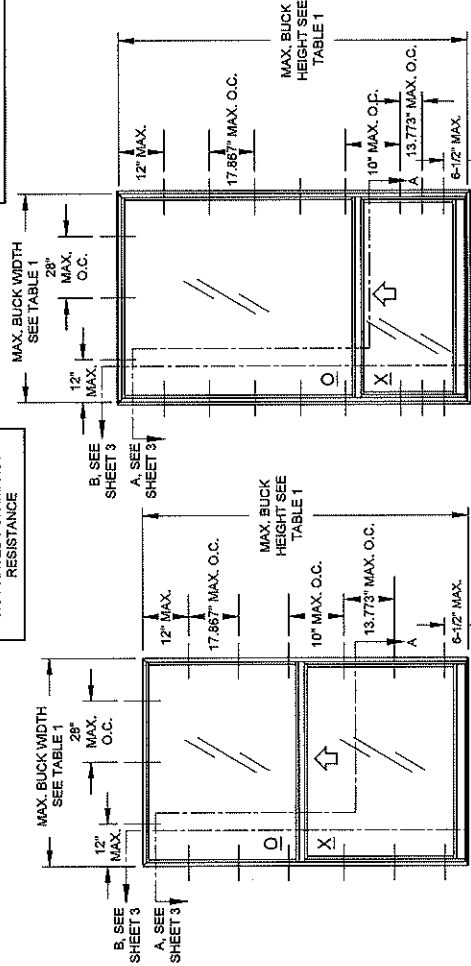
SERIES SH5400 NON-IMPACT RESISTANT VINYL SINGLE HUNG WINDOW

- 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 1.8 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.
- FRAME FLANGES OR INTEGRAL FINS MAY BE TRIMMED IN-FIELD TO CREATE EQUAL-LEG FRAME.

FLORIDA PRODUCT APPROVAL #435

DESIGN PRESSURE RATING
SEE TABLE 1

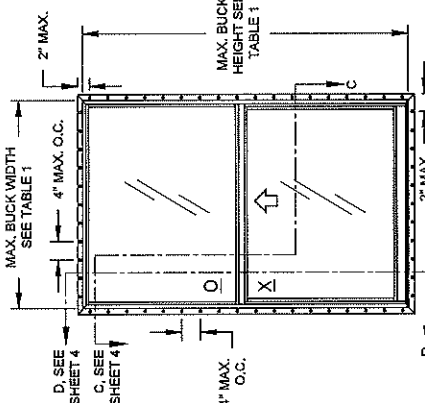
IMPACT RATING
NOT RATED FOR IMPACT
RESISTANCE



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

ELEVATION FOR TYP. FLANGE FRAME,
PROVISIONAL 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)

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. Provisional	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"	91-13/16"	91-13/16"	Std. Provisional				
52-1/8"	84"	84"	Equal-lite	R2	65.0	70.0	LC-PG65
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).

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 33475
(941) 480-1600

REGISTRATION #29296

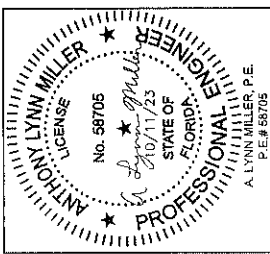
VINYL SINGLE HUNG WINDOW (N)

DATE: 06/14/11

DESIGNER: A. MORLESIN

SHEET: 1 OF 4

PROJECT: SH5400PPA-NI



NO CHANGES ON THIS SHEET.

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"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Ultracon+	Concrete (min. 3 ksi)	1-3/16"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 3.35 ksi)	1"	1-3/4"
1/4" Crete-Flex (410 S.S.)	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	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

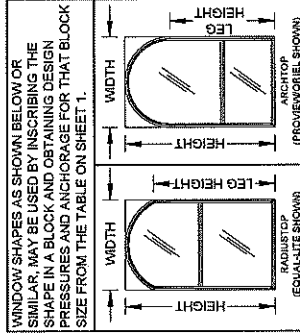
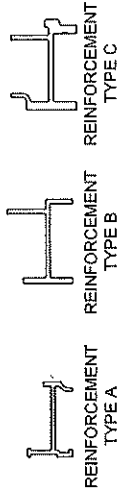
Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Common Nail Max. DP of 50.0	P.T. Southern Pine (SG=55)	9/16"	2-7/16"
	P.T. Southern Pine (SG=55)	9/16"	2-7/16"
	P.T. Southern Pine (SG=55)	9/16"	2-7/16"
	P.T. Southern Pine (SG=55)	3/4"	1-3/8"
#10 SMS (steel, 18-8 S.S. or 410 S.S.)	Aluminum,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

ANCHOR NOTES FOR TABLES 2 & 3:

- "UNGRADED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.
- ALL ANCHOR HEAD TYPES 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	Bottom Rail	Side Rails
R1	B	A	A	A
R2	C	A	A	A
R4	B	A	A	N/A



D) REMOVED ULTRACON
1/4" & 3/8" FROM
ANCHOR TABLES.

PGT
Custom Windows and Doors
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1800

PREPARED BY A. LYNN MILLER
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N. VENICE, FL 34275
(941) 480-1800

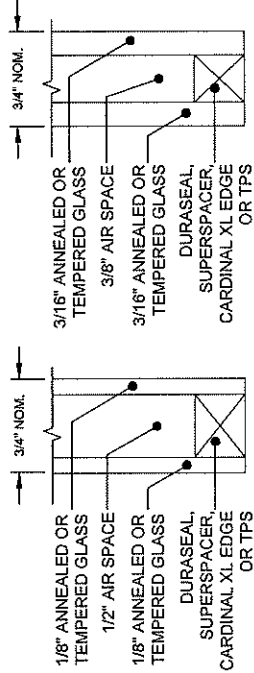
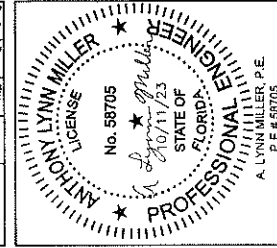
REGISTRATION #29296

DATE 06/12/11

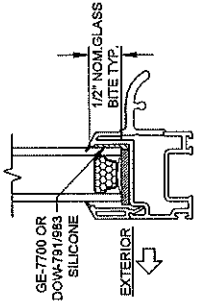
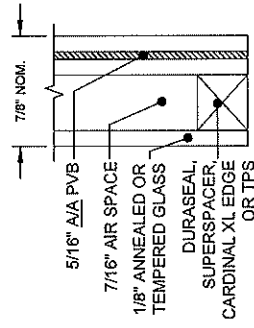
ANCHOR & GLAZING DETAILS.
A. MORLESIN

2 OF 4

SH5400



GLASS TYPES



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

PGT

PREPARED BY A. LYNN MILLER
1970 TECHNOLOGY DRIVE
N. VENICE, FL 33429
(941) 480-1800

REGISTRATION #29296

DATE: 06/12/11

DRAWN BY: A. MORLESIN

DESIGN: SH5400

SHEET: 3 OF 4

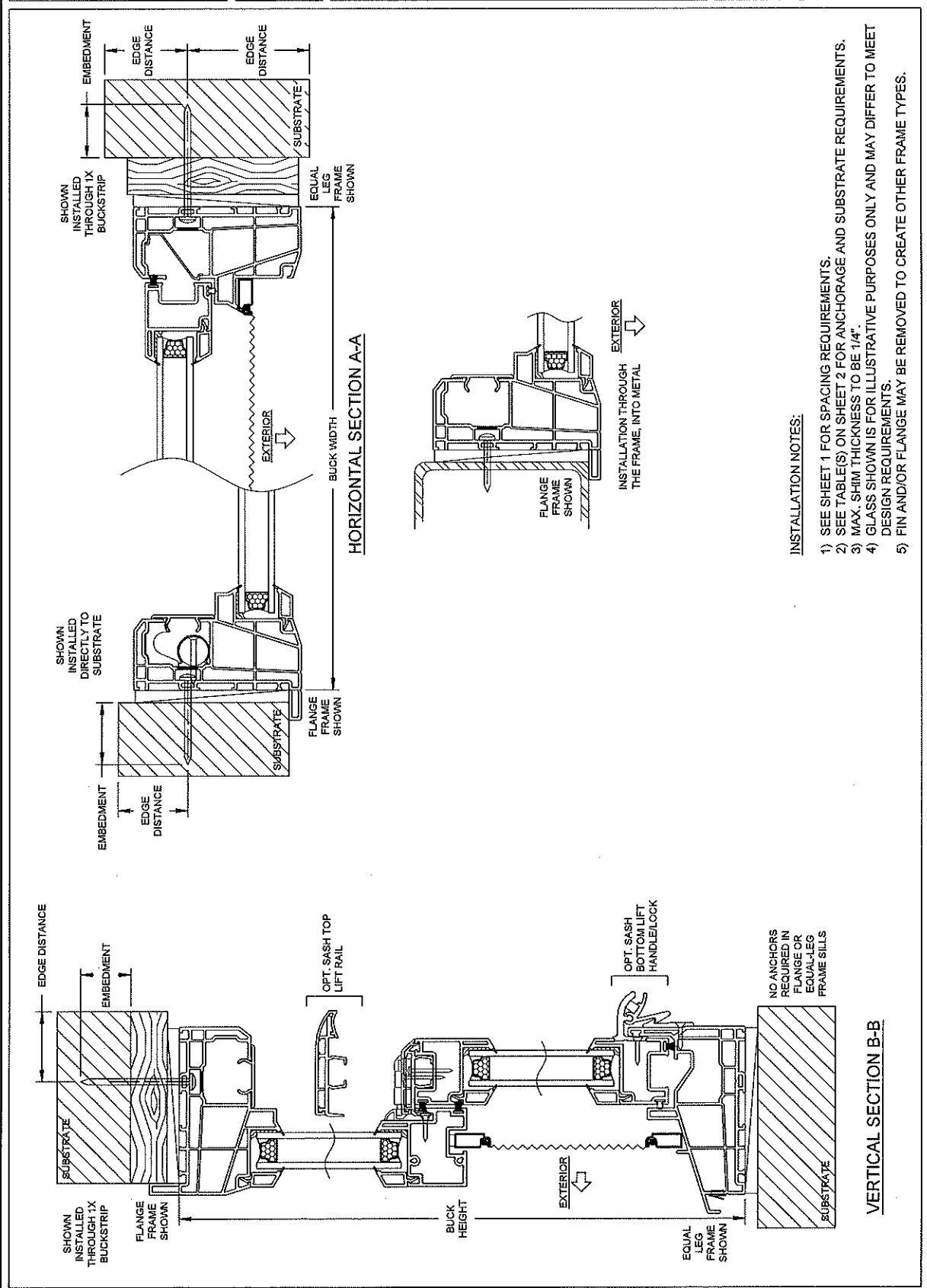
REV: D

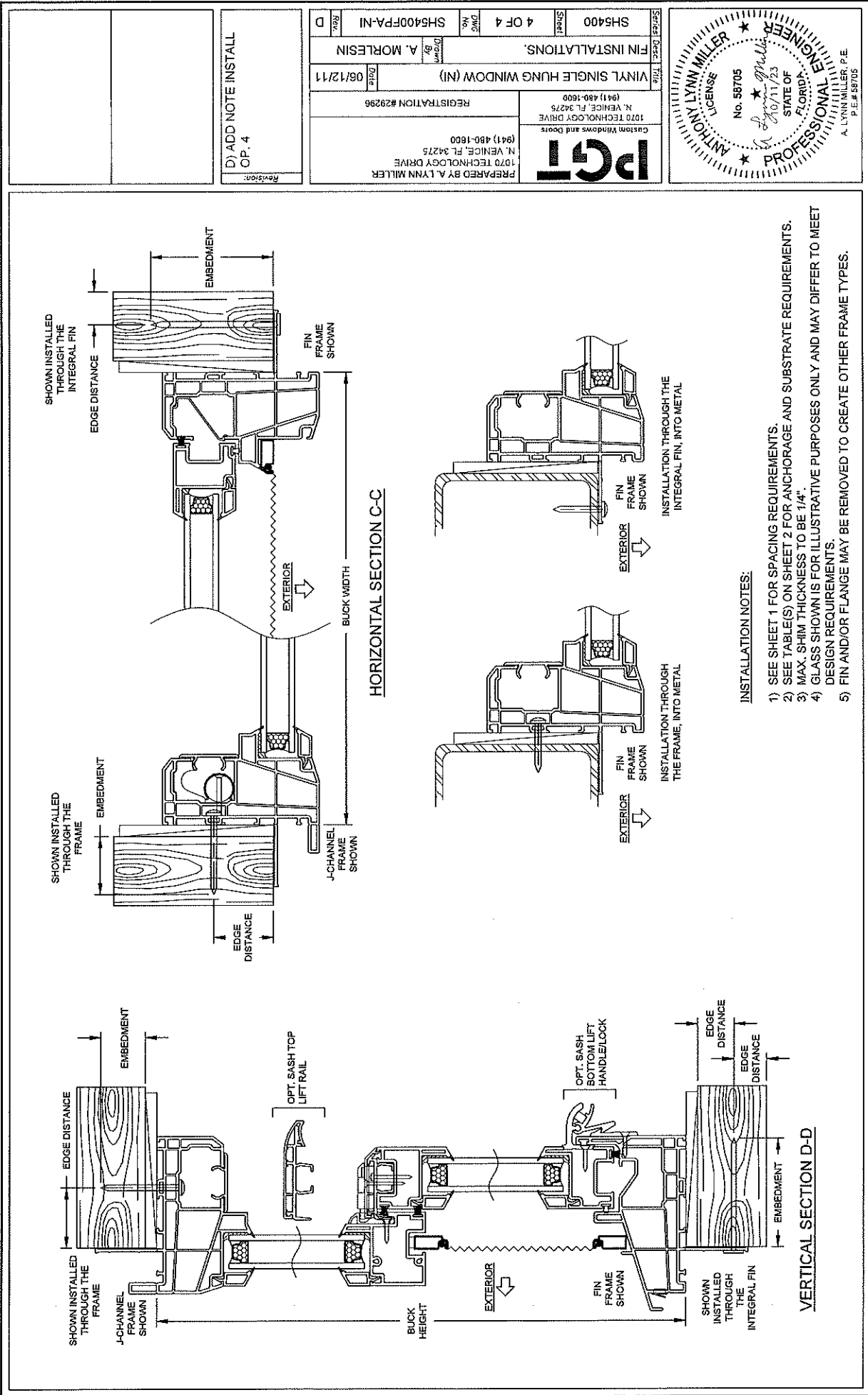
FLANGE INSTALLATIONS.

VINYL SINGLE HUNG WINDOW (NI)

ANTHONY LYNN MILLER
No. 58705
Professional Engineer
State of Florida
A. LYNN MILLER, P.E.
P.E.#58705

Revision: D) NO CHANGES IN THIS SHEET.







Product Approval
USER: Public User

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

OFFICE OF THE
SECRETARY

FL #

Application Type

Code Version

Application Status

FL1844-R29

Revision

2023

Approved

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

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. Ulrich, PE

☒ Validation Checklist - Hardcopy Received

Certificate of Independence

[FL1844_R29_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_R29_Equiv ASTM E1886-04-05 to E1886-13a and E1996-05-06-09-12 to E1996-17 Equivalency Letter 2020-09-09.pdf](#)

Product Approval Method

Method 1 Option D

Date Submitted 10/19/2023

Date Validated 10/20/2023

Date Pending FBC Approval 10/27/2023

Date Approved 12/12/2023

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 R29 II HR5410FPA-NI - REV D.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1844 R29 AE Eng Eval - HR5410 - REV D.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 R29 II HR5510FPA-LM - REV D.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1844 R29 AE Eng Eval - HR5510 - REV D1.pdf Created by Independent Third Party: No

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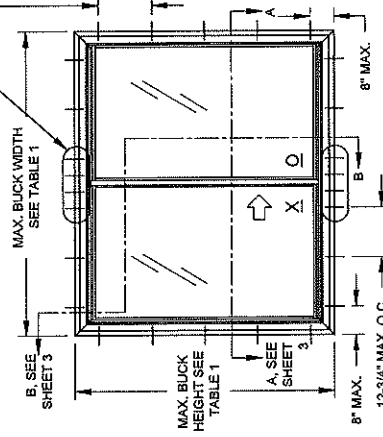
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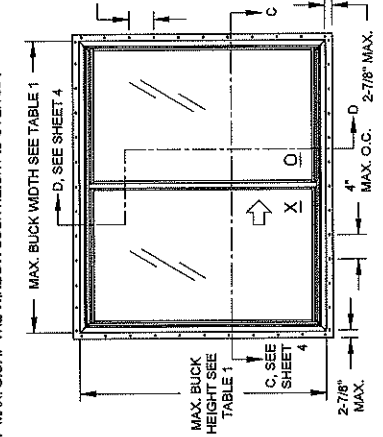
Product Approval Accepts:

FLORIDA PRODUCT APPROVAL #1844

- 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".



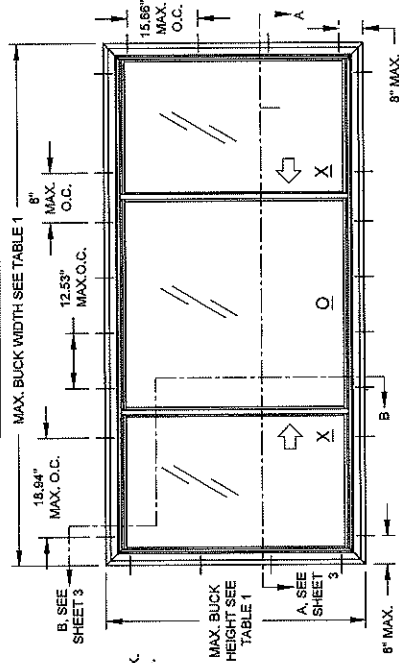
ELEVATION FOR TYP. EQUAL LEG BOX
& FLANGE FRAME.
XO CONFIGURATION, OX SIMILAR



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

IMPACT RATING
NOT RATED FOR IMPACT
RESISTANCE

DESIGN PRESSURE RATING
SEE TABLE 1



ELEVATION FOR TYP. EQUAL LEG BOX
& FLANGE FRAME. XO CONFIGURATION
MAX. SASH WIDTH = 30.38"
MAX. FIXED LITE (BUCK WIDTH - (2 X SASH WIDTH)) = 59.28"

SERIES HR5410 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.
- 7) FRAMES FLANGES OR INTEGRAL FINS MAY BE TRIMMED IN-FIELD TO CREATE AN EQUAL-LEG FRAME.

TABLE 1:

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

SEE SHEET 2 FOR GLASS TYPES

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

PGT
Custom Windows and Doors

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

REGISTRATION #29296
DATE 06/12/11
A. MORLESIN

GENERAL NOTES & ELEVATION
VINYL HORIZONTAL ROLLER WINDOW (N)

Sheet 1 OF 4
DWG No. HR5410FPA-N
Rev. D

Revision:
D) NO CHANGES IN THIS SHEET.

ANTHONY LYNN MILLER
No. 58705
10/11/23
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E. #58705

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

TABLE 2: ANCHORS INSTALLED THROUGH FRAME

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

1) "UNGRADED 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 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	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)	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"

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



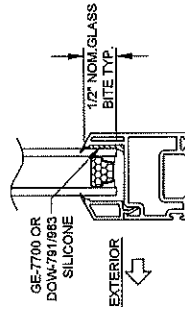
REINFORCEMENT TYPE D



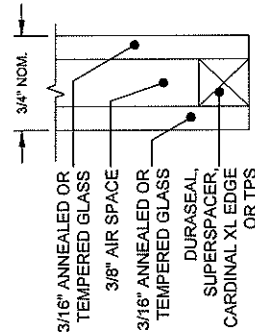
REINFORCEMENT TYPE E



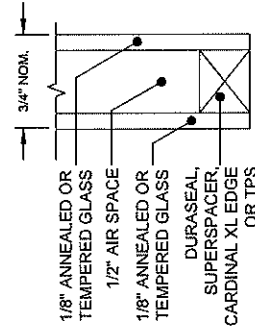
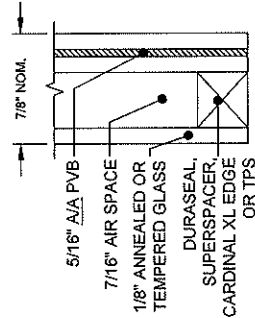
REINFORCEMENT TYPE F



TYP. GLAZING DETAIL



GLASS TYPES

PVB = KURARAY TROSIFOL PVB
INTERLAYER BY KURARAY AMERICA, INC.
A = ANNEALEDD) REMOVED 1/4" & 3/16"
ULTRACON FROM
ANCHOR TABLES.

Revision	Date	By	Check	Drawn	Mo	Year
1	06/12/11	A. MORLESIN				
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PGT
Custom Windows and Doors
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(841) 480-1600

PREPARED BY A. LYNN MILLER

REGISTRATION #29296

VINYL HORIZONTAL ROLLER WINDOW (N)

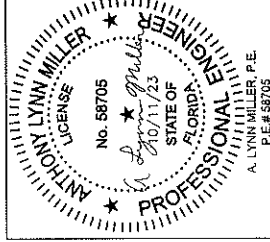
ANCHOR & GLAZING DETAILS.

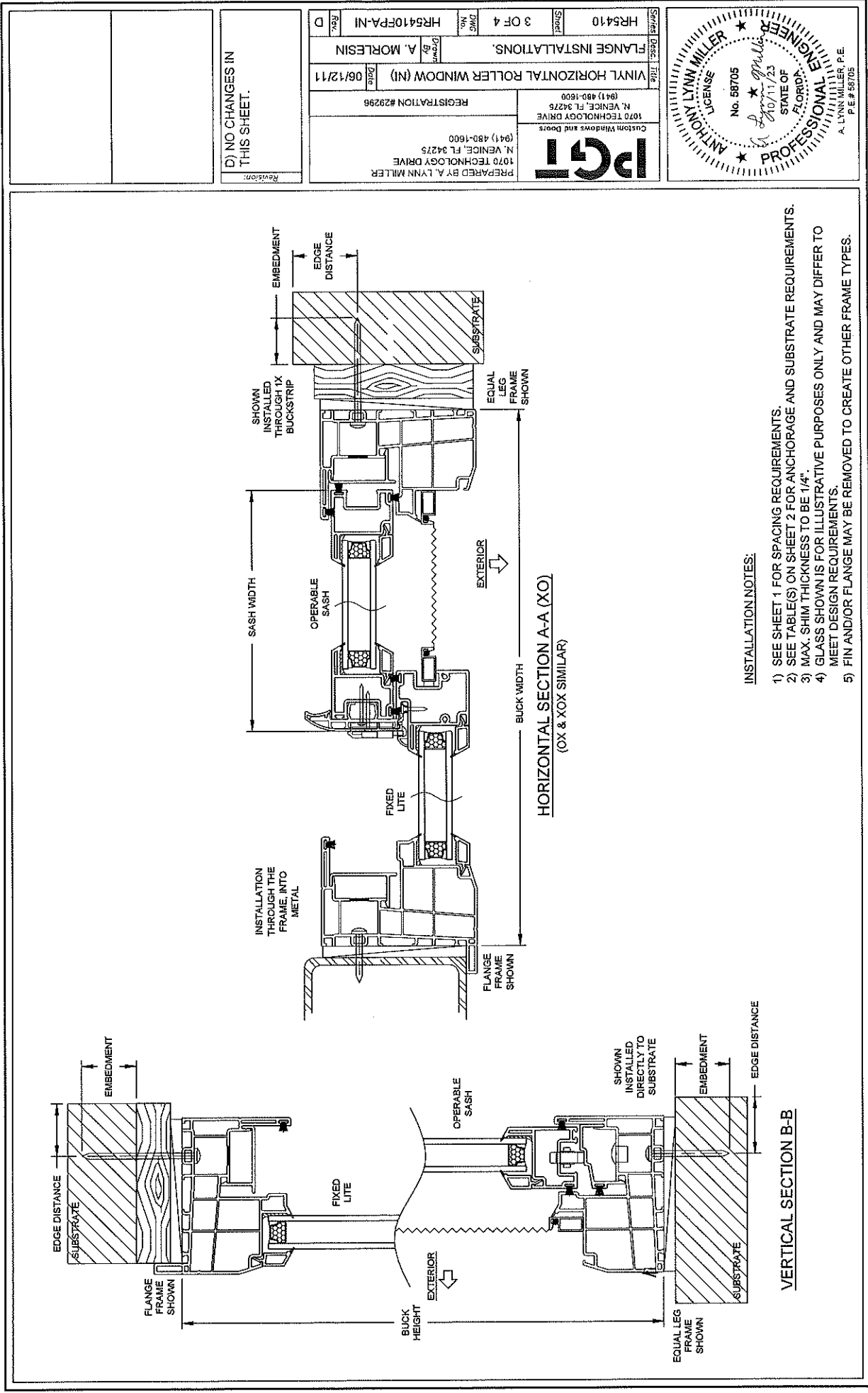
HR5410

2 OF 4

HR5410FPA-N

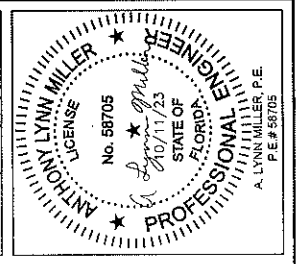
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D) NO CHANGES IN THIS SHEET.

Project	HR5410
Sheet	3 OF 4
DWG No.	HR5410FPA-NI
Drawn by	A. MORLESIN
Date	06/12/11
Registration #	29296
Prepared by	A. LYNN MILLER
Company	PGT Custom Windows and Doors 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600
Product	VINYL HORIZONTAL ROLLER WINDOW (NI)
Flange Installation	FLANGE INSTALLATIONS.



PGT 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 Drawn by: A. MORLESIN		VINYL HORIZONTAL ROLLER WINDOW (N) FIN INSTALLATIONS. HR5410 4 OF 4 DWG No. HR5410FPA-N Rev. D

D) NO CHANGES IN THIS SHEET.

ANTHONY LYNN MILLER
 No. 58705
 10/11/23
 STATE OF FLORIDA
PROFESSIONAL ENGINEER
 A. LYNN MILLER, P.E.
 P.E.#58705

