As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and approval numbers on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. Statewide approved products are listed online @ www.floridabuilding.org

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
1. EXTERIOR DOORS	THERMA-TRU	THERMA-TRU BENCHMARK DOORS	21135.1
A. SWINGING			
B. SLIDING			
C. SECTIONAL/ROLL UP			
D. OTHER			
2. WINDOWS			
A. SINGLE/DOUBLE HUNG	PGT INDUSTRIES	SH 5500 IMPACT	239.2
B. HORIZONTAL SLIDER			
C. CASEMENT			
D. FIXED			
E. MULLION			
F. SKYLIGHTS			
G. OTHER			
3. PANEL WALL			
A. SIDING	MIDFL METAL	MR PANEL WALL	31397.1
B. SOFFITS			
C. STOREFRONTS			
D. GLASS BLOCK			
E. OTHER			
4. ROOFING PRODUCTS			
A. ASPHALT SHINGLES			
B. NON-STRUCT METAL	MIDFL METAL	MULTI-RIB STRUCTURAL	23490.1
C. ROOFING TILES			
D. SINGLE PLY ROOF			
E. OTHER			
5. STRUCT COMPONENTS			
A. WOOD CONNECTORS			
B. WOOD ANCHORS			
C. TRUSS PLATES			
D. INSULATION FORMS			
E. LINTELS			
F. OTHERS			
6. NEW EXTERIOR			
ENVELOPE PRODUCTS			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements.
Further, I understand these products may have to be removed if approval cannot be demonstrated during inspection.

NOTES: _____

FL #	FL31397-R1
Application Type	Revision
Code Version	2020
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer	Mid Florida Metal Roofing Supply/Supplies, Inc.
Address/Phone/Email	28328 County Road 561 Tavares, FL 32778 (352) 742-7070 amyprince@mfmrs.com
Authorized Signature	Amy Prince amyprince@mfmrs.com
Technical Representative Address/Phone/Email	
Quality Assurance Representative Address/Phone/Email	
Category	Structural Components
Subcategory	Structural Wall
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	Johnathan E. Green, P.E.
Florida License	PE-88223
Quality Assurance Entity	Keystone Certifications, Inc.
Quality Assurance Contract Expiration Date	02/10/2026
Validated By	Brian Jaks, P.E. ☑ Validation Checklist - Hardcopy Received
Certificate of Independence	FL31397_R1_COI_Letter of Certification-Mid Florida Metal Roofing Supply, Inc._sealed.pdf
Referenced Standard and Year (of Standard)	
Equivalence of Product Standards Certified By	
Sections from the Code	1709.2
Product Approval Method	Method 2 Option B

Date Submitted	09/09/2020
Date Validated	09/28/2020
Date Pending FBC Approval	11/04/2020
Date Approved	12/16/2020

Summary of Products

FL #	Model, Number or Name	Description
31397.1	29 Ga. MFMRS Multi-Rib Wall Panel over 2x4 Wood Girts	29 Ga. MFMRS Multi-Rib Wall Panel over 2x4 Wood Girts
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** +140/-140 **Other:** See evaluation report for limits of use.		**Installation Instructions** FL31397_R1_II_FL31397.1 29ga MFMRS Multi-Rib Wall Panel_sealed.pdf Verified By: Zachary R. Priest PE-74021 Created by Independent Third Party: Yes **Evaluation Reports** FL31397_R1_AE_FL31397.1 29ga MFMRS Multi-Rib Wall Panel_sealed.pdf Created by Independent Third Party: Yes

Back Next

Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603 FAX: (281) 540-9966
Website: www.forceengineeringtesting.com

Product Evaluation Report

Mid Florida Metal Roofing Supply, Inc.

29ga MFMRS Multi-Rib Wall Panel Over 2x4 Wood Girts

Florida Product Approval # 31397.1 R1

Florida Building Code 2020
Per Rule 61G20-3
Method: 2 –B

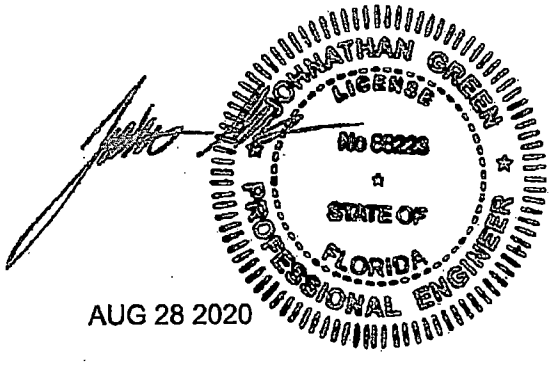
Category: Structural Components
Subcategory: Structural Wall
Compliance Method: 61G20-3.005(2)(b)
NON HVHZ

Product Manufacturer:
Mid Florida Metal Roofing Supply, Inc.
28328 County Road 561
Tavares, Florida 32778
(352) 742-7070

Engineer Evaluator:
Johnathan Green, P.E. #88223
Florida Evaluation ANE ID: 12901

Validator:
Brian Jaks, P.E. #70159

Contents:
Evaluation Report Pages 1 – 4



AUG 28 2020

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Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603 FAX: (281) 540-9966
Website: www.forceengineeringtesting.com

Compliance Statement: The product as described in this report has demonstrated compliance with the Florida Building Code 2020, Section 1709.2.

Product Description: MFMRS Multi-Rib Panel, Min. 29 Ga. Steel, 36" Wide, through fastened wall panel. Structural Application.

Panel Material/Standards: Material: Min. 29ga Steel, ASTM A792 AZ50 Grade 80 conforming to Florida Building Code 2020 Section 1507.4.3. Paint finish optional.
Yield Strength: Min. 80.0 ksi – 29ga
Corrosion Resistance: Panel Material shall comply with Florida Building Code 2020, Section 1507.4.3

Panel Dimension(s):

Thickness:	0.0125" min.
Width:	36" coverage
Rib Height:	3/4" major rib at 9" O.C.

Panel Fastener: #12-8 x 1" HWH Woodgrip™ XG screws with sealing washing or approved equal at 9"-9"-9"-7.5"-3" fastener pattern. Panel side laps fastened together w/ ¼-14 x 7/8" HWH SD w/ sealer washer at 12" O.C.
Corrosion Resistance: Per Florida Building Code 2020.

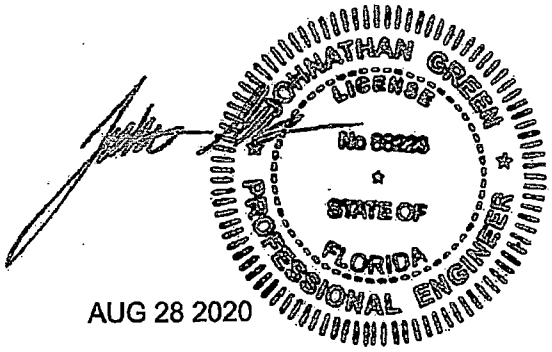
Substrate Description: Minimum #2 SYP 2x4 wood girts spaced a maximum 24" o.c. Framing must be designed in accordance w/ Florida Building Code 2020.

Allowable Design Pressures:

Table "A"

Maximum Design Pressure:	-140.0 psf
Fastener Pattern:	9"-9"-9"-7.5"-3"
Fastener Spacing:	2'-0" O.C.

*Design Pressure includes a Safety Factor = 1.5.



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Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603 FAX: (281) 540-9966
Website: www.forceengineeringtesting.com

Code Compliance: The product described herein has demonstrated compliance with The Florida Building Code 2020, Section 1709.2.

Evaluation Report Scope: The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2020, as relates to Rule 61G20-3.

Performance Standards: The product described herein has demonstrated compliance with:

- ASTM E 1592-05 (2012) Test method for structural performance of sheet metal roof and siding systems by uniform static air pressure difference.

Reference Data:

1. ASTM E 1592-01
   PRI Construction Materials Technologies
   Report No. FAE-008-02-01, Dated 06/18/2012
2. Certificate of Independence
   By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing
   (FBC Organization # ANE ID: 12901)

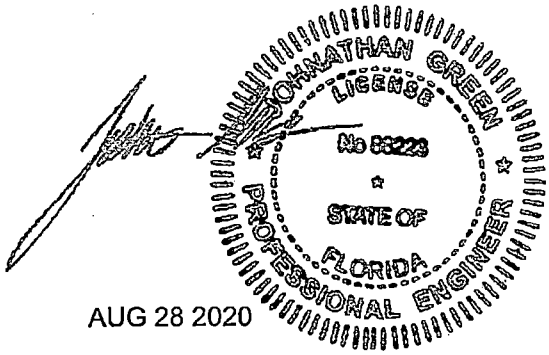
Test Standard Equivalency: The ASTM E 1592-01 test standard is equivalent to the ASTM E 1592-05 (2012) test standard.

Quality Assurance Entity: The manufacturer has established compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

Installation: Install per manufacturer's recommended details.

Shear Diaphragm: Shear diaphragm values are outside the scope of this report.

Design Procedure: Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2020 for wall cladding wind loads. These component wind loads for wall cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to his structure and analyze the panel fasteners for pullout and pullover. Support framing must be in compliance with Florida Building Code 2020 Chapter 22 for steel, and Chapter 16 for structural loading.



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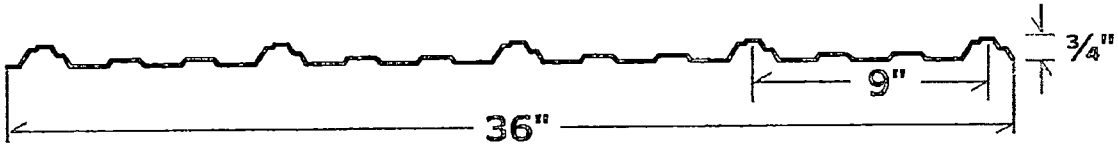
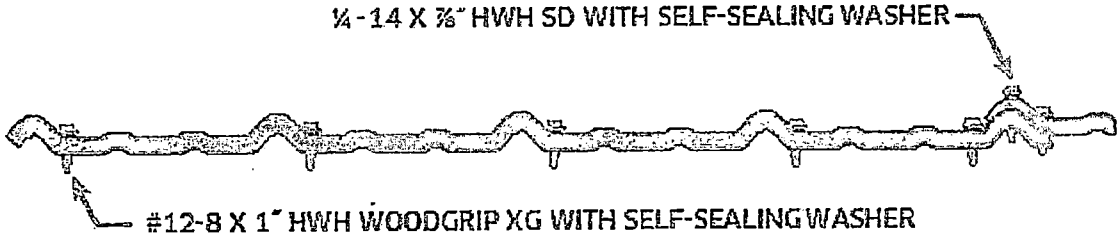
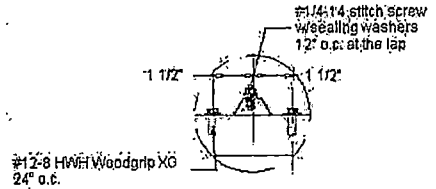
Website: www.forceengineeringtesting.com







Fastener Locations at Panel Overlap

JOHNATHAN GREEN LICENSE No 68223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AUG 28 2020

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FL# 31397.1 R1

Product Approval
USER: Public User

FL #	FL23490-R3
Application Type	Revision
Code Version	2020
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer	Mid Florida Metal Roofing Supply/Supplies, Inc.
Address/Phone/Email	28328 County Road 561 Tavares, FL 32778 (352) 742-7070 amyprince@mfmrs.com
Authorized Signature	Amy Prince amyprince@mfmrs.com
Technical Representative Address/Phone/Email	
Quality Assurance Representative Address/Phone/Email	
Category	Structural Components
Subcategory	Roof Deck
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	Johnathan E. Green, P.E.
Florida License	PE-88223
Quality Assurance Entity	Keystone Certifications, Inc.
Quality Assurance Contract Expiration Date	02/10/2026
Validated By	Steven M. Urich, PE ☒ Validation Checklist - Hardcopy Received
Certificate of Independence	FL23490_R3_COI_Letter of Certification-Mid florida_sealed.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM E1592	2012
FM 4471	1992

Equivalence of Product Standards Certified By

Sections from the Code

Product Approval Method: Method 1 Option D

Date Submitted	06/07/2022
Date Validated	06/08/2022
Date Pending FBC Approval	06/10/2022
Date Approved	08/09/2022

Summary of Products

FL #	Model, Number or Name	Description
23490.1	Multi-Rib Structural	29 Ga. Through-Fastened Structural Roof Panels Over Minimum 2x4 Purlins
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** +N/A/-105.0 **Other:**		**Installation Instructions** FL23490_R3_II_23490 29 Ga. MFMRS Multi-Rib Structural Roof-sealed.pdf Verified By: Johnathan E. Green, P.E. 88223 Created by Independent Third Party: Yes **Evaluation Reports** FL23490_R3_AE_23490 29 Ga. MFMRS Multi-Rib Structural Roof-sealed.pdf Created by Independent Third Party: Yes

Back Next

Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603, Fax: (281) 540-9966
Website: forceengineeringtesting.com

Product Evaluation Report

MID FLORIDA METAL ROOFING SUPPLY, INC.

Minimum 29 Ga. MFMRS Multi-Rib Roof Panel over 2x4 Wood Purlins

Florida Product Approval # 23490.1 R3

Florida Building Code 2020
Per Rule 61G20-3
Method: 1 –D

Category: Structural Components
Subcategory: Roof Deck
Compliance Method: 61G20-3.005(1)(d)
NON HVHZ

Product Manufacturer:
Mid Florida Metal Roofing Supply, Inc.
28328 County Road 561
Tavares, Florida 32778

Engineer Evaluator:
Johnathan Green, P.E. #88223
Florida Evaluation ANE ID: 12901

Validator:
Steven Urich, P.E. #57795

Contents:
Evaluation Report **Pages 1 – 5**

JOHNATHAN GREEN LICENSE No 88223 STATE OF FLORIDA PROFESSIONAL ENGINEER

JUN 08 2022

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Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603, Fax: (281) 540-9966
Website: forceengineeringtesting.com

Compliance Statement: The product as described in this report has demonstrated compliance with the Florida Building Code 2020, Sections 1504.3.2, 1504.7.

Product Description: MFMRS Multi-Rib Roof Panel, 29 Ga. Steel, 36" Wide, through fastened structural roof panel over 2x4 wood purlins. Structural Application.

Panel Material/Standards: Material: Minimum 29 Ga. Steel, ASTM A792 or ASTM A653 G90 conforming to Florida Building Code 2020 Section 1507.4.3.
Yield Strength: Min. 80.0 ksi
Corrosion Resistance: Panel Material shall comply with Florida Building Code 2020, Section 1507.4.3.

Panel Dimension(s):

Thickness:	0.0145" min.
Width:	36" maximum coverage
Rib Height:	¾" major rib at 9" O.C.

Panel Fastener: #12-8 x 1" HWH Woodgrip XG w/ ½" EPDM washing or approved equal.
¼-14 x 7/8" HWH SD1 w/ EPDM washer through panel side laps at 12" O.C.
Corrosion Resistance: Per Florida Building Code 2020, Section 1507.4.4.

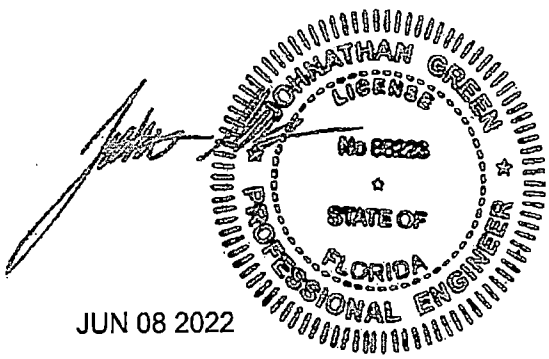
Substrate Description: Min. 2x4 No. 2 SYP wood purlins at 24" O.C. complying with 2020 Florida Building Code. Framing must be designed in accordance w/ Florida Building Code 2020.

Allowable Design Uplift Pressures:

Table "A"

Maximum Design Uplift Pressure:	-105.0 psf
Fastener Pattern:	9"-9"-9"-6"-3"
Fastener Pattern Spacing:	24" O.C.

*Design Pressure includes a Safety Factor = 2.0



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Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603, Fax: (281) 540-9966
Website: forceengineeringtesting.com

Code Compliance:

The product described herein has demonstrated compliance with The Florida Building Code 2020, Section 1504.3.2, 1504.7.

Evaluation Report Scope:

The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2020, as relates to Rule 61G20-3.

Performance Standards:

The product described herein has demonstrated compliance with:

- ASTM E 1592-05 (2012) Test method for structural performance of sheet metal roof and siding systems by uniform static air pressure difference.
- FM 4471-92, Foot Traffic Resistance Test for Roof Panels.

Reference Data:

1. ASTM E 1592-01
   PRI Construction Materials technologies LLC
   Report No. FAE-008-02-01
2. FM 4471-92, Section 5.4 Foot Traffic Resistance Test
   Force Engineering & Testing, Inc.
   Report No. 194-0134T-11A
3. Certificate of Independence
   By Johnathan Green, P.E. #88223

Test Standard Equivalency:

The ASTM E 1592-01 test standard is equivalent to the ASTM E 1592-05 (2012) test standard.

Quality Assurance Entity:

The manufacturer has established compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

JOHNATHAN GREEN LICENSE No 88223 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603, Fax: (281) 540-9966
Website: forceengineeringtesting.com

Minimum Slope Range: Minimum Slope shall comply with Florida Building Code 2020, including Section 1507.4.2 and in accordance with Manufacturers recommendations. For slopes less than 3:12, lap sealant must be used in the panel side laps.

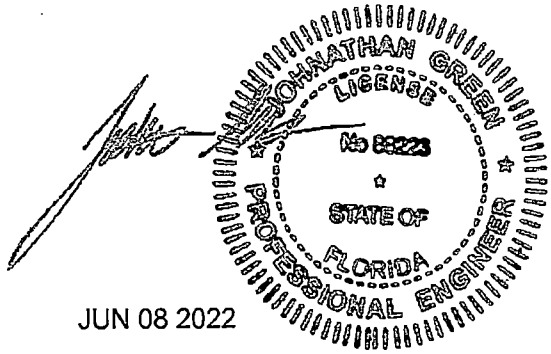
Installation: Install per manufacturer's recommended details.

Insulation: Manufacturer's approved product (Optional)

Roof Panel Fire Classification: Fire classification is not part of this acceptance.

Shear Diaphragm: Shear diaphragm values are outside the scope of this report.

Design Procedure: Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2020 for roof cladding wind loads. These component wind loads for roof cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to his structure and analyze the panel fasteners for pullout and pullover. Support framing must be in compliance with Florida Building Code 2020 Chapter 23 for wood, and Chapter 16 for structural loading.



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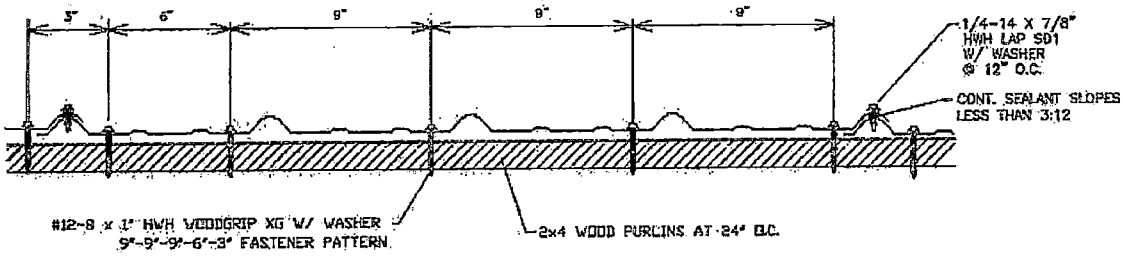
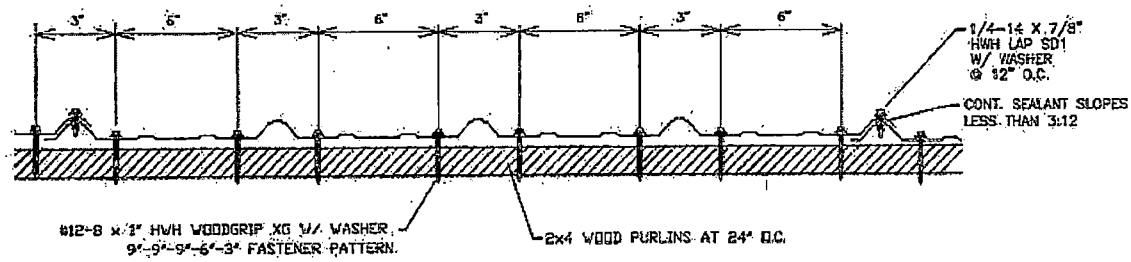
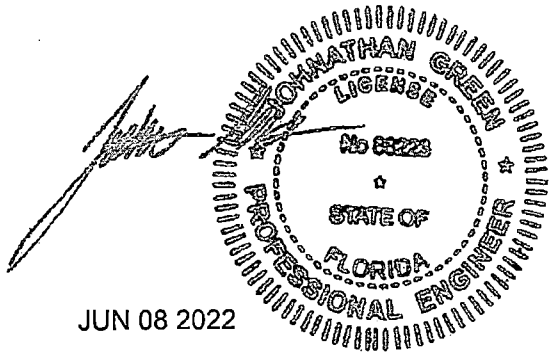
Phone: (281) 540-6603, Fax: (281) 540-9966
Website: forceengineeringtesting.com

PANEL FASTENER PATTERN AT INTERIOR



PANEL FASTENER PATTERN AT PANEL ENDS/END LAPS





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FL# 23490.1 R3

Product Approval
USER: Public User

> > > Application Detail

FL #	FL239-R28
Application Type	Affirmation
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	Windows
Subcategory	Single Hung
Compliance Method	Certification Mark or Listing
Certification Agency	Miami-Dade BCCO - CER
Validated By	Miami-Dade BCCO - VAL

Referenced Standard and Year (of Standard)	Standard	Year
	TAS 201, 202, 203	1994

Equivalence of Product Standards
Certified By

I affirm that there are no changes in the new Florida Building Code which affect my product(s) and my product(s) are in compliance with the new Florida Building Code.

Documentation from approved Evaluation or Validation Entity Yes No N/A

Product Approval Method Method 1 Option A

Date Submitted	11/05/2020
Date Validated	11/05/2020
Date Pending FBC Approval	
Date Approved	11/11/2020

Summary of Products

FL #	Model, Number or Name	Description
239.1	SH5400 (Non-Impact)	Vinyl Single Hung Window

Limits of Use
Approved for use in HVHZ: Yes
Approved for use outside HVHZ: Yes
Impact Resistant: No
Design Pressure: N/A
Other: Please see Miami-Dade County Notice of Acceptance (NOA) for product performance information, anchorage details, and anchor type, size, and spacing information.

Certification Agency Certificate

Quality Assurance Contract Expiration Date
07/30/2025
Installation Instructions

Verified By: Miami-Dade BCCO - CER
Created by Independent Third Party:
Evaluation Reports
Created by Independent Third Party:

239.2	SH5500 (Large Missile Impact)	Vinyl Single Hung Window

Limits of Use
Approved for use in HVHZ: Yes
Approved for use outside HVHZ: Yes
Impact Resistant: Yes
Design Pressure: N/A
Other: Please see Miami-Dade County Notice of Acceptance (NOA) for product performance information, anchorage details, and anchor type, size, and spacing information.

Certification Agency Certificate

Quality Assurance Contract Expiration Date
07/30/2025
Installation Instructions

Verified By: Miami-Dade BCCO - CER
Created by Independent Third Party:
Evaluation Reports
Created by Independent Third Party:

239.3	SH7600 (Non-Impact)	Aluminum Single Hung Window

Limits of Use
Approved for use in HVHZ: Yes
Approved for use outside HVHZ: Yes
Impact Resistant: No
Design Pressure: N/A
Other: Please see Miami-Dade County Notice of Acceptance (NOA) for product performance information, anchorage details, and anchor type, size, and spacing information.

Certification Agency Certificate

Quality Assurance Contract Expiration Date
08/23/2023
Installation Instructions

Verified By: Miami-Dade BCCO - CER
Created by Independent Third Party:
Evaluation Reports
Created by Independent Third Party:

239.4	SH7700 (Large Missile Impact)	Aluminum Single Hung Window

Limits of Use
Approved for use in HVHZ: Yes
Approved for use outside HVHZ: Yes
Impact Resistant: Yes
Design Pressure: N/A
Other: Please see Miami-Dade County Notice of Acceptance (NOA) for product performance information, anchorage details, and anchor type, size, and spacing information.

Certification Agency Certificate

Quality Assurance Contract Expiration Date
08/23/2023
Installation Instructions

Verified By: Miami-Dade BCCO - CER
Created by Independent Third Party:
Evaluation Reports
Created by Independent Third Party:

MIAMI-DADE

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

PGT Industries, Inc.
1070 Technology Drive
North Venice, FL 34275

SCOPE: This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).
This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami-Dade County) and/or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami–Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.
This product is approved as described herein and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.-

DESCRIPTION: Series "SH7700A" Aluminum Single Hung Window – L.M.I.

APPROVAL DOCUMENT: Drawing No. **7700NOA-1**, titled "Aluminum Single Hung Install (LM)", sheets 1 through 11 of 11, dated 04/01/18, with revision A dated 03/11/20, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.
This NOA **revises NOA # 18-0430.06** and consists of this page 1 and evidence pages E-1, E-2, E-3 and E-4, as well as approval document mentioned above.
The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**

PGT Industries, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. Submitted under NOA # 18-0430.06

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **7700NOA-1**, titled "Aluminum Single Hung Install (LM), sheets 1 through 11 of 11, dated 04/01/18, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

B. TESTS

1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
   2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
   3) Water Resistance Test, per FBC, TAS 202-94
   4) Large Missile Impact Test per FBC, TAS 201-94
   5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94

   along with marked-up drawings and installation diagram of an aluminum single hung window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-18-7835.1**, dated 04/03/18, signed and sealed by Idalmis Ortega, P.E.
2. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
   2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
   3) Water Resistance Test, per FBC, TAS 202-94
   4) Large Missile Impact Test per FBC, TAS 201-94
   5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94

   window, prepared by Fenestration Testing Laboratory, Inc., Test Reports No. **FTL-18-7835.2**, dated 05/04/18, signed and sealed by Idalmis Ortega, P.E.

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 6th Edition (2017)**, dated 04/23/18, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
2. Glazing complies with **ASTM E1300-09**

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 20-0401.11
Expiration Date: August 23, 2023
Approval Date: July 30, 2020

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **17-1114.14** issued to **Kuraray America, Inc.** for their "**Trosifol® Ultraclear, Clear and Color PVB Glass Interlayers**" dated 01/18/18, expiring on 07/08/19.
2. Notice of Acceptance No. **17-0808.02** issued to **Kuraray America, Inc.** for their "**SentryGlas® (Clear and White) Glass Interlayers**" dated 12/28/17, expiring on 07/04/23.

F. STATEMENTS

1. Statement letter of conformance to **FBC 6th Edition (2017)**, dated April 24, 2018, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
2. Statement letter of no financial interest, dated April 24, 2018, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
3. Proposal No. **18-0005R** issued by the Product Control Section, dated 01/16/18, signed by Manuel Perez, P.E

G. OTHERS

1. None.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. New Evidence Submitted

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **7700NOA-1**, titled "Aluminum Single Hung Install (LM)", sheets 1 through 11 of 11, dated 04/01/18, with revision A dated 03/11/20, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

B. TESTS

1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
   2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
   3) Water Resistance Test, per FBC, TAS 202-94
   4) Large Missile Impact Test per FBC, TAS 201-94
   5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   6) Forced Entry Test, per ASTM F588 and TAS 202-94

   along with marked-up drawings and installation diagram of all PGT Industries, Inc. representative units listed below and tested to qualify **Dowsil 791** and **Dowsil 983** silicones, prepared by Fenestration Testing Laboratory, Inc., Test Reports No.:
   FTL-7897, PGT PW5520 PVC Fixed Window (unit 6 in proposal), dated 09/03/14
   FTL-20-2107.1, PGT SGD780 Aluminum Sliding Glass Door (unit 7 in proposal)
   FTL-20-2107.2, PGT CA740 Alum. Outswing Casement Window (unit 8 in proposal)
   FTL-20-2107.3, PGT PW7620A Aluminum Fixed Window (unit 9 in proposal) and
   FTL-20-2107.4, PGT PW7620A Aluminum Fixed Window (unit 10 in proposal)
   dated 07/13/20, all signed and sealed by Idalmis Ortega, P.E

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 6th Edition (2017)** and **FBC 7th Edition (2020)**, dated 03/13/20, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

D. QUALITY ASSURANCE

1. Miami- Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 20-0401.11
Expiration Date: August 23, 2023
Approval Date: July 30, 2020

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS

1. Statement letter of conformance, complying with **FBC 6th Edition (2017)** and **FBC 7th Edition (2020)**, dated March 10, 2020, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
2. Statement letter of no financial interest, dated March 10, 2020, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
3. Proposal No. **19-1155 TP** issued by the Product Control Section, dated January 10, 2020, signed by Ishaq Chanda, P.E.

G. OTHERS

1. Notice of Acceptance No. **18-0430.06** issued to PGT Industries, Inc. for their "Series "SH7700A" Aluminum Single Hung Window – L.M.I." approved on 08/23/18 and expiring on 08/23/23.

SERIES SH7700A IMPACT RESISTANT SINGLE HUNG WINDOW

1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).

2) SHUTTERS ARE NOT REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS. FOR INSULATED GLASS INSTALLATIONS ABOVE 30' IN THE HVHZ, THE OUTBOARD LITE (CAP) MUST BE TEMPERED, USE ONLY GLASS TYPES 3, 7, 12, 13 OR 15.

3) FOR MASONRY APPLICATIONS IN MIAMI-DADE COUNTY, USE ONLY MIAMI-DADE COUNTY APPROVED MASONRY ANCHORS. MATERIALS USED FOR ANCHOR EVALUATIONS WERE SOUTHERN PINE, ASTM C90 CONCRETE MASONRY UNITS AND CONCRETE WITH MIN. KSI PER ANCHOR TYPE.

4) 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 AND SECURED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER, (EOR) OR ARCHITECT OF RECORD, (AOR).

5) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT LENGTH TO ACHIEVE REQUIRED MIN. EMBEDMENT. 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.

6) 1/4" MAX. SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS.

7) DESIGN PRESSURES:
A. NEGATIVE DESIGN LOADS BASED ON STRUCTURAL & CYCLE TESTING AND GLASS PER ASTM E1300.
B. POSITIVE DESIGN LOADS BASED ON WATER TEST PRESSURE, STRUCTURAL & CYCLE TESTING AND GLASS PER ASTM E1300.
C. DESIGN LOADS ARE BASED ON ALLOWABLE STRESS DESIGN, ASD.

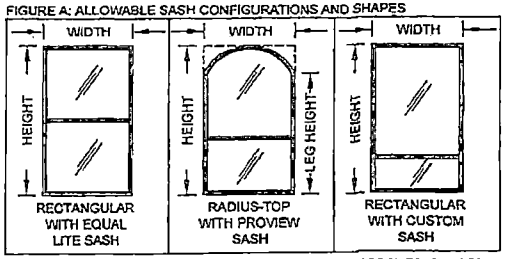
8) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WINDLOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT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

9) METAL SUBSTRATE TO MEET MIN. STRENGTH AND THICKNESS REQUIREMENTS PER CURRENT FLORIDA BUILDING CODE AND TO BE REVIEWED BY THE AUTHORITY HAVING JURISDICTION.

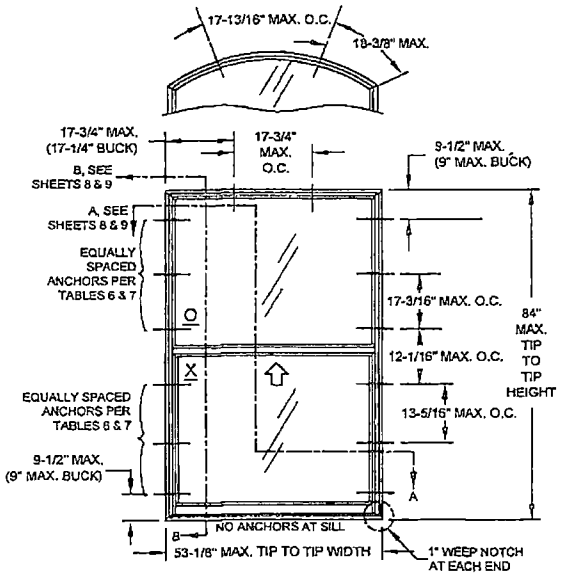
10) REFERENCES: TEST REPORTS FTL 18-7835.1 & 18-7835.2; ELCO ULTRACON NOA; DEWALT/ELCO CRETEFLEX NOA; DEWALT ULTRACON + NOA; NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, ANSI/AF&PA NDS & ALUMINUM DESIGN MANUAL

11) APPLICABLE EGRESS REQUIREMENTS TO BE REVIEWED BY BUILDING OFFICIAL.

FIGURE A: ALLOWABLE SASH CONFIGURATIONS AND SHAPES

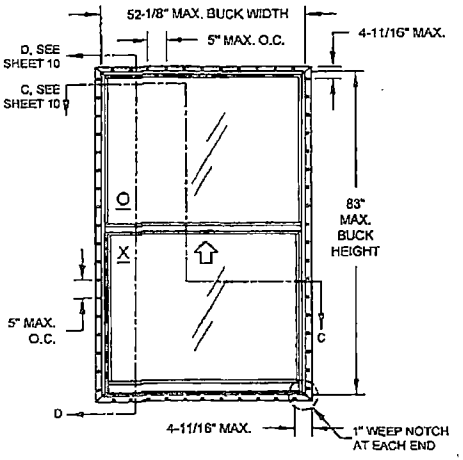


ALL SHAPES WITH ALL SASH CONFIGURATIONS ARE APPROVED. SHAPES MAY BE USED BY INSCRIBING THE SHAPE IN A BLOCK AND OBTAINING DESIGN PRESSURES AND ANCHORAGE FOR THAT BLOCK SIZE FROM THE TABLES ON THE FOLLOWING SHEETS.



ELEVATION FOR TYP. FLANGE FRAME SHOWN WITH EQUAL-LITE CONFIGURATION

DESIGN PRESSURE RATING	IMPACT RATING
VARIES PER GLASS TYPE, SEE SHEETS 2-5	LARGE & SMALL MISSILE IMPACT RESISTANT



ELEVATION FOR TYP. FIN FRAME SHOWN WITH EQUAL-LITE CONFIGURATION

TABLE 1: ALLOWABLE GLASS TYPES

Glass Type	Description (Listed from Exterior to Interior)	DP Table #
1	1/8"AN, .090" PVB, 1/8" AN	2
2	13/16" LIG: 1/8" AN CAP, AIRSPACE, 1/8" AN, .090" PVB, 1/8" AN	2
3	13/16" LIG: 1/8" TP CAP, AIRSPACE, 1/8" AN, .090" PVB, 1/8" AN	3
4	1/8" HS, .090" PVB, 1/8" HS	4
5	3/16" AN, .090" PVB, 3/16" AN	4
6	13/16" LIG: 3/16" AN CAP, AIRSPACE, 1/8" AN, .090" PVB, 1/8" AN	4
7	13/16" LIG: 3/16" TP CAP, AIRSPACE, 1/8" AN, .090" PVB, 1/8" AN	4
8	3/16" AN, .090" SG, 3/16" AN	5
9	3/16" HS, .090" SG, 3/16" HS	5
10	13/16" LIG: 1/8" AN CAP, AIRSPACE, 1/8" HS, .090" SG, 1/8" HS	5
11	13/16" LIG: 1/8" AN CAP, AIRSPACE, 3/16" AN, .090" SG, 3/16" AN	5
12	13/16" LIG: 1/8" TP CAP, AIRSPACE, 1/8" HS, .090" SG, 1/8" HS	5
13	13/16" LIG: 1/8" TP CAP, AIRSPACE, 3/16" AN, .090" SG, 3/16" AN	5
14	13/16" LIG: 3/16" AN CAP , AIRSPACE, 1/8" HS, .090" SG, 1/8" HS	5
15	13/16" LIG: 3/16" TP CAP, AIRSPACE, 1/8" HS, .090" SG, 1/8" HS	5

USER INSTRUCTIONS:

1) DETERMINE THE SITE SPECIFIC, WINDOW OPENING'S DESIGN PRESSURE REQUIREMENT FROM ASCE 7.

2) KNOWING YOUR GLAZING OPTION (TABLE 1), WINDOW CONFIGURATION AND SIZE, DETERMINE YOUR WINDOWS DESIGN PRESSURE FROM TABLES 2-5. IT MUST EQUAL OR EXCEED THE DESIGN PRESSURE REQUIREMENT FOR THE WINDOW OPENING OBTAINED IN STEP 1.

3) DETERMINE THE ANCHOR QUANTITY FROM TABLES 6 & 7.

4) INSTALL AS PER SHEET 7 FOR FLANGE INSTALLATION, SHEET 8 FOR EQUAL LEG INSTALLATION OR SHEET 9 FOR INTEGRAL FIN INSTALLATION.

NOTE:DESIGN PRESSURE RATING DETERMINATION IS THE SAME PROCESS FOR ALL FRAME TYPES (FLANGE, INTEGRAL FIN OR EQUAL LEG/BOX).

CODES / STANDARDS USED:
- 2020 FLORIDA BUILDING CODE (FBC), 7TH EDITION
- 2017 FLORIDA BUILDING CODE (FBC), 6TH EDITION
- ASTM E1300-09
- ANSI/AF&PA NDS-2018 FOR WOOD CONSTRUCTION
- ALUMINUM DESIGN MANUAL, ADM-2015
- AISI S100-16
- AISC 360-16

SG= KURARAY SENTRYGLAS© INTERLAYER BY KURARAY AMERICA, INC.
PVB = KURARAY TROSIFOL® PVB INTERLAYER BY KURARAY AMERICA, INC.
AN = ANNEALED
HS = HEAT-STRENGTHENED
TP = TEMPERED

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0401.11
Expiration Date 08/23/2023
By Miami-Dade Product Control

Revision:
A) UPDATED TO FBC 2020, REVISED ANCHOR TYPE TABLE.
JR - 03/11/20

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29266

DRWN	JENS ROSOWSKI
DATE	04/01/18
SCALE	NTS
JOB NO.	7700NOA-1
SHEET NO.	1 OF 11
REVISION	A

ALUMINUM SINGLE HUNG INSTALL. (LM)
GENERAL NOTES & ELEVATION
SH7700A

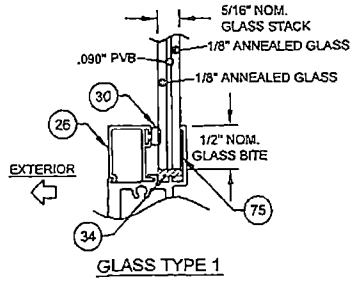
ANTHONY LYNN MILLER
LICENSE
No. 56705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
3/13/20
A. LYNN MILLER, P.E.
P.E.# 56705

TABLE 2:

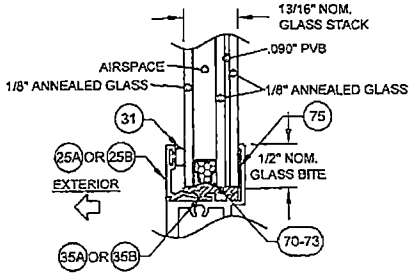
Tip to Tip Height	Bottom Sash Description for Given Range	Sash Height Range (in)	Design Pressure (lbs/ft²) for Glass Types 1 & 2 — Tip to Tip Width																	
			16"		25"		33"		37"		41"		45"		49"		53-1/8"			
24"	Equal-lite	12.464	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
31"	Equal-lite	15.964	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Standard Prowew	12.994 - 15.963	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Shortest	12.464 - 12.993	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
38-3/8"	Equal-lite	19.652	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Standard Prowew	15.944 - 19.651	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	15.131 - 15.943	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	14.131 - 15.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Shortest	12.464 - 14.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
45"	Equal-lite	22.964	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	20.131 - 22.963	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Standard Prowew	18.594 - 20.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	16.131 - 18.593	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	15.131 - 16.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	14.131 - 15.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Shortest	12.464 - 14.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
49"	Equal-lite	24.964	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	22.131 - 24.963	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Standard Prowew	20.194 - 22.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	18.131 - 20.193	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	16.131 - 18.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	14.131 - 16.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-77.6
	Shortest	12.464 - 14.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-75.1
50-5/8"	Equal-lite	25.777	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	24.131 - 25.776	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Standard Prowew	20.844 - 24.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	20.131 - 20.843	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	18.131 - 20.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	16.131 - 18.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-77.6
	Custom Size	14.131 - 16.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-75.1
	Shortest	12.464 - 14.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-73.9
63"	Equal-lite	31.964	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	28.131 - 31.963	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-77.6
	Standard Prowew	25.794 - 28.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-73.9
	Custom Size	24.131 - 25.793	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-72.7
	Custom Size	22.131 - 24.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-78.8	+65.0	-70.5
	Custom Size	20.131 - 22.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-77.1	+65.0	-68.4
	Custom Size	18.131 - 20.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-75.4	+65.0	-66.5		
	Custom Size	16.131 - 18.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-77.1	+65.0	-73.8	+64.7	-54.7		
	Shortest	13.194* - 16.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-75.9	+65.0	-71.8	+65.0	-68.2	+62.3	-62.3		
76"	Equal-lite	38.464	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-73.9		
	Custom Size	36.131 - 38.463	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-78.8	+65.0	-71.6		
	Custom Size	34.131 - 36.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-77.9	+65.0	-69.4		
	Standard Prowew	30.994 - 34.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-75.4	+65.0	-66.5		
	Custom Size	30.131 - 30.993	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-78.9	+65.0	-74.6	+65.0	-65.6		
	Custom Size	28.131 - 30.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-79.1	+65.0	-75.3	+65.0	-71.9	+63.8	-63.8		
	Shortest	26.194* - 28.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-75.9	+65.0	-71.8	+65.0	-68.2	+62.3	-62.3		
84"	Equal-lite	42.464	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-77.9	+65.0	-69.4		
	Custom Size	38.131 - 42.463	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-78.9	+65.0	-74.6	+65.0	-65.6		
	Standard Prowew	34.194* - 38.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-75.9	+65.0	-71.8	+65.0	-68.2	+62.3	-62.3		

* MINIMUM SASH HEIGHT FOR FLANGED WINDOWS IS: TIP TO TIP HEIGHT - 49.391
MINIMUM SASH HEIGHT FOR INTEGRAL FIN AND EQUAL LEG WINDOWS IS: BUCK HEIGHT - 48.391
MINIMUM SASH HEIGHT FOR FLANGED, RADIUS TOP WINDOWS IS: TIP TO TIP HEIGHT - 49.806
MINIMUM SASH HEIGHT FOR INTEGRAL FIN AND EQUAL LEG, RADIUS TOP WINDOWS IS: BUCK HEIGHT - 48.806

1) TIP TO TIP DIMENSIONS SHOWN, FOR INTEGRAL FIN AND EQUAL-LEG WINDOWS, SUBTRACT 1" FROM THE TIP TO TIP DIMENSION IN THE TABLE TO DETERMINE THE WINDOW SIZE.
2) FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE SIZE.
3) FOR RADIUS TOP WINDOWS, FIND THE SMALLEST WINDOW SIZE IN THE TABLE ABOVE WHICH THE RADIUS TOP WINDOW WILL COMPLETELY FIT WITHIN.
4) WINDOWS WITH THE LOW SILL OPTION ARE LIMITED TO A MAXIMUM POSITIVE DESIGN PRESSURE OF +55 PSF. NEGATIVE DESIGN PRESSURES ARE UNAFFECTED.



GLASS TYPE 1



GLASS TYPE 2

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0401.11
Expiration Date 08/23/2023
By Miami-Dade Product Control

Revision:
A) NO CHANGES THIS SHEET.
JR - 03/11/20

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29296

Date:	04/01/18
Drawn By:	JENS ROSOWSKI
Job No.	7700NOA-1
Rev.	A
Title:	ALUMINUM SINGLE HUNG INSTALL. (LM)
Descr.	DP TABLE
Sheet	2 OF 11
Sheet No.	SH7700A

ANTHONY LYNN MILLER
LICENSE
No. 58705
3/13/20
STATE OF FLORIDA
PROFESSIONAL ENGINEER

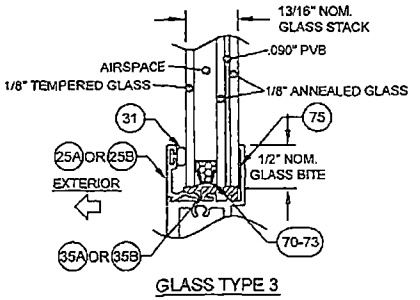
A. LYNN MILLER, P.E.
P.E.# 58705

TABLE 3:

Tip to Tip Height	Bottom Sash Description for Given Range	Sash Height Range (in)	Design Pressure (lbs/ft²) for Glass Type 3 — Tip to Tip Width																	
			18"		25"		33"		37"		41"		45"		45"		53-1/8"	
24"	Equal-lite	12.464	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
31"	Equal-lite	15.964	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Standard Proview	12.994 - 15.963	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Shortest	12.464 - 12.993	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
38-3/8"	Equal-lite	19.652	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Standard Proview	15.944 - 19.651	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	15.131 - 15.943	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	14.131 - 15.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Shortest	12.464 - 14.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
45"	Equal-lite	22.964	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	20.131 - 22.963	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Standard Proview	18.594 - 20.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	16.131 - 18.593	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	15.131 - 16.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	14.131 - 15.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Shortest	12.464 - 14.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
49"	Equal-lite	24.964	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	22.131 - 24.963	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Standard Proview	20.194 - 22.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	18.131 - 20.193	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	16.131 - 18.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	14.131 - 16.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Shortest	12.464 - 14.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
50-5/8"	Equal-lite	25.777	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	24.131 - 25.776	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Standard Proview	20.844 - 24.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	20.131 - 20.843	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	18.131 - 20.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	16.131 - 18.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	14.131 - 16.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Shortest	12.464 - 14.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
63"	Equal-lite	31.964	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	28.131 - 31.963	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Standard Proview	25.794 - 28.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	24.131 - 25.793	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	22.131 - 24.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	20.131 - 22.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-78.0
	Custom Size	18.131 - 20.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-75.8
	Custom Size	16.131 - 18.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-73.8
	Shortest	13.194* - 16.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-77.7	+65.0	-71.0
75"	Equal-lite	38.464	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	36.131 - 38.463	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0
	Custom Size	34.131 - 36.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-79.1
	Standard Proview	30.994 - 34.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-75.8
	Custom Size	30.131 - 30.993	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-74.8
	Custom Size	28.131 - 30.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-72.7
	Shortest	26.194* - 28.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-77.7	+65.0	-71.0
84"	Equal-lite	42.464	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-79.1
	Custom Size	38.131 - 42.463	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-74.8
	Standard Proview	34.194* - 38.130	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-80.0	+65.0	-77.7	+65.0	-71.0

* MINIMUM SASH HEIGHT FOR FLANGED WINDOWS IS: TIP TO TIP HEIGHT - 49.391
MINIMUM SASH HEIGHT FOR INTEGRAL FIN AND EQUAL LEG WINDOWS IS: BUCK HEIGHT - 48.391
MINIMUM SASH HEIGHT FOR FLANGED, RADIUS TOP WINDOWS IS: TIP TO TIP HEIGHT - 49.606
MINIMUM SASH HEIGHT FOR INTEGRAL FIN AND EQUAL LEG, RADIUS TOP WINDOWS IS: BUCK HEIGHT - 48.606

1) TIP TO TIP DIMENSIONS SHOWN. FOR INTEGRAL FIN AND EQUAL-LEG WINDOWS, SUBTRACT 1" FROM THE TIP TO TIP DIMENSION IN THE TABLE TO DETERMINE THE WINDOW SIZE.
2) FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE SIZE.
3) FOR RADIUS TOP WINDOWS, FIND THE SMALLEST WINDOW SIZE IN THE TABLE ABOVE WHICH THE RADIUS TOP WINDOW WILL COMPLETELY FIT WITHIN.
4) WINDOWS WITH THE LOW SILL OPTION ARE LIMITED TO A MAXIMUM POSITIVE DESIGN PRESSURE OF +65 PSF. NEGATIVE DESIGN PRESSURES ARE UNAFFECTED.



GLASS TYPE 3

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0401.11
Expiration Date 08/23/2023
By Miami-Dade Product Control

Revision:
A) NO CHANGES THIS SHEET.

JR - 03/11/20

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

PGT INDUSTRIES
REGISTRATION #229296

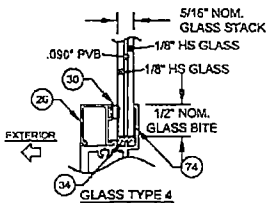
Title:	ALUMINUM SINGLE HUNG INSTALL. (LM)
Date:	04/01/18
Drawn By:	JENS ROSOWSKI
Rev.	A
Dwg. No.	7700NOA-1
Sheet	3 OF 11
Series	SH7700A

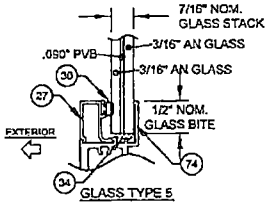
ANTHONY LYNN MILLER
LICENSE
No. 58705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
3/13/20

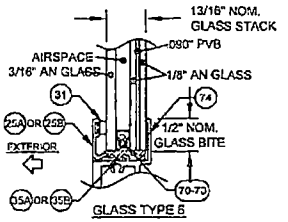
A. LYNN MILLER, P.E.
P.E.# 58705

TABLE 4:

Design Pressure (lbs/ft²) for Glass Types 4-7				
	Bottom Sash Description for Given Range	Sash Height Range (in)	Tip To Tip Width	
			53-1/8"	
Tip to Tip Height				
24"	Equal-lite	12.464	+65.0	-80.0
31"	Equal-lite	15.964	+65.0	-80.0
	Standard Proview	12.994 - 15.963	+65.0	-80.0
	Shortest	12.464 - 12.993	+65.0	-80.0
38-3/8"	Equal-lite	19.652	+65.0	-80.0
	Standard Proview	15.944 - 19.651	+65.0	-80.0
	Custom Size	15.131 - 15.943	+65.0	-80.0
	Custom Size	14.131 - 15.130	+65.0	-80.0
	Shortest	12.464 - 14.130	+65.0	-80.0
45"	Equal-lite	22.964	+65.0	-80.0
	Custom Size	20.131 - 22.963	+65.0	-80.0
	Standard Proview	18.594 - 20.130	+65.0	-80.0
	Custom Size	18.131 - 18.593	+65.0	-80.0
	Custom Size	15.131 - 18.130	+65.0	-80.0
	Custom Size	14.131 - 15.130	+65.0	-80.0
	Shortest	12.464 - 14.130	+65.0	-80.0
49"	Equal-lite	24.964	+65.0	-80.0
	Custom Size	22.131 - 24.963	+65.0	-80.0
	Standard Proview	20.194 - 22.130	+65.0	-80.0
	Custom Size	18.131 - 20.193	+65.0	-80.0
	Custom Size	16.131 - 18.130	+65.0	-80.0
	Custom Size	14.131 - 16.130	+65.0	-80.0
	Shortest	12.464 - 14.130	+65.0	-80.0
50-5/8"	Equal-lite	25.777	+65.0	-80.0
	Custom Size	24.131 - 25.776	+65.0	-80.0
	Standard Proview	20.844 - 24.130	+65.0	-80.0
	Custom Size	20.131 - 20.843	+65.0	-80.0
	Custom Size	18.131 - 20.130	+65.0	-80.0
	Custom Size	18.131 - 18.130	+65.0	-80.0
	Custom Size	14.131 - 18.130	+65.0	-80.0
	Shortest	12.464 - 14.130	+65.0	-80.0
63"	Equal-lite	31.964	+65.0	-80.0
	Custom Size	28.131 - 31.963	+65.0	-80.0
	Standard Proview	25.794 - 28.130	+65.0	-80.0
	Custom Size	24.131 - 25.793	+65.0	-80.0
	Custom Size	22.131 - 24.130	+65.0	-80.0
	Custom Size	20.131 - 22.130	+65.0	-80.0
	Custom Size	18.131 - 20.130	+65.0	-80.0
	Custom Size	16.131 - 18.130	+65.0	-80.0
	Shortest	13.194" - 16.130	+65.0	-80.0
76"	Equal-lite	38.464	+65.0	-80.0
	Custom Size	36.131 - 38.463	+65.0	-80.0
	Custom Size	34.131 - 36.130	+65.0	-80.0
	Standard Proview	30.994 - 34.130	+65.0	-80.0
	Custom Size	30.131 - 30.993	+65.0	-80.0
	Custom Size	28.131 - 30.130	+65.0	-80.0
	Shortest	26.194" - 28.130	+65.0	-80.0
84"	Equal-lite	42.464	+65.0	-80.0
	Custom Size	38.131 - 42.463	+65.0	-80.0
	Standard Proview	34.194" - 38.130	+65.0	-80.0







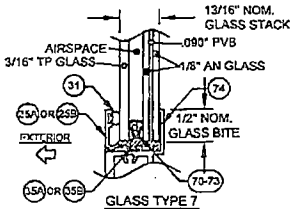
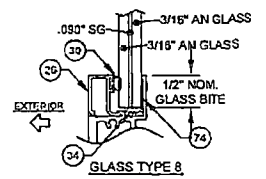
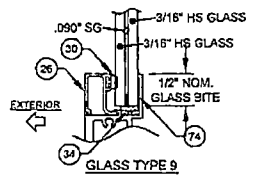
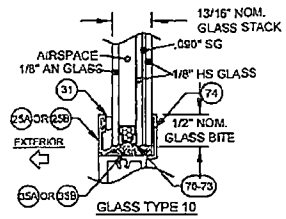


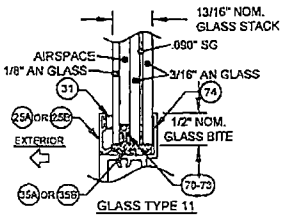
TABLE 5:

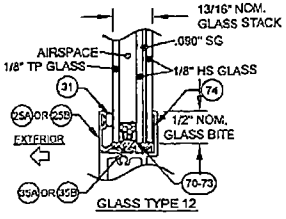
Design Pressure for Glass Types 8-15				
	Bottom Sash Description for Given Range	Sash Height Range (in)	Tip To Tip Width	
			53-1/8"	
Tip to Tip Height				
24"	Equal-lite	12.464	+80.0	-110.0
31"	Equal-lite	15.964	+80.0	-110.0
	Standard Proview	12.994 - 15.963	+80.0	-110.0
	Shortest	12.464 - 12.993	+80.0	-110.0
38-3/8"	Equal-lite	19.652	+80.0	-110.0
	Standard Proview	15.944 - 19.651	+80.0	-110.0
	Custom Size	15.131 - 15.943	+80.0	-110.0
	Custom Size	14.131 - 15.130	+80.0	-110.0
	Shortest	12.464 - 14.130	+80.0	-110.0
45"	Equal-lite	22.964	+80.0	-110.0
	Custom Size	20.131 - 22.963	+80.0	-110.0
	Standard Proview	18.594 - 20.130	+80.0	-110.0
	Custom Size	18.131 - 18.593	+80.0	-110.0
	Custom Size	15.131 - 18.130	+80.0	-110.0
	Custom Size	14.131 - 15.130	+80.0	-110.0
	Shortest	12.464 - 14.130	+80.0	-110.0
49"	Equal-lite	24.964	+80.0	-110.0
	Custom Size	22.131 - 24.963	+80.0	-110.0
	Standard Proview	20.194 - 22.130	+80.0	-110.0
	Custom Size	18.131 - 20.193	+80.0	-110.0
	Custom Size	16.131 - 18.130	+80.0	-110.0
	Custom Size	14.131 - 16.130	+80.0	-110.0
	Shortest	12.464 - 14.130	+80.0	-110.0
50-5/8"	Equal-lite	25.777	+80.0	-110.0
	Custom Size	24.131 - 25.776	+80.0	-110.0
	Standard Proview	20.844 - 24.130	+80.0	-110.0
	Custom Size	20.131 - 20.843	+80.0	-110.0
	Custom Size	18.131 - 20.130	+80.0	-110.0
	Custom Size	16.131 - 18.130	+80.0	-110.0
	Custom Size	14.131 - 16.130	+80.0	-110.0
	Shortest	12.464 - 14.130	+80.0	-110.0
63"	Equal-lite	31.964	+80.0	-110.0
	Custom Size	28.131 - 31.963	+80.0	-110.0
	Standard Proview	25.794 - 28.130	+80.0	-110.0
	Custom Size	24.131 - 25.793	+80.0	-110.0
	Custom Size	22.131 - 24.130	+80.0	-110.0
	Custom Size	20.131 - 22.130	+80.0	-110.0
	Custom Size	18.131 - 20.130	+80.0	-110.0
	Custom Size	16.131 - 18.130	+80.0	-110.0
	Shortest	13.194" - 16.130	+80.0	-110.0
76"	Equal-lite	38.464	+80.0	-110.0
	Custom Size	36.131 - 38.463	+80.0	-110.0
	Custom Size	34.131 - 35.130	+80.0	-110.0
	Standard Proview	30.994 - 34.130	+80.0	-110.0
	Custom Size	30.131 - 30.553	+80.0	-110.0
	Custom Size	28.131 - 30.130	+80.0	-110.0
	Shortest	26.194" - 28.130	+80.0	-110.0
84"	Equal-lite	42.464	+80.0	-110.0
	Custom Size	38.131 - 42.463	+80.0	-110.0
	Standard Proview	34.194" - 38.130	+80.0	-110.0

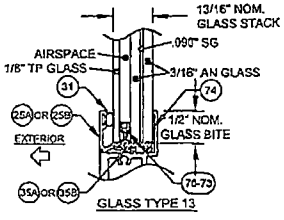


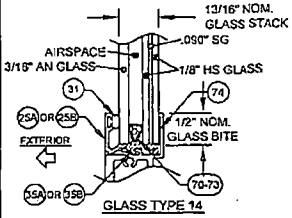


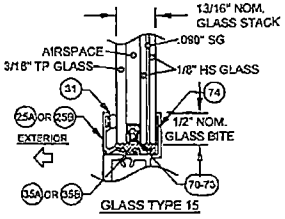












* MINIMUM SASH HEIGHT FOR FLANGED WINDOWS IS: TIP TO TIP HEIGHT - 49.391
MINIMUM SASH HEIGHT FOR INTEGRAL FIN AND EQUAL LEG WINDOWS IS: BUCK HEIGHT - 48.391
MINIMUM SASH HEIGHT FOR FLANGED, RADIUS TOP WINDOWS IS: TIP TO TIP HEIGHT - 49.805
MINIMUM SASH HEIGHT FOR INTEGRAL FIN AND EQUAL LEG, RADIUS TOP WINDOWS IS: BUCK HEIGHT - 48.806

1) TIP TO TIP DIMENSIONS SHOWN, FOR INTEGRAL FIN AND EQUAL-LEG WINDOWS, SUBTRACT 1" FROM THE TIP TO TIP DIMENSION IN THE TABLE TO DETERMINE THE WINDOW SIZE.
2) FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE SIZE.
3) FOR RADIUS TOP WINDOWS, FIND THE SMALLEST WINDOW SIZE IN THE TABLE ABOVE WHICH THE RADIUS TOP WINDOW WILL COMPLETELY FIT WITHIN.
4) WINDOWS WITH THE LOW SILL OPTION ARE LIMITED TO A MAXIMUM POSITIVE DESIGN PRESSURE OF +65 PSF. NEGATIVE DESIGN PRESSURES ARE UNAFFECTED.

AN= ANNEALED
TP= TEMPERED
HS= HEAT STRENGTHENED

PRODUCT REVISED
as complying with the Florida Building Code
NOA No. 20-0401.11
Expiration Date 08/23/2023
By Miami-Dade Product Control

Revision:
A) NO CHANGES THIS SHEET.
JR - 03/11/20

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

REGISTRATION # 29296

Title	ALUMINUM SINGLE HUNG INSTALL. (LM)
Date	04/01/18
Drawn By	JENS ROSOWSKI
Check'd By	DP TABLE
DWG No.	7700NOA-1
Rev.	A
Sheet	4 OF 11
Series	SH7700A

ANTHONY LYNN MILLER
LICENSE
No. 58705
3/13/20
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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

TABLE 6:

Anchor Quantities Required for "Through-Frame" Installation using Glass Types 1-7

Tip to Tip Height	Bottom Sash Description for Given Range	Sash Height Range (in)	18" Jamb Above MR	18" Jamb Below MR	18" Header	25" Jamb Above MR	25" Jamb Below MR	25" Header	33" Jamb Above MR	33" Jamb Below MR	33" Header	37" Jamb Above MR	37" Jamb Below MR	37" Header	41" Jamb Above MR	41" Jamb Below MR	41" Header	45" Jamb Above MR	45" Jamb Below MR	45" Header	49" Jamb Above MR	49" Jamb Below MR	49" Header	53-1/8" Jamb Above MR	53-1/8" Jamb Below MR	53-1/8" Header
24"	Equal-lite	12.464	1	2	1	1	2	1	1	2	1	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2
31"	Equal-lite	15.964	1	2	1	1	2	1	1	2	1	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2
	Standard Proview	12.994 - 15.963	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2
	Shortest	12.464 - 12.993	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
38-3/8"	Equal-lite	19.652	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Standard Proview	15.944 - 19.651	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	15.131 - 15.943	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	14.131 - 15.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Shortest	12.464 - 14.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
45"	Equal-lite	22.964	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	20.131 - 22.983	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Standard Proview	18.594 - 20.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	16.131 - 18.593	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	15.131 - 16.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	14.131 - 15.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Shortest	12.464 - 14.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
48"	Equal-lite	24.964	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	22.131 - 24.963	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Standard Proview	20.194 - 22.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	18.131 - 20.193	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	16.131 - 18.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
	Custom Size	14.131 - 16.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
	Shortest	12.464 - 14.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
50-5/8"	Equal-lite	25.777	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	24.131 - 25.776	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Standard Proview	20.844 - 24.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	20.131 - 20.843	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	18.131 - 20.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
	Custom Size	16.131 - 18.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
	Custom Size	14.131 - 16.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
	Shortest	12.464 - 14.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
63"	Equal-lite	31.964	2	3	1	2	3	1	2	3	1	2	3	2	2	3	2	2	3	2	2	3	2	2	3	2
	Custom Size	28.131 - 31.963	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	3	2	3	3	2	3	3	2
	Standard Proview	25.794 - 28.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	3	2
	Custom Size	24.131 - 25.793	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
	Custom Size	22.131 - 24.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
	Custom Size	20.131 - 22.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
	Custom Size	18.131 - 20.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
	Custom Size	16.131 - 18.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2
	Shortest	13.194* - 16.130	4	2	1	4	2	1	4	2	1	4	2	2	4	2	2	4	2	2	4	2	2	4	2	2
76"	Equal-lite	38.464	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	3	2	3	3	2	3	3	2
	Custom Size	36.131 - 38.463	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	3	2	3	3	2	3	3	2
	Custom Size	34.131 - 36.130	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	3	2	3	3	2	3	3	2
	Standard Proview	30.994 - 34.130	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	3	2	3	3	2	3	3	2
	Custom Size	30.131 - 30.933	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	3	2	3	3	2	3	3	2
	Custom Size	28.131 - 30.130	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	3	2	3	3	2	3	3	2
	Shortest	26.194* - 28.130	4	2	1	4	2	1	4	2	1	4	2	2	4	2	2	4	2	2	4	2	2	4	3	2
84"	Equal-lite	42.464	3	4	1	3	4	1	3	4	1	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2
	Custom Size	38.131 - 42.463	3	4	1	3	4	1	3	4	1	3	4	2	3	4	2	3	4	2	3	4	2	3	4	2
	Standard Proview	34.194* - 38.130	4	3	1	4	3	1	4	3	1	4	3	2	4	3	2	4	3	2	4	3	2	4	3	2

*MINIMUM SASH HEIGHT FOR FLANGED WINDOWS IS: TIP TO TIP HEIGHT - 49.391
MINIMUM SASH HEIGHT FOR INTEGRAL FIN AND EQUAL LEG WINDOWS IS: BUCK HEIGHT - 48.391
MINIMUM SASH HEIGHT FOR FLANGED, RADIUS TOP WINDOWS IS: TIP TO TIP HEIGHT - 49.806
MINIMUM SASH HEIGHT FOR INTEGRAL FIN AND EQUAL LEG, RADIUS TOP WINDOWS IS: BUCK HEIGHT - 48.806

TABLE 6B:

Glass Type	Description (Listed from Exterior to Interior)
1	1/8"AN, .090" PVB, 1/8" AN
2	13/16" LIG: 1/8" AN CAP, AIRSPACE, 1/8" AN, .090" PVB, 1/8" AN
3	13/16" LIG: 1/8" TP CAP, AIRSPACE, 1/8" AN, .090" PVB, 1/8" AN
4	1/8" HS, .090" PVB, 1/8" HS
5	3/16" AN, .090" PVB, 3/16" AN
6	13/16" LIG: 3/16" AN CAP, AIRSPACE, 1/8" AN, .090" PVB, 1/8" AN
7	13/16" LIG: 3/16" TP CAP, AIRSPACE, 1/8" AN, .090" PVB, 1/8" AN

1) TIP TO TIP DIMENSIONS SHOWN. FOR INTEGRAL FIN AND EQUAL-LEG WINDOWS, SUBTRACT 1" FROM THE TIP TO TIP DIMENSION IN THE TABLE TO DETERMINE THE WINDOW SIZE.

2) FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE SIZE.

3) FOR RADIUS TOP WINDOWS, FIND THE SMALLEST WINDOW SIZE IN THE TABLE ABOVE WHICH THE RADIUS TOP WINDOW WILL COMPLETELY FIT WITHIN.

4) WINDOWS WITH THE LOW SILL OPTION ARE LIMITED TO A MAXIMUM POSITIVE DESIGN PRESSURE OF +65 PSF. NEGATIVE DESIGN PRESSURES ARE UNAFFECTED.

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0401.11
Expiration Date 08/23/2023
By
Miami-Dade Product Control

Revision: A) NO CHANGES THIS SHEET.
JR - 03/11/20

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29296

Title: ALUMINUM SINGLE HUNG INSTALL. (LM)
Desc: ANCHOR QUANTITY TABLE
Series: SH7700A
Date: 04/01/18
Drwn By: JENS ROSOWSKI
Rev: A
Dwg No.: 7700NOA-1
Sheet: 5 OF 11

ANTHONY LYNN MILLER
LICENSE
No. 58705
3/13/20
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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

TABLE 7:

Anchor Quantities Required for "Through-Frame" Installation using Glass Types 8-15

Tip to Tip Height	Bottom Sash Description for Given Range	Sash Height Range (in)	18" Jamb Above MR	18" Jamb Below MR	18" Header	25" Jamb Above MR	25" Jamb Below MR	25" Header	33" Jamb Above MR	33" Jamb Below MR	33" Header	37" Jamb Above MR	37" Jamb Below MR	37" Header	41" Jamb Above MR	41" Jamb Below MR	41" Header	45" Jamb Above MR	45" Jamb Below MR	45" Header	49" Jamb Above MR	49" Jamb Below MR	49" Header	53-1/8" Jamb Above MR	53-1/8" Jamb Below MR	53-1/8" Header
24"	Equal-lite	12.464	1	2	1	1	2	1	1	2	1	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2
31"	Equal-lite	15.964	1	2	1	1	2	1	1	2	1	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2
	Standard Proview	12.994 - 15.963	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2
	Shortest	12.464 - 12.993	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
38-3/8"	Equal-lite	19.652	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Standard Proview	15.944 - 19.651	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	15.131 - 15.943	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Custom Size	14.131 - 15.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Shortest	12.464 - 14.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
45"	Equal-lite	22.964	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	3	2	2	3	2
	Custom Size	20.131 - 22.963	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	3	2	2	3	2
	Standard Proview	18.594 - 20.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2
	Custom Size	16.131 - 18.593	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
	Custom Size	15.131 - 16.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
	Custom Size	14.131 - 15.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
	Shortest	12.454 - 14.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	3
49"	Equal-lite	24.964	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	3	2	2	3	2	2	3	2
	Custom Size	22.131 - 24.963	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	3	2	2	3	2	2	3	2
	Standard Proview	20.194 - 22.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	3	2	2	3	3
	Custom Size	18.131 - 20.193	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3
	Custom Size	16.131 - 18.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	2	3
	Custom Size	14.131 - 16.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	3	3	2	3
	Shortest	12.464 - 14.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	3	3	2	3
50-5/8"	Equal-lite	25.777	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	3	2	2	3	2	2	3	2
	Custom Size	24.131 - 25.776	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	3	2	2	3	2	2	3	2
	Standard Proview	20.844 - 24.130	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	3	2	2	3	2	2	3	3
	Custom Size	20.131 - 20.843	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3
	Custom Size	18.131 - 20.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	2	3	3	3
	Custom Size	16.131 - 18.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	3	3	2	3
	Custom Size	14.131 - 16.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	3	3	2	3
	Shortest	12.464 - 14.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	3	3	2	3
63"	Equal-lite	31.964	2	3	1	2	3	1	2	3	1	2	3	2	2	3	2	2	3	2	2	3	2	2	4	3
	Custom Size	28.131 - 31.963	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	3	2	3	3	3	3	4	3
	Standard Proview	25.794 - 28.130	3	2	1	3	2	1	3	2	1	3	2	2	3	3	2	3	3	2	3	3	3	3	3	3
	Custom Size	24.131 - 25.793	3	2	1	3	2	1	3	2	1	3	2	2	3	3	2	3	3	2	3	3	3	3	3	3
	Custom Size	22.131 - 24.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	3	2	3	3	3	3	3	3
	Custom Size	20.131 - 22.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	3	3	3	3	3
	Custom Size	18.131 - 20.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	3	2	3	4	3	3
	Custom Size	16.131 - 18.130	3	2	1	3	2	1	3	2	1	3	2	2	3	2	2	3	2	2	4	2	3	4	2	3
	Shortest	13.194* - 16.130	4	2	1	4	2	1	4	2	1	4	2	2	4	2	2	4	2	2	4	2	3	4	2	3
76"	Equal-lite	38.464	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	4	2	3	4	3	3	4	3
	Custom Size	36.131 - 38.463	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	4	2	3	4	3	3	4	3
	Custom Size	34.131 - 36.130	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	4	2	3	4	3	3	4	3
	Standard Proview	30.994 - 34.130	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	3	2	3	4	3	4	4	3
	Custom Size	30.131 - 30.993	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	3	3	2	4	3	3	4	4	3
	Custom Size	28.131 - 30.130	3	3	1	3	3	1	3	3	1	3	3	2	3	3	2	4	3	2	4	3	3	4	4	3
	Shortest	26.194* - 28.130	4	2	1	4	2	1	4	2	1	4	2	2	4	3	2	4	3	2	4	3	3	4	3	3
84"	Equal-lite	42.464	3	4	1	3	4	1	3	4	1	3	4	2	3	4	2	3	4	2	3	4	3	3	5	3
	Custom Size	38.131 - 42.463	3	4	1	3	4	1	3	4	1	3	4	2	3	4	2	3	4	2	4	4	3	4	5	3
	Standard Proview	34.194* - 38.130	4	3	1	4	3	1	4	3	1	4	3	2	4	3	2	4	4	2	4	4	3	4	4	3

*MINIMUM SASH HEIGHT FOR FLANGED WINDOWS IS: TIP TO TIP HEIGHT - 49.391
MINIMUM SASH HEIGHT FOR INTEGRAL FIN AND EQUAL LEG WINDOWS IS: BUCK HEIGHT - 48.391
MINIMUM SASH HEIGHT FOR FLANGED, RADIUS TOP WINDOWS IS: TIP TO TIP HEIGHT - 49.806
MINIMUM SASH HEIGHT FOR INTEGRAL FIN AND EQUAL LEG, RADIUS TOP WINDOWS IS: BUCK HEIGHT - 48.806

TABLE 7B:

Glass Type	Description (Listed from Exterior to Interior)
8	3/16" AN, .090" SG, 3/16" AN
9	3/16" HS, .090" SG, 3/16" HS
10	13/16" LIG: 1/8" AN CAP, AIRSPACE, 1/8" HS, .090" SG, 1/8" HS
11	13/16" LIG: 1/8" AN CAP, AIRSPACE, 3/16" AN, .090" SG, 3/16" AN
12	13/16" LIG: 1/8" TP CAP, AIRSPACE, 1/8" HS, .090" SG, 1/8" HS
13	13/16" LIG: 1/8" TP CAP, AIRSPACE, 3/16" AN, .090" SG, 3/16" AN
14	13/16" LIG: 3/16" AN CAP, AIRSPACE, 1/8" HS, .090" SG, 1/8" HS
15	13/16" LIG: 3/16" TP CAP, AIRSPACE, 1/8" HS, .090" SG, 1/8" HS

1) TIP TO TIP DIMENSIONS SHOWN. FOR INTEGRAL FIN AND EQUAL-LEG WINDOWS, SUBTRACT 1" FROM THE TIP TO TIP DIMENSION IN THE TABLE TO DETERMINE THE WINDOW SIZE.

2) FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE SIZE.

3) FOR RADIUS TOP WINDOWS, FIND THE SMALLEST WINDOW SIZE IN THE TABLE ABOVE WHICH THE RADIUS TOP WINDOW WILL COMPLETELY FIT WITHIN.

4) WINDOWS WITH THE LOW SILL OPTION ARE LIMITED TO A MAXIMUM POSITIVE DESIGN PRESSURE OF +65 PSF. NEGATIVE DESIGN PRESSURES ARE UNAFFECTED.

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0401.11
Expiration Date 08/23/2023
By
Miami-Dade Product Control

Revision: A) NO CHANGES THIS SHEET.
JR - 03/11/20

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

REGISTRATION #29296

Date: 04/01/18 | Drawn By: JENS ROSOWSKI | Rev: A

ALUMINUM SINGLE HUNG INSTALL. (LM)
ANCHOR QUANTITY TABLE

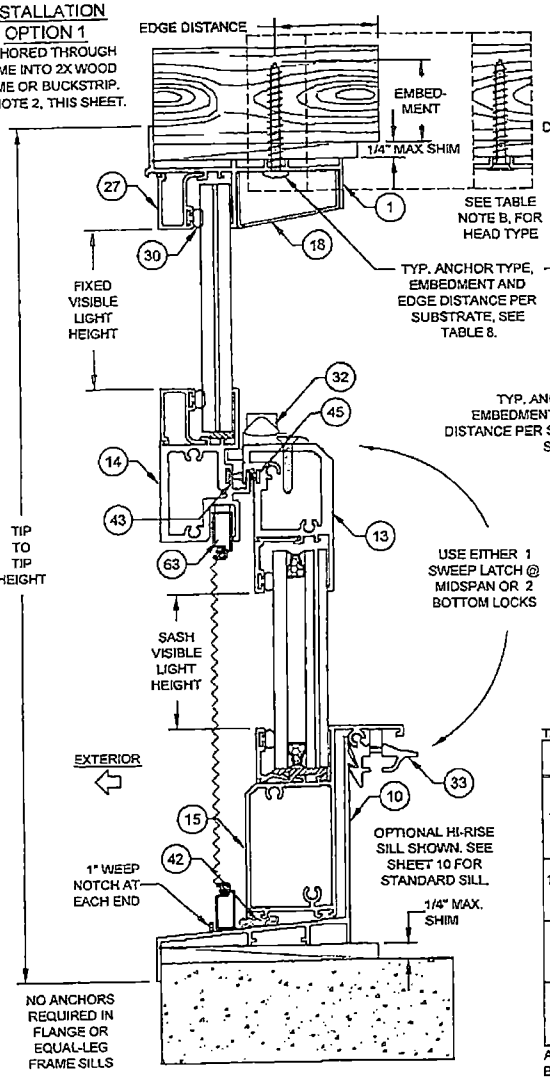
Series: SH7700A | Sheet: 6 OF 11 | Dwg. No.: 7700NOA-1

ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER 3/13/20

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

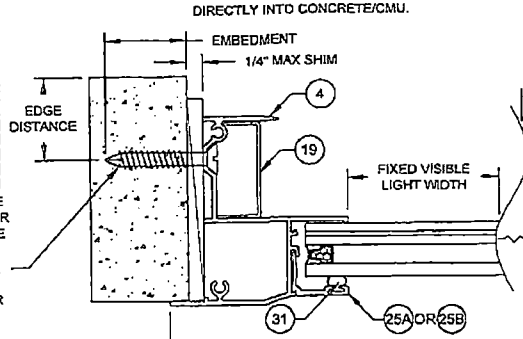
INSTALLATION DETAILS FOR FLANGE FRAMES

INSTALLATION OPTION 1
ANCHORED THROUGH FRAME INTO 2X WOOD FRAME OR BUCKSTRIP. SEE NOTE 2, THIS SHEET.

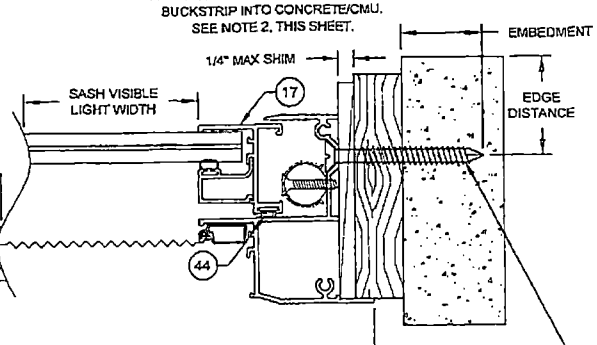


VERTICAL SECTION B-B

INSTALLATION OPTION 2
ANCHORED THROUGH FRAME DIRECTLY INTO CONCRETE/CMU.



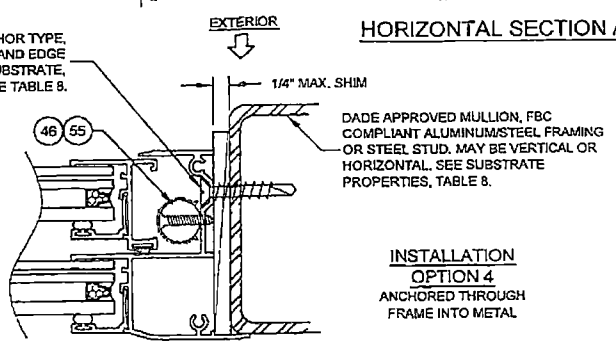
INSTALLATION OPTION 3
ANCHORED THROUGH FRAME AND 1X BUCKSTRIP INTO CONCRETE/CMU. SEE NOTE 2, THIS SHEET.



TIP TO TIP WIDTH

TYP. ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE PER SUBSTRATE, SEE TABLE 8.

HORIZONTAL SECTION A-A



INSTALLATION OPTION 4
ANCHORED THROUGH FRAME INTO METAL

VISIBLE LIGHT FORMULAS:
(SHOWN FOR HI-RISE SILL; SEE SHEET 9 FOR STANDARD SILL)

WIDTH
@ SASH & FIXED LITE: TIP TO TIP WIDTH - 5.12"

HEIGHT (EQUAL-LITE)
TIP TO TIP HEIGHT/2 - 3.73"

HEIGHT (PROVIEW)
@FIXED LITE: TIP TO TIP HEIGHT/2 + 3.78"
@SASH: TIP TO TIP HEIGHT/2 - 11.93"

HEIGHT (CUSTOM SASH)
@FIXED LITE: TIP TO TIP HEIGHT - SASH HEIGHT - 3.55"
@SASH: SASH HEIGHT - 4.60"

TABLE 8:

Anchor	Substrate	Min. Edge Distance	Min. Embedment
#12 Steel, 18-8 or 410 SS Screw	P.T. Southern Pine (SG=0.55)	9/16"	1-3/8"
	Aluminum, 6063-T5 min.	3/8"	0.063"
	A36 Steel	3/8"	0.063"
	Steel Stud, Gr. 33 min.	3/8"	0.045" (18 Ga)
1/4" 410 SS CretoFlex	Concrete (min. 3.35 ksi)	1"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Steel Ultracon	Concrete (min. 2.85 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Steel Ultracon +	Concrete (min. 3.00 ksi)	1-3/16"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"

A) MIN. OF 3 THREADS BEYOND THE METAL SUBSTRATE.
B) USE ONLY FLATHEAD ANCHORS IN JAMBS. PAN/HEX/FLAT HEAD TYPE IS ALLOWABLE FOR ANCHORS IN THE HEAD.
C) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.

NOTES:

1) USE ONLY SUBSTRATE-APPROPRIATE ANCHORS LISTED ON TABLE 8. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE WINDOW.

2) MASONRY ANCHORS MAY BE USED INTO WOOD AS PER TABLE 8. 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.

3) VISIBLE LIGHT WIDTH OR HEIGHT (ALSO REFERRED TO AS DAYLIGHT OPENING) IS MEASURED FROM BEADING TO BEADING.

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0401.11
Expiration Date 08/23/2023
By Miami-Dade Product Control

Revision: A) REVISED ANCHOR TYPE TABLE.
JR - 03/11/20

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29295

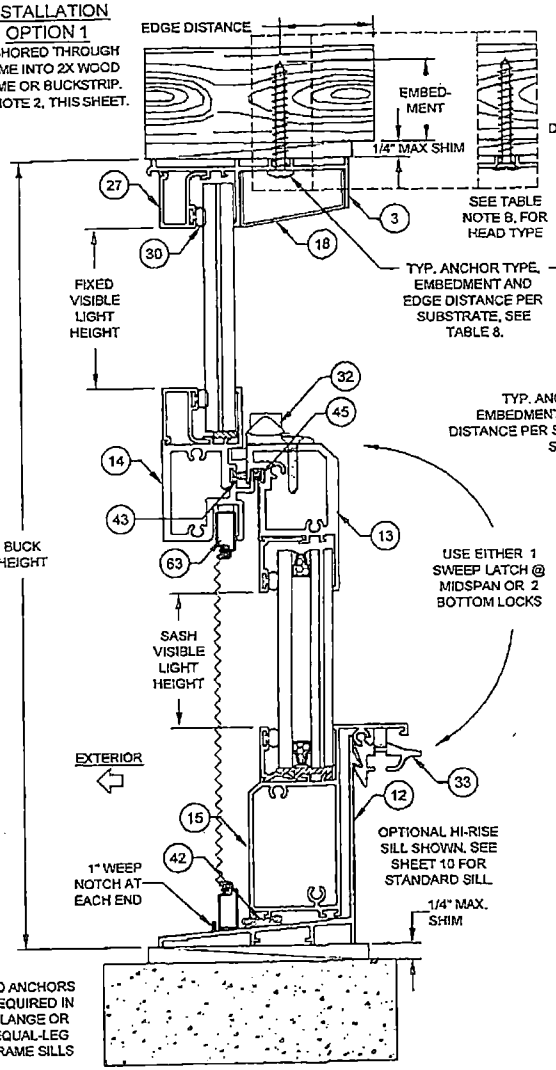
Date	04/01/18
Drawn By	JENS ROSOWSKI
Rev.	A
Drawing No.	7700NOA-1
Sheet No.	7 OF 11
Sheet Title	FLANGE X-SECTION
Product Title	ALUMINUM SINGLE HUNG INSTALL. (LM)
Series	SH7700A

ANTHONY LYNN MILLER
LICENSE
No. 58705
3/13/20
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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

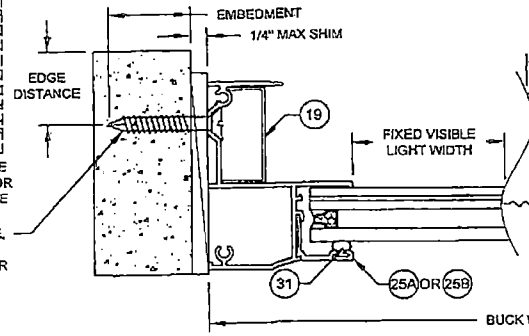
INSTALLATION DETAILS FOR EQUAL-LEG FRAMES

INSTALLATION OPTION 1
ANCHORED THROUGH FRAME INTO 2X WOOD FRAME OR BUCKSTRIP. SEE NOTE 2, THIS SHEET.

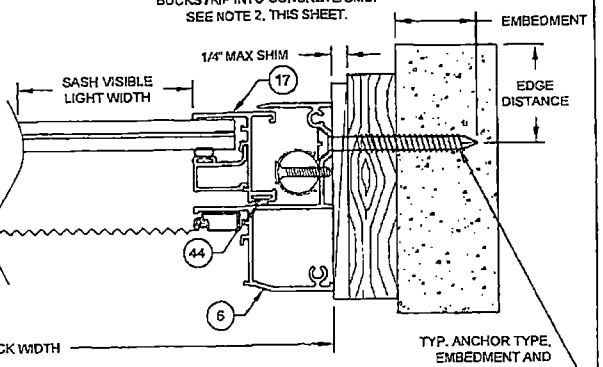


VERTICAL SECTION B-B

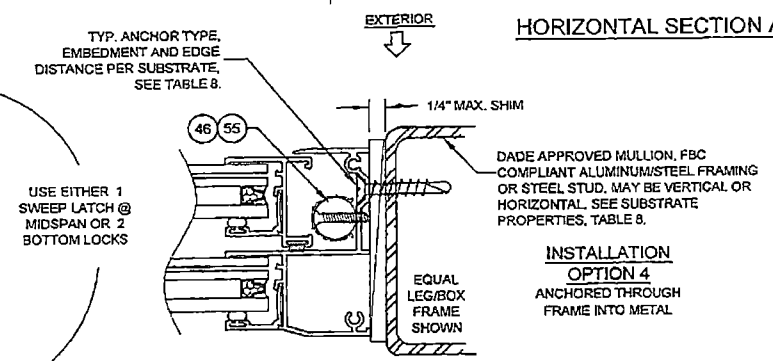
INSTALLATION OPTION 2
ANCHORED THROUGH FRAME DIRECTLY INTO CONCRETE/CMU.



INSTALLATION OPTION 3
ANCHORED THROUGH FRAME AND 1X BUCKSTRIP INTO CONCRETE/CMU. SEE NOTE 2, THIS SHEET.



HORIZONTAL SECTION A-A



INSTALLATION OPTION 4
ANCHORED THROUGH FRAME INTO METAL

VISIBLE LIGHT FORMULAS:
(SHOWN FOR HI-RISE SILL; SEE SHEET 9 FOR STANDARD SILL)

WIDTH
@ SASH & FIXED LITE: BUCK WIDTH - 4.12"

HEIGHT (EQUAL-LITE)
BUCK HEIGHT/2 - 3.23"

HEIGHT (PROVIEW)
@FIXED LITE: BUCK HEIGHT/2 + 4.28"
@SASH: BUCK HEIGHT/2 - 11.43"

HEIGHT (CUSTOM SASH)
@FIXED LITE: BUCK HEIGHT - SASH HEIGHT - 2.55"
@SASH: SASH HEIGHT - 4.60"

TABLE 8:

Anchor	Substrate	Min. Edge Distance	Min. Embedment
#12 Steel, 18-8 or 410 SS Screw	P.T. Southern Pine (SG=0.55)	9/16"	1-3/8"
	Aluminum, 6063-T5 min.	3/8"	0.063"
	A36 Steel	3/8"	0.063"
	Steel Stud, Gr. 33 min.	3/8"	0.045" (18 Ga)
1/4" 410 SS CreteFlex	Concrete (min. 3.35 ksi)	1"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Steel Ultracon	Concrete (min. 2.85 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Steel Ultracon +	Concrete (min. 3.00 ksi)	1-3/16"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"

A) MIN. OF 3 THREADS BEYOND THE METAL SUBSTRATE.
B) USE ONLY FLATHEAD ANCHORS IN JAMBS. PAN/HEX/FLAT HEAD TYPE IS ALLOWABLE FOR ANCHORS IN THE HEAD.
C) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.

NOTES:

1) USE ONLY SUBSTRATE-APPROPRIATE ANCHORS LISTED ON TABLE 8. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE WINDOW.

2) MASONRY ANCHORS MAY BE USED INTO WOOD AS PER TABLE 8. 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.

3) VISIBLE LIGHT WIDTH OR HEIGHT (ALSO REFERRED TO AS DAYLIGHT OPENING) IS MEASURED FROM BEADING TO BEADING.

PRODUCT REVISED
as complying with the Florida Building Code
NOA No. 20-0401.11
Expiration Date 08/23/2023
By Miami-Dade Product Control

Revision: A) REVISED ANCHOR TYPE TABLE.
JR - 03/11/20

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

REGISTRATION #29296

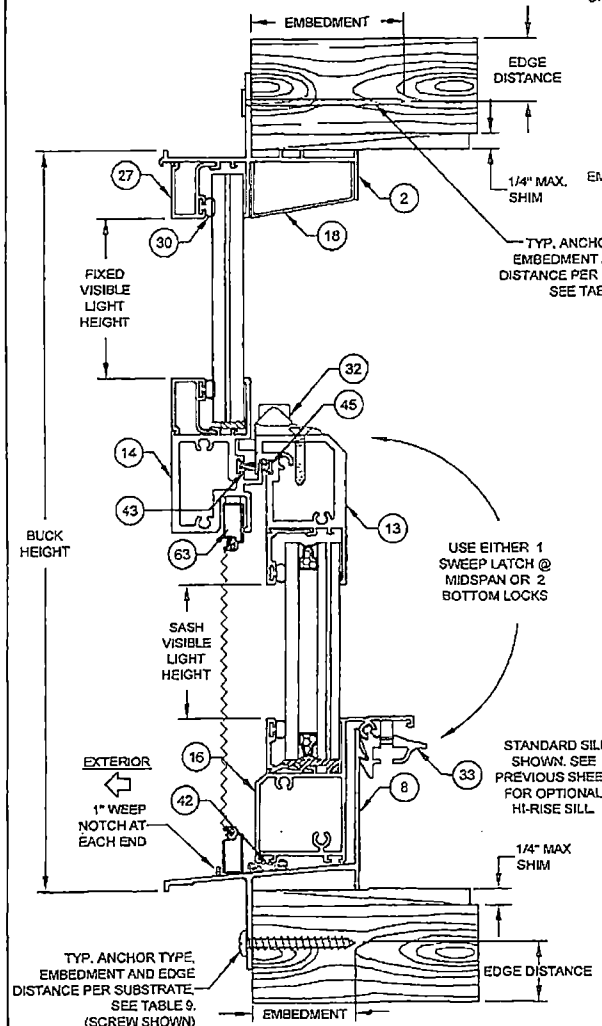
Title	Date	Drawn By	Rev.
ALUMINUM SINGLE HUNG INSTALL. (LM)	04/01/18	JENS ROSOWSKI	A

Series	Sheet	DWG No.	Rev.
EQUAL-LEG X-SECTION	8 OF 11	7700NOA-1	
	SH7700A		

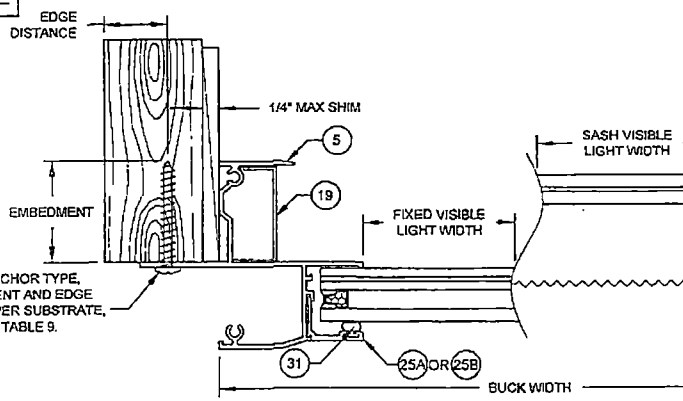
ANTHONY LYNN MILLER
LICENSE
No. 56705
3/13/20
STATE OF FLORIDA
PROFESSIONAL ENGINEER

A. LYNN MILLER, P.E.
P.E.# 56705

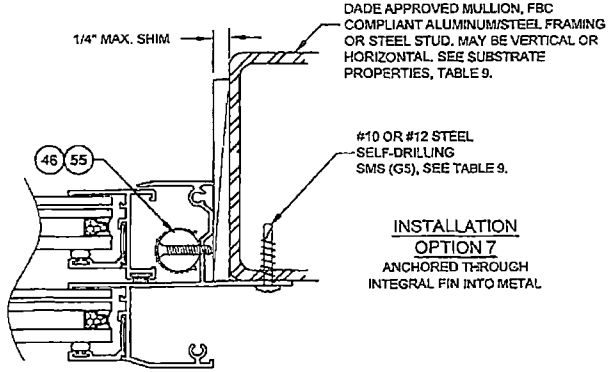
INSTALLATION DETAILS FOR INTEGRAL FIN FRAMES



VERTICAL SECTION D-D



HORIZONTAL SECTION C-C



INSTALLATION OPTION 7
ANCHORED THROUGH INTEGRAL FIN INTO METAL

VISIBLE LIGHT FORMULAS:
(SHOWN FOR STANDARD SILL; SEE SHEETS 7 OR 8 FOR HI-RISE SILL)

WIDTH
@ SASH & FIXED LITE: BUCK WIDTH - 4.12"

HEIGHT (EQUAL-LITE)
BUCK HEIGHT/2 - 3.23"

HEIGHT (PROVIEW)
@FIXED LITE: BUCK HEIGHT/2 + 4.28"
@SASH: BUCK HEIGHT/2 - 11.43"

HEIGHT (CUSTOM SASH)
@FIXED LITE: BUCK HEIGHT - SASH HEIGHT - 2.55"
@SASH: SASH HEIGHT - 4.60"

TABLE 9:

Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .113" Box Nail	P.T. Southern Pine (SG=0.55)	5/16"	2.438
2-1/2" x .131" Common Nail	P.T. Southern Pine (SG=0.55)	3/8"	2.438
2-1/2" x .145" Roofing Nail	P.T. Southern Pine (SG=0.55)	3/8"	2.438
2-1/2" x .145" Roofing Nail	P.T. Southern Pine (SG=0.55)	3/8"	2.438
#10 Steel Trusshead Screw or #12 Steel, 18-8 or 410 SS Screw	P.T. Southern Pine (SG=0.55)	1/2"	1.375
	0.125" Aluminum, 6063-T5 min.	5/16"	0.125
	0.050" A36 Steel	5/16"	0.05
	0.045" (18 Ga) Steel Stud, Gr. 33 min.	5/16"	0.045

A) MIN. OF 3 THREADS BEYOND THE METAL SUBSTRATE.

NOTES:

1) USE ONLY SUBSTRATE-APPROPRIATE ANCHORS LISTED ON TABLE 9. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE WINDOW.

2) VISIBLE LIGHT WIDTH OR HEIGHT (ALSO REFERRED TO AS DAYLIGHT OPENING) IS MEASURED FROM BEADING TO BEADING.

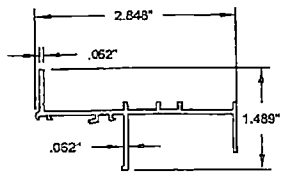
PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0401.11
Expiration Date 08/23/2023
By Miami-Dade Product Control

Revision:
A) NO CHANGES THIS SHEET.
JR - 03/11/20

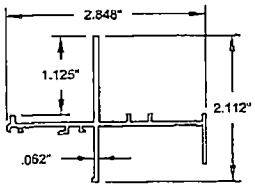
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29295

Date	04/01/18
Drawn By	JENS ROSOWSKI
Dwg No.	7700NOA-1
Rev.	A
Title	ALUMINUM SINGLE HUNG INSTALL. (LM)
Descr.	INTEGRAL FIN X-SECTION
Sheet	9 OF 11
Series	SH7700A

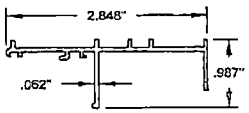
ANTHONY LYNN MILLER LICENSE No. 53705 STATE OF FLORIDA PROFESSIONAL ENGINEER
3/13/20
A. LYNN MILLER, P.E.
P.E.# 58705



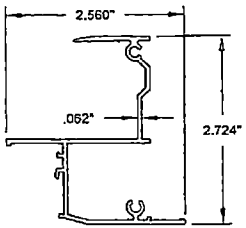
1 FLANGE FRAME HEAD



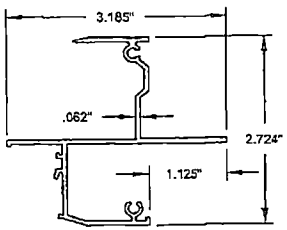
2 INTEGRAL FIN FRAME HEAD



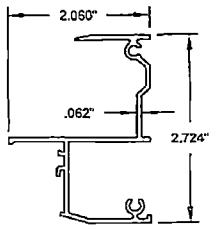
3 EQUAL LEG FRAME HEAD



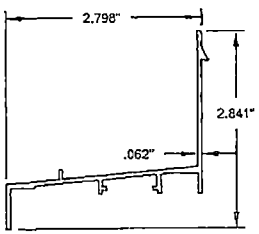
4 FLANGE FRAME JAMB



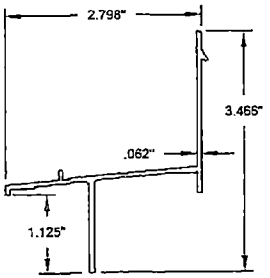
5 INTEGRAL FIN FRAME JAMB



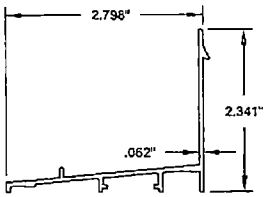
6 EQUAL LEG FRAME JAMB



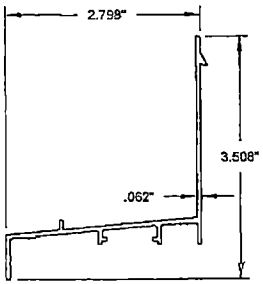
7 FLANGE FRAME SILL



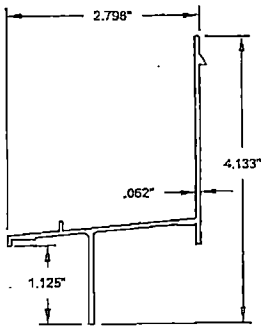
8 INTEGRAL FIN FRAME SILL



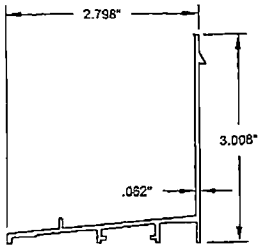
9 EQUAL LEG FRAME SILL



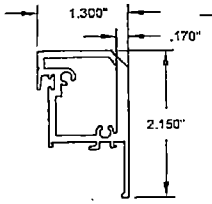
10 FLANGE FRAME SILL HI-RISE



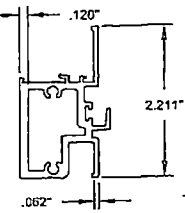
11 INTEGRAL FIN FRAME SILL - HI-RISE



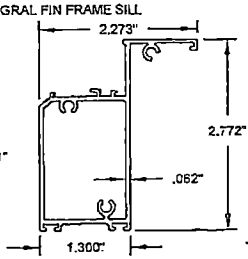
12 EQUAL LEG FRAME SILL HI-RISE



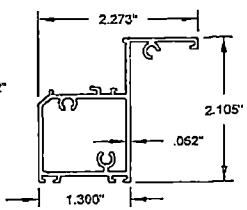
13 SASH TOP RAIL



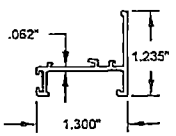
14 FIXED MEETING RAIL



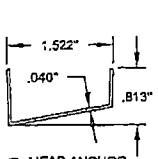
15 SASH BOTTOM RAIL - HI-RISE



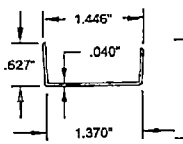
16 SASH BOTTOM RAIL



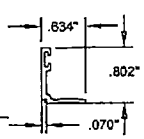
17 SASH SIDE RAIL



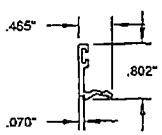
18 HEAD ANCHOR COVER



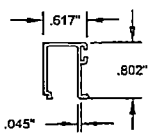
19 SASH STOP COVER



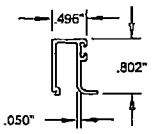
25A IG BEAD



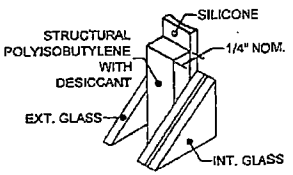
25B IG SNAP BEAD



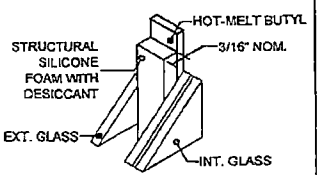
26 5/16" LAMI BEAD



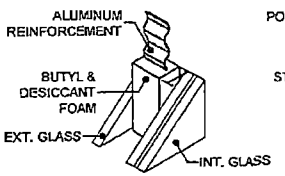
27 7/16" LAMI BEAD



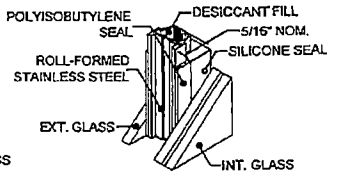
70 KODISPACE 4SG TPS



71 SUPER SPACER© NXT ™



72 DURASEAL® SPACER



73 XL EDGE™ SPACER

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0401.11
Expiration Date 08/23/2023
By Miami-Dade Product Control

Revision:
A) NO CHANGES THIS SHEET.

JR - 03/11/20

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

REGISTRATION #29295

Title:	ALUMINUM SINGLE HUNG INSTALL. (LM)
Scale:	EXTRUSIONS
Date:	04/01/18
Drawn By:	JENS ROSOWSKI
Drwg. No.:	7700NOA-1
Rev.:	A
Sheet:	10 OF 11
Sheet:	SH7700A

ANTHONY LYNN MILLER
LICENSE
No. 58705
3/13/20
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

TABLE 11:

Item #	PGT Part #	Description	Material
1	642001	Head, Flange	Alum. 6063-T6
2	624017	Head, Integral Fin	Alum. 6063-T6
3	624028	Head, Equal-leg	Alum. 6063-T6
4	624004	Jamb, Flange	Alum. 6063-T6
4A		Jamb, Flange (Used For Alternate Radius Top Head)	Alum. 6063-T52
5	624020	Jamb, Integral Fin	Alum. 6063-T6
5A		Jamb, Integral Fin (Used For Alternate Radius Top Head)	Alum. 6063-T52
6	624031	Jamb, Equal-leg	Alum. 6063-T6
6A		Jamb, Equal-leg (Used For Alternate Radius Top Head)	Alum. 6063-T52
7	624002	Sill, Flange	Alum. 6063-T6
8	624018	Sill, Integral Fin	Alum. 6063-T6
9	624029	Sill, Equal-leg	Alum. 6063-T6
10	624003	Sill, Hi-Rise, Flange	Alum. 6063-T6
11	624019	Sill, Hi-Rise, Integral Fin	Alum. 6063-T6
12	624030	Sill, Hi-Rise, Equal-leg	Alum. 6063-T6
13	624006	Sash Top Rail	Alum. 6005A-T61
14	624005	Fixed Meeting Rail	Alum. 6005A-T61
15	624012	Sash Bottom Rail - Hi-Rise	Alum. 6063-T6
16	624068	Sash Bottom Rail	Alum. 6063-T6
17	624007	Sash Side Rail	Alum. 6063-T6
18	624051	Head Anchor Cover	Alum. 6063-T6
19	624015	Sash Stop	Alum. 6063-T6
25A	624009	IG Bead	Alum. 6063-T5
25B	624011	IG Snap Bead	Alum. 6063-T5
26	624010	5/16" Lami Beading	Alum. 6063-T6
27	624026	7/16" Lami Beading	Alum. 6063-T6
30	6TP247	Glazing Bead, Bulb Vinyl for #624023	Vinyl
31	6TP248	Glazing Bead, Bulb Vinyl for #624009 & #624011	Vinyl
32	724046	Sweep Latch (@ Top Rail)	Cast Zinc
33	624049	Bottom Latch (@ Sill)	Alum. 6063-T6
34		Setting Block (1/8" X 1/2" X 4")	Neoprene
35A		IG Setting Block (1/8" X 3/4" X 4")	Neoprene
35B	724014	IG Snap Setting Block	Vinyl
36	724044	Bottom Rail Weatherstrip Extension	
37	724053	Sill Gasket	Polyethylene
38	724054	Sash Top Rail Gasket	Polyethylene
39	724055	Sash Bottom Rail Gasket	Polyethylene
40	724057	Head Gasket	Polyethylene
41	724063	Meeting Rail Gasket	Polyethylene
42	61226D	Sash Bottom Rail Bulb Vinyl	Polyethylene
43		Weatherstrip, .270" x .187", Fin Seal (@ MR)	
44	67S16G	Weatherstrip, .170" X .270", Fin Seal (@ Sash Side Rail)	
45		Weatherstrip, .170" X .187", Fin Seal (@ Top Sash Rail)	
46	varies	Balance with Cover & Trim	Rigid Vinyl
51	781PSQX	#8 X 1" PH SMS (Assembly)	Stainless Steel
55	7834AA	#8 X 3/4" Ph. PN SMS (Balance)	Stainless Steel
63	-	Alum. Screen with Fiberglass Mesh	Varies
70	-	Kommerling Kodispace 4SG TPS	See Sheet 10 for Materials
71	-	Quanex Super Spacer nXT	
72	-	Quanex Duraseal Spacer	
73	-	Cardinal XL Edge Spacer	
74	-	Dow 791, 899, 983 or GE 7700 Backbedding	Silicone

ASSEMBLY DETAILS FOR FLANGE FRAMES

(OTHER FRAME TYPES SIMILAR).

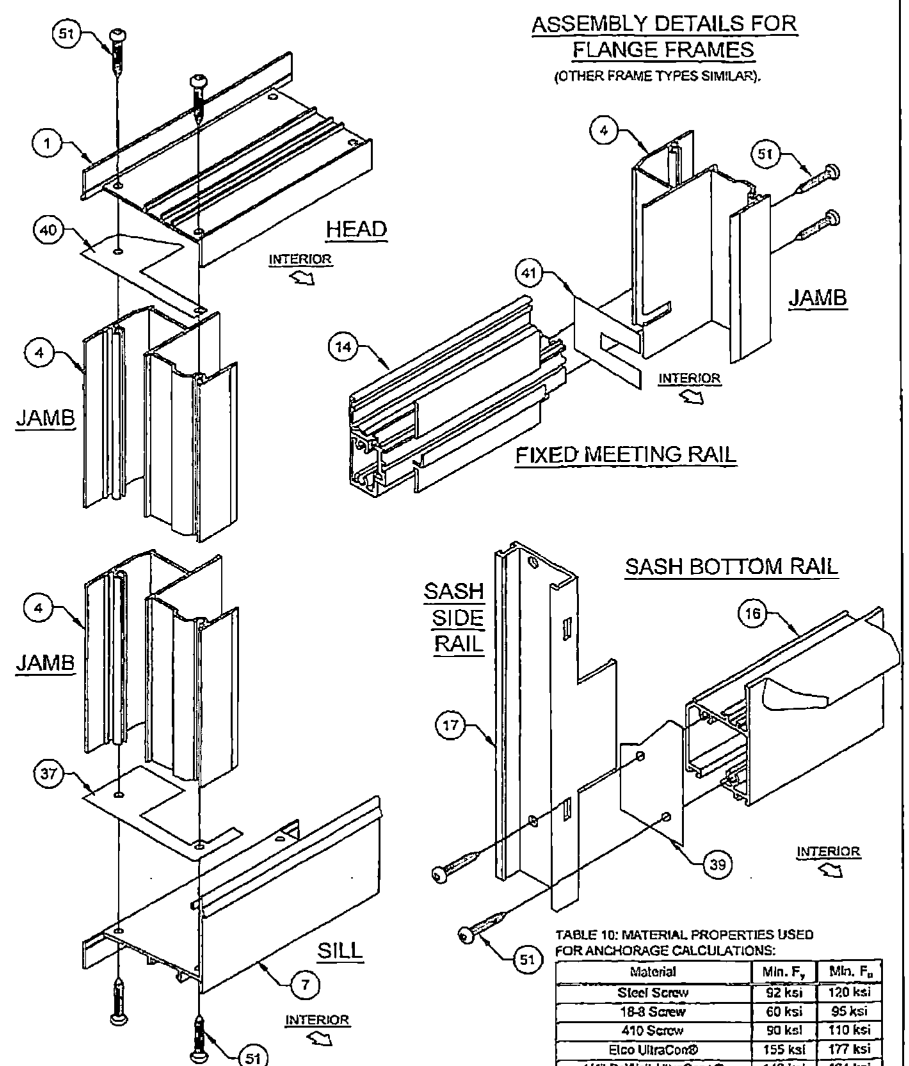


TABLE 10: MATERIAL PROPERTIES USED FOR ANCHORAGE CALCULATIONS:

Material	Min. F_y	Min. F_u
Steel Screw	92 ksi	120 ksi
18-8 Screw	60 ksi	95 ksi
410 Screw	90 ksi	110 ksi
Elco UltraCon®	155 ksi	177 ksi
1/4" DeWalt UltraCon+®	148 ksi	164 ksi
410 SS Elco/Dewalt CreteFlex®	127.4 ksi	189.7 ksi
6063-T5 Aluminum	16 ksi	22 ksi
A36 Steel	36 ksi	58 ksi
Gr. 33 Steel Stud	33 ksi	45 ksi

NOTES:

1) ALL CORNERS TO USE GASKET AND/OR SEALANT.

2) SOME PARTS/OPTIONS NOT SHOWN ON DRAWING FOR CLARITY.

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0401.11
Expiration Date 08/23/2023
By
Miami-Dade Product Control

Revision: A) ADDED BACKBEDDING, UPDATED MATERIAL PROP. TABLE.
JR - 03/11/20

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

REGISTRATION #29298

Date: 04/01/18
Drawn: JENS ROSOWSKI
Rev.: A
Dwg. No.: 7700NOA-1
Sheet: 11 OF 11
Title: ALUMINUM SINGLE HUNG INSTALL. (LM)
Desc.: BOM & CORNER DETAILS
Series: SH7700A

ANTHONY LYNN MILLER
LICENSE
No. 58705
3/13/20
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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

Product Approval
USER: Public User

FL #	FL21135-R5
Application Type	Revision
Code Version	2020
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer	Therma-Tru Corporation
Address/Phone/Email	1750 Indian Wood Circle Maumee, OH 43537 (800) 843-7628 sjasperson@thermatru.com
Authorized Signature	Vivian Wright rickw@rwbldgconsultants.com
Technical Representative Address/Phone/Email	
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	Lyndon F. Schmidt, P.E.
Florida License	PE-43409
Quality Assurance Entity	National Accreditation and Management Institute
Quality Assurance Contract Expiration Date	12/31/2026
Validated By	Ryan J. King, P.E. ☒ Validation Checklist - Hardcopy Received
Certificate of Independence	FL21135_R5_COI_(j)_Certificate of Independence.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM E330	2002
ASTM E331	2000
TAS 202	1994

Equivalence of Product Standards Certified By

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	07/12/2020
Date Validated	07/21/2020
Date Pending FBC Approval	07/25/2020
Date Approved	10/13/2020

Summary of Products

FL #	Model, Number or Name	Description
21135.1	a. Therma-Tru Benchmark Doors	Nominal 6'8 "Non-Impact" Opaque Wood Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door (Inswing/Outswing; X configuration)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.1 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.1.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.1.pdf Created by Independent Third Party: Yes
21135.2	b. Therma-Tru Benchmark Doors	Nominal 6'8 "Non-Impact" Opaque Wood Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door with Sidelite(s) (Inswing/Outswing; XO, OX or OXO configurations)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.2 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.2.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.2.pdf Created by Independent Third Party: Yes
21135.3	c. Therma-Tru Benchmark Doors	Nominal 8'0 "Non-Impact" Opaque Wood Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door (Inswing/Outswing; X configuration)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.3 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.3.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.3.pdf Created by Independent Third Party: Yes
21135.4	d. Therma-Tru Benchmark Doors	Nominal 8'0 "Non-Impact" Opaque Wood Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door with Sidelite(s) (Inswing/Outswing; XO, OX or OXO configurations)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.4 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.4.pdf Verified By: Lyndon F. Schmidt, P.E. P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.4.pdf Created by Independent Third Party: Yes
21135.5	e. Therma-Tru Benchmark Doors	Nominal 6'8 "Non-Impact" Glazed Wood Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door (Inswing/Outswing; X configuration)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.5.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports**

Other: See INST 21135.5 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark door panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)	FL21135_R5_AE_(j)_Eval_21135.5.pdf Created by Independent Third Party: Yes

21135.6	f. Therma-Tru Benchmark Doors	Nominal 6'8 "Non-Impact" Glazed Wood Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door with Sidelite(s) (Inswing/Outswing; XO, OX or OXO configurations)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.6 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst_21135.6.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval_21135.6.pdf Created by Independent Third Party: Yes

21135.7	g. Therma-Tru Benchmark Doors	Nominal 8'0 "Non-Impact" Glazed Wood Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door (Inswing/Outswing; X configuration)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.7 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst_21135.7.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval_21135.7.pdf Created by Independent Third Party: Yes

21135.8	h. Therma-Tru Benchmark Doors	Nominal 8'0 "Non-Impact" Glazed Wood Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door with Sidelite(s) (Inswing/Outswing; XO, OX or OXO configurations)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.8 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst_21135.8.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval_21135.8.pdf Created by Independent Third Party: Yes

21135.9	i. Therma-Tru Benchmark Doors	Nominal 6'8 "Non-Impact" Opaque Wood Edge Fiberglass Door Panels with Vented Sidelite(s) (Inswing; XX, XXX or XXXX configurations)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.9 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst_21135.9.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval_21135.9.pdf Created by Independent Third Party: Yes

21135.10	j. Therma-Tru Benchmark Doors	Nominal 6'8 "Non-Impact" Opaque Composite Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door (Inswing/Outswing; X configuration)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.10 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst_21135.10.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval_21135.10.pdf Created by Independent Third Party: Yes

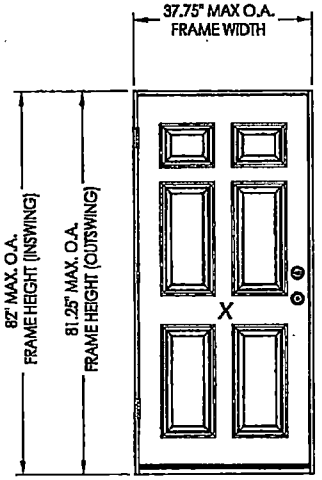
21135.11	k. Therma-Tru Benchmark Doors	Nominal 6'8 "Non-Impact" Opaque Composite Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door with Sidelite(s) (Inswing/Outswing; XO, OX or OXO configurations)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.11 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.11.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.11.pdf Created by Independent Third Party: Yes
21135.12	l. Therma-Tru Benchmark Doors	Nominal 8'0 "Non-Impact" Opaque Composite Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door (Inswing/Outswing; X configuration)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.12 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.12.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.12.pdf Created by Independent Third Party: Yes
21135.13	m. Therma-Tru Benchmark Doors	Nominal 8'0 "Non-Impact" Opaque Composite Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door with Sidelite(s) (Inswing/Outswing; XO, OX or OXO configurations)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.13 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.13.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.13.pdf Created by Independent Third Party: Yes
21135.14	n. Therma-Tru Benchmark Doors	Nominal 6'8 "Non-Impact" Glazed Composite Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door (Inswing/Outswing; X configuration)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.14 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.14.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.14.pdf Created by Independent Third Party: Yes
21135.15	o. Therma-Tru Benchmark Doors	Nominal 6'8 "Non-Impact" Glazed Wood Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door with Sidelite(s) (Inswing/Outswing; XO, OX or OXO configurations)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.15 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.15.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.15.pdf Created by Independent Third Party: Yes
21135.16	p. Therma-Tru Benchmark Doors	Nominal 8'0 "Non-Impact" Glazed Composite Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door (Inswing/Outswing; X configuration)

Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.16 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.16.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.16.pdf Created by Independent Third Party: Yes
21135.17	q. Therma-Tru Benchmark Doors	Nominal 8'0 "Non-Impact" Glazed Composite Edge "Smooth Surface" or "Wood Grain" Fiberglass Single Door with Sidelite(s) (Inswing/Outswing; XO, OX or OXO configurations)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.17 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.17.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.17.pdf Created by Independent Third Party: Yes
21135.18	r. Therma-Tru Benchmark Doors	Nominal 6'8 "Non-Impact" Opaque Composite Edge Fiberglass Door Panels with Vented Sidelite(s) (Inswing; XX, XXX or XXXX configurations)
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** N/A **Other:** See INST 21135.18 for Design Pressure Ratings, any additional use limitations, installation instructions and product particulars. (For Benchmark Door and Sidelite panels, this product approval requires the use of "J" part numbers for these doors, which have been stained or painted within six months of installation.)		**Installation Instructions** FL21135_R5_II_(j)_Inst 21135.18.pdf Verified By: Lyndon F. Schmidt, P.E. 43409 Created by Independent Third Party: Yes **Evaluation Reports** FL21135_R5_AE_(j)_Eval 21135.18.pdf Created by Independent Third Party: Yes

Back Next

THERMA-TRU
Benchmark® Doors

WOOD EDGE
OPAQUE FIBERGLASS SINGLE DOOR
INSWING/OUTSWING
"NON-IMPACT"



GENERAL NOTES

1. This product has been evaluated and is in compliance with the 7th Edition (2020) Florida Building Code (FBC) structural requirements excluding the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing or stucco.
3. For 2x stud framing construction, anchoring of these units shall be the same as that shown for 2x buck masonry construction.
4. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.
5. Benchmark Door panels require the use of "J" part numbers and must be stained or painted within six months of installation.

TABLE OF CONTENTS

CONFIGURATION	LOCK HARDWARE	DESIGN PRESSURE (PSF) INSWING		DESIGN PRESSURE (PSF) OUTSWING	
		POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
X	Latch & Deadbolt	+67.0	-67.0	+67.0	-67.0

See Sheet 3 for Hardware Specifications

F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

July 20, 2020

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.689.9197
FBPE Registry No. 9813

PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

NO.	DATE	REVISIONS	BY
3	7/16/20	UPDATE TO 7th ED (2020) FBC	PO
2	10/08/18	REV. DOOR PANEL OPTION NOTE	MT
1	12/03/17	RECESSED PANEL NOTATION	JK

DATE: 07/07/17
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-21135.1
SHEET 1 OF 11

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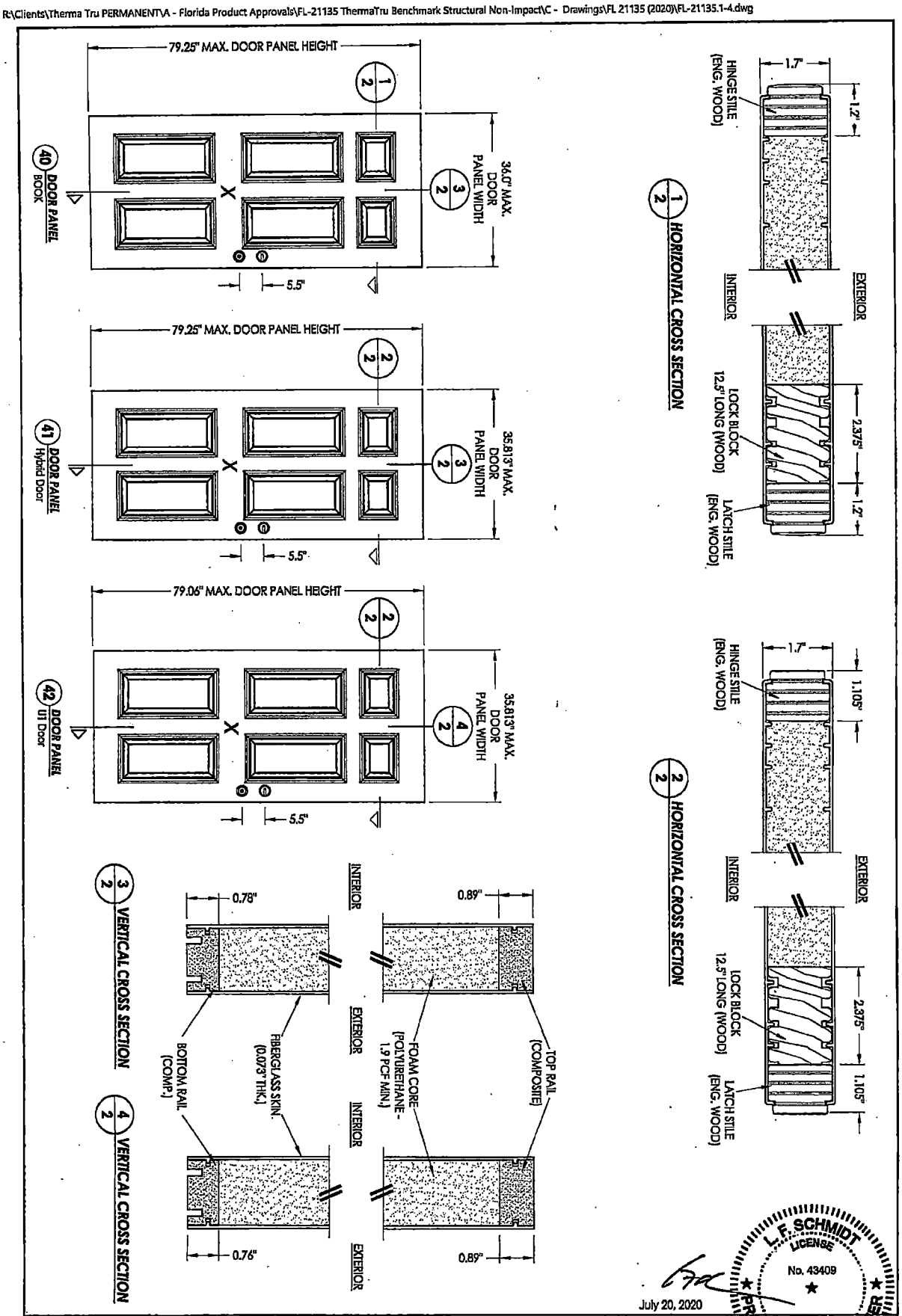


July 20, 2020

L.F. SCHMIDT LICENSE No. 43409 PROFESSIONAL ENGINEER STATE OF FLORIDA

NO.	DATE	REVISIONS	BY
3	7/16/20	UPDATE TO 7th ED (2020) FBC	PO
2	10/08/18	REV. DOOR PANEL OPTION NOTE	MT
1	12/03/17	RECESSED PANEL NOTATION	JK

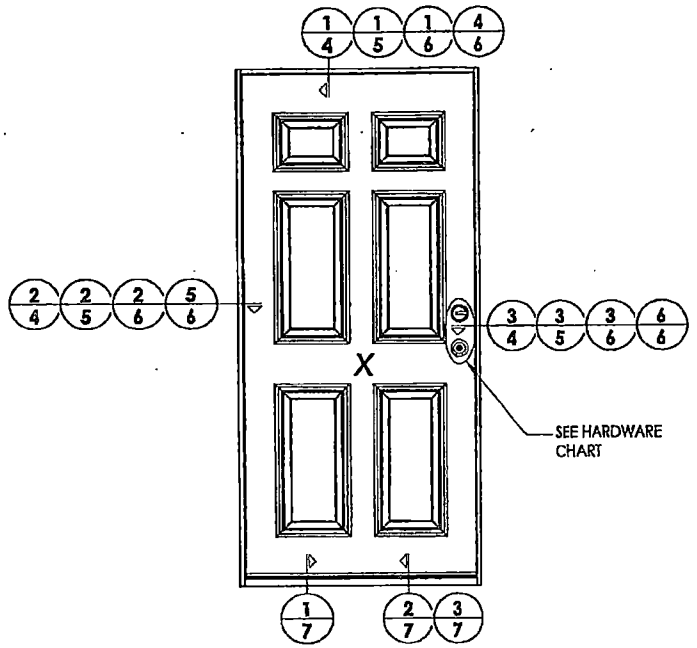
DATE: 07/07/17
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-21135.1
SHEET 2 of 11

PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: DOOR PANEL DETAILS

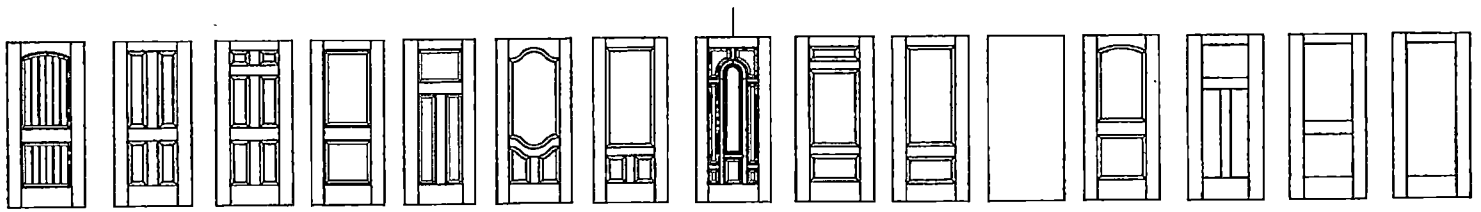
Documents Prepared By: Lyndon F. Schmidt P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.8197
FBPE Registry No. 9813



ELEVATION
X

HARDWARE TABLE	
MANUFACTURER	MODEL
SCHLAGE	KNOB: F51 DEADBOLT: B60
KWIKSET	KNOB: SIGNATURE SERIES DEADBOLT: SIGNATURE SERIES (980)



Benchmark Door Panel Options

Products approved include all embossed and recessed panel doors.
Similar opaque panel configurations are allowed.
Panels shown are for illustration and are representative only.

July 20, 2020

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT: THERMA-TRU FIBERGLASS DOOR

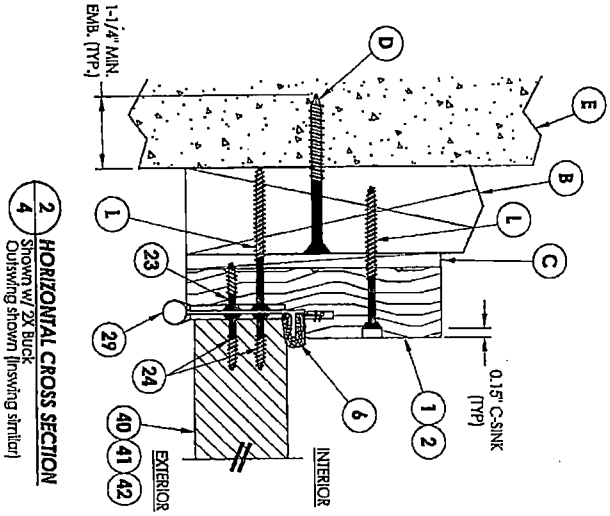
PART OR ASSEMBLY: ELEVATIONS

NO.	DATE	REVISIONS	BY
3	7/16/20	UPDATE TO 7th ED (2020) FBC	PO
2	10/08/18	REV. DOOR PANEL OPTION NOTE	MT
1	12/05/17	RECESSED PANEL NOTATION	JK

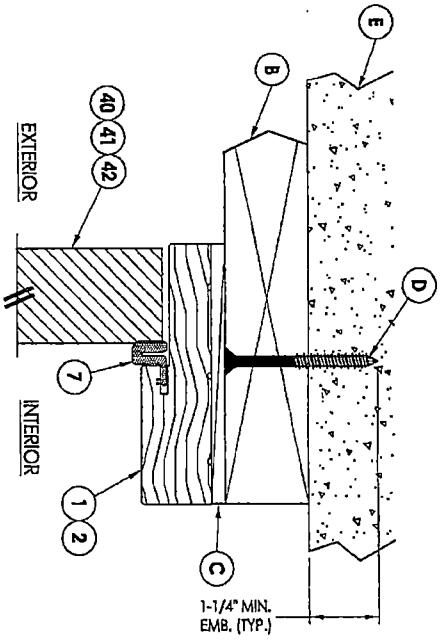
DATE: 07/07/17
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-21135.1
SHEET 3 OF 11

R:\Clients\Therma Tru PERMANENTA - Florida Product Approvals\FL-21135 ThermaTru Benchmark Structural Non-Impact\C - Drawings\FL 21135 (2020)\FL-21135.1-4.dwg

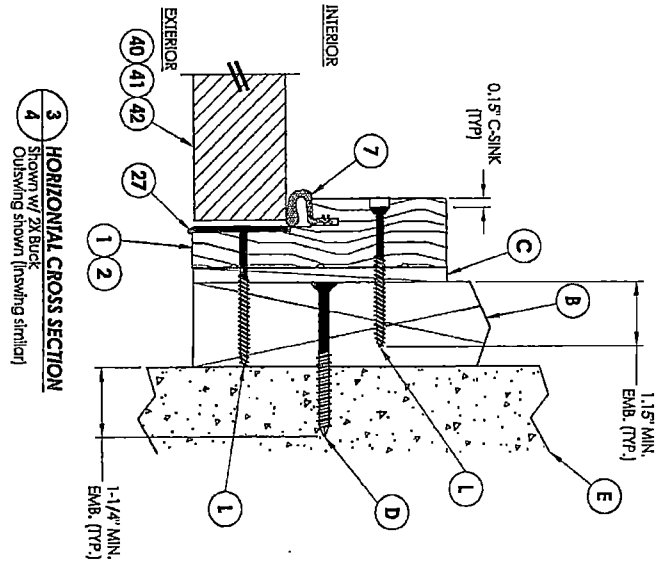
R:\Clients\Therma Tru PERMANENT\A - Florida Product Approvals\FL-21135 ThermaTru Benchmark Structural Non-Impact\C - Drawings\FL 21135 (2020)\FL-21135.1-4.dwg



2/4 **HORIZONTAL CROSS SECTION**
Shown w/ 2X Buck
Outswing shown (Inswing similar)



1/4 **VERTICAL CROSS SECTION**
Shown w/ 2X Buck
Outswing shown (Inswing similar)



3/4 **HORIZONTAL CROSS SECTION**
Shown w/ 2X Buck
Outswing shown (Inswing similar)

July 20, 2020

L. F. SCHMIDT LICENSE No. 43409 ★ PROFESSIONAL ENGINEER STATE OF FLORIDA

NO.	DATE	REVISIONS
3	7/16/20	UPDATE TO 7th ED (2020) FBC
2	10/08/18	REV. DOOR PANEL OPTION NOTE
1	12/03/17	RECESSED PANEL NOTATION

PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (2X BUCK)

Documents Prepared By: Lyndon F. Schmidt P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

DATE: 07/07/17 | SCALE: N.T.S. | DWG. BY: JK | CHK. BY: LFS | DRAWING NO.: FL-21135.1 | SHEET 4 OF 11

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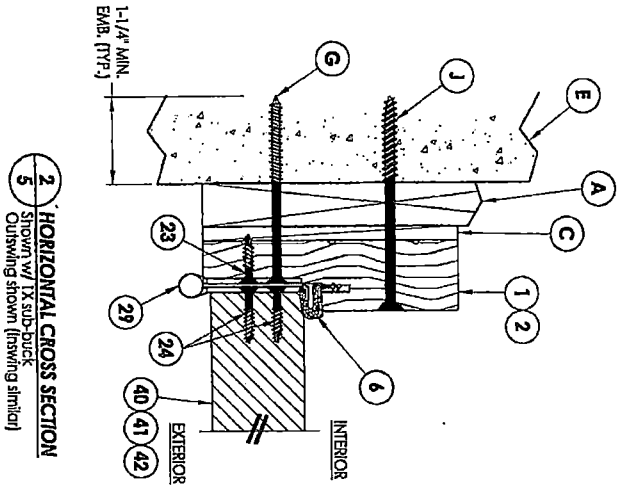
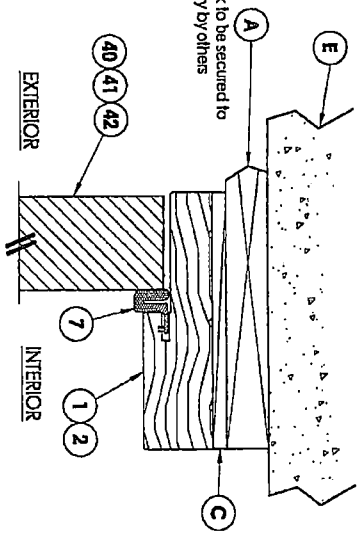
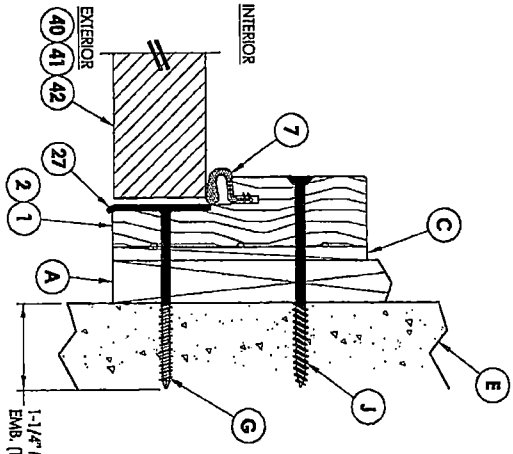


2/5 HORIZONTAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)



1/5 VERTICAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)



3/5 HORIZONTAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)

July 20, 2020

L. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

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2	10/08/18	REV. DOOR PANEL OPTION NOTE	MT
1	12/03/17	RECESSED PANEL NOTATION	JK

PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (1X BUCK)

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
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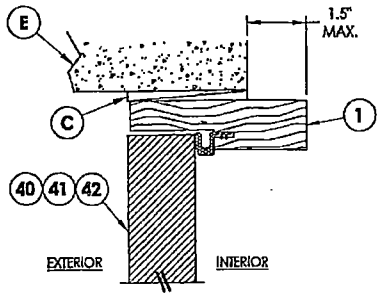
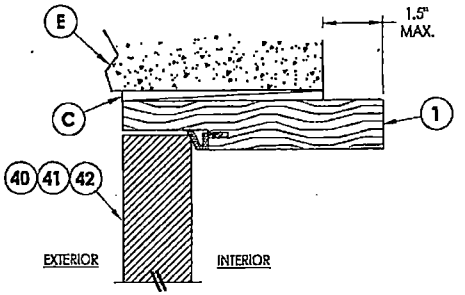
DATE: 07/07/17
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-21135.1
SHEET 5 OF 11

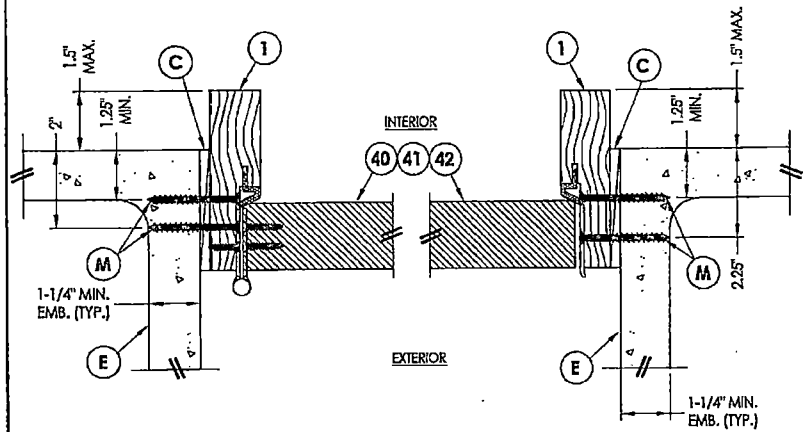


1/6 **VERTICAL CROSS SECTION**
Shown Direct to Masonry
Outswing only w/ 4-9/16" jamb



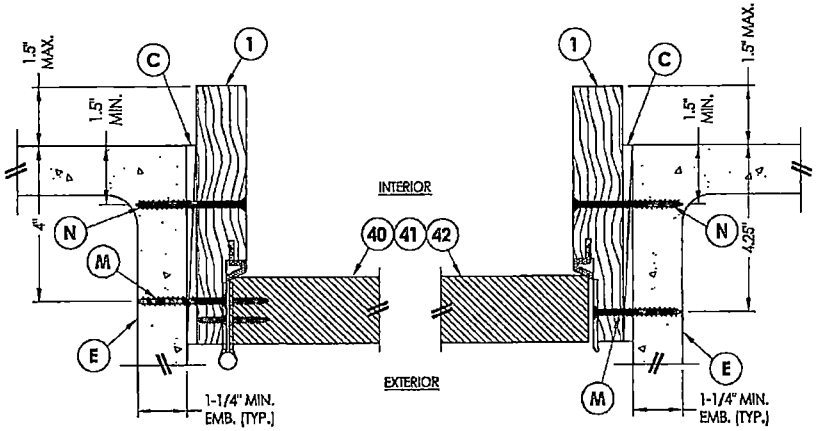
4/6 **VERTICAL CROSS SECTION**
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb

DIRECT TO MASONRY MAX. DESIGN PRESSURE:
w/ STANDARD STRIKE = ± 55 PSF
w/ SECURITY STRIKE = ± 65 PSF



2/6 **HORIZONTAL CROSS SECTION**
Shown Direct to Masonry
Outswing only w/ 4-9/16" jamb

3/6 **HORIZONTAL CROSS SECTION**
Shown Direct to Masonry
Outswing only w/ 4-9/16" jamb



5/6 **HORIZONTAL CROSS SECTION**
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb

6/6 **HORIZONTAL CROSS SECTION**
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb

July 20, 2020

Documents Prepared By
Lyndon F. Schmidt
P.E. No. 43409

STATE OF FLORIDA
PROFESSIONAL ENGINEER
LYNDON F. SCHMIDT
LICENSE
No. 43409

R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL & VERTICAL SECTIONS (DIRECT TO MASONRY)

NO	DATE	REVISIONS	BY
3	7/16/20	UPDATE TO 7th ED (2020) FBC	PO
2	10/08/18	REV. DOOR PANEL OPTION NOTE	MT
1	12/03/17	RECESSED PANEL NOTATION	JK

DATE: 07/07/17
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-21135.1
SHEET 6 OF 11

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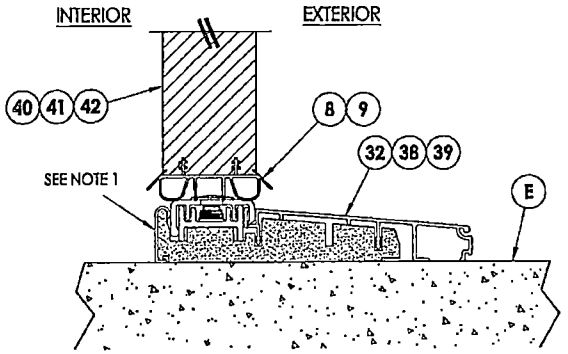
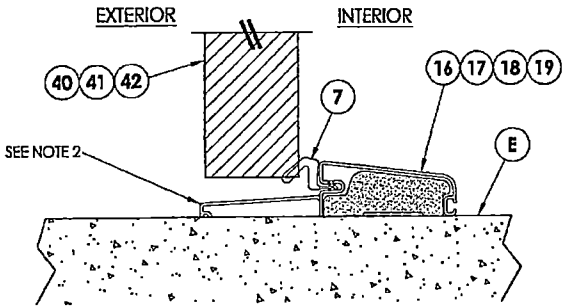
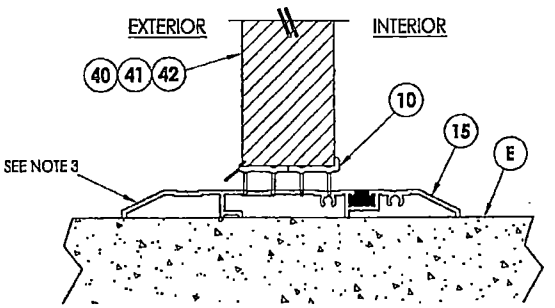
Notes:
1. Sill Item #'s 32, 38 & 39 are attached to jambs w/ (3) #8 X 2-1/2" pfh screws or (3) 2.5" staples at each end.
2. Sill Item #'s 16, 17, 18 & 19 are attached to jambs w/ (2) #8 X 2-1/2" pfh screws at each end.
3. Sill Item #15 is attached to jambs utilizing (2) #10 X 2" pph SMS screws at each end.



1/7 VERTICAL CROSS SECTION
Inswing Sill



2/7 VERTICAL CROSS SECTION
Outswing Sill



3/7 VERTICAL CROSS SECTION
Public Access Sill

T. F. SCHMIDT LICENSE No. 43408 STATE OF FLORIDA PROFESSIONAL ENGINEER
July 20, 2020
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43408
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT: THERMA-TRU FIBERGLASS DOOR
PART OR ASSEMBLY: VERTICAL CROSS SECTIONS (THRESHOLDS)

NO	DATE	REVISIONS	BY
3	7/16/20	UPDATE TO 7th ED (2020) FBC	PD
2	10/08/18	REV. DOOR PANEL OPTION NOTE	MT
1	12/03/17	RECESSED PANEL NOTATION	JK

DATE: 07/07/17
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-21135.1
SHEET 7 OF 11

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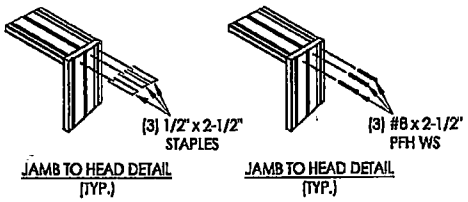
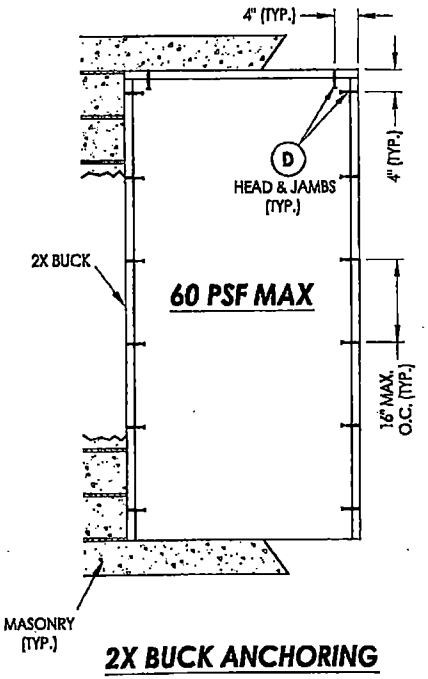
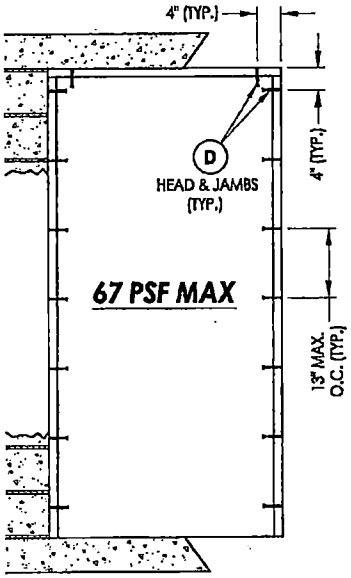


JAMB TO HEAD DETAIL (TYP.)

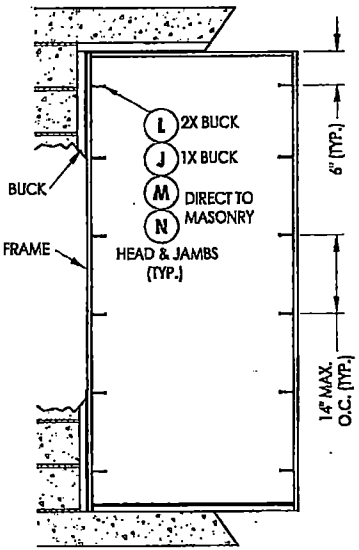
JAMB TO HEAD DETAIL (TYP.)



2X BUCK ANCHORING



2X BUCK ANCHORING



FRAME ANCHORING

T. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

July 20, 2020

Documents Prepared by:
Lyndon F. Schmidt
P.E. No. 43409

R|W BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9187
FBPE Registry No. 9813

PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: BUCK & FRAME ANCHORING

NO.	DATE	REVISIONS	BY
3	7/16/20	UPDATE TO 7th ED (2020) FBC	PO
2	10/08/18	REV. DOOR PANEL OPTION NOTE	MT
1	12/03/17	RECESSED PANEL NOTATION	JK

DATE: 07/07/17
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-21135.1
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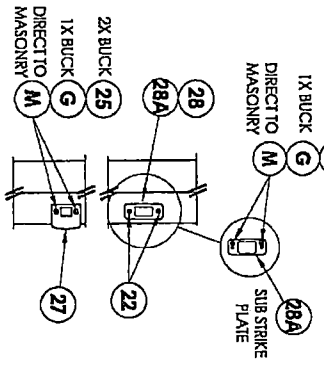
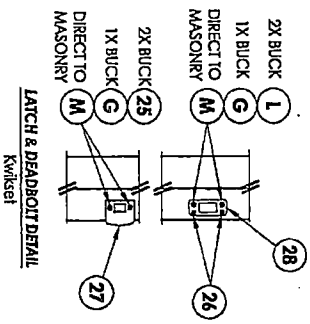
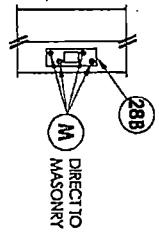
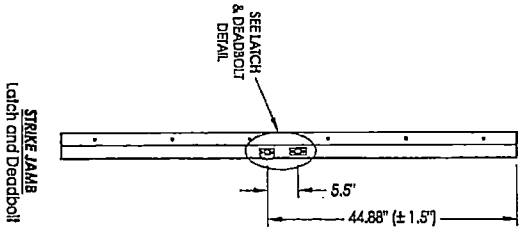
LATCH & DEADBOLT STRIKE DETAILS
(Standard Deadbolt Strike Plate)

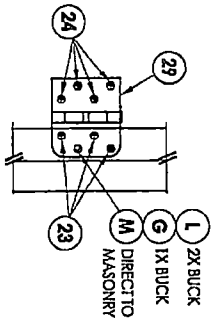


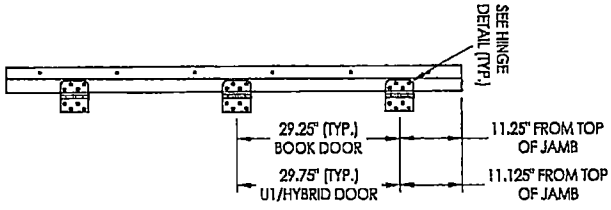


DEADBOLT STRIKE DETAILS
(Security Deadbolt Strike Plate)









July 20, 2020

L.F. SCHMIDT LICENSE No. 43409 ★ PROFESSIONAL ENGINEER ★ STATE OF FLORIDA

NO.	DATE	REVISIONS	BY
3	7/16/20	UPDATE TO 7th ED (2020) FBC	PO
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1	12/03/17	RECESSED PANEL NOTATION	JK

PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: HARDWARE DETAILS

Documents Prepared By: Lyndon F. Schmidt P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

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DWG. BY: JK
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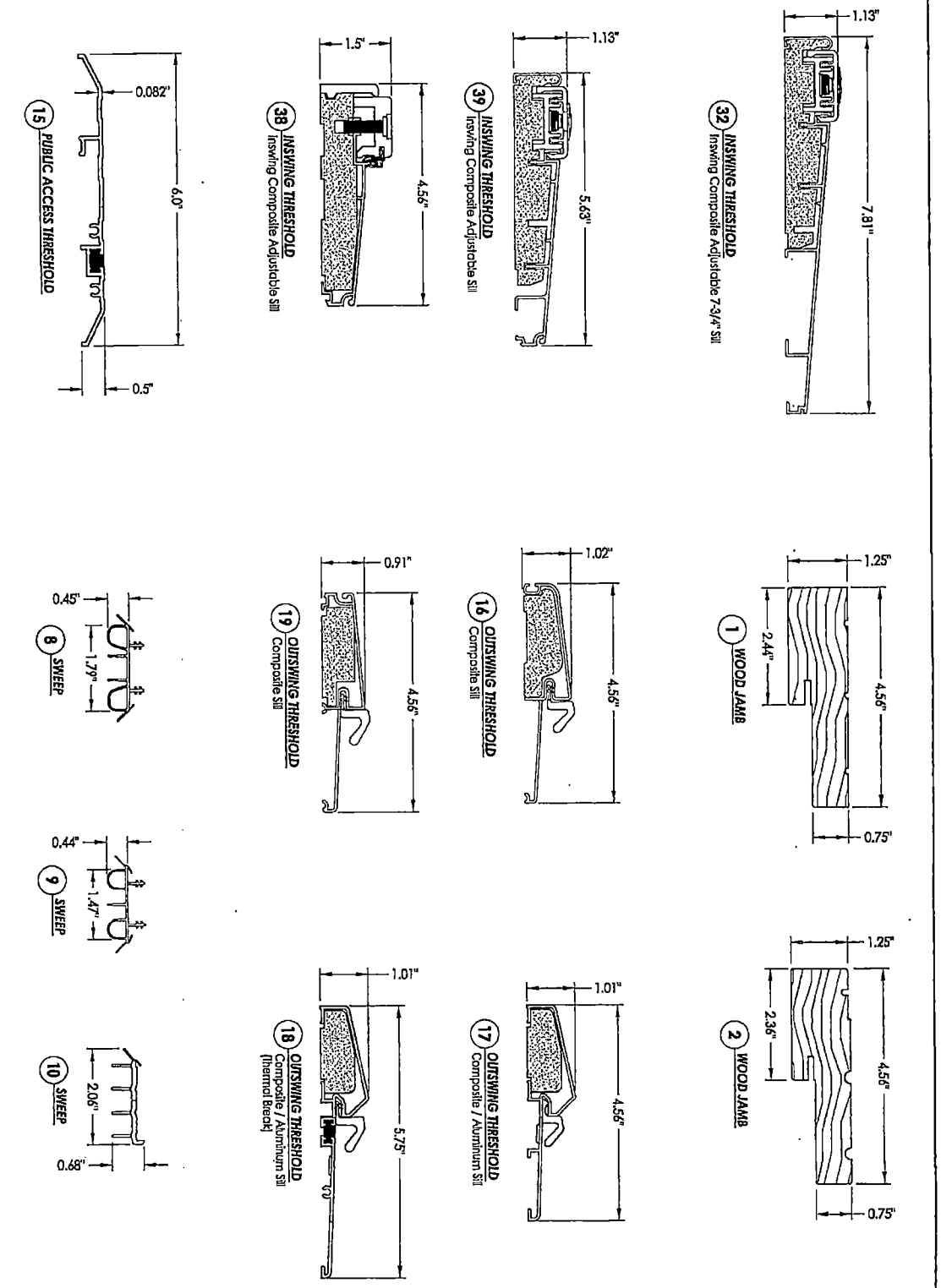

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L. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

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NO.	DATE	REVISIONS	BY

PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: COMPONENTS

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

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DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-21135.1
SHEET 10 OF 11

BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
A	1X BUCK (SG >= 0.42)	WOOD
B	2X BUCK (SG >= 0.42)	WOOD
C	1/4" MAX. SHIM SPACE	-
D	1/4" X 2-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	3/16" X 3-1/4" ITW CONCRETE SCREW	STEEL
J	1/4" X 3-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW (1.15" MIN. EMBEDMENT)	STEEL
M	3/16" X 2-1/4" ITW CONCRETE SCREW	STEEL
N	3/16" X 2-3/4" ITW CONCRETE SCREW	STEEL
1	JAMB (FINGER JOINT PINE)	WOOD
2	JAMB (FINGER JOINT PINE)	WOOD
6	WEATHERSTRIP (MEDIUM REACH)	FOAM
7	WEATHERSTRIP (LONG REACH)	FOAM
8	SWEEP	VINYL
9	SWEEP (USE w/ MODERATE CLIMATE THRESHOLD)	VINYL
10	SWEEP (USE w/ PUBLIC ACCESS THRESHOLD)	VINYL
15	PUBLIC ACCESS THRESHOLD	ALUM
16	OUTSWING THRESHOLD	ALUM/COMP
17	OUTSWING THRESHOLD	ALUM/COMP
18	OUTSWING THRESHOLD	ALUM/COMP
19	OUTSWING THRESHOLD	ALUM/COMP
22	#8 x 3/4" PFH WOOD SCREW	STEEL
23	#10 x 3/4" PFH WOOD SCREW	STEEL
24	#10 x 1" PFH WOOD SCREW	STEEL

BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
25	#8 x 2-1/2" PFH WOOD SCREW	STEEL
26	#8 x 5/8" PFH WOOD SCREW	STEEL
27	LATCH STRIKE PLATE	STEEL
28	DEADBOLT STRIKE PLATE (STANDARD)	STEEL
28A	DEADBOLT SUB STRIKE PLATE	STEEL
28B	DEADBOLT STRIKE PLATE (SECURITY)	STEEL
29	4" X 4" HINGE	STEEL
32	INSWING THRESHOLD	ALUM/COMP
38	INSWING THRESHOLD	ALUM/COMP
39	INSWING THRESHOLD	ALUM/COMP
40	DOOR PANEL (BOOK)	-
41	DOOR PANEL (HYBRID)	-
42	DOOR PANEL (U1)	-

CONCRETE ANCHOR NOTES:

1. *Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.*
2. *Concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. ON CENTER" dimension are not exceeded.*
3. *Concrete anchor table:*

ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-1/4"	2"	4"
ELCO ULTRACON®	1/4"	1-1/4"	1"	4"
ITW TAPCON®	3/16"	1-1/4"	AS SHOWN	1-1/2"

WOOD SCREW INSTALLATION NOTES:

1. *Maintain a minimum 5/8" edge distance, 1" end distance, & 1" o.c. spacing of wood screws to prevent the splitting of wood.*

T. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

July 20, 2020

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: BILL OF MATERIALS

NO.	DATE	REVISIONS	BY
3	7/16/20	UPDATE TO 7th ED (2020) FBC	PO
2	10/08/18	REV. DOOR PANEL OPTION NOTE	MT
1	12/03/17	RECESSED PANEL NOTATION	JK

DATE: 07/07/17
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-21135.1
SHEET 11 OF 11

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R W B C

R W Building Consultants, Inc.

Consulting and Engineering Services for the Building Industry
P.O. Box 230 Valrico, FL 33595 Phone 813.659.9197
Florida Board of Professional Engineers Registry License No. 9813

Product Evaluation Report — *Report No.:* FL-21135.1 — *Date:* July 20, 2020

Product Category	Sub Category	Manufacturer	Product Name
Exterior Doors	Swinging Exterior Door Assemblies	Therma Tru Corporation 118 Industrial Drive Edgerton, OH 43517 Phone 419.298.1740	ThermaTru Benchmark Doors "Smooth Surface" and "Wood Grain" Fiberglass Door "Non-Impact" Inswing/Outswing

Scope: This is a Product Evaluation report issued by R W Building Consultants, Inc. and Lyndon F. Schmidt, P.E. for Therma Tru Corporation based on Rule Chapter No. 61G20-3, Method 1D of the State of Florida Product Approval, Department of Business & Professional Regulation.

RW Building Consultants and Lyndon F. Schmidt, P.E. do not have nor will acquire financial interest in the company manufacturing or distributing the product or in any other entity involved in the approval process of the product named herein.

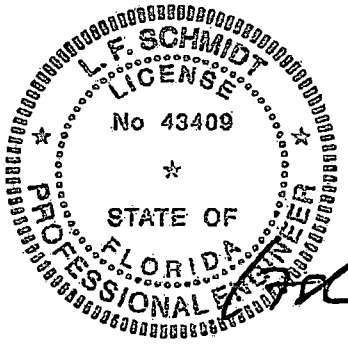
Limitations:

1. This product has been evaluated and is in compliance with the 7th Edition (2020) Florida Building Code (FBC) structural requirements excluding the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing or stucco.
3. For 2x stud framing construction, anchoring of these units shall be the same as that shown for 2x buck masonry construction.
4. Site conditions that deviate from the details of drawing FL-21135.1 require further engineering analysis by a licensed engineer or registered architect.
5. Benchmark Door panels require the use of "J" part numbers and must be stained or painted within six months of installation.
6. See drawing FL-21135.1 for size and design pressure limitations.

Supporting Documents:

	Test Report No.	Test Standard	Testing Laboratory	Signed by
1.	ETC-01-741-10702.0	TAS 202 (94)	ETC Laboratories	Wendell W. Haney, P.E.
	TEL 01460145	ASTM E330 (02)	Testing Evaluation Lab., Inc.	V.K. Wright
	TEL 01461612	ASTM E330 (02) / E331 (00)	Testing Evaluation Lab., Inc.	V.K. Wright

2. **Drawing No.** — No. FL-21135.1 — **Prepared by** RW Building Consultants, Inc. (# 9813) — **Signed & Sealed by** Lyndon F. Schmidt, P.E.
3. **Calculations** — Anchoring — **Prepared by** RW Building Consultants, Inc. (# 9813) — **Signed & Sealed by** Lyndon F. Schmidt, P.E.
4. **Quality Assurance**
   Certificate of Participation issued by National Accreditation and Management Institute, certifying that Therma Tru Corporation is manufacturing products within a quality assurance program that complies with ISO/IEC 17020 and Guide 53.



Lyndon F. Schmidt, P.E.
FL PE No. 43409
7/20/2020