



Product Approval
USER: Public User

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



FL #

FL5012-R22

Application Type

Revision

Code Version

2020

Application Status

Approved

*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

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
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(941) 486-0100 Ext 21142
lmiller@pgtindustries.com

Quality Assurance Representative

Address/Phone/Email

Category

Windows

Subcategory

Fixed

Compliance Method

Certification Mark or Listing

Certification Agency

Keystone Certifications, Inc.

Validated By

Steven M. Urlich, PE

Validation Checklist - Hardcopy Received

Referenced Standard and Year (of Standard)

<u>Standard</u>	<u>Year</u>
AAMA/WDMA/CSA 101/IS2/A440	2011
AAMA/WDMA/CSA 101/IS2/A440	2005
AAMA/WDMA/CSA 101/IS2/A440	2017
ASTM E 1886	2013
ASTM E1886	2005
ASTM E1996	2012
ASTM E283	2004
ASTM E330	2002

Equivalence of Product Standards
Certified By

Florida Licensed Professional Engineer or Architect
[FL5012 R22 Equiv AAMA 101-97 and 05 to AAMA 101-17 Equivalency Letter 2020-09-15.pdf](#)
[FL5012 R22 Equiv ASTM E1886-04-05 to E1886-13a and E1996-05-06-09 to E1996-17 Equivalency Letter 2020-09-09.pdf](#)

Product Approval Method

Method 1 Option A

Date Submitted

10/27/2020

Date Validated

11/03/2020

Date Pending FBC Approval

Date Approved

11/13/2020

Summary of Products

FL #	Model, Number or Name	Description
5012.1	PW - 640	Aluminum Fixed Casement
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL5012_R22_C_CAC_Cert-FCA640.pdf Quality Assurance Contract Expiration Date 02/25/2022 Installation Instructions FL5012_R22_II_CA640F FPA - Rev A.pdf Verified By: A. Lynn Miller, PE 58705 Created by Independent Third Party: No Evaluation Reports FL5012_R22_AE_CA640F Evaluation.pdf Created by Independent Third Party: No
5012.2	PW-5420	EnergyVue Vinyl Fixed Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL5012_R22_C_CAC_Certification - PW5420-5440.pdf Quality Assurance Contract Expiration Date 07/29/2021 Installation Instructions FL5012_R22_II_PW5420 FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL5012_R22_AE_PW5420 Evaluation.pdf Created by Independent Third Party: No
5012.3	PW-5440	EnergyVue Vinyl Fixed Casement Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL5012_R22_C_CAC_Certification - PW5420-5440.pdf Quality Assurance Contract Expiration Date 07/29/2021 Installation Instructions FL5012_R22_II_PW5440 FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL5012_R22_AE_PW5440 Evaluation.pdf Created by Independent Third Party: No
5012.4	PW-5520	WinGuard Vinyl Fixed Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL5012_R22_C_CAC_Certification - PW5520-5540 b.pdf Quality Assurance Contract Expiration Date 06/27/2021 Installation Instructions FL5012_R22_II_PW5520 FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL5012_R22_AE_PW5520 Evaluation.pdf Created by Independent Third Party: No
5012.5	PW-5540	WinGuard Vinyl Fixed Casement Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL5012_R22_C_CAC_Certification - PW5520-5540 b.pdf Quality Assurance Contract Expiration Date 06/27/2021 Installation Instructions FL5012_R22_II_PW5540 FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705

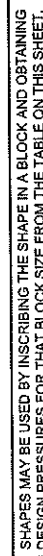
FLORIDA PRODUCT APPROVAL #5012

2) 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. 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, (EOR) OR ARCHITECT OF RECORD, (AOR).

3) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT 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.

4) MAX. 1/4" SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, BY OTHERS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE WINDOW.

5) 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 18 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIPABLE MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.



Window	Buck Size	Design Pressure		Certification (CAR) Number
		(+) psf	(-) psf	
120"	60"	70.0	70.0	190-1017
96"	63"	50.0	50.0	190-1011



09/30/11	DATE	VINYL PICTURE WINDOW INSTALLATION, NJ	
J ROSOWSKI	BY	GENERAL NOTES & ELEVATIONS	
PW5420-FPA	NO	1 OF 4	PW5420
REV	SHEET	SHEET	

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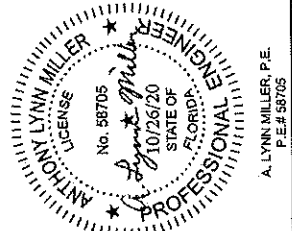
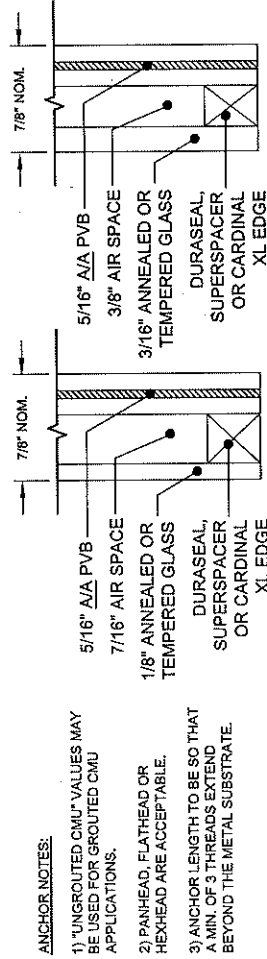


TABLE 2: ANCHORS INSTALLED THROUGH FRAME

Anchor	Substrate	Min. Edge Distance	Min. Embedment
#10 SMS (steel, 18-8 S.S. or 410 S.S.) Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
	Steel, A36	3/8"	0.050"
	Steel Stud, A653 Gr. 33 Aluminum, 6063-T5 (14 Ga.)	3/8"	0.0346" (20 Ga.) 0.0713" (14 Ga.)
#12 SMS (steel, 18-8 S.S. or 410 S.S.)	P.T. Southern Pine (SG=0.55)	9/16"	1-3/8"
	Steel, A36	3/8"	0.050"
	Steel Stud, A653 Gr. 33 Aluminum, 6063-T5 (14 Ga.)	3/8"	0.0346" (20 Ga.) 0.0713" (14 Ga.)
3/16" Ultracon Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
3/16" Ultracon+ Max. DP of 50.0 psf	Concrete (min. 2.85 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
1/4" Ultracon	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Ultracon+	Concrete (min. 2.85 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" Crete-Flex (410 S.S.)	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)	1-1/2"	1-3/8"
1/4" Aggre-Gator (18-8 S.S.)	Concrete (min. 3.275 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2"	1-1/4"

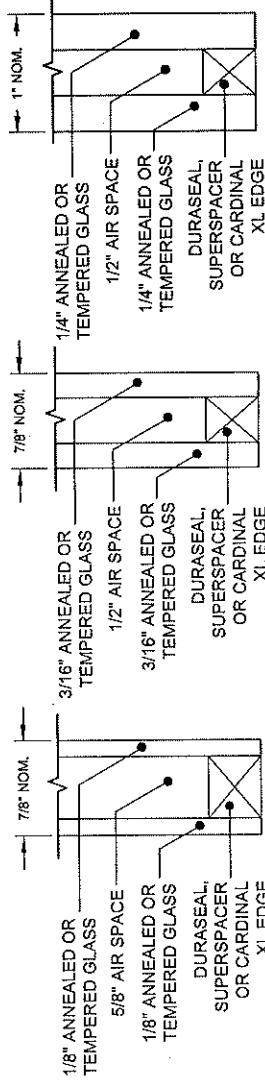
TABLE 3: ANCHORS INSTALLED THROUGH INTEGRAL FIN

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



ANCHOR NOTES:

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



GLAZING TYPES

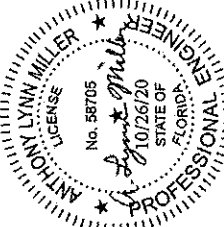
VISIBLE LIGHT FORMULAS

WIDTH: BUCK WIDTH - 4.5/16"

HEIGHT: BUCK HEIGHT - 4.5/16"

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

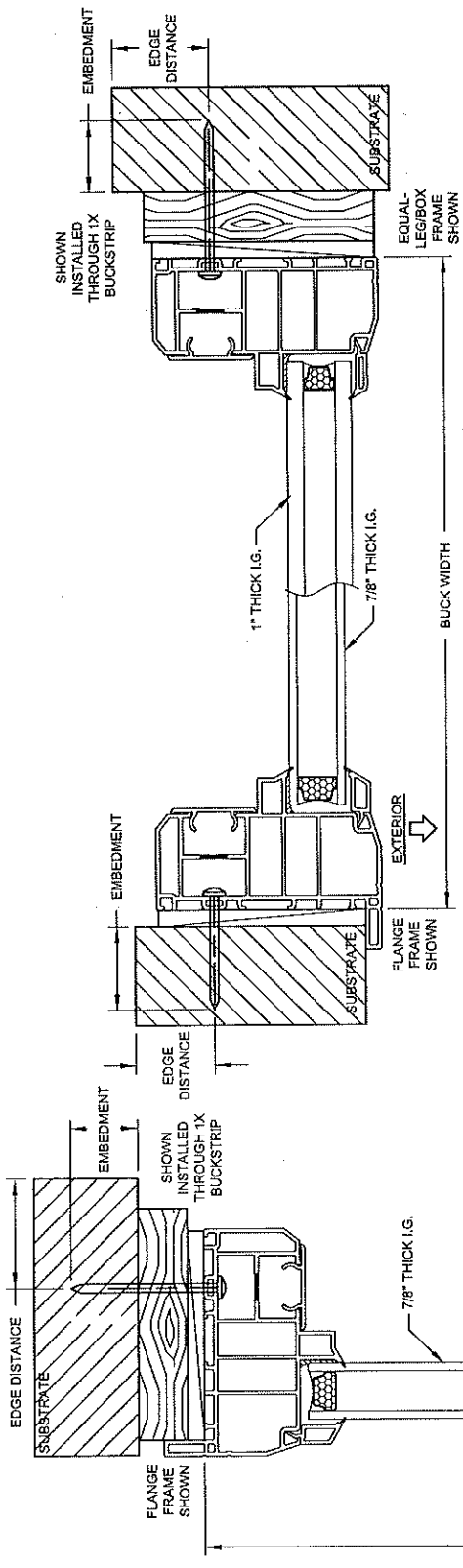
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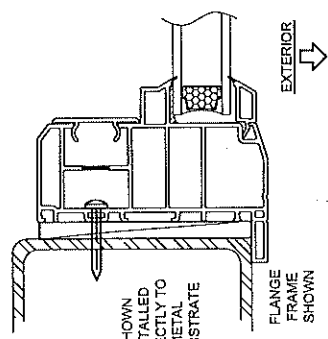
A LYNN MILLER, P.E.
P.E. #58705

PVB INTERLAYER MANUFACTURED BY KURARAY AMERICA, INC.

Series	Desc	Title	Rev	Date
PW5420	2 OF 4	GLASS ANCHORS/FRAME OPTIONS	J ROSOWSKI	09/30/11
PW5420	2 OF 4	VINYL PICTURE WINDOW INSTALLATION, NI	J ROSOWSKI	09/30/11



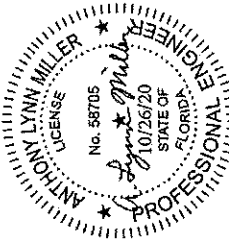
HORIZONTAL SECTION A-A



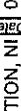
INSTALLATION NOTES:

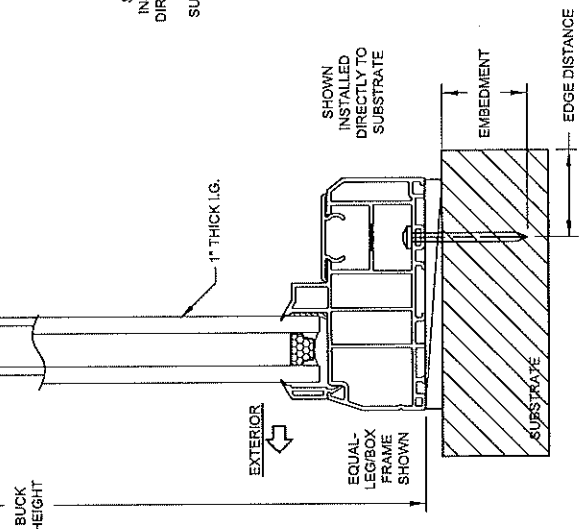
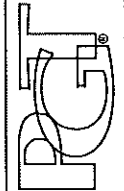
- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4"
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME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

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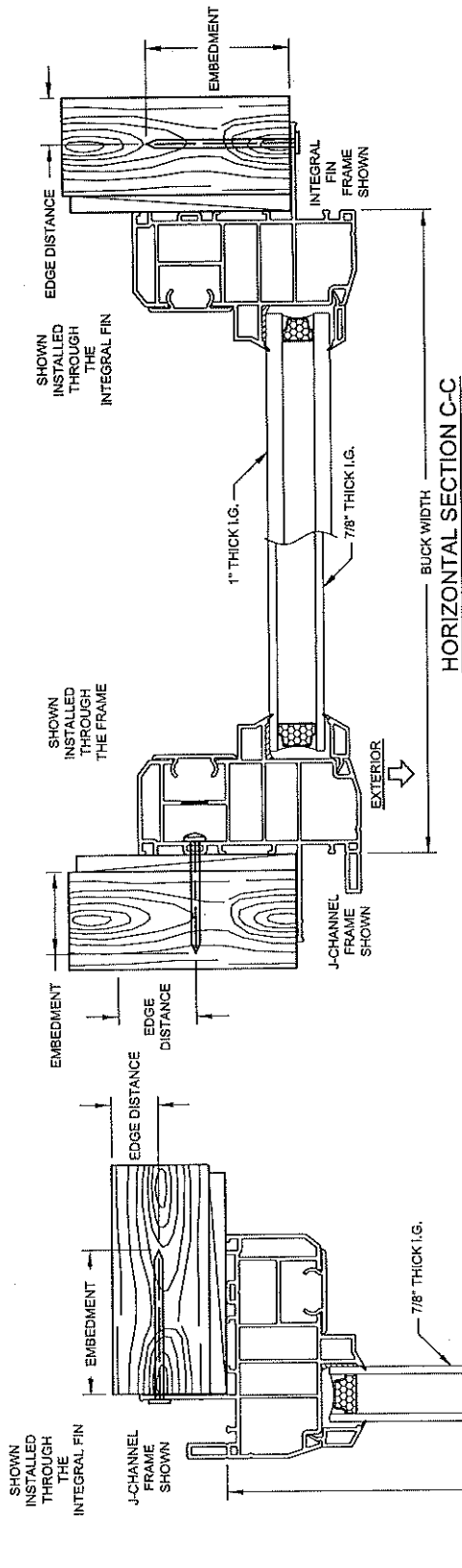


A. LYNN MILLER, P.E.
P.E. # 53705

	
Series	Disc
PW5420	FLANGE/EQUAL-LEG INSTALLATION
Sheet	3 OF 4
DWG No.	PW5420-FPA
Rev.	A
VINYL PICTURE WINDOW INSTALLATION, N	
Date	09/30/11
J ROSOWSKI	

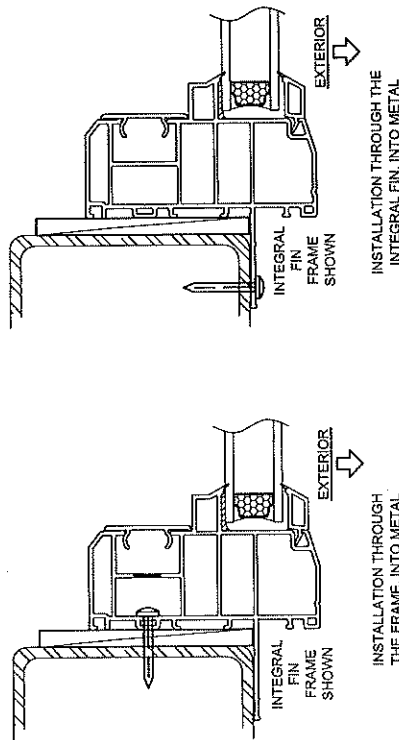


VERTICAL SECTION B-B



INSTALLATION NOTES:

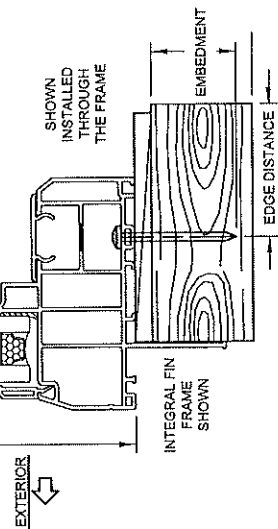
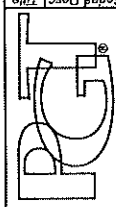
- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4".
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME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



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ANTHONY LYNN MILLER
No. 58705
10/26/20
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

VINYL PICTURE WINDOW INSTALLATION, N		09/30/11	
INTEGRAL FIN INSTALLATION		J ROSOWSKI	
PW5420	4 OF 4	Sheet	Rev
PW5420-FPA			A



VERTICAL SECTION D-D



Product Approval
USER: Public User

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

OFFICE OF THE
SECRETARY

FL #	FL261-R13
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	Mullions
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

TAS 201, 202, 203

Year

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
261.1	Mullions for All Doors and Windows	Aluminum Mullions
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, and mullion clip anchorage details.		Certification Agency Certificate FL261 R13 C CAC 20-0406.03.pdf Quality Assurance Contract Expiration Date 05/26/2026 Installation Instructions FL261 R13 II 20-0406.03.pdf Verified By: Miami-Dade BCCO - CER Created by Independent Third Party: Evaluation Reports Created by Independent Third Party:

[Back](#) [Next](#)

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Product Approval Accepts:





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

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208
Miami, FL 33175-2474
T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/economy

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 "PGT" Clipped Extruded Aluminum Tube Mullion – L.M.I.

APPROVAL DOCUMENT: Drawing No. 6300JR, titled "Impact-Resistant Aluminum Tube Mullions", sheets 1 through 25 of 25, prepared by manufacturer, dated 08/29/11, with revision D dated 06/26/2020, 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.

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 and renews NOA# 17-0630.01 and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by Sifang Zhao, P.E.



S.Z.
08/20/2020

NOA No. 20-0406.03
Expiration Date: May 26, 2026
Approval Date: August 20, 2020
Page 1

PGT Industries, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

A. DRAWINGS

1. Manufacturer's die drawings and sections. *(Submitted under NOA No. 10-0819.05)*
2. Drawing No. **6300JR**, titled "Impact-Resistant Aluminum Tube Mullions", sheets 1 through 25 of 25, dated 08/29/11, with revision C dated 06/19/17, 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 clipped aluminum mullions, prepared by Fenestration Testing Lab, Inc., Test Report No. **FTL-6443** (samples A-1 thru E-1), dated 02/28/11, and addendum letter dated 05/05/11, signed and sealed by Marlin D. Brinson, P.E. *(Submitted under NOA No. 10-0819.05)*

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 5th Edition (2014)** and with **FBC 6th Edition (2017)**, prepared by manufacturer, dated 08/29/17, 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

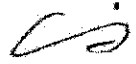
1. None.

F. STATEMENTS

1. Statement letter of conformance to **FBC-5th Edition (2014)** and **FBC-6th Edition (2017)**, dated 06/22/17, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
2. Statement letter of no financial interest, dated 06/22/17, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

G. OTHERS

1. Notice of Acceptance No. **16-0218.03**, issued to PGT Industries, Inc. for their Series "**PGT**" **Clipped Extruded Aluminum Tube Mullion – L.M.I.**, approved on 04/14/16 and expiring on 05/26/21.



Sifang Zhao, P.E.
Product Control Examiner
NOA No. 20-0406.03
Expiration Date: May 26, 2026
Approval Date: August 20, 2020

PGT Industries, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **6300JR**, titled "Impact-Resistant Aluminum Tube Mullions", sheets 1 through 25 of 25, dated 08/29/11, with revision **D** dated 06/26/2020, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 6th Edition (2017)** and with **FBC 7th Edition (2020)**, prepared by manufacturer, dated 04/01/2020, 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.

F. STATEMENTS

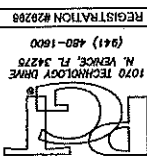
1. Statement letter of conformance to **FBC-6th Edition (2017)** and **FBC-7th Edition (2020)**, dated 03/30/2020, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
2. Statement letter of no financial interest, dated 03/30/2020, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

G. OTHERS

1. Notice of Acceptance No. **17-0630.01**, issued to PGT Industries, Inc. for their Series "**PGT**" **Clipped Extruded Aluminum Tube Mullion – L.M.I.**, approved on 11/09/17 and expiring on 05/26/21.



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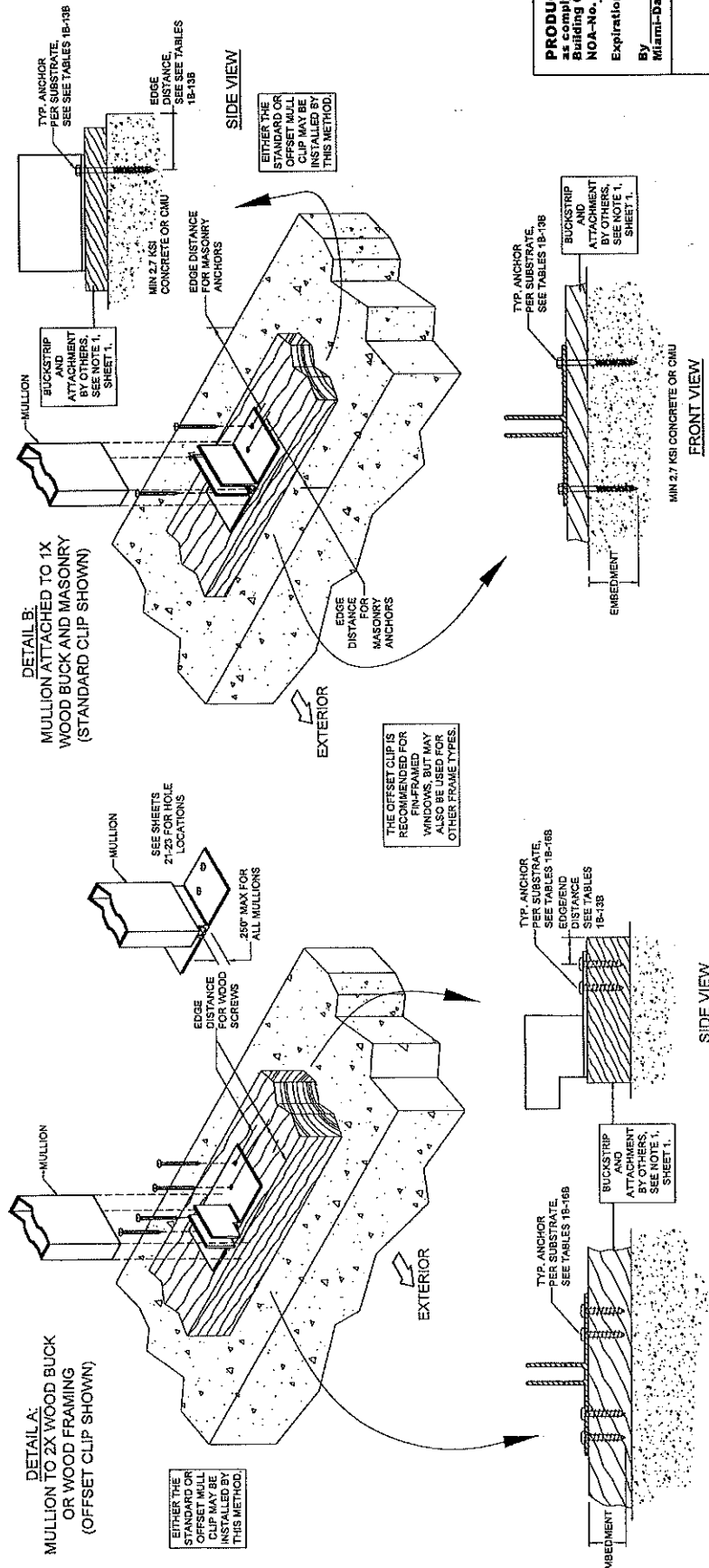


Revision:	06/26/20	Added Mat. Prop. Table.
Rev:	D	
Sheet:	2 of 25	
Drawing No.	6300JR	
Scale:	N/A	
Date:	08/29/11	
Checked By:		
Design By:	J ROSOWSKI	
Rev By:	J ROSOWSKI	
Project:	IMPACT-RESISTANT ALUMINUM TUBE MULLIONS	
Description:	INSTALLATION INSTRUCTIONS A	

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By
Miami-Dade Product Control

ANTHONY LYNN MILLER
FLORIDA
PROFESSIONAL ENGINEER
No. 58705
0-71210

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



MATERIAL PROPERTIES:

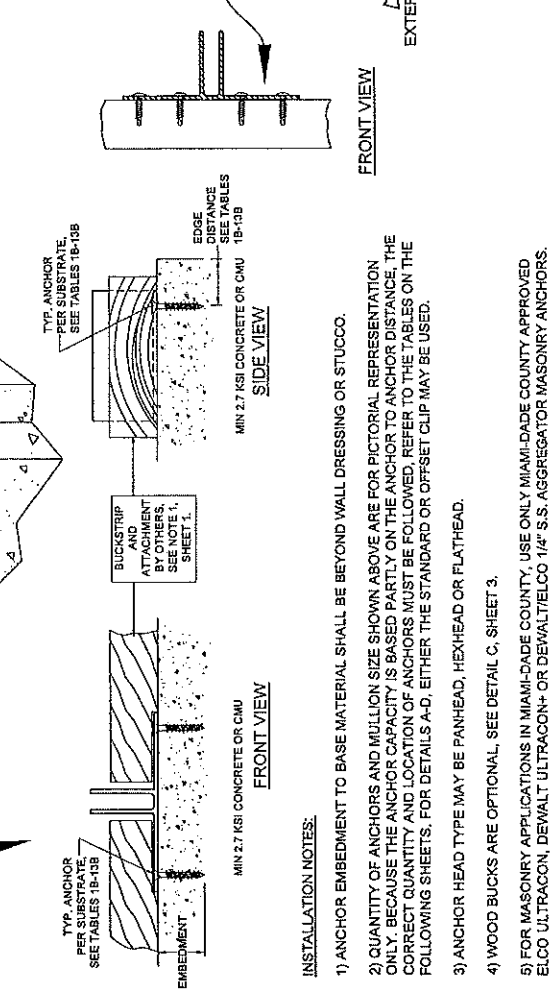
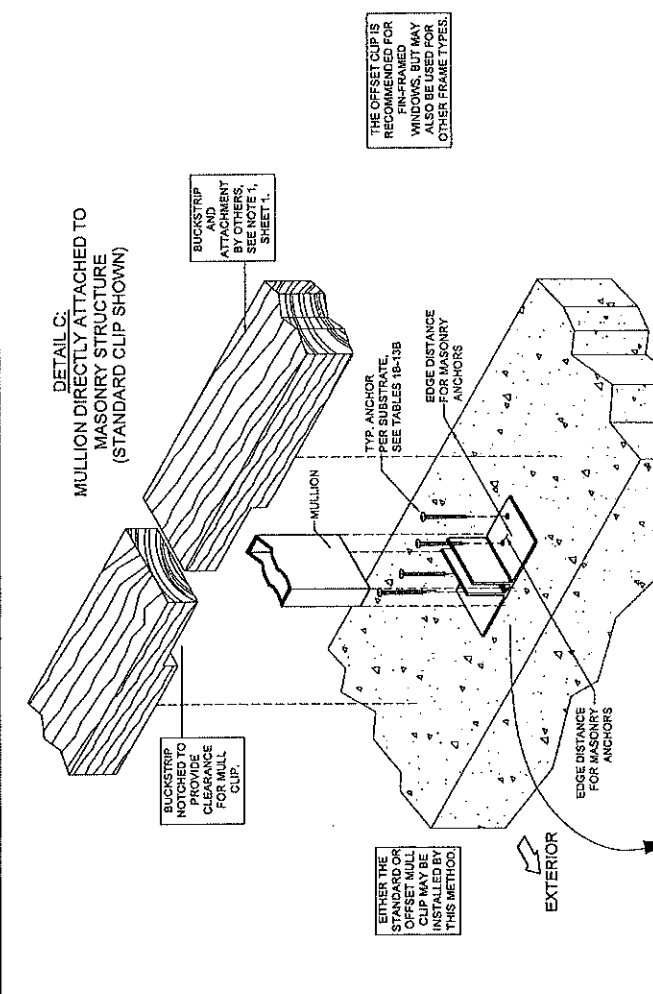
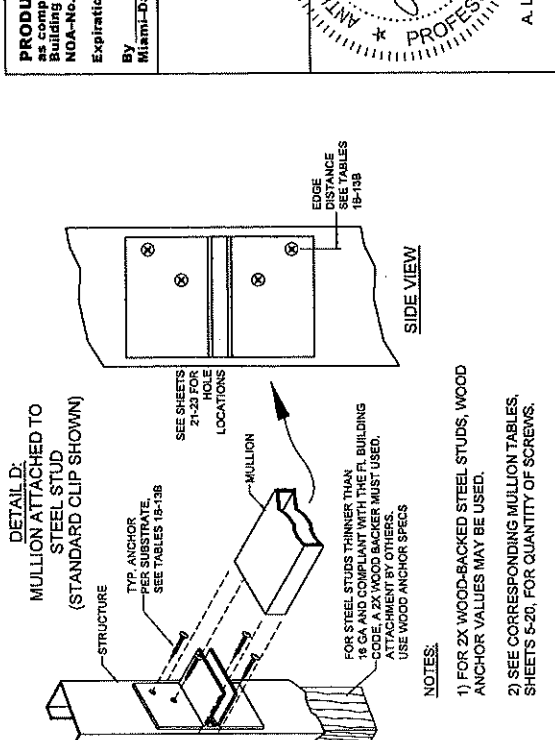
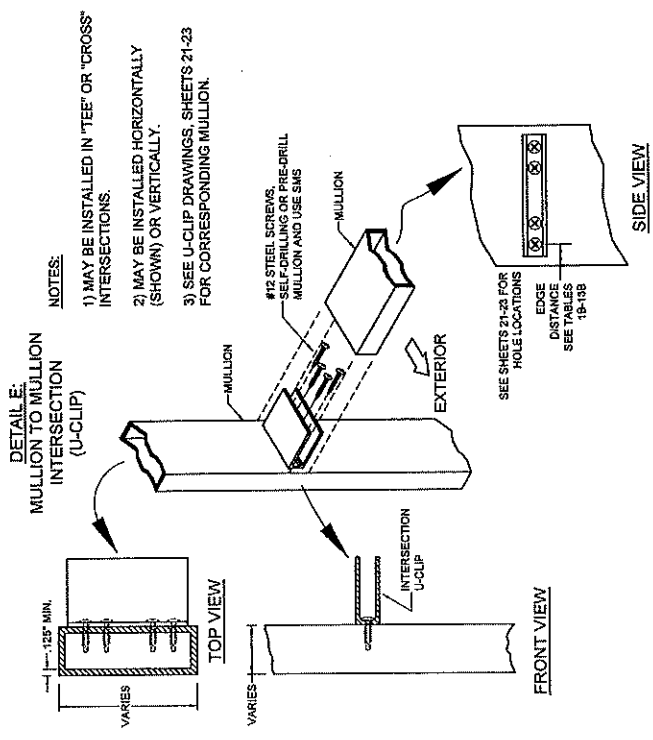
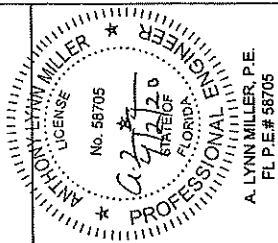
Material	Min. F _y	Min. F _u
Steel Screw	92 ksi	120 ksi
18-8 Screw	80 ksi	95 ksi
410 Screw	90 ksi	110 ksi
DeWalt/Elco Aggre-Gator®	57 ksi	96 ksi
Elco UltraCon®	155 ksi	177 ksi
3/16" DeWalt UltraCon+®	117 ksi	164 ksi
1/4" DeWalt UltraCon+®	148 ksi	164 ksi
6063-T5 Aluminum	16 ksi	22 ksi
A36 Steel	36 ksi	58 ksi
Gr. 33 Steel Stud	23 ksi	45 ksi

- INSTALLATION NOTES:**
- ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
 - QUANTITY OF ANCHORS AND MULLION SIZE SHOWN ABOVE ARE FOR PICTORIAL REPRESENTATION ONLY. BECAUSE THE ANCHOR CAPACITY IS BASED PARTLY ON THE ANCHOR TO ANCHOR DISTANCE, THE CORRECT QUANTITY AND LOCATION OF ANCHORS MUST BE FOLLOWED. REFER TO THE TABLES ON THE FOLLOWING SHEETS. FOR DETAILS A-D, EITHER THE STANDARD OR OFFSET CLIP MAY BE USED.
 - ANCHOR HEAD TYPE MAY BE PANHEAD, HEXHEAD OR FLATHEAD.
 - WOOD BUCKS ARE OPTIONAL, SEE DETAIL C, SHEET 3.
 - FOR MASONRY APPLICATIONS IN MIAMI-DADE COUNTY, USE ONLY MIAMI-DADE COUNTY APPROVED ELCO ULTRACON, DEWALT ULTRACON+ OR DEWALT/ELCO 1/4" S.S. AGGREGATOR MASONRY ANCHORS.

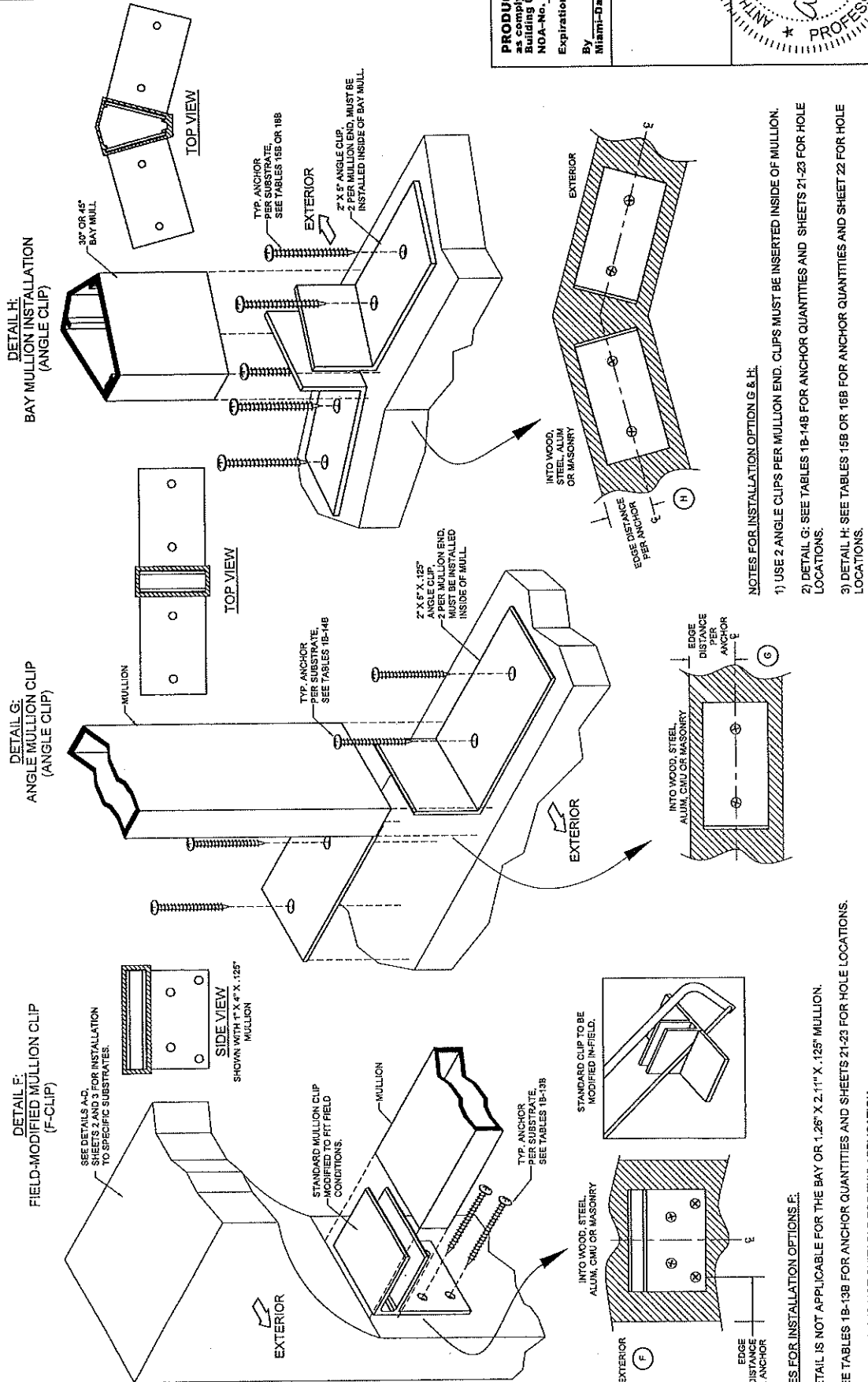
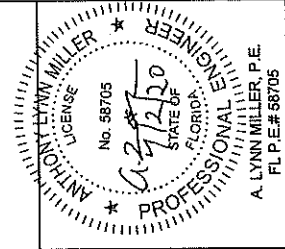


Rev. By: J. ROSOWSKI	06/26/20	REVISOR
Drawn By: J. ROSOWSKI	08/29/11	DATE
Scale: N/A	N/A	CHECKED BY
Sheet: 3 of 25	6300JR	DATE
Project: 1070 TECHNOLOGY DRIVE	N. VENICE, FL 33575	REGISTRATION #20200

PRODUCT REVISED
As required by the Florida Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2025
By: Miami-Dade Product Control



		REGISTRATION #20288 NO CHANGES THIS SHEET.	
IMPACT-RESISTANT ALUMINUM TUBE MULLIONS INSTALLATION INSTRUCTIONS C	Drawing No. 6300JR Date: 08/29/11 Checked By: J. ROSOWSKI Design: J. ROSOWSKI	Rev. By: J. ROSOWSKI Date: 06/26/20 Scale: N/A	PRODUCT REVISED as complying with the Florida Building Code NOA-No. 20-0406.03 Expiration Date 05/26/2026 By: Miami-Dade Product Control



NOTES FOR INSTALLATION OPTION G & H:

- 1) USE 2 ANGLE CLIPS PER MULLION END. CLIPS MUST BE INSERTED INSIDE OF MULLION.
- 2) DETAIL G: SEE TABLES 1B-14B FOR ANCHOR QUANTITIES AND SHEETS 21-23 FOR HOLE LOCATIONS.
- 3) DETAIL H: SEE TABLES 15B OR 16B FOR ANCHOR QUANTITIES AND SHEET 22 FOR HOLE LOCATIONS.

NOTES FOR INSTALLATION OPTIONS F:

- 1) DETAIL IS NOT APPLICABLE FOR THE BAY OR 1.26\" X 2.11\" X .125\" MULLION.
- 2) SEE TABLES 1B-13B FOR ANCHOR QUANTITIES AND SHEETS 21-23 FOR HOLE LOCATIONS.
- 3) THE 2X5 CLIP IS NOT SUITABLE FOR THIS APPLICATION.

TABLE 1A

Mullion Capacity Table (lbs/ft)		Opening Width (for vertically-sparring mullions) or Opening Height (for horizontally-sparring mullions)											
		50 in				60 in				70 in			
		Rectangular Loading	Trap/Trip Loading	Rectangular Loading	Trap/Trip Loading	Rectangular Loading	Trap/Trip Loading	Rectangular Loading	Trap/Trip Loading	Rectangular Loading	Trap/Trip Loading	Rectangular Loading	Trap/Trip Loading
1 x 2 x .125 Alum. Tube Mullion	Mullion Capacity (lbs/ft)	Anchor Capacity (lbs)	Mullion Capacity (lbs/ft)	Anchor Capacity (lbs)	Mullion Capacity (lbs/ft)	Anchor Capacity (lbs)	Mullion Capacity (lbs/ft)	Anchor Capacity (lbs)	Mullion Capacity (lbs/ft)	Anchor Capacity (lbs)	Mullion Capacity (lbs/ft)	Anchor Capacity (lbs)	Mullion Capacity (lbs/ft)
	Required (lbs)	Required (lbs)	Required (lbs)	Required (lbs)	Required (lbs)	Required (lbs)	Required (lbs)	Required (lbs)	Required (lbs)	Required (lbs)	Required (lbs)	Required (lbs)	Required (lbs)
42 in	11.19	408	129.5	332	93.2	408	115.5	325	79.9	408	107.5	321	69.9
48 in	74.9	312	83.8	258	62.4	312	73.4	252	53.5	312	67.0	248	46.8
50.625 in	63.9	281	70.6	234	50.2	281	61.5	228	45.6	281	61.5	224	41.9
54 in	52.6	247	57.5	207	43.9	247	49.8	202	37.6	247	44.8	199	32.9
60 in	38.4	200	41.2	170	32.0	200	35.4	166	27.4	200	31.5	163	24.0
66 in	33.1	181	35.3	155	27.6	181	30.3	152	23.7	181	28.9	149	20.7
72 in	22.2	139	23.3	120	18.5	139	19.9	118	15.9	139	17.5	116	14.1
76 in	18.9	125	19.7	109	15.7	125	16.8	107	12.5	125	14.1	104	11.1
78 in	17.5	116	18.2	104									

ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$(DP_{\text{req}}) \times (\text{ANCHOR CAP.}) = \text{ANCHOR CAP.}$$

USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY REQUIRED" CORRESPONDING TO AN ACTUAL PRESSURE OPENING, WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION. IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE ANCHOR CAPACITY TABLE.

TABLE 1B

Anchor Capacity (lbs)	Substrate											
	2.7K Concrete				3K Concrete				Hollow CMU			
Anchor Type	3/16" E-100				3/16" E-100				3/16" E-100			
	Edge Distance (in)	Embedment (in)	Edge Distance (in)	Embedment (in)	Edge Distance (in)	Embedment (in)	Edge Distance (in)	Embedment (in)	Edge Distance (in)	Embedment (in)	Edge Distance (in)	Embedment (in)
2 Anchors @ 4.75" Min. O.C. / Standard or Offset Clip (Fig. 1)	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"
4 Anchors @ 1.15" Min. O.C. / Standard or Offset Clip (Fig. 2)	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"
4 Anchors @ 3" Min. O.C. / (2) 2x4 Angle Clip / (Fig. 3)	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"
2 Anchors @ 0.45" Min. O.C. / U-Clip, Info. 135" Alum. (Fig. 4)	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"
2 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 5)	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"
2 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 6)	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"	1.34"

NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

FIGURE 1:



FIGURE 2:

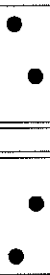


FIGURE 3:



FIGURE 4:



FIGURE 5:



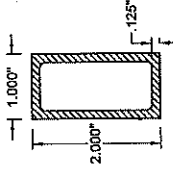
FIGURE 6:



ANGLE CLIP MUST BE USED IN PAIRS.

TABLE NOTES:

- SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
- LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 24-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .125" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST 125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-8 S.S. OR 410 S.S.



1" X 2" X .125" MULLION



PROJECT INFORMATION		DRAWING INFORMATION	
Project No.	6300JR	Drawn By	N/A
Sheet	5 of 25	Checked By	06/26/20
Anchor Type	IMPACT-RESISTANT ALUMINUM TUBE MULLIONS	Scale	1/8" = 1'-0"
Anchor Capacity	1 X 2 X .125 MULL SPECS	Revision	06/26/20 ADDED NEW ANCHOR TYPE.

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026

By
Miami-Dade Product Control

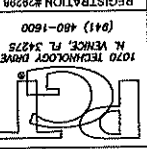
TABLE 2A

Mullion Capacity Table (lb/ft²)	Opening Width (for vertically-spacing mullions) or Opening Height (for horizontally-spacing mullions)											
	60 in			70 in			80 in			90 in		
	Rectangular Loading	Triangular Loading	Trap/Trap Loading	Rectangular Loading	Triangular Loading	Trap/Trap Loading	Rectangular Loading	Triangular Loading	Trap/Trap Loading	Rectangular Loading	Triangular Loading	Trap/Trap Loading
1 x 2 x .375 Alum. Tube Mullion												
42 in	170.0	620	170.0	435	151.3	662	170.0	508	151.3	662	168.9	517
48 in	121.6	507	136.0	419	101.4	507	128.7	462	101.4	507	128.7	419
50.625 in	103.7	456	114.6	379	86.4	456	99.9	371	74.1	456	99.9	371
54 in	85.4	400	93.3	336	71.2	400	80.9	328	61.0	400	80.9	328
60 in	63.3	324	66.9	278	51.9	324	57.5	270	44.5	324	57.5	270
63 in	53.6	294	57.4	252	44.9	294	49.2	245	38.4	294	49.2	245
66 in	45.6	268	49.6	230	39.0	268	42.4	225	33.4	268	42.4	225
72 in	36.0	225	37.9	196	30.0	225	32.2	191	25.7	225	32.2	191
76 in	30.6	202	32.0	177	25.8	202	27.2	173	21.9	202	27.2	173
78 in	28.3	192	29.6	169	23.6	192	25.1	165	20.2	192	25.1	165
80 in	18.5	144	19.3	128	15.1	144	16.1	126				
96 in	15.2	127	15.6	113								

ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$(DE_{\text{req}}) \times (\text{ANCHOR CAP. (lb/ft)} / \text{ANCHOR CAP. (lb/ft)}) = \text{ANCHOR CAP. (lb/ft)}$$

USE THIS FORMULA TO OBTAIN THE 'ANCHOR CAPACITY' REQUIRED CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING. WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE OF THE SELECTED MULLION, IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE ANCHOR CAPACITY TABLE.



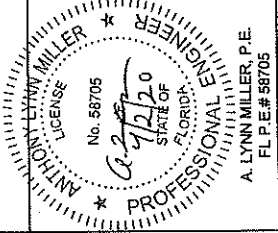
REGISTRATION #22298
(941) 460-1800
1070 TECHNOLOGY DRIVE
N. VENICE, FL 33425

Rev: 6 of 25
Date: 08/29/11
Checked By: 6300JR
Drawing No.: 1 X 2 X .375 MULL SPECS
Scale: N/A
Description: IMPACT RESISTANT ALUMINUM TUBE MULLIONS

Date: 06/26/20
Added New Anchor Type: J ROSOWSKI

PRODUCT REVISED
In Accordance with the Florida Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026

By: Miami-Dade Product Control



Anchor Capacity (lbs)	Substrate											
	2" K Concrete			3" K Concrete			5" K Concrete			Hollow CMU		
	Anchor Type	Embedment (in)	Embedment (in)	Anchor Type	Embedment (in)	Embedment (in)	Anchor Type	Embedment (in)	Embedment (in)	Anchor Type	Embedment (in)	Embedment (in)
2 Anchors @ 4.75" Min. O.C. / Standard for Offset Clip (Fig. 3)	1/4" Eiko Ultracore	1-3/4"	1-3/4"	3/16" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"
2 Anchors @ 1.15" Min. O.C. / Standard for Offset Clip (Fig. 3)	1/4" Eiko Ultracore	1-3/4"	1-3/4"	3/16" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"
4 Anchors @ 3" Min. O.C. / Standard for Offset Clip (Fig. 3)	1/4" Eiko Ultracore	1-3/4"	1-3/4"	3/16" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"
4 Anchors @ 3" Min. O.C. / (3) 245 Angle Clips / (Fig. 3)	1/4" Eiko Ultracore	1-3/4"	1-3/4"	3/16" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"
2 Anchors @ 0.45" Min. O.C. / U-Clip, 1/8" x 1/8" x 1/8" (Fig. 4)	1/4" Eiko Ultracore	1-3/4"	1-3/4"	3/16" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"
2 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 5)	1/4" Eiko Ultracore	1-3/4"	1-3/4"	3/16" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"
2 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 5)	1/4" Eiko Ultracore	1-3/4"	1-3/4"	3/16" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"	1/4" Eiko Ultracore	1-3/4"	1-3/4"

NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

TABLE NOTES:

- SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
- LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
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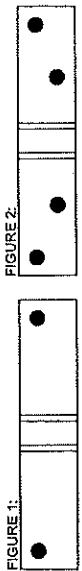


FIGURE 2:



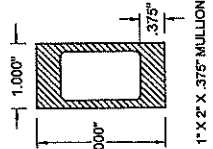
FIGURE 4:



ANGLE CLIP MUST BE USED IN PAIRS.



FIGURE 6:





REGISTRATION #28260
N. 1070, (407) 480-1800
1070 TECHNOLOGY DRIVE
N. 1070, (407) 480-1800

ANCHOR CAP. FORMULA:
 $(DP) \times X$ (ANCHOR CAP. FORMULA)
= ANCHOR CAP.

USE THIS FORMULA TO OBTAIN THE ANCHOR CAPACITY REQUIRED CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING, WHEN IT IS LOWER THAN THE MULLION CAPACITY FROM THE TABLE OF THE SELECTED MULLION. IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE ANCHOR CAPACITY TABLE.

IMPACT-RESISTANT ALUMINUM TUBE MULLIONS

1 X 2.75 X .375 MULL SPECS

Checked By: 6300JR
Date: 08/29/11

Drawn By: N/A
Date: 08/29/11

Revised By: J ROSOWSKI
Date: 06/26/20

Added New Anchor Type

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026

By: Miami-Dade Product Control

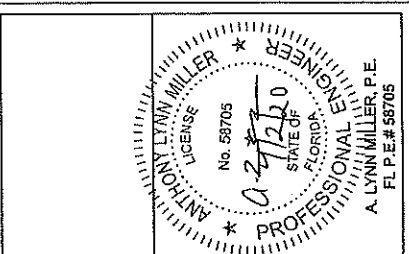


TABLE 3A Mullion Capacity Table (lbs/ft²) or Opening Height (for horizontally-spanning mullions)

Mullion Length	Opening Width (for vertically-spanning mullions) or Opening Height (for horizontally-spanning mullions)											
	50 in	60 in	70 in	80 in	90 in	100 in	110 in	120 in	130 in	140 in	150 in	160 in
1 x 2.75 x .375 Alum. Tube Mullion	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)	Rectangular Loading Mullion Capacity (lbs/ft²) Anchor Capacity (lbs) Required (lbs)
42 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
48 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
50 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
54 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
60 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
66 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
72 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
78 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
84 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
90 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
96 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
102 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
108 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
114 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
120 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0

TABLE 3B Anchor Capacity (lbs)

Anchor Capacity (lbs)	Substrate											
	3x Concrete	3x Concrete	3x Concrete	3x Concrete	3x Concrete	3x Concrete	3x Concrete	3x Concrete	3x Concrete	3x Concrete	3x Concrete	3x Concrete
2 Anchors @ 4.75" Min. O.C. / Standard or Offset Clip (Fig. 1)	390 lbs	390 lbs	390 lbs	390 lbs	390 lbs	390 lbs	390 lbs	390 lbs	390 lbs	390 lbs	390 lbs	390 lbs
4 Anchors @ 1.15" Min. O.C. / Standard or Offset Clip (Fig. 2)	480 lbs	480 lbs	480 lbs	480 lbs	480 lbs	480 lbs	480 lbs	480 lbs	480 lbs	480 lbs	480 lbs	480 lbs
4 Anchors @ 3" Min. O.C. / (2) 2.5" Angle Clips / (Fig. 3)	780 lbs	780 lbs	780 lbs	780 lbs	780 lbs	780 lbs	780 lbs	780 lbs	780 lbs	780 lbs	780 lbs	780 lbs
2 Anchors @ 0.45" Min. O.C. / U.O.P. / (Fig. 4)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2 Anchors @ 1.15" Min. O.C. / P-Clip (Fig. 5)	195 lbs	195 lbs	195 lbs	195 lbs	195 lbs	195 lbs	195 lbs	195 lbs	195 lbs	195 lbs	195 lbs	195 lbs
2 Anchors @ 1.15" Min. O.C. / P-Clip (Fig. 6)	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs

NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

FIGURE 1: [Diagram showing two anchors with a standard clip]

FIGURE 2: [Diagram showing two anchors with an offset clip]

FIGURE 3: [Diagram showing four anchors with angle clips]

FIGURE 4: [Diagram showing two anchors with U.O.P.]

FIGURE 5: [Diagram showing two anchors with P-clip]

FIGURE 6: [Diagram showing two anchors with P-clip]

ANGLE CLIP MUST BE USED IN PAIRS.

TABLE NOTES:

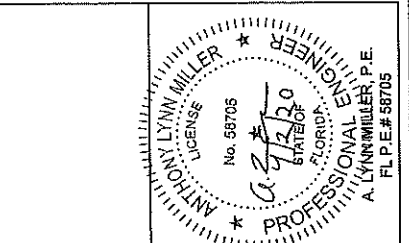
- SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 24 FOR GENERAL INSTALLATION METHODS.
- LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF 125" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST .125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-5 S.S. OR 410 S.S.

1" X 2.75" X .375" MULLION



REGISTRATION #29206
Date: 06/26/20
Checked By: J. ROSOWSKI
Drawing No: 6300JR
Sheet: 8 of 25
Project: IMPACT-RESISTANT ALUMINUM TUBE MULLIONS
Description: 1 X 2.75 X .650 MULL SPEC

PRODUCT REVISED
as complying with the Florida
Building Code
NDA-No. 20-0406.03
Expiration Date 05/26/2026
By: Miami-Dade Product Control



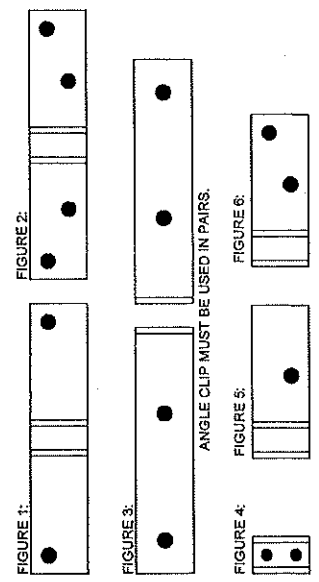
ANCHOR CAPACITY
ADJUSTMENT FORMULA:
 $(DF_{req}) \times (ANCHOR CAP_{req}) = ANCHOR CAP_{adj}$
USE THIS FORMULA TO OBTAIN
THE "ANCHOR CAPACITY
REQUIRED" CORRESPONDING
TO AN ACTUAL PRESSURE
REQUIREMENT FOR THE
OPENING WHEN IT IS LOWER
THAN THE MULLION CAPACITY
(FROM THE TABLE OF THE
SELECTED MULLION). IT WILL
YIELD A MINIMUM ANCHOR
CAPACITY WHICH MAY BE
USED TO QUALIFY FROM THE
ANCHOR CAPACITY TABLE.

Mullion Length	Opening Width (for vertically-sparring mullions) or Opening Height (for horizontally-sparring mullions)											
	50 in	60 in	70 in	80 in	90 in	100 in	120 in	140 in	160 in	180 in	200 in	220 in
1 x 2.75 x .650 Alum. Tube Mullion	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading
	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)
42 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
48 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
54 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
60 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
66 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
72 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
78 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
84 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
90 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
96 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
102 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
108 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
114 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
120 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700

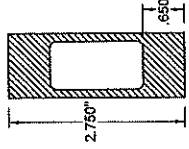
Anchor Capacity (lbs)	Opening Width (for vertically-sparring mullions) or Opening Height (for horizontally-sparring mullions)											
	50 in	60 in	70 in	80 in	90 in	100 in	120 in	140 in	160 in	180 in	200 in	220 in
1 x 2.75 x .650 Alum. Tube Mullion	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading
	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)
42 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
48 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
54 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
60 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
66 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
72 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
78 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
84 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
90 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
96 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
102 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
108 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
114 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
120 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700

CIRCLED VALUES ARE USED IN THE EXAMPLE ON SHEET 24.

TABLE 4B



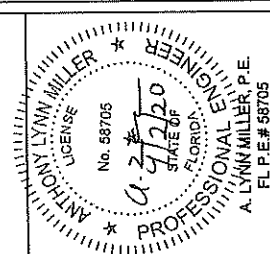
- NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.
- FIGURE 1: [Diagram]
- FIGURE 2: [Diagram]
- FIGURE 3: [Diagram]
- FIGURE 4: [Diagram]
- FIGURE 5: [Diagram]
- FIGURE 6: [Diagram]
- ANGLE CLIP MUST BE USED IN PAIRS.
- 1) SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. Holes to be drilled in the field following dimensional restrictions shown on sheets 21-23. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
- 2) LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- 3) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- 4) SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .125" THICK STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE) STRUCTURAL STEEL TO BE AT LEAST .125" THICK AND A96. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 19-3 S.S. OR 410 S.S.



REGISTRATION #29286
(941) 490-1600
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275

IMPACT-RESISTANT ALUMINUM TUBE MULLIONS		Description:		1 X 3.125 X .5 MULL. SPEC.		Sheet:	
		Quantity:		N/A		6300JR	
		Order:		N/A		Rev:	
		Checked By:				9 of 25	
		Date:		08/29/11		D	
		Revision:		06/26/20		ADDED NEW ANCHOR TYPE.	
		J ROSOWSKI		J ROSOWSKI			

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By CS
Miami-Dade Product Control



**ANCHOR CAPACITY
ADJUSTMENT FORMULA:**

$$(DP_{\text{min}}) \times \left(\frac{\text{ANCHOR CAP. (POUND)} }{\text{MILLION CAP. (POUND)}} \right)^{1/2}$$

= ANCHOR CAP. ^{min}

USE THIS FORMULA TO OBTAIN
THE "ANCHOR CAPACITY
REQUIRED" CORRESPONDING
TO AN ACTUAL PRESSURE
REQUIREMENT FOR THE
OPENING, WHEN IT IS LOWER
THAN THE MILLION CAPACITY
(FROM THE TABLE) OF THE
SELECTED MILLION ANCHOR
YIELD A MINIMUM ANCHOR
CAPACITY WHICH MAY BE
USED TO QUALIFY ADDITIONAL
ANCHOR OPTIONS FROM THE
ANCHOR CAPACITY TABLE.

TABLE 5A		Mullion Capacity Table (lb/ft²)																																		
		Opening Width (for vertically-sparring mullions) or Opening Height (for horizontally-sparring mullions)																																		
		50 in		60 in		70 in		80 in		90 in		100 in		120 in		140 in		160 in																		
Mull Length	Rectangular Loading		Tripart/Flang. Loading		Rectangular Loading		Tripart/Flang. Loading		Rectangular Loading		Tripart/Flang. Loading		Rectangular Loading		Tripart/Flang. Loading		Rectangular Loading		Tripart/Flang. Loading		Rectangular Loading		Tripart/Flang. Loading		Rectangular Loading		Tripart/Flang. Loading									
	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lb/ft²)	Anchor Capacity Required (lbs)								
42 in	170.0	620	170.0	435	170.0	840	170.0	478	170.0	898	170.0	506	170.0	932	170.0	518	170.0	1115	170.0	921	170.0	1240	170.0	591	170.0	1735	170.0	921	170.0	154.4	1802	170.0	680			
48 in	170.0	708	170.0	524	170.0	850	170.0	584	170.0	962	170.0	596	170.0	1042	170.0	631	170.0	1275	170.0	977	170.0	1417	170.0	691	170.0	1587	170.0	990	118.2	1577	170.0	796				
50.025 in	170.0	747	170.0	563	170.0	896	170.0	631	170.0	1006	170.0	634	170.0	1105	170.0	671	170.0	1345	170.0	1047	170.0	1484	170.0	736	170.0	1665	170.0	1038	1465	170.0	796					
54 in	170.0	787	170.0	612	170.0	948	170.0	681	170.0	1058	170.0	684	170.0	1170	170.0	720	170.0	1401	170.0	1097	170.0	1536	170.0	786	170.0	1756	170.0	1081	158.4	1401	170.0	861				
60 in	170.0	885	170.0	751	170.0	1043	170.0	797	170.0	1159	170.0	754	170.0	1275	170.0	833	170.0	1483	170.0	1140	170.0	1646	170.0	836	170.0	1851	170.0	1131	168.4	1156	144.5	903				
63 in	170.0	920	170.0	785	170.0	1079	170.0	830	170.0	1195	170.0	788	170.0	1317	170.0	866	170.0	1518	170.0	1179	170.0	1686	170.0	869	170.0	1886	170.0	1164	168.4	1156	144.5	903				
66 in	186.8	955	170.0	789	159.0	1055	151.3	904	119.1	955	133.7	798	104.2	955	121.4	775	92.8	965	112.6	765	83.4	965	108.4	928	78.9	1049	119.3	820	83.5	1049	118.9	819				
69 in	170.0	955	170.0	820	170.0	1109	170.0	861	170.0	1225	170.0	820	170.0	1347	170.0	907	170.0	1561	170.0	1228	170.0	1708	170.0	910	170.0	1901	170.0	1201	168.4	1156	144.5	903				
72 in	128.5	902	134.9	837	107.0	903	114.9	882	91.8	823	101.1	870	80.3	823	91.2	658	71.4	803	83.9	640	64.2	803	78.6	842	53.5	803	72.2	532	45.5	803	68.8	628	401	803	98.7	627
76 in	109.2	721	114.1	629	91.0	721	87.0	616	78.0	721	83.1	605	68.3	721	78.5	595	60.7	721	70.1	598	54.6	721	68.4	579	45.5	721	59.4	589	39.0	721	58.6	504	34.1	721	58.1	593
78 in	101.0	684	105.4	599	84.2	584	57.2	584	57.8	631	68.4	578	63.1	684	74.4	587	58.1	684	64.4	559	50.5	684	58.9	551	42.1	684	54.1	584	35.1	684	50.6	584	34.1	721	58.1	593
80 in	66.9	514	67.6	456	54.8	514	57.3	448	47.4	514	50.0	440	41.1	514	44.6	433	36.5	514	44.6	433	36.5	514	44.6	433	36.5	514	44.6	433								
86 in	54.2	452	55.7	404	45.2	452	47.0	395	38.7	452	40.9	390	33.9	452	38.4	384	30.1	452	32.9	370	27.1	452	30.3	373	22.5	452	28.6	365	16.8	452	22.8	365	16.8	452	22.8	365
108 in	38.1	357	38.9	322	31.7	357	32.7	284	31.2	357	28.4	268	23.6	357	28.4	268	21.5	357	25.2	308	21.1	357	20.0	299	15.9	357	18.2	287	11.8	357	15.0	285	11.8	357	15.0	285
110 in	35.1	338	35.8	305	29.2	338	30.1	269	21.9	338	28.1	268	21.9	338	26.1	338	20.1	338	20.6	289	19.3	338	19.0	284	14.8	338	16.5	273	11.0	338	13.6	269	11.0	338	13.6	269
120 in	27.7	288	28.2	233	23.1	289	23.1	233	19.8	288	20.5	256	17.3	288	18.1	252	15.4	289	16.3	248	13.9	289	14.9	246	11.8	288	12.8	240	8.9	288	10.4	232	8.9	288	10.4	232

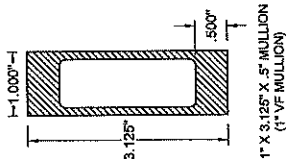
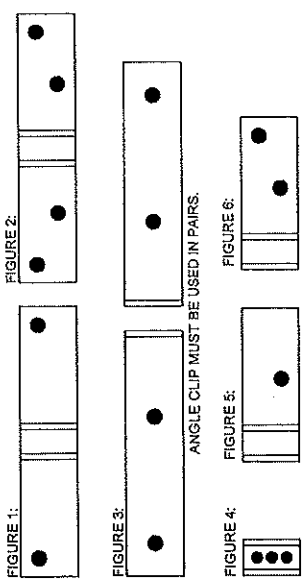
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TABLE NOTES:

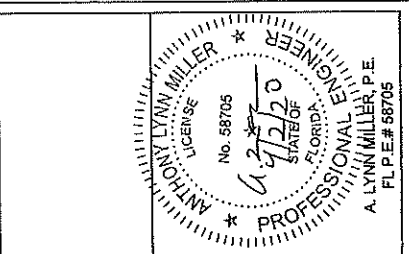
- 1) SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
- 2) LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- 3) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- 4) SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6061-T5 AND BE A MINIMUM "0" .125" THICK STEEL STUDS TO BE A MINIMUM GRADE 33. AND .045" THICK (18 GAUGE), STRUCTURAL STEEL TO BE AT LEAST .125" THICK AND #36. ALL ANCHORS INTO METAL SHALL BE STEEL, AT LEAST 3" SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ALL ANCHORS INTO WOOD MAY BE STEEL, 18-8 S.S., OR 410 S.S.





REGISTRATION #29286
Date: 06/26/20
Checked By: J ROSOWSKI
Drawing No.: 6300JR
Scale: N/A
Description: 1 X 4 X 125 MULL
IMPACT-RESISTANT ALUMINUM TUBE MULLIONS

PRODUCT REVISED
as complying with the Florida
Building Code
NDA-No. 20-0406.03
Expiration Date 05/26/2026
By: Miami-Dade Product Control

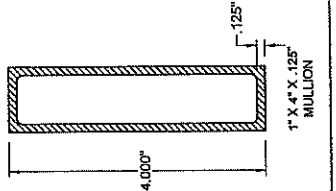


**ANCHOR CAPACITY
ADJUSTMENT FORMULA:**
 $(D_p) \times (ANCHOR CAP. (lb))$
 $= ANCHOR CAP. (lb)$

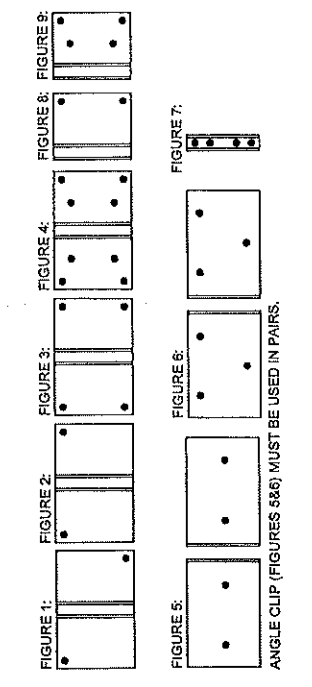
USE THIS FORMULA TO OBTAIN
THE "ANCHOR CAPACITY
REQUIRED" CORRESPONDING
TO AN ACTUAL PRESSURE
OPENING, WHEN IT IS LOWER
THAN THE MULLION CAPACITY
(FROM THE TABLE). IT WILL
SELECTED MULLION. IT WILL
YIELD A MINIMUM ANCHOR
CAPACITY WHICH MAY BE
USED TO QUALIFY ADDITIONAL
ANCHOR OPTIONS FROM THE
ANCHOR CAPACITY TABLE.

Mull Length	Opening Width (for vertically-spanning mullions) or Opening Height (for horizontally-spanning mullions)											
	50 in	60 in	70 in	80 in	90 in	100 in	110 in	120 in	130 in	140 in	150 in	
1 x 4 x 125 Alum. Tube Mullion	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	
42 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
48 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
50.625 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
54 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
60 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
66 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
72 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
78 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
84 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
90 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
96 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
102 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
108 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
114 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
120 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
144 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521

Anchor Capacity (lb)	Opening Width (for vertically-spanning mullions) or Opening Height (for horizontally-spanning mullions)											
	50 in	60 in	70 in	80 in	90 in	100 in	110 in	120 in	130 in	140 in	150 in	
1 x 4 x 125 Alum. Tube Mullion	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	Rectangular Loading Mullion Capacity (lb/ft) Anchor Capacity (lb) Required (lb)	
42 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
48 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
50.625 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
54 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
60 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
66 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
72 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
78 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
84 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
90 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
96 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
102 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
108 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
114 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
120 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521
144 in	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	521



- TABLE NOTES:**
- SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
 - LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
 - MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
 - SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6061-T5 AND BE A MINIMUM .045" THICK. STEEL STUDS TO BE A MINIMUM GRADE 53 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST 125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3" SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-8 S.S. OR 410 S.S.



MIAMI-DREE PRODUCT CONTROL

NO. 58705
STATE OF FLORIDA
A. LYNN MILLER, P.E.
FL. P.E. # 58705

NO. 58705
STATE OF FLORIDA
A. LYNN MILLER, P.E.
FL. P.E. # 58705

TABLE 8B											PRODUCT as supplied Building Co. NOA-No. Expiration By
Anchor Capacity (lbs)	Substrate	2"K Concrete		3" Concrete		3.5K Concrete		Follow CMU	Filled CMU	PT Wood	
	Anchor Type/ Embedment (in)	3/16" Epo Ultracut	1/4" Epo Ultracut	3/16" DeWall Ultracut	1/4" DeWall Ultracut	3/16" DeWall Ultracut	1/4" DeWall Ultracut	3/16" DeWall Ultracut	1/4" DeWall Ultracut	1/4" SS Elok Screw (95)	#12 Steel Screw (95)
	Edge Distance (in)	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2"	0.32"
	Embedment (in)	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	varies
	3 Anchors @ 4" Min. O.C. / Standard or Great Clip (Fig. 1)	350 lbs	350 lbs	310 lbs	310 lbs	310 lbs	310 lbs	310 lbs	310 lbs	540 lbs	560 lbs
	2 Anchors @ 4" Min. O.C. / Standard or (Great) Clip (Fig. 2)	350 lbs	350 lbs	310 lbs	310 lbs	310 lbs	310 lbs	310 lbs	310 lbs	540 lbs	560 lbs
	4 Anchors @ 1.15" Min. O.C. / Standard or (Great) Clip (Fig. 2)	400 lbs	700 lbs	320 lbs	320 lbs	320 lbs	320 lbs	320 lbs	320 lbs	880 lbs	1,120 lbs
	4 Anchors @ 3" Min. O.C. / (2) 2x Angle Clip / (Fig. 3)	700 lbs	700 lbs	1260 lbs	1260 lbs	1260 lbs	1260 lbs	1260 lbs	1260 lbs	1520 lbs	1,850 lbs
	4 Anchors @ 3" Min. O.C. / (2) 2x Angle Clip / (Fig. 3)	700 lbs	690 lbs	1580 lbs	1580 lbs	1580 lbs	1580 lbs	1580 lbs	1580 lbs	1820 lbs	2,150 lbs

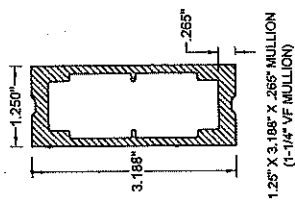
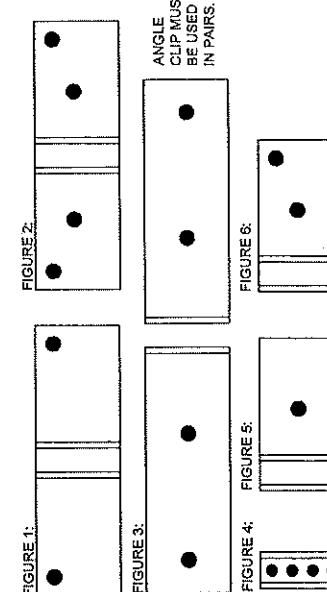
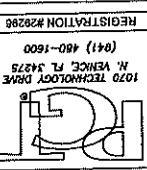
[illegible]

TABLE NOTES:

- 1) SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
- 2) LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
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- 4) SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (GMI) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTH PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .125" THICK. STEEL STUDS TO BE A MINIMUM GRADE 35 AND .065-T5 THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST .125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 19-9 S.S. OR 410 S.S.



[illegible]



IMPACT-RESISTANT ALUMINUM TUBE MULLIONS

1.25 X 3.25 X .624 MULL SPECS

Scale: N/A

Drawn By: J. ROSOWSKI

Checked By: J. ROSOWSKI

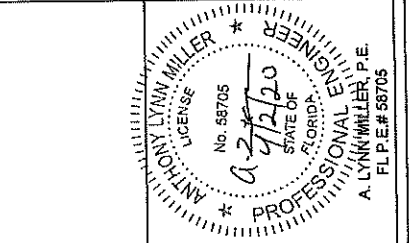
Date: 08/29/11

Date: 06/26/20

Added New Anchor Type: D

Stamp: 14 of 25

PRODUCT REVISED
As complying with the Florida Building Code
NOA No. 20-0406.03
Expiration Date 05/26/2025
By: Miami-Dade Product Control



ANCHOR CAPACITY
ADJUSTMENT FORMULA:

$$(DP_{max}) \times (ANCHOR CAP_{min}) = ANCHOR CAP_{max}$$

USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY REQUIRED" CORRESPONDING TO AN ACTUAL PRESSURE OPENING, WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION. IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE ANCHOR CAPACITY TABLE.

TABLE 10A Mullion Capacity Table (lbs/ft)

Mullion Length	Opening Width (for vertically-spanning mullions) or Opening Height (for horizontally-spanning mullions)											
	50 in	60 in	70 in	80 in	90 in	100 in	120 in	140 in	160 in	180 in	200 in	220 in
1.25 X 3.25 Alum. Tube Mullion	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading
	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)	Anchor Capacity (lbs)
42 in	170.0	520	170.0	435	170.0	435	170.0	435	170.0	435	170.0	435
48 in	170.0	788	170.0	524	170.0	524	170.0	524	170.0	524	170.0	524
54 in	170.0	747	170.0	583	170.0	583	170.0	583	170.0	583	170.0	583
60 in	170.0	797	170.0	612	170.0	612	170.0	612	170.0	612	170.0	612
66 in	170.0	885	170.0	701	170.0	701	170.0	701	170.0	701	170.0	701
72 in	170.0	830	170.0	745	170.0	745	170.0	745	170.0	745	170.0	745
78 in	170.0	974	170.0	789	170.0	789	170.0	789	170.0	789	170.0	789
84 in	170.0	1049	170.0	878	170.0	878	170.0	878	170.0	878	170.0	878
90 in	170.0	1049	170.0	878	170.0	878	170.0	878	170.0	878	170.0	878
96 in	170.0	1049	170.0	878	170.0	878	170.0	878	170.0	878	170.0	878
102 in	170.0	1049	170.0	878	170.0	878	170.0	878	170.0	878	170.0	878
108 in	170.0	1049	170.0	878	170.0	878	170.0	878	170.0	878	170.0	878
114 in	170.0	1049	170.0	878	170.0	878	170.0	878	170.0	878	170.0	878
120 in	170.0	1049	170.0	878	170.0	878	170.0	878	170.0	878	170.0	878
126 in	170.0	1049	170.0	878	170.0	878	170.0	878	170.0	878	170.0	878
132 in	170.0	1049	170.0	878	170.0	878	170.0	878	170.0	878	170.0	878
138 in	170.0	1049	170.0	878	170.0	878	170.0	878	170.0	878	170.0	878
144 in	170.0	1049	170.0	878	170.0	878	170.0	878	170.0	878	170.0	878

TABLE 10B

Anchor Capacity (lbs)	Substrate											
	3K Concrete	3K Concrete	3K Concrete	3K Concrete	3K Concrete	3K Concrete	3K Concrete	3K Concrete	3K Concrete	3K Concrete	3K Concrete	3K Concrete
Anchor Capacity (lbs)	1/4" Dia. U-Anchor	3/16" Dia. U-Anchor	1/2" Dia. U-Anchor	3/4" Dia. U-Anchor	1" Dia. U-Anchor	1 1/4" Dia. U-Anchor	1 1/2" Dia. U-Anchor	1 3/4" Dia. U-Anchor	2" Dia. U-Anchor	2 1/2" Dia. U-Anchor	3" Dia. U-Anchor	4" Dia. U-Anchor
	Anchor Type	Anchor Type	Anchor Type	Anchor Type	Anchor Type	Anchor Type	Anchor Type	Anchor Type	Anchor Type	Anchor Type	Anchor Type	Anchor Type
2 Anchors @ 1.15" Min. O.C. / Standard or Offset Clip (Fig. 2)	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs
4 Anchors @ 1.15" Min. O.C. / Standard or Offset Clip (Fig. 2)	400 lbs	400 lbs	400 lbs	400 lbs	400 lbs	400 lbs	400 lbs	400 lbs	400 lbs	400 lbs	400 lbs	400 lbs
4 Anchors @ 3" Min. O.C. / (2) 2x4 Angle Clips / (Fig. 3)	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs
3 Anchors @ 0.54" Min. O.C. / U-Clip, incl. 100" Alum. (Fig. 4)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 5)	150 lbs	150 lbs	150 lbs	150 lbs	150 lbs	150 lbs	150 lbs	150 lbs	150 lbs	150 lbs	150 lbs	150 lbs
2 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 6)	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs

NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

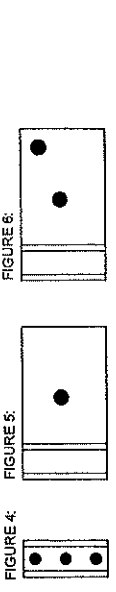
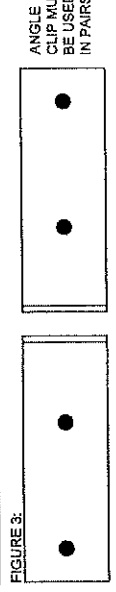
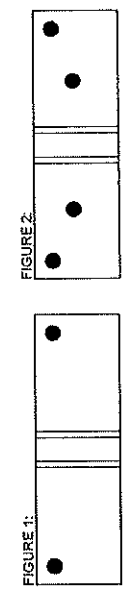


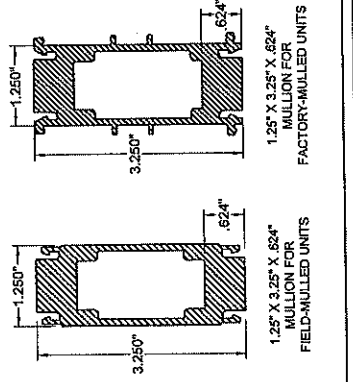
TABLE NOTES:

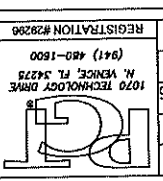
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2) LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.

3) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.

4) SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF 100" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .048" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST 1/2" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-8 S.S. OR 410 S.S.





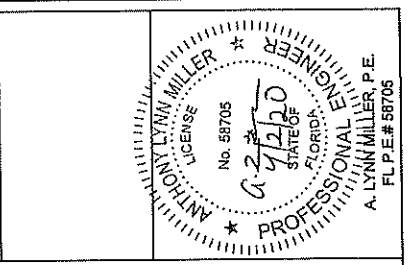
1070 TECHNOLOGY DRIVE
N. VENICE, FL 33573
(941) 480-1600
REGISTRATION #29206

DATE: 06/26/20
CHECKED BY: J. ROSOWSKI
DRAWING NO. 6300JR
SCALE: 1/8" = 1'-0"

DATE: 08/29/11
CHECKED BY: J. ROSOWSKI
DRAWING NO. 6300JR
SCALE: 1/8" = 1'-0"

DATE: 06/26/20
CHECKED BY: J. ROSOWSKI
DRAWING NO. 6300JR
SCALE: 1/8" = 1'-0"

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By: J. ROSOWSKI
Miami-Dade Product Control



**ANCHOR CAPACITY
ADJUSTMENT FORMULA:**

$$(DP_{adj}) \times \left(\frac{ANCHOR CAP.}{ANCHOR CAP.} \right) = ANCHOR CAP.$$

USE THIS FORMULA TO OBTAIN
THE 'ANCHOR CAPACITY'
REQUIRED CORRESPONDING
TO AN ACTUAL PRESSURE
REQUIREMENT WHEN IT IS LOWER
THAN THE MULLION CAPACITY
(FROM THE TABLE). IT WILL
SELECTED MULLION. IT WILL
YIELD A MINIMUM ANCHOR
CAPACITY WHICH MAY BE
USED TO QUALIFY ADDITIONAL
ANCHOR CAPACITY TABLE.

TABLE 11A
Mullion Capacity Table (for horizontally-spanning mullions)

Mullion Length	Opening Width (for vertically-spanning mullions) or Opening Height (for horizontally-spanning mullions)											
	50 in	60 in	70 in	80 in	90 in	100 in	120 in	140 in	160 in	180 in	200 in	220 in
42 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
48 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
54 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
60 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
66 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
72 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
78 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
84 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
90 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
96 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
102 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
108 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
114 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
120 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
126 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
132 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
138 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
144 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0

Anchor Capacity (lbs)	Opening Width (for vertically-spanning mullions) or Opening Height (for horizontally-spanning mullions)											
	50 in	60 in	70 in	80 in	90 in	100 in	120 in	140 in	160 in	180 in	200 in	220 in
2 Anchors @ 1.15" Min. O.C. / Standard for Offset Clip (Fig. 1)	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs
4 Anchors @ 1.15" Min. O.C. / Standard for Offset Clip (Fig. 1)	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs
4 Anchors @ 3" Min. O.C. / Standard for Offset Clip (Fig. 2)	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs
4 Anchors @ 0.54" Min. O.C. / 100" Min. L (Fig. 3)	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs
2 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 4)	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs	300 lbs
4 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 4)	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs	600 lbs

NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

TABLE NOTES:

- SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 24 FOR GENERAL INSTALLATION METHODS.
- LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .100" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST 125" THICK AND A36. ALL #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 16-8 S.S. OR 410 S.S.

FIGURE 1: [Diagram showing anchor pattern for standard clip]

FIGURE 2: [Diagram showing anchor pattern for offset clip]

FIGURE 3: [Diagram showing anchor pattern for 100" min. L]

FIGURE 4: [Diagram showing anchor pattern for F-clip]

FIGURE 5: [Diagram showing anchor pattern for F-clip]

FIGURE 6: [Diagram showing anchor pattern for F-clip]

FIGURE 7: [Diagram showing anchor pattern for F-clip]

FIGURE 8: [Diagram showing anchor pattern for F-clip]

FIGURE 9: [Diagram showing anchor pattern for F-clip]

FIGURE 10: [Diagram showing anchor pattern for F-clip]

FIGURE 11: [Diagram showing anchor pattern for F-clip]

FIGURE 12: [Diagram showing anchor pattern for F-clip]

FIGURE 13: [Diagram showing anchor pattern for F-clip]

FIGURE 14: [Diagram showing anchor pattern for F-clip]

FIGURE 15: [Diagram showing anchor pattern for F-clip]

FIGURE 16: [Diagram showing anchor pattern for F-clip]

FIGURE 17: [Diagram showing anchor pattern for F-clip]

FIGURE 18: [Diagram showing anchor pattern for F-clip]

FIGURE 19: [Diagram showing anchor pattern for F-clip]

FIGURE 20: [Diagram showing anchor pattern for F-clip]

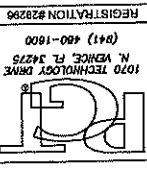
FIGURE 21: [Diagram showing anchor pattern for F-clip]

FIGURE 22: [Diagram showing anchor pattern for F-clip]

FIGURE 23: [Diagram showing anchor pattern for F-clip]

FIGURE 24: [Diagram showing anchor pattern for F-clip]

FIGURE 25: [Diagram showing anchor pattern for F-clip]



IMPACT-RESISTANT ALUMINUM TUBE MULLIONS

2 X 4 X .25 MULL SPECS

Scale: N/A

Drawn By: J. ROSOWSKI

Checked By: J. ROSOWSKI

Date: 08/29/11

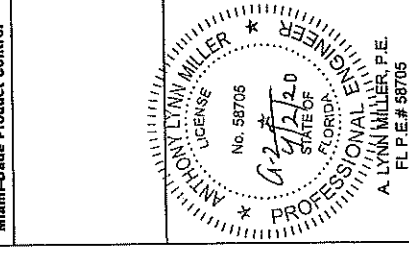
Revised: 06/26/20 ADDED NEW ANCHOR TYPE

Sheet: 1 of 25

Project: 6300JR

Rev: D

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By: Miami-Dade Product Control



ANCHOR CAPACITY ADJUSTMENT FORMULA:
 $(DF_{adj}) \times (\text{ANCHOR CAP. (lb)} / \text{ANCHOR CAP. (lb)})$
= ANCHOR CAP. (lb)

USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY REQUIRED" CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE OF THE SELECTED MULLION). IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE ANCHOR CAPACITY TABLE.

Mullion Length	Opening Width (for vertically-spanning mullions) or Opening Height (for horizontally-spanning mullions)											
	50 in			60 in			70 in			80 in		
	Rectangular Loading	Triangular Loading	Time/Temp. Loading	Rectangular Loading	Triangular Loading	Time/Temp. Loading	Rectangular Loading	Triangular Loading	Time/Temp. Loading	Rectangular Loading	Triangular Loading	Time/Temp. Loading
42 in	1700	620	1700	435	1700	740	1700	478	1700	598	1700	598
48 in	1700	708	1700	524	1700	850	1700	584	1700	684	1700	684
50.625 in	1700	747	1700	563	1700	886	1700	631	1700	731	1700	731
54 in	1700	797	1700	612	1700	936	1700	681	1700	781	1700	781
60 in	1700	885	1700	701	1700	1063	1700	767	1700	867	1700	867
63 in	1700	930	1700	745	1700	1116	1700	810	1700	910	1700	910
66 in	1700	974	1700	789	1700	1169	1700	854	1700	954	1700	954
72 in	1700	1063	1700	878	1700	1275	1700	943	1700	1043	1700	1043
78 in	1700	1151	1700	967	1700	1381	1700	1032	1700	1132	1700	1132
90 in	1700	1328	1700	1144	1700	1598	1700	1219	1700	1319	1700	1319
96 in	1474	1229	1515	1098	1228	1293	1278	1079	1053	1229	1112	1081
108 in	1035	971	1058	877	863	971	863	877	863	971	863	877
111 in	854	919	873	832	795	819	819	819	819	819	819	819
120 in	755	795	768	716	623	785	645	705	539	785	539	785
144 in	437	546	442	594	364	546	376	498	312	546	312	546

Anchor Capacity (lbs)	Substrate											
	27K Concrete			3K Concrete			3.5K Core			Hollow CMU		
	Anchor Type	Edge Distance (in)	Embedment (in)	Anchor Type	Edge Distance (in)	Embedment (in)	Anchor Type	Edge Distance (in)	Embedment (in)	Anchor Type	Edge Distance (in)	Embedment (in)
2 Anchors @ 4.75" Min. O.C. / Standard or Offset Clip (Fig. 1)	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"
4 Anchors @ 2.88" Min. O.C. / Standard or Offset Clip (Fig. 3)	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"
6 Anchors @ 1.77" Min. O.C. / Standard or Offset Clip (Fig. 4)	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"
8 Anchors @ 1.17" Min. O.C. / Standard or Offset Clip (Fig. 5)	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"
10 Anchors @ 0.85" Min. O.C. / Standard or Offset Clip (Fig. 6)	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"
12 Anchors @ 0.68" Min. O.C. / Standard or Offset Clip (Fig. 7)	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"
14 Anchors @ 0.54" Min. O.C. / Standard or Offset Clip (Fig. 8)	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"
16 Anchors @ 0.45" Min. O.C. / Standard or Offset Clip (Fig. 9)	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"
18 Anchors @ 0.38" Min. O.C. / Standard or Offset Clip (Fig. 10)	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"	3/16" E-60 U-Anchor	1" - 2-1/2"	1-3/4"

NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

FIGURE 1: [Diagram showing 2 anchors with 4.75" min. O.C.]

FIGURE 2: [Diagram showing 4 anchors with 2.88" min. O.C.]

FIGURE 3: [Diagram showing 6 anchors with 1.77" min. O.C.]

FIGURE 4: [Diagram showing 8 anchors with 1.17" min. O.C.]

FIGURE 5: [Diagram showing 10 anchors with 0.85" min. O.C.]

FIGURE 6: [Diagram showing 12 anchors with 0.68" min. O.C.]

FIGURE 7: [Diagram showing 14 anchors with 0.54" min. O.C.]

FIGURE 8: [Diagram showing 16 anchors with 0.45" min. O.C.]

FIGURE 9: [Diagram showing 18 anchors with 0.38" min. O.C.]

FIGURE 10: [Diagram showing 20 anchors with 0.31" min. O.C.]

TABLE NOTES:

- SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 24 FOR GENERAL INSTALLATION METHODS.
- LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- MULLION AND MULLION CUPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .125" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .046" THICK (.16 GAUGE). STRUCTURAL STEEL TO BE AT LEAST .125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-8 S.S. OR 410 S.S.

2" X 4" X .25" MULLION

2.000"

.250"

4.000"



1.26 X 2.11 X .125 MULL SPECS

IMPACT RESISTANT ALUMINUM TUBE MULLIONS

Rev. By: J ROSOWSKI Date: 06/26/20

Drawn By: J ROSOWSKI Date: 08/29/11

Scale: N/A

Checked By: 6300JR

Rev. D

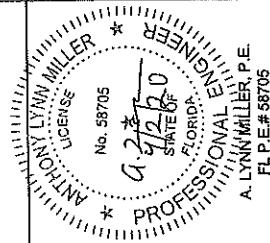
18 of 25

PRODUCT REVISED
as complying with the Florida Building Code

NOA-No. 20-0406.03

Expiration Date 05/26/2026

By: Miami-Dade Product Control



ANCHOR CAPACITY ADJUSTMENT FORMULA:

$(DP_{an}) \times (\text{ANCHOR CAP}_{min})$

$(DP_{an}) \times (\text{MULLION CAP}_{min})$

$= \text{ANCHOR CAP}_{min}$

USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY REQUIRED" CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING. WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE OF THE SELECTED MULLION, IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE ANCHOR CAPACITY TABLE.

Mullion Length	Opening Width (for vertically-spanning mullions) or Opening Height (for horizontally-spanning mullions)											
	50 in			60 in			70 in			80 in		
	Rectangular Loading	Triangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Triangular Loading
42 in	144.2	526	167.0	428	120.2	526	103.0	526	138.9	414	50.1	526
48 in	166.6	403	108.0	333	80.5	403	59.0	403	86.4	300	50.4	403
50, 62.5 in	82.3	362	91.0	301	68.6	362	58.8	362	71.9	289	51.5	362
54 in	67.8	318	74.1	267	58.5	318	51.7	266	42.4	259	42.4	318
60 in	49.5	258	53.1	219	41.2	258	40.7	210	30.9	208	37.7	258
63 in	42.7	224	45.6	200	35.6	224	38.1	195	30.5	204	34.7	224
66 in	37.2	213	36.4	183	31.0	213	33.7	179	26.5	204	34.7	213
72 in	28.6	179	30.1	155	23.3	179	25.5	152	20.4	179	22.5	179
76 in	24.3	161	25.4	140	20.3	161	21.6	137	17.4	161	19.0	161
78 in	22.5	152	23.5	133	18.5	152	19.9	131	16.1	152	17.5	152

TABLE 14B

Anchor Capacity (lbs)	Substrate											
	2 1/2" Concrete			3K Concrete			3K Concrete			3K Concrete		
	Anchor Type	Edge Distance (in)	Embedment (in)	Anchor Type	Edge Distance (in)	Embedment (in)	Anchor Type	Edge Distance (in)	Embedment (in)	Anchor Type	Edge Distance (in)	Embedment (in)
4 Anchors @ 3" Min. O.C. / (2) 2x5 Angle Clips (Fig. 1)	1/4" Elco Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"
	1/4" Elco Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"
	1/4" Elco Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"
	1/4" Elco Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"	3/16" DeWall Ultrason	1"	2-1/2"

TABLE 14B

TABLE NOTES:

- 1) SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
- 2) LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- 3) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- 4) SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. FLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.85. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .125" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST .125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-8 S.S. OR 410 S.S.

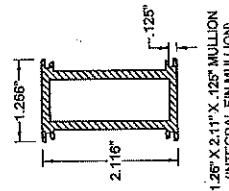
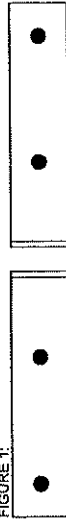
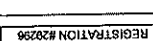


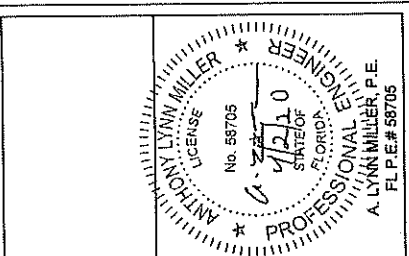
FIGURE 1:



ANGLE CLIP MUST BE USED IN PAIRS.

	1000 TECHNOLOGY DRIVE N. VENICE, FL 33575 (813) 480-1600		REGISTRATION #28298	
	Title: IMPACT-RESISTANT ALUMINUM TUBE MULLIONS Description: 45 DEGREE BAY MULL SPECS		Series: N/A Scale: N/A Drawing No. 6300JR 20x 25	
Date: 08/29/11 Checked by: ☐ Date: 06/26/20 Added New Anchor Type.		Revision: ☐ Date: 08/29/11 Checked by: ☐ Date: 06/26/20 Added New Anchor Type.		J ROSOWSKI J ROSOWSKI J ROSOWSKI

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By [Signature]
Miami-Dade Product Control



$$\text{ANCHOR CAPACITY ADJUSTMENT FORMULA:} \\ (DP_{\text{table}}) \times \left(\frac{\text{ANCHOR CAP. (FROM TABLE)}}{\text{MULTIPLY CAP. (FROM TABLE)}} \right) \\ = \text{ANCHOR CAP.} \quad \text{TABLE}$$

Mullion Capacity Table (lbs/ft ²)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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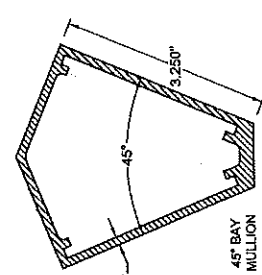
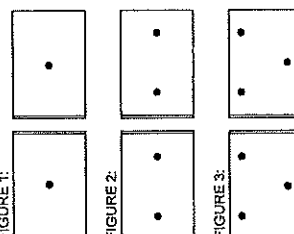
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TABLE NOTES:

- 1) SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 26 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
- 2) LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- 3) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- 4) SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF 12" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE A MINIMUM OF 1/2" THICK. ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-8 S.S. OR 4130 S.S.



ANGLE CLIP (FIGURES 1-3) MUST BE USED IN PAIRS.

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By CO
Witness: State Product Control

MIDWEST-STATE FINANCE COUNCIL

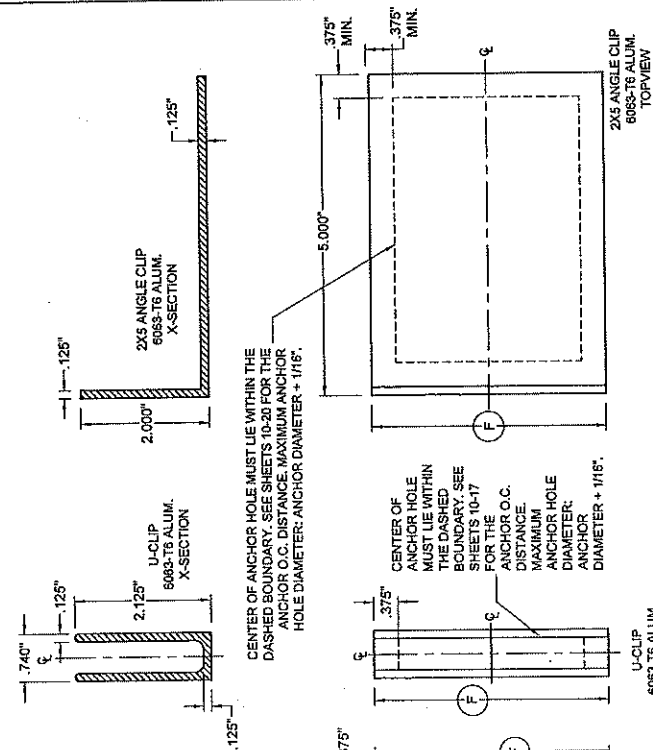
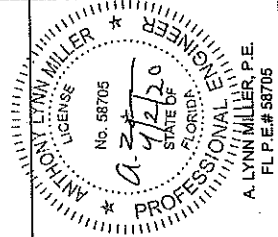
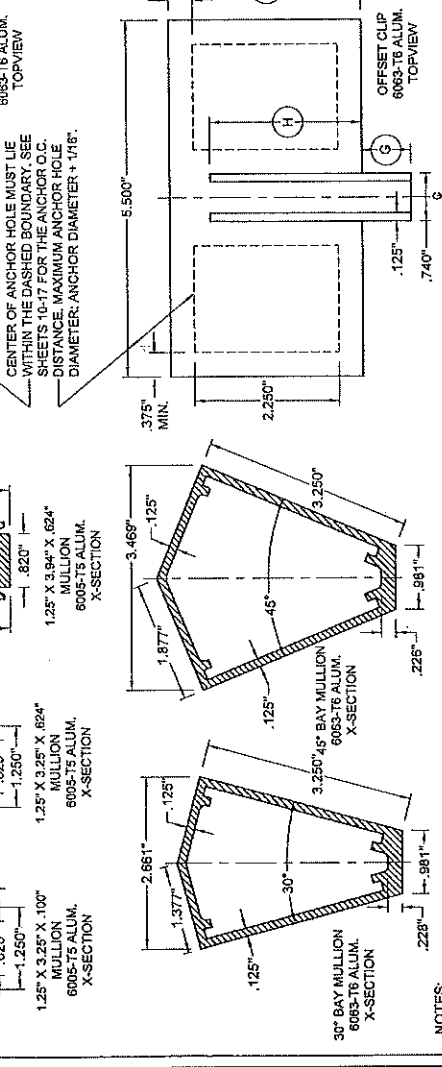
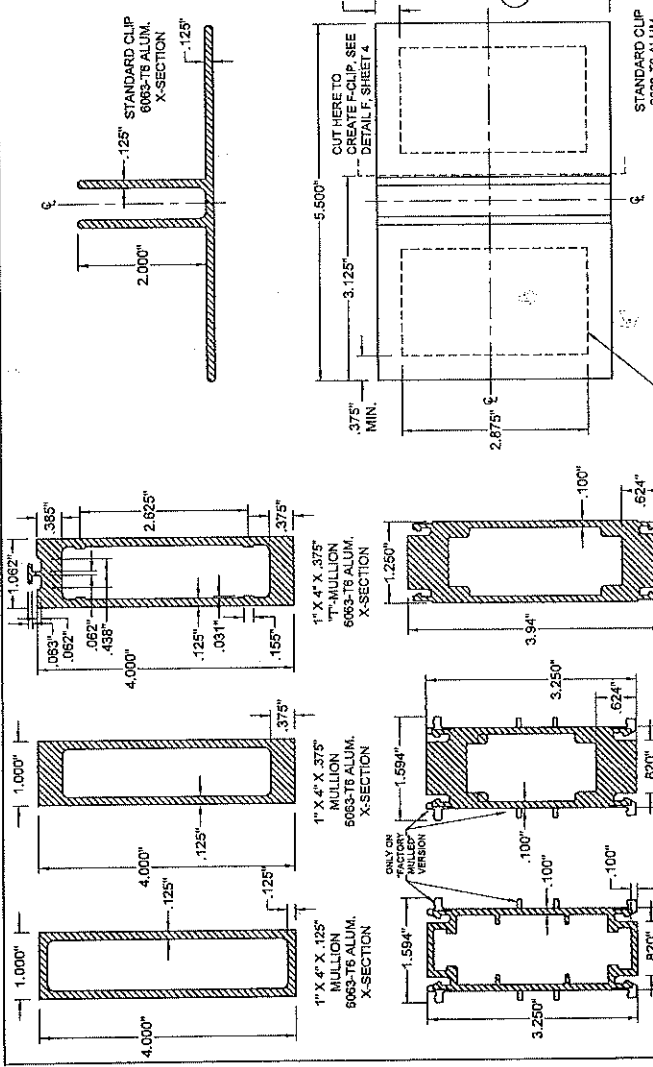


TABLE C. CONT.

Dimension	Value (in)	For Mullion	Dimension	Value (in)	For Mullion
F	3.687	T X 4" X	F	1.938	1.25" X 3.25"
G	1.000	.125"	G	0.900	X .624"
H	2.880	Aluminum	H	1.1438	Aluminum
I	3.000	Tube Mullion	I	3.250	Tube Mullion
F	3.187	T X 4" X	F	2.625	1.25" X 3.94"
G	0.757	.375"	G	1.125	X .624"
H	2.430	Aluminum	H	1.900	Aluminum
I	3.000	Tubes & T	I	3.250	Tube Mullion
F	2.250	1.25" X 3.25"	F	2.613	30" Bay Mull
G	0.750	X .100"	G	2.975	45" Bay Mull

TABLE 10

Multi Dimension (sheet #)	Mullion	Std. Clip	Offset Clip	U-Clip	Angle Clip
1" X 4" X .125" (10)	69584	696111M	696212M	696214M	696518M
1" X 4" X .375" (11)	69610	696112M	696112XM	696212M	696519M
1" X 4" X .375" (11)	69653	696112M	696112XM	696212M	696519M
1.25" X 3.25" X .100" (13)	20160/20312	6961127M	6961127M	6962141M	6965118M
1.25" X 3.25" X .624" (14)	20161/20315	6961128M	6961128M	6962141M	6965118M
1.25" X 3.94" X .624" (15)	20162	9901117M	9901117M	9962141M	996517M
30 Degree (19)	59649	N/A	N/A	N/A	9965110M
45 Degree (20)	99650	N/A	N/A	N/A	9965111M

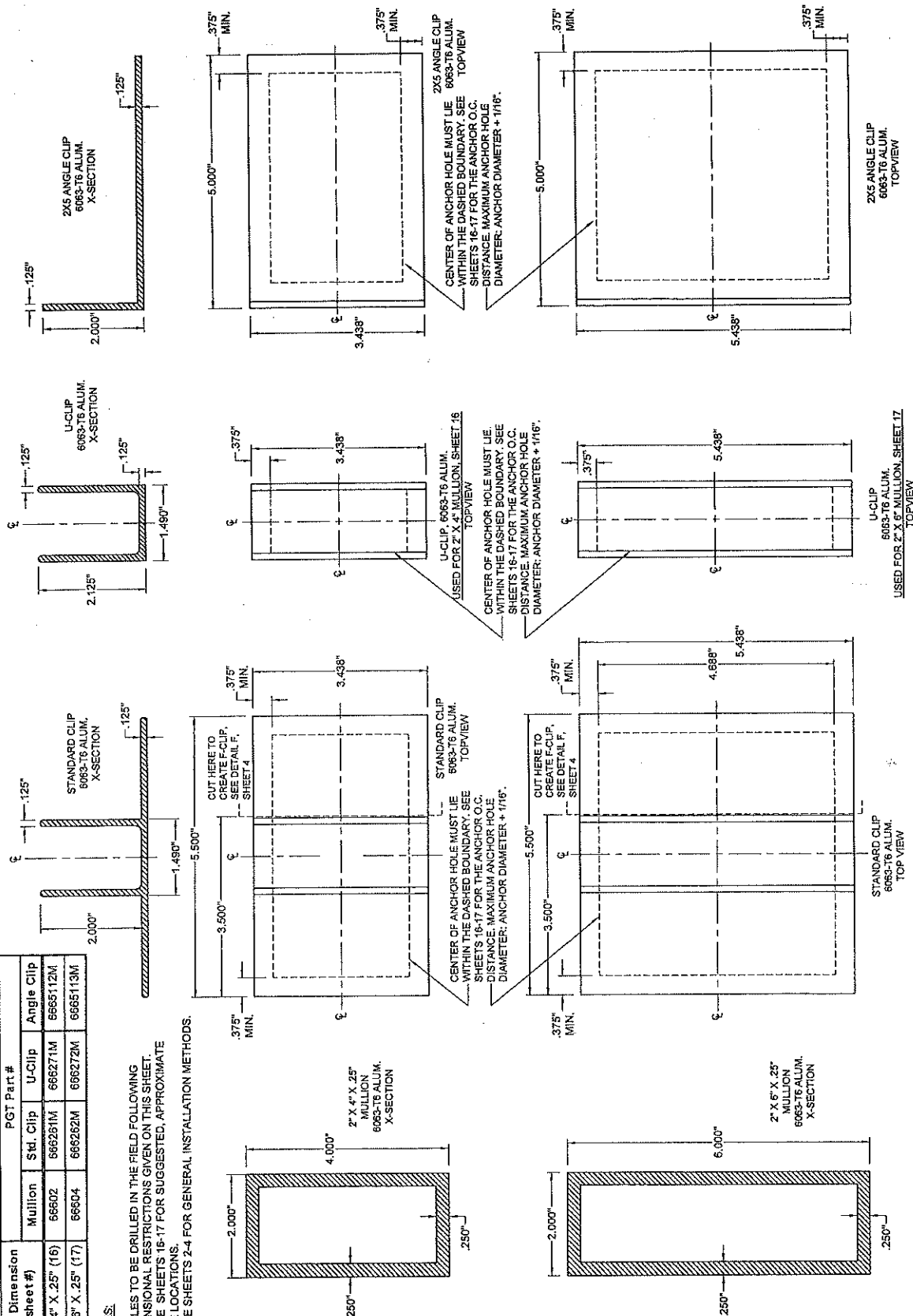


NOTES:

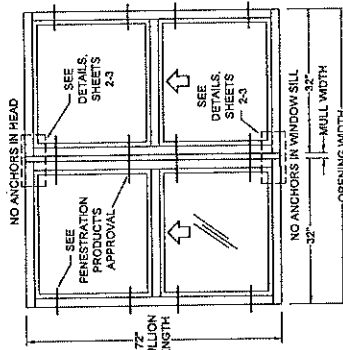
- 1) HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS GIVEN ON THIS SHEET.
- 2) SEE SHEETS 10, 11, 13-15, 19 & 20 FOR SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- 3) SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.

Mull Dimension (sheet #)	PGT Part #		
	Mullion	Std. Clip	U-Clip
2" X 4" X .25" (16)	56602	566281M	566271M
2" X 6" X .25" (17)	56604	566262M	566272M
			5665112M
			5665113M

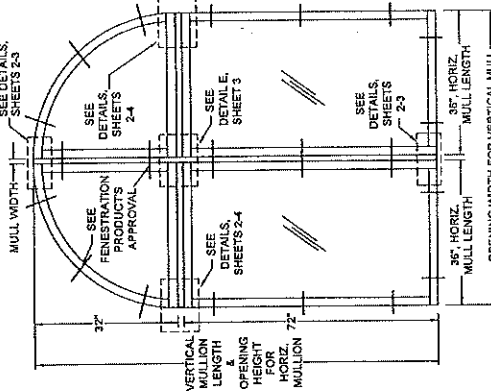
NOTES:



EXAMPLE 1: SINGLE VERTICAL MULLION



EXAMPLE 2: MULTIPLE MULLIONS



THE BUILDING SUBSTRATE IS KNOWN TO BE WOOD ON ALL FOUR SIDES. THE WINDOW FRAME DEPTH IS 2-1/4". THE OPENING REQUIRES A DESIGN PRESSURE OF +50.0/-50.0 PSF.

- INITIALLY ASSUMING THAT A 1" WIDE MULLION IS SUITABLE, THE MULLION LENGTH IS 72" AND THE OPENING WIDTH IS 32" X 21" = 66". REFERENCING SHEET 25, THE COLUMN USING RECTANGULAR LOADING MUST BE USED. SCAN THE MULLION TABLES FOR A MULLION THAT IS AT LEAST THE WINDOW FRAME DEPTH OF 2-1/4" AND WILL MEET OR EXCEED THE REQUIRED DESIGN PRESSURE OF +50.0/-50.0 PSF. IF THE TABLE DOES NOT SHOW THE EXACT SIZE, USE THE NEXT LARGER SIZE AVAILABLE.

FROM TABLE 3A, SHEET 7, THE 1" X 2-7/8" X 375" MULLION (LENGTH = 72", OPENING WIDTH = 70") MEETS THE DESIGN PRESSURE OF +50.3 PSF AND WOULD NOT BE SUITABLE FOR THIS APPLICATION.

FROM TABLE 4A, SHEET 8, THE 1" X 2-7/8" X 650" MULLION (LENGTH = 72", OPENING WIDTH = 70") HAS A DESIGN PRESSURE OF +472.7 PSF WHICH EXCEEDS THE REQUIREMENTS FOR THE OPENING AND MAY BE USED IN THIS APPLICATION. NOTE THE ANCHOR CAPACITY REQUIRED OF 636 LBS.

- USE TABLE 4B TO FIND THE ANCHOR TYPE, ANCHOR QUANTITY AND CLIP TYPE REQUIRED FOR THE WOOD SUBSTRATE. BOTH THE STANDARD CLIP WITH (4) #12 ANCHORS AND THE 2X5 ANGLE CLIPS WITH (4) #12 ANCHORS HAVE A CAPACITY OF 665 LBS. THOUGH EITHER ONE COULD BE USED, THE STANDARD CLIP IS EASIER TO INSTALL.

- VERIFY THE DESIGN PRESSURE OF THE FENESTRATION PRODUCTS USED WITH THIS MULLION SYSTEM. THE LOWER DESIGN PRESSURE, OF MULLIONS OR FENESTRATION PRODUCTS, WILL APPLY TO THE OVERALL ASSEMBLY. FINAL DESIGN PRESSURE REQUIRES THAT THE BOTH THE MULLION AND THE FENESTRATION PRODUCT BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION SPECIFICATIONS INTO RESPECTIVE SUBSTRATES AND FENESTRATION PRODUCTS TO MULLION.

IN THIS EXAMPLE, THE DESIGN PRESSURE REQUIRED WAS +460.0 PSF. THE OVERALL MULLION SYSTEM WAS DETERMINED TO BE 72.7 PSF WITH AN ANCHOR CAPACITY OF 636 LBS. ALTERNATIVELY, THE ANCHOR CAPACITY ADJUSTMENT FORMULA COULD HAVE BEEN USED TO CALCULATE THE ANCHOR CAPACITY REQUIRED FOR THE EXACT DESIGN PRESSURE OF 60 PSF:

$$(60 \text{ PSF}) \times \left(\frac{636 \text{ LBS}}{72.7 \text{ PSF}} \right) = 524.9 \text{ LBS} \quad (\text{MAY BE USED TO QUALIFY #10 STEEL SCREWS FROM TABLE 4B})$$

THE BUILDING SUBSTRATE IS KNOWN TO BE CMU ON THE JAMBS AND USES A CONCRETE HEADER AND SILL. THE WINDOW FRAME DEPTH IS 2-3/8". THE OPENING REQUIRES A DESIGN PRESSURE OF +50.0/-55.0 PSF.

FOR THE VERTICAL MULLION:

- INITIALLY ASSUMING THAT A 1" WIDE MULLION IS SUITABLE, THE MULLION LENGTH IS 32" X 21" = 105" AND THE OPENING WIDTH IS 36" X 36" = 73". REFERENCING SHEET 25, THE COLUMN USING RECTANGULAR LOADING SHALL BE USED. SCAN THE MULLION TABLES FOR A MULLION THAT IS AT LEAST THE WINDOW FRAME DEPTH OF 2-3/8" AND WILL MEET OR EXCEED THE REQUIRED DESIGN PRESSURE OF +50.0/-55.0 PSF. IF THE TABLE DOES NOT SHOW THE EXACT SIZE, USE THE NEXT LARGER SIZE AVAILABLE.

FROM TABLE 3A, SHEET 7, THE 1" X 2-7/8" X 375" MULLION (LENGTH = 106", OPENING WIDTH = 80") MEETS THE DESIGN PRESSURE OF +415.1 PSF AND WOULD NOT BE SUITABLE FOR THIS APPLICATION.

FROM TABLE 12A, SHEET 16, THE 2" X 4" X 250" MULLION (LENGTH = 108", OPENING WIDTH = 80") HAS A DESIGN PRESSURE OF +464.7 PSF WHICH EXCEEDS THE REQUIREMENTS FOR THE OPENING AND MAY BE USED IN THIS APPLICATION. NOTE THE ANCHOR CAPACITY REQUIRED OF 971 LBS.

BECAUSE IT IS NOW KNOWN THAT THE MULLION WILL ADD 2" TO THE WIDTH OF THE MULLION UNIT, THE ADJUSTED OPENING WIDTH IS 36" X 36" = 74". NOT 73" AS PREVIOUSLY ASSUMED. VERIFY THAT THE DESIGN PRESSURE IS STILL APPLICABLE FOR THE ADJUSTED OPENING. ALTERNATIVELY, THE WINDOW WIDTHS MAY BE REDUCED TO MAINTAIN THE 73" DIMENSION (35-1/2" X 35-1/2" = 73").

- USE TABLE 12B TO FIND THE ANCHOR TYPE, ANCHOR QUANTITY AND CLIP TYPE REQUIRED FOR THE CONCRETE SUBSTRATE. IN THIS EXAMPLE, ASSUME THE POURED CONCRETE HEADER AND SILL ARE 8" WIDE. IF THE MULLION CLIP WERE TO BE CENTERED WITHIN THE 8", CARE MUST BE TAKEN TO MAINTAIN THE FASTENER'S EDGE DISTANCE. USING THE STANDARD CLIP WITH (6) 3/16" ULTRACON ANCHORS AT AN EDGE DISTANCE OF 2-1/2" GIVES AN ANCHOR CAPACITY OF 1050 LBS WHICH IS GREATER, AND THEREFORE SUITABLE, FOR THE REQUIRED ANCHOR CAPACITY OF 971 LBS.

FOR THE HORIZONTAL MULLIONS:

BECAUSE THE VERTICAL MULLION WILL BE A 2" X 4" X 250" MULLION, IN THIS EXAMPLE WE WILL MATCH THE HORIZONTAL AND VERTICAL MULLIONS. ALTERNATIVELY, ANOTHER MULLION TYPE COULD BE CHOSEN.

- THE MULLION LENGTH IS 36" AND THE OPENING HEIGHT IS 32" X 21" = 106". REFERENCING SHEET 25, THE COLUMN USING TRAPEZOIDAL/TRIANGULAR LOADING MAY BE USED. FROM TABLE 12A, SHEET 16, THE 2" X 4" X 250" MULLION @ LENGTH = 42", OPENING HEIGHT = 42", HAS A DESIGN PRESSURE OF +4170.0 PSF WHICH EXCEEDS THE REQUIREMENTS FOR THE OPENING AND MAY BE USED IN THIS APPLICATION. NOTE THE ANCHOR CAPACITY REQUIRED OF 521 LBS.

- USE TABLE 12B TO FIND THE ANCHOR TYPE, ANCHOR QUANTITY AND CLIP TYPE REQUIRED FOR THE CMU SUBSTRATE. IN THIS EXAMPLE, ASSUME THE CMU JAMBS ARE 8" WIDE. IF THE MULLION CLIP WERE TO BE CENTERED WITHIN THE 8", CARE MUST BE TAKEN TO MAINTAIN THE FASTENER'S EDGE DISTANCE. USING THE 2X5 ANGLE CLIPS WITH (4) 3/16" ULTRACON ANCHORS AT AN EDGE DISTANCE OF 1" GIVES AN ANCHOR CAPACITY OF 540 LBS WHICH IS GREATER, AND THEREFORE SUITABLE, FOR THE REQUIRED ANCHOR CAPACITY OF 521 LBS.

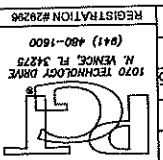
- FOR THE U-CLIP IN THE HORIZONTAL MULLION TO VERTICAL MULLION, USE THE SAME ANCHOR CAPACITY OF 521 LBS. TABLE 12B FOR THE U-CLIP SHOWS THE ANCHOR CAPACITY IS 1074 LBS WHEN USING 3 ANCHORS, WHICH IS GREATER, AND THEREFORE SUITABLE, FOR THE REQUIRED ANCHOR CAPACITY REQUIREMENT OF 521 LBS. THE ANCHOR TYPE IS A #12 STEEL SCREW.

FROM THE ABOVE STEPS, OUR MULLION DESIGN PRESSURE IS:

- +464.7 PSF FROM THE VERTICAL MULLION;
- +4170.0 PSF FROM THE 36" HORIZONTAL MULLION ATTACHING TO CMU;
- +4170.0 PSF FROM THE 36" HORIZONTAL MULLION ATTACHING TO THE VERTICAL MULLION (INTERSECTION).

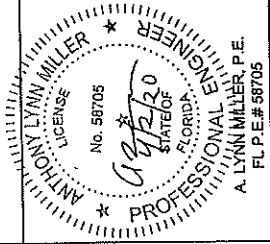
THE LOWEST DESIGN PRESSURE IS +464.7 PSF AND WOULD APPLY TO ALL OF THE MULLIONS.

VERIFY THE DESIGN PRESSURE OF THE FENESTRATION PRODUCTS USED WITH THIS MULLION SYSTEM. THE LOWER DESIGN PRESSURE, OF MULLIONS OR FENESTRATION PRODUCTS, WILL APPLY TO THE OVERALL ASSEMBLY. FINAL DESIGN PRESSURE REQUIRES THAT THE BOTH THE MULLION AND THE FENESTRATION PRODUCT BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION SPECIFICATIONS INTO RESPECTIVE SUBSTRATES AND FENESTRATION PRODUCTS TO MULLION.

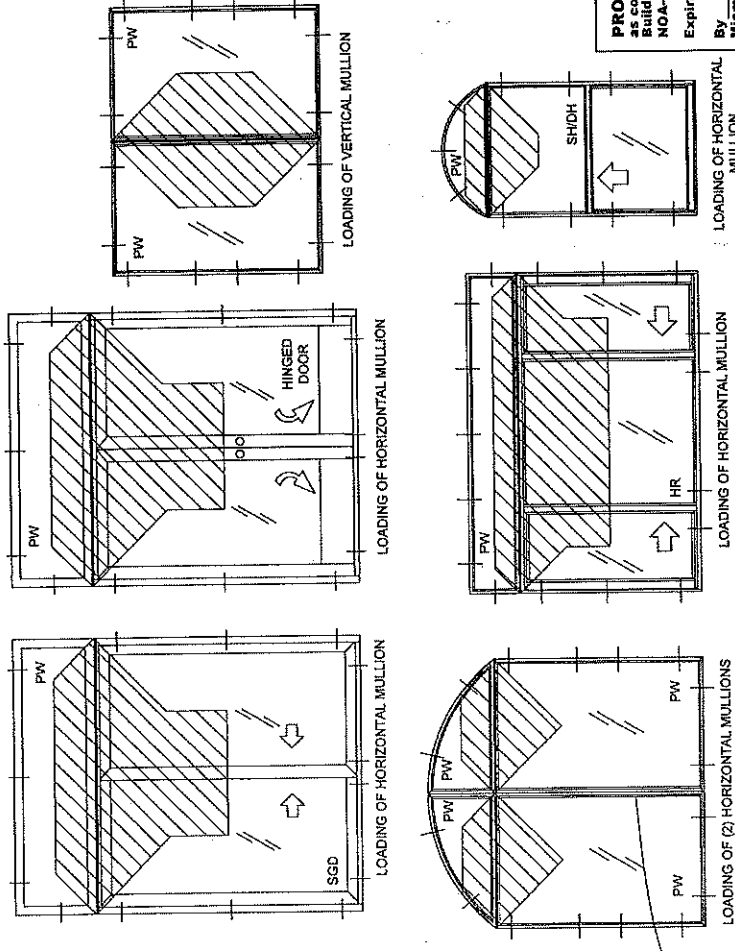


REGISTRATION #229296	DATE: 06/26/20	NO CHANGES THIS SHEET.
DESIGNER: J. ROSOWSKI	CHECKED BY: J. ROSOWSKI	DATE: 08/29/11
PROJECT: IMPACT-RESISTANT ALUMINUM TUBE MULLIONS	DRAWING NO.: 6300JR	SCALE: N/A
SHEET: 24 OF 25	DATE: 08/29/11	DATE: 08/29/11

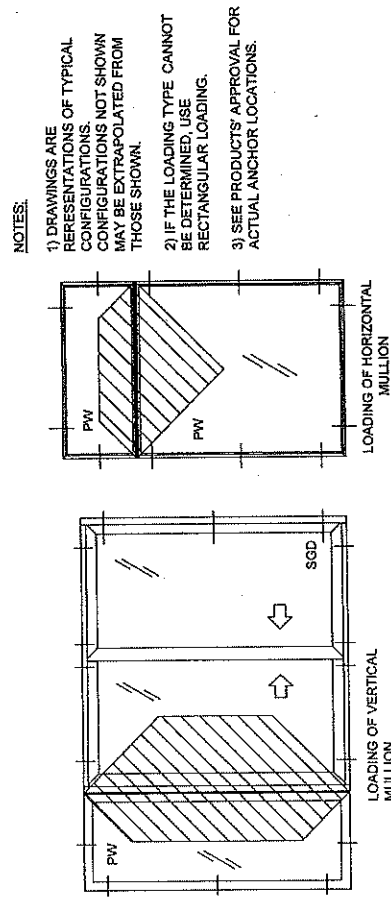
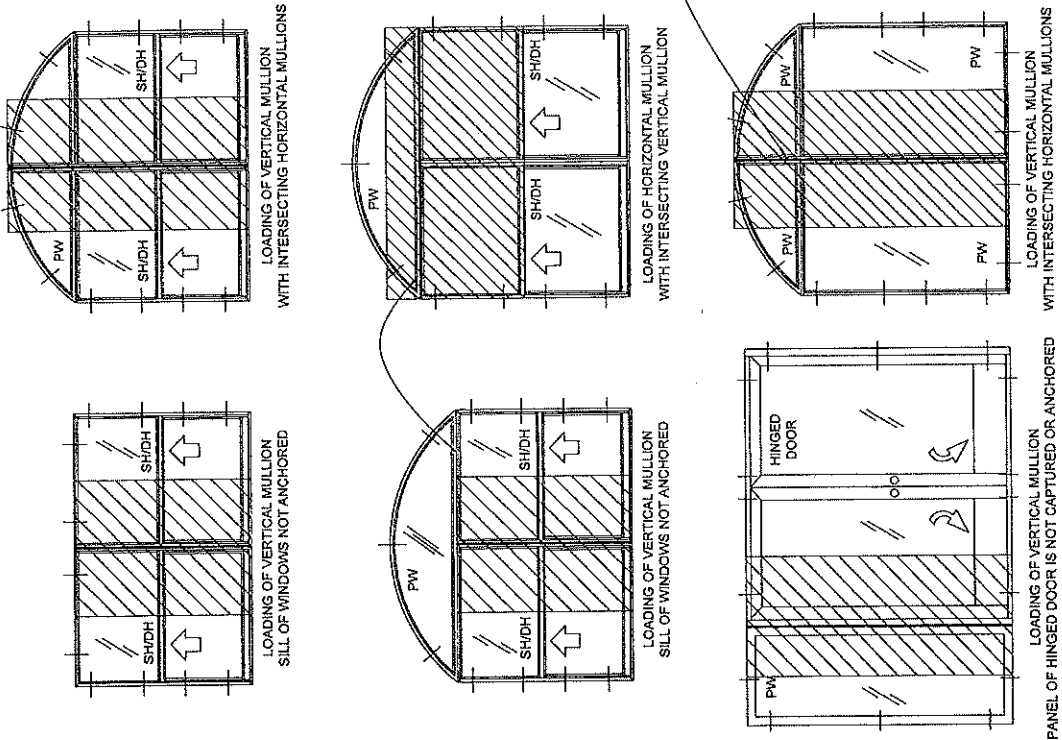
PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0406-03
Expiration Date 05/26/2026
By: Miami-Grade Product Control



EXAMPLES OF TRAPEZOIDAL/TRIANGULAR LOADING:



EXAMPLES OF RECTANGULAR LOADING:



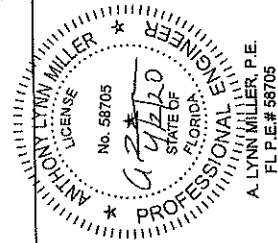
NOTES:

- 1) DRAWINGS ARE REPRESENTATIONS OF TYPICAL CONFIGURATIONS NOT SHOWN MAY BE EXTRAPOLATED FROM THOSE SHOWN.
- 2) IF THE LOADING TYPE CANNOT BE DETERMINED, USE RECTANGULAR LOADING.
- 3) SEE PRODUCTS APPROVAL FOR ACTUAL ANCHOR LOCATIONS.

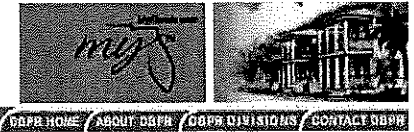


Rev. By: J ROSOWSKI	Date: 06/26/20	Revision: NO CHANGES THIS SHEET
Drawn By: J ROSOWSKI	Date: 08/29/11	
Scale: N/A	Checked By: N/A	
Sheet: 6300JR	DWG. No. 25 of 26	
Description: IMPACT-RESISTANT ALUMINUM TUBE MULLIONS		
Title: LOADING EXAMPLES		

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 20-0406-03
Expiration Date 05/26/2026
By Miami-Dade Product Control



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Product Approval
USER: Public User

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

OFFICE OF THE
SECRETARY

FL #

Application Type

Code Version

Application Status

FL1435-R23

Revision

2020

Approved

*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

Comments

Archived



Product Manufacturer

Address/Phone/Email

PGT Industries

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North Venice, FL 34275

(941) 486-0100 Ext 21140

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Authorized Signature

Jens Rosowski

jrosowski@pgtindustries.com

Technical Representative

Address/Phone/Email

Lynn Miller, P.E.

1070 Technology Dr

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Quality Assurance Representative

Address/Phone/Email

Category

Subcategory

Windows

Single Hung

Compliance Method

Certification Mark or Listing

Certification Agency

Validated By

Keystone Certifications, Inc.

Steven M. Urlich, PE

Validation Checklist - Hardcopy Received

Referenced Standard and Year (of Standard)

Standard

AAMA/WDMA/CSA 101/IS2/A440

ASTM E1886

ASTM E1886

ASTM E1996

ASTM E283

ASTM E330

Year

2011

2005

2013

2012

2004

2002

Equivalence of Product Standards
Certified By

Florida Licensed Professional Engineer or Architect
FL1435_R23 Equiv ASTM E1886-04-05 to E1886-13a and E1996-05-06-09 to E1996-17 Equivalency Letter 2020-09-09.pdf

Product Approval Method

Method 1 Option A

Date Submitted

10/27/2020

Date Validated

11/04/2020

Date Pending FBC Approval

Date Approved

11/08/2020

Summary of Products

FL #	Model, Number or Name	Description
1435.1	SH-5400	EnergyVue Vinyl Single Hung Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL1435_R23_C_CAC_Certification - SH5400.pdf Quality Assurance Contract Expiration Date 08/13/2021 Installation Instructions FL1435_R23_II_SH5400_FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1435_R23_AE_SH5400_Evaluation.pdf Created by Independent Third Party: No
1435.2	SH-5500	WinGuard Vinyl Single Hung Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL1435_R23_C_CAC_Certification - SH5500.pdf Quality Assurance Contract Expiration Date 10/01/2021 Installation Instructions FL1435_R23_II_SH5500_FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1435_R23_AE_SH5500_Evaluation.pdf Created by Independent Third Party: No

Back

Next

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

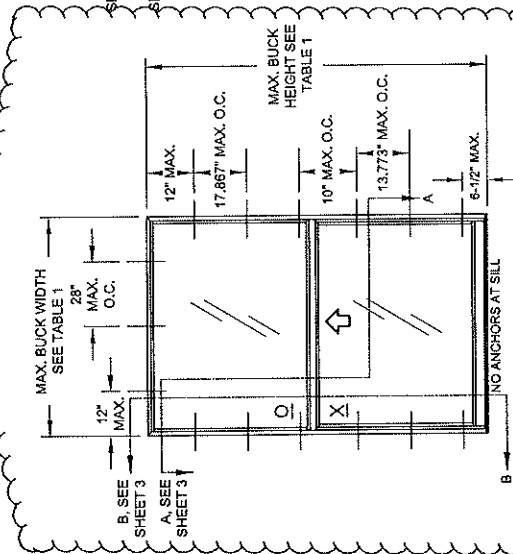
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Product Approval Accepts:



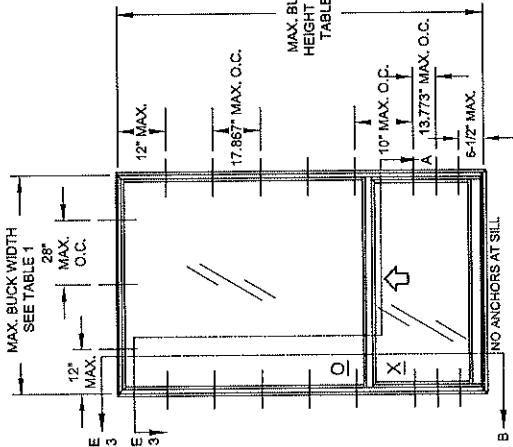
IMPACT RATING	DESIGN PRESSURE RATING
NON-IMPACT RESISTANT	SEE TABLE 1



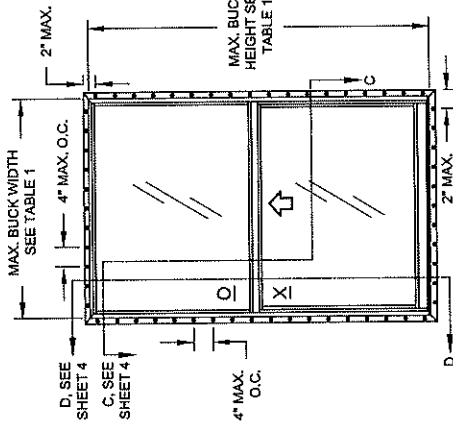
ELEVATION FOR TYP. EQUAL LEG FRAME,
EQUAL-LITE CONFIGURATION

GENERAL NOTES: SERIES 5400 NON-IMPACT RESISTANT,
VINYL SINGLE HUNG WINDOW

- THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE.
- 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, (EOR) OR ARCHITECT OF RECORD, (AOR).
- ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT 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.
- MAX. 1/4" SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, BY OTHERS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE WINDOW.
- THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE 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 PRODUCT. INTO WOOD, ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.



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



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

TABLE 1:

Window Buck Size		Reinf. Level	Design Pressure (+) psf	Certification (CAR) Number
Width	Height			
40"	63"	R4	50.0	190-1022
36"	62"	R4	50.0	190-1027
36"	67-9/16"	R4	50.0	190-1027
52-1/8"	84"	R1	50.0	190-1021
52-1/8"	84"	R1	50.0	190-1021
52-1/8"	91-13/16"	R2	65.0	190-1026
52-1/8"	84"	R2	65.0	190-1026
52-1/8"	91-13/16"	R2	65.0	190-1026

MIN. SASH HEIGHT = WINDOW BUCK HEIGHT - 50.135 (APPLIES TO ANY HEIGHT 91.75" OR LESS).

ADDED ANCHORS TO TABLE 2		10/20/2020
Model	Sheet	1 of 2
VINYL SINGLE HUNG INSTALLATION, NI		09/30/11
GENERAL NOTES & ELEVATIONS		J ROSOWSKI
Series	Disc	SH 5400
1 OF 4	2 OF 2	SH5400-FPA
Rev	A	



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1875 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941) 480-1600

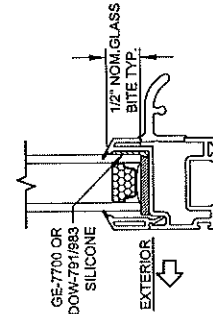
ANTHONY LYNN MILLER
No. 58705
10/26/20
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

TABLE 2: ANCHORS INSTALLED THROUGH FRAME

Anchor	Substrate	Min. Edge Distance	Min. Embedment
#10 SMS (steel, 18-8 S.S., or 410 S.S.) Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
	Steel, A36	3/8"	0.050"
	Steel Stud, A653 Gr. 33	3/8"	0.0346" (20 Ga.)
	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
#12 SMS (steel, 18-8 S.S., or 410 S.S.)	P.T. Southern Pine (SG=0.55)	9/16"	1-3/8"
	Steel, A36	3/8"	0.050"
	Steel Stud, A653 Gr. 33	3/8"	0.0346" (20 Ga.)
	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
3/16" Ultracon Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
	Concrete (min. 3.00 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
3/16" Ultracon+ Max. DP of 50.0 psf	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 3 ksi)	1"	1-3/8"
1/4" Ultracon	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 2.85 ksi)	1"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Ultracon+	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 3.35 ksi)	1"	1-3/4"
1/4" Crete-Flex (410 S.S.)	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	Concrete (min. 3.275 ksi)	1-1/2"	1-3/8"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2"	1-1/4"

TABLE 3: ANCHORS INSTALLED THROUGH INTEGRAL FIN

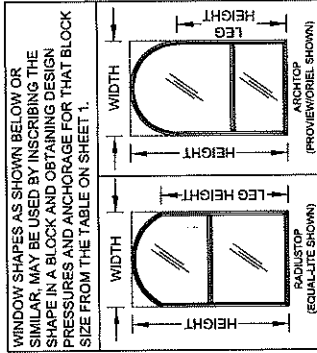
Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Common Nail Max. DP of 50.0	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	3/4"	1-3/8"
#10 SMS (steel, 18-8 S.S., or 410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



TYP. GLAZING DETAIL

ANCHOR NOTES:

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



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

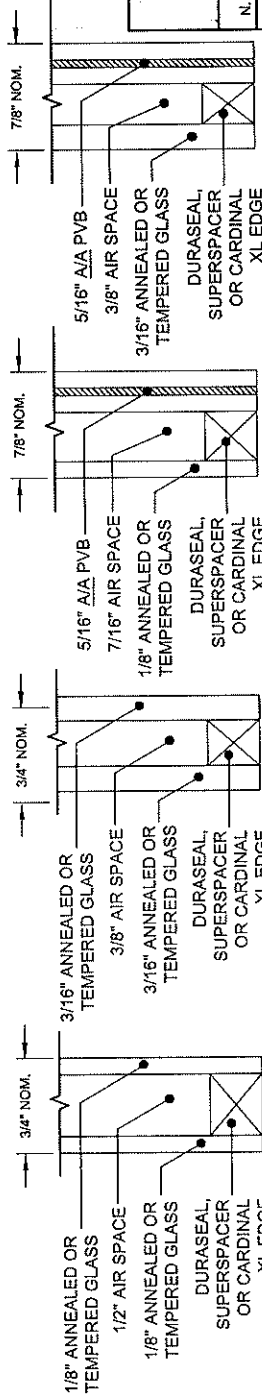
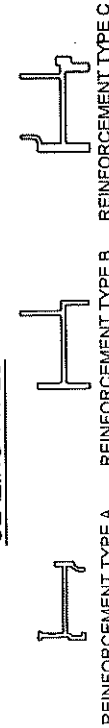


TABLE 4: REINFORCEMENT TYPES

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

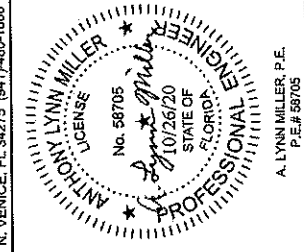
GLAZING TYPES

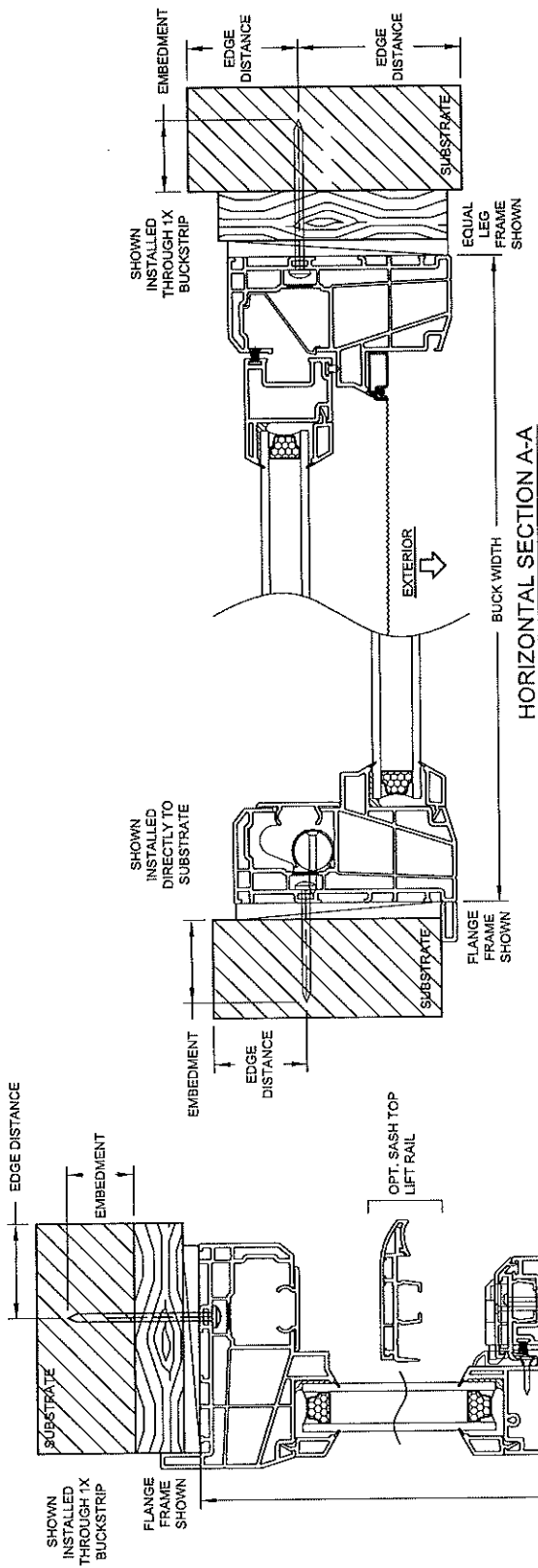


Series	Desc	Rev	Rev
SH 5400	2 OF 4	SHS400-FPA	A

PVB INTERLAYER MANUFACTURED BY KURARAY AMERICA, INC.

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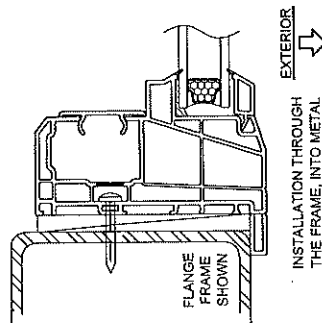




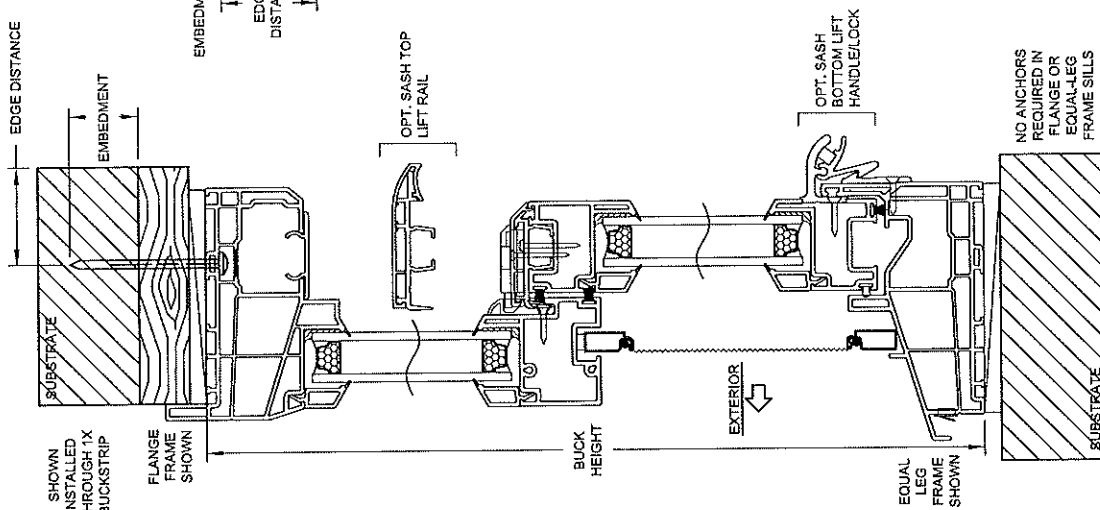
HORIZONTAL SECTION A-A

INSTALLATION NOTES:

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

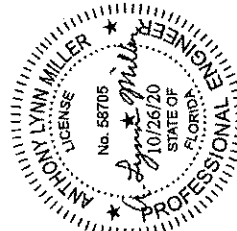


INSTALLATION THROUGH THE FRAME, INTO METAL



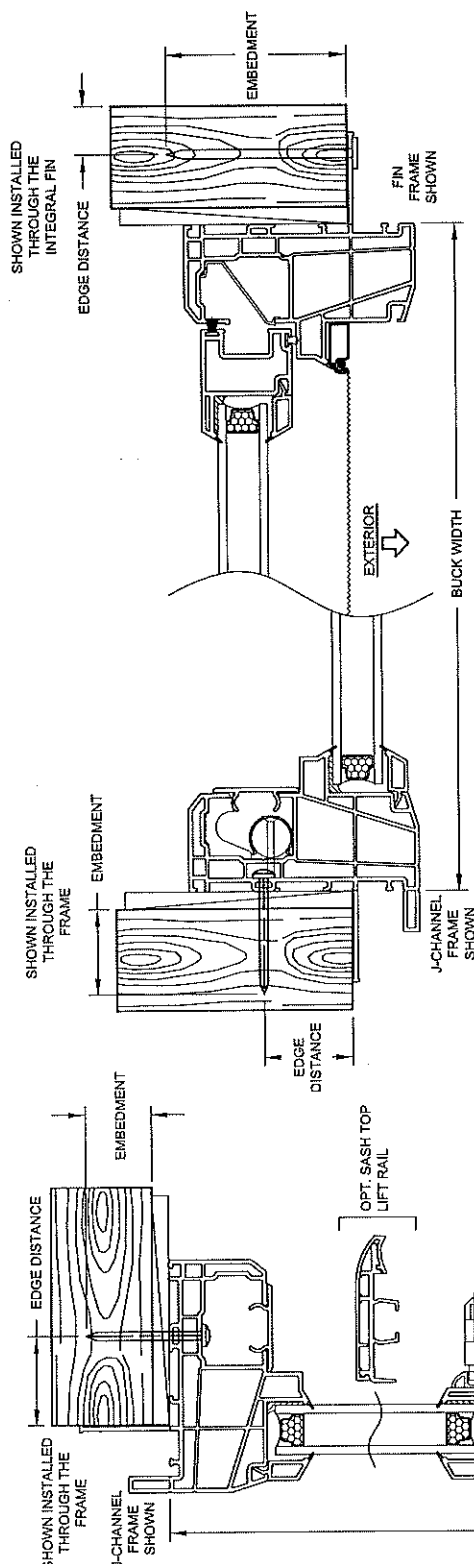
VERTICAL SECTION B-B

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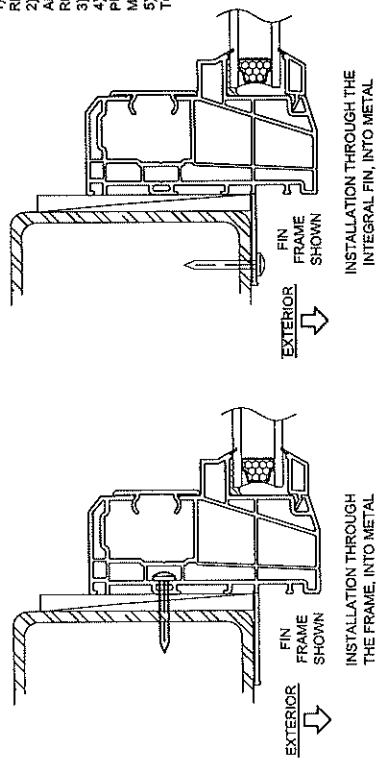
A. LYNN MILLER, P.E.
P.E.# 58705

PGT	VINYL SINGLE HUNG INSTALLATION, NI		09/30/11	
	FLANGE/EQUAL-LEG INSTALLATION	J ROSOWSKI	Rev.	A
SH 5400	3 OF 4	SH5400-FPA	Desc.	



HORIZONTAL SECTION C-C

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



VERTICAL SECTION D-D

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ANTHONY LYNN MILLER
No. 58705
10/26/20
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

		VINYL SINGLE HUNG INSTALLATION, NJ		Date	09/30/11
		INTEGRAL FIN INSTALLATION		By	J. ROSOWSKI
Sheet	SH 5400	4 OF 4	Drawn	SH5400-FPA	Rev
Senior Desc Title		A			