



FLORIDA DEPARTMENT OF
Business & Professional Regulation

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



Product Approval
USER: Public User

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

OFFICE OF THE
SECRETARY

FL #

Application Type

Code Version

Application Status

FL29783-R16

Revision

2023

Approved

Comments

Archived

Product Manufacturer

Address/Phone/Email

WinDoor Inc.

104 Triple Diamond Blvd
N Venice, FL 34275
(941) 486-0100
jrosowski@pgtindustries.com

Authorized Signature

Jens Rosowski
jrosowski@pgtindustries.com

Technical Representative

Address/Phone/Email

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

Quality Assurance Representative

Address/Phone/Email

Category

Subcategory

Exterior Doors

Swinging Exterior Door Assemblies

Compliance Method

Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer
☐ Evaluation Report - Hardcopy Received

Florida Engineer or Architect Name who developed the Evaluation Report

A. Lynn Miller, P.E.

Florida License

PE-58705

Quality Assurance Entity

Keystone Certifications, Inc.

Quality Assurance Contract Expiration Date

12/31/2032

Validated By

Steven M. Urich, PE

☒ Validation Checklist - Hardcopy Received

Certificate of Independence

[FL29783_R16_COI_Cert of Independence2.pdf](#)

Referenced Standard and Year (of Standard)

Standard

Year

AAMA/WDMA/CSA 101/I.S.2/A440

2011

AAMA/WDMA/CSA 101/I.S.2/A440

2017

AAMA/WDMA/CSA 101/I.S.2/A440

2008

TAS 201, 202, 203

1994

Equivalence of Product Standards
Certified By

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

06/25/2024

Date Validated

06/25/2024

Date Pending FBC Approval

06/27/2024

Date Approved

08/13/2024

Date Revised

02/13/2025

Summary of Products

FL #	Model, Number or Name	Description
29783.1	FD450A	Impact Resistant, Inswing & Outswing, Aluminum French Door with/without Sidelites
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 the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL29783_R16_II_450FPA-LM-1 - REV D.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL29783_R16_AE_FD450 LM - Eng Eval - REV D.pdf Created by Independent Third Party: No
29783.2	FD9850A	Non-impact Resistant, Outswing, Aluminum French Door
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL29783_R16_II_FD9850NI - FPA REV A.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL29783_R16_AE_FD9850 NI - Eng Eval REV A.pdf Created by Independent Third Party: No
29783.3	FD9950A	Impact Resistant, Outswing, Aluminum French Door
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 the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL29783_R16_II_FD9950LMI - FPA REV B.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL29783_R16_AE_FD9950 LMI - Eng Eval REV B.pdf Created by Independent Third Party: No
29783.4	PV9998A	Impact Resistant, Inswing & Outswing, Aluminum Pivot Door
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 the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL29783_R16_II_9998FPA-LM-2 - REV H.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL29783_R16_AE_PV9998A LM - Eng Eval H.pdf Created by Independent Third Party: No
29783.5	PV9998A	Non-Impact Resistant, Inswing & Outswing, Aluminum Pivot Door
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL29783_R16_II_9998FPA-NI-2 - REV D.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL29783_R16_AE_PV9998A NI - Eng Eval D.pdf Created by Independent Third Party: No
29783.6	TD9050A	LM Impact Resistant, Inswing & Outswing, Aluminum Terrace Door
Limits of Use Approved for use in HVHZ: Yes		Installation Instructions FL29783_R16_II_TD9050LMI-FPA - REV D.pdf

Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL29783_R16_AE_TD9050 LMI - Eng_Eval - REV D.pdf Created by Independent Third Party: No
29783.7	TD9050A	Non-impact Resistant, Inswing & Outswing, Aluminum Terrace Door
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL29783_R16_II_TD9050NI - REV B.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL29783_R16_AE_TD9050 NI - Eng_Eval - REV B.pdf Created by Independent Third Party: No

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

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

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

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

Product Approval Accepts:



Engineering Evaluation Report # 450LM-022824

Prepared by:

A. Lynn Miller, P.E.
1070 Technology Dr.
N. Venice, FL 34275
(941) 480-1600
Registration Number: #29296

Manufacturer:

WinDoor Inc.
104 Triple Diamond Blvd
N. Venice, FL 34275

Product Description:

FD450A Series Impact-resistant Aluminum French Door, PW/Sidelite and Transom, (LM & SM); FL Approval #29783

Compliance:

The above-mentioned product has been evaluated for compliance with the requirements of the Florida Department of Business and Professional Regulation for Statewide Acceptance per Rule 61 G20-3.005 method 1(d). The product listed herein complies with requirements of the current Florida Building Code.

This product has been evaluated and is in compliance with the current Florida Building Code, including the "High Velocity Hurricane Zone" (HVHZ).

Supporting Technical Documentation:

1. Approval document: drawing number 450FPA-LM-1, signed and sealed by A. Lynn Miller, P.E.
2. Test Report Nos. HTL-0080-0304-11, 0080-0902-11, 0080-912-97 (97055), 0080-0402-02 (01071) signed and sealed by Vinu J. Abraham, P.E.; Hurricane Testing Laboratories
Test report Nos. CTLA-3056WA thru C signed and sealed by Ramesh C. Patel, P.E.; Certified Testing Laboratories
Test report Nos. ATI-B5234.03-450-18 signed and sealed by Vinu J. Abraham, P.E.; Architectural Testing Inc.
Test Report FTL 17-7534, signed and sealed by Idalmis Ortega, P.E.; Fenestration Testing Laboratories, Medley, FL 33166

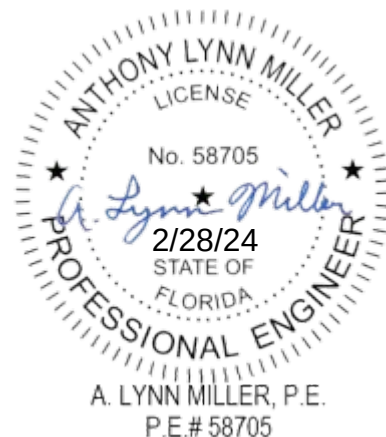
TAS 201-94 Large Missile Impact Test
TAS 202-94 Uniform Static Air Pressure Test
TAS 203-94 Cyclic Pressure Loading Test

3. Calculations, signed and sealed by Javad Ahmad, P.E. dated 10/27/14, 8/27/15 & 6/29/12A. Calculations, signed and sealed by Lynn Miller, P.E., dated 3/26/20, 6/20/20 & 7/17/20.

4. Miami-Dade RER Product Control Section NOA's; Various interlayers as noted.

Limitations and Conditions of use:

- Units must be glazed per ASTM E1300-09, refer to approval document for glazing details.
- This product is rated to be used in the HVHZ.
- This product is impact resistant and does not require impact protection in wind borne debris regions.
- Frame and panel material to be extruded Aluminum.
- Units must be installed in accordance with approval document.



SERIES FD450 IMPACT-RESISTANT, INSWING & OUTSWING, FRENCH DOOR W/WO TRANSOM OR SIDELITES

- 1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE CURRENT FLORIDA BUILDING CODE, (FBC), INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
- 2) SHUTTERS ARE NOT REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS.
- 3) MASONRY ANCHORS MAY BE USED INTO WOOD AS PER TABLE A. ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DEPICTED AS 2X ARE 1-1/2" THICK OR GREATER. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD.
- 4) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT LENGTH. OVERALL SEALING/FLASHING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.
- 5) SHIMS ARE REQUIRED AT EACH ANCHOR LOCATIONS WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, BY OTHERS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE DOOR.
- 6) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WIND LOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.
- 7) DOOR SIZES MUST BE VERIFIED FOR COMPLIANCE WITH EGRESS REQUIREMENTS OF THE FBC, AS APPLICABLE. ALL CONFIGURATIONS SHOWN ARE AVAILABLE AS MULTIPLE PANELS. MAXIMUM OVERALL FRAME SQUARE FOOTAGE FOR VERTICAL, SELF-MULLING SYSTEMS IS 125 FT². FOR SYSTEMS USING A TRANSOM, SEE SHEET 4 FOR LIMITATIONS. FOR LARGER AREAS USE STRUCTURAL MULLIONS FROM SEPARATE APPROVAL.

TABLE A:

Anchor Group	Anchor Type	Substrate	Anchor Location	Min. Embedment	Min. Edge Distance
A	1/4" DeWalt UltraCon+	Southern Pine (SG = 0.55)	Head & Jamb	1-3/8"	1"
		Hollow or Grout-filled CMU (ASTM C90)		1-1/4"	2-1/2"
		Concrete (min. 3.0 ksi)		1-1/4"	2-1/2"
	#14 Steel SMS (Gr. 5) (Min. of 3 threads beyond substrate.)	Aluminum, 6063-T5		1/8"	1"
		Steel, A36		0.071" (14 Ga)	1"
		Steel Stud, A653 Gr. 33		0.071" (14 Ga)	1"
B	1/4" DeWalt Ultracon+	Concrete (min. 3.0 ksi)	Head & Sill	1-3/4"	2-1/2"
C	5/16" DeWalt UltraCon	Concrete (min. 3.0 ksi)	ADA Sill (P# 9)	1-3/4"	3-1/8"
D	#14 Steel SMS (Gr. 5)	Southern Pine (SG = 0.55)	Sills (P# 5 or 10)	1-3/8"	1"

- 1) ALL ANCHOR HEAD TYPES ARE APPLICABLE, FLATHEAD RECOMMENDED FOR ADA SILL.

TABLE 1:

Lock Design Pressures, PSF									
Lock Type	Description	Door Frame Height							
		84-3/4"		96-3/4"		108-3/4"		120-3/4"	
		(+)	(-)	(+)	(-)	(+)	(-)	(+)	(-)
1	Copper Creek with 3-Point Lock	90.0	90.0	90.0	90.0	-	-	-	-
2	Baldwin with 3-Point Lock	100.0	110.0	100.0	110.0	100.0	110.0	70.0	70.0
3	Regent Commercial with 3-Point Lock	100.0	110.0	100.0	110.0	100.0	110.0	70.0	70.0
4	Baldwin Single Point Lock	65.0	65.0	65.0	65.0	-	-	-	-
5	Copper Creek Single Point Lock	65.0	65.0	65.0	65.0	-	-	-	-
6	Door-O-Matic, Series 1690	80.0	80.0	70.0	70.0	-	-	-	-
7	Jackson, Series 2065/2085	80.0	80.0	70.0	70.0	-	-	-	-
8	Surface Mounted Lock	100.0	110.0	90.0	90.0	90.0	90.0	70.0	70.0

- 1) LOCK TYPES 6 & 7 ARE NOT AVAILABLE FOR INSWING CONFIGURATIONS.
- 2) LADDER PULL HANDLE MAY BE USED WITH LOCK TYPES 2 OR 3.

FLORIDA PRODUCT APPROVAL #29783

DESIGN PRESSURE RATING	IMPACT RATING
VARIES WITH OPTIONS, SEE TABLES 1 - 7	RATED FOR LARGE & SMALL MISSILE IMPACT RESISTANCE

INSTRUCTIONS TO USING THE TABLES:

- 1) FOR YOUR STRUCTURE AND PRODUCT OPTIONS, DETERMINE THE MINIMUM DESIGN PRESSURE REQUIRED BASED ON PROVISIONS OF THE CURRENT FLORIDA BUILDING CODE (FBC).
- 2) CHECK THE ALLOWABLE EXTERIOR AND INTERIOR DESIGN PRESSURES FROM APPROPRIATE TABLES ON THE FOLLOWING SHEETS. THE DESIGN PRESSURE FROM SEVERAL DIFFERENT PARTS MUST FIRST BE ASCERTAINED, AND THEN THE LOWEST VALUE USED AS THE FINAL, OVERALL DESIGN PRESSURE.
- A) DETERMINE WATER INFILTRATION REQUIREMENTS BASED ON PROVISIONS OF THE FBC AND FIGURES 1 & 2 ON THIS SHEET FOR DOORS. DEPENDING ON YOUR CHOSEN PRODUCT, THIS MAY LIMIT YOUR (+) DESIGN PRESSURE.
- B) FROM TABLE 1, DETERMINE THE DESIGN PRESSURE BASED ON YOUR DOOR LOCK TYPE.
- C) FOR SINGLE DOORS (X) AND STAND-ALONE SIDELITES (O), DETERMINE THE DESIGN PRESSURE BASED ON YOUR GLASS TYPE FROM TABLE 2.
- D) FOR DOUBLE DOORS (XX), DETERMINE THE DESIGN PRESSURE BASED ON YOUR DOOR GLASS TYPE FROM TABLE 4 AND THE DOOR ANCHOR CLUSTER FROM TABLE 5.
- E) IF ATTACHING A SIDELITE (O) TO ANY DOOR, DETERMINE THE DESIGN PRESSURE FOR THE SIDELITE BASED ON GLASS TYPE FROM TABLE 2, ANCHORAGE FROM TABLE 3 AND MULLION CAPACITY FROM TABLE 7.
- F) IF USING A TRANSOM, FROM TABLE 6, DETERMINE THE DESIGN PRESSURE BASED ON YOUR TRANSOM GLASS TYPE.

THE LOWEST DESIGN PRESSURE FROM A-F ABOVE SHALL CONTROL THE ENTIRE SYSTEM.

GUIDE TO SHEETS:

GENERAL NOTES.....	1
DESIGN PRESSURES TABLES.....	2-5
ANCHOR LOCATIONS.....	6-7
INSTALLATION, OUTSWING.....	8-11
INSTALLATION, INSWING.....	12-15
TRANSOM ASSEMBLY/DETAILS....	16
FRAME ASSEMBLY.....	17
GLAZING DETAILS.....	18
HARDWARE DETAILS.....	19-20
EXTRUSION PROFILES.....	21
BILL OF MATERIALS.....	21

FIGURE 1:

OH LENGTH

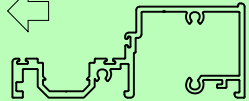
DOOR ASSEMBLIES INSTALLED WHERE THE OVERHANG (OH) LENGTH IS EQUAL TO OR GREATER THAN THE OVERHANG HEIGHT ARE EXEMPTED FROM WATER INFILTRATION RESISTANCE.

DOOR WATER INFILTRATION NOTES:

- 1) IF WATER INFILTRATION RESISTANCE IS REQUIRED, THE STANDARD OUTSWING SILL, FIGURE 2, MUST BE USED.
- 2) IF WATER INFILTRATION RESISTANCE IS NOT REQUIRED OR OVERHANG IS PER FIGURE 1, THE (+) DESIGN PRESSURES SHOWN IN THE TABLES MAY BE USED AND ANY THRESHOLD IS ACCEPTABLE.

FIGURE 2:

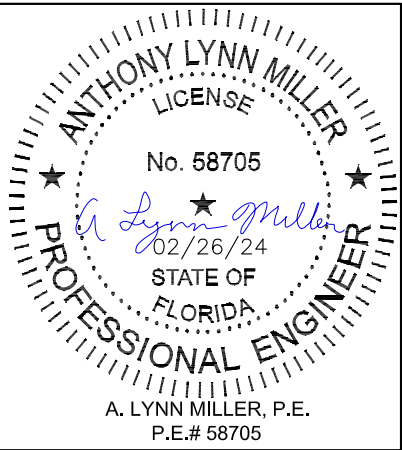
EXTERIOR



STANDARD OUTSWING SILL

ONLY THIS DOOR SILL, IN AN OUTSWING CONFIGURATION, MAY BE USED WHERE WATER INFILTRATION RESISTANCE IS REQUIRED.

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296 COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING: 12/12/22	JENS ROSOWSKI By	450FPA-LM-1
WINDOOR 104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432	ALUMINUM FRENCH DOOR (LM)	GENERAL NOTES	1 OF 21
FD450A	Series	Desc.	Sheet



Rev.	NO CHANGES THIS SHEET.	Date	02/22/24	D
------	------------------------	------	----------	---

TABLE 2:

SINGLE DOOR (X) AND/OR SIDELITES (O) DESIGN PRESSURES, PSF DUE TO GLAZING							
SGL DOOR (X) OR SIDELITE WIDTH*	FRAME HEIGHT	GLASS TYPES 1, 2, 3, 4 & COMPOSITE PANELS		GLASS TYPES 6 & 7		GLASS TYPES 5 & 8	
		EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
26-9/16"	82-3/4"	100.0	110.0	70.0	70.0	90.0	90.0
32-9/16"		100.0	110.0	70.0	70.0	90.0	90.0
38-9/16"		100.0	110.0	70.0	70.0	90.0	90.0
44-9/16"		94.2	94.2	70.0	70.0	90.0	90.0
26-9/16"	84-3/4"	100.0	110.0	70.0	70.0	90.0	90.0
32-9/16"		100.0	110.0	70.0	70.0	90.0	90.0
38-9/16"		100.0	110.0	70.0	70.0	90.0	90.0
44-9/16"		94.2	94.2	70.0	70.0	90.0	90.0
26-9/16"	90-3/4"	100.0	110.0	70.0	70.0	90.0	90.0
32-9/16"		100.0	110.0	70.0	70.0	90.0	90.0
38-9/16"		100.0	110.0	70.0	70.0	90.0	90.0
44-9/16"		94.2	94.2	70.0	70.0	90.0	90.0
26-9/16"	96-3/4"	100.0	110.0	70.0	70.0	90.0	90.0
32-9/16"		100.0	110.0	70.0	70.0	90.0	90.0
38-9/16"		100.0	110.0	70.0	70.0	90.0	90.0
44-9/16"		59.9	59.9	59.9	59.9	-	-
26-9/16"	102-3/4"	100.0	110.0	70.0 **	70.0 **	-	-
32-9/16"		100.0	110.0	70.0 **	70.0 **	-	-
38-9/16"		100.0	110.0	70.0 **	70.0 **	-	-
44-9/16"		59.9	59.9	59.9 **	59.9 **	-	-
26-9/16"	108-3/4"	100.0	110.0	70.0 **	70.0 **	-	-
32-9/16"		100.0	110.0	70.0 **	70.0 **	-	-
38-9/16"		100.0	110.0	70.0 **	70.0 **	-	-
26-9/16"	114-3/4"	70.0	70.0	70.0 **	70.0 **	-	-
32-9/16"		70.0	70.0	70.0 **	70.0 **	-	-
38-9/16"		70.0	70.0	70.0 **	70.0 **	-	-
26-9/16"	120-3/4"	70.0	70.0	70.0 **	70.0 **	-	-
32-9/16"		70.0	70.0	70.0 **	70.0 **	-	-
38-9/16"		70.0	70.0	70.0 **	70.0 **	-	-

* NARROW STILE SIDELITES LIMITED TO 18" FRAME WIDTH OR LESS.
** GLASS LIMITED TO 96-3/4" FRAME HEIGHT. TALLER HEIGHTS REQUIRE A TRUE MUNTIN.

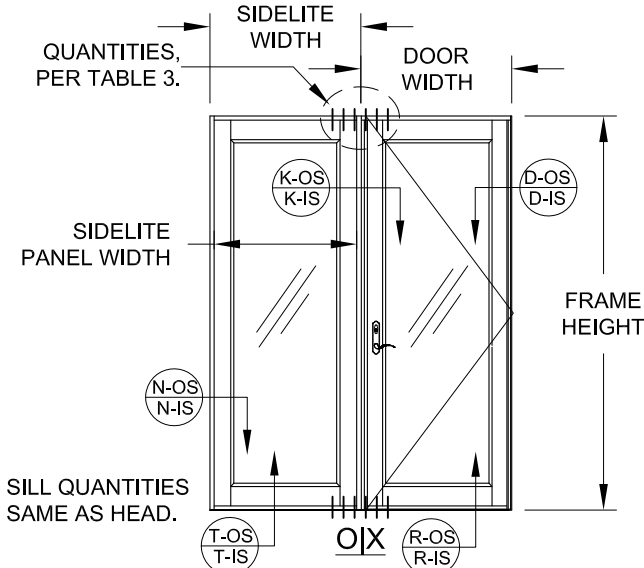
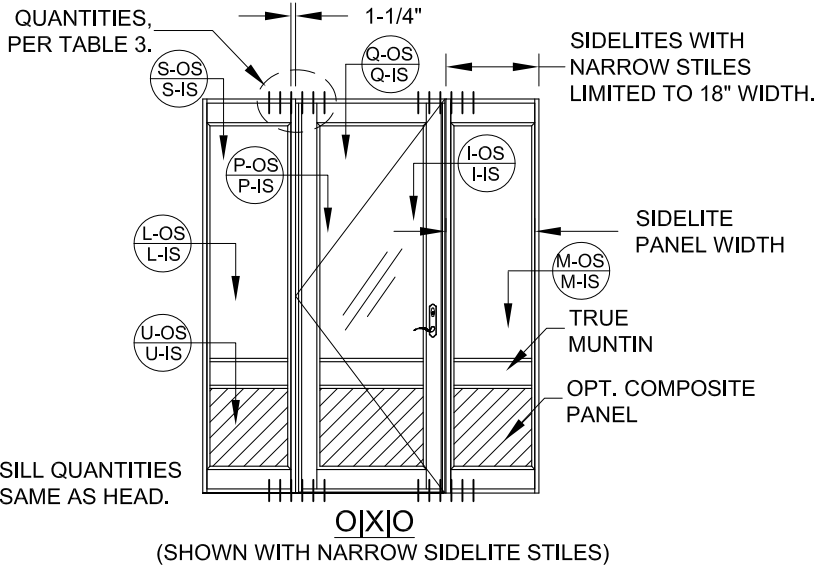
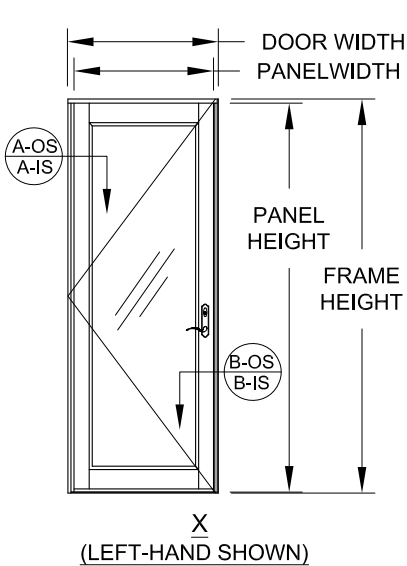
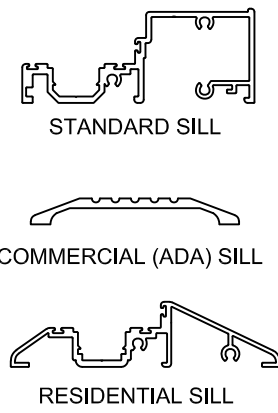


TABLE 3:

DESIGN PRESSURES, PSF AT SIDELITES DUE TO ANCHORAGE TYPE							
ANCHOR TYPE (SEE SHEET 6 FOR LOCATIONS)		A @ HEAD		B @ HEAD, STD. SILL & RES. SILL		B @ HEAD, C @ COM. SILL & D @ STD. & RES. SILLS	
WIDTH "W"	FRAME HEIGHT	3 ANCHORS	4 ANCHORS	6 ANCHORS	3 ANCHORS	4 ANCHORS	3 ANCHORS
24"	82-3/4"	106.7	110.0	110.0	110.0	110.0	110.0
30"		86.2	110.0	110.0	110.0	110.0	110.0
36"		72.3	96.4	110.0	109.3	110.0	110.0
42"		62.3	83.0	110.0	94.2	110.0	110.0
24"	84-3/4"	104.2	110.0	110.0	110.0	110.0	110.0
30"		84.2	110.0	110.0	110.0	110.0	110.0
36"		70.6	94.1	110.0	106.7	110.0	110.0
42"		60.8	81.1	110.0	91.9	110.0	110.0
24"	90-3/4"	97.3	110.0	110.0	110.0	110.0	110.0
30"		78.6	104.8	110.0	110.0	110.0	110.0
36"		65.9	87.9	110.0	99.7	110.0	110.0
42"		56.8	75.7	110.0	85.9	110.0	110.0
24"	96-3/4"	91.2	110.0	110.0	110.0	110.0	110.0
30"		73.7	98.3	110.0	110.0	110.0	110.0
36"		61.9	82.5	110.0	93.5	110.0	110.0
42"		53.3	71.0	110.0	80.5	110.0	110.0
24"	102-3/4"	85.9	110.0	110.0	110.0	110.0	110.0
30"		69.4	92.6	110.0	104.9	110.0	110.0
36"		58.2	77.7	110.0	88.0	110.0	110.0
42"		50.2	66.9	110.0	75.8	110.0	110.0
24"	108-3/4"	81.2	108.2	110.0	110.0	110.0	110.0
30"		65.6	87.5	110.0	99.2	110.0	110.0
36"		55.0	73.4	110.0	83.2	110.0	110.0
24"	114-3/4"	76.9	102.6	110.0	110.0	110.0	110.0
30"		62.2	82.9	110.0	94.0	110.0	110.0
36"		52.2	69.5	110.0	78.8	110.0	110.0
24"	120-3/4"	73.1	97.5	110.0	110.0	110.0	110.0
30"		59.1	78.8	110.0	89.3	110.0	110.0
36"		49.6	66.1	110.0	74.9	110.0	110.0

WIDTH "W" = $\frac{\text{PANEL WIDTH} + \text{ADJACENT PANEL WIDTH}}{2} + 1.250$

- NOTES:
- 1) CHECK THE ALLOWABLE DESIGN PRESSURES FROM THE APPROPRIATE TABLES OF ALL SHEETS PER THE INSTRUCTIONS ON SHEET 1. THE LOWEST DESIGN PRESSURE FROM ALL SHALL CONTROL THE ENTIRE SYSTEM.
 - 2) EXAMPLE CONFIGURATIONS SHOWN. SIMILAR CONFIGURATIONS ALLOWED. DOORS MAY BE LEFT OR RIGHT-HANDED, INSWING OR OUTSWING & USE ANY LOCK FROM TABLE 1.
 - 3) "OS" = OUTSWING; "IS" = INSWING; SEE DETAILS ON SHEETS 8-11 & 16 (OUTSWING) & 12-16 (INSWING).
 - 4) IF TABLE 3 REQUIRES 3 ANCHORS, INSTALL 1 @ THE DOOR AND 2 @ THE SIDELITE OTHERWISE SPLIT QUANTITY EVENLY.



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

REGISTRATION #29296
COPYRIGHT © 2024 WINDOOR, INC., LIMITED
LICENSE TO MAKE COPIES FOR PERMITTING.

12/12/22

ALUMINUM FRENCH DOOR (LM)

DESIGN PRESSURE TABLES

FD450A

2 OF 21

450FPA-LM-1

WINDOOR

104 TRIPLE DIAMOND BLVD
N. VENICE, FL 34275
(833) 554-5432

ANTHONY LYNN MILLER
LICENSE
No. 58705
02/26/24
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

TABLE 4:

DOUBLE DOOR (XX) DESIGN PRESSURES, PSF DUE TO GLAZING							
DBL DOOR, XX WIDTH	FRAME HEIGHT	GLASS TYPES 1, 2, 3, 4 & COMPOSITE PANELS		GLASS TYPES 6 & 7		GLASS TYPES 5 & 8	
		EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
50-1/2"	82-3/4"	100.0	110.0	70.0	70.0	90.0	90.0
62-1/2"		100.0	110.0	70.0	70.0	90.0	90.0
74-1/2"		100.0	110.0	70.0	70.0	90.0	90.0
86-1/2"		94.2	94.2	70.0	70.0	90.0	90.0
50-1/2"	84-3/4"	100.0	110.0	70.0	70.0	90.0	90.0
62-1/2"		100.0	110.0	70.0	70.0	90.0	90.0
74-1/2"		100.0	110.0	70.0	70.0	90.0	90.0
86-1/2"		94.2	94.2	70.0	70.0	90.0	90.0
50-1/2"	90-3/4"	100.0	110.0	70.0	70.0	90.0	90.0
62-1/2"		100.0	110.0	70.0	70.0	90.0	90.0
74-1/2"		100.0	110.0	70.0	70.0	90.0	90.0
86-1/2"		94.2	94.2	70.0	70.0	90.0	90.0
50-1/2"	96-3/4"	100.0	110.0	70.0	70.0	90.0	90.0
62-1/2"		100.0	110.0	70.0	70.0	90.0	90.0
74-1/2"		100.0	110.0	70.0	70.0	90.0	90.0
86-1/2"		59.9	59.9	59.9	59.9	-	-
50-1/2"	102-3/4"	100.0	110.0	70.0 **	70.0 **	-	-
62-1/2"		100.0	110.0	70.0 **	70.0 **	-	-
74-1/2"		100.0	110.0	70.0 **	70.0 **	-	-
86-1/2"		59.9	59.9	59.9 **	59.9 **	-	-
50-1/2"	108-3/4"	100.0	110.0	70.0 **	70.0 **	-	-
62-1/2"		100.0	110.0	70.0 **	70.0 **	-	-
74-1/2"		100.0	110.0	70.0 **	70.0 **	-	-
50-1/2"	114-3/4"	70.0	70.0	70.0 **	70.0 **	-	-
62-1/2"		70.0	70.0	70.0 **	70.0 **	-	-
74-1/2"		70.0	70.0	70.0 **	70.0 **	-	-
50-1/2"	120-3/4"	70.0	70.0	70.0 **	70.0 **	-	-
62-1/2"		70.0	70.0	70.0 **	70.0 **	-	-
74-1/2"		70.0	70.0	70.0 **	70.0 **	-	-

** GLASS LIMITED TO 96-3/4" FRAME HEIGHT. TALLER HEIGHTS REQUIRE A TRUE MUNTIN.

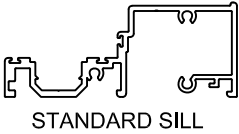
TABLE 5:

DESIGN PRESSURES, PSF @ XX DOOR MEETING STILE DUE TO ANCHORAGE								
ANCHOR TYPE (SEE SHEET 6 FOR LOCATIONS)		A @ HEAD			B @ HEAD, STD. SILL & RES. SILL		B @ HEAD, C @ COM. SILL & D @ STD. & RES. SILLS	
DBL DOOR, XX WIDTH	FRAME HEIGHT	3 ANCHORS	4 ANCHORS	5 ANCHORS	3 ANCHORS	4 ANCHORS	3 ANCHORS	4 ANCHORS
50-1/2"	82-3/4"	106.7	110.0	110.0	110.0	110.0	110.0	110.0
62-1/2"		86.2	110.0	110.0	110.0	110.0	100.7	110.0
74-1/2"		72.3	96.4	110.0	109.3	110.0	84.5	110.0
86-1/2"		62.3	83.0	103.8	94.2	110.0	72.8	97.0
50-1/2"	84-3/4"	104.2	110.0	110.0	110.0	110.0	110.0	110.0
62-1/2"		84.2	110.0	110.0	110.0	110.0	98.4	110.0
74-1/2"		70.6	94.1	110.0	106.7	110.0	82.5	110.0
86-1/2"		60.8	81.1	101.4	91.9	110.0	71.1	94.8
50-1/2"	90-3/4"	97.3	110.0	110.0	110.0	110.0	110.0	110.0
62-1/2"		78.6	104.8	110.0	110.0	110.0	91.9	110.0
74-1/2"		65.9	87.9	109.9	99.7	110.0	77.1	102.7
86-1/2"		56.8	75.7	94.7	85.9	110.0	66.4	88.5
50-1/2"	96-3/4"	91.2	110.0	110.0	110.0	110.0	106.6	110.0
62-1/2"		73.7	98.3	110.0	110.0	110.0	86.2	110.0
74-1/2"		61.9	82.5	103.1	93.5	110.0	72.3	96.4
86-1/2"		53.3	71.0	88.8	80.5	107.4	62.3	83.0
50-1/2"	102-3/4"	85.9	110.0	110.0	110.0	110.0	100.4	110.0
62-1/2"		69.4	92.6	110.0	104.9	110.0	81.1	108.2
74-1/2"		58.2	77.7	97.1	88.0	110.0	68.1	90.7
86-1/2"		50.2	66.9	83.6	75.8	101.1	58.6	78.2
50-1/2"	108-3/4"	81.2	108.2	110.0	110.0	110.0	94.9	110.0
62-1/2"		65.6	87.5	109.3	99.2	110.0	76.7	102.2
74-1/2"		55.0	73.4	91.7	83.2	110.0	64.3	85.7
50-1/2"	114-3/4"	76.9	102.6	110.0	110.0	110.0	89.9	110.0
62-1/2"		62.2	82.9	103.6	94.0	110.0	72.6	96.9
74-1/2"		52.2	69.5	86.9	78.8	105.1	60.9	81.3
50-1/2"	120-3/4"	73.1	97.5	110.0	110.0	110.0	85.4	110.0
62-1/2"		59.1	78.8	98.5	89.3	110.0	69.0	92.0
74-1/2"		49.6	66.1	82.6	74.9	99.9	57.9	77.2

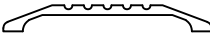
WIDTH "W" = PANEL WIDTH + ADJACENT PANEL WIDTH + 1.250

NOTES:

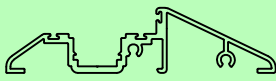
- 1) CHECK THE ALLOWABLE DESIGN PRESSURES FROM THE APPROPRIATE TABLES OF ALL SHEETS PER THE INSTRUCTIONS ON SHEET 1. THE LOWEST DESIGN PRESSURE FROM ALL SHALL CONTROL THE ENTIRE SYSTEM.
- 2) EXAMPLE CONFIGURATIONS SHOWN. SIMILAR CONFIGURATIONS ALLOWED. DOORS MAY BE LEFT OR RIGHT-HANDED, INSWING OR OUTSWING & USE ANY LOCK FROM TABLE 1.
- 3) "OS" = OUTSWING; "IS" = INSWING; SEE DETAILS ON SHEETS 8-11 & 16 (OUTSWING) & 12-16 (INSWING).



STANDARD SILL

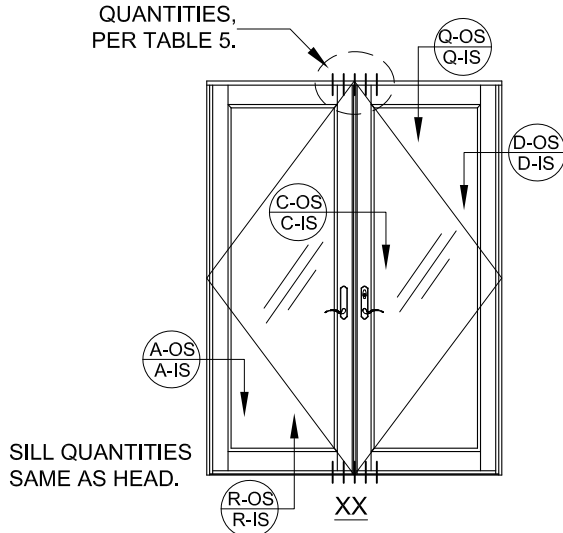


COMMERCIAL (ADA) SILL



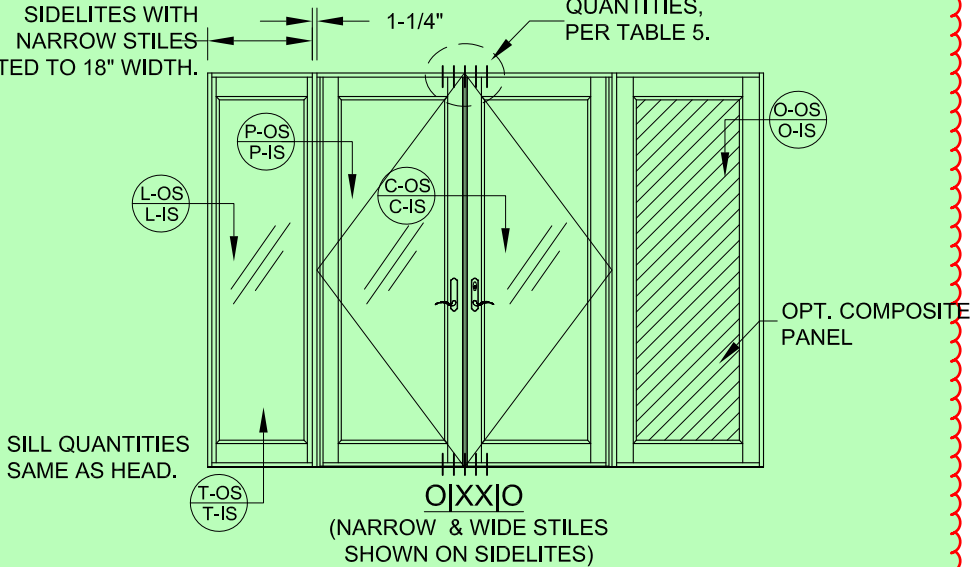
RESIDENTIAL SILL

QUANTITIES, PER TABLE 5.



SILL QUANTITIES SAME AS HEAD.

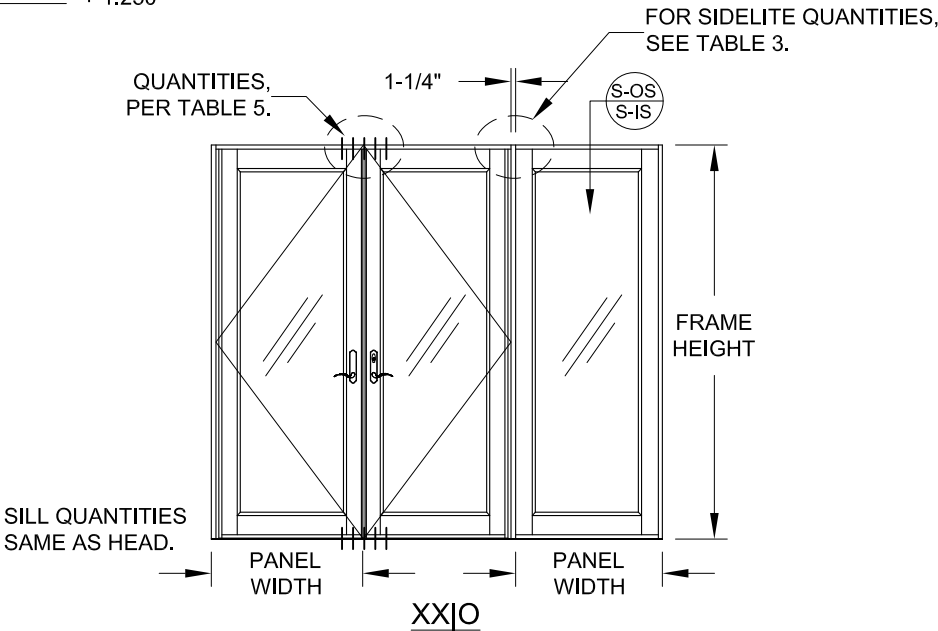
SIDELITES WITH NARROW STILES LIMITED TO 18" WIDTH.



SILL QUANTITIES SAME AS HEAD.

QUANTITIES, PER TABLE 5.

QUANTITIES, PER TABLE 5.



SILL QUANTITIES SAME AS HEAD.

FOR SIDELITE QUANTITIES, SEE TABLE 3.

 WINDOOR	PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600			
	REGISTRATION #29296			
	COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING: (833) 554-5432			
104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432	ALUMINUM FRENCH DOOR (LM)		Date	12/12/22
DESIGN PRESSURE TABLES		By Drawn	JENS ROSOWSKI	
Series	FD450A	Desc.		No.
Sheet		3 OF 21		DWG
				450FPA-LM-1

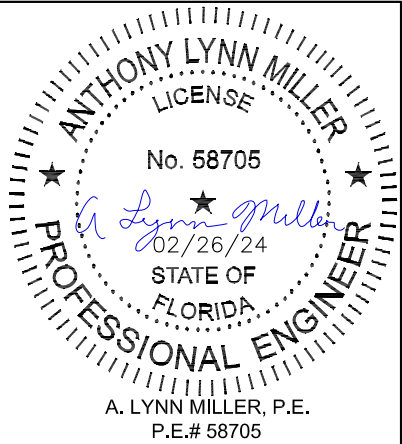


TABLE 6:

TRANSOM FRAME WIDTH	DOOR FRAME HEIGHT	TRANSOM HEIGHT	GLASS TYPES 1, 2, 3, 4 & COMPOSITE PANELS		GLASS TYPES 6 & 7		GLASS TYPES 5 & 8		
			EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	
60"	84"	24"	100.0	110.0	70.0	70.0	90.0	90.0	
		30"	100.0	110.0	70.0	70.0	90.0	90.0	
		36"	100.0	110.0	70.0	70.0	90.0	90.0	
		42"	100.0	110.0	70.0	70.0	90.0	90.0	
66"		24"	100.0	110.0	70.0	70.0	90.0	90.0	
		30"	100.0	109.8	70.0	70.0	90.0	90.0	
		36"	100.0	105.4	70.0	70.0	90.0	90.0	
74-1/2"		24"	95.6	95.6	70.0	70.0	90.0	90.0	
		30"	91.2	91.2	70.0	70.0	90.0	90.0	
		36"	87.5	87.5	70.0	70.0	87.5	87.5	
60"		96"	24"	100.0	110.0	70.0	70.0	90.0	90.0
			30"	100.0	110.0	70.0	70.0	90.0	90.0
	36"		100.0	110.0	70.0	70.0	90.0	90.0	
	42"		100.0	110.0	70.0	70.0	90.0	90.0	
66"	24"		100.0	103.2	70.0	70.0	90.0	90.0	
	30"		99.0	99.1	70.0	70.0	90.0	90.0	
	36"		96.0	95.6	70.0	70.0	90.0	90.0	
74-1/2"	24"		86.0	86.0	70.0	70.0	86.0	86.0	
	30"		82.5	82.5	70.0	70.0	82.5	82.5	
	36"		79.4	79.4	70.0	70.0	79.4	79.4	
60"	108"		24"	100.0	110.0	70.0	70.0	90.0	90.0
			30"	100.0	110.0	70.0	70.0	90.0	90.0
		36"	100.0	107.2	70.0	70.0	90.0	90.0	
66"		24"	94.0	93.8	70.0	70.0	90.0	90.0	
		30"	90.0	90.4	70.0	70.0	90.0	90.0	
		36"	87.5	87.5	70.0	70.0	87.5	87.5	
74-1/2"		24"	78.2	78.2	70.0	70.0	78.2	78.2	
		30"	75.3	75.3	70.0	70.0	75.3	75.3	
		36"	72.7	72.7	70.0	70.0	72.7	72.7	
60"		120"	24"	100.0	104.9	70.0	70.0	90.0	90.0
66"			24"	86.0	86.0	70.0	70.0	86.0	86.0
74-1/2"			24"	71.7	71.7	70.0	70.0	71.7	71.7

NOTES:

1) CHECK THE ALLOWABLE DESIGN PRESSURES FROM THE APPROPRIATE TABLES OF ALL SHEETS PER THE INSTRUCTIONS ON SHEET 1. THE LOWEST DESIGN PRESSURE FROM ALL SHALL CONTROL THE ENTIRE SYSTEM.

2) EXAMPLE CONFIGURATIONS SHOWN. SIMILAR CONFIGURATIONS ALLOWED. DOORS MAY BE LEFT OR RIGHT-HANDED, INSWING OR OUTSWING & USE ANY LOCK FROM TABLE 1.

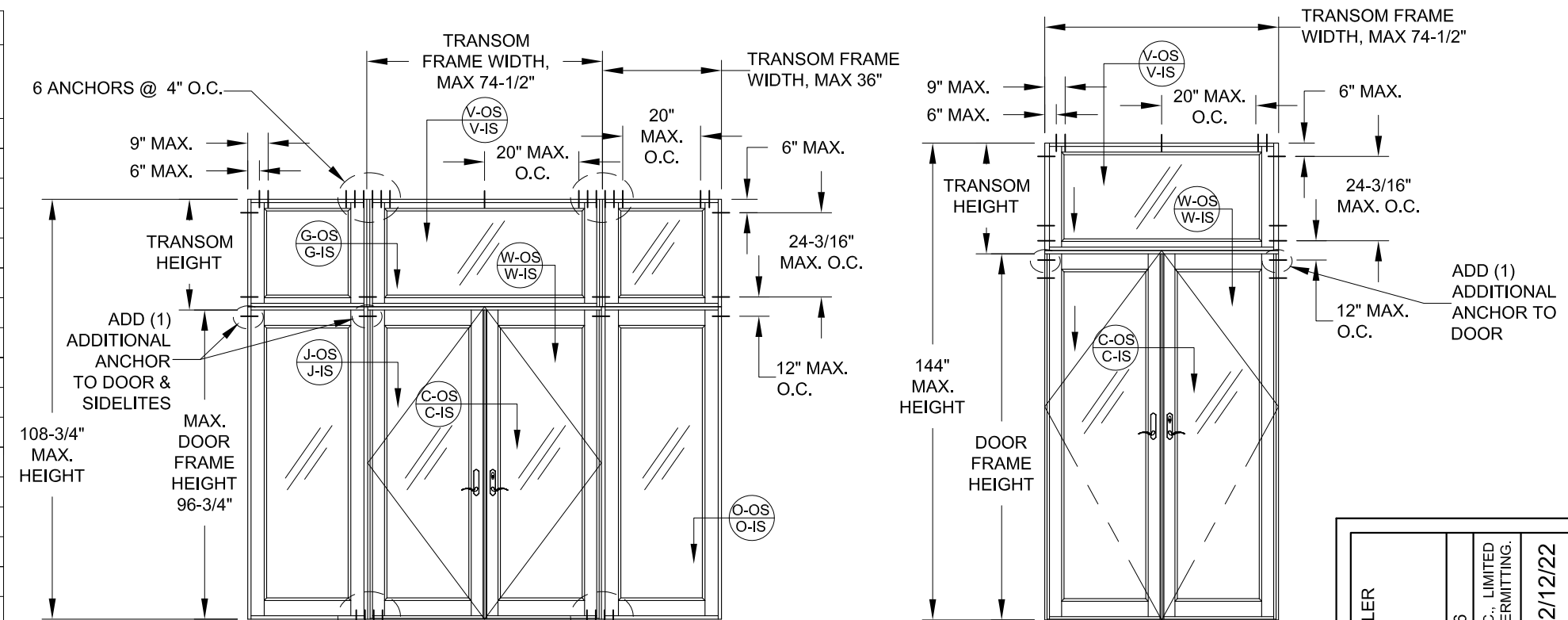
3) "OS" = OUTSWING; "IS" = INSWING; SEE DETAILS ON SHEETS 8-11 & 16 (OUTSWING) & 12-16 (INSWING).

4) ANY ANCHOR TYPE FROM TABLE A MAY BE USED.

5) TOTAL HEIGHTS OVER 108-3/4" MUST USE A TUBE MULLION. SEE SEPARATE MULLION APPROVAL FOR SPECIFICS.

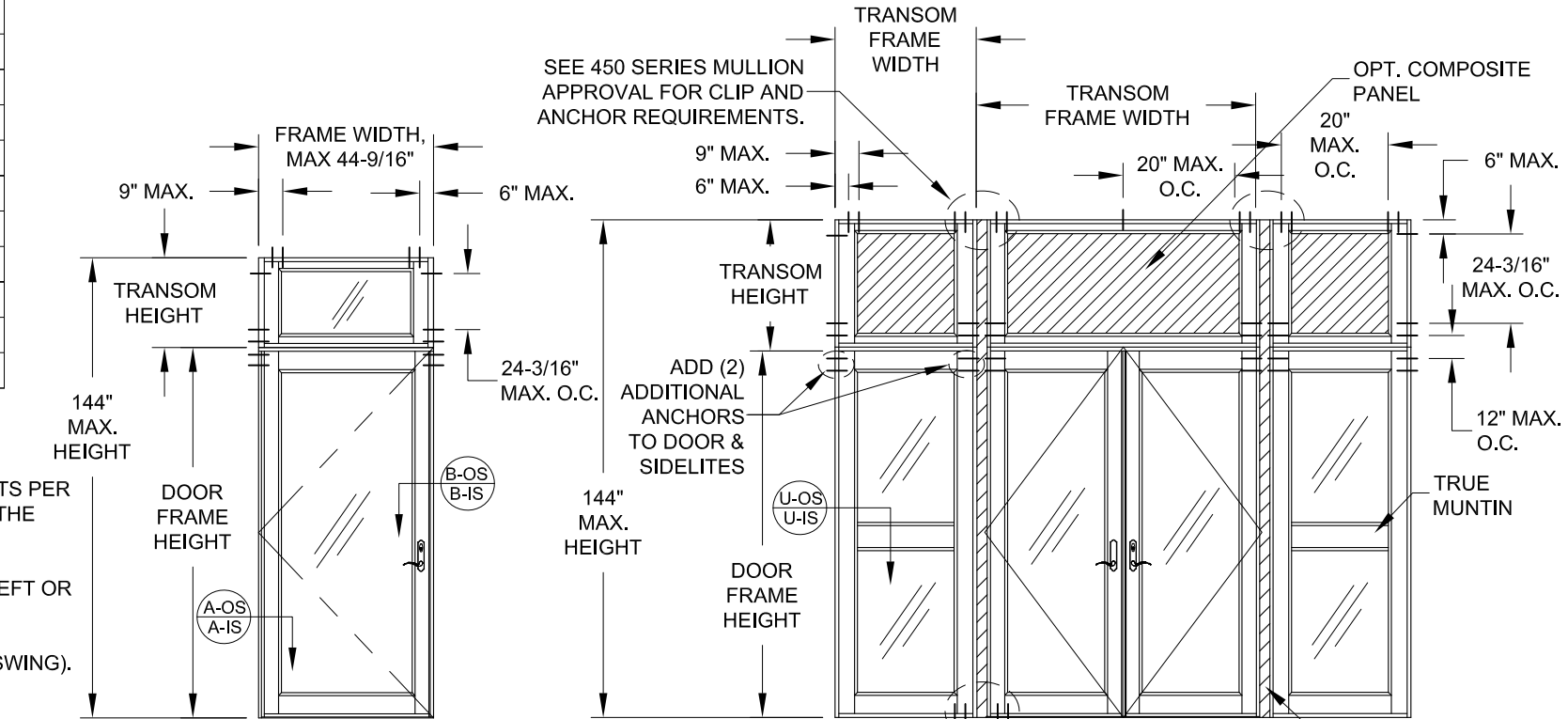
TRANSOM DLO WIDTH = TRANSOM FRAME WIDTH - 13-5/8"

TRANSOM DLO HEIGHT = TRANSOM FRAME HEIGHT - 4-5/8"



MIN. 4 ANCHORS @ 4" O.C. — OJOJO / OJXXJO, AS TESTED WITH
SELF-MATING, VERTICAL MULLIONS
 (TRANSOMS OVER DOOR WITH SIDELITES) -
 108-3/4" HEIGHT AND UNDER,
 MAX. DP AS SHOWN, = 71.3 PSF

FOR DOOR AND/OR SIDELITE ANCHORAGE, SEE OTHER TABLES IN THIS APPROVAL.



SEE 450 SERIES MULLION
APPROVAL FOR FOR CLIP AND
ANCHOR REQUIREMENTS.

O|O|O / O|XX|O
(TRANSOMS OVER DOOR WITH SIDELITES) - OVER
108-3/4" HEIGHT REQUIRE STRUCTURAL MULLIONS

450 SERIES MULLION

		PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	
104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		REGISTRATION #29296	
		COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	
ALUMINUM FRENCH DOOR (LM)		Date	12/12/22
DESIGN PRESSURE TABLES		By Drawn	JENS ROSOWSKI
FD450A	4 OF 21	No. DWG	450FPA-LM-1

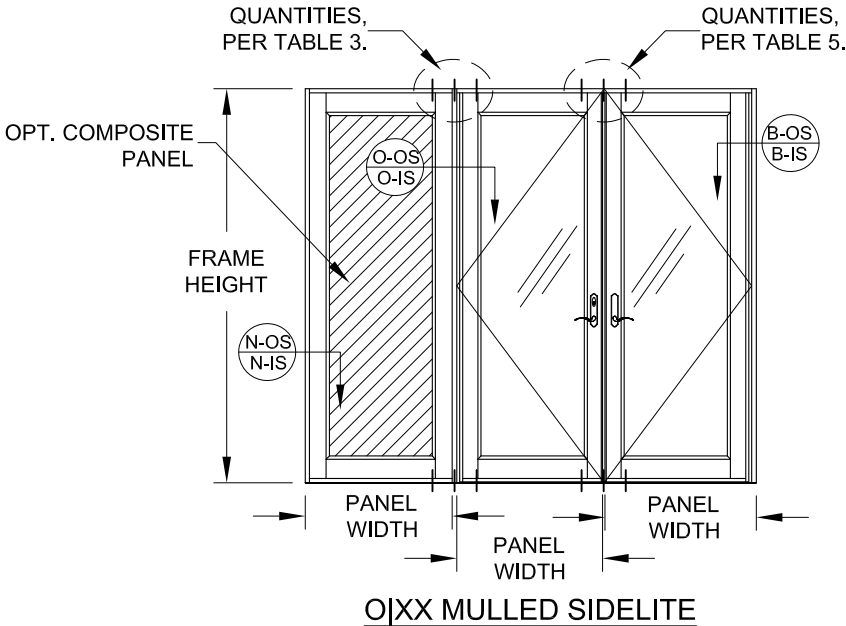
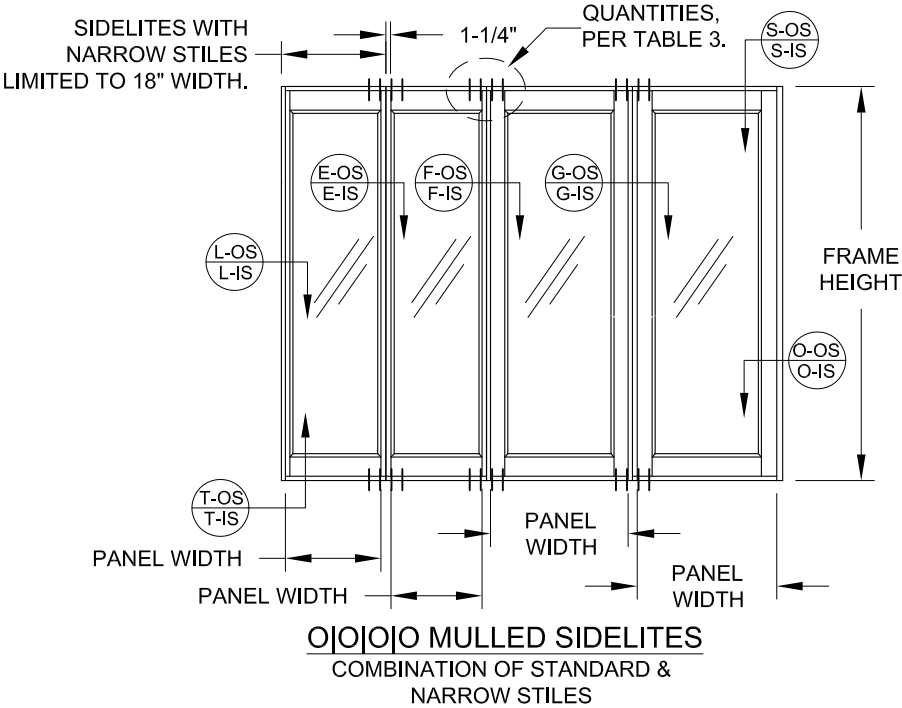
ANTHONY LYNN MILLER
LICENSE
No. 58705
02/26/24
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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

TABLE 7:

MULLION DESIGN PRESSURES - PSF							
WIDTH "W"	FRAME HEIGHT	PANEL STILE TYPES BEING MULLED TOGETHER:					
		WIDE TO WIDE DETAILS G-OS, G-IS, J-OS, J-IS, K-OS & K-IS		WIDE TO NARROW DETAILS F-OS, F-IS, I-OS, I-IS, P-OS & P-IS		NARROW TO NARROW DETAILS E-OS & E-IS	
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
18"	82-3/4"	100.0	110.0	100.0	110.0	100.0	110.0
24"		100.0	110.0	100.0	110.0	100.0	110.0
30"		100.0	110.0	100.0	110.0	-	-
36"		100.0	110.0	100.0	110.0	-	-
42"		94.2	94.2	70.0	70.0	-	-
18"	84-3/4"	100.0	110.0	100.0	110.0	100.0	110.0
24"		100.0	110.0	100.0	110.0	100.0	110.0
30"		100.0	110.0	100.0	110.0	-	-
36"		100.0	110.0	100.0	110.0	-	-
42"		94.2	94.2	-	-	-	-
18"	90-3/4"	100.0	110.0	100.0	110.0	100.0	110.0
24"		100.0	110.0	100.0	110.0	70.0	70.0
30"		100.0	110.0	100.0	110.0	-	-
36"		100.0	110.0	70.0	70.0	-	-
42"		94.2	94.2	-	-	-	-
18"	96-3/4"	100.0	110.0	100.0	110.0	100.0	110.0
24"		100.0	110.0	100.0	110.0	70.0	70.0
30"		100.0	110.0	100.0	110.0	-	-
36"		100.0	110.0	-	-	-	-
42"		59.9	59.9	-	-	-	-
18"	102-3/4"	100.0	110.0	100.0	110.0	100.0	110.0
24"		100.0	110.0	100.0	110.0	-	-
30"		100.0	110.0	100.0	100.4	-	-
36"		98.9	98.9	-	-	-	-
42"		59.9	59.9	-	-	-	-
18"	108-3/4"	100.0	110.0	100.0	110.0	100.0	110.0
24"		100.0	110.0	100.0	104.1	-	-
30"		98.1	98.1	70.0	70.0	-	-
36"		82.9	82.9	-	-	-	-
18"	114-3/4"	70.0	70.0	70.0	70.0	100.0	110.0
24"		70.0	70.0	70.0	70.0	-	-
30"		70.0	70.0	-	-	-	-
36"		70.0	70.0	-	-	-	-
18"	120-3/4"	70.0	70.0	70.0	70.0	70.0	70.0
24"		70.0	70.0	70.0	70.0	-	-
30"		70.0	70.0	-	-	-	-
36"		59.9	59.9	-	-	-	-

WIDTH "W" = $\frac{\text{PANEL WIDTH} + \text{ADJACENT PANEL WIDTH}}{2} + 1.250$



NOTES:

1) CHECK THE ALLOWABLE DESIGN PRESSURES FROM THE APPROPRIATE TABLES OF ALL SHEETS PER THE INSTRUCTIONS ON SHEET 1. THE LOWEST DESIGN PRESSURE FROM ALL SHALL CONTROL THE ENTIRE SYSTEM.

2) EXAMPLE CONFIGURATIONS SHOWN. SIMILAR CONFIGURATIONS ALLOWED. DOORS MAY BE LEFT OR RIGHT-HANDED, INSWING OR OUTSWING & USE ANY LOCK FROM TABLE 1.

3) "OS" = OUTSWING; "IS" = INSWING; SEE DETAILS ON SHEETS 8-11 & 16 (OUTSWING) & 12-16 (INSWING).

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

104 TRIPLE DIAMOND BLVD
N. VENICE, FL 34275
(833) 554-5432

REGISTRATION #29296
COPYRIGHT © 2024 WINDOOR, INC., LIMITED
LICENSE TO MAKE COPIES FOR PERMITTING.

12/12/22

JENS ROSOWSKI

By

ALUMINUM FRENCH DOOR (LM)

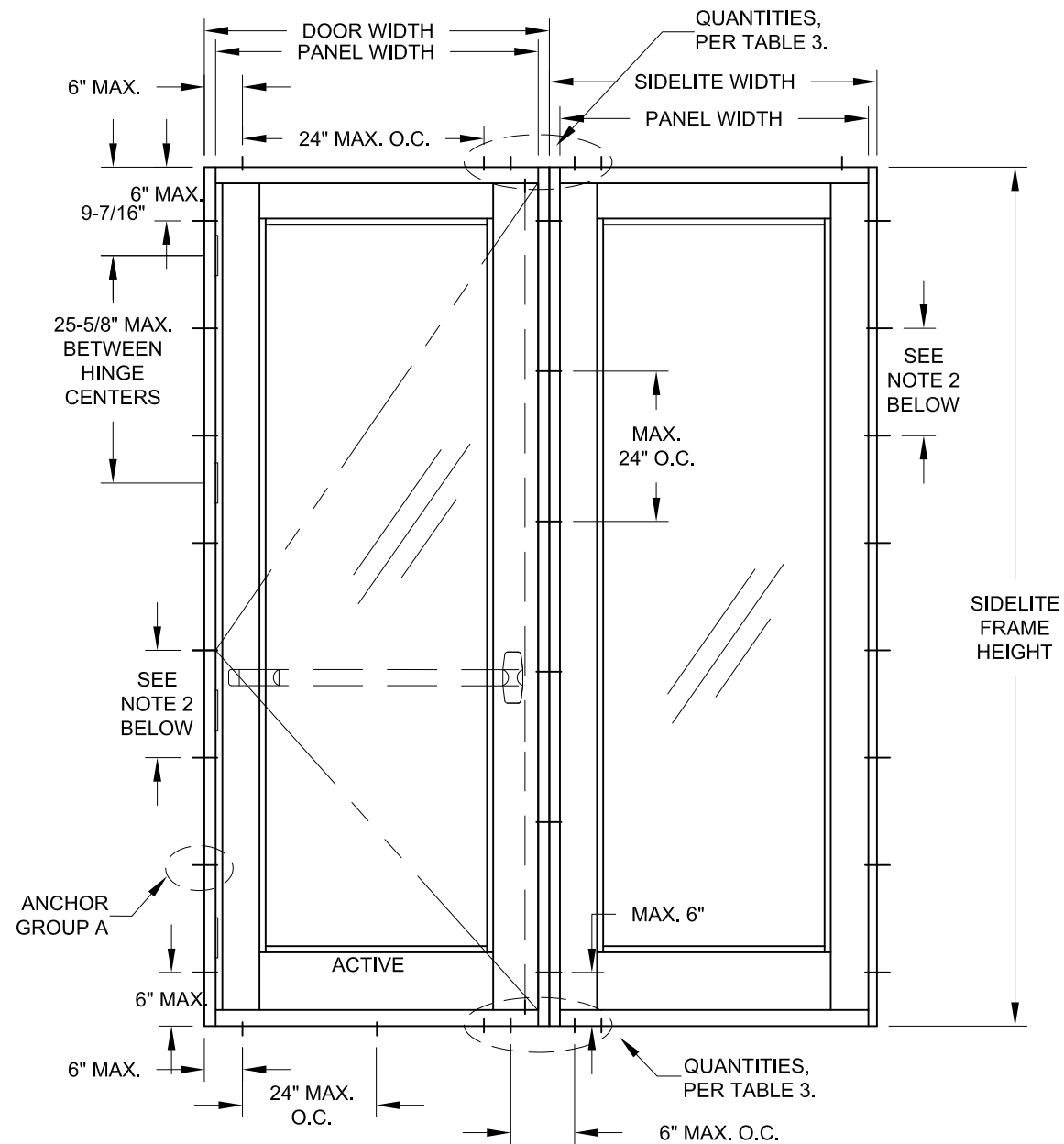
DESIGN PRESSURE TABLES

FD450A

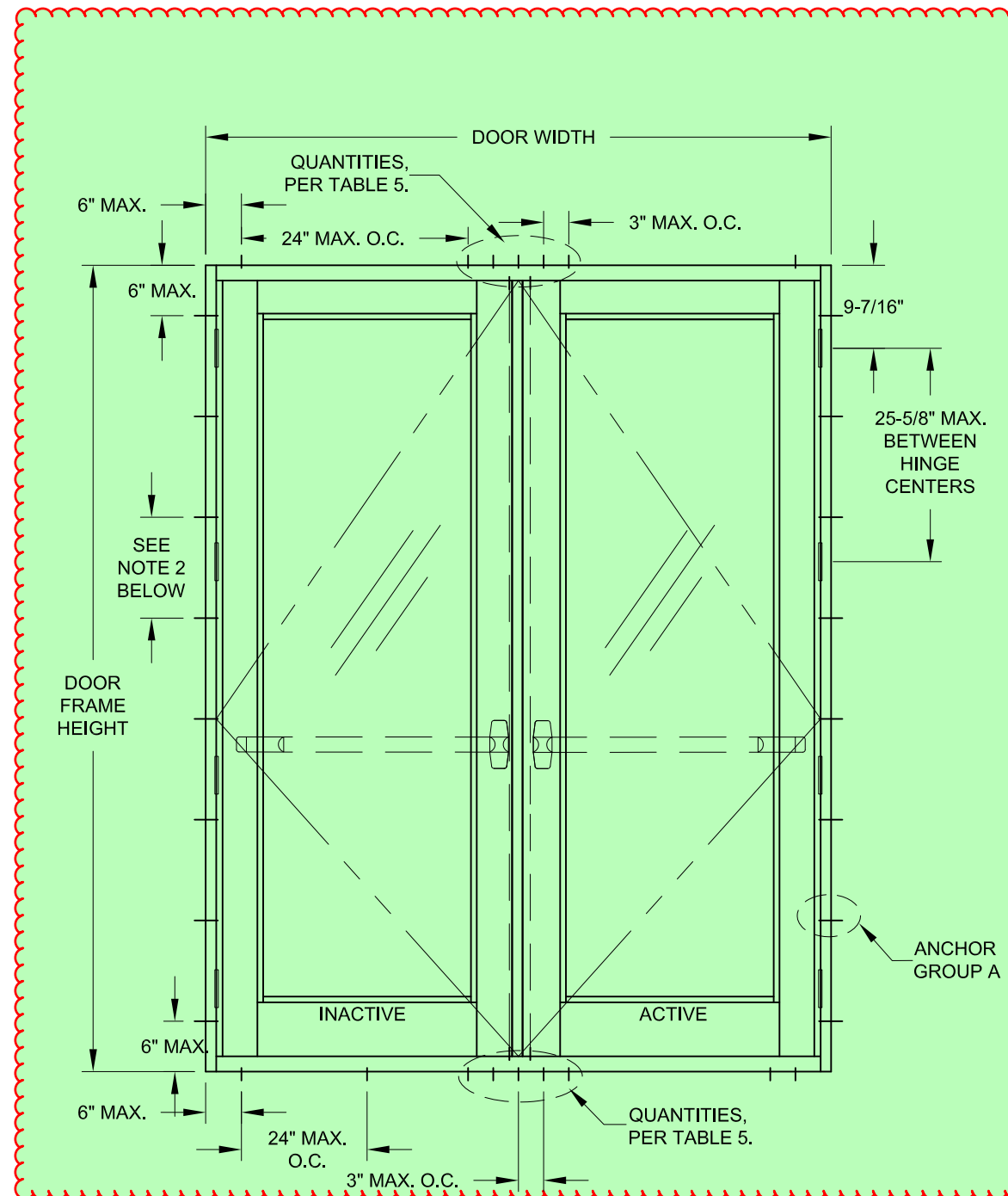
5 OF 21

450FPA-LM-1

ANTHONY LYNN MILLER
LICENSE
No. 58705
02/26/24
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705



TYPICAL XJO CONFIGURATION ANCHOR LOCATIONS
SHOWN WITH OPT. COMMERCIAL PANIC HARDWARE



TYPICAL XX DOOR ANCHOR LOCATIONS
SHOWN WITH OPT. COMMERCIAL PANIC HARDWARE

NOTES:

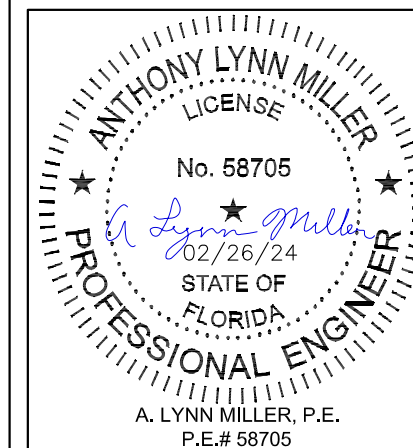
1) EXAMPLE CONFIGURATIONS SHOWN. SIMILAR CONFIGURATIONS ALLOWED. DOORS MAY BE LEFT OR RIGHT-HANDED, INSWING OR OUTSWING & USE ANY LOCK FROM TABLE 1.

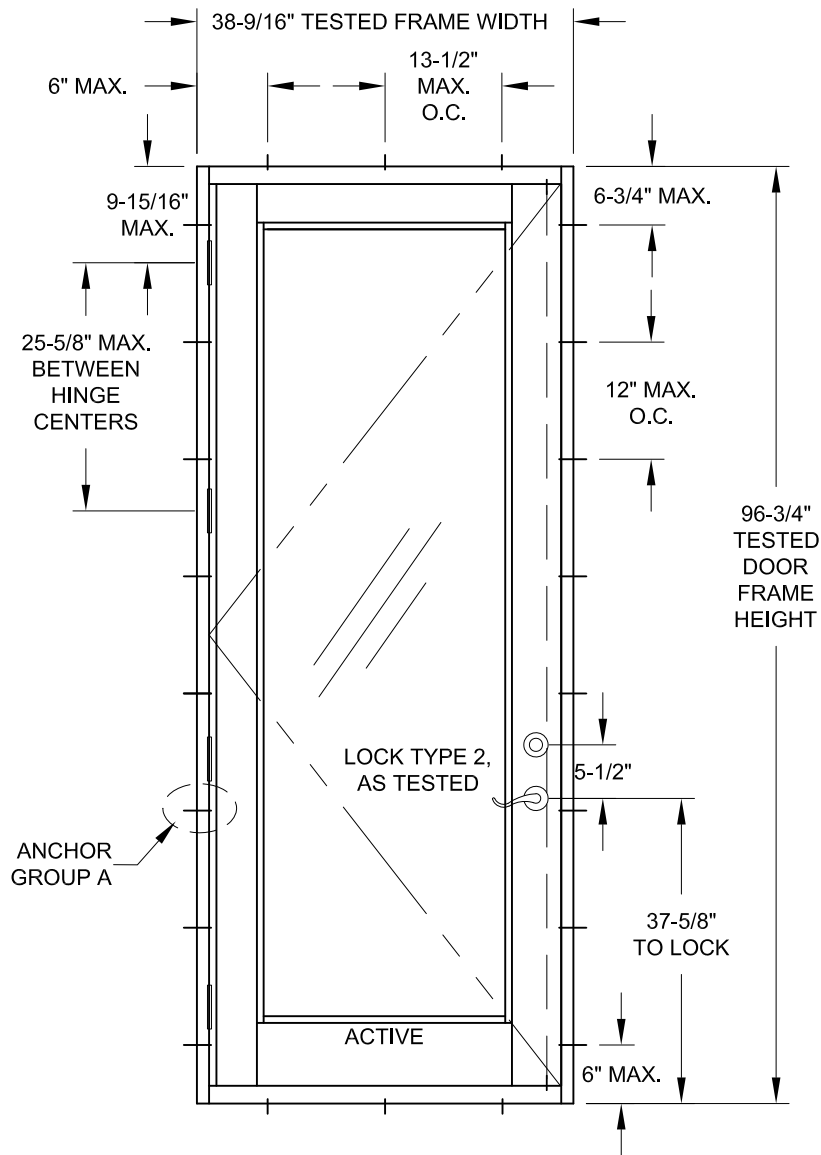
2) ANCHOR GROUP A, JAMB SPACING AS FOLLOWS:
19-3/8" MAX. O.C. FOR DESIGN PRESSURES UP TO 70 PSF
14-1/2" MAX. O.C. FOR DESIGN PRESSURES UP TO 110 PSF
12" MAX. O.C. FOR DESIGN PRESSURES OVER 110 PSF

HINGE LOCATIONS		
MAX. FRAME HEIGHT	NO. REQD.	MAX. SPACING
UP TO 90-3/4"	3	35 1/2"
ABOVE 90-3/4" UPTO 120-3/4"	4	44 1/2"

DOOR/SIDELITE DLO WIDTH = DOOR/SIDELITE PANEL WIDTH - 11"
DOOR/SIDELITE DLO HEIGHT = DOOR/SIDELITE PANEL HEIGHT - 13-1/2"
NARROW STILE SIDELITE DLO WIDTH = SIDELITE PANEL WIDTH - 4"
FRAME HEIGHT = PANEL HEIGHT + 1-7/8" (STD. THRESHOLD)
FRAME HEIGHT = PANEL HEIGHT + 1-5/8" (ADA THRESHOLD)
FRAME WIDTH = PANEL WIDTH + 2-13/16"

	PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		REGISTRATION #29296 COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.		12/12/22		JENS ROSOWSKI		450FPA-LM-1	
	104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		ALUMINUM FRENCH DOOR (LM)		By		DWG		6 OF 21	
									FD450A	

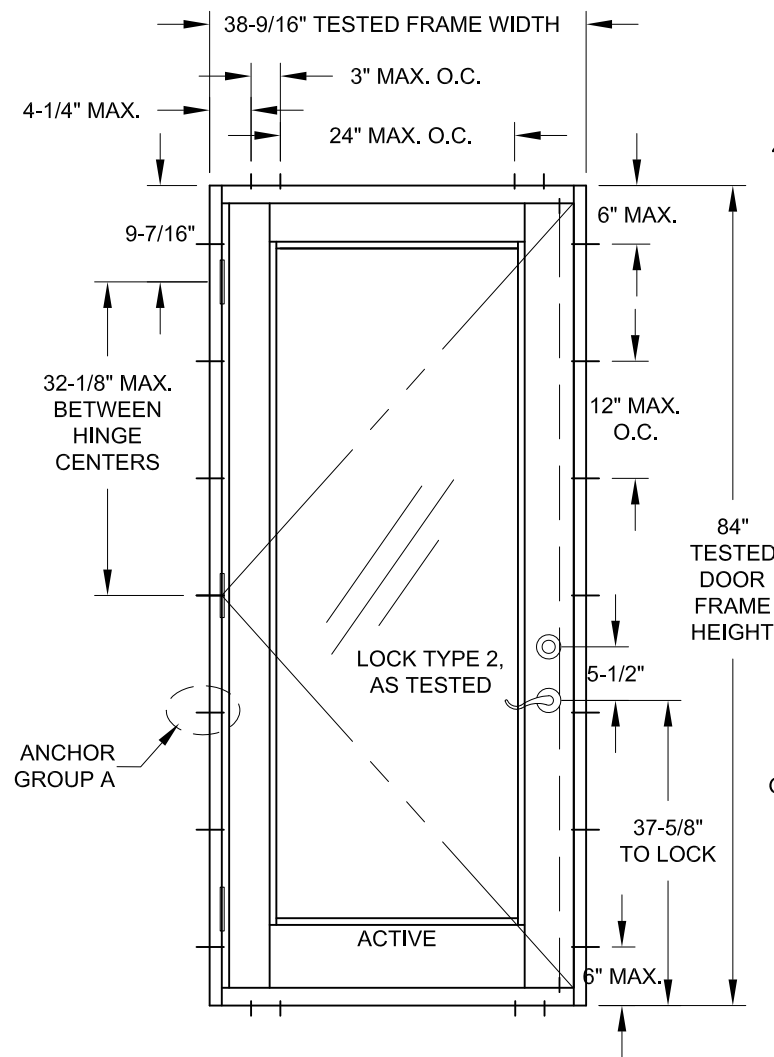




**"AS TESTED" TALL X DOOR
TYP. ANCHOR LOCATIONS**

TESTED DOOR INFORMATION (ABOVE DOOR ONLY):

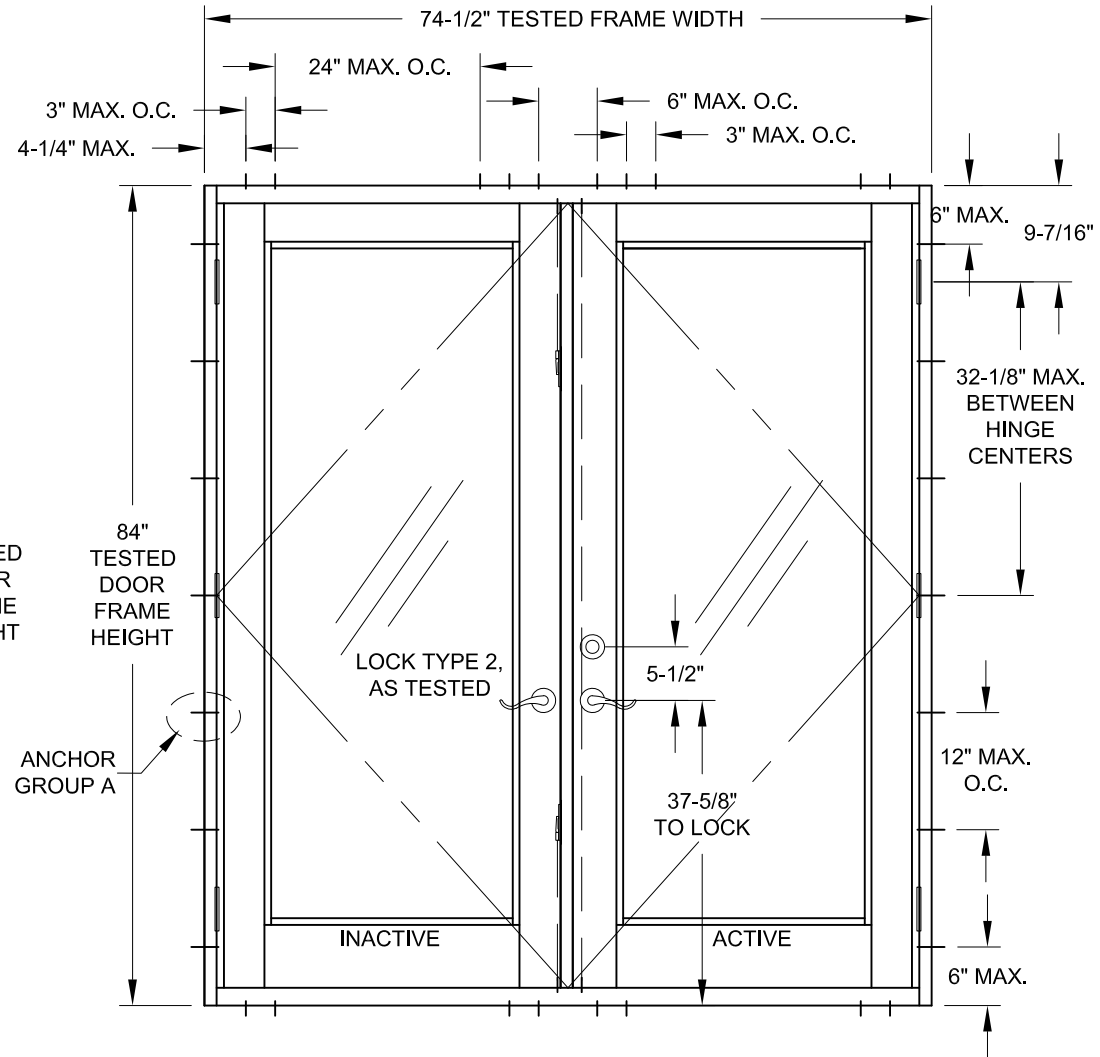
SIZE: 38-9/16" X 96-3/4" (X) W/O SIDELITES OR TRANSOM
ANCHOR GROUP : A
GLASS TYPE: 4
LOCK TYPE: 2, WITH BALDWIN SERIES 8200 DEADBOLT
MAX. (+) DESIGN PRESSURE: 66.0 PSF, LARGE MISSILE
MAX. (-) DESIGN PRESSURE: 124.0 PSF, LARGE MISSILE
OUTSWING USING STANDARD (P# 5) SILL



**"AS TESTED" X DOOR
TYP. ANCHOR LOCATIONS**

TESTED DOOR INFORMATION (ABOVE DOOR ONLY):

SIZE: 38-9/16" X 84" (X) W/O SIDELITES OR TRANSOM
ANCHOR GROUP: A
GLASS TYPES: 1 - 4
LOCK TYPE: 2, WITH BALDWIN SERIES 8200 DEADBOLT
MAX. (+) DESIGN PRESSURE: 100.0 PSF, LARGE MISSILE
MAX. (-) DESIGN PRESSURE: 132.0 PSF, LARGE MISSILE
OUTSWING USING STANDARD (P# 5) SILL



**"AS TESTED" XX DOOR
TYP. ANCHOR LOCATIONS**

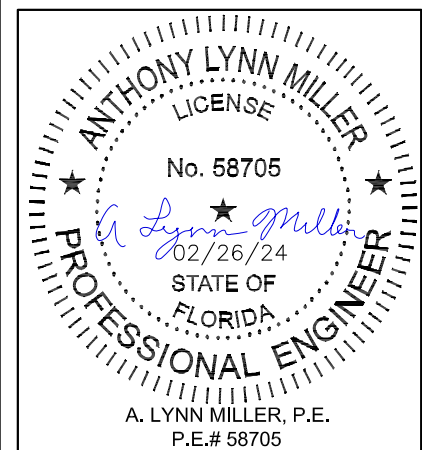
TESTED DOOR INFORMATION (ABOVE DOOR ONLY):

SIZE: 74-1/2" X 84" (XX) W/O SIDELITES OR TRANSOM
ANCHOR GROUP: A
GLASS TYPES: 1 - 4
LOCK TYPE: 2, WITH BALDWIN SERIES 8200 DEADBOLT
MAX. (+) DESIGN PRESSURE: 100.0 PSF, LARGE MISSILE
MAX. (-) DESIGN PRESSURE: 132.0 PSF, LARGE MISSILE
OUTSWING USING STANDARD (P# 5) SILL

NOTES:

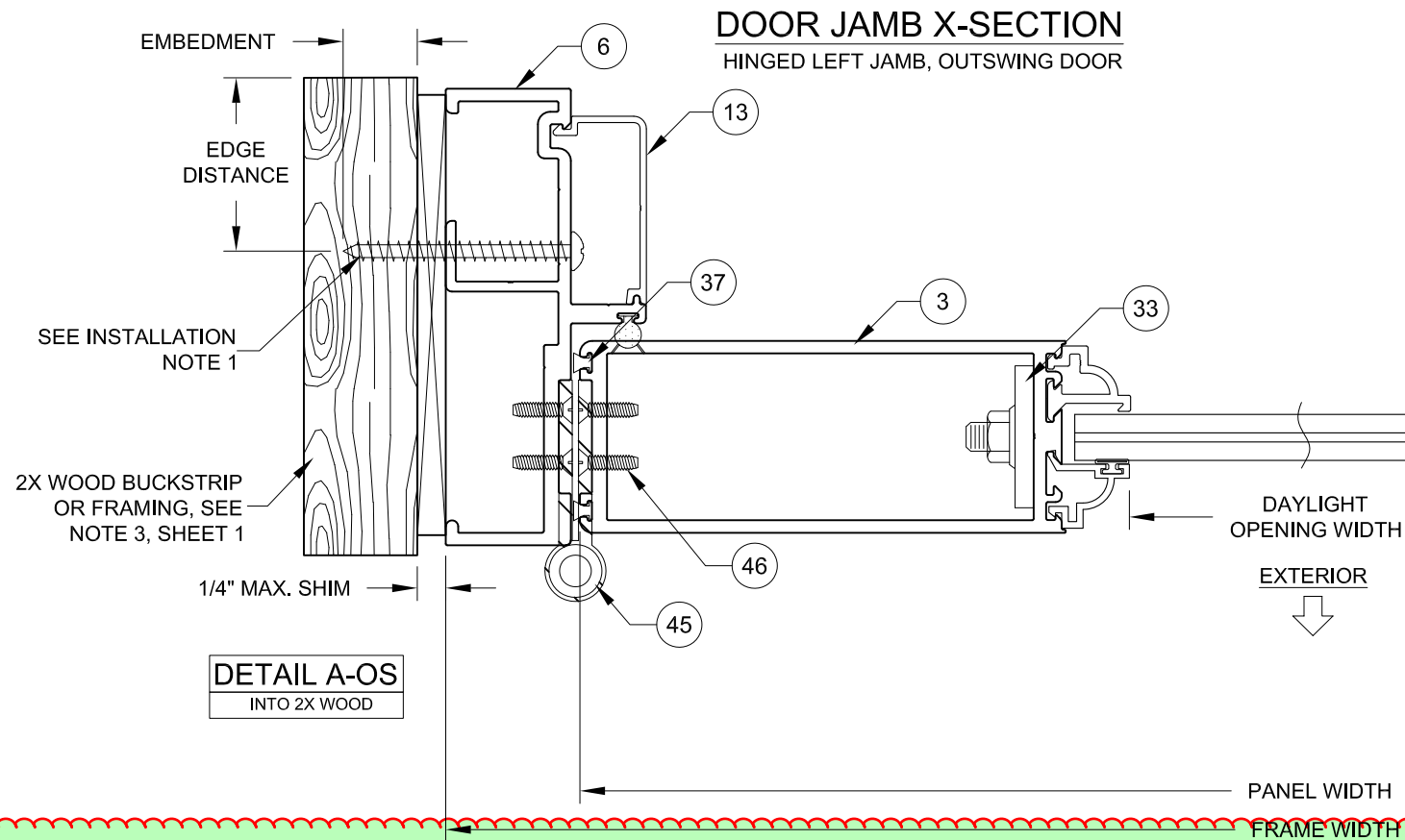
1) EXAMPLE CONFIGURATIONS SHOWN. SIMILAR CONFIGURATIONS
ALLOWED. DOORS MAY BE LEFT OR RIGHT-HANDED.

	PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		REGISTRATION #29296 COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	
	104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		ALUMINUM FRENCH DOOR (LM)	
	TESTED ANCHOR LOCATIONS		JENS ROSOWSKI	
FD450A	7 OF 21	No. D/M	450FPA-LM-1	
Series	Desc.	Title	By	Date

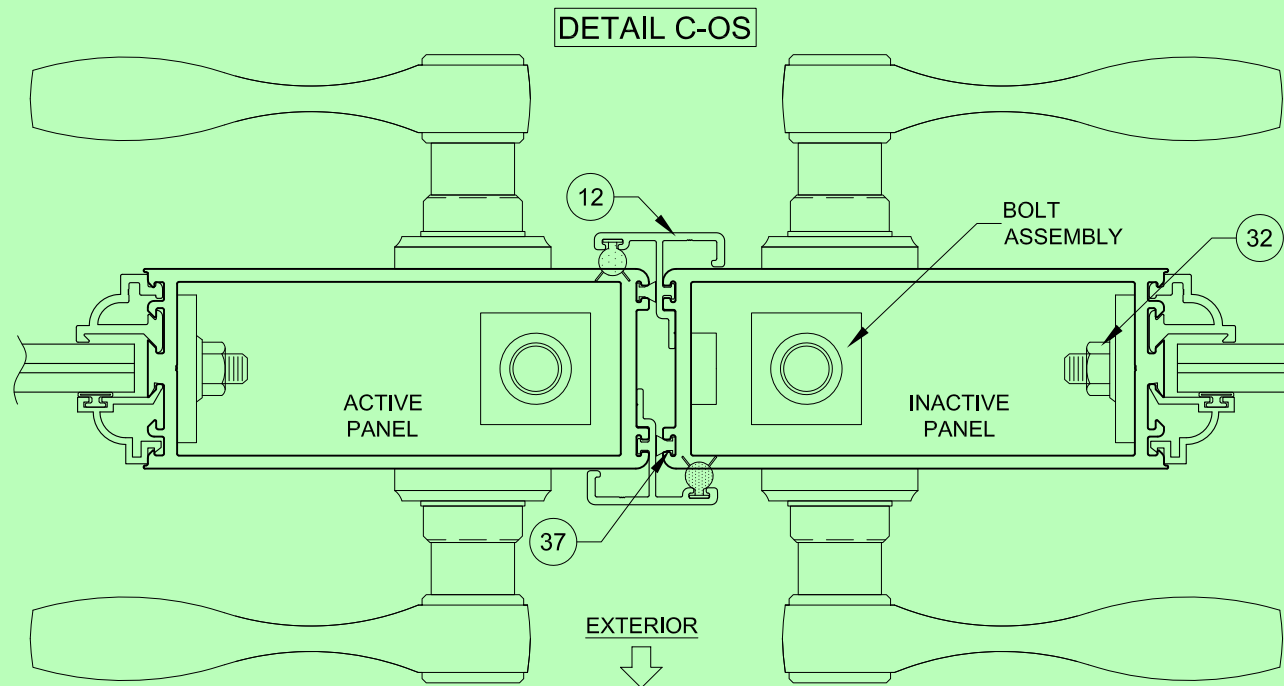
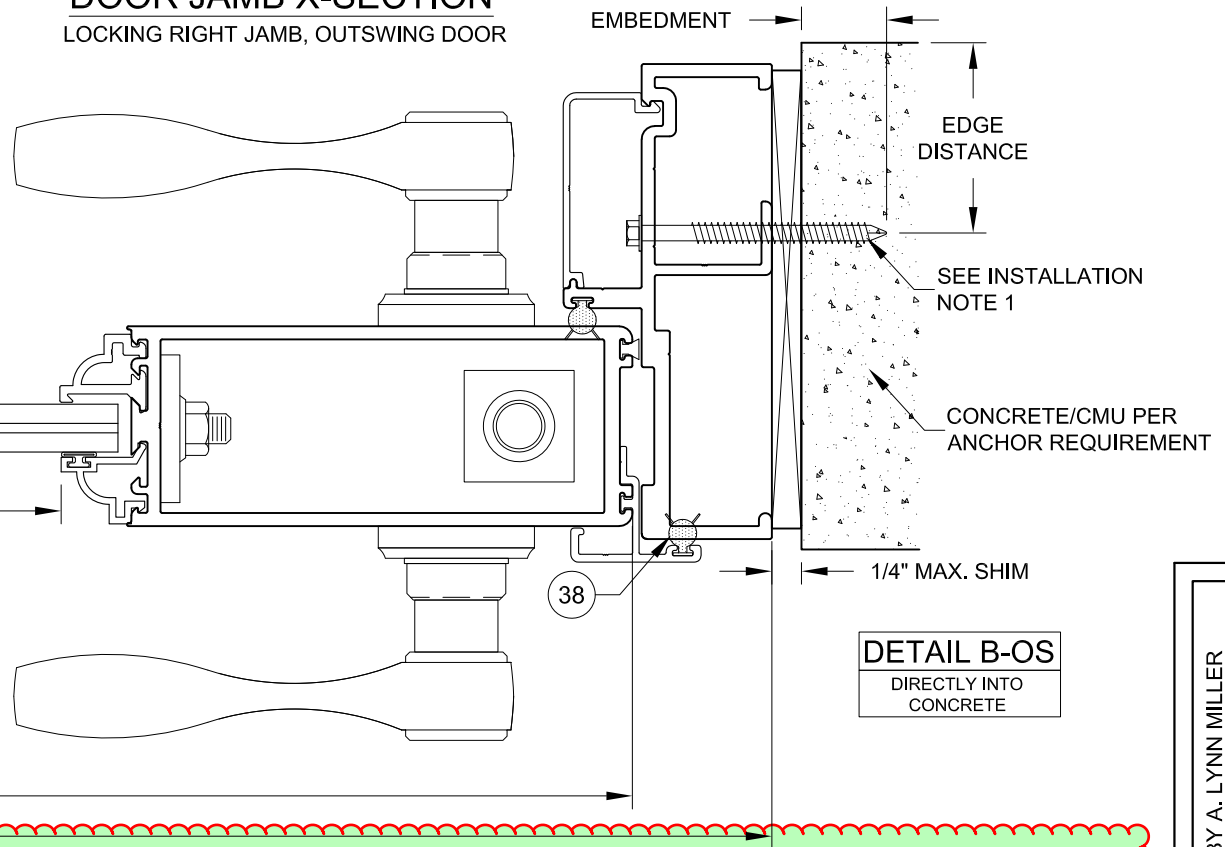


Rev.	Date	02/22/24	D
NO CHANGES THIS SHEET.			

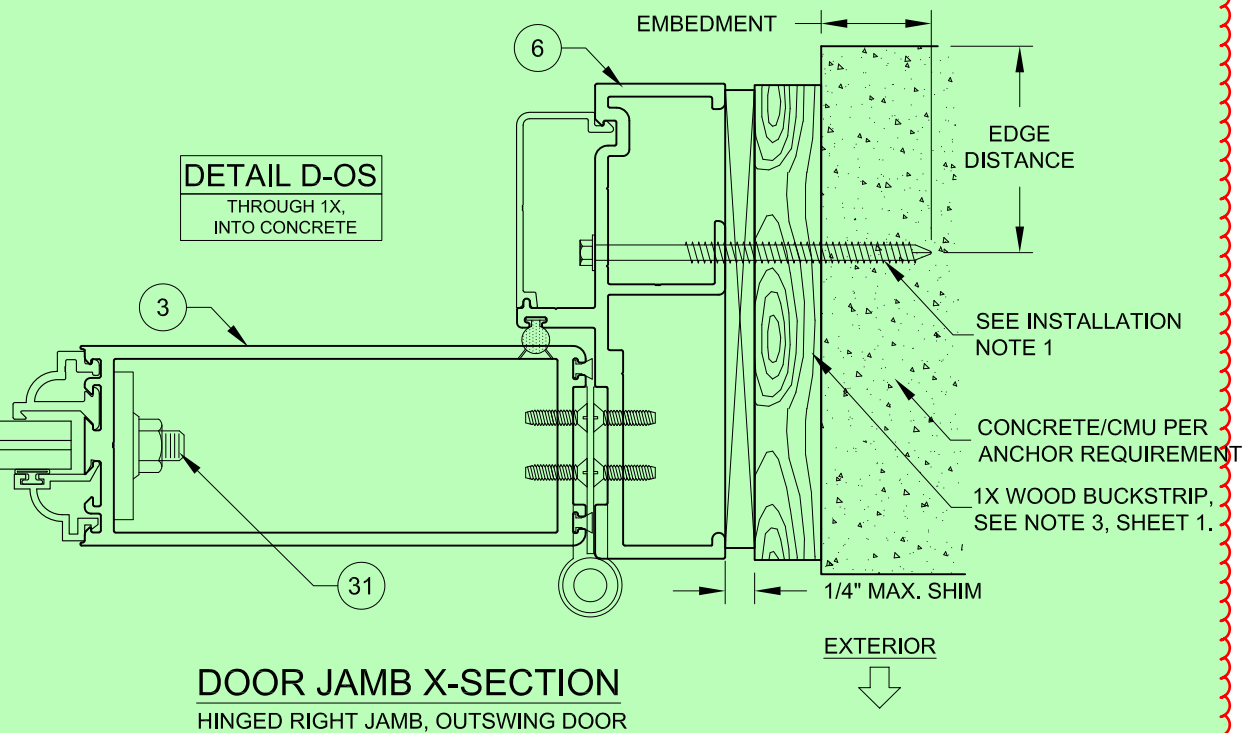
OUTSWING DETAILS



DOOR JAMB X-SECTION
LOCKING RIGHT JAMB, OUTSWING DOOR

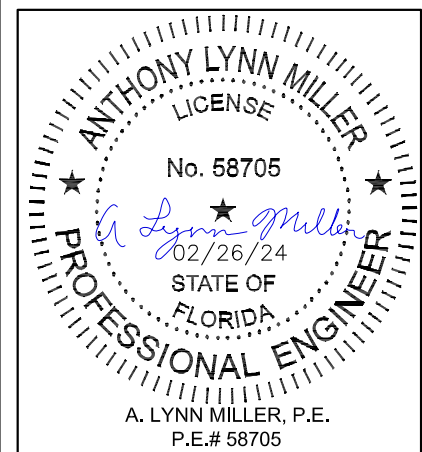


DETAIL D-OS
THROUGH 1X,
INTO CONCRETE



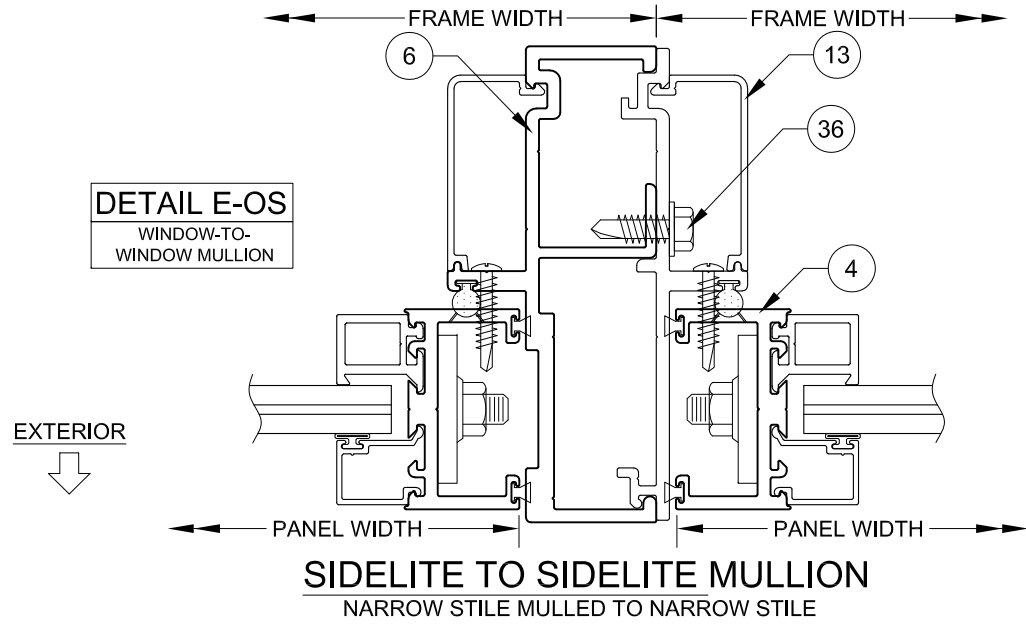
Rev.#	Date	Rev.
D	02/22/24	NO CHANGES THIS SHEET.

 WINDOOR		104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600			
FD450A		8 OF 21		JENS ROSOWSKI		12/12/22	
						Date	
Series		Desc.		Title		ALUMINUM FRENCH DOOR (LM)	
Sheet		Dwg No.		By		Drawn	
X-SECTIONS (OUTSWING)							
						COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	
						REGISTRATION #29296	



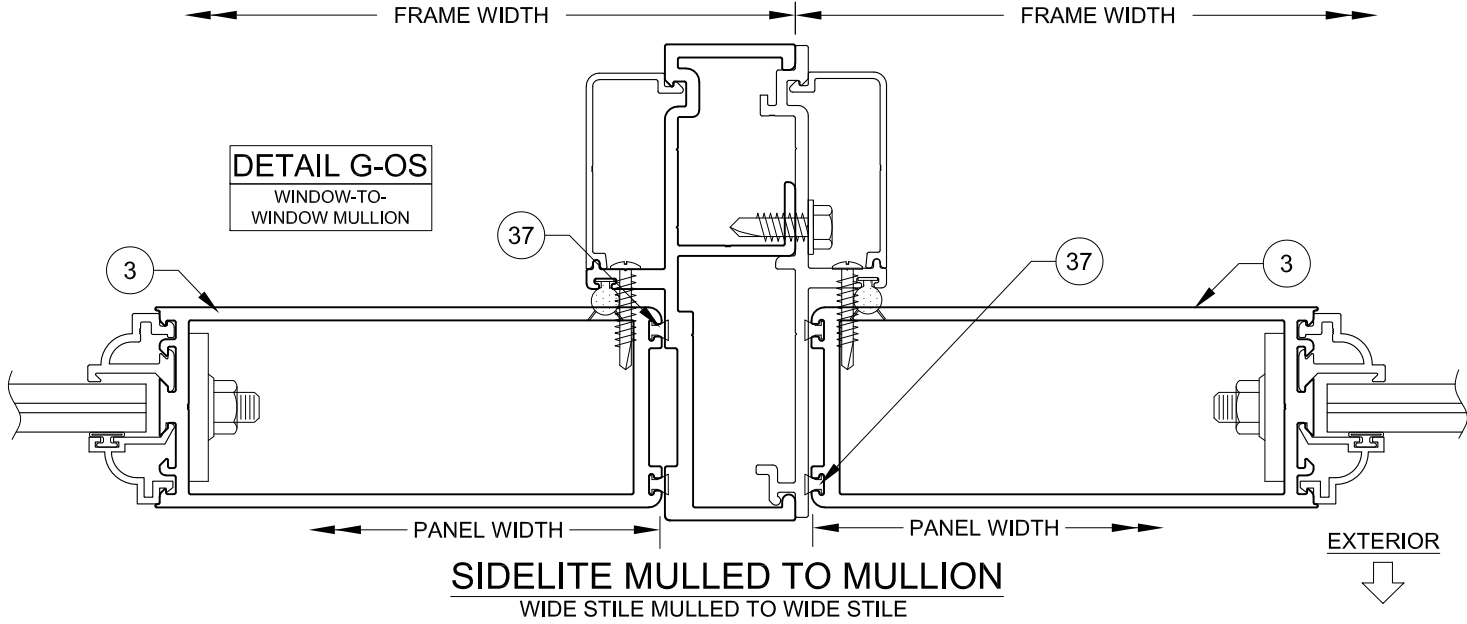
OUTSWING DETAILS

DETAIL E-OS
WINDOW-TO-
WINDOW MULLION



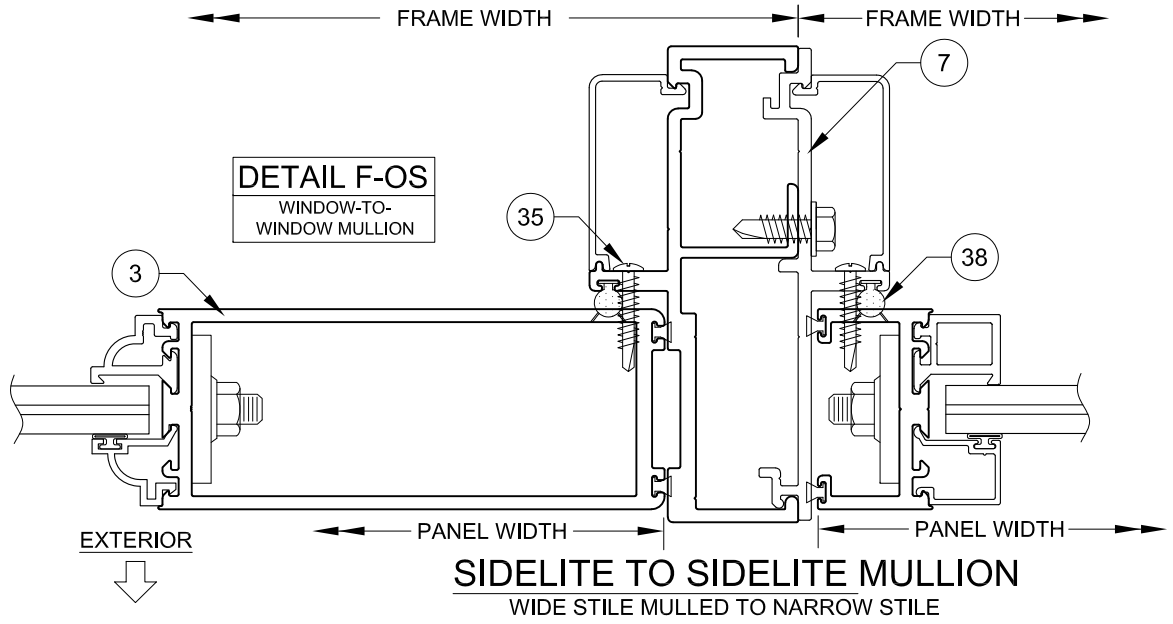
SIDELITE TO SIDELITE MULLION
NARROW STILE MULLED TO NARROW STILE

DETAIL G-OS
WINDOW-TO-
WINDOW MULLION



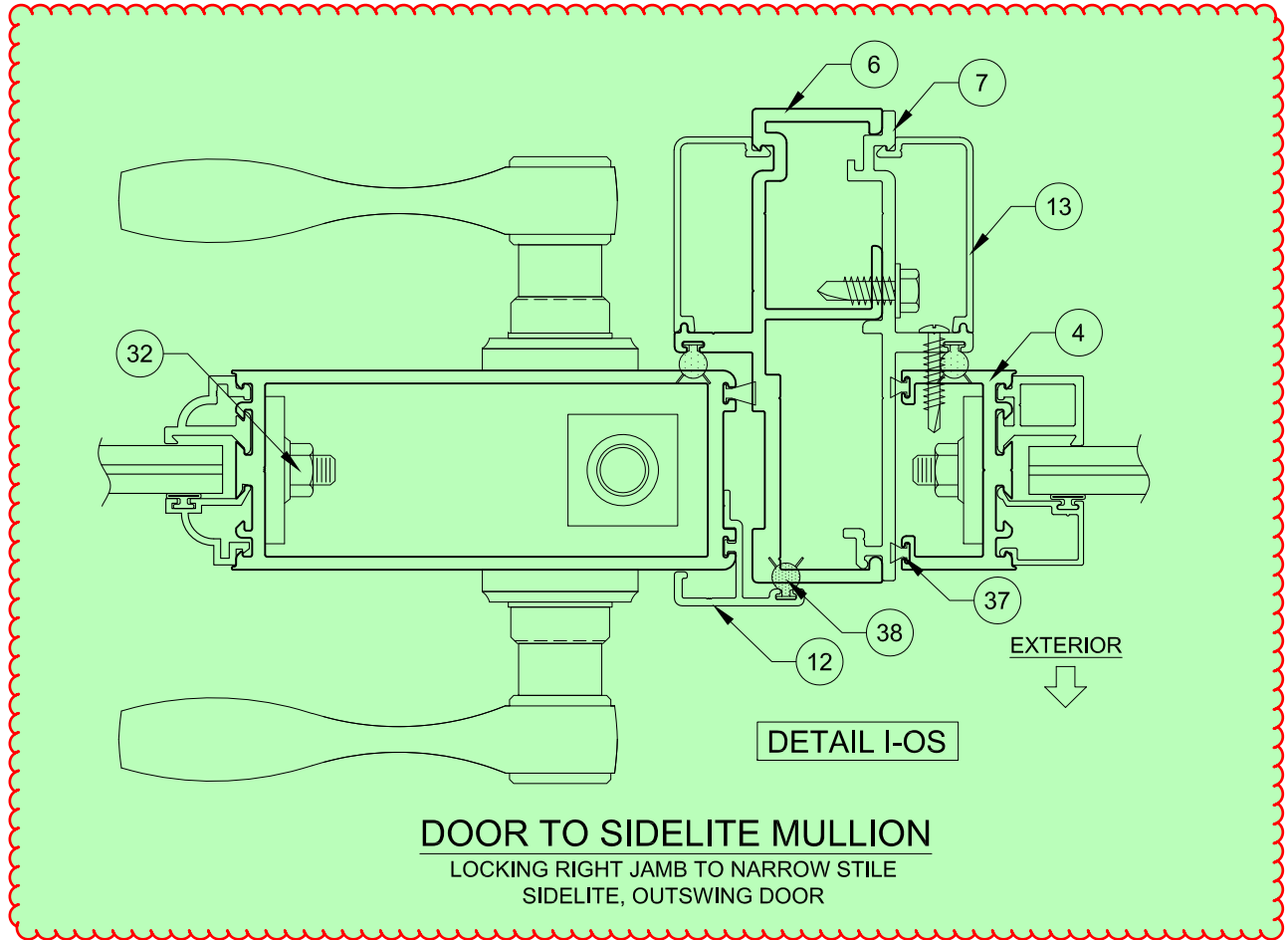
SIDELITE MULLED TO MULLION
WIDE STILE MULLED TO WIDE STILE

DETAIL F-OS
WINDOW-TO-
WINDOW MULLION



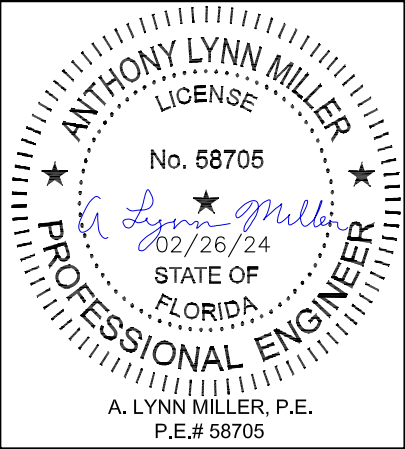
SIDELITE TO SIDELITE MULLION
WIDE STILE MULLED TO NARROW STILE

DETAIL I-OS

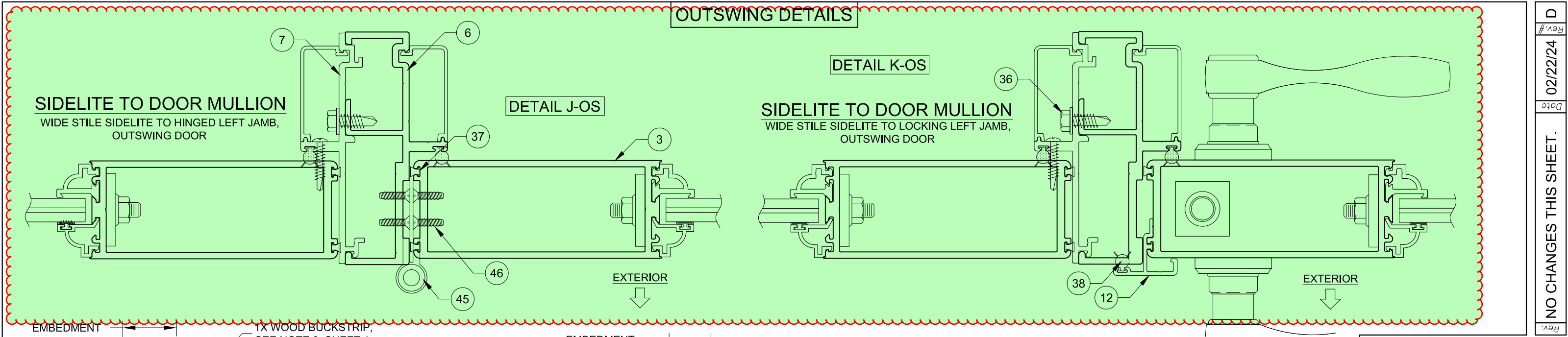


DOOR TO SIDELITE MULLION
LOCKING RIGHT JAMB TO NARROW STILE
SIDELITE, OUTSWING DOOR

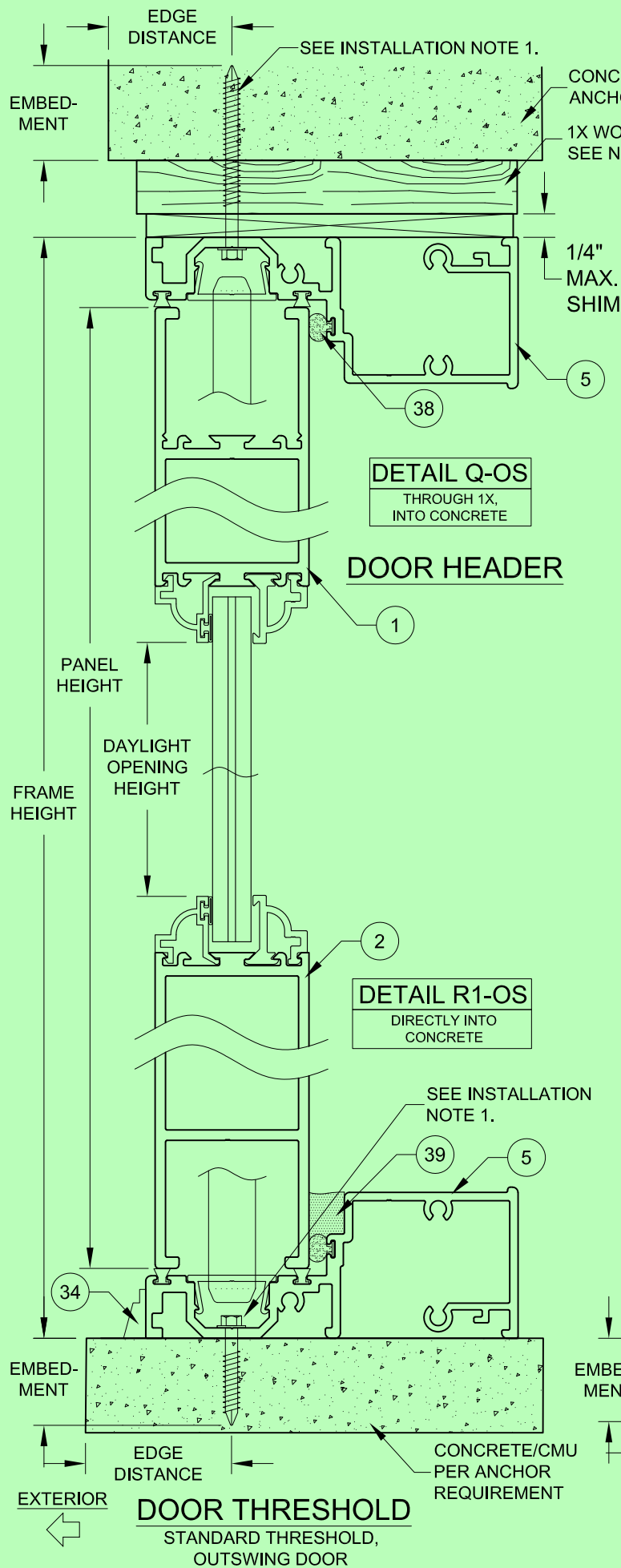
	PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		REGISTRATION #29296	12/12/22	
	104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	JENS ROSOWSKI	
	ALUMINUM FRENCH DOOR (LM)		X-SECTIONS (OUTSWING)	450FPA-LM-1	
	FD450A		9 OF 21	NO CHANGES THIS SHEET.	



ANTHONY LYNN MILLER
LICENSE
No. 58705
02/26/24
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

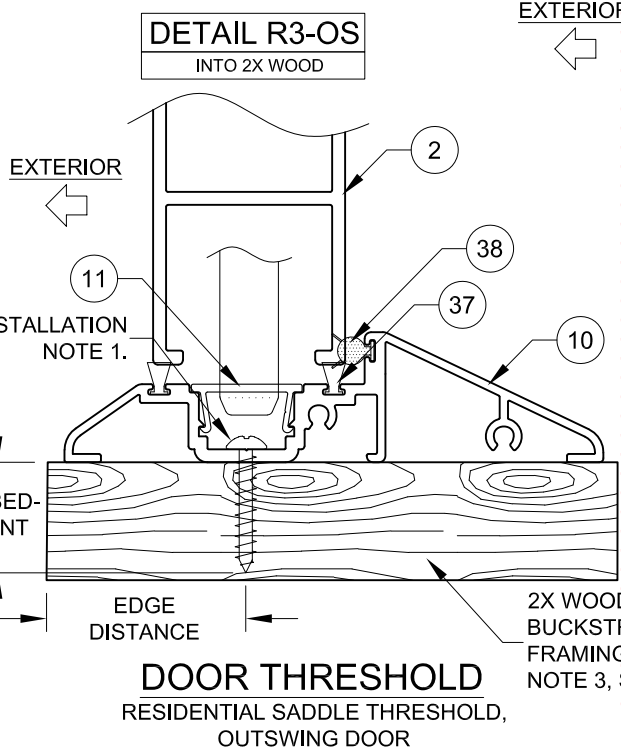
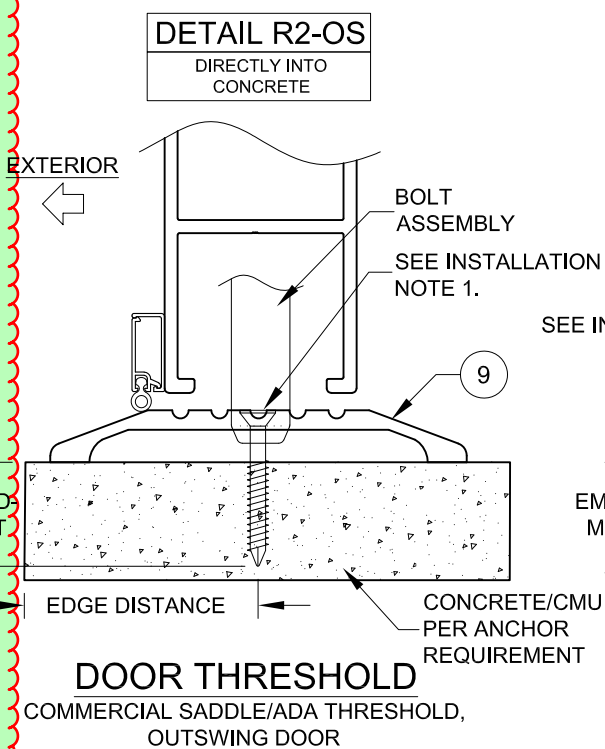
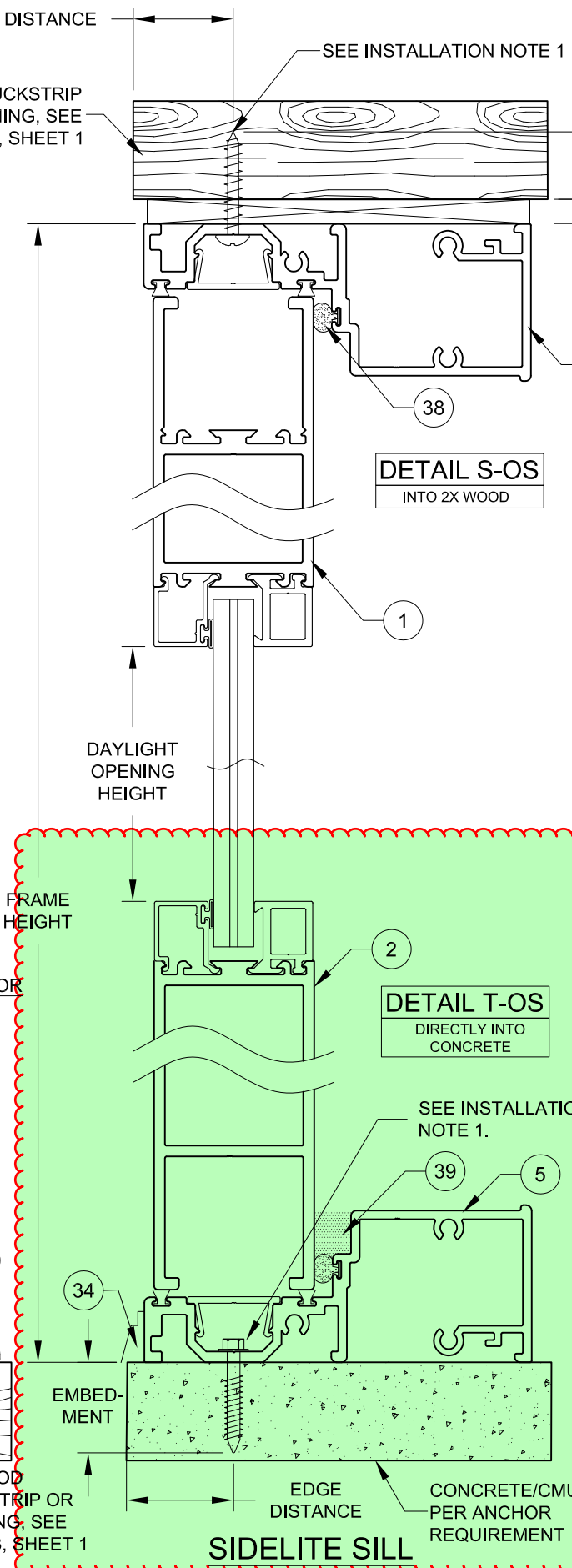
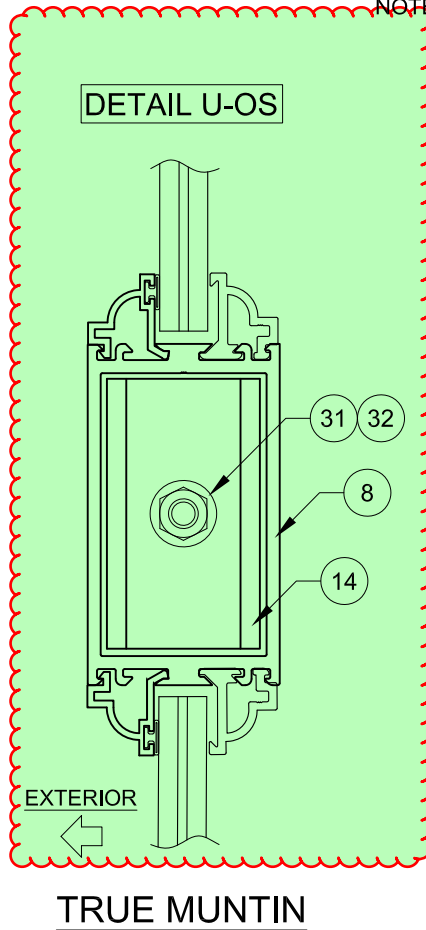


OUTSWING DETAILS



INSTALLATION NOTES:

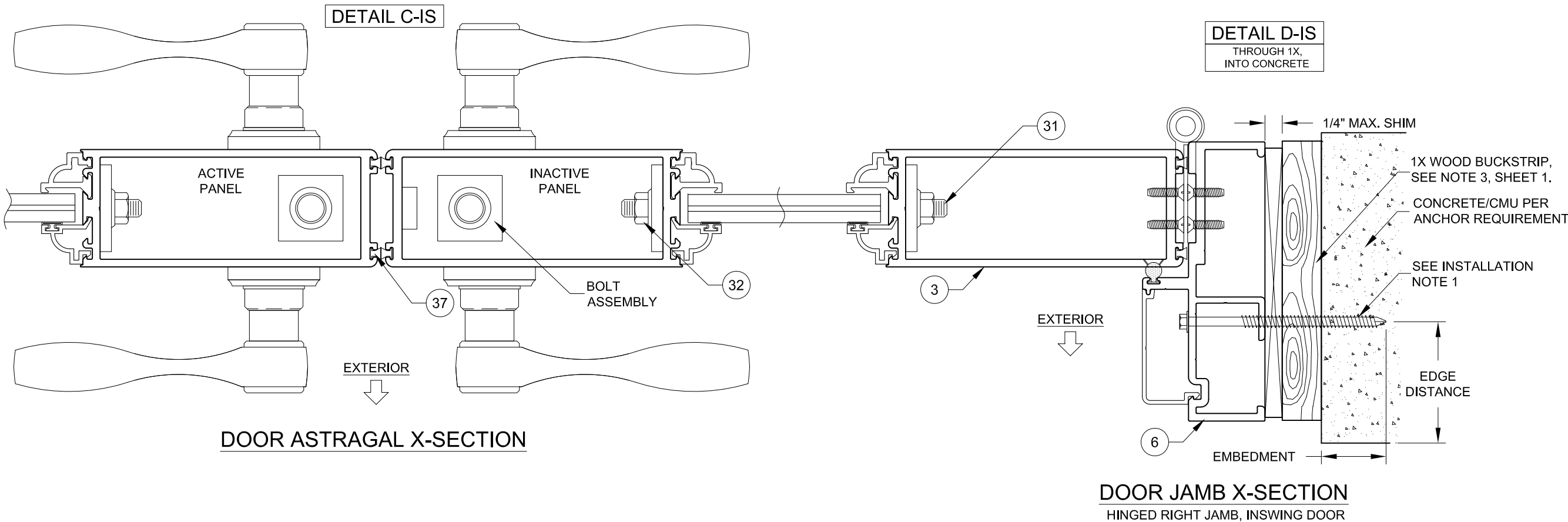
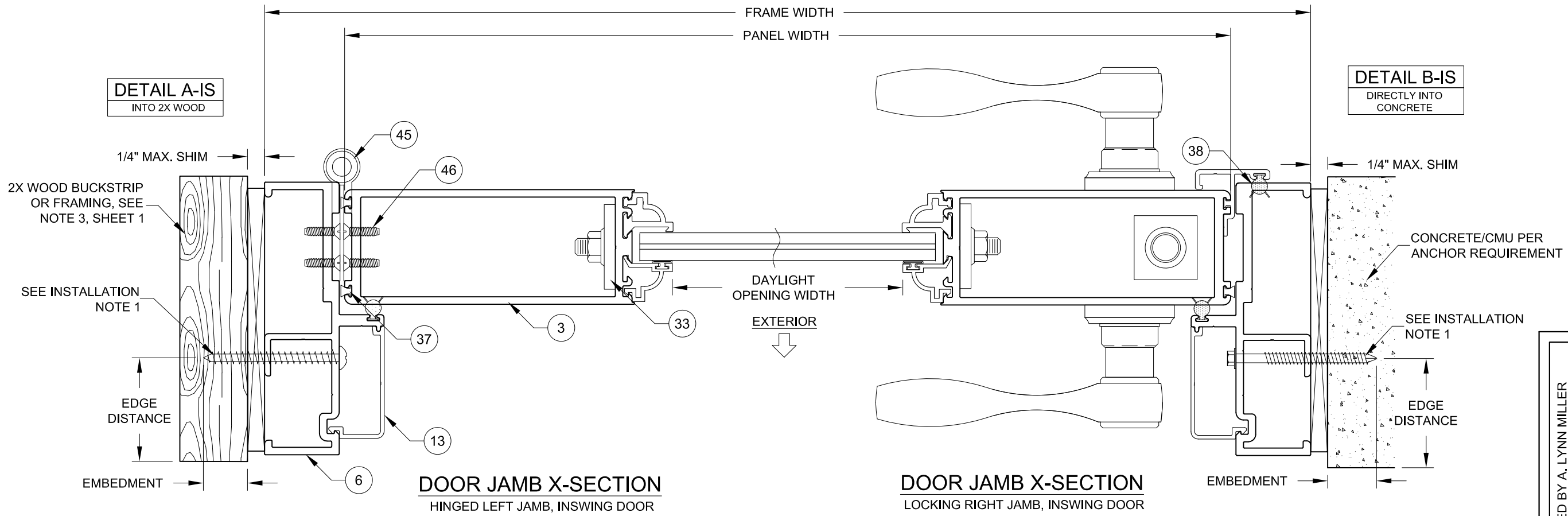
- 1) USE ONLY SUBSTRATE-APPROPRIATE ANCHORS LISTED ON TABLE A. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE DOOR OR SIDELITE.
- 2) SEE SHEET 6 FOR ANCHOR LOCATIONS & SPACING, FOR ANCHOR QUANTITIES, SEE TABLES 3 & 5.
- 3) METAL SUBSTRATE TO MEET MIN. STRENGTH AND THICKNESS REQUIREMENTS PER CURRENT FLORIDA BUILDING CODE AND TO BE REVIEWED BY THE AUTHORITY HAVING JURISDICTION.
- 4) IF SILL IS TIGHT TO SUBSTRATE, GROUT OR OTHER MATERIAL IS NOT REQUIRED. IF USED, NON-SHRINK, NON-METALLIC GROUT, MAX. 1/4" THICK & 3400 PSI MIN., (DONE BY OTHERS) MUST FULLY SUPPORT THE ENTIRE LENGTH OF THE SILL THAT IS NOT TIGHT TO THE SUBSTRATE, AND TRANSFER SHEAR LOAD TO SUBSTRATE. IF SUBSTRATE IS WOOD, 30# FELT PAPER OR MASTIC IS REQUIRED BETWEEN THE GROUT AND WOOD SUBSTRATE, OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- 5) BEADING AND GLASS TYPE SHOWN IN DETAILS MAY VARY FROM ACTUAL. SEE GLAZING DETAILS SHEET FOR FURTHER OPTIONS.



WINDOOR PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296	12/12/22	JENS ROSOWSKI	450FPA-LM-1
	COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.			
	104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432			
ALUMINUM FRENCH DOOR (LM)		X-SECTIONS (OUTSWING)		
FD450A		11 OF 21		
Series Desc. Title				

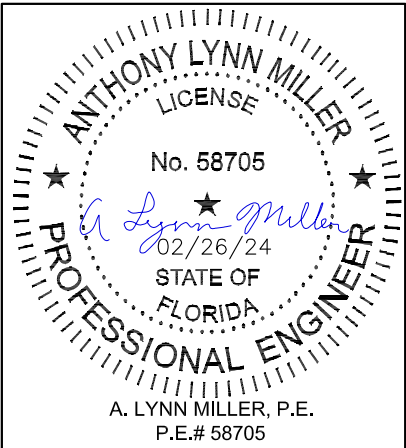
ANTHONY LYNN MILLER
LICENSE
No. 58705
02/26/24
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

INSWING DETAILS



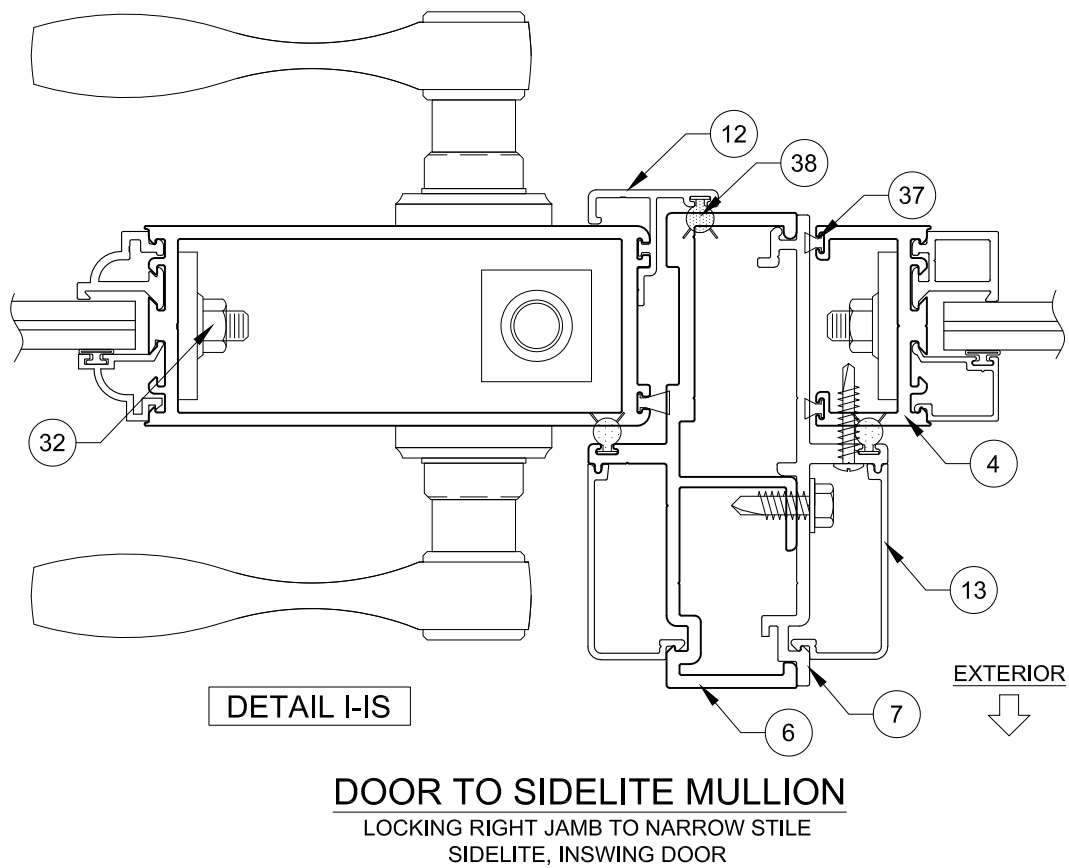
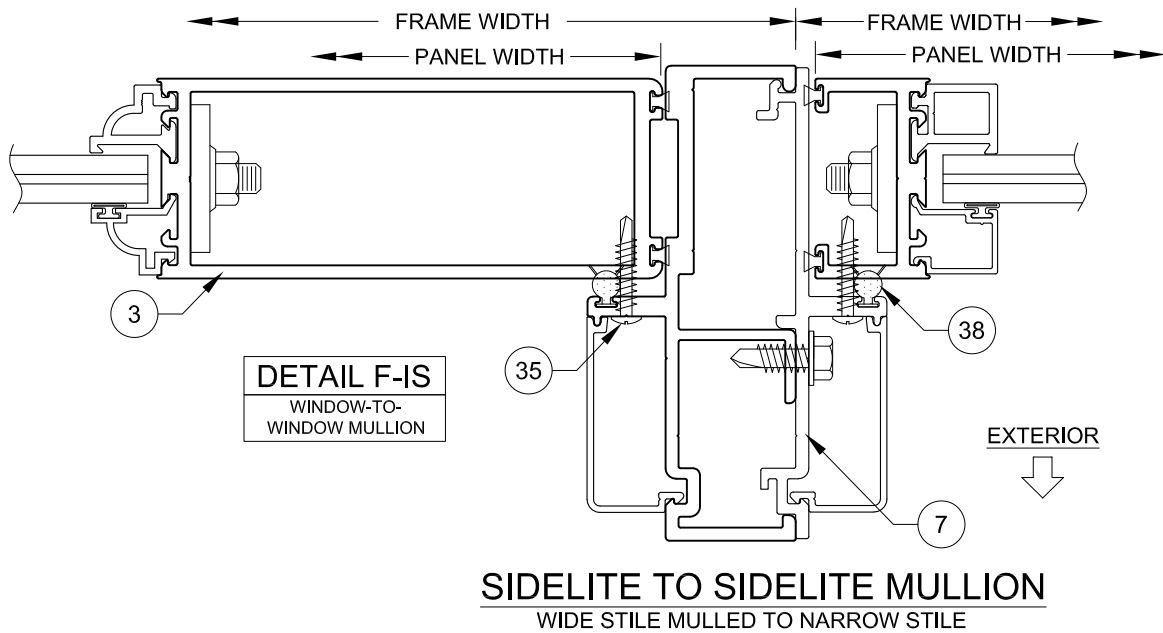
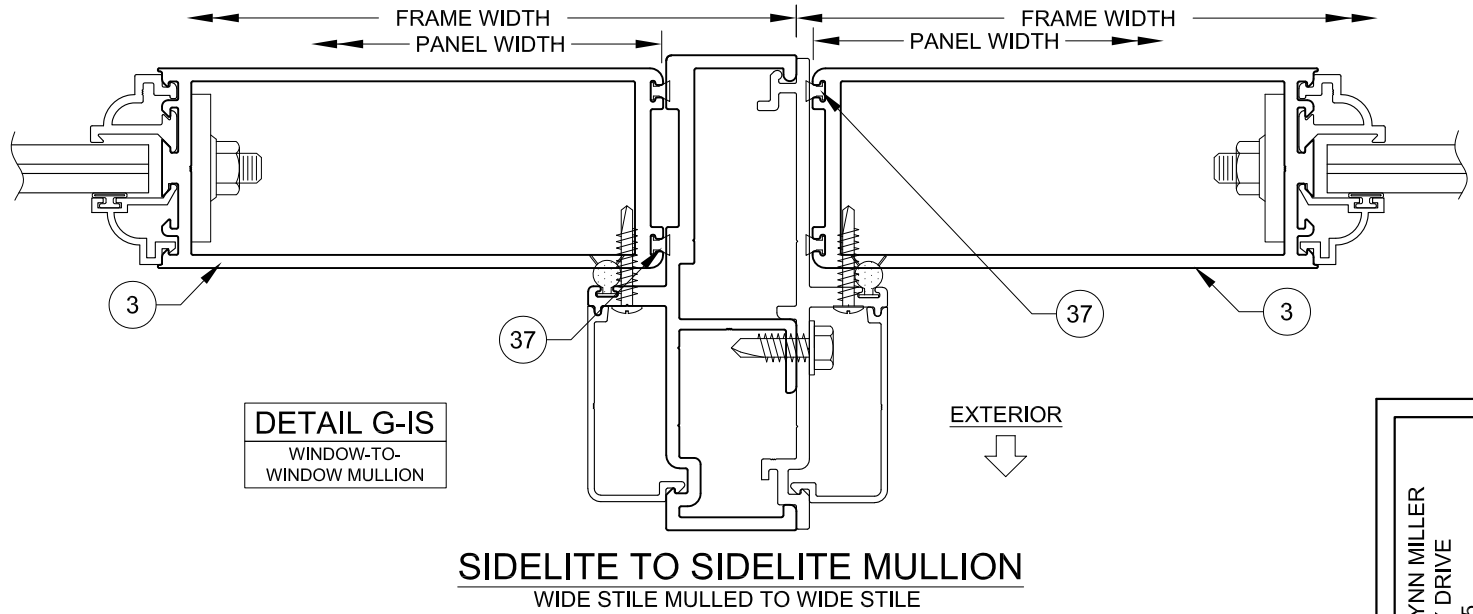
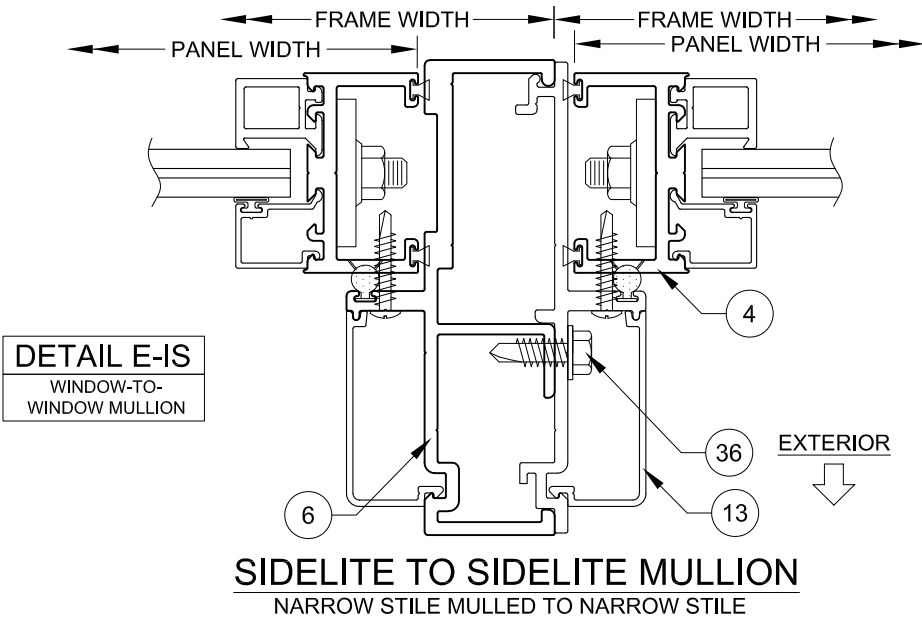
SEE INSTALLATION NOTES, SHEET 15.

 WINDOOR		104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	
ALUMINUM FRENCH DOOR (LM)		REGISTRATION #29296		COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	
FD450A		12 OF 21		DWC No.	
X-SECTIONS (INSWING)		JENS ROSOWSKI		By Drawn	
Date		12/12/22			
Title		Desc.		Series	



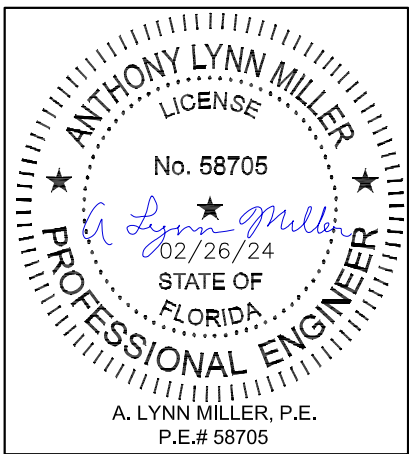
Rev. #	02/22/24	D
Date		
NO CHANGES THIS SHEET.		

INSWING DETAILS

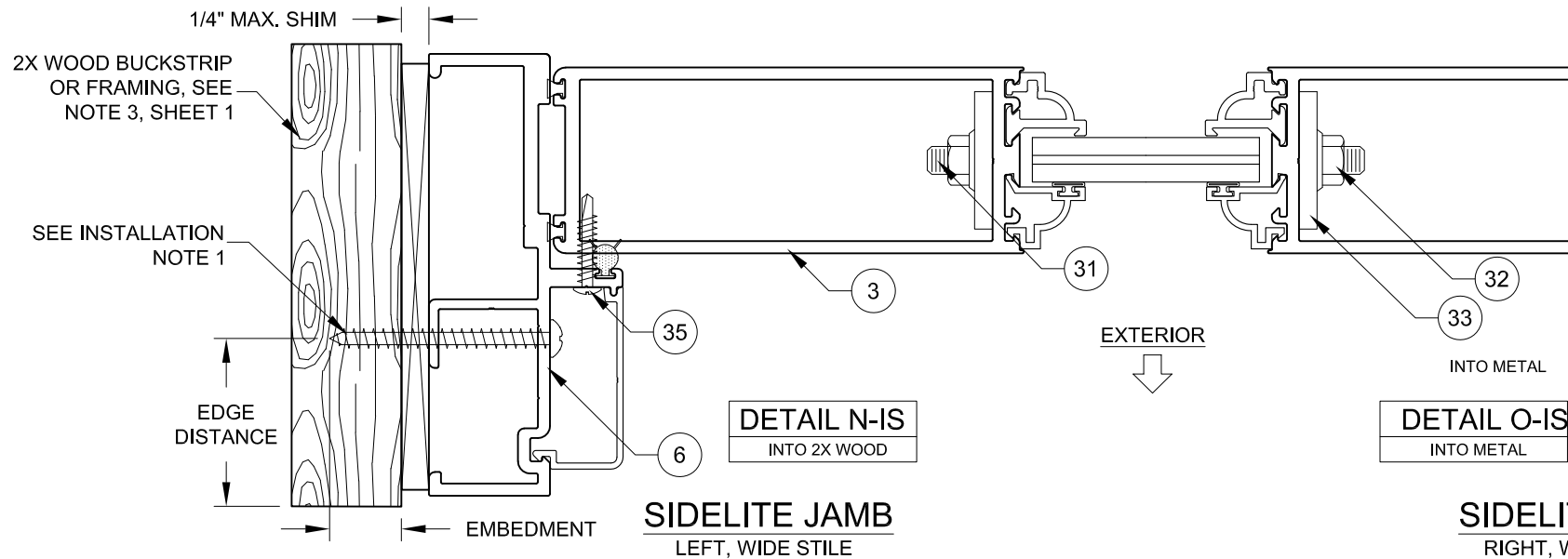
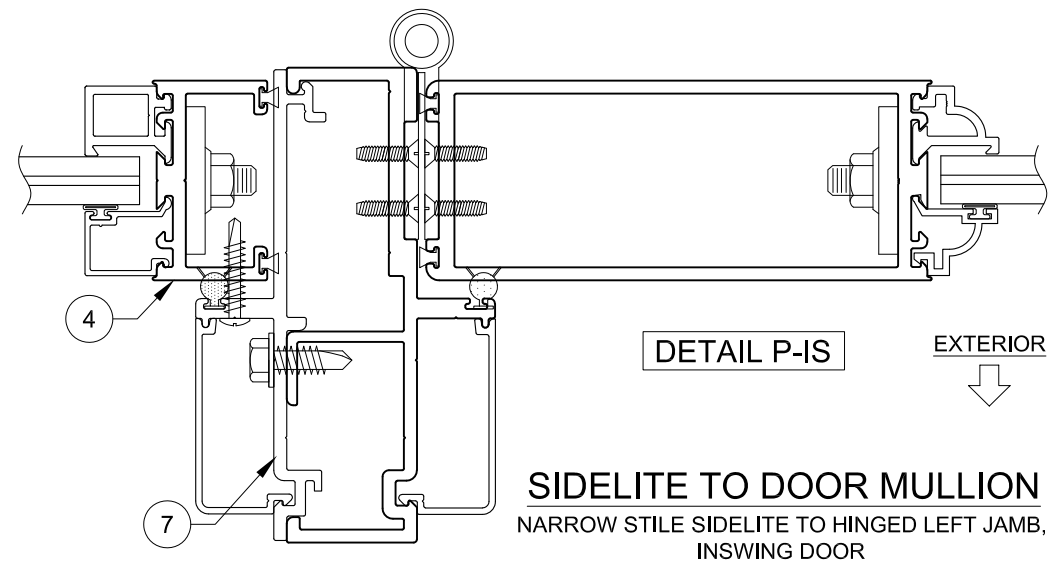
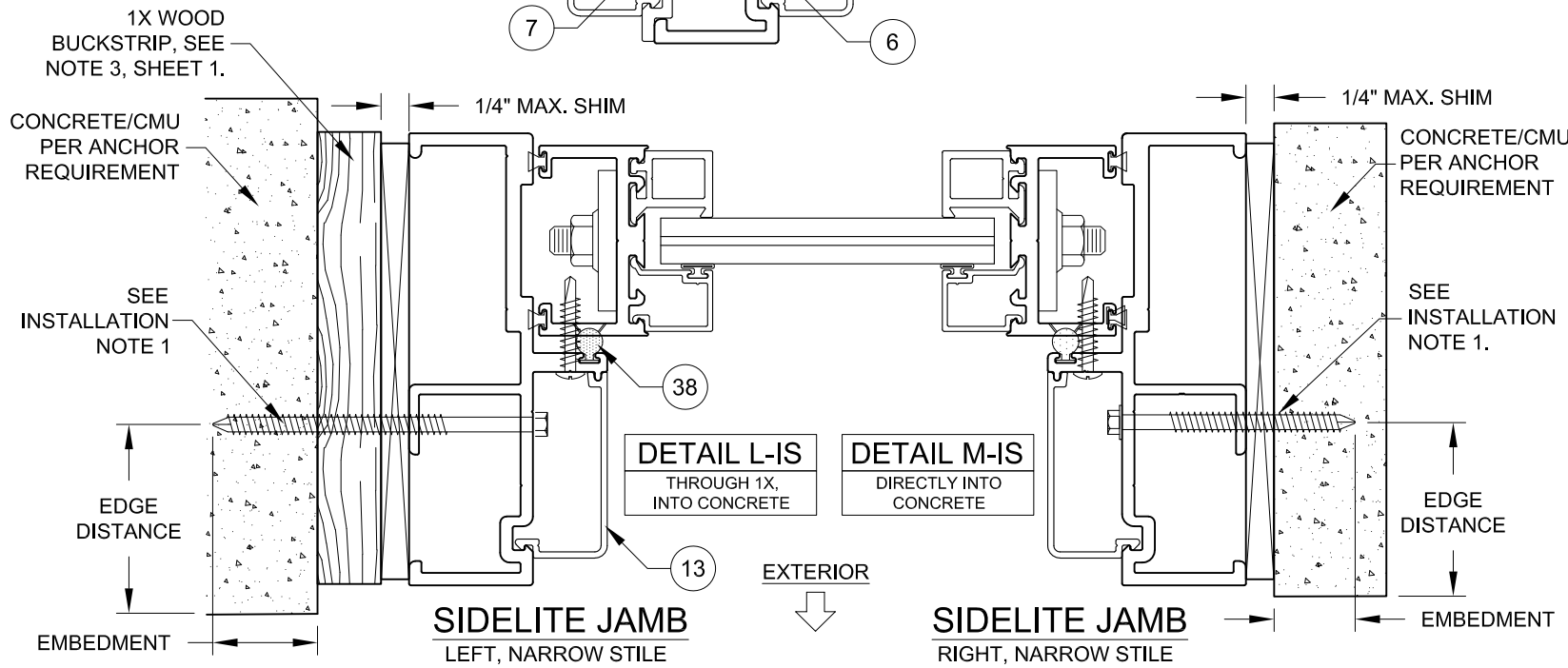
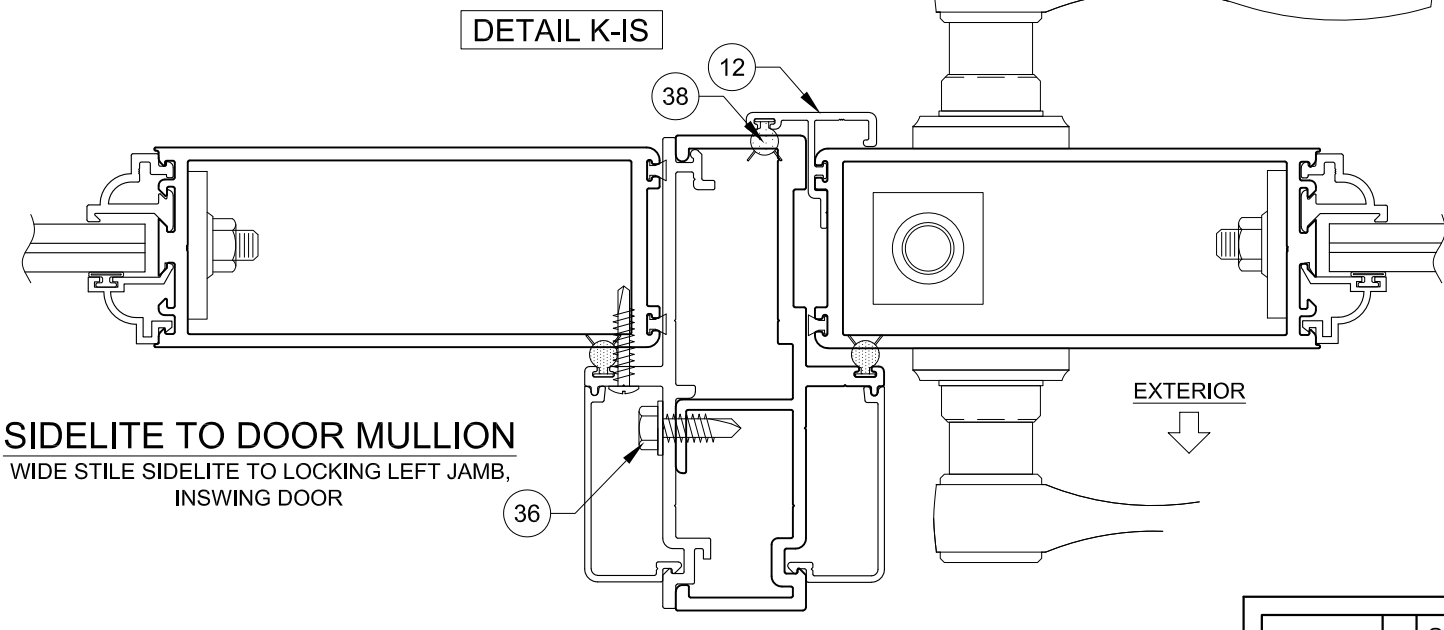
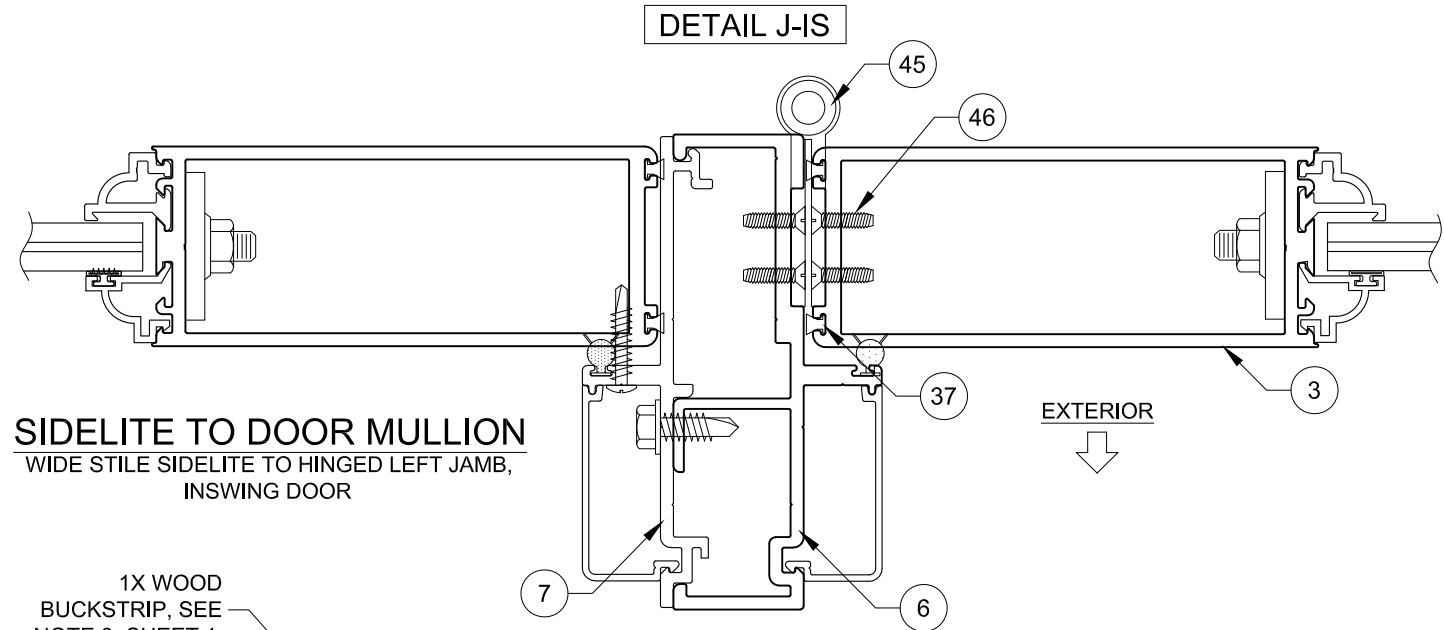


Rev. #	Date	Rev.
D	02/22/24	NO CHANGES THIS SHEET.

 WINDOOR		104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	
ALUMINUM FRENCH DOOR (LM)		REGISTRATION #29296		12/12/22	
		COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.			
X-SECTIONS (INSWING)		JENS ROSOWSKI		Date	
FD450A		13 OF 21		By	
Sheet		DWC No.		Drawn	
Series		Desc.		Title	



INSWING DETAILS

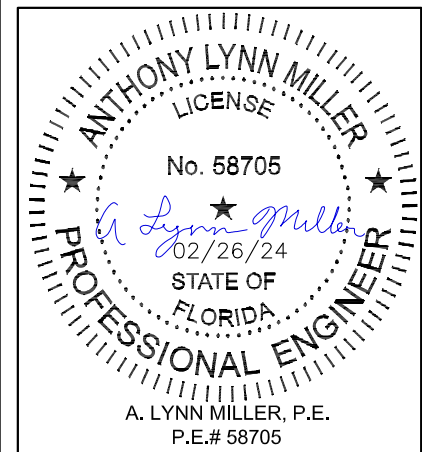


APPROVED MULLION, FBC
COMPLIANT ALUMINUM OR STEEL
FRAMING OR STEEL STUD. SEE
SUBSTRATE PROPERTIES, TABLE A.

SEE INSTALLATION
NOTE 2, SHEET 17

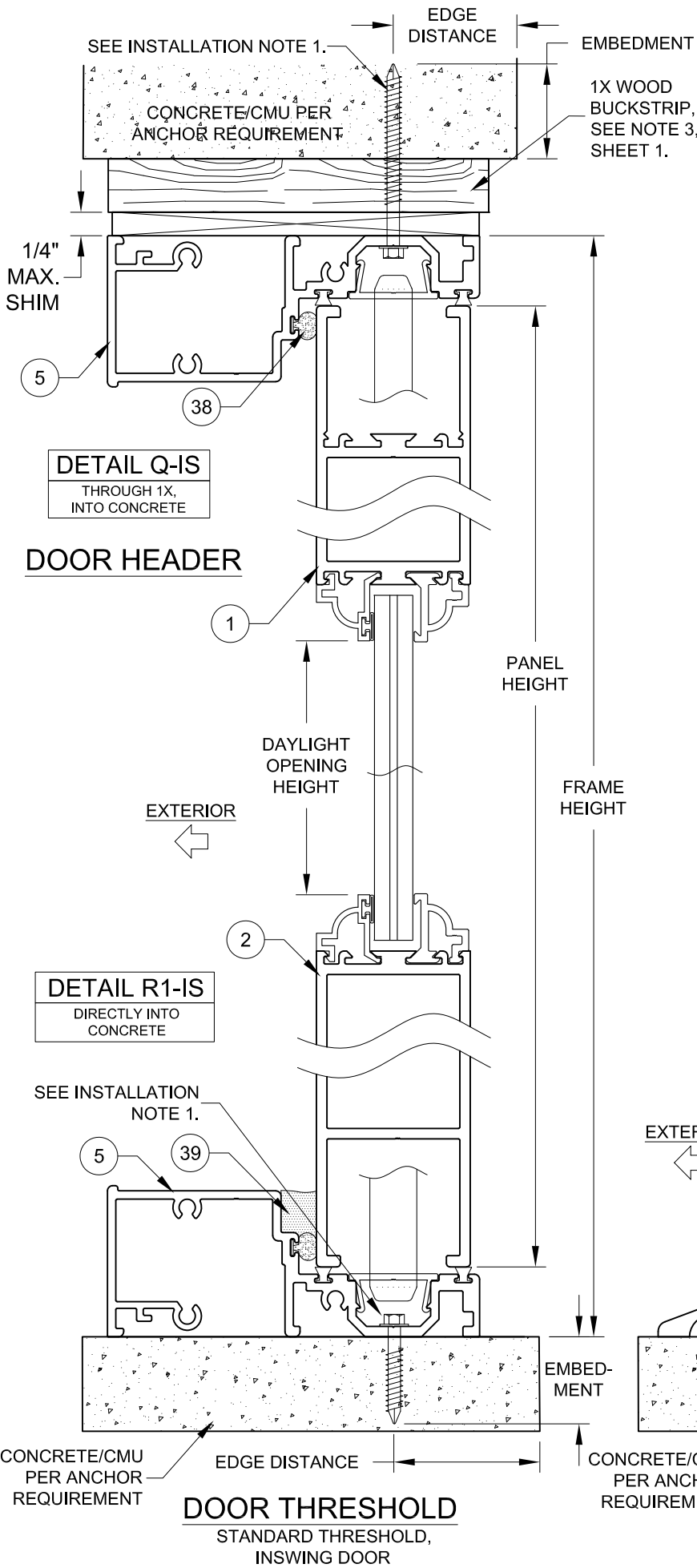
SEE INSTALLATION NOTES, SHEET 15.

WINDOOR	PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		REGISTRATION #29296 COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	
	104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		12/12/22	
	ALUMINUM FRENCH DOOR (LM)		JENS ROSOWSKI	
X-SECTIONS (INSWING)		14 OF 21	450FPA-LM-1	
FD450A				



Rev. #	02/22/24	D
Date		
NO CHANGES THIS SHEET.		

INSWING DETAILS



INSTALLATION NOTES:

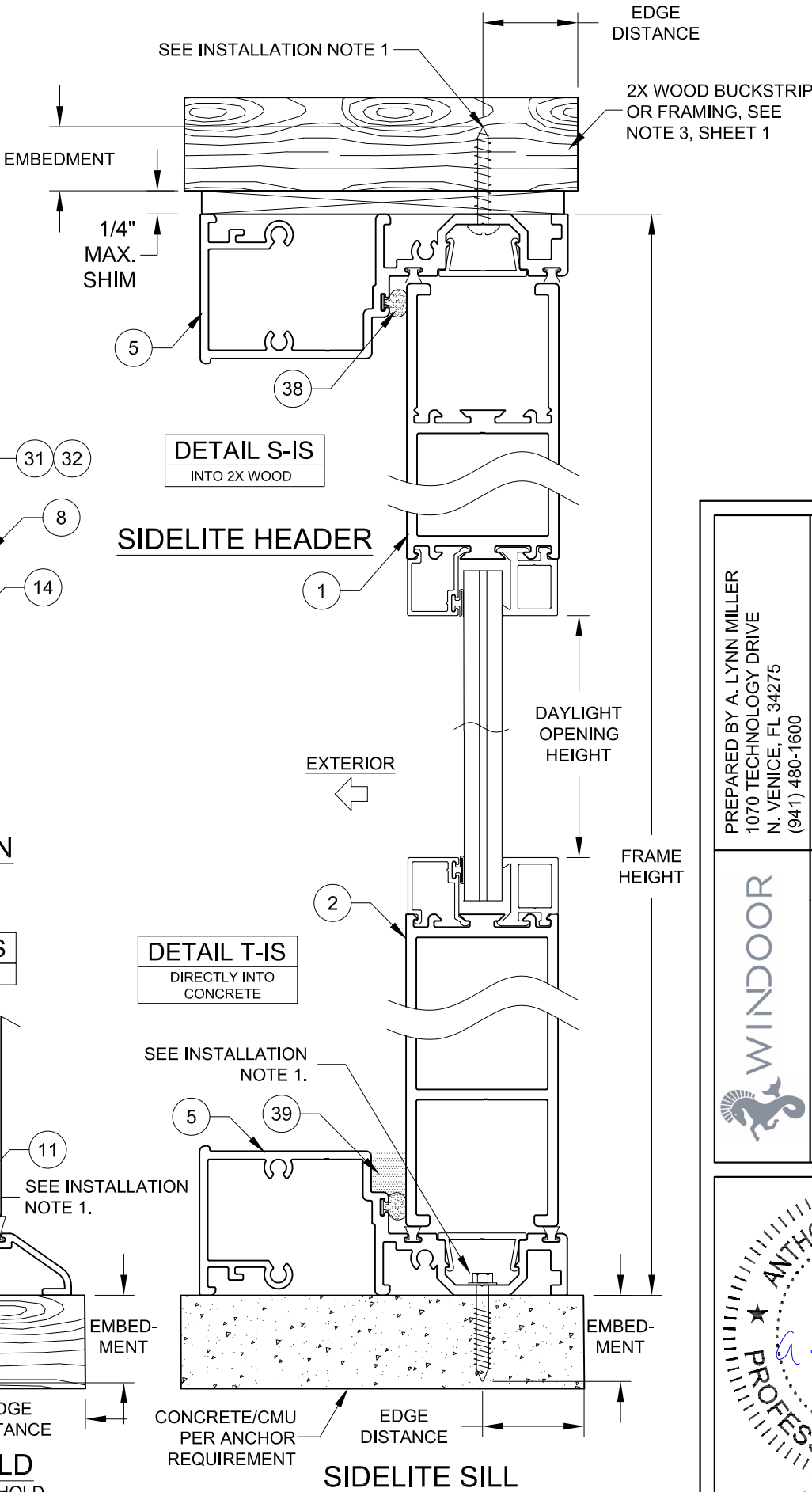
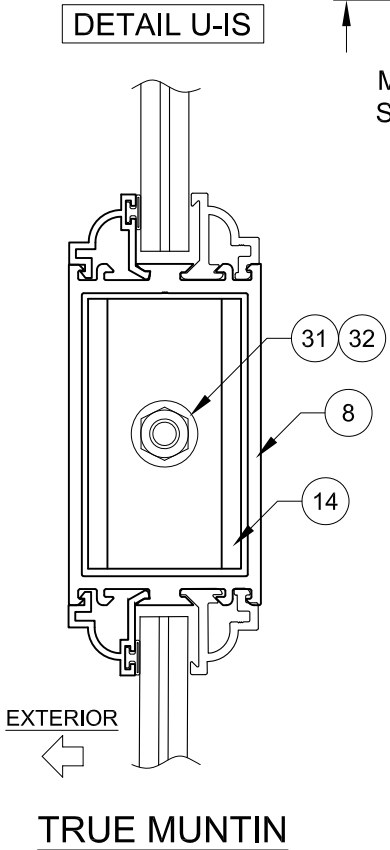
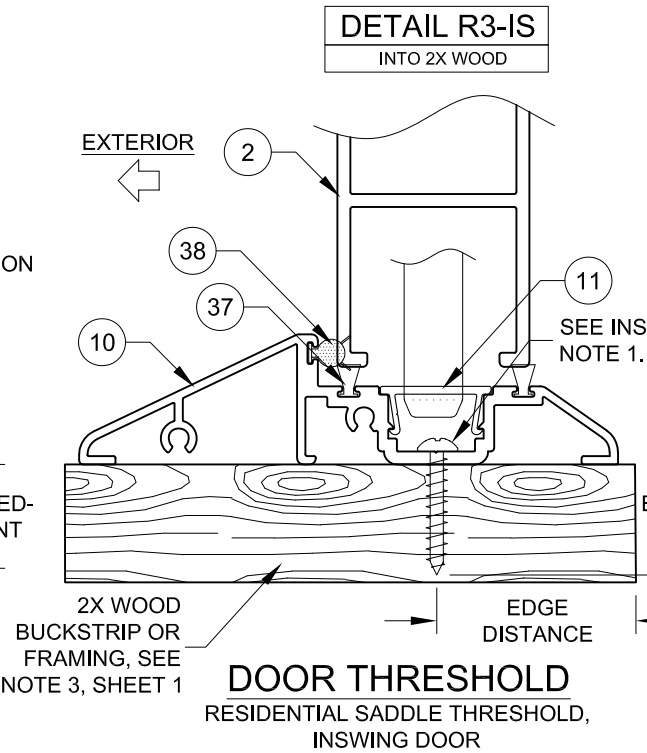
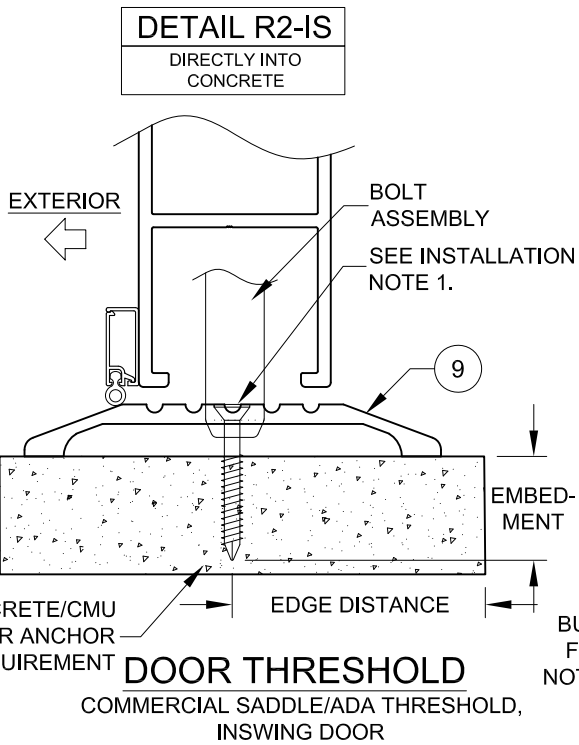
1) USE ONLY SUBSTRATE-APPROPRIATE ANCHORS LISTED ON TABLE A. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE DOOR OR SIDELITE .

2) SEE SHEET 6 FOR ANCHOR LOCATIONS & SPACING, FOR ANCHOR QUANTITIES, SEE TABLES 3 & 5.

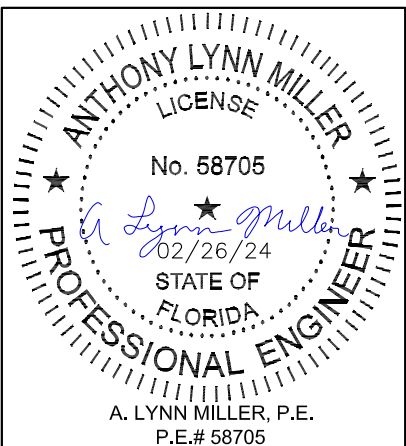
3) METAL SUBSTRATE TO MEET MIN. STRENGTH AND THICKNESS REQUIREMENTS PER CURRENT FLORIDA BUILDING CODE AND TO BE REVIEWED BY THE AUTHORITY HAVING JURISDICTION.

4) IF SILL IS TIGHT TO SUBSTRATE, GROUT OR OTHER MATERIAL IS NOT REQUIRED. IF USED, NON-SHRINK, NON-METALLIC GROUT, MAX. 1/4" THICK & 3400 PSI MIN., (DONE BY OTHERS) MUST FULLY SUPPORT THE ENTIRE LENGTH OF THE SILL THAT IS NOT TIGHT TO THE SUBSTRATE, AND TRANSFER SHEAR LOAD TO SUBSTRATE. IF SUBSTRATE IS WOOD, 30# FELT PAPER OR MASTIC IS REQUIRED BETWEEN THE GROUT AND WOOD SUBSTRATE, OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.

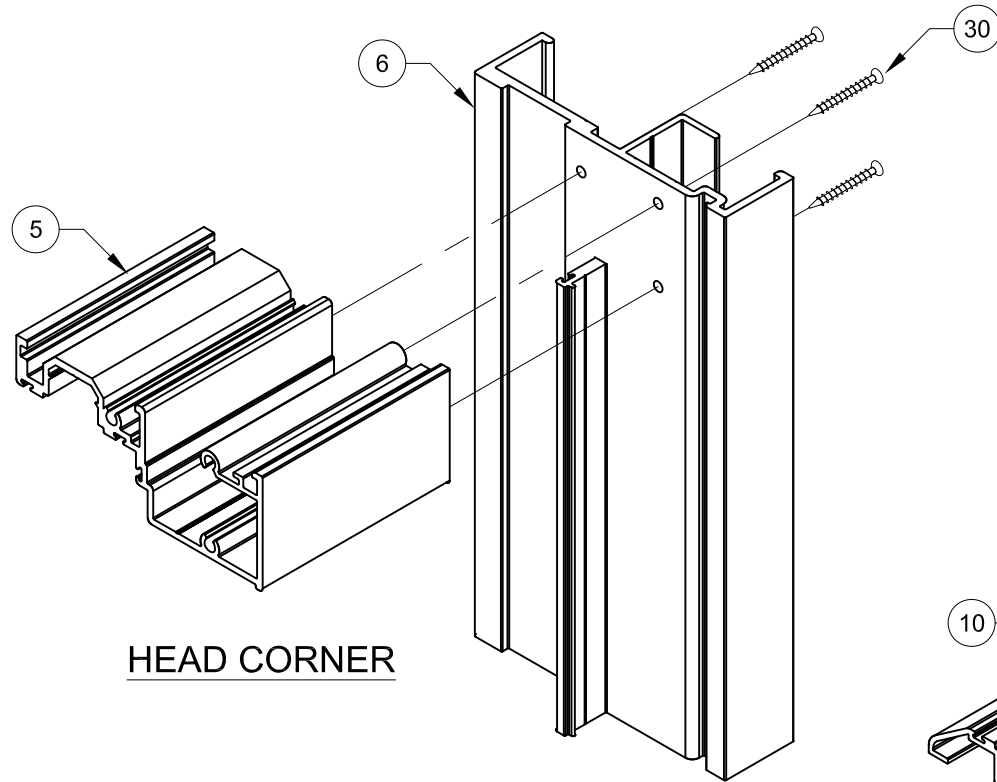
5) BEADING AND GLASS TYPE SHOWN IN DETAILS MAY VARY FROM ACTUAL. SEE GLAZING DETAILS SHEET FOR FURTHER OPTIONS.



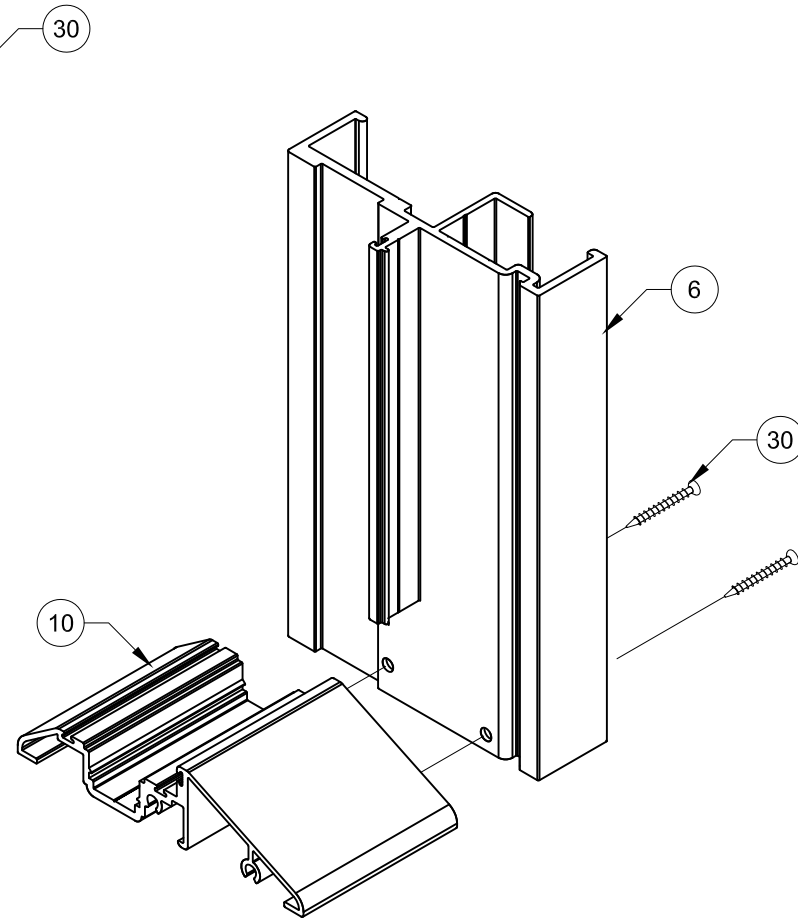
 WINDOOR		PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		
104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		REGISTRATION #29296		12/12/22
		COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.		
Title	ALUMINUM FRENCH DOOR (LM)		Date	
Desc.	X-SECTIONS (INSWING)		By	JENS ROSOWSKI
Series	FD450A	Sheet	15 OF 21	
		DWG No.	450FPA-LM-1	



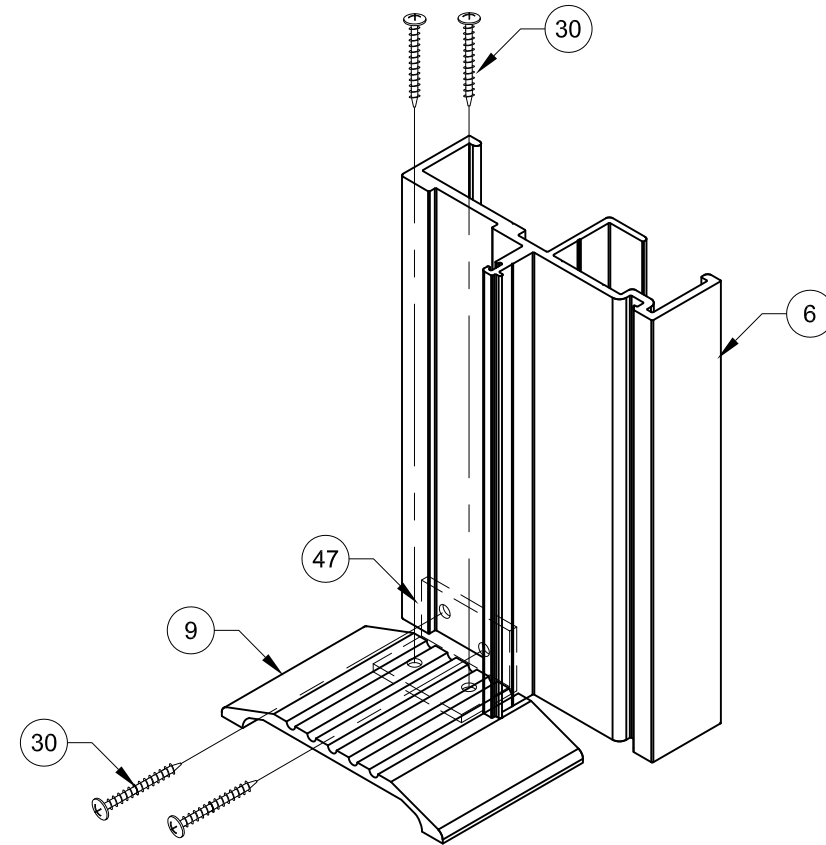
Rev.	02/22/24	D
Date		
CORRECTED SIDELITE PROFILES		



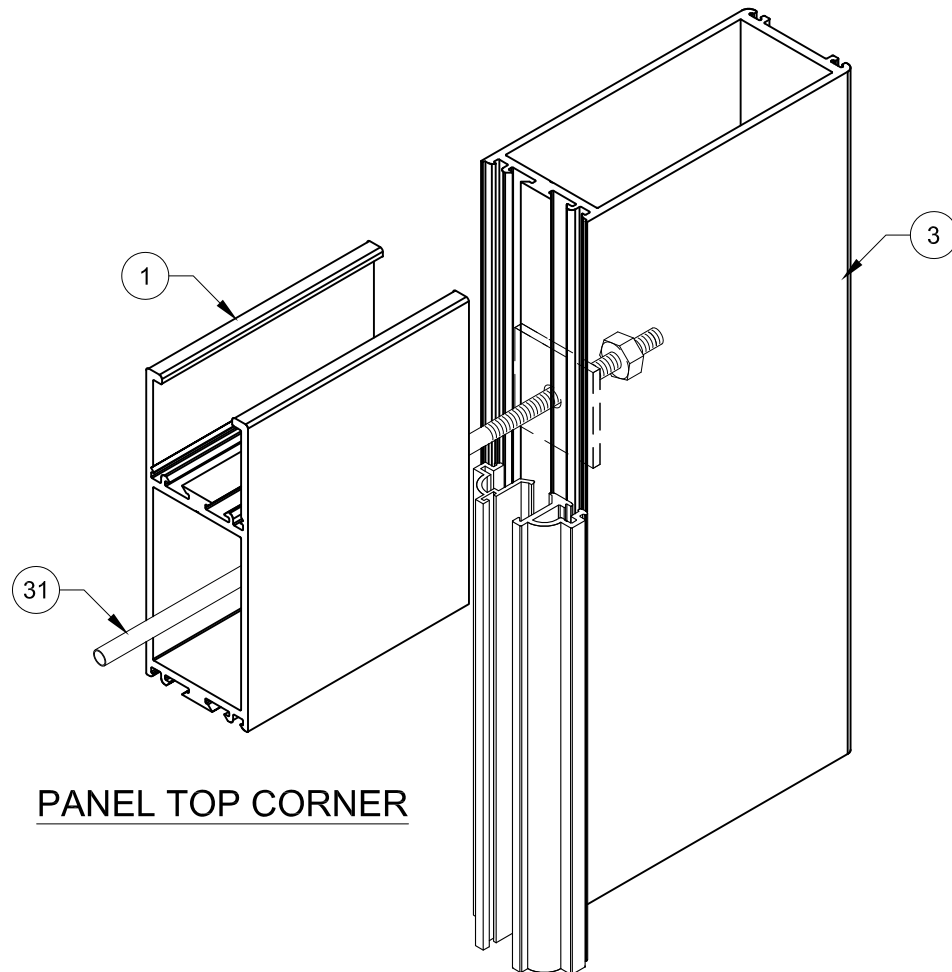
HEAD CORNER



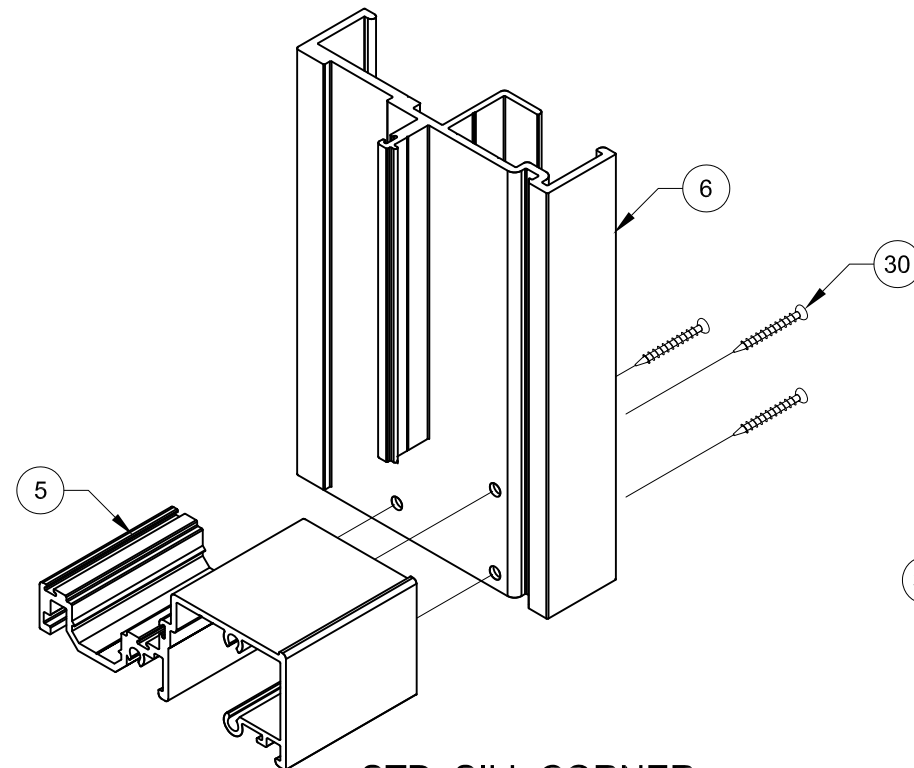
RESIDENTIAL SADDLE SILL



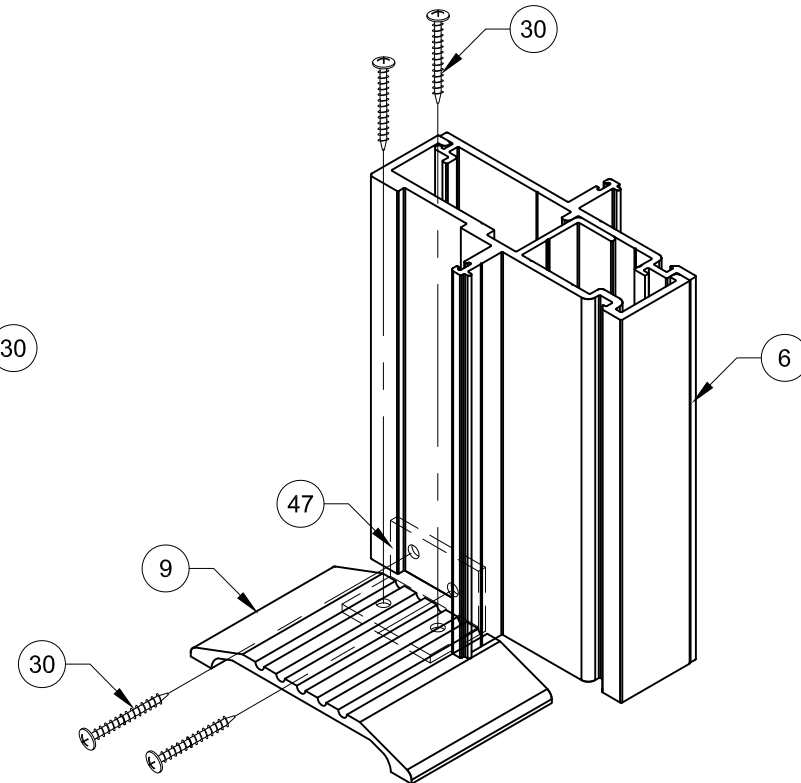
ADA SILL CORNER



PANEL TOP CORNER



STD. SILL CORNER

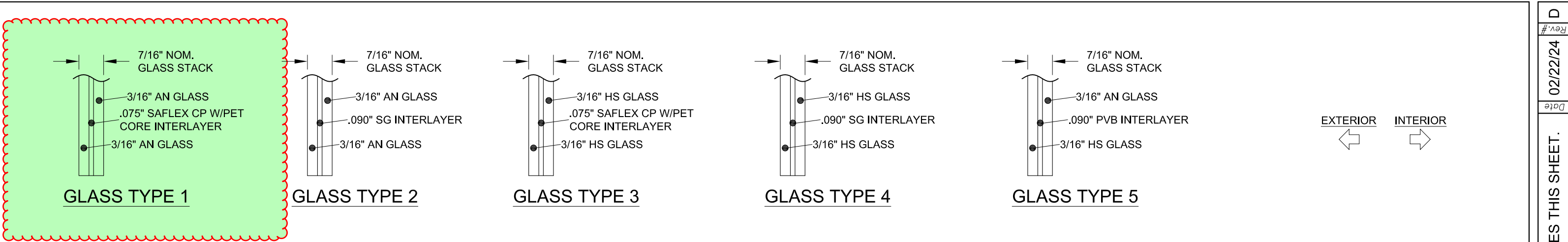


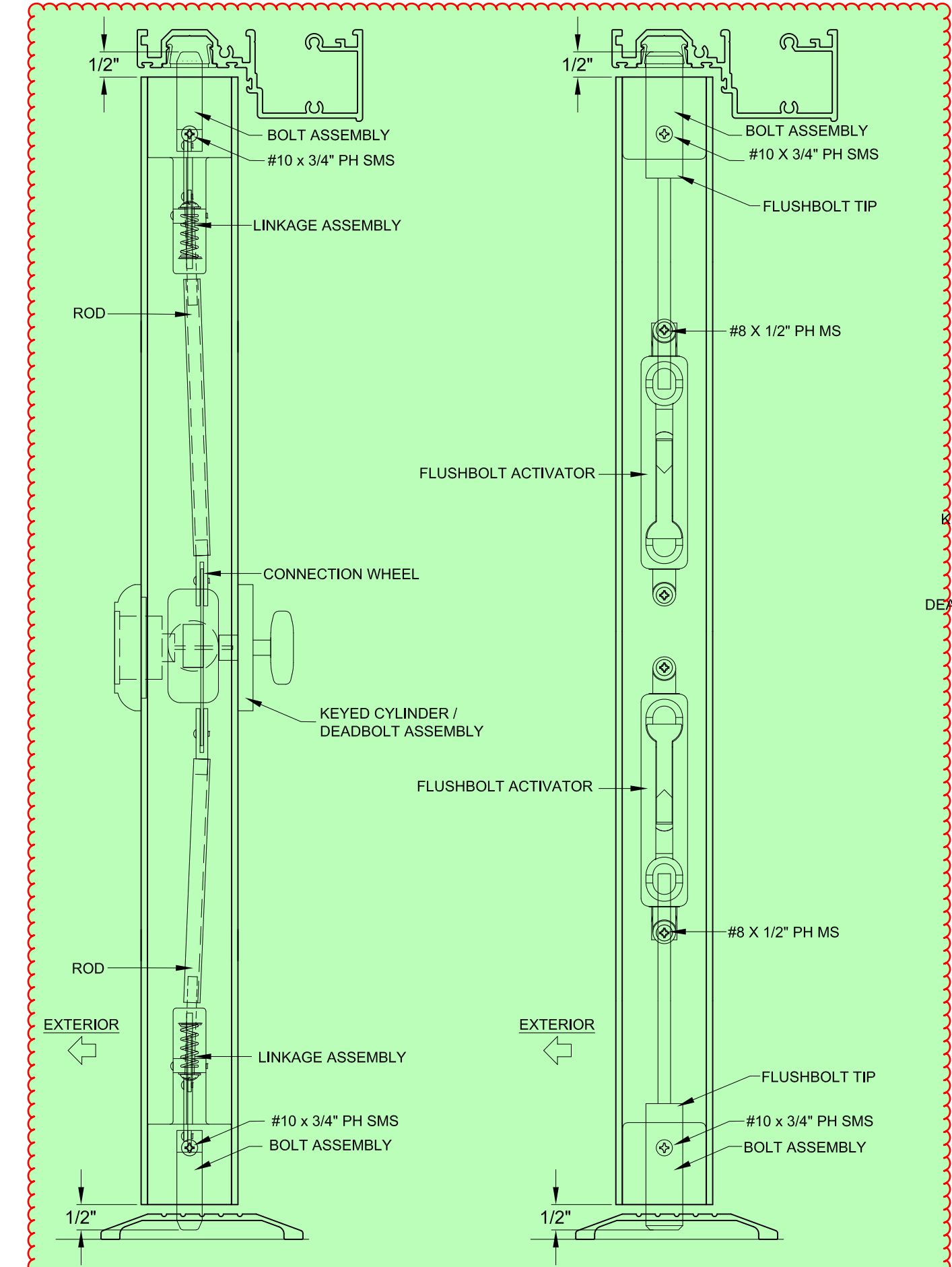
ADA SILL @ MULLION

ALL CORNERS TO BE SEALED WITH SILICONE SILPRUF OR EQUIVALENT.
DETAILS MAY BE FOR INSWING OR OUTSWING DOORS.

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		REGISTRATION #29296 COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.		12/12/22 Date	JENS ROSOWSKI By	450FPA-LM-1 No.
WINDOOR		104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		ALUMINUM FRENCH DOOR (LM) CORNER ASSEMBLY		17 OF 21 Sheet
FD450A		CORNER ASSEMBLY		JENS ROSOWSKI		450FPA-LM-1

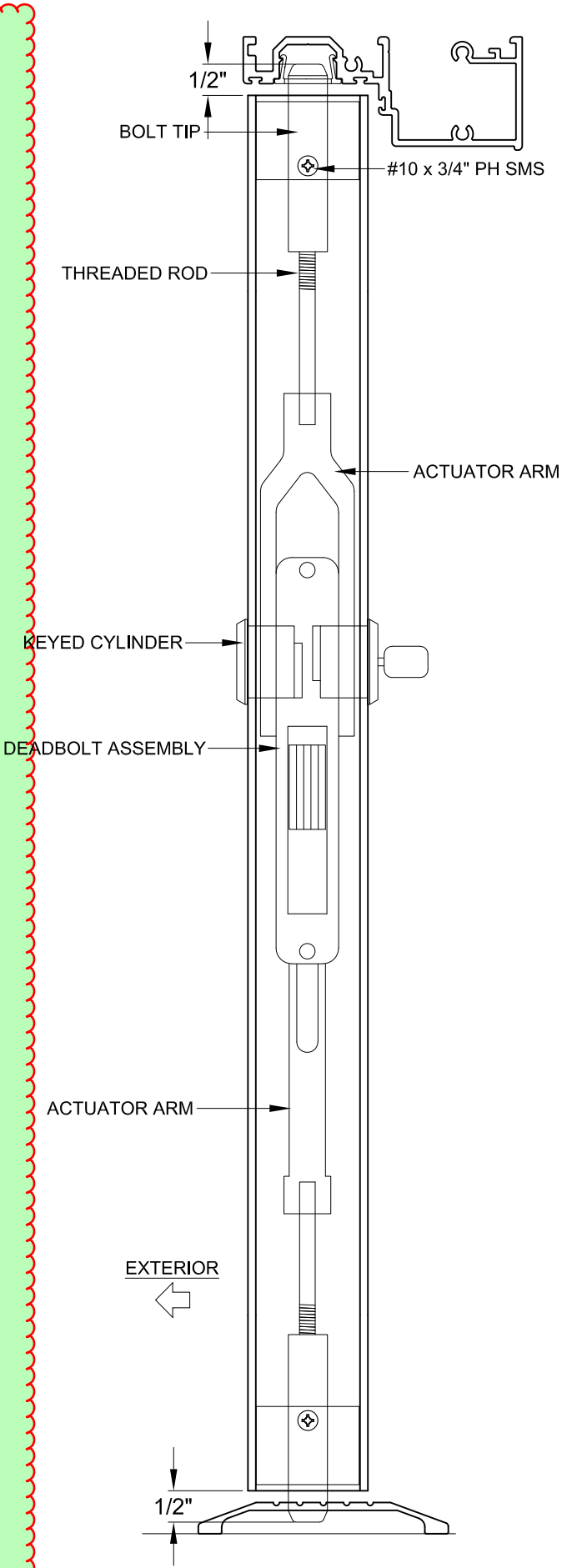
ANTHONY LYNN MILLER
 LICENSE
 No. 58705
 02/26/24
 STATE OF
 FLORIDA
 PROFESSIONAL ENGINEER
 A. LYNN MILLER, P.E.
 P.E.# 58705



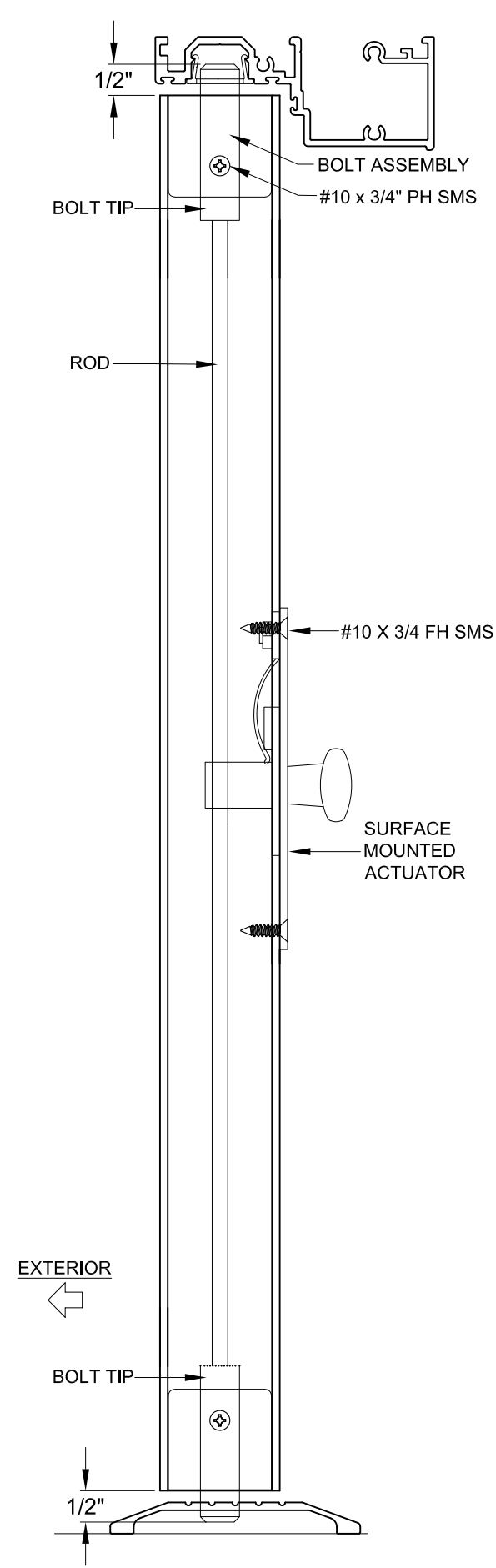


COPPER CREEK W/ 3 POINT LOCK

FLUSHBOLTS (INACTIVE PANEL)

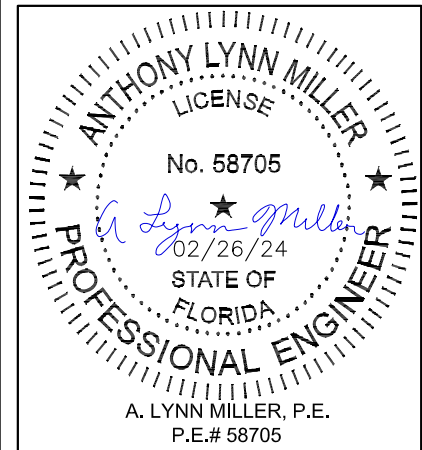


REGENT COMMERCIAL 3 POINT

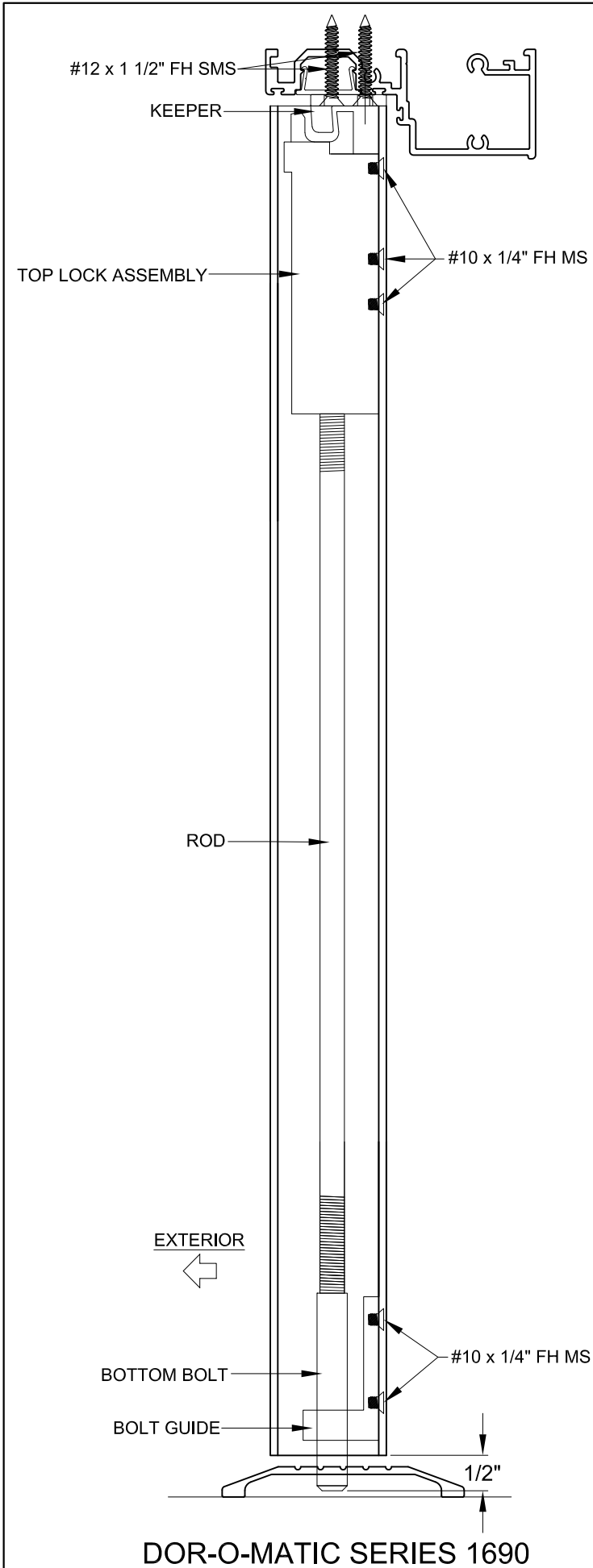


SURFACE MOUNTED LOCK

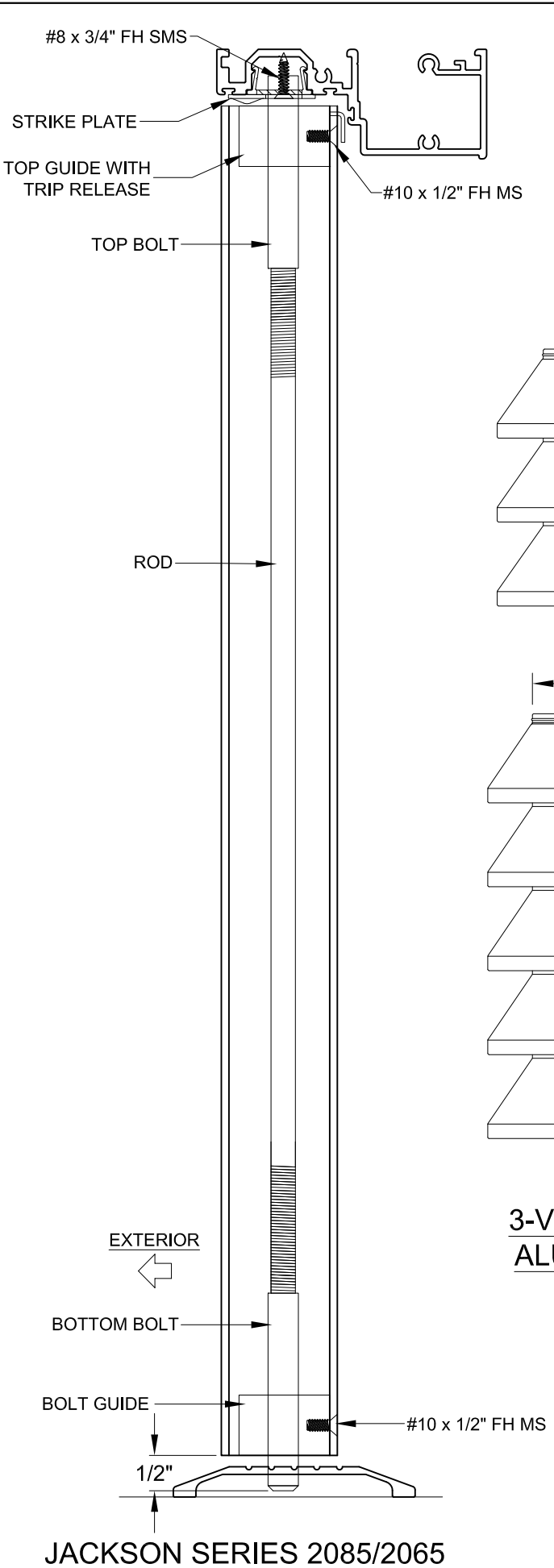
		PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600			
104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		REGISTRATION #29296		COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	
ALUMINUM FRENCH DOOR (LM)		12/12/22		Date	
HARDWARE		JENS ROSOWSKI		By	
FD450A		19 OF 21		DWG No.	
Sheet		19 OF 21		DWG No.	
Series		Desc.		Title	



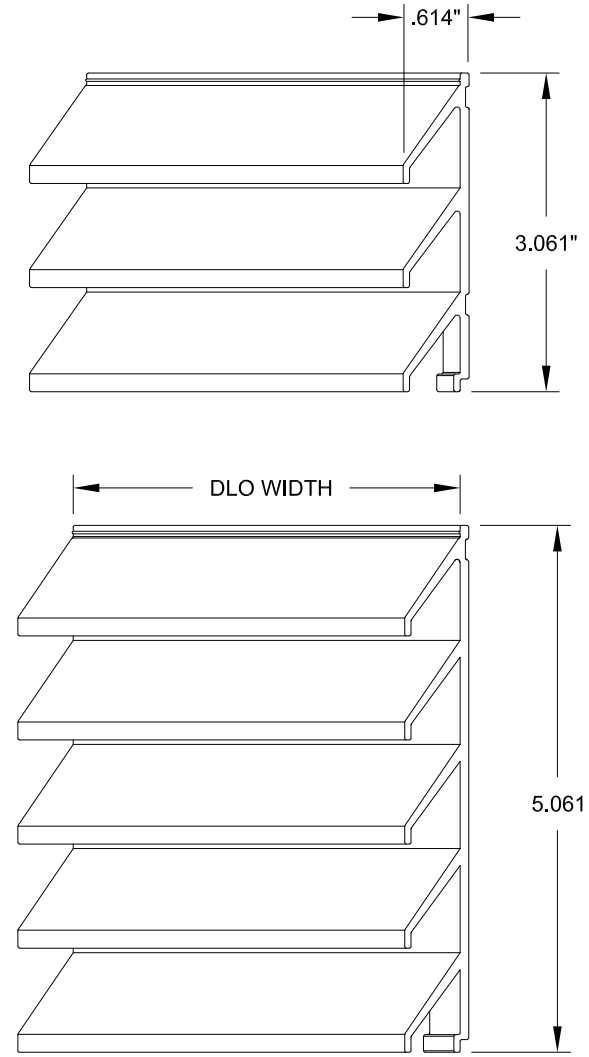
Rev.	02/22/24	D
Date	NO CHANGES THIS SHEET.	



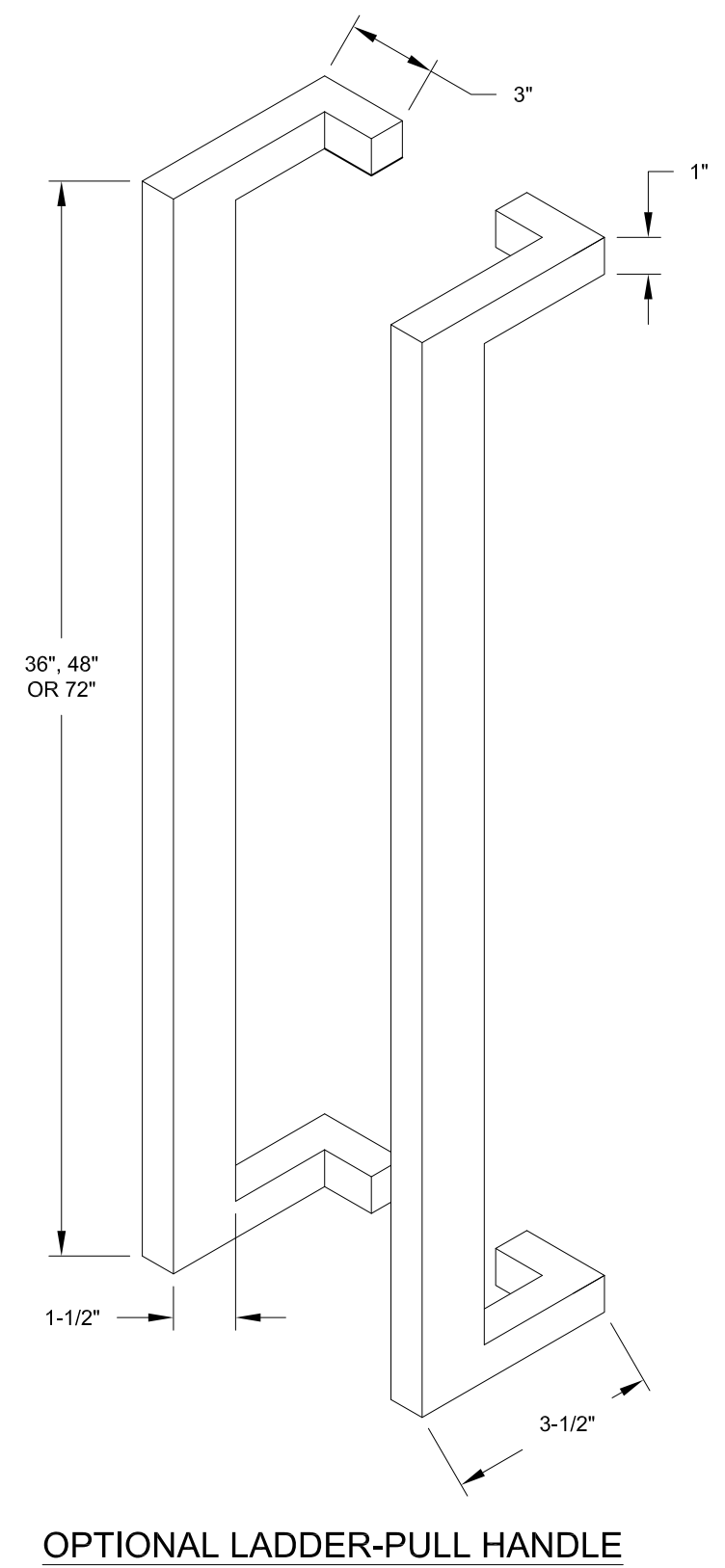
DOR-O-MATIC SERIES 1690



JACKSON SERIES 2085/2065

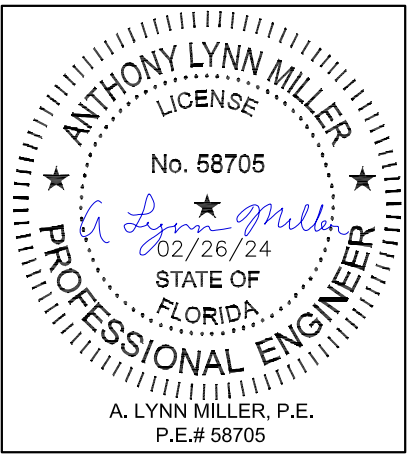


3-VENT & 5-VENT OPTIONAL
ALUMINUM FAUX LOUVERS
FOR COMPOSITE PANELS ONLY



OPTIONAL LADDER-PULL HANDLE

		PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600				REGISTRATION #29296 COPYRIGHT © 2024 WINDOOR, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.		12/12/22		JENS ROSOWSKI		450FPA-LM-1			
104 TRIPLE DIAMOND BLVD N. VENICE, FL 34275 (833) 554-5432		ALUMINUM FRENCH DOOR (LM)		Date		By		DWG		No.		20 OF 21		Sheet	
Series		Title		Desc.		Hardware		FD450A		20 OF 21		Sheet		DWG	

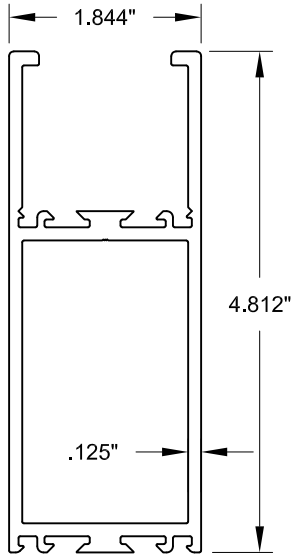


Rev.	02/22/24	D
Date	02/22/24	
Rev.	02/22/24	
Date	02/22/24	
Rev.	02/22/24	
Date	02/22/24	

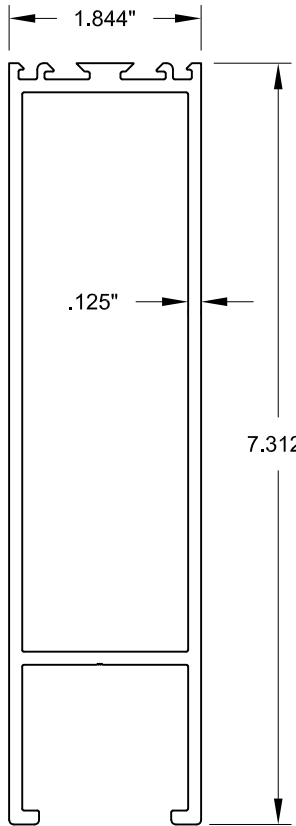
NO CHANGES THIS SHEET.

TABLE C:

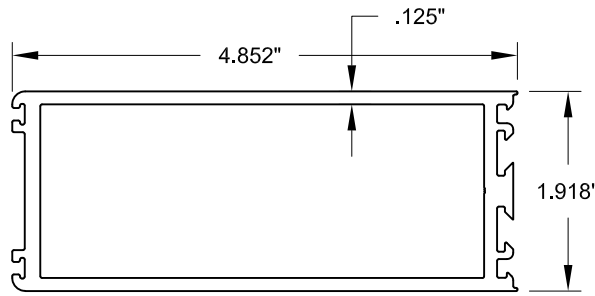
ITEM #	PART #	DESCRIPTION	MATERIAL
1	500a	Top Rail	ALUM. 6063-T6
2	501	Bottom Rail	ALUM. 6063-T6
3	502	Jamb / Lock / Sidelite Stile	ALUM. 6063-T6
4	503	Narrow Sidelite Stile	ALUM. 6063-T6
5	507	Door Frame Head / Sill	ALUM. 6063-T6
6	509	Framb Jamb / Mullion	ALUM. 6063-T6
7	510	Sidelite Mullion	ALUM. 6063-T6
8	514	Horizontal Muntin	ALUM. 6063-T6
9	540	Commercial/ADA Saddle Threshold	ALUM. 6063-T6
10	539	Residential Saddle Threshold	ALUM. 6063-T6
11	508	Frame Cover	ALUM. 6063-T5
12	505	Astragal	ALUM. 6063-T5
13	511	Jamb Cover	ALUM. 6063-T5
14	505	Shear Clip	ALUM. 6063-T5
15	506	Transom Channel	ALUM. 6063-T6
20	375	Mono. / I.G. Ogee Beading	ALUM. 6063-T5
21	504	Monolithic IG Stop	ALUM. 6063-T6
22	515	I.G. Stop	ALUM. 6063-T6
23	396	Mono. / I.G. Square Beading	ALUM. 6063-T5
24	519	Monolithic Square Stop	ALUM. 6063-T6
30		#12 x 1-1/4" Ph. SMS (Frame Assembly)	Stainless Steel
31		3/8"-16 Threaded Rod	Steel
32		3/8"-16 Hex Nut	Steel
33		1-1/2 x 1-1/2" x 3/16" Aluminum Plate	Aluminum
34		Weephole Cover	PVC
35		#10 x 1" Ph. PH SDS (Sidelite Attachment)	Stainless Steel
36		#14 x 3/4" HH SDS (Mullion Assembly)	Stainless Steel
37		0.320" Woolpile (Ultrafab 3032)	-
38		0.350" Foam-filled Bulb (Amesbury 32011)	-
39		1/2" x 1/2" Adhesive Closed Cell Foam Pad	-
40	382	Glazing Bead Vinyl	Vinyl
41		Backbedding, GE-1200, Dow 791, 899, 983, 995	Silicone
42		Setting Block	
43		Insulated Glass Spacer	-
45		Hinge, 4" x 4-1/2"	Stainless Steel
46		12-24 x 1/2" Thread-cutting SMS (Hinge)	Stainless Steel
47		2" x 2" x 1/4" Angle	Aluminum



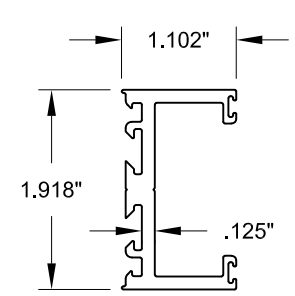
1 TOP RAIL



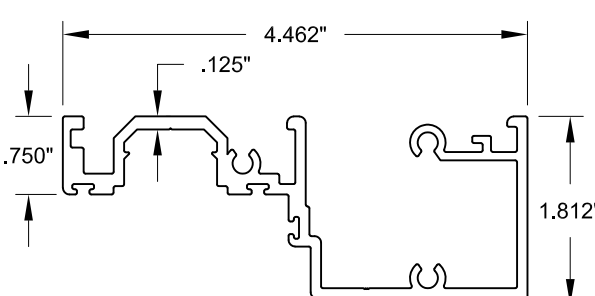
2 BOTTOM RAIL



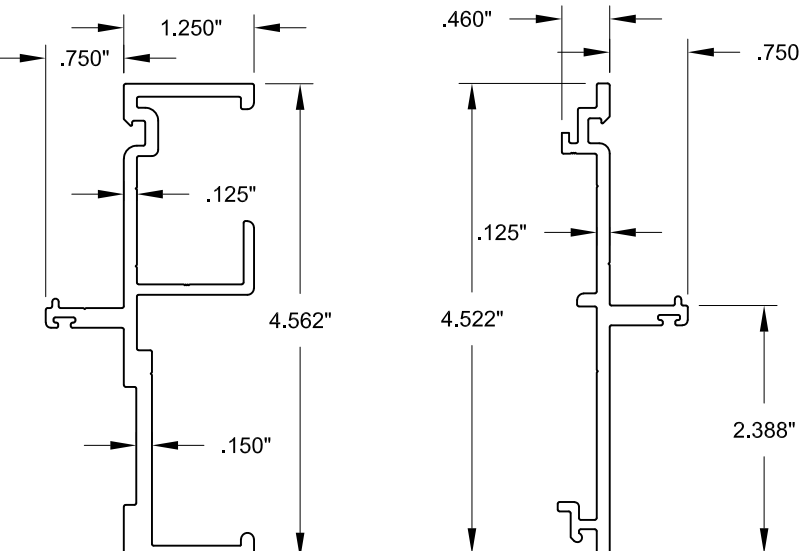
3 JAMB/LOCK/SIDELITE STILE



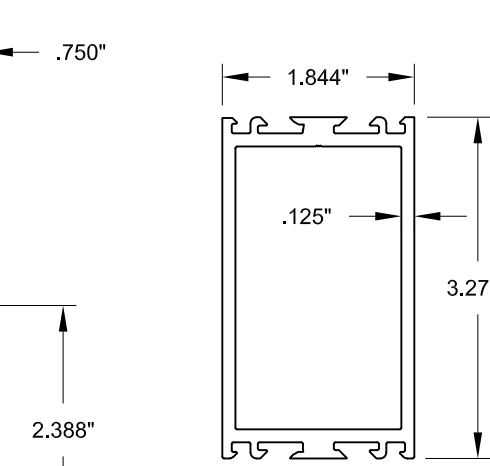
4 NARROW SIDELITE STILE



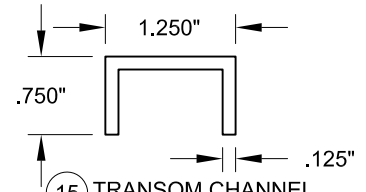
5 DOOR FRAME HEAD/SILL



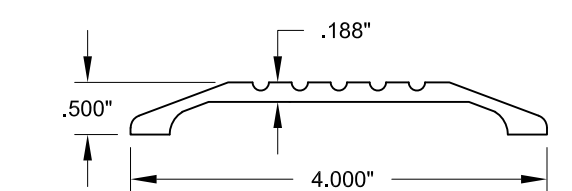
6 FRAME JAMB/MULLION



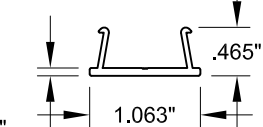
7 SIDELITE MULLION



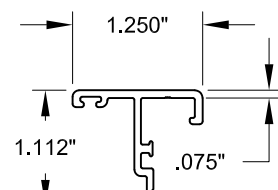
8 HORIZONTAL MUNTIN



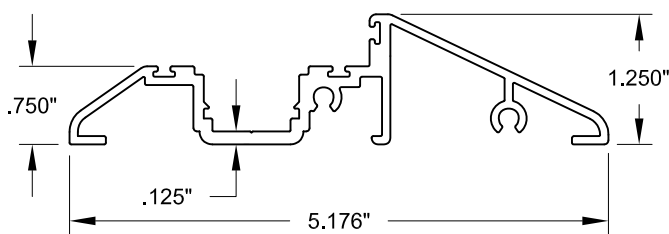
9 COMMERCIAL/ADA SADDLE THRESHOLD



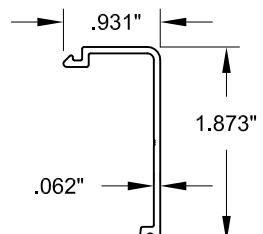
11 FRAME COVER



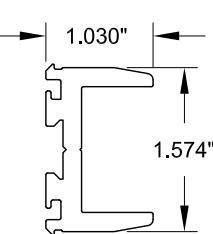
12 ASTRAGAL



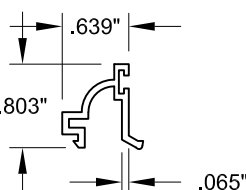
10 RESIDENTIAL SADDLE THRESHOLD



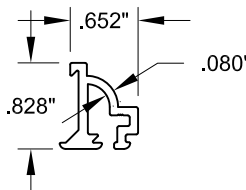
13 JAMB COVER



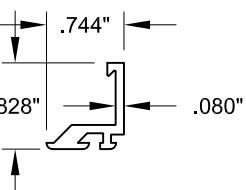
14 SHEAR CLIP



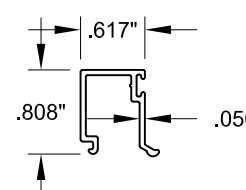
20 MONO. / I.G. OGEE BEADING



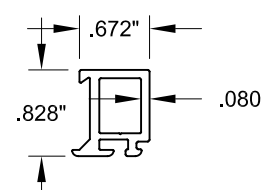
21 MONOLITHIC OGEE STOP



22 I.G. STOP



23 MONO. / I.G. SQUARE BEADING



24 MONOLITHIC SQUARE STOP



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

REGISTRATION #29296
COPYRIGHT © 2024 WINDOOR, INC., LIMITED
LICENSE TO MAKE COPIES FOR PERMITTING.

12/12/22

ALUMINUM FRENCH DOOR (LM)

BOM AND EXTRUSIONS

FD450A

JENS ROSOWSKI

450FPA-LM-1

ANTHONY LYNN MILLER

LICENSE

No. 58705

02/26/24

STATE OF FLORIDA

PROFESSIONAL ENGINEER

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