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

FLORIDA PRODUCT APPROVAL #28750

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

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 WITH WOOD AS PER TABLE A. ALL WOOD BUCKS LESS THAN 1 - 1/2" THICK ARE TO BE CONSIDERED AS INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DENOTED AS 2X ARE 1-1/2" THICK OR GREATER. 1X AND 2X BUCKS MAY BE USED. ANY BUCK 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 BUILDING PLANNING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.

5) SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT PLUMB TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD SHIMS, 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 EXPRESS REQUIREMENTS OF THE FBC, AS APPLICABLE. ALL CONFIGURATIONS SHOWN ARE AVAILABLE AS MULTIPLE PANELS. MAXIMUM OVERALL FRAME SQUARE FOOTAGE FOR VERTICAL SELF-ANCHORED SYSTEMS IS 120 FT² FOR SYSTEMS USING A TRANSOM, SEE SHEET 4 FOR LIMITATIONS FOR LARGER WIDER USE STRUCTURAL MULLIONS FROM SEPARATE APPROVAL.

TABLE A

Anchor Group	Anchor Type	Substrate	Anchor Location	Min. Embedment	Min. Edge Distance
A	1/4" DekWall 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 (Qt. 6) (Min. of 3 Heads Beyond subunits.)	Aluminum, 6063-T6		1/8"	1"
		Steel, A36		0.077" (14 Ga.)	1"
		Steel Stud, 43mil (Sc. 33)		0.077" (14 Ga.)	1"
B	1/4" DekWall UltraCon+	Concrete (min. 3.0 ksi)	Head & Sill	1-3/4"	2-1/2"
C	5/16" DekWall UltraCon	Concrete (min. 3.0 ksi)	ADA Sill (Fig 6)	1-3/4"	3-1/8"
D	#14 Steel SMS (Qt. 6)	Southern Pine (SG = 0.55)	Stile (Fig 5 or 10)	1-3/8"	1"

* ALL ANCHOR HEAD TYPES ARE APPLICABLE. FLATHEAD RECOMMENDED FOR ADA SILL.

TABLE 1

Lock Design Pressures, PSF

Lock Type	Description	Door Frame Height							
		80-3/4"		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	150.0	110.0	150.0	110.0	130.0	110.0	110.0	70.0
3	Regent Commercial with 3-Point Lock	150.0	110.0	150.0	110.0	130.0	110.0	110.0	70.0
4	Baldwin Single Point Lock	95.0	95.0	95.0	95.0	-	-	-	-
5	Copper Creek Single Point Lock	95.0	95.0	95.0	95.0	-	-	-	-
6	Imron-O-Matic, Series 1000	80.0	80.0	70.0	70.0	-	-	-	-
7	Jackson, Series 2000-3000	95.0	90.0	70.0	70.0	-	-	-	-
8	Surface Mounted Lock	150.0	110.0	90.0	90.0	90.0	90.0	70.0	70.0

1) LOCK TYPES 5 & 7 ARE NOT AVAILABLE FOR INSWING CONFIGURATIONS
2) LADDER PULL HANDLE MAY BE USED WITH LOCK TYPES 3 OR 5.

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 DIFFERENT PARTS MUST FIRST BE INDEPENDENT, 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 (A) AND STAND-ALONE SIDELITES (C), DETERMINE THE DESIGN PRESSURE BASED ON YOUR GLASS TYPE FROM TABLE 2.

D) FOR DOUBLE DOORS (A-C), 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 (C) 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 ALL OF ABOVE SHALL CONTROL THE ENTIRE SYSTEM.

FIGURE 1



DOOR 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



GUIDE TO SHEETS

GENERAL NOTES	1
DESIGN PRESSURE TABLES	2-3
ANCHOR LOCATIONS	4-7
INSTALLATION, OUTSWING	8-11
INSTALLATION, INSWING	12-15
TRANSOM ARRANGEMENT DETAILS	16
FRAME ASSEMBLY	17
GLAZING DETAILS	18
HARDWARE DETAILS	19-20
EXTRUSION PROFILES	21
BILL OF MATERIALS	21

10/2/2024	JENS ROSKWAG	4	10/2/24	FD450A	1

NO CHANGES THIS SHEET...

WINDOOR

ALUMINUM FRENCH DOOR (SWING)

GENERAL NOTES

FD450A

ANTHONY LYNN MILLER LICENSE No. 66706 STATE OF FLORIDA PROFESSIONAL ENGINEER

A. LYNN MILLER, P.E.
P.E. #66706

TABLE 2:

SINGLE DOOR (L AND/OR R)(ABLITES) (C) DESIGN PRESSURES, PSF DUE TO GLAZING

ABLE DOOR (L) OR SIDE (R) WIDTH	FRAME HEIGHT	GLASS TYPES 1, 2, 3, 8 & COMPOSITE PANELS		GLASS TYPES 5 & 7		GLASS TYPES 6 & 9	
		EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
20-8/16"	82-3/4"	100.0	110.0	70.0	70.0	80.0	80.0
32-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
44-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
56-8/16"		94.2	94.2	70.0	70.0	80.0	80.0
20-8/16"	94-3/4"	100.0	110.0	70.0	70.0	80.0	80.0
32-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
44-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
56-8/16"		94.2	94.2	70.0	70.0	80.0	80.0
20-8/16"	94-3/4"	100.0	110.0	70.0	70.0	80.0	80.0
32-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
44-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
56-8/16"		94.2	94.2	70.0	70.0	80.0	80.0
20-8/16"	106-3/4"	100.0	110.0	70.0	70.0	80.0	80.0
32-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
44-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
56-8/16"		94.2	94.2	70.0	70.0	80.0	80.0
20-8/16"	106-3/4"	100.0	110.0	70.0	70.0	80.0	80.0
32-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
44-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
56-8/16"		94.2	94.2	70.0	70.0	80.0	80.0
20-8/16"	118-3/4"	100.0	110.0	70.0	70.0	80.0	80.0
32-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
44-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
56-8/16"		94.2	94.2	70.0	70.0	80.0	80.0
20-8/16"	130-3/4"	100.0	110.0	70.0	70.0	80.0	80.0
32-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
44-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
56-8/16"		94.2	94.2	70.0	70.0	80.0	80.0
20-8/16"	142-3/4"	100.0	110.0	70.0	70.0	80.0	80.0
32-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
44-8/16"		100.0	110.0	70.0	70.0	80.0	80.0
56-8/16"		94.2	94.2	70.0	70.0	80.0	80.0

* NARROW STILE SIDELITES LIMITED TO 15" FRAME WIDTH OR LESS
** GLASS LIMITED TO 66-3/4" FRAME HEIGHT. TALLER HEIGHTS REQUIRE 4 TRUE MUNTIN

TABLE 3:

DESIGN PRESSURES, PSF (+/-) SIDELITES DUE TO WINDBORNE TYPE

ANCHOR TYPE → (SEE SHEET 9 FOR LOCATIONS)		A @ HEAD			B @ HEAD STD. SILL & REG. SILL		B @ HEAD, C @ CONC SILL & D @ WTD. & REG. SILL	
WIDTH "W"	FRAME HEIGHT	3 ANCHORS	4 ANCHORS	6 ANCHORS	3 ANCHORS	4 ANCHORS	3 ANCHORS	4 ANCHORS
24"	82-3/4"	146.1	110.0	110.0	110.0	110.0	110.0	110.0
30"		96.0	110.0	110.0	110.0	110.0	110.0	110.0
36"		72.0	96.4	110.0	108.0	110.0	101.0	110.0
42"		53.1	82.0	110.0	94.2	110.0	87.0	110.0
24"	94-3/4"	108.2	110.0	110.0	110.0	110.0	110.0	110.0
30"		94.2	110.0	110.0	110.0	110.0	110.0	110.0
36"		70.0	94.1	110.0	105.7	110.0	99.7	110.0
42"		60.0	81.1	110.0	91.9	110.0	85.0	108.7
24"	82-3/4"	97.0	110.0	110.0	110.0	110.0	110.0	110.0
30"		70.9	104.2	110.0	110.0	110.0	108.8	110.0
36"		60.0	97.0	110.0	98.7	110.0	92.7	110.0
42"		54.0	75.7	110.0	20.9	110.0	79.4	101.5
24"	94-3/4"	91.2	110.0	110.0	110.0	110.0	110.0	110.0
30"		73.7	96.3	110.0	110.0	110.0	103.0	110.0
36"		61.9	82.5	110.0	93.9	110.0	86.6	110.0
42"		53.1	71.0	108.3	80.5	107.4	75.4	96.2
24"	106-3/4"	83.8	110.0	110.0	110.0	110.0	110.0	110.0
30"		69.4	92.9	110.0	104.9	110.0	97.0	110.0
36"		59.2	77.2	110.0	86.6	110.0	81.4	104.1
42"		53.2	66.8	102.5	75.8	101.1	70.1	89.6
24"	118-3/4"	97.2	106.2	110.0	110.0	110.0	110.0	110.0
30"		65.6	87.5	110.0	99.2	110.0	91.7	110.0
36"		55.9	73.8	110.0	83.2	110.0	78.9	98.2
24"	130-3/4"	79.8	102.6	110.0	110.0	110.0	107.0	110.0
30"		62.2	82.9	110.0	94.0	110.0	88.9	110.0
36"		52.2	68.5	104.3	78.8	105.1	73.9	93.2
24"	142-3/4"	73.1	97.3	110.0	110.0	110.0	102.2	110.0
30"		59.1	78.8	110.0	89.1	110.0	82.5	105.8
36"		49.6	66.1	99.1	74.6	99.6	69.2	88.6

WIDTH "W" = PANEL WIDTH + ADJACENT PANEL WIDTH / 2 × (.25)

NOTES:

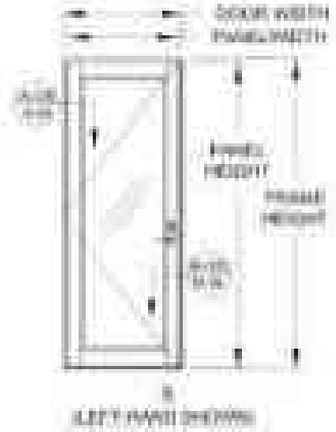
1) CHECK THE ALLOWABLE DESIGN PRESSURES FROM THE APPROPRIATE TABLES OF ALL SHEETS PER THE INSTRUCTIONS ON SHEET 1. THE LOWEST DESIGN PRESSURE FROM ALL SHALL CONTROL THE ENTIRE SYSTEM.

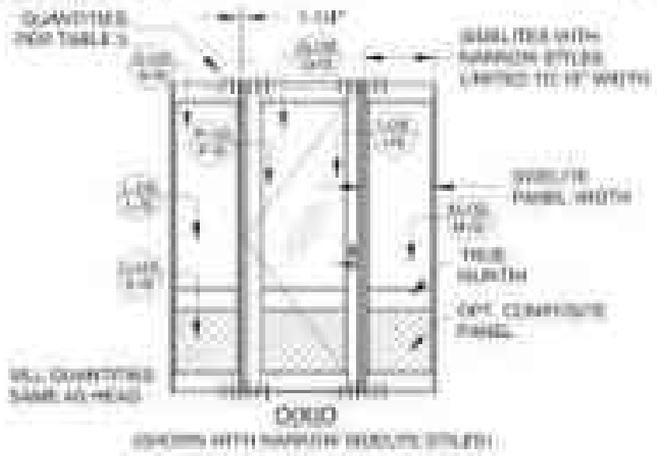
2) EXAMPLE CONFIGURATIONS SHOWN. SIMILAR CONFIGURATIONS ALLOWED. DOORS MAY BE LEFT OR RIGHT HANDED, INSWING OR OUTSWING & LOAD BAR LOCK FROM TABLE 1.

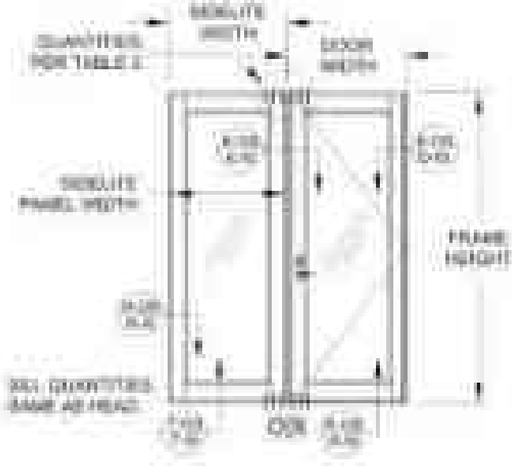
3) "OS" = OUTSWING, "IS" = INSWING. SEE DETAILS ON SHEETS 9-11 & 16 (OUTSWING) & 12-15 (INSWING).

4) IF TABLE 3 REQUIRES 3 ANCHORS (INSTALL) @ THE DOOR AND 3 @ THE SIDELITE OTHERWISE SPLIT QUANTITY EVENLY.









PREPARED BY: A. LYNN MILLER 2000 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 493-9000	
	10/10/2024
	JEWS RDSWG
	4607PA(M) I
	10/22/2024
	NO CHANGES THIS SHEET
	ID
ALUMINUM FRENCH DOOR (1AB)	
DESIGN PRESSURE TABLES	
FD4SGA	3 OF 21



TABLE 4

DOUBLE DOOR (IA) DESIGN PRESSURES PSF DUE TO GLAZING

DBL DOOR SIS WIDTH	FRAME HEIGHT	GLASS TYPES 1, 2, 3, 4 & COMPOSITE (CMBLE		GLASS TYPES 5 & 6 †		GLASS TYPES 5 & 6 ‡	
		EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
36-1/2"	82-3/4"	109.0	110.0	79.0	79.0	86.0	86.0
52-1/2"		108.0	110.0	78.0	78.0	86.0	86.0
74-1/2"		108.0	110.0	78.0	78.0	86.0	86.0
96-1/2"		84.2	84.2	78.0	78.0	86.0	86.0
40-1/2"	94-3/4"	108.0	110.0	78.0	78.0	86.0	86.0
52-1/2"		108.0	110.0	78.0	78.0	86.0	86.0
74-1/2"		108.0	110.0	78.0	78.0	86.0	86.0
96-1/2"		84.2	84.2	78.0	78.0	86.0	86.0
36-1/2"	94-3/4"	100.0	110.0	78.0	78.0	86.0	86.0
52-1/2"		108.0	110.0	78.0	78.0	86.0	86.0
74-1/2"		108.0	110.0	78.0	78.0	86.0	86.0
96-1/2"		84.2	84.2	78.0	78.0	86.0	86.0
36-1/2"	86-3/4"	108.0	110.0	78.0	78.0	86.0	86.0
52-1/2"		108.0	110.0	78.0	78.0	86.0	86.0
74-1/2"		108.0	110.0	78.0	78.0	86.0	86.0
96-1/2"		84.9	84.9	84.9	84.9	-	-
36-1/2"	102-3/4"	109.0	110.0	78.0 **	78.0 **	-	-
52-1/2"		108.0	110.0	78.0 **	78.0 **	-	-
74-1/2"		108.0	110.0	78.0 **	78.0 **	-	-
96-1/2"		84.9	84.9	84.9 **	84.9 **	-	-
36-1/2"	118-3/4"	108.0	110.0	78.0 **	78.0 **	-	-
52-1/2"		108.0	110.0	78.0 **	78.0 **	-	-
74-1/2"		108.0	110.0	78.0 **	78.0 **	-	-
96-1/2"		78.2	78.0	78.0 **	78.0 **	-	-
40-1/2"	114-3/4"	78.0	78.0	78.0 **	78.0 **	-	-
74-1/2"		78.0	78.0	78.0 **	78.0 **	-	-
96-1/2"		78.0	78.0	78.0 **	78.0 **	-	-
40-1/2"	126-3/4"	78.0	78.0	78.0 **	78.0 **	-	-
74-1/2"		78.0	78.0	78.0 **	78.0 **	-	-

** GLASS LIMITED TO 84-3/4" FRAME HEIGHT. TALLER HEIGHTS REQUIRE 4 RIGID MUNTIN

TABLE 5

DESIGN PRESSURES PSF @ 4/4 DOOR MEETING STILE DUE TO ANCHORAGE

ANCHOR TYPE → (SEE SHEET 9 FOR LOCATIONS)		4 @ HEAD			6 @ HEAD STD. SILL & R&S SILL		8 @ HEAD, 2 @ CONC SILL & 2 @ STD. & R&S SILLS	
DBL DOOR SIS WIDTH	FRAME HEIGHT	a ANCHORS	a ANCHORS	β ANCHORS	δ ANCHORS	ε ANCHORS	β ANCHORS	ε ANCHORS
36-1/2"	82-3/4"	108.7	110.0	110.0	110.0	110.0	110.0	110.0
52-1/2"		96.2	110.0	110.0	110.0	110.0	100.7	110.0
74-1/2"		72.0	96.4	110.0	108.3	110.0	84.3	110.0
96-1/2"		55.2	83.0	103.6	84.2	110.0	72.2	97.6
40-1/2"	94-3/4"	104.2	110.0	110.0	110.0	110.0	110.0	110.0
52-1/2"		94.2	110.0	110.0	110.0	110.0	98.4	110.0
74-1/2"		72.0	94.1	110.0	106.7	110.0	82.5	108.0
96-1/2"		55.8	81.1	101.4	81.8	110.0	71.1	94.8
36-1/2"	86-3/4"	97.2	110.0	110.0	110.0	110.0	110.0	110.0
52-1/2"		75.6	103.5	110.0	110.0	110.0	91.9	110.0
74-1/2"		53.8	87.8	109.8	89.7	110.0	77.1	102.7
96-1/2"		36.8	73.7	94.7	82.4	110.0	69.4	90.5
36-1/2"	98-3/4"	91.2	110.0	110.0	110.0	110.0	106.8	110.0
52-1/2"		73.7	98.2	110.0	110.0	110.0	88.2	110.0
74-1/2"		51.9	82.5	103.1	83.5	110.0	73.3	96.4
96-1/2"		33.3	71.0	90.8	80.0	107.4	68.3	83.6
36-1/2"	102-3/4"	85.4	110.0	110.0	110.0	110.0	103.4	110.0
52-1/2"		68.4	90.9	110.0	104.9	110.0	81.1	108.2
74-1/2"		46.2	77.2	97.1	86.8	110.0	68.1	90.1
96-1/2"		29.2	66.9	83.5	75.8	101.1	58.8	78.2
36-1/2"	114-3/4"	81.2	108.2	110.0	110.0	110.0	94.6	110.0
52-1/2"		63.6	87.5	109.5	99.2	110.0	78.7	102.3
74-1/2"		42.0	72.4	91.7	81.2	110.0	64.3	85.7
96-1/2"		26.9	62.4	110.0	110.0	110.0	55.9	110.3
40-1/2"	118-3/4"	62.7	82.9	103.8	94.9	110.0	72.6	96.8
74-1/2"		38.2	68.5	86.9	76.6	105.1	60.5	81.3
96-1/2"		23.1	57.5	110.0	110.0	110.0	55.9	110.0
52-1/2"	126-3/4"	55.1	78.8	98.5	89.3	110.0	68.6	92.0
74-1/2"		45.8	64.1	82.5	72.3	99.8	57.9	77.2

WIDTH "W" = PANEL WIDTH + ADJACENT PANEL WIDTH + (.250 / 2)

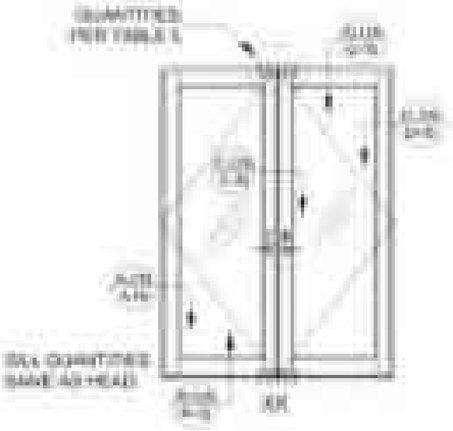
NOTES:

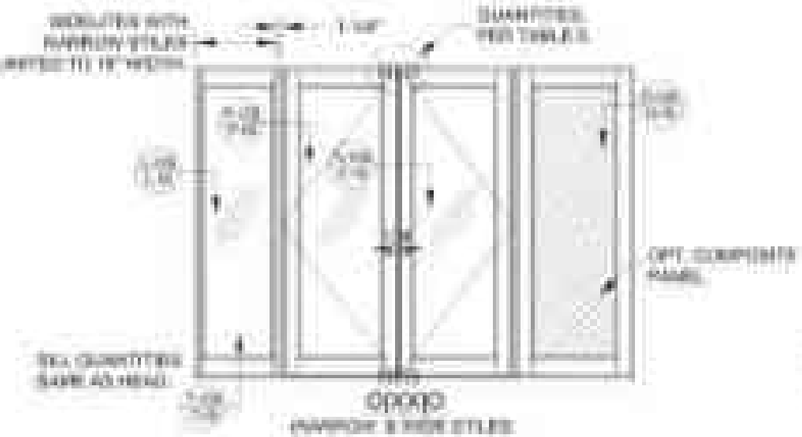
1) CHECK THE ALLOWABLE DESIGN PRESSURES FROM THE APPROPRIATE TABLES OF ALL SHEETS PER THE INSTRUCTIONS ON SHEET 1. THE LOWEST DESIGN PRESSURE FROM ALL SHALL CONTROL THE ENTIRE SYSTEM.

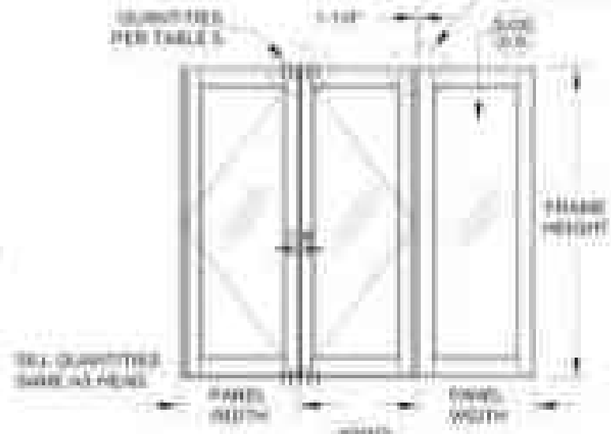
2) EXAMPLE CONFIGURATIONS SHOWN. SIMILAR CONFIGURATIONS ALLOWED. DOORS MAY BE LEFT OR RIGHT HANDED, HEADING OR OUTSWING & USE ANY LOCK FROM TABLE 1.

3) "OXO" = OUTSWING "O" = HEADING. SEE DETAILS ON SHEETS 9-11 & 15 (OUTSWING) & 13-15 (HEADING)







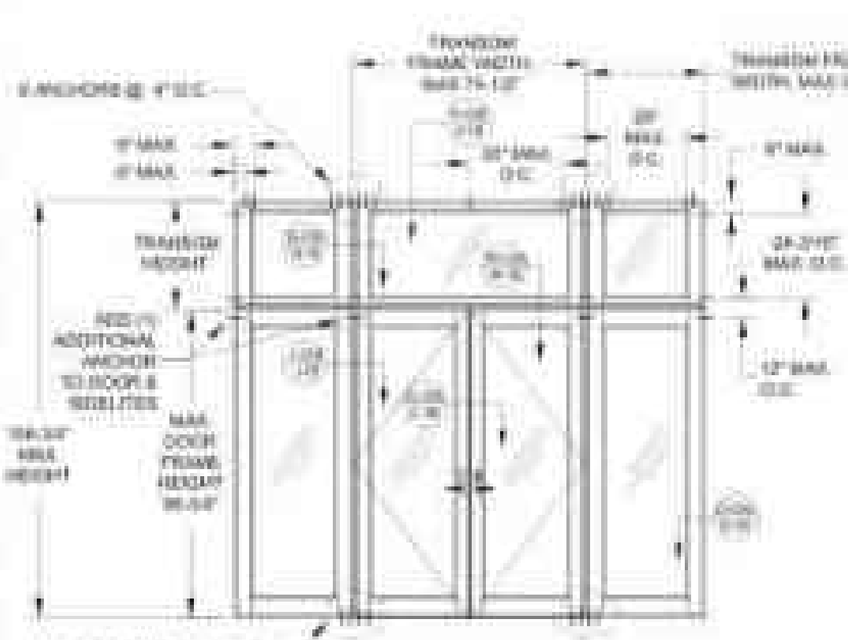


NO CHANGES THIS SHEET	12/2/2024	D	
JENS ROSS/WSRD			
4501PALM-1			
ALUMINUM FRENCH DOOR (5.5W)	12/1/2022		
DESIGN PRESSURE TABLES		3 OF 21	
FD4SSA			

ANTHONY LYNN MILLER
LICENSE
No. 59726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER P.E.
P.E. # 59726

Table 6

TRANSOM DESIGN PRESSURES - PSF DUE TO GLAZING								
TRANSOM FRAME WIDTH	DOOR FRAME HEIGHT	TRANSOM HEIGHT	GLASS TYPES 1, 2, 3, 4 & 8: COMPOSITE PANELS		GLASS TYPES 5 & 7		GLASS TYPES 6 & 9	
			EXT (+)	INT (-)	EXT (+)	INT (-)	EXT (+)	INT (-)
60"	96"	24"	100.0	100.0	70.0	70.0	69.0	69.0
		30"	100.0	100.0	70.0	70.0	69.0	69.0
		36"	100.0	100.0	70.0	70.0	69.0	69.0
		42"	100.0	100.0	70.0	70.0	69.0	69.0
80"		24"	100.0	100.0	70.0	70.0	69.0	69.0
		30"	100.0	100.0	70.0	70.0	69.0	69.0
		36"	100.0	100.0	70.0	70.0	69.0	69.0
74-1/2"		24"	99.6	99.6	70.0	70.0	69.0	69.0
		30"	91.2	91.2	70.0	70.0	69.0	69.0
		36"	87.6	87.6	70.0	70.0	87.6	87.6
60"	96"	24"	100.0	100.0	70.0	70.0	69.0	69.0
		30"	100.0	100.0	70.0	70.0	69.0	69.0
		36"	100.0	100.0	70.0	70.0	69.0	69.0
		42"	100.0	100.0	70.0	70.0	69.0	69.0
80"		24"	100.0	100.0	70.0	70.0	69.0	69.0
		30"	99.0	99.1	70.0	70.0	69.0	69.0
		36"	99.0	95.6	70.0	70.0	69.0	84.0
74-1/2"		24"	99.0	99.0	70.0	70.0	69.0	69.0
		30"	82.5	82.5	70.0	70.0	82.5	82.5
		36"	75.4	75.4	70.0	70.0	75.4	75.4
60"	108"	24"	100.0	100.0	70.0	70.0	69.0	69.0
		30"	100.0	100.0	70.0	70.0	69.0	69.0
		36"	104.0	107.2	70.0	70.0	69.0	69.0
80"		24"	94.0	93.9	70.0	70.0	69.0	69.0
		30"	90.0	89.4	70.0	70.0	69.0	69.0
		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	100.0	70.0	70.0	69.0	69.0
80"		24"	99.0	99.0	70.0	70.0	69.0	69.0
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, SWINGING OR OUTSWING & USE ANY LOCK FROM TABLE 1.

3) "OX" = OUTSWING, "IX" = INSWING. SEE DETAILS ON SHEETS 6-1 & 15 (OUTSWING) & 12-15 (INSWING).

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

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

TRANSOM OLD WIDTH = TRANSOM FRAME WIDTH - 13-5/8"
TRANSOM OLD HEIGHT = TRANSOM FRAME HEIGHT + 4-5/8"

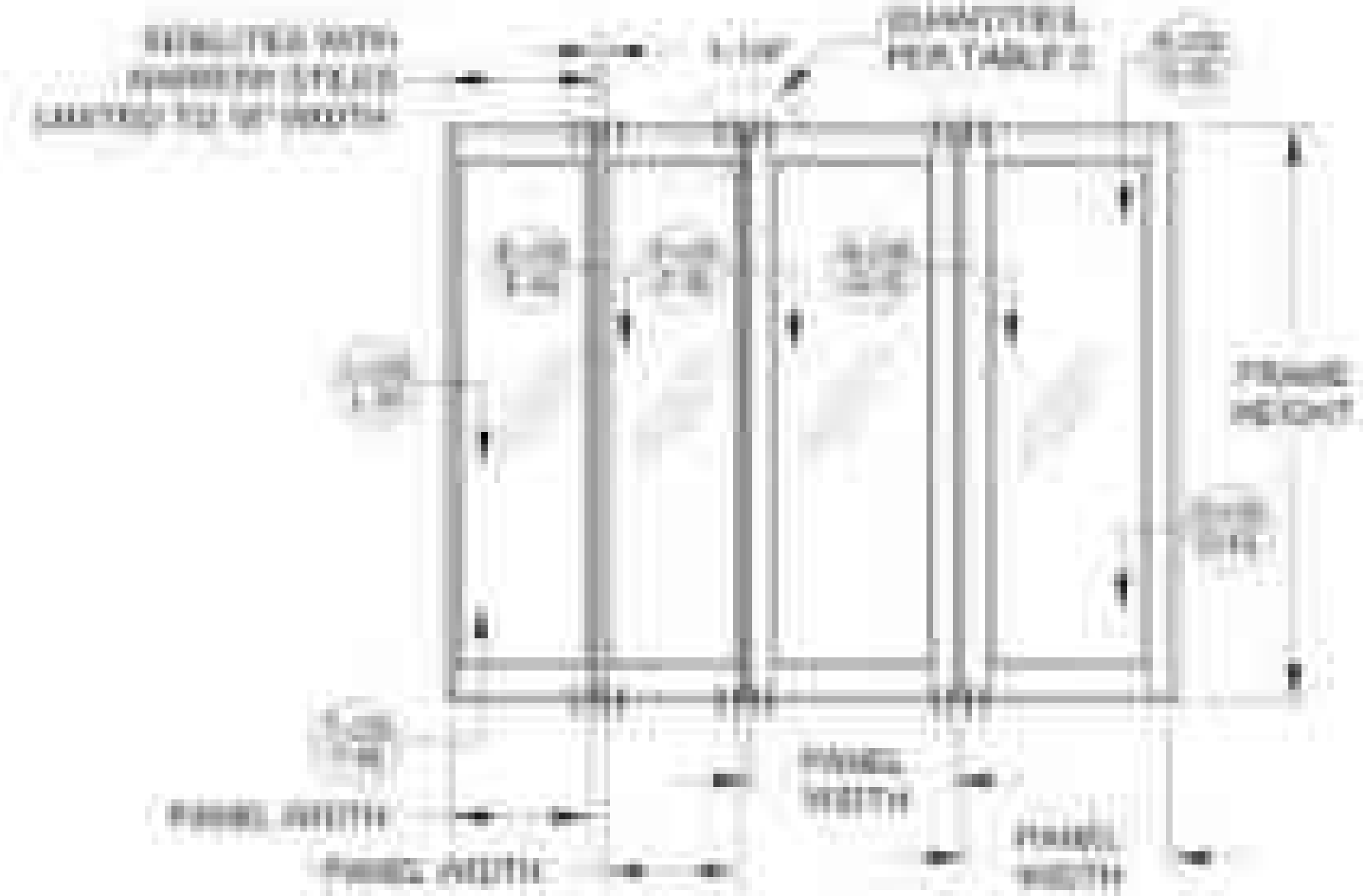
NO CHANGES THIS SHEET	02/20/24	D	
450TP4-M-1	12/19/22		
JENS ROSCWSKI			
ALUMINUM FRENCH DOOR (LAM)		4 OF 31	
DESIGN PRESSURE TABLES		FD4504	

ANTHONY LYNN MILLER
LICENSE
No. 58705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER P.E.
P.E. # 58705

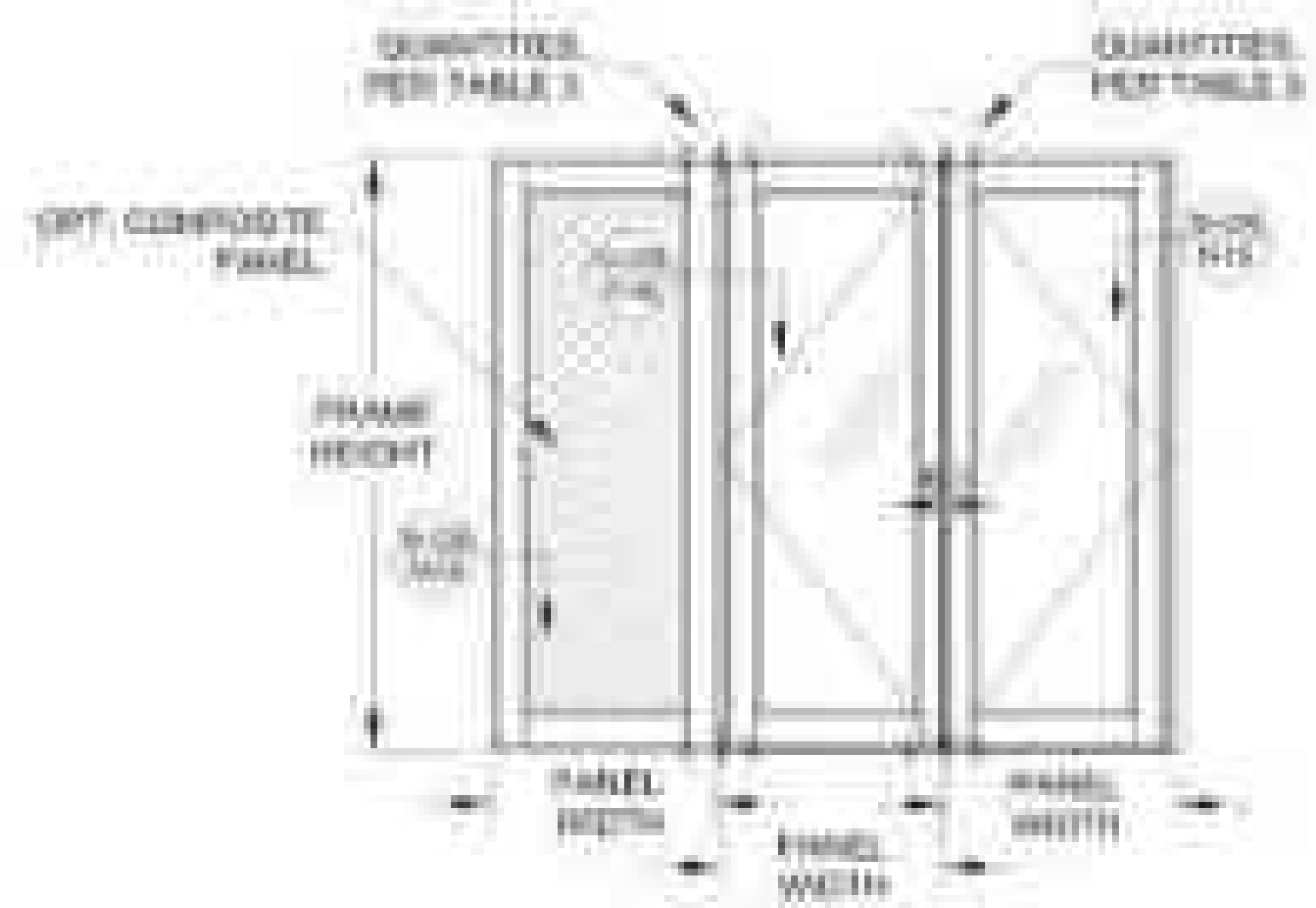
TABLE 7:

WIDTH "W"	FRAME HEIGHT	MULLION DESIGN PRESSURES - PSF					
		PANEL STILE TYPES BEING MULLED TOGETHER:					
		WIDE TO WIDE DETAILS E-O5, G-O5, J-O5, J-I5, K-O5 & K-I5		WIDE TO NARROW DETAILS F-O5, F-I5, I-O5, I-I5, P-O5 & P-I5		NARROW TO NARROW DETAILS B-O5 & B-I5	
		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"	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	70.0	70.0	-	-
42"		94.2	94.2	-	-	-	-
18"	98-3/4"	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"		59.6	59.6	-	-	-	-
18"	108-3/4"	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"		86.6	84.8	-	-	-	-
42"		59.6	59.6	-	-	-	-
18"	110-3/4"	100.0	110.0	100.0	110.0	100.0	110.0
24"		100.0	110.0	100.0	104.7	-	-
30"		65.1	65.1	70.0	70.0	-	-
36"		52.9	52.9	-	-	-	-
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	-	-	-	-
[illegible]		58.8	58.8	-	-	-	-

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



O|X|X|O MULLED SIDELITES
(COMBINATION OF STANDARD & NARROW STILES)



O|XX MULLED SIDELITE

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.

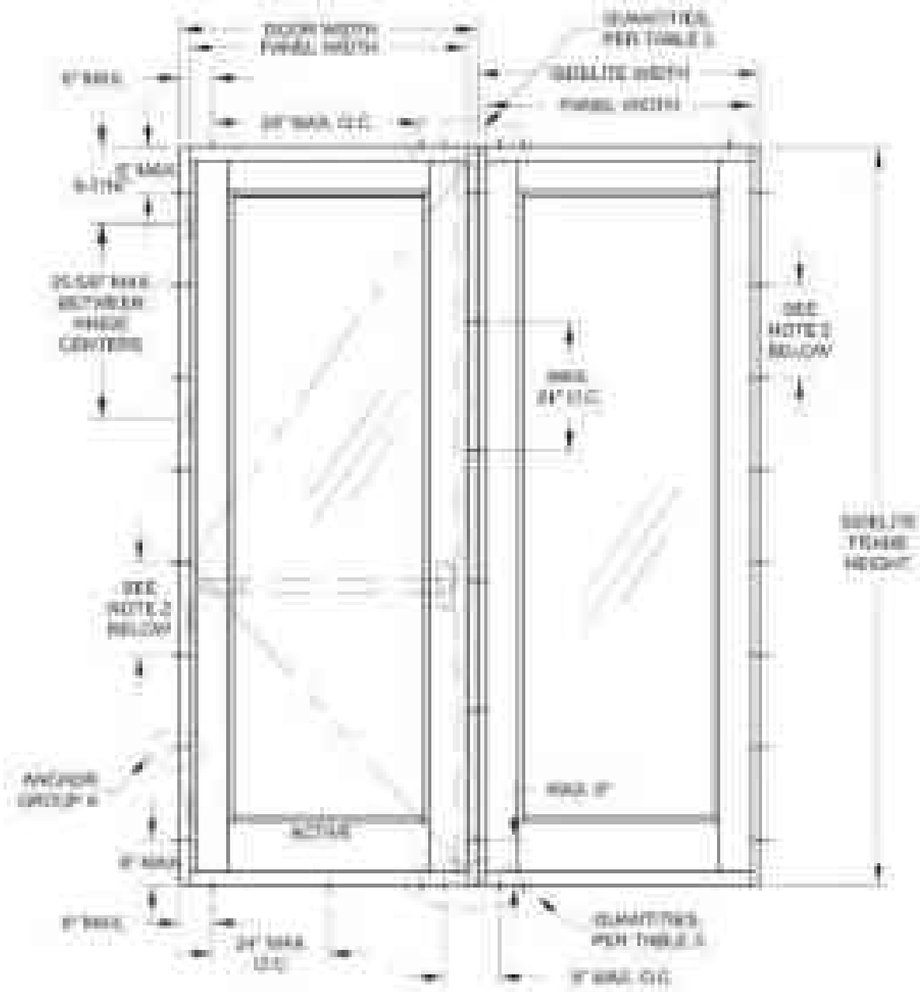
2) EXAMPLE CONFIGURATIONS SHOWN. SIMILAR CONFIGURATIONS ALLOWED. DOORS MAY BE LEFT OR RIGHT-HANDED, INSWING OR OUTSWING & USE ANY LOCK FROM TABLE 1.

3) "OS" = OUTSWING; "IS" = INSWING. SEE DETAILS ON SHEETS 6-11 & 16 (OUTSWING) & 12-15 (INSWING).

NO CHANGES THIS SHEET

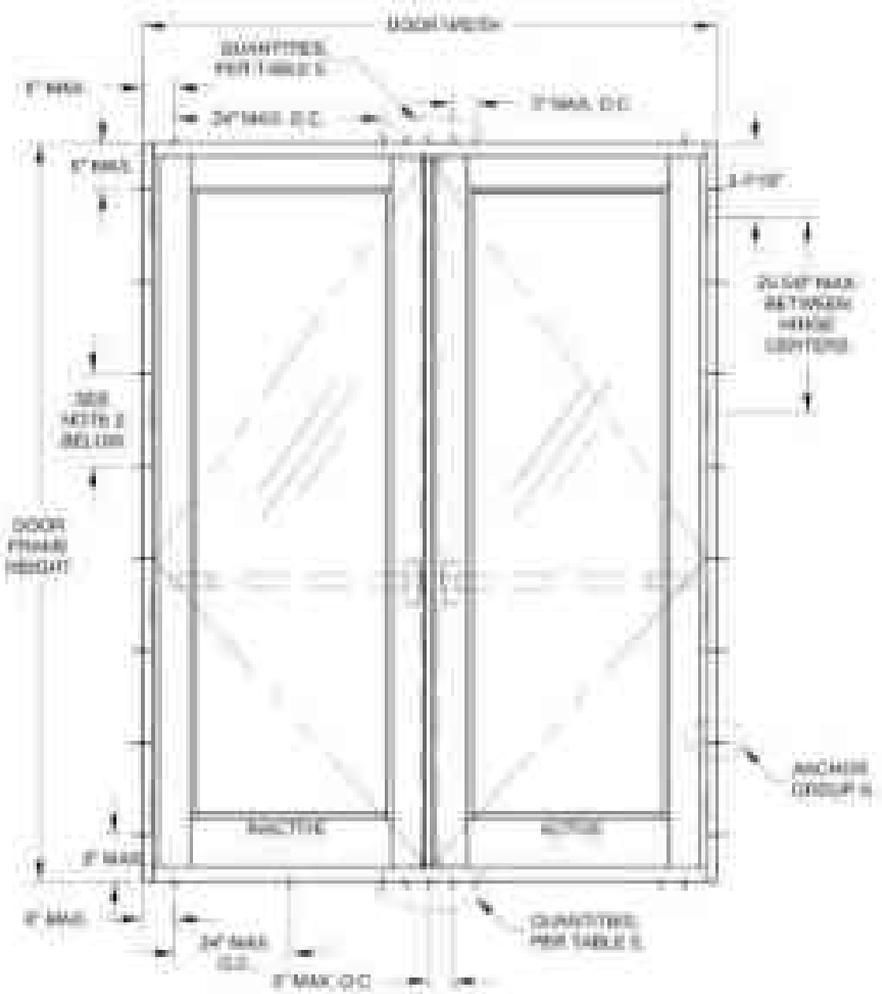
PREPARED BY: A. LYNN MILLER
ALUMINUM FRENCH DOOR (LM)
DESIGN PRESSURE TABLES
JENS ROSOWSKI
5 OF 21
FD4SIA
45ITFA-LM-1

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



TYPICAL X|O 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, SWINGING OR OUTSWING & USE ANY LOCK FROM TABLE 1.

2) ANCHOR GROUP A: JAMB SPACING AS FOLLOWS:
18-5/8" MAX. O.C. FOR DESIGN PRESSURES UP TO 75 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 80-3/4"	3	35-1/2"
ABOVE 80-3/4" UPTO 120-3/4"	4	44-1/2"

DOOR/SIDELITE O.A.D WIDTH = DOOR/SIDELITE PANEL WIDTH + 1/4"
DOOR/SIDELITE O.A.D HEIGHT = DOOR/SIDELITE PANEL HEIGHT + 13-1/2"
NARROW STILE SIDELITE O.A.D WIDTH = SIDELITE PANEL WIDTH + 4"
FRAME HEIGHT = PANEL HEIGHT + 1-1/8" (UTO THRESHOLD)
FRAME HEIGHT = PANEL HEIGHT + 1-5/8" (HIGH THRESHOLD)
FRAME WIDTH = PANEL WIDTH + 2-1/4"

NO.	DESCRIPTION	DATE
1	ADDED NOTE 3	02/20/24

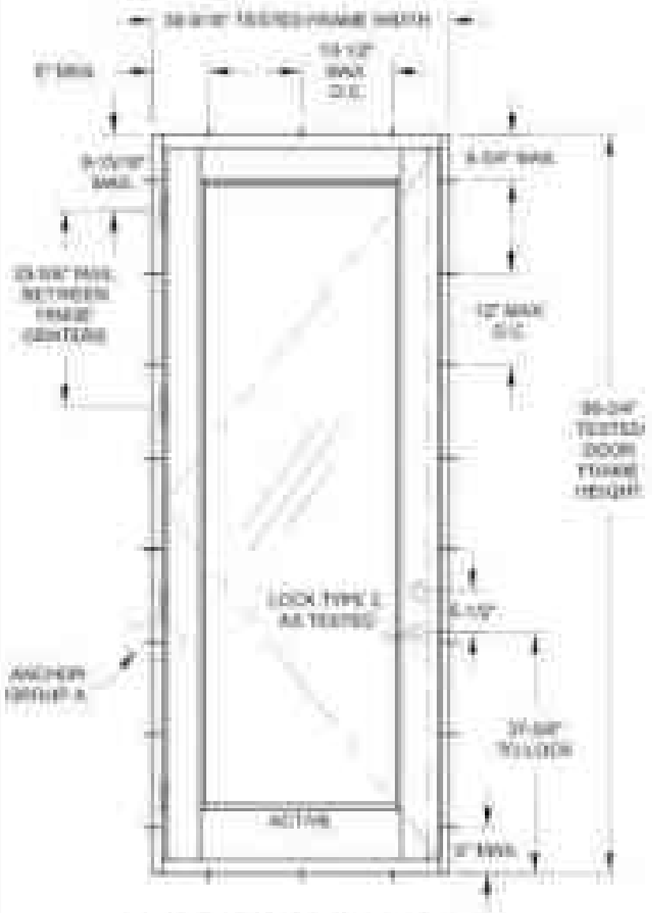
NO CHANGES THIS SHEET

DRAWN BY	JRS
CHECKED BY	AJM
DATE	02/20/24
SCALE	NTS
SHEET	6 OF 31
PROJECT NO.	FD4SGA

ALUMINUM FRENCH DOOR (1 LITE)

ANTHONY LYNN MILLER
LICENSE
No. 50726
STATE OF FLORIDA
PROFESSIONAL ENGINEER

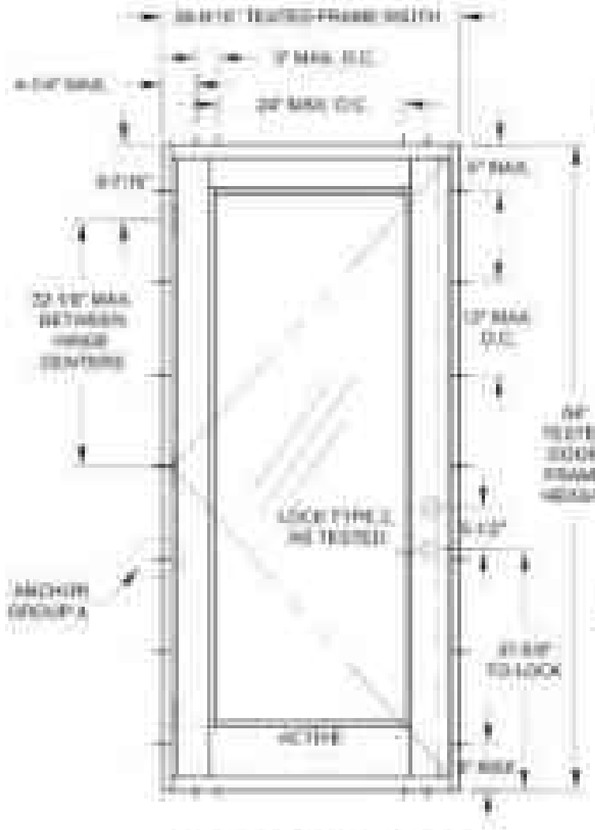
A. LYNN MILLER P.E.
P.E.# 50726



"AS TESTED" TALL X DOOR
TYP. ANCHOR LOCATIONS

TESTED DOOR INFORMATION (ABOVE DOOR ONLY):

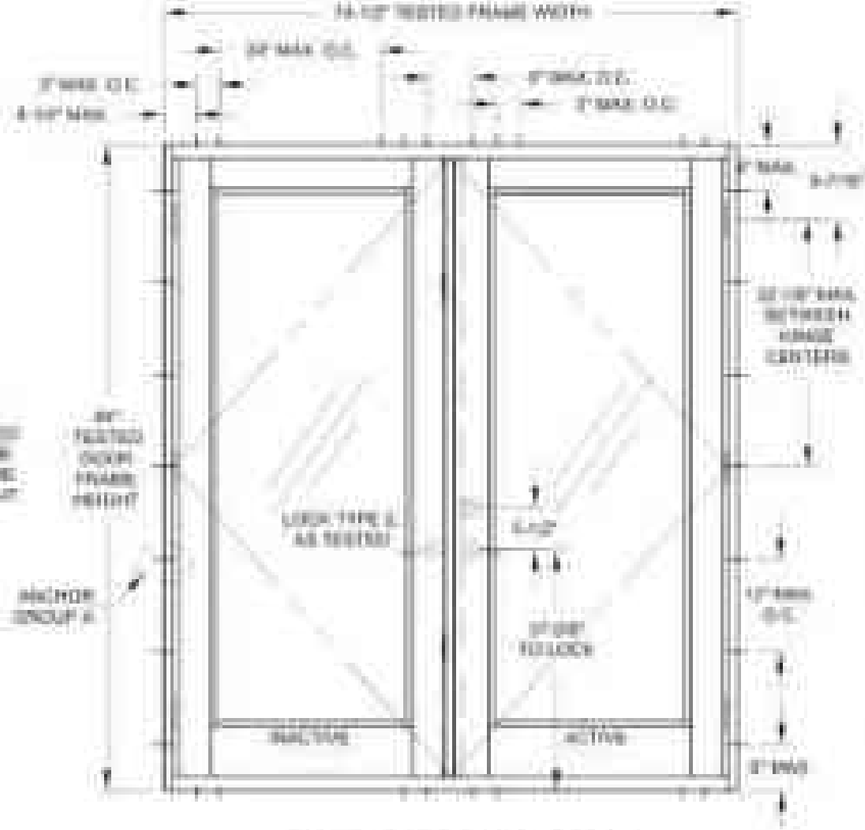
SIZE: 36 9/16" X 95-1/4" (E) W/O SIDELITES OR TRANSOM
ANCHOR GROUP: A
GLASS TYPE: 4
LOCK TYPE: 2 WITH BALDWIN SERIES 6204 DEADBOLT
MAS. (+) DESIGN PRESSURE: 90.5 PSF, LARGE MISSILE
MAS. (-) DESIGN PRESSURE: 124.5 PSF, LARGE MISSILE
OUTSWING USING STANDARD (PR 5) SILL



"AS TESTED" X DOOR
TYP. ANCHOR LOCATIONS

TESTED DOOR INFORMATION (ABOVE DOOR ONLY):

SIZE: 36 9/16" X 95" (E) W/O SIDELITES OR TRANSOM
ANCHOR GROUP: A
GLASS TYPES: 1 - 4
LOCK TYPE: 2 WITH BALDWIN SERIES 6204 DEADBOLT
MAS. (+) DESIGN PRESSURE: 100.0 PSF, LARGE MISSILE
MAS. (-) DESIGN PRESSURE: 124.5 PSF, LARGE MISSILE
OUTSWING USING STANDARD (PR 5) SILL



"AS TESTED" XX DOOR
TYP. ANCHOR LOCATIONS

TESTED DOOR INFORMATION (ABOVE DOOR ONLY):

SIZE: 74-1/2" X 96" (DU) W/O SIDELITES OR TRANSOM
ANCHOR GROUP: A
GLASS TYPES: 1 - 4
LOCK TYPE: 2 WITH BALDWIN SERIES 6204 DEADBOLT
MAS. (+) DESIGN PRESSURE: 100.0 PSF, LARGE MISSILE
MAS. (-) DESIGN PRESSURE: 124.5 PSF, LARGE MISSILE
OUTSWING USING STANDARD (PR 5) SILL

NOTES:

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

NO CHANGES THIS SHEET | 03/20/24 | D

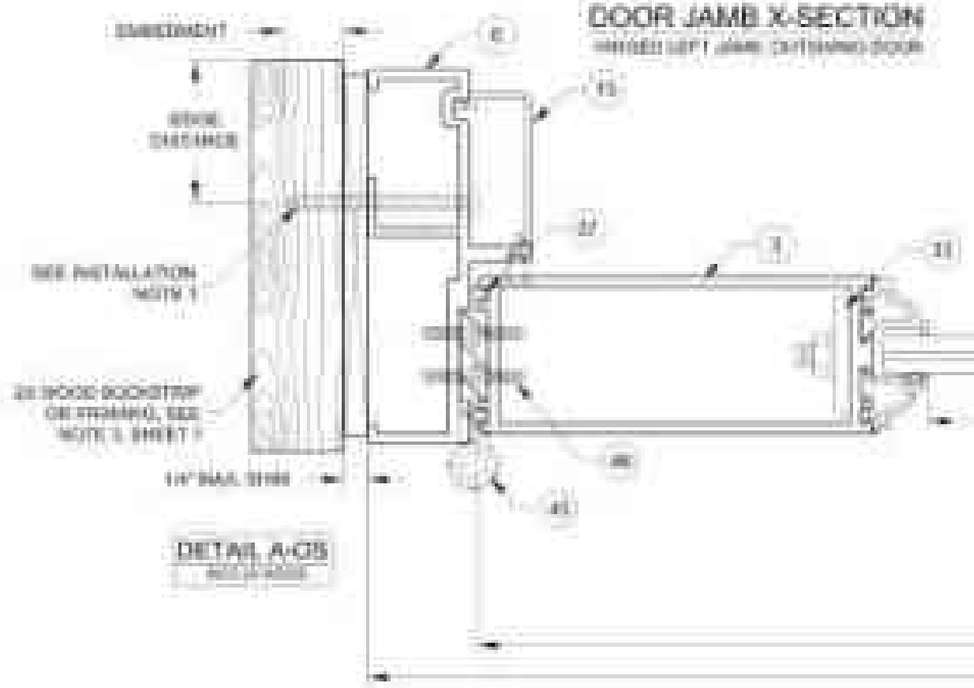
ANTHONY LYNN MILLER
LICENSE
No. 92705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E. # 92705

PREPARED BY: A. LYNN MILLER 2001 TREMONT DRIVE N. VENICE, FL 34275 (941) 468-0663	
REVISION RECORD	
1/29/2024	
ALUMINUM FRENCH DOOR (LAM)	45DTFA.LM.1
TESTED ANCHOR LOCATIONS	JERS ROSEWOOD
1 OF 3	
7/24/24	

OUTSWING DETAILS

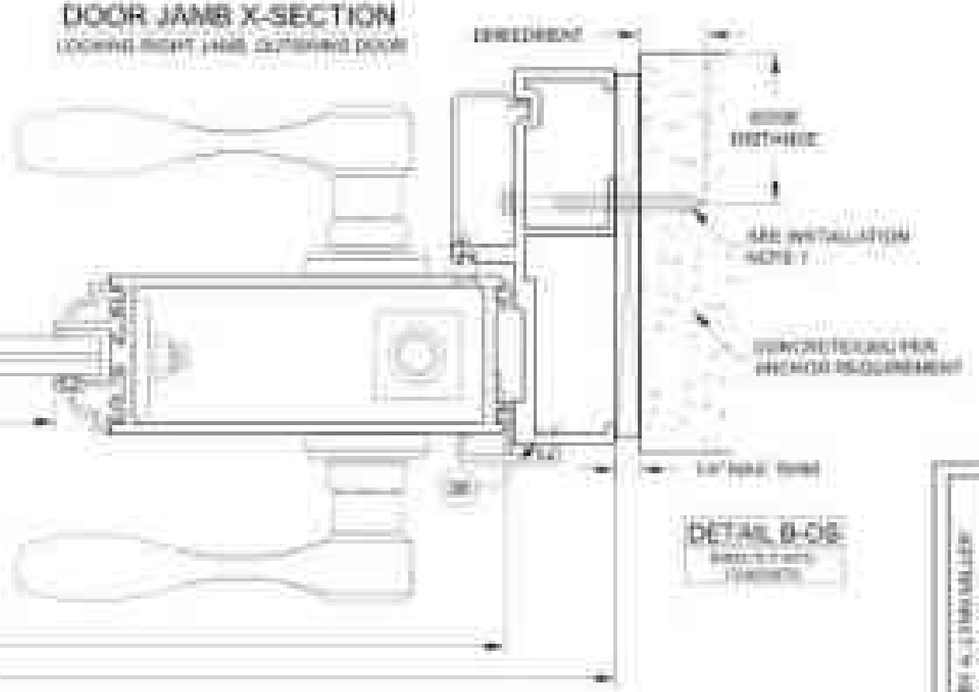
DOOR JAMB X-SECTION

HINGED LEFT JAMB OUTSWING DOOR

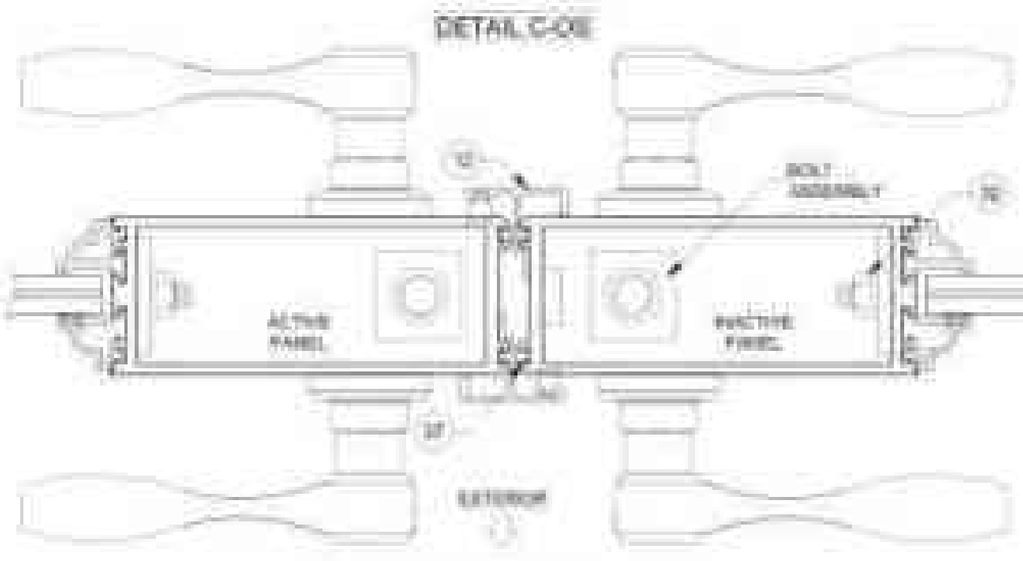


DOOR JAMB X-SECTION

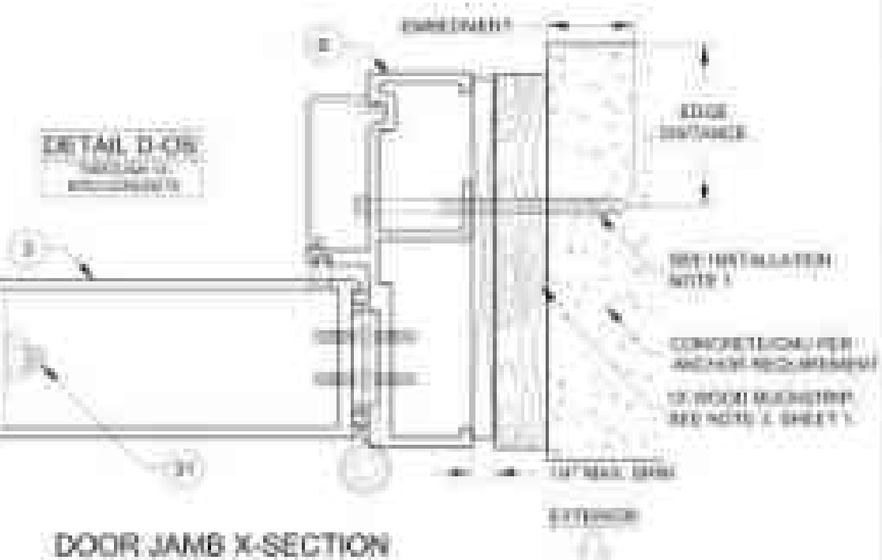
LOCKING RIGHT JAMB OUTSWING DOOR



DETAIL C-OS



DETAIL D-OS



DOOR ASTRAGAL X-SECTION

DOOR JAMB X-SECTION

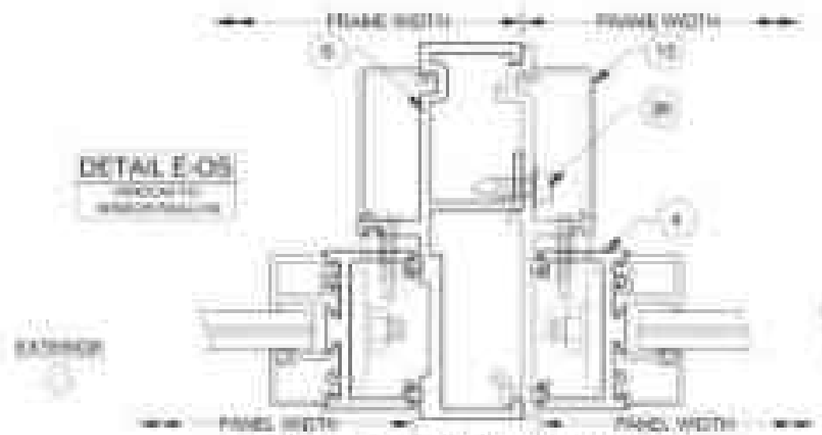
HINGED RIGHT JAMB OUTSWING DOOR

SEE INSTALLATION NOTES SHEET 11

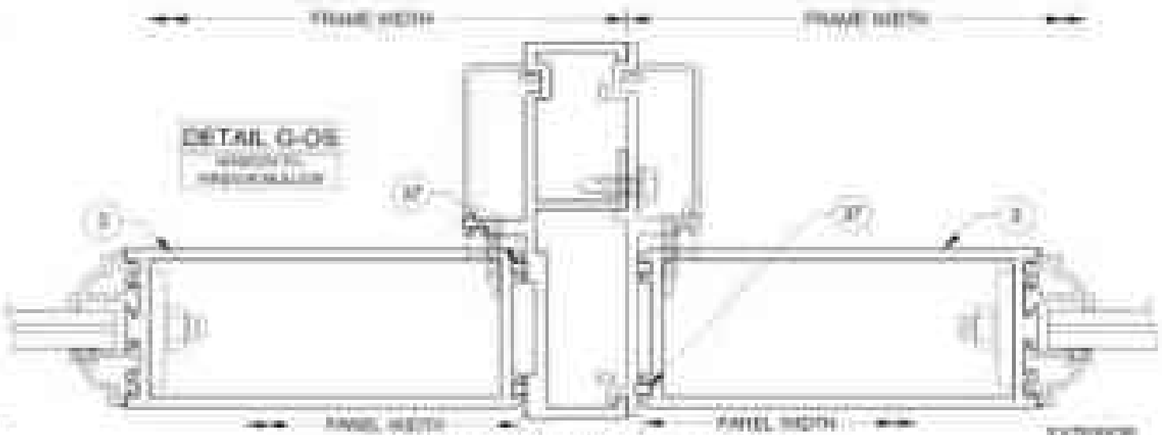
02/2024	D
NO CHANGES THIS SHEET	
4501PA4-M-1	
1/4" = 1'-0"	B SIZE
X-SECTIONS (OUTSWING)	
ALUMINUM FRENCH DOOR (FLAT)	
JENS ROSSWEIN	
tyndale	

ANTHONY LYNN MILLER
LICENSED
No. 50726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FLA. #50726

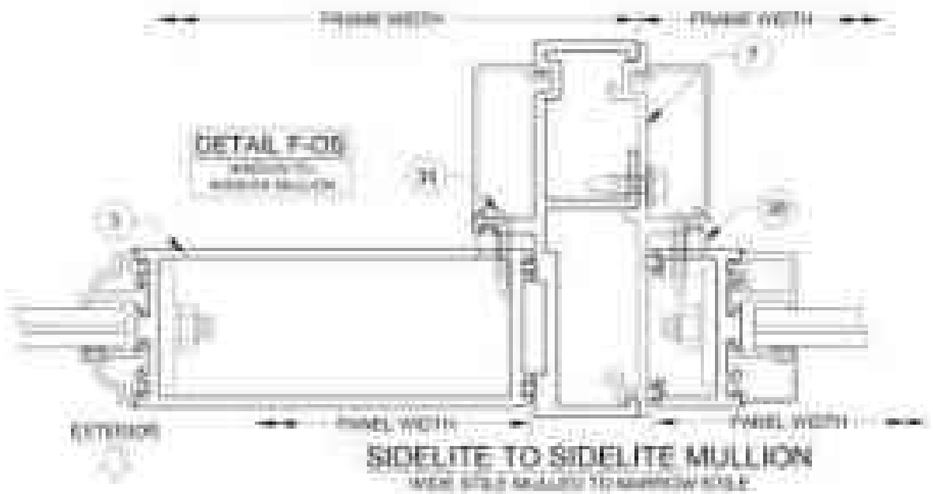
OUTSWING DETAILS



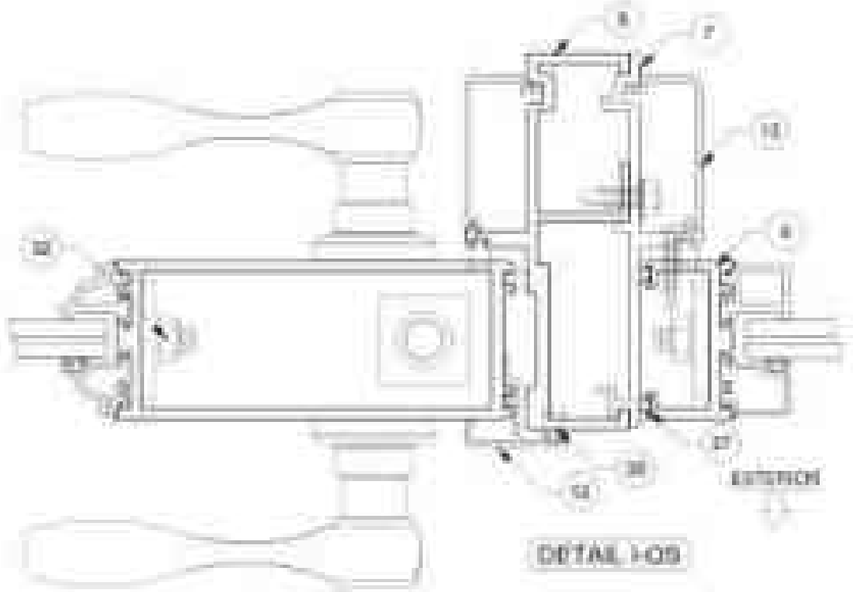
SIDELITE TO SIDELITE MULLION



SIDELITE MULLED TO MULLION



SIDELITE TO SIDELITE MULLION



DOOR TO SIDELITE MULLION

SEE INSTALLATION NOTES SHEET 11

02/27/24	D
12/13/23	C
11/13/23	B
10/19/23	A

WINDOOR

ALUMINUM FRENCH DOOR (US)

X-SECTIONS (OUTSWING)

#SIP-PA-MW-1

SHEET

PREPARED BY: A. LYNN MILLER
WINDOOR
3000 TECHNOLOGY DRIVE
ANGLETON, TX 77515
979.849.4411

REGISTERED
PROFESSIONAL ENGINEER
No. 92708
10/25/24
STATE OF
FLORIDA

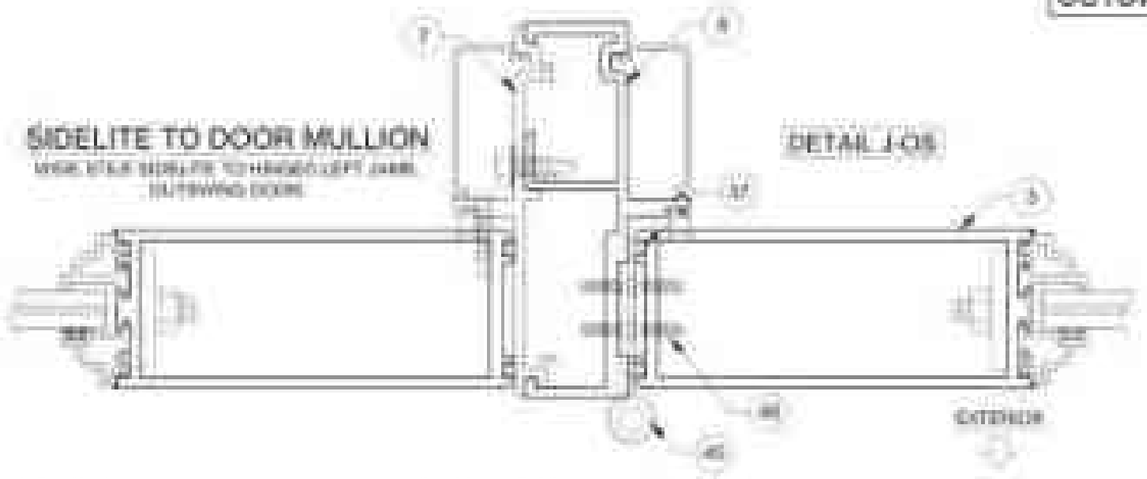
A. LYNN MILLER, P.E.
FE# 92708

OUTSWING DETAILS

SIDELITE TO DOOR MULLION

WIDE STILE SIDELITE TO HINGED LEFT JAMB
OUTSWING DOOR

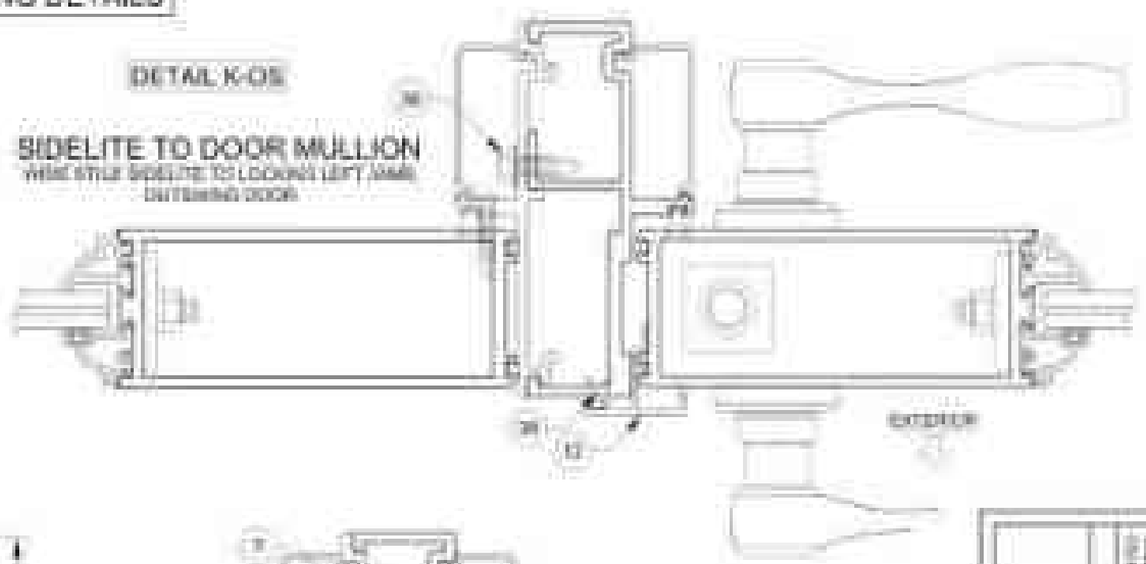
DETAIL J-OS



SIDELITE TO DOOR MULLION

WIDE STILE SIDELITE TO LOCKING LEFT JAMB
OUTSWING DOOR

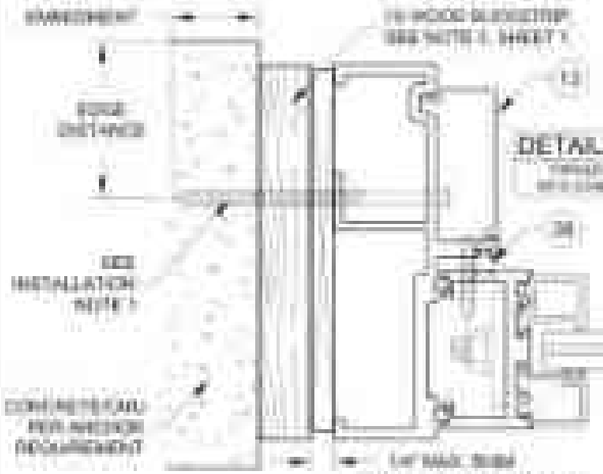
DETAIL K-OS



SIDELITE JAMB

LEFT, NARROW STILE

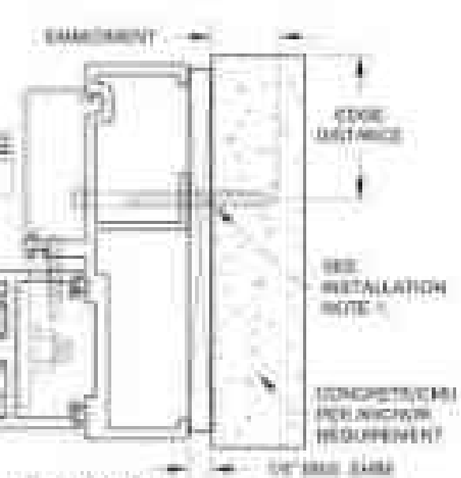
DETAIL L-OS



SIDELITE JAMB

RIGHT, NARROW STILE

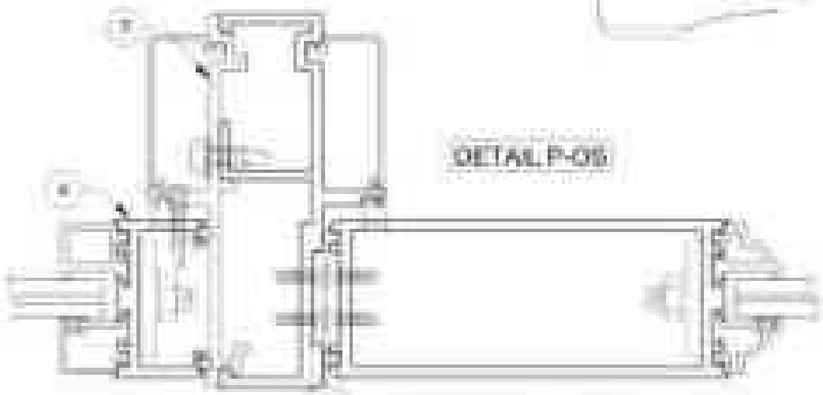
DETAIL M-OS



SIDELITE TO DOOR MULLION

NARROW STILE SIDELITE TO HINGED LEFT JAMB
OUTSWING DOOR

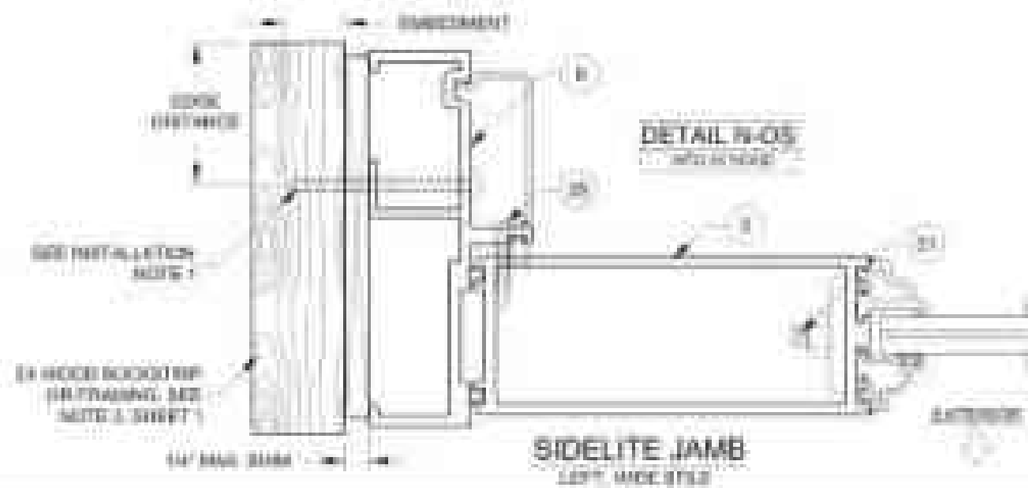
DETAIL P-OS



SIDELITE JAMB

LEFT, WIDE STILE

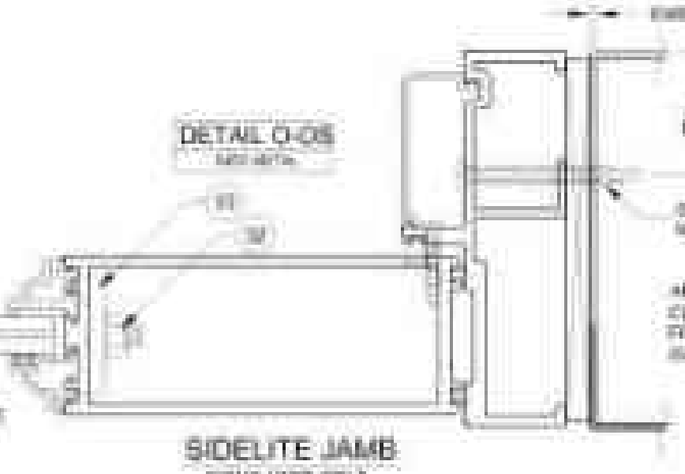
DETAIL N-OS



SIDELITE JAMB

RIGHT, WIDE STILE

DETAIL O-OS



SEE INSTALLATION NOTES, SHEET 11

NO CHANGES THIS SHEET | 03/22/24 | D

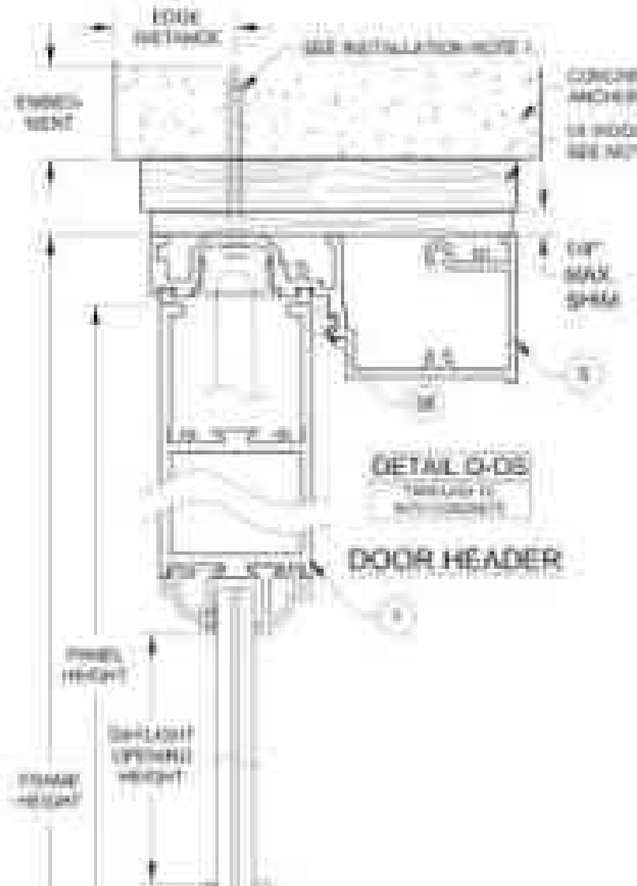
ALUMAWAY FRENCH DOOR (LAM) | JEBS RDSCWGD | 4501PA-LM-1

X-SECTIONS (OUTSWING) | 03/22/24 | 10 OF 21

FD4SQA

MURRAY LYNN MILLER
LICENSED
No. 50705
PROFESSIONAL ENGINEER
STATE OF TEXAS
A. LYNN MILLER, P.E.
P.E. # 50705

OUTSWING DETAILS



INSTALLATION NOTES:

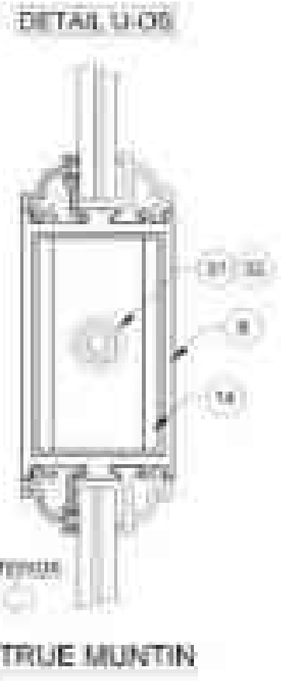
1) USE ONLY SUBSTRATE-APPROPRIATE ANCHORS LISTED ON TABLE A. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE DOOR OR SIDELITE.

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

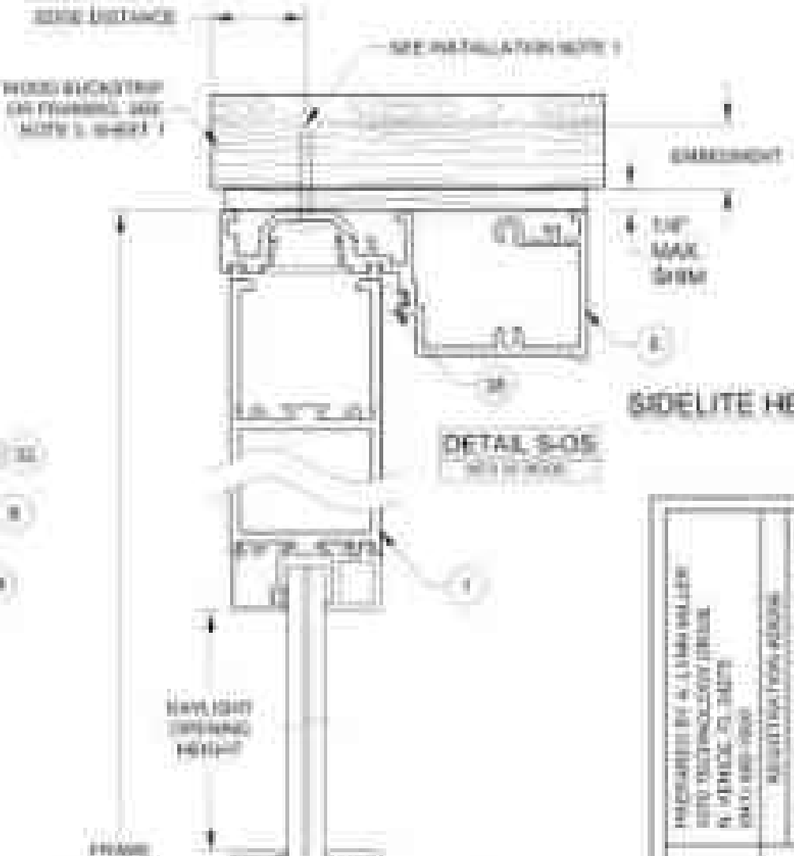
3) METAL SUBSTRATE TO MEET MIN. STRENGTH AND THICKNESS REQUIREMENTS PER CURRENT FLORIDA BUILDING CODE AND TO BE REVIEWED BY THE AUTHORITY HAVING JURISDICTION.

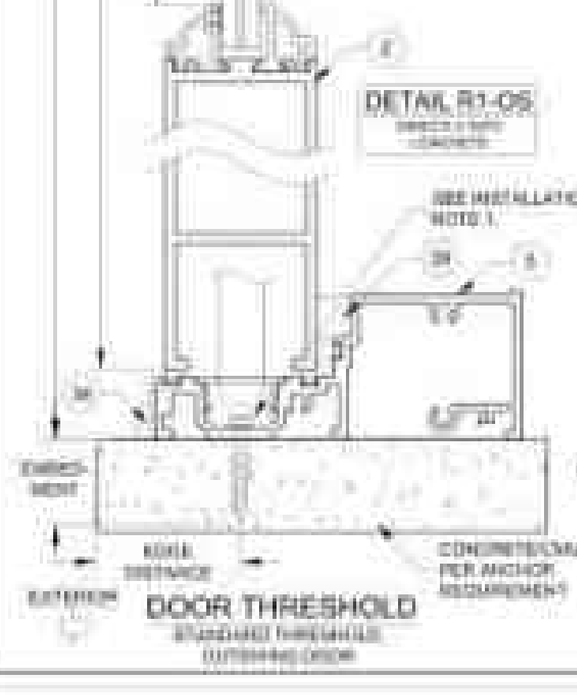
4) IF SILL IS "CUT" TO SUBSTRATE, GROUT OR OTHER MATERIAL IS NOT REQUIRED. IF USED, NON-SHRINK, NON-METALLIC GROUT, MIN. 1/4" THICK & 2 DOOR PSI MIN. ZONE BY OTHERS) MUST FULLY SUPPORT THE ENTIRE LENGTH OF THE SILL THAT IS NOT "CUT" TO THE SUBSTRATE, AND TRANSFER SHEAR LOAD TO SUBSTRATE. IF SUBSTRATE IS WOOD, USE 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.

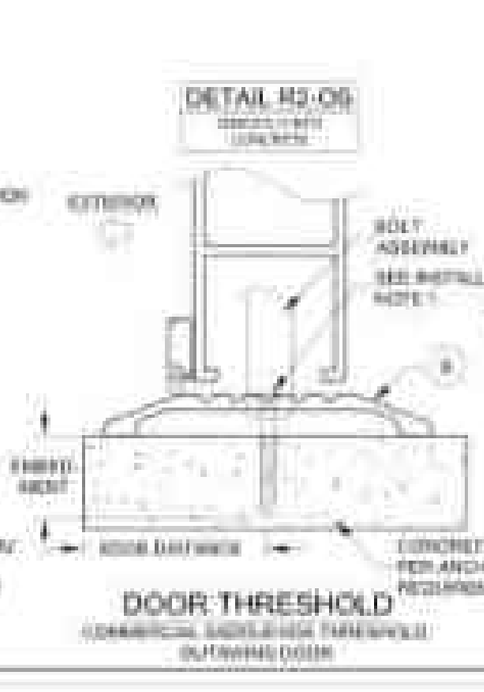


TRUE MUNTIN

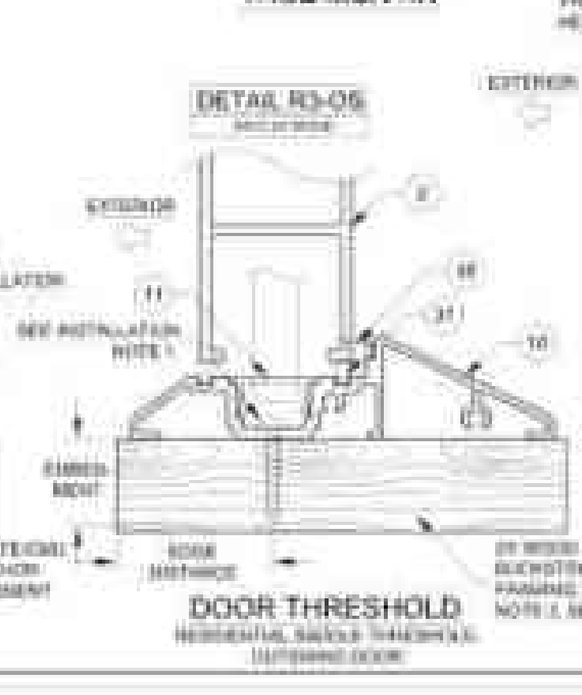




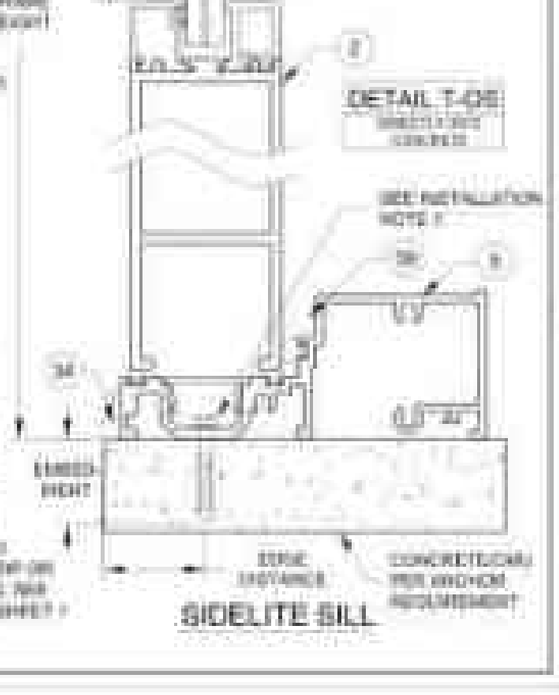
DOOR THRESHOLD
STANDARD THRESHOLD
OUTSWING DOOR



DOOR THRESHOLD
COMMERCIAL SADDLE-HIGH THRESHOLD
OUTSWING DOOR



DOOR THRESHOLD
RESIDENTIAL SADDLE THRESHOLD
OUTSWING DOOR

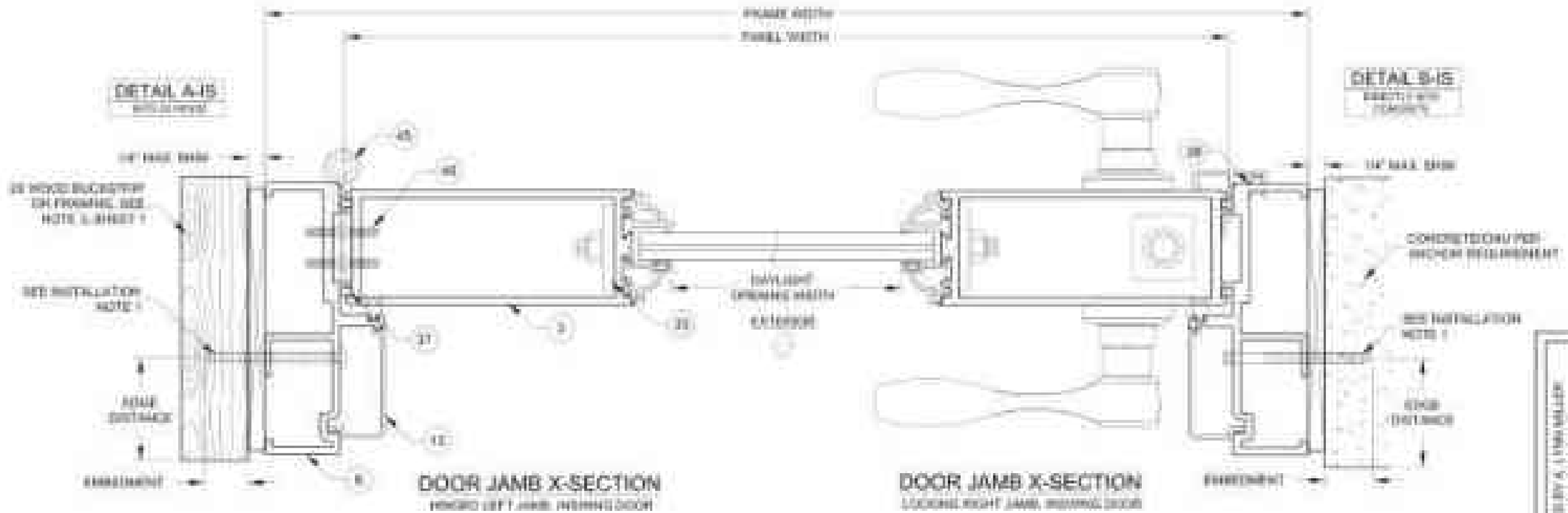


SIDELITE SILL

0	12/2022	JENS ROSWORD	ASSEMBLY
		ALUMINUM FRENCH DOOR (OUTSWING)	11-DF-21
		X-SECTIONS	FL9634

ANTHONY LYNN MILLER
LICENSE
No. 59705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E. # 59705

INSWING DETAILS



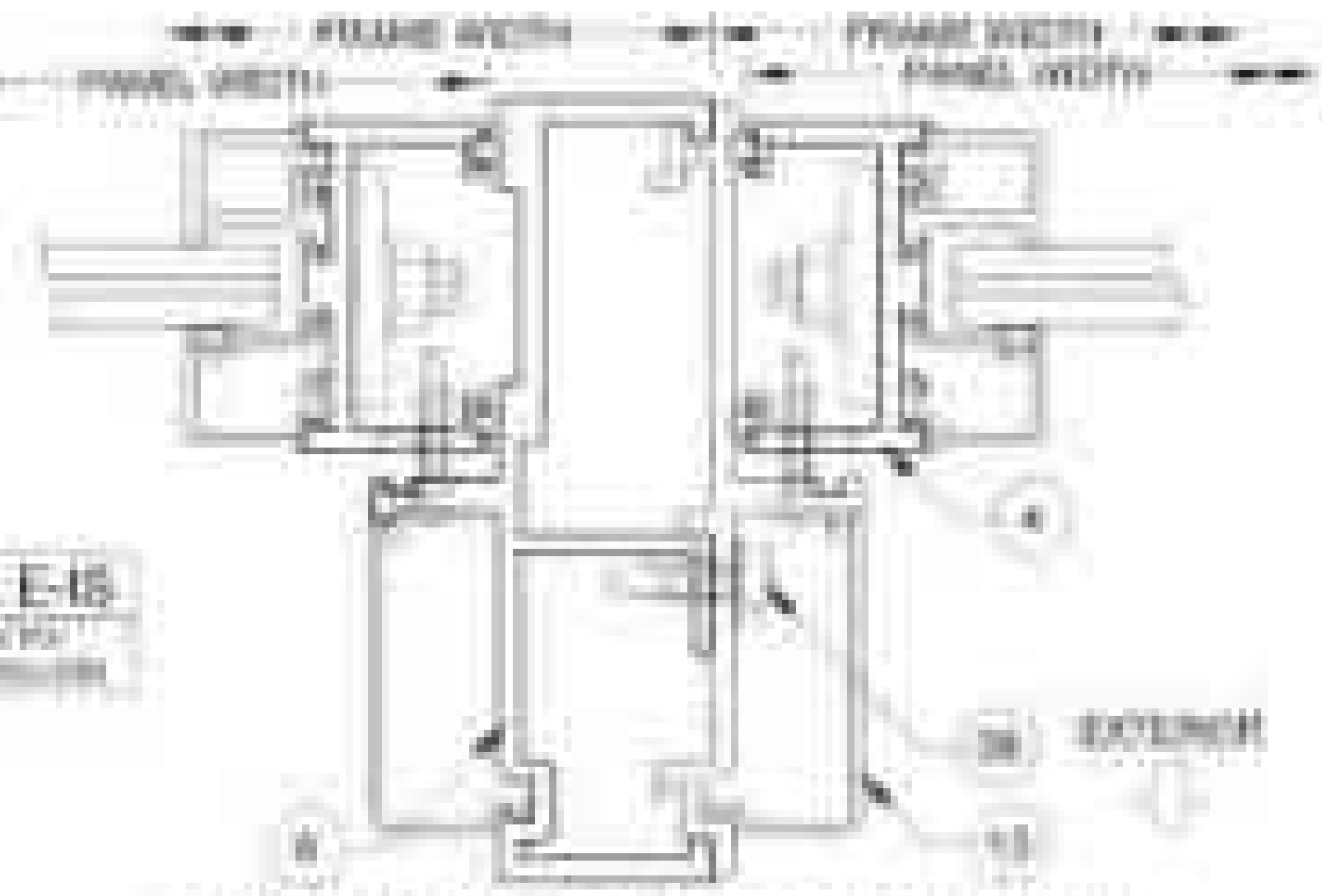
SEE INSTALLATION NOTES SHEET 11

NO CHANGES THIS SHEET	03/22/24
JENS ROSCWSKI	12/19/22
ALUMINUM FRENCH DOOR (1-LITE)	12 OF 13
X-SECTIONS (SWING)	FD4SA

MEGHAN LYNN MILLER
LICENSE
No. 56705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. J. MILLER P.E.
P.E.#56705

INSWING DETAILS

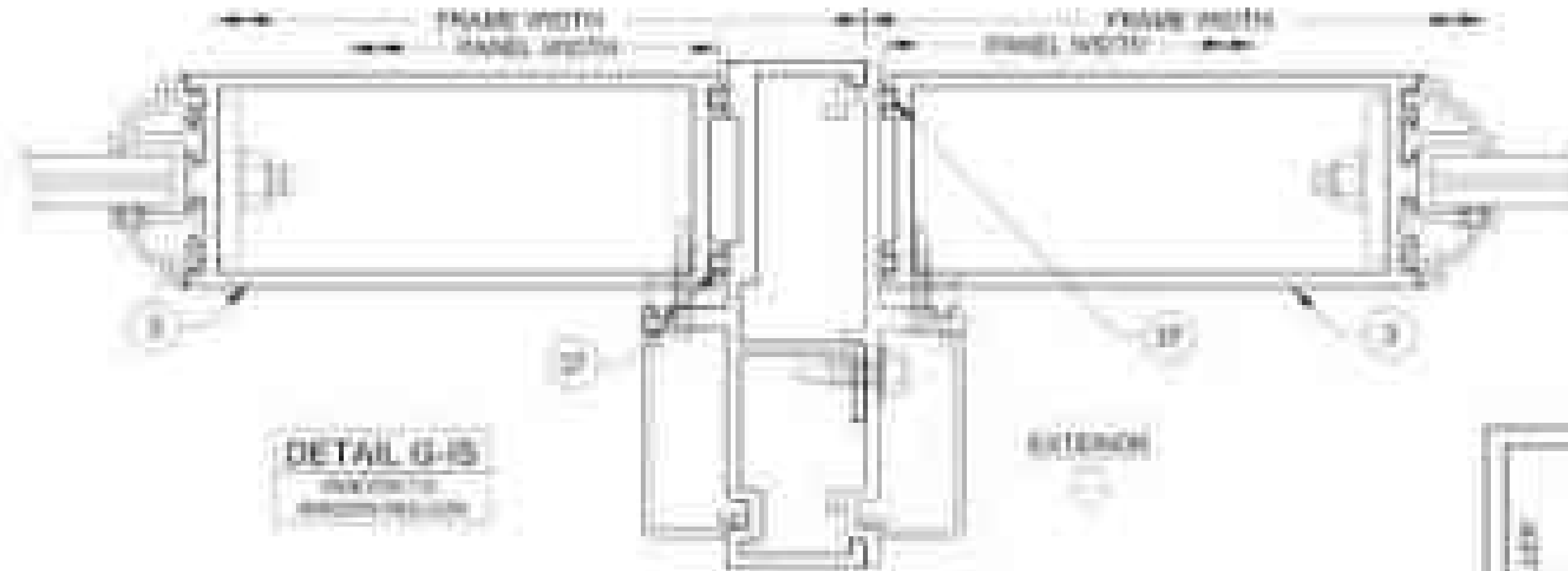
DETAIL E-IS



SIDELITE TO SIDELITE MULLION

NARROW STYLE MULLED TO NARROW STYLE

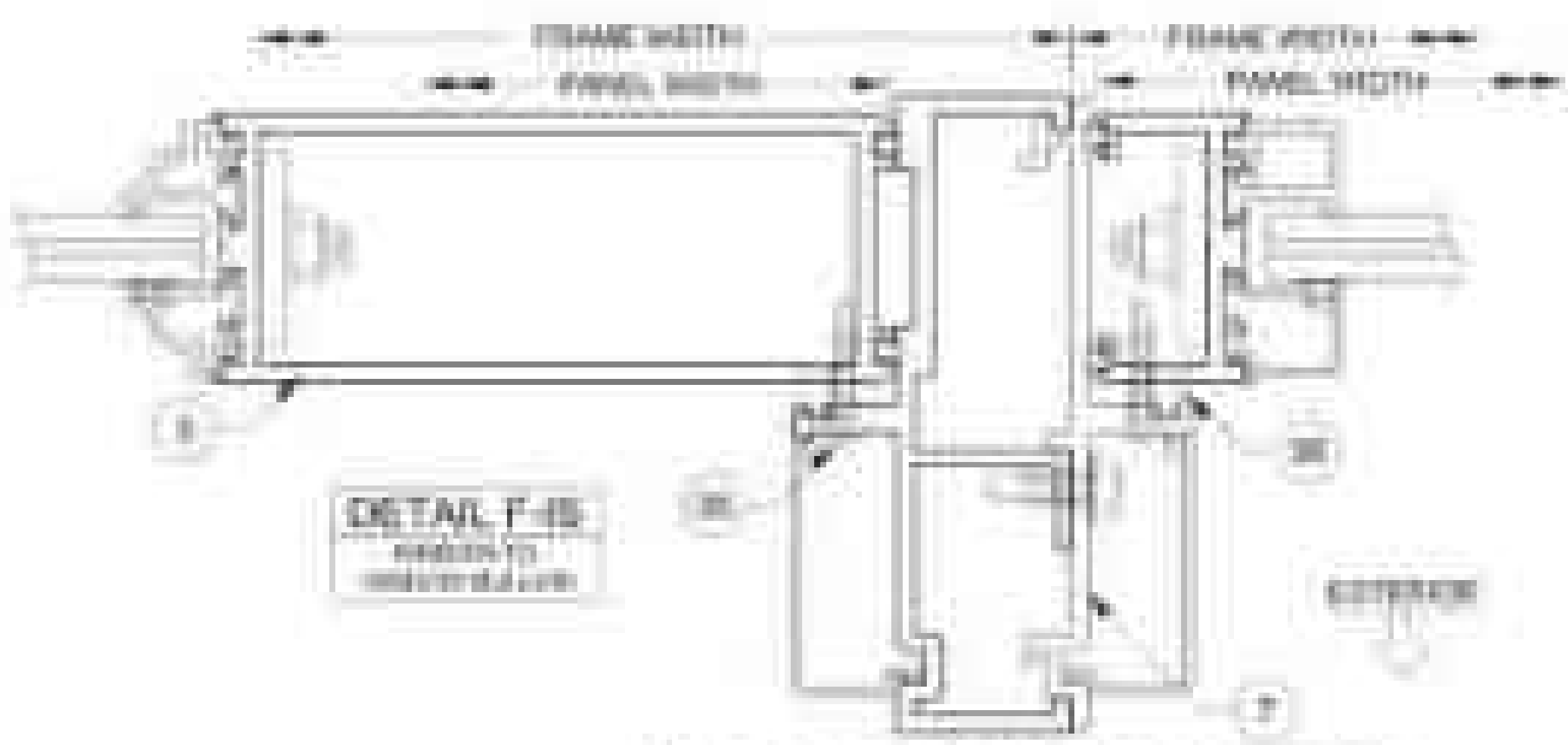
DETAIL G-IS



SIDELITE TO SIDELITE MULLION

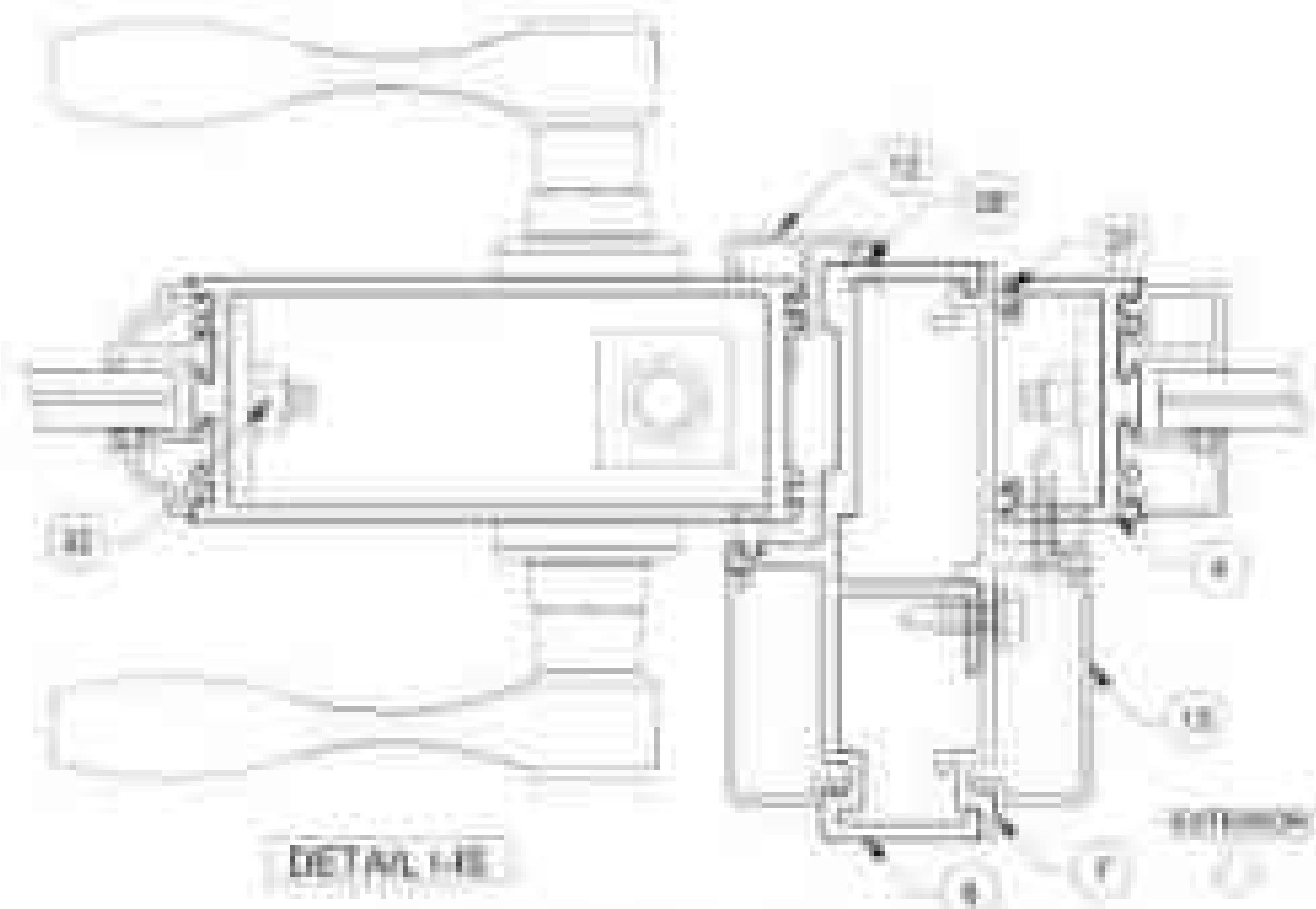
WIDE STYLE MULLED TO WIDE STYLE

DETAIL F-IS



SIDELITE TO SIDELITE MULLION

WIDE STYLE MULLED TO NARROW STYLE



DETAIL I-IS

DOOR TO SIDELITE MULLION

LOCKING RIGHT JAMB TO NARROW STYLE SIDELITE, INSWING DOOR

SEE INSTALLATION NOTES, SHEET 11

D | 03/20/24 | NO CHANGES THIS SHEET

ALUMINUM FRENCH DOOR (LM)

X-SECTIONS (INSWING)

12/10/22 | JENS ROSOWSKI

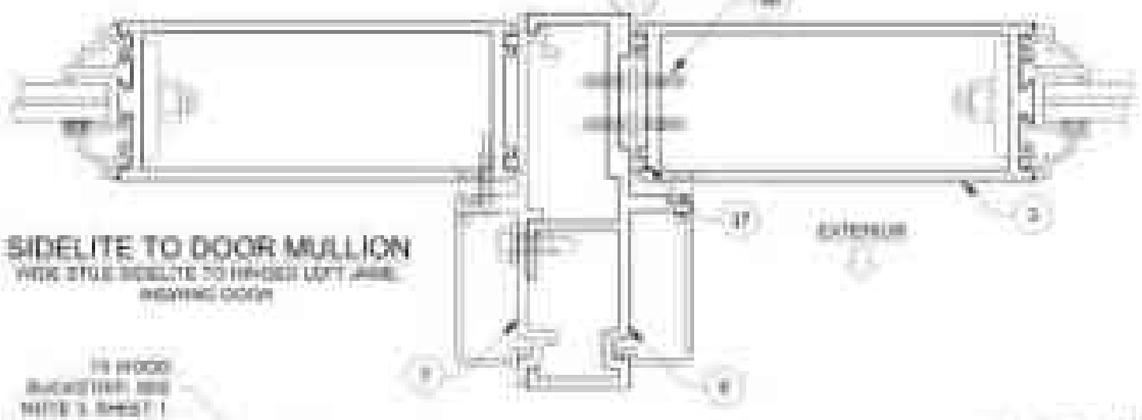
FD4524 | 13 OF 21 | 4SFFA-LM-1

ANTHONY LYNN MILLER
LICENSE
No. 58705
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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

INSWING DETAILS

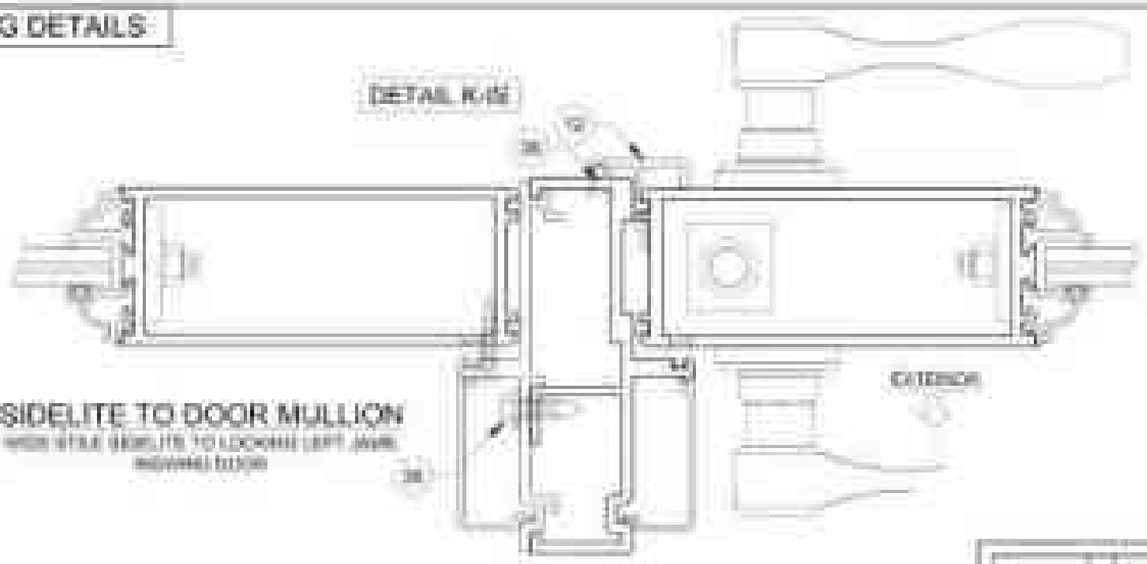
DETAIL J-IS



SIDELITE TO DOOR MULLION

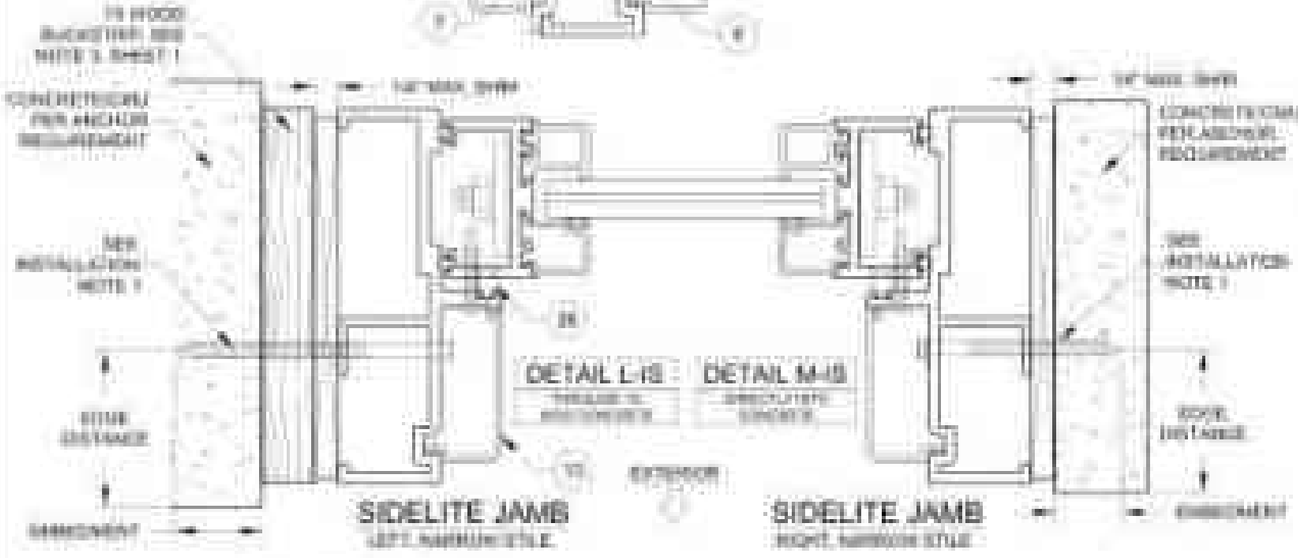
WIDE STILE SIDELITE TO HINGED LEFT JAMB INSWING DOOR

DETAIL K-IS



SIDELITE TO DOOR MULLION

WIDE STILE SIDELITE TO LOCKING LEFT JAMB INSWING DOOR



DETAIL L-IS

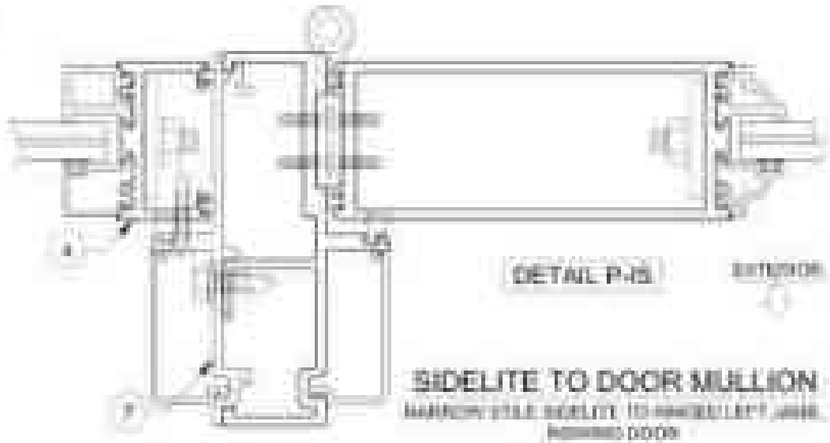
DETAIL M-IS

SIDELITE JAMB

LEFT, NARROW STILE

SIDELITE JAMB

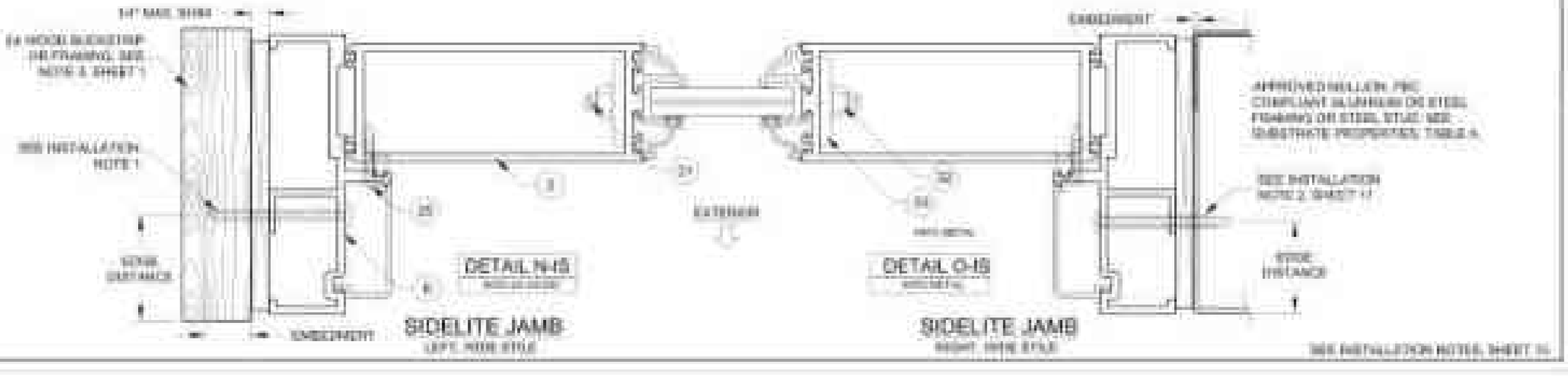
RIGHT, NARROW STILE



DETAIL P-IS

SIDELITE TO DOOR MULLION

NARROW STILE SIDELITE TO HINGED LEFT JAMB INSWING DOOR



DETAIL N-IS

DETAIL O-IS

SIDELITE JAMB

LEFT, WIDE STILE

SIDELITE JAMB

RIGHT, WIDE STILE

SEE INSTALLATION NOTES, SHEET 1

NO CHANGES THIS SHEET

02/22/24

D

ASTRALM I

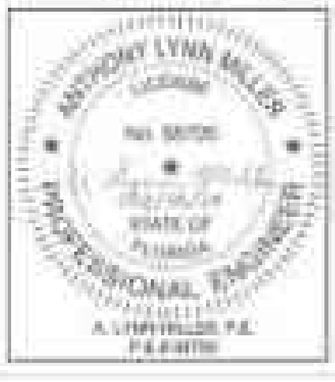
JEMS ROSCWSG

12/19/22	
	1 OF 1
	FD4504

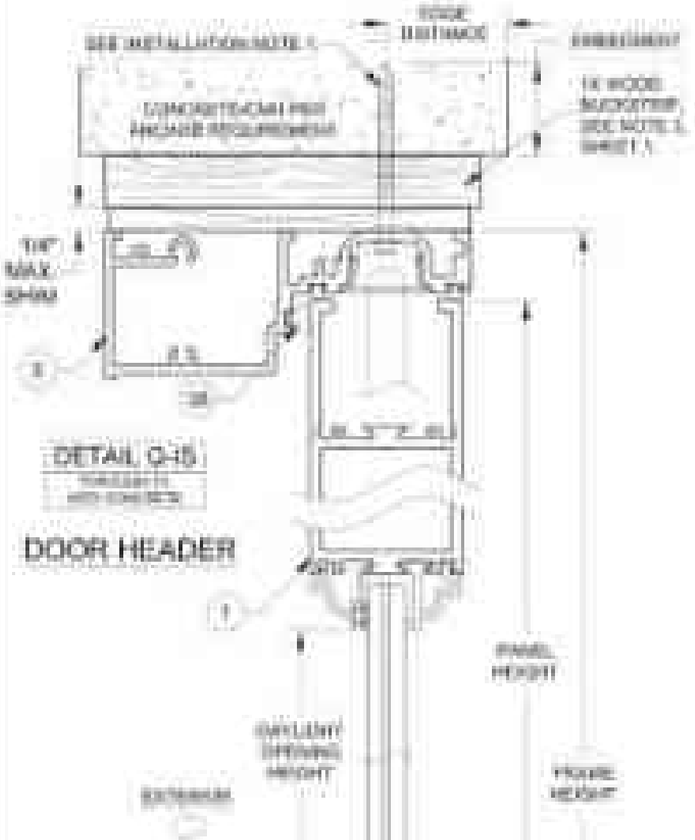
ALUMINUM FRENCH DOOR ELEVATIONS

SECTIONS (INSWING)

ARCHITECTURAL & ENGINEERING SERVICES
W. HENRY PL. WAY
PHONE (_____)



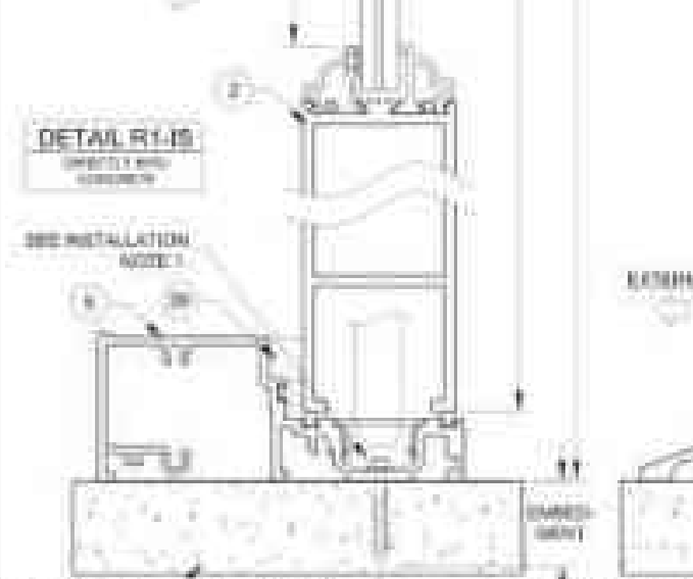
INSWING DETAILS



DETAIL D-IS

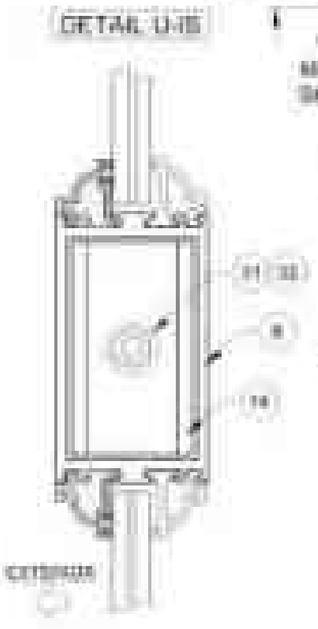
DOOR HEADER

DETAIL R1-IS

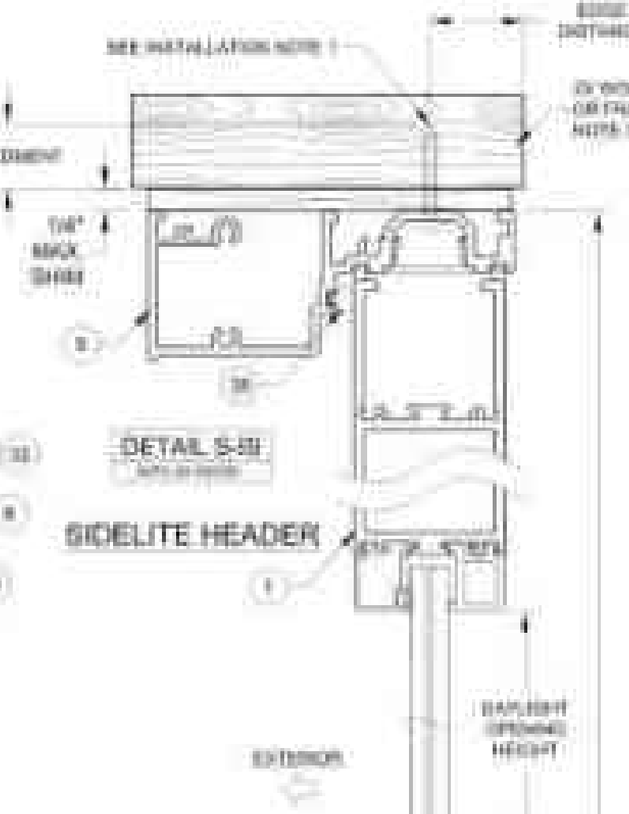


DOOR THRESHOLD

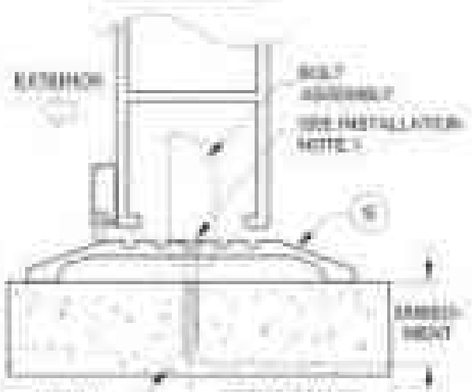
STANDARD THRESHOLD



TRUE MUNTIN



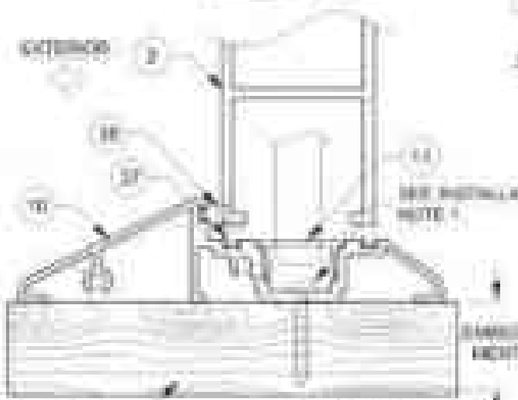
DETAIL R2-IS



DOOR THRESHOLD

COMMERCIAL NARROW HIGH THRESHOLD

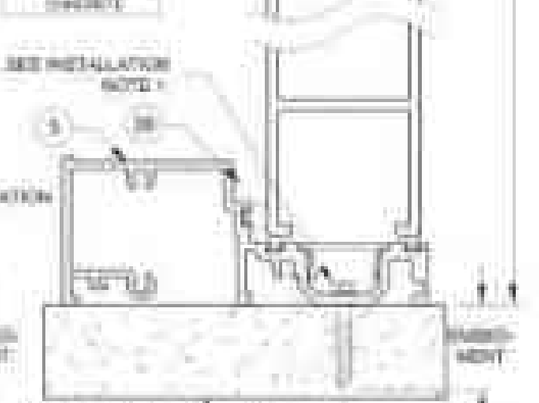
DETAIL R3-IS



DOOR THRESHOLD

RESIDENTIAL SADDLE THRESHOLD

DETAIL T-IS



SIDELITE SILL

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 4 FOR ANCHOR LOCATIONS & SPACING FOR ANCHOR QUANTITIES, SEE TABLES 1 & 3.

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, MIN. 1/4" THICK & MIN. F'C/ PSI MIN. (VERIFY 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.

D	02/22/24		
C	12/19/22	JENS ROSOWSKI	ASTRA-M-1
B	10/26/22		
A	10/12/22		

connecticut/miami

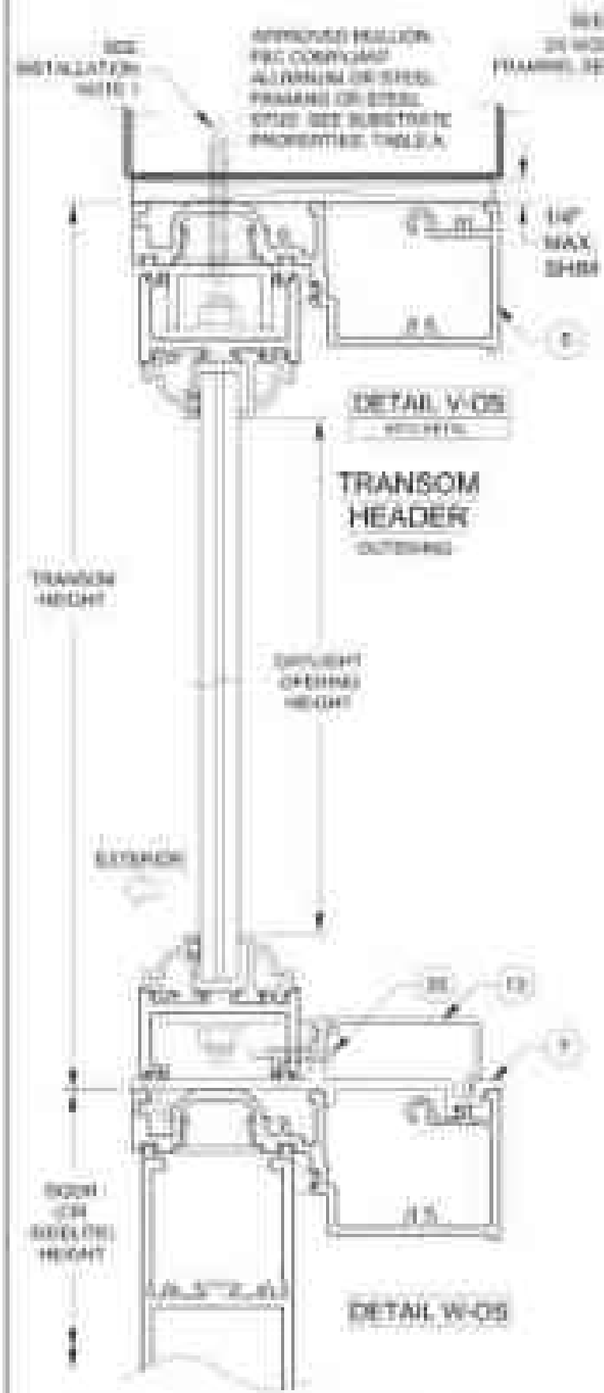
ALUMA/HURRICANE FRENCH DOOR (HP)

X-SECTIONS (REVISED)

FD4SSA	15 OF 21

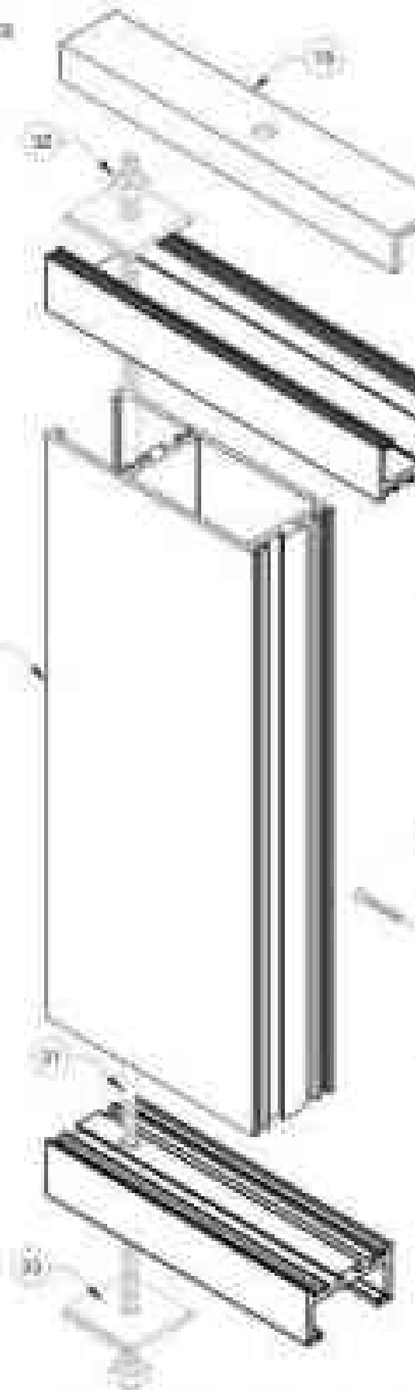


A. LYNN MILLER, P.E.
P.E.#59705

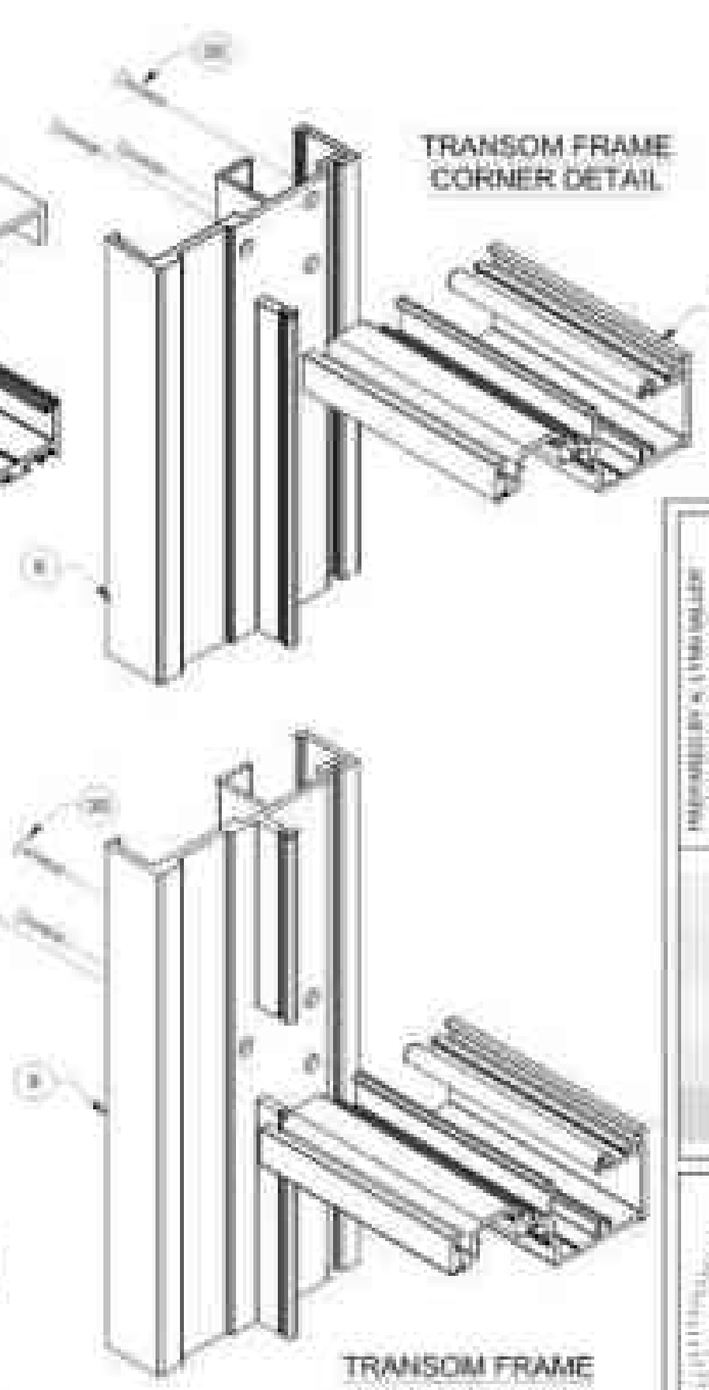


TRANSOM TO DOOR MULLION

TRANSOM TO DOOR MULLION



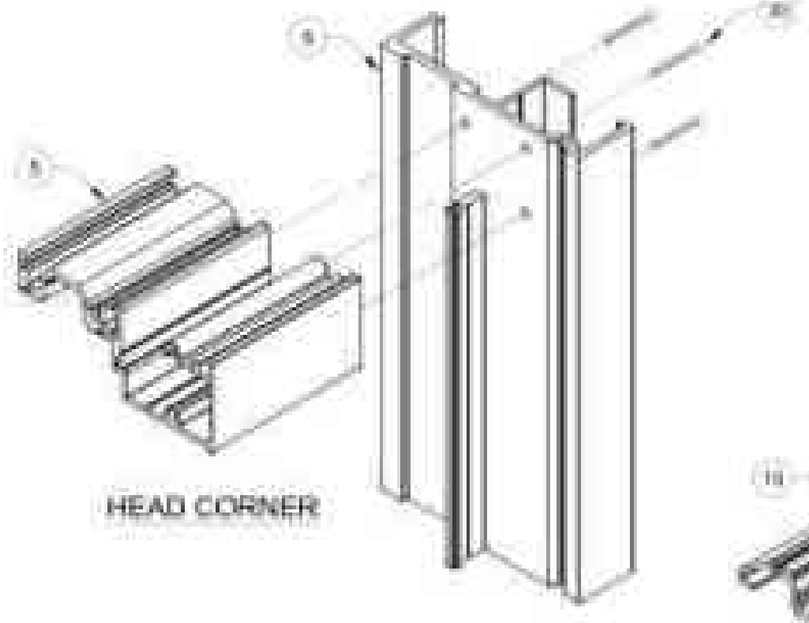
TRANSOM JAMB DETAIL



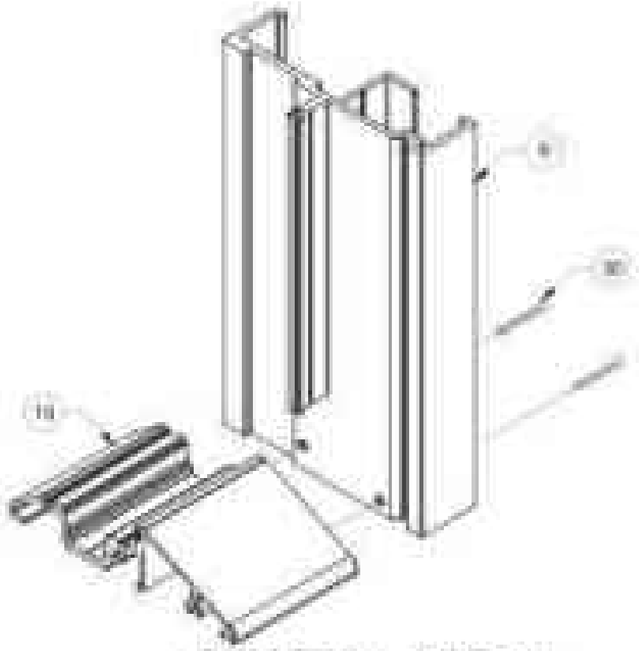
ALL JOINTS TO BE SEALED WITH SILICONE SURFAP OR EQUIVALENT
DETAILS MAY BE FOR INSWING OR OUTSWING DOORS

D	02/22/24	CORRECTED TRANSOM FRAME DETAIL	
	12/19/22		
		JEWS ROSOWSKI	45FPA-M-1
		ALUMINUM FRENCH DOOR (LHI)	
		TRANSOM DETAILS	16 OF 21
		FD45A	

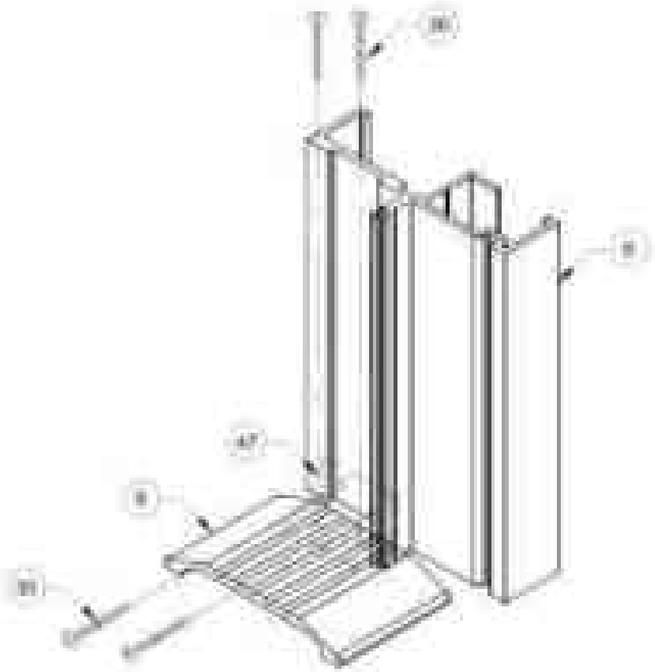
ANTHONY LYNN MILLER
LICENSE
No. 56705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER P.E.
P.E.#56705



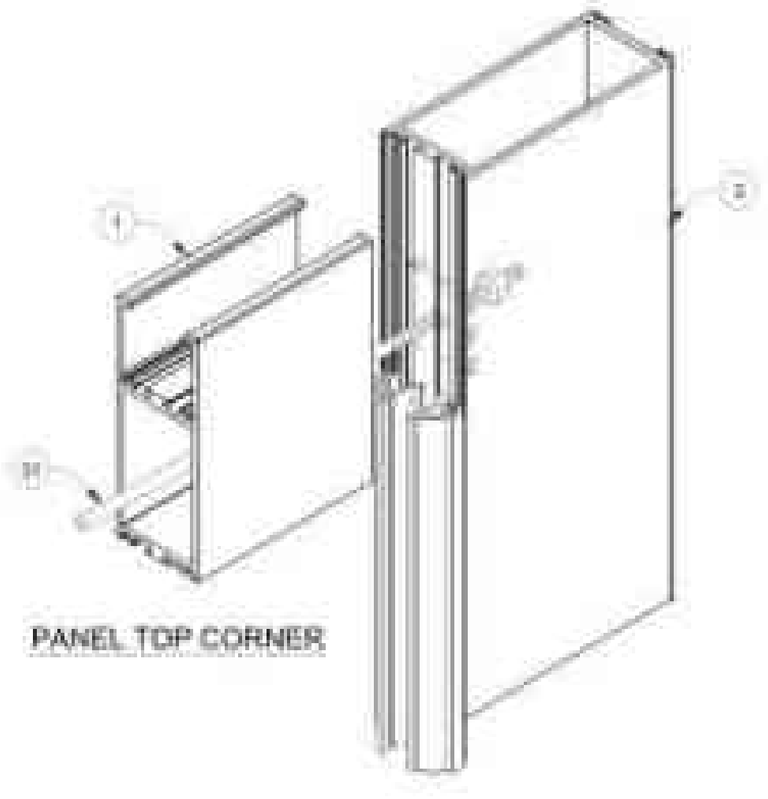
HEAD CORNER



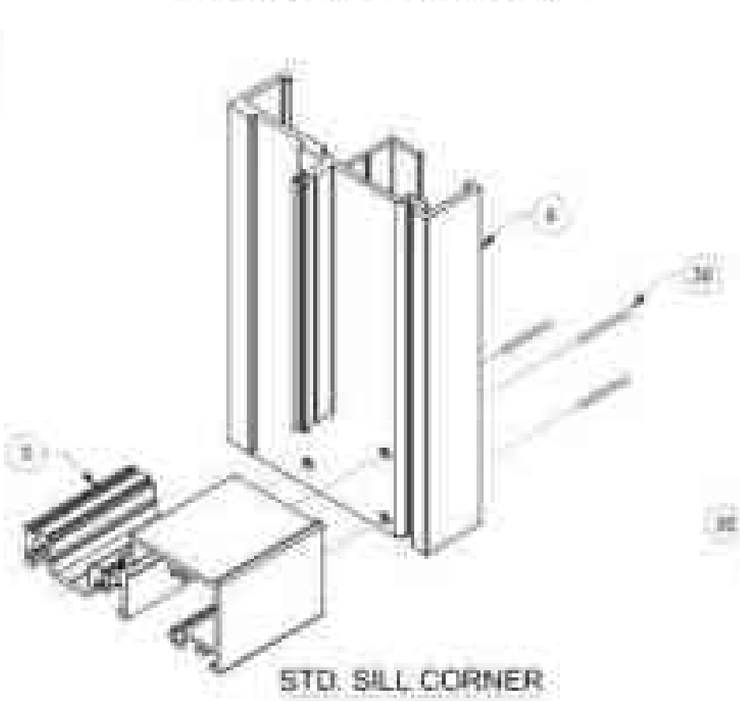
RESIDENTIAL SADDLE SILL



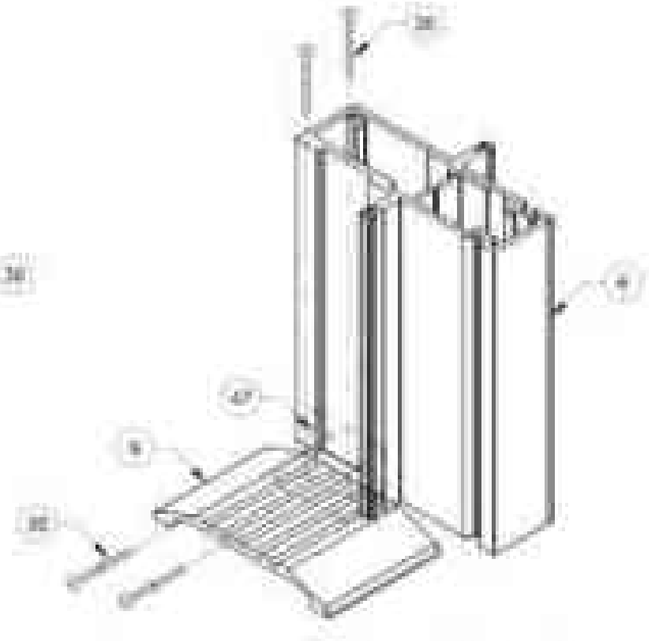
ADA SILL CORNER



PANEL TOP CORNER



STD. SILL CORNER



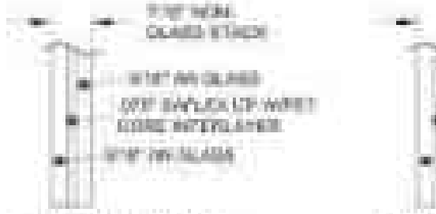
ADA SILL @ MULLION

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

NO CHANGES TO THIS SHEET | 03/22/24 | D

45ITP4-LM-1		
JEBS ROSOWSKI	12/19/22	
ALUMINUM FRENCH DOOR (LM)		
CORNER ASSEMBLY		17 OF 21
FD4508		

ANTHONY LYNN MILLER
LICENSE
No. 56705
REGISTERED
STATE OF
PENNSYLVANIA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E. # 56705



GLASS TYPE 1



GLASS TYPE 2



GLASS TYPE 3



GLASS TYPE 4

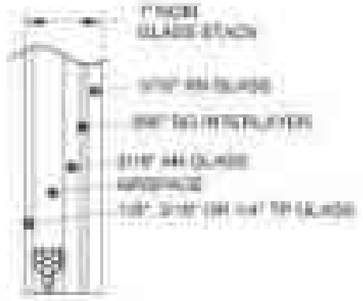


GLASS TYPE 5

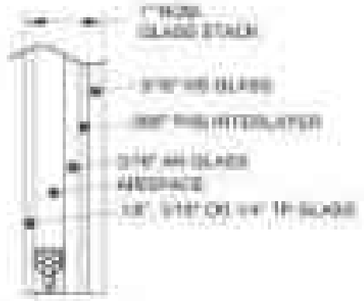




GLASS TYPE 6



GLASS TYPE 7



GLASS TYPE 8



COMPOSITE TYPE 9

ALUM. SPANDREL COMPOSITE PANEL



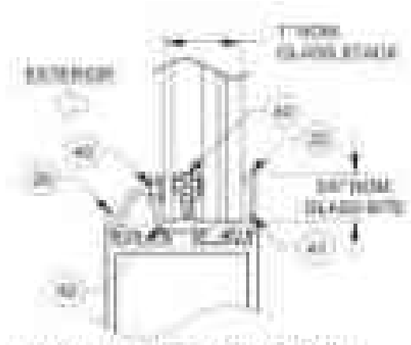
COMPOSITE 10

ALUM. SPANDREL COMPOSITE PANEL



LAMI. GLAZING DETAIL

SHOWN WITH OPT. SQUARE BEADING



LAMI. IG GLAZING DETAIL

SHOWN WITH OPT. SQUARE BEADING



LAMI. GLAZING DETAIL

SHOWN WITH OPT. SQUARE BEADING



LAMI. IG GLAZING DETAIL

SHOWN WITH OPT. SQUARE BEADING

TABLE 8

Glazing Type	Description (Listed from Exterior to Interior)
1	7/16" LAMI: 3/16" AN - 0.017" Saflex DF - 3/16" AN
2	9/16" LAMI: 3/16" AN - 0.060" SG - 3/16" AN
3	7/16" LAMI: 3/16" HS - 0.67" Saflex DF - 3/16" HS
4	7/16" LAMI: 3/16" HS - 0.060" SG - 3/16" HS
5	7/16" LAMI: 3/16" AN - 0.060" PVB - 3/16" HS
6	1" LAMI IG: 1/4" 3/16" or 1/4" TP Clear - Airspace - 3/16" AN - 0.67" Saflex DF - 3/16" AN
7	1" LAMI IG: 1/4" 3/16" or 1/4" TP Clear - Airspace - 3/16" AN - 0.060" SG - 3/16" AN
8	1" LAMI IG: 1/4" 3/16" or 1/4" TP Clear - Airspace - 3/16" AN - 0.060" PVB - 3/16" HS
9	1" 10" Composite Opaque Panel: 0.090" Aluminum - 1/4" Plywood - 0.090" Aluminum
10	1" Composite Opaque Panel: 0.090" Aluminum - 3/4" Plywood - 0.090" Aluminum

AN = ANNEALED GLASS
HS = HEAT STRENGTHENED GLASS
TP = TEMPERED GLASS

DOORS, SIDELITES & TRANSOMS CAN BE GLAZED USING SQUARE OR DOME GLAZING BEADS AND ANY GLAZING TYPE AND ARE NOT LIMITED BY BEADING/GLAZING SHOWN ON CROSS SECTIONS.

NO CHANGES THIS SHEET 10/2/2024 D

4617P4-LM-1

JENS ROSCOWSKI

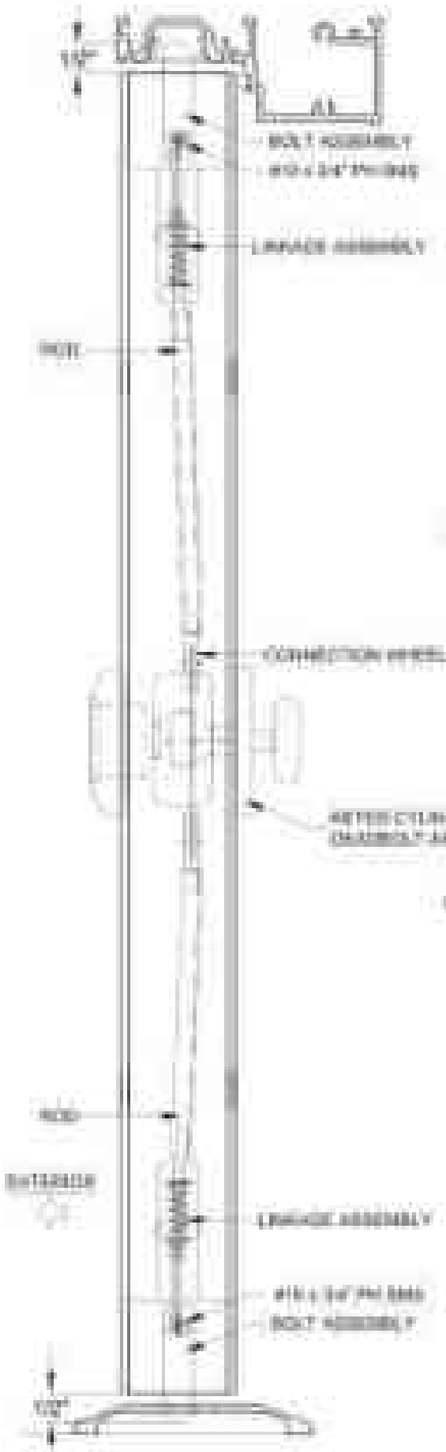
tymetal

ALUMINUM FRENCH DOOR (LAM)

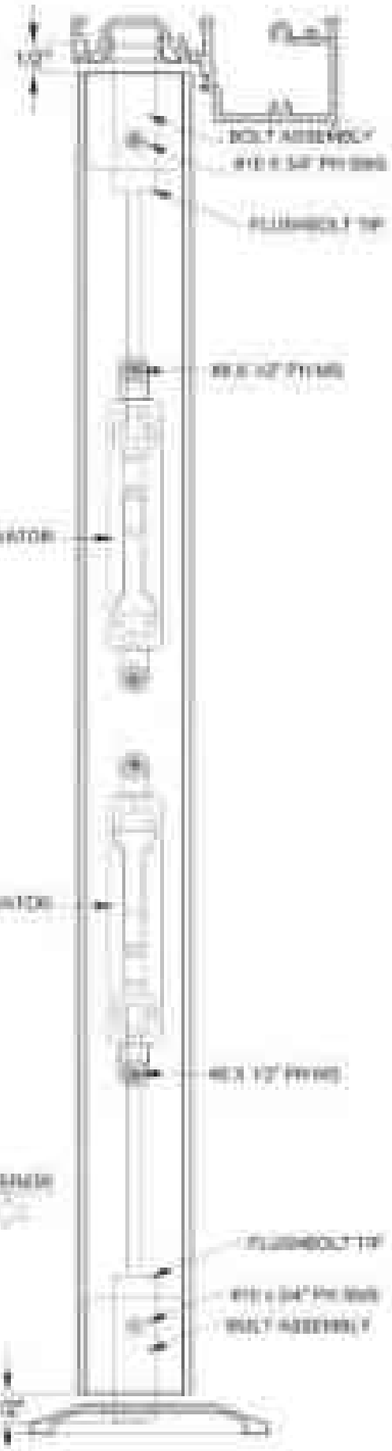
GLAZING DETAILS

FD4P3A 10-07-21

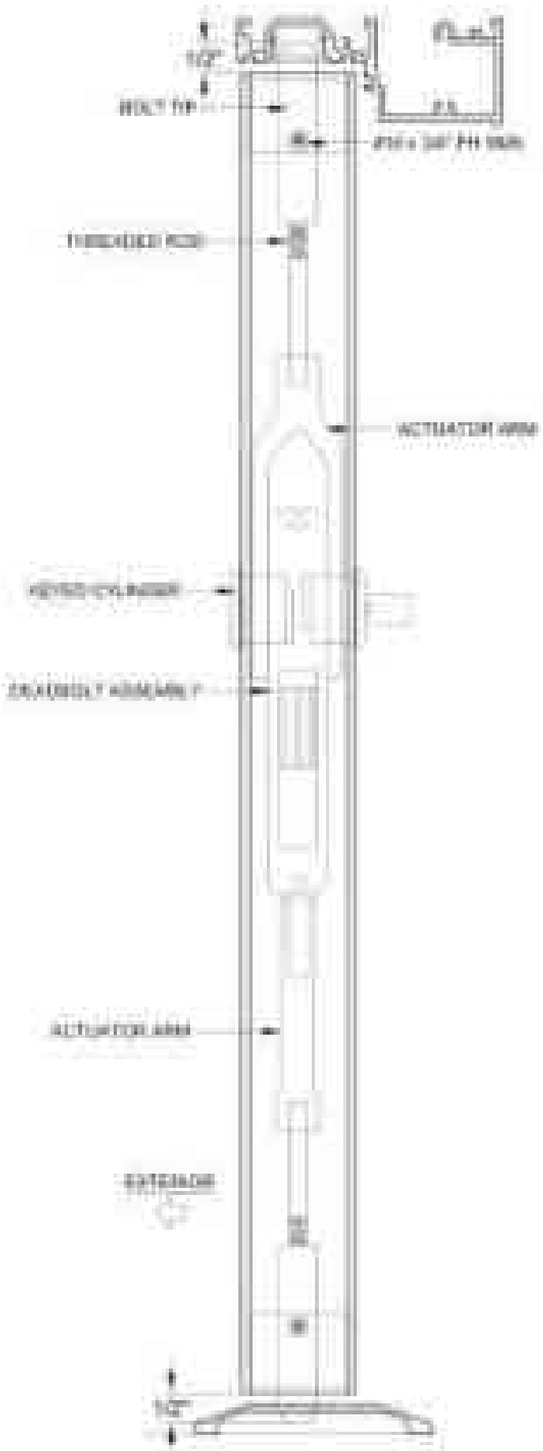
ANTHONY LYNN MILLER
LICENSED
No. 56726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER P.E.
FE #56726



COPPER CREEK W/ 3 POINT LOCK



FLUSHBOLTS (INACTIVE PANEL)



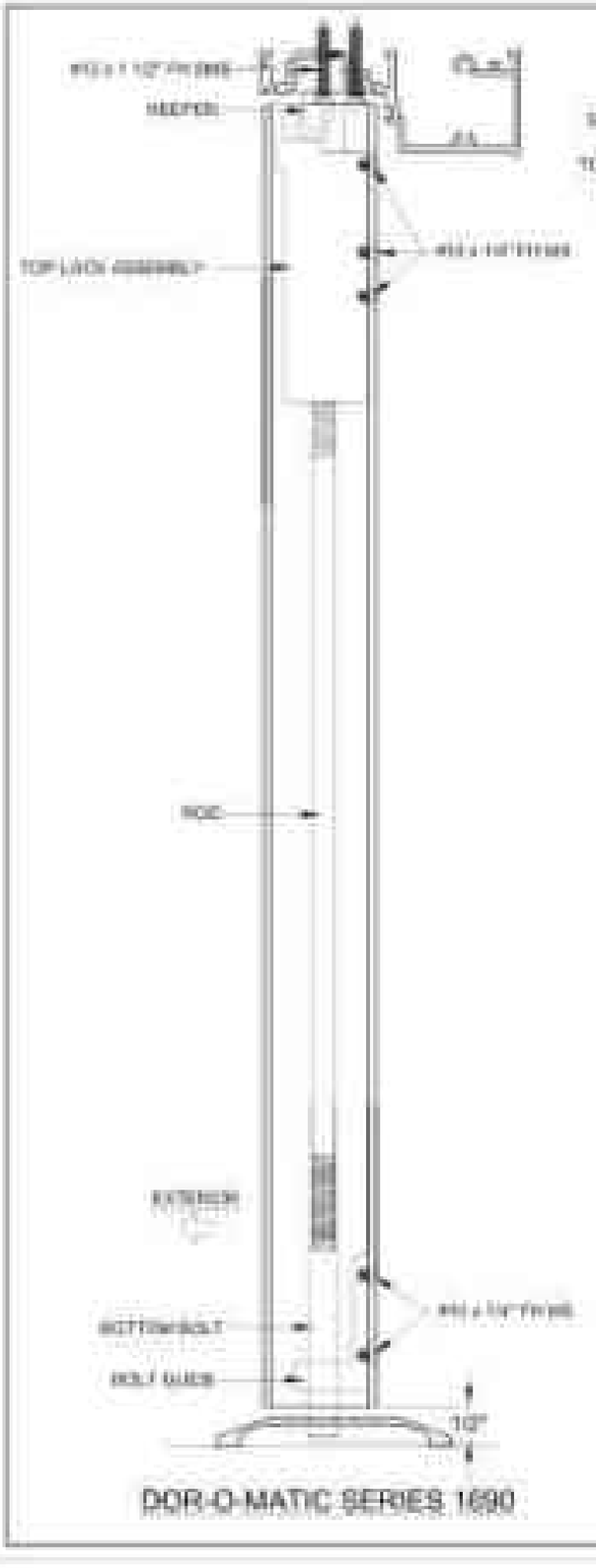
REGENT COMMERCIAL 3 POINT



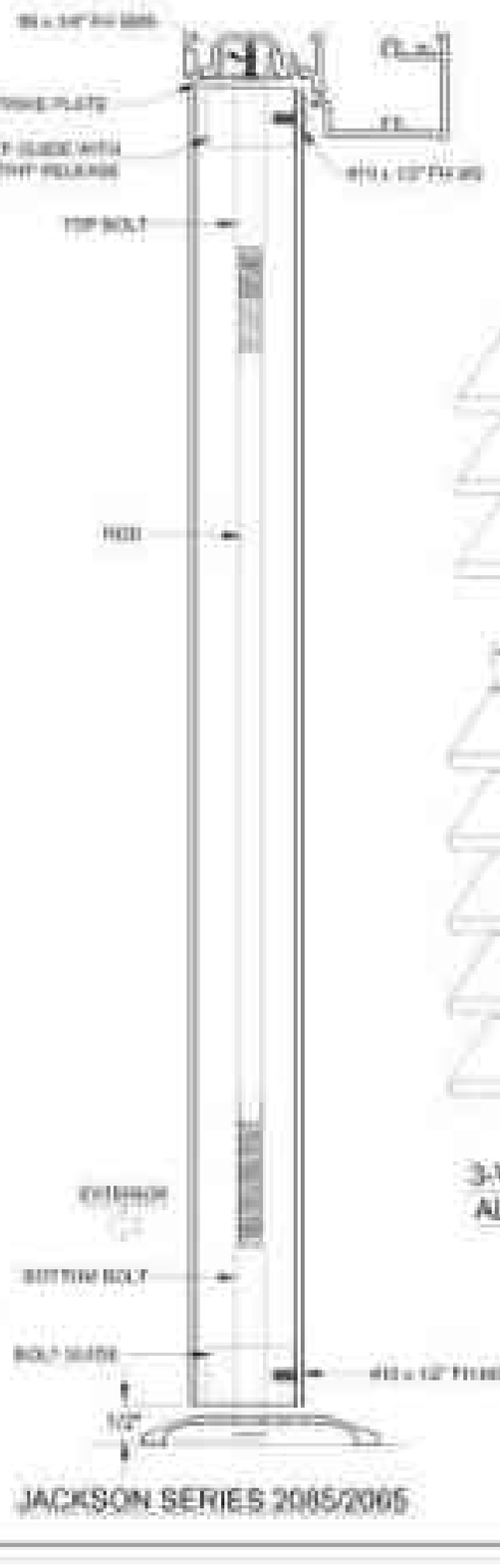
SURFACE MOUNTED LOCK

D	03/20/24	NO CHANGES THIS SHEET	
		JEBS RDS/SWG	4667PA-M.1
		ALUMINUM FRENCH DOOR PLAN	15 OF 21
		HARDWARE	TD4504

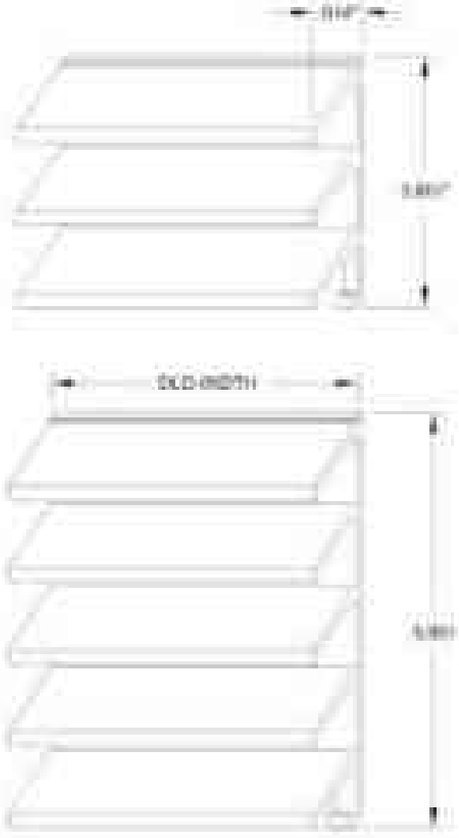




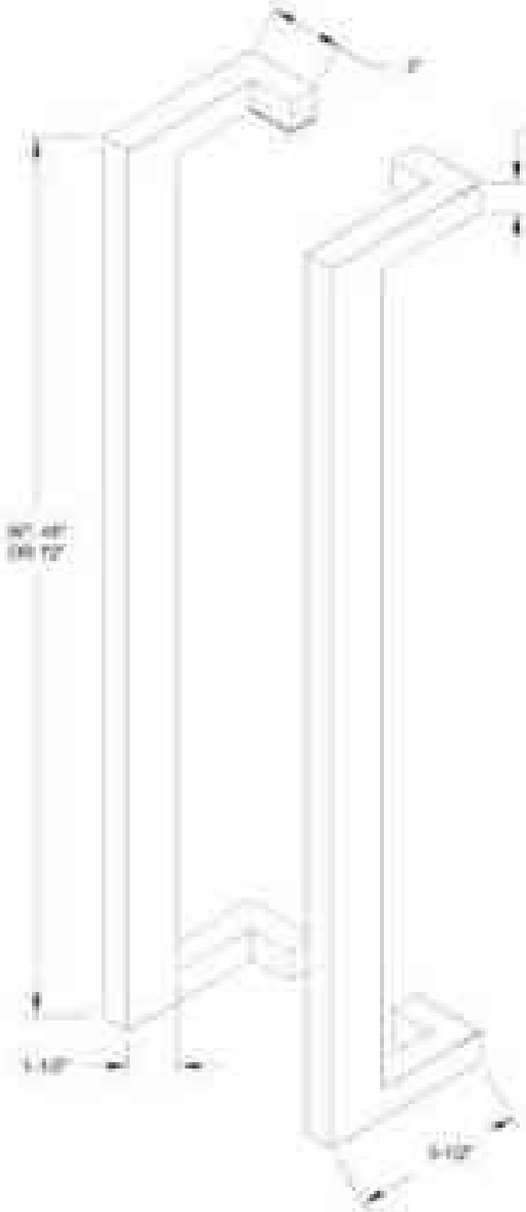
DOR-O-MATIC SERIES 1690



JACKSON SERIES 2065/2065



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



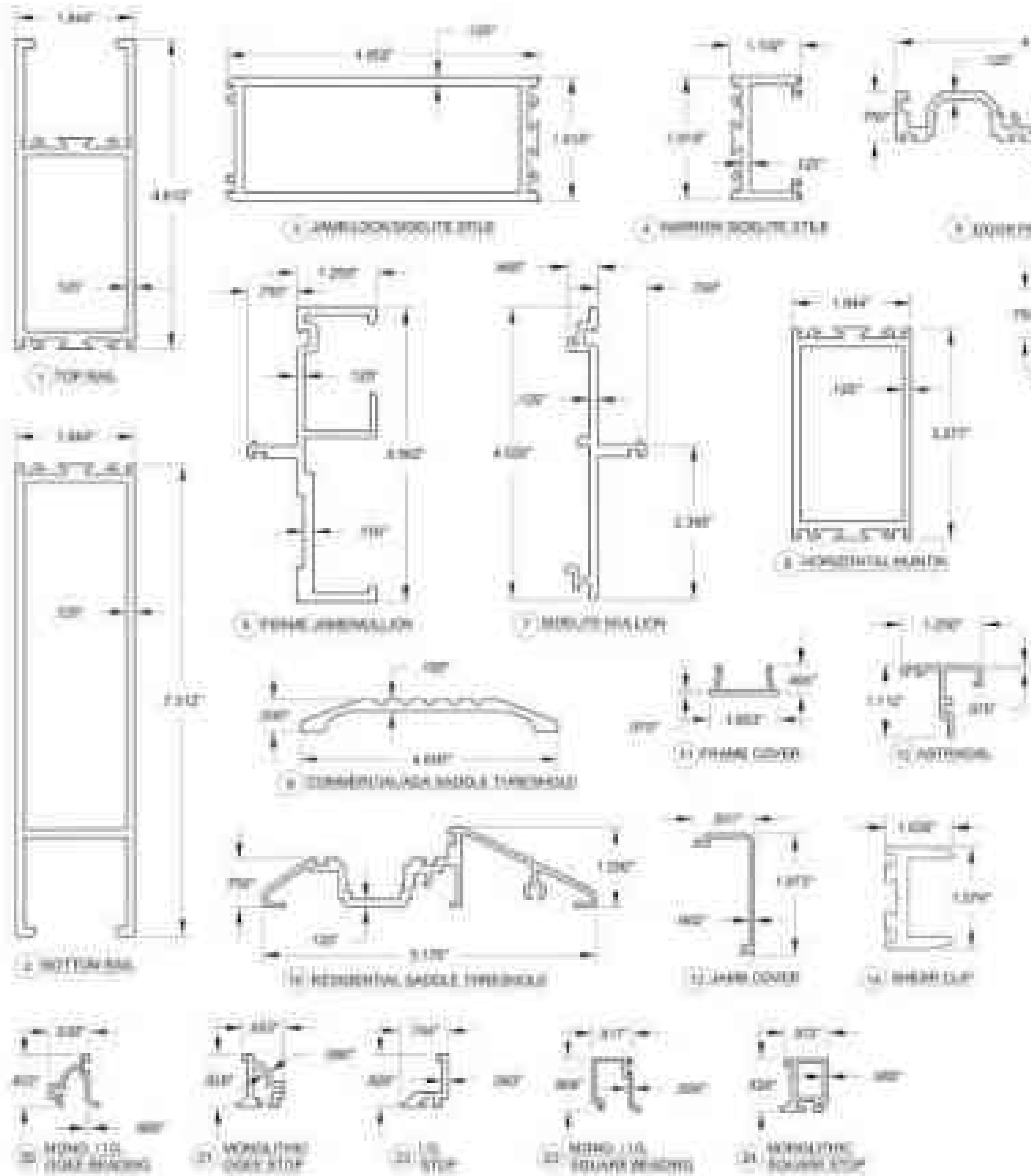
OPTIONAL LADDER-PULL HANDLE

PREPARED BY: A. LYNN MILLER 2010 TWIN OAKS CIRCLE N. VENICE, FL 34275 (941) 493-5030	
REVISIONS	
DESCRIPTION	DATE
NO CHANGES THIS SHEET	03/20/24
ALUMINUM FRENCH DOOR (HM)	
HARDWARE	JEMS ROSEWOOD
SCALE:	4687PA-HM-1
	21 OF 21
	D



TABLE C

ITEM #	PART #	DESCRIPTION	MATERIAL
1	[illegible]	Top Rail	ALUM. 6063-T6
2	[illegible]	Bottom Rail	ALUM. 6063-T6
3	[illegible]	Jamb / Lock / Sidelite Stile	ALUM. 6063-T6
4	[illegible]	Narrow Sidelite Stile	ALUM. 6063-T6
5	[illegible]	Door Frame Header, [illegible]	ALUM. 6063-T6
6	[illegible]	Frame Jamb / Mullion	ALUM. 6063-T6
7	[illegible]	Sidelite Mullion	ALUM. 6063-T6
8	[illegible]	Horizontal Muntin	ALUM. 6063-T6
9	[illegible]	Commercial/ADA Saddle Threshold	ALUM. 6063-T6
10	[illegible]	Residential Saddle Threshold	ALUM. 6063-T6
11	[illegible]	Frame Cover	ALUM. 6063-T6
12	[illegible]	Astragal	ALUM. 6063-T6
13	[illegible]	Jamb Cover	ALUM. 6063-T6
14	[illegible]	Shear Clip	ALUM. 6063-T6
15	[illegible]	Transom Channel	ALUM. 6063-T6
20	[illegible]	Mono. / I.G. Ogee Beading	ALUM. 6063-T6
21	[illegible]	Monolithic Ogee Stop	ALUM. 6063-T6
22	[illegible]	I.G. Stop	ALUM. 6063-T6
23	[illegible]	Mono. / I.G. Square Beading	ALUM. 6063-T6
24	[illegible]	Monolithic Square Stop	ALUM. 6063-T6
25		#12 x 1-1/2" 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		[illegible]	[illegible]
35		#10 x 1" PH. [illegible] (Stabilizer Attachment)	Stainless Steel
36		#8 x 3/4" [illegible] (Astragal Assembly)	Stainless Steel
37		[illegible]	-
38		[illegible]	-
39		1/8" x 1/2" Adhesive Closed Cell Foam Pad	-
40	[illegible]	Glazing Bead Vinyl	Vinyl
41		Backbedding [illegible]	Silicone
42		Setting Block	
43		Insulated Glass Spacer	
45		Hinge, 4" x 4 1/2"	Stainless Steel
46		1/4-20 x 1/2" [illegible] (Hinge)	Stainless Steel
47		2" x 2" x 1/4" Angle	Aluminum



NO CHANGES THIS SHEET

ALUMINUM FRENCH DOOR (LM)

BOM AND EXTRUSIONS

21 OF 21

ANTHONY LYNN MILLER
PROFESSIONAL ENGINEER
STATE OF FLORIDA

A. LYNN MILLER, P.E.