

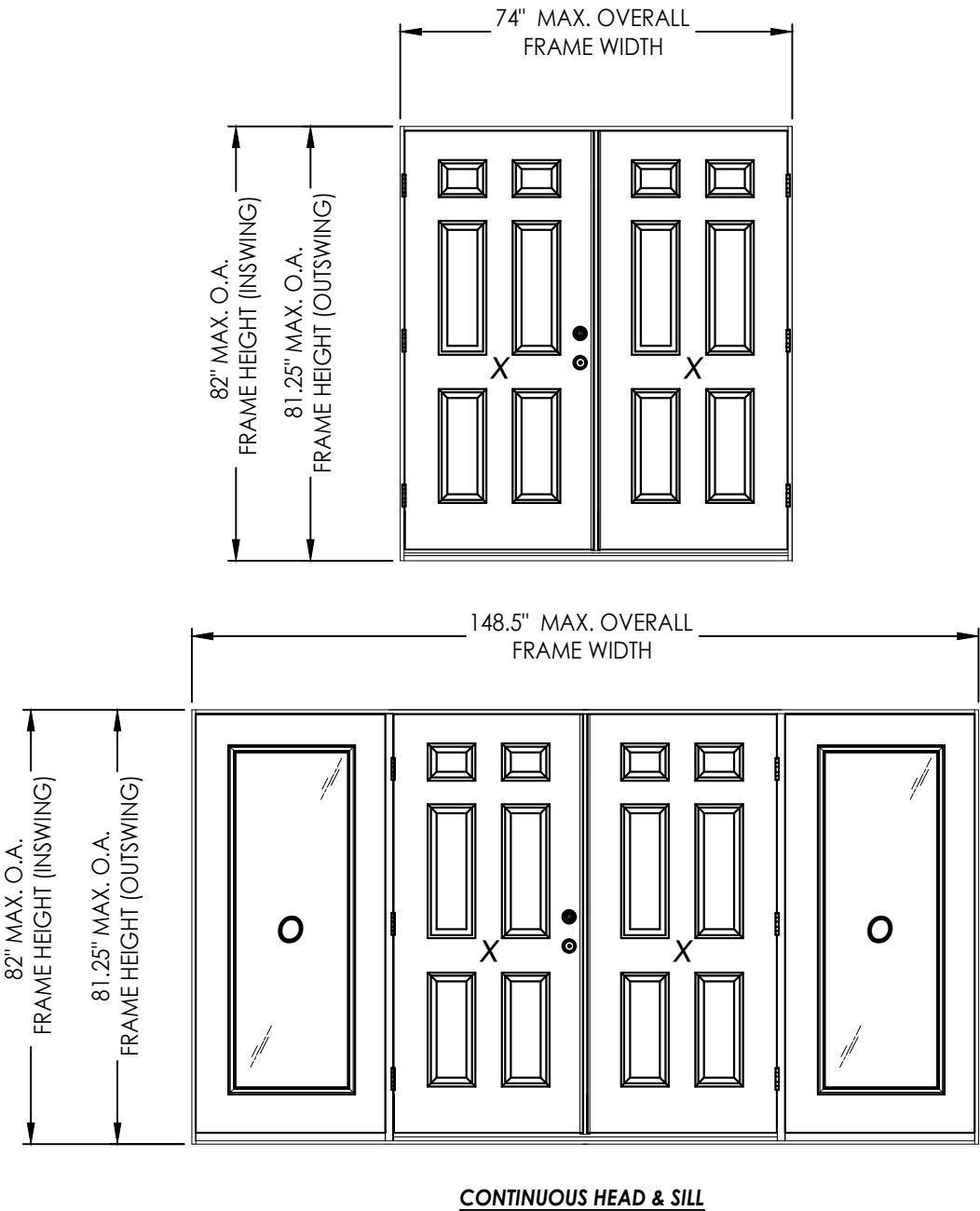
Z:\2023 FBC Drawings\MasterGrain\FL-21852 R10\FL-21852.13.dwg

FIBERGLASS OPAQUE
DOUBLE DOOR
w/ or w/out SIDELITES
INSWING/OUTSWING
"IMPACT"

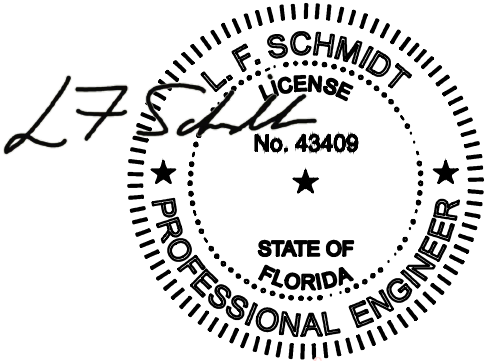
GENERAL NOTES

1. This product has been evaluated and is in compliance with the 9th Edition (2026) Florida Building Code (FBC) structural requirements excluding the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing or stucco.
3. When used in areas requiring wind borne debris protection this product complies with FBC Sections 1609.1.2 & R301.2.1.2 and does not require an impact resistant covering. This product meets missile level "D" and includes Wind Zone 4 as defined in ASTM E1996.
4. For 2x stud framing construction, anchoring of these units shall be the same as that shown for 2x buck masonry construction.
5. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.

TABLE OF CONTENTS	
SHEET#	DESCRIPTION
1	Typical Elevations, Design Pressures & General Notes
2	Door Panel Details
3	Sidelite Panel Details
4	Glazing Details
5	Elevations
6	Horizontal & Vertical Cross Sections (2X Buck)
7	Horizontal & Vertical Cross Sections (1X Buck)
8	Vertical Cross Sections (Thresholds)
9	Buck Anchoring
10	Frame Anchoring
11	Hardware Details
12	Bill of Materials & Components



CONFIGURATION	DESIGN PRESSURE (PSF) INSWING		DESIGN PRESSURE (PSF) OUTSWING	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
XX, OXXO	+50.0	-55.0	+50.0	-50.0



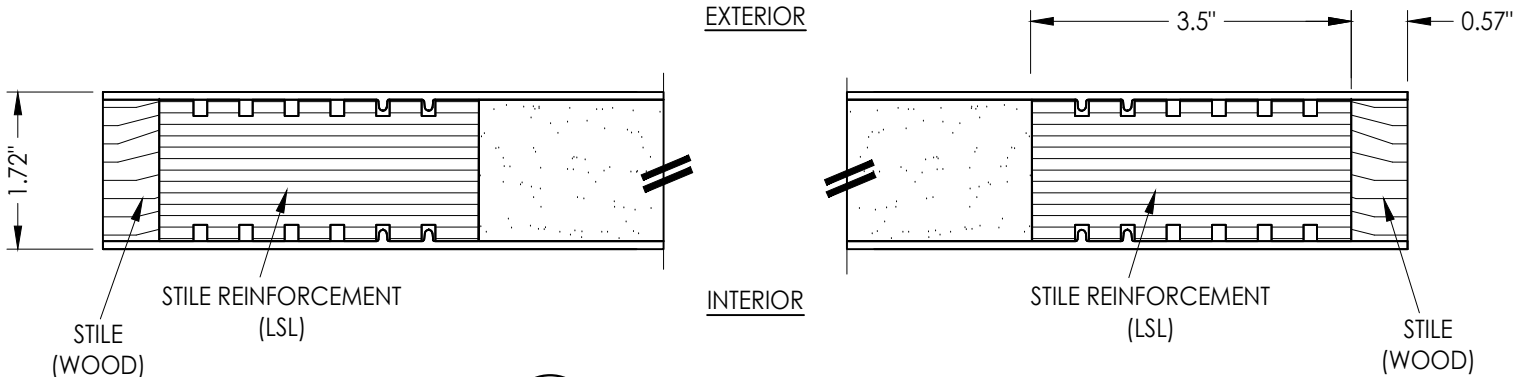
Digitally signed by Lyndon F Schmidt
Date: 2026.07.22 17:08:06 -04'00'

This item has been digitally signed and sealed by
L. F. Schmidt, P.E. on the date adjacent to the seal.
Printed copies of this document are not
considered signed and sealed and the signature
must be verified on any electronic copies.

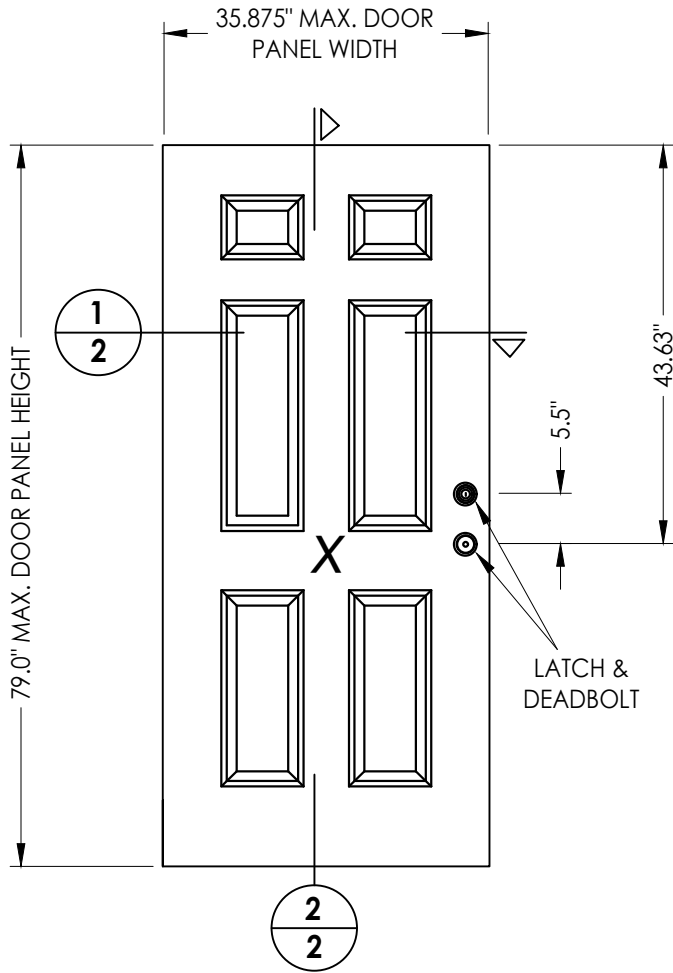
THIS PRODUCT APPROVAL IS VALID
ONLY FOR THE STATE OF FLORIDA

PRODUCT:		MASTERGRAIN FIBERGLASS DOOR		PART OR ASSEMBLY:		TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES	
5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC	LFS			
4	7/01/23	UPDATE TO 8TH ED. (2023)	FBC	LFS			
3	7/08/20	UPDATE TO 7TH ED. (2020)	FBC	LFS			
2	6/20/19	ADD ASTRAGAL		LFS			
1	10/03/17	UPDATE TO 6TH ED. (2017)	FBC	JK			
NO.	DATE			BY			
				REVISIONS			
DATE: 02/09/17							
SCALE: N.T.S.							
DWG. BY: JK							
CHK. BY: LFS							
DRAWING NO.: FL-21852.13							
SHEET 1 OF 12							

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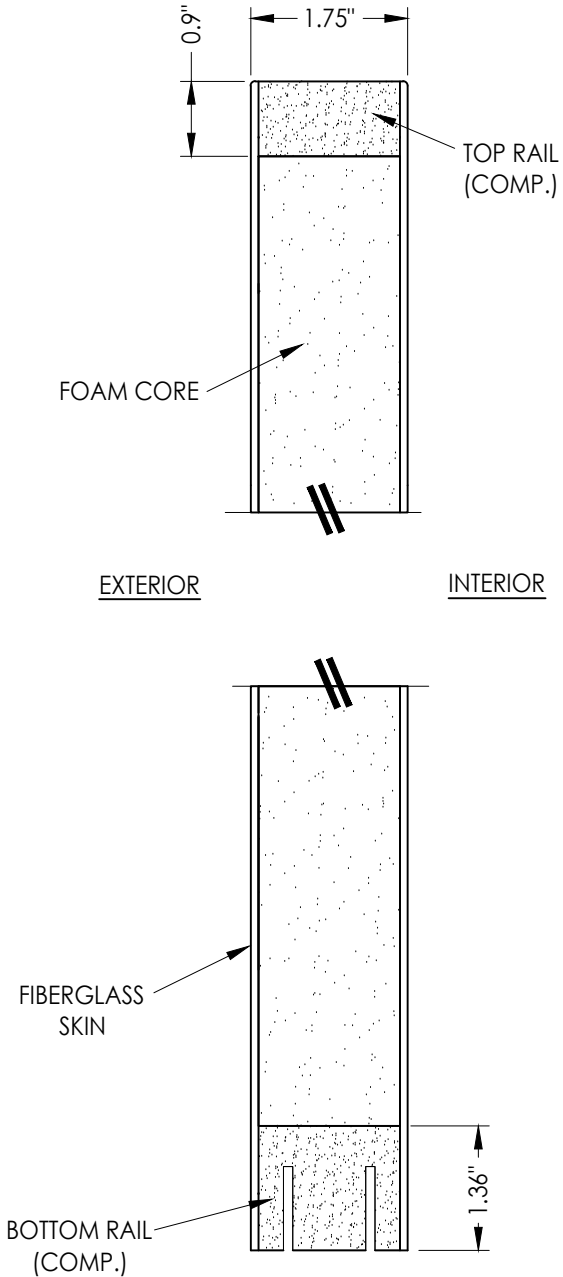


1
2 **HORIZONTAL CROSS SECTION**



40 **DOOR PANEL**
Mastergrain

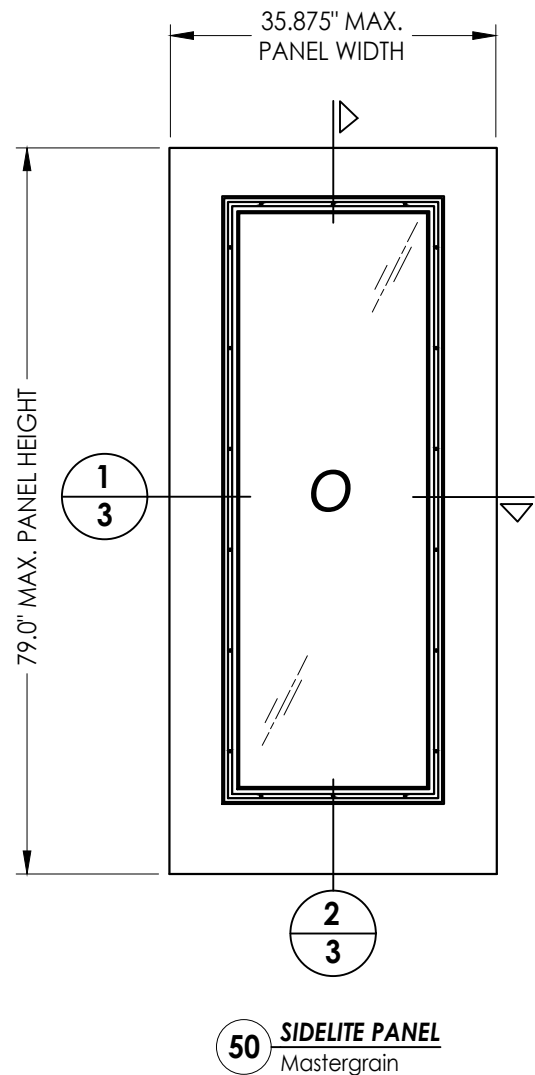
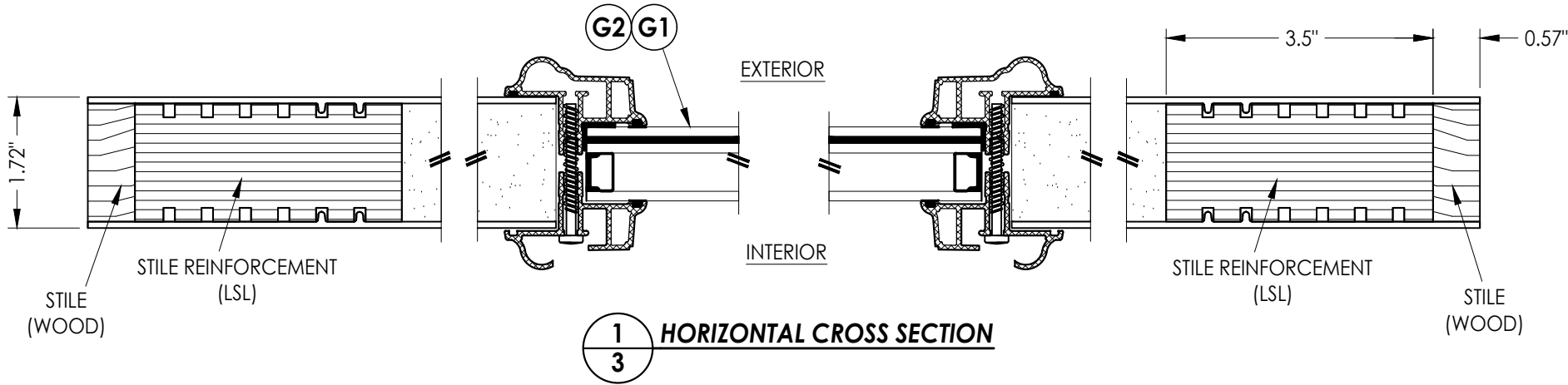
FIBERGLASS DOOR SKIN: 0.095" MIN. THK.
FOAM CORE: POLYURETHANE - 1.9 PCF MIN.



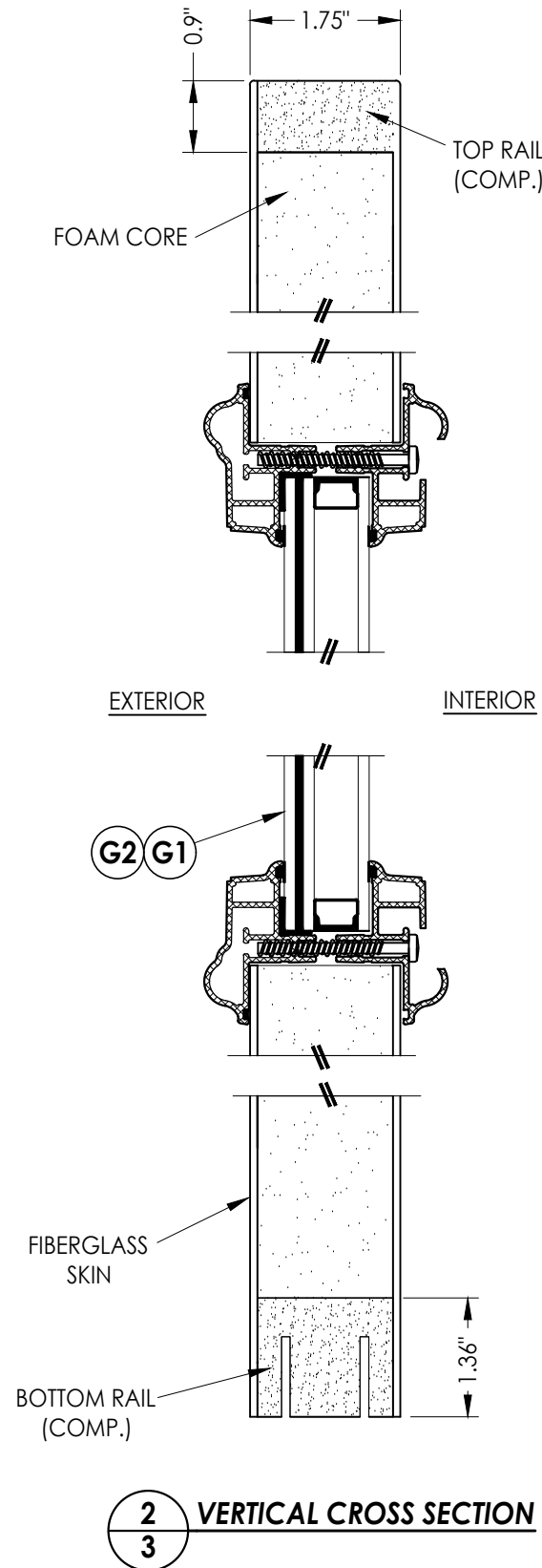
2
2 **VERTICAL CROSS SECTION**

Documents Prepared By: Lyndon F. Schmidt P.E. No. 43409				BUILDING CONSULTANTS, INC. P.O. Box 230, Valrico, FL 33595 Phone No.: 813.659.9197 FBPE Registry No. 9813			
PRODUCT: MASTERGRAIN FIBERGLASS DOOR				PART OR ASSEMBLY: DOOR PANEL DETAILS			
5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC	LFS			
4	7/01/23	UPDATE TO 8TH ED. (2023)	FBC	LFS			
3	7/08/20	UPDATE TO 7TH ED. (2020)	FBC	LFS			
2	6/20/19	ADD ASTRAGAL		LFS			
1	10/03/17	UPDATE TO 6TH ED. (2017)	FBC	JK			
NO.	DATE			BY			
				REVISIONS			
DATE: 02/09/17							
SCALE: N.T.S.							
DWG. BY: JK							
CHK. BY: LFS							
DRAWING NO.: FL-21852.13							
SHEET 2 OF 12							

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FIBERGLASS SIDELITE SKIN: 0.095" MIN. THK.
FOAM CORE: POLYURETHANE - 1.9 PCF MIN.



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Lyndon F. Schmidt
P.E. No. 43409

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

PRODUCT:
MASTERGRAIN
FIBERGLASS DOOR

PART OR ASSEMBLY:
DOOR PANEL DETAILS

NO.	DATE	REVISIONS
5	7/01/26	UPDATE TO 9TH ED. (2026) FBC LFS
4	7/01/23	UPDATE TO 8TH ED. (2023) FBC LFS
3	7/08/20	UPDATE TO 7TH ED. (2020) FBC LFS
2	6/20/19	ADD ASTRAGAL LFS
1	10/03/17	UPDATE TO 6TH ED. (2017) FBC JK

DATE: 02/09/17

SCALE: N.T.S.

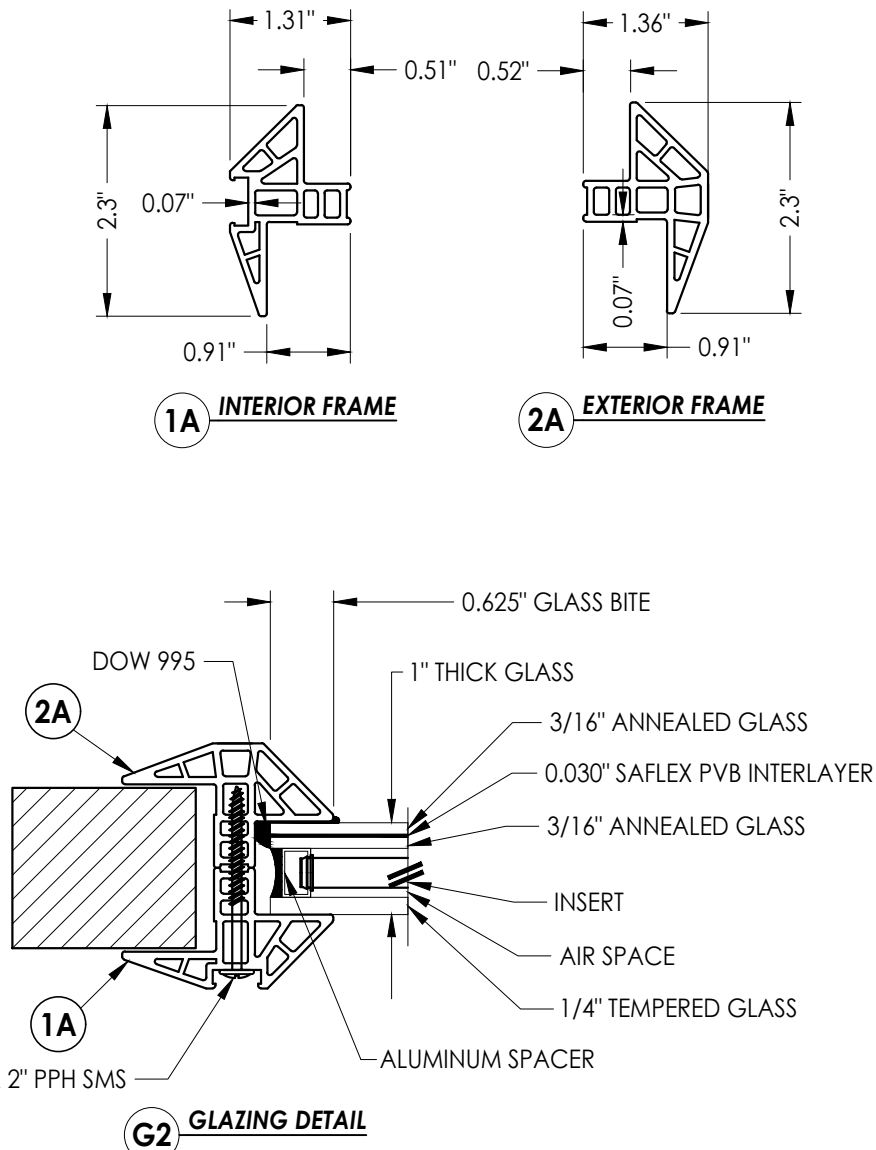
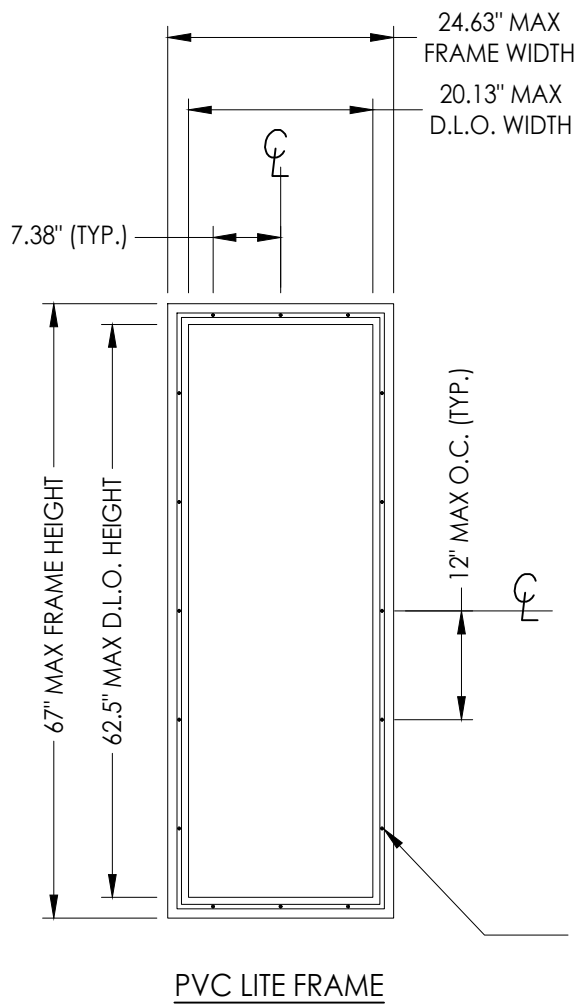
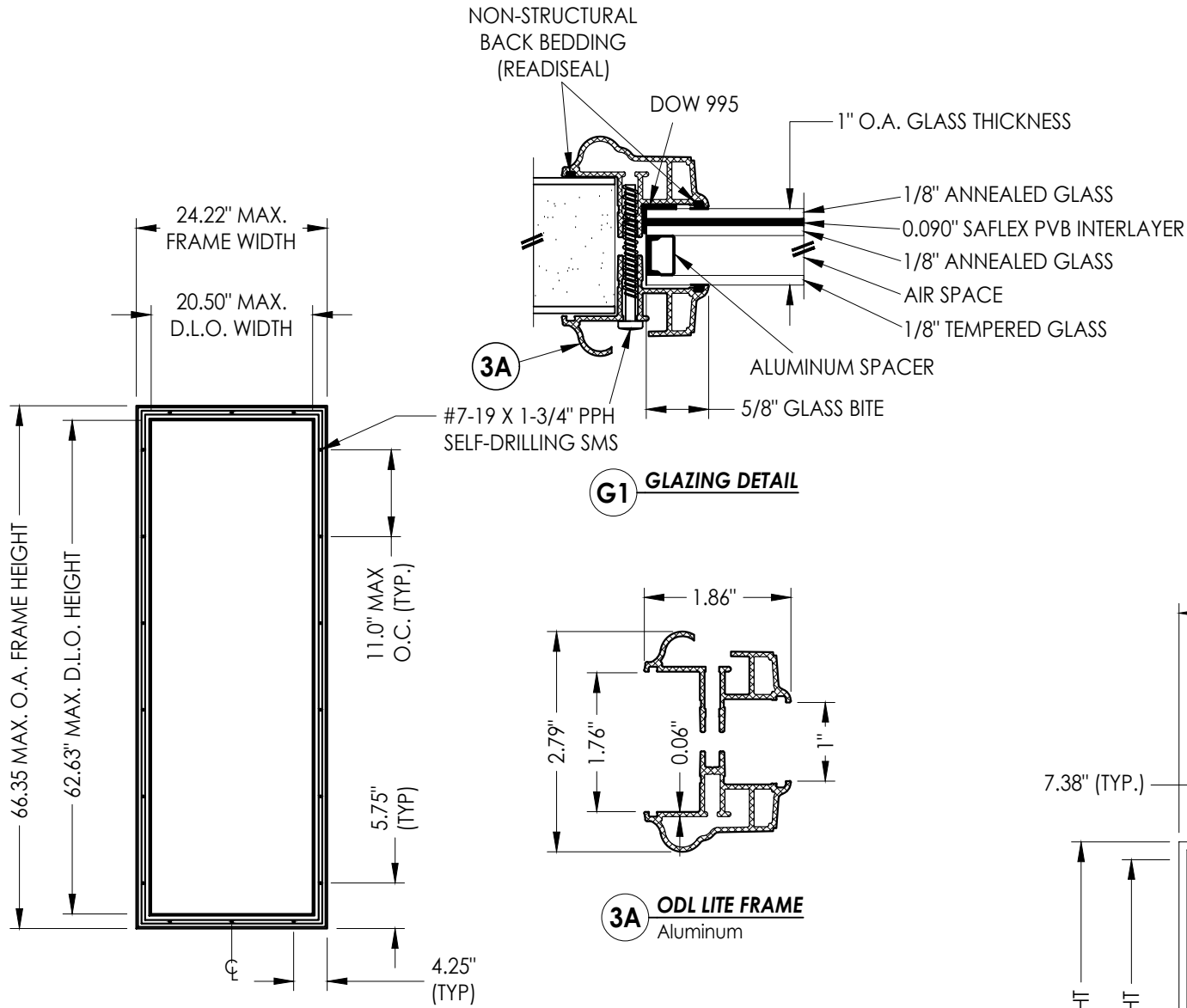
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CHK. BY: LFS

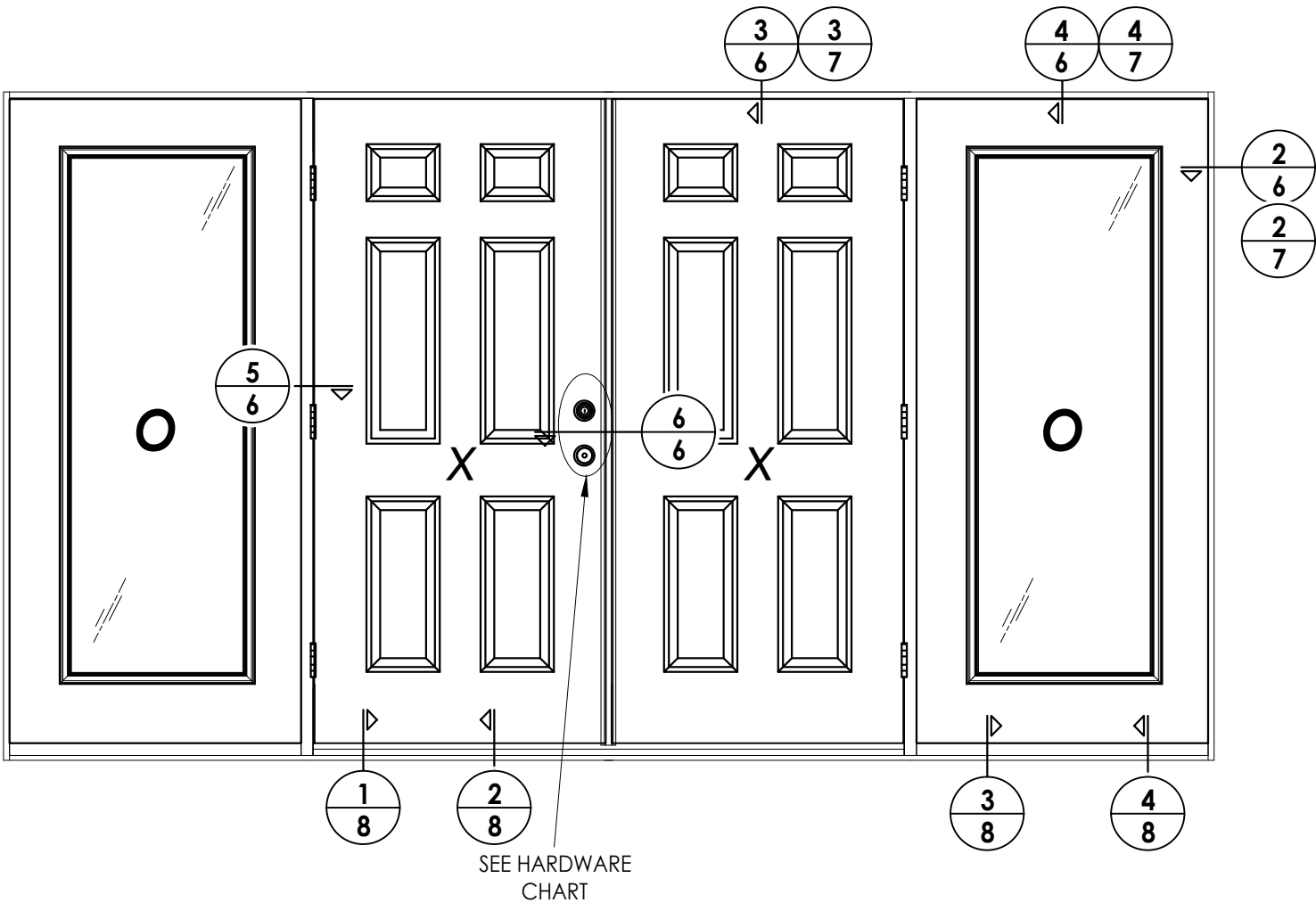
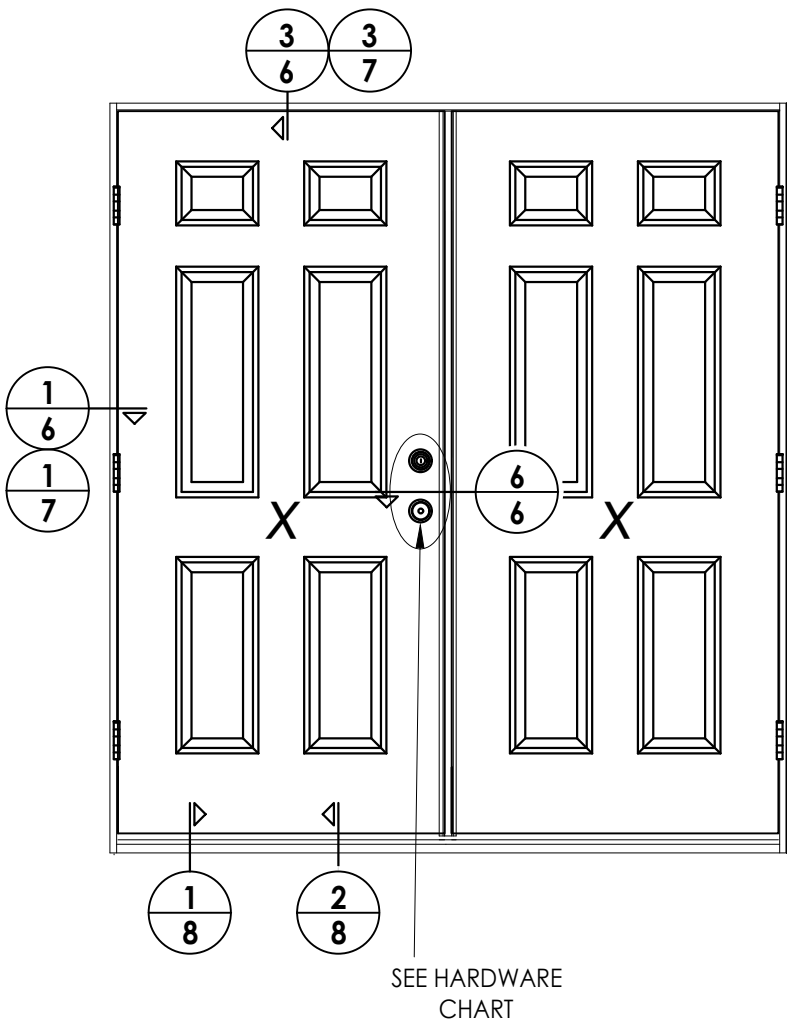
DRAWING NO.:

FL-21852.13

SHEET 3 OF 12



Documents Prepared By: Lyndon F. Schmidt P.E. No. 43409		BUILDING CONSULTANTS, INC. P.O. Box 230, Valrico, FL 33595 Phone No.: 813.659.9197 FBPE Registry No. 9813	
PRODUCT: MASTERGRAIN FIBERGLASS DOOR		PART OR ASSEMBLY: GLAZING DETAILS	
5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC
4	7/01/23	UPDATE TO 8TH ED. (2023)	FBC
3	7/08/20	UPDATE TO 7TH ED. (2020)	FBC
2	6/20/19	ADD ASTRAGAL	LFS
1	10/03/17	UPDATE TO 6TH ED. (2017)	FBC
NO. DATE		REVISIONS	
DATE: 02/09/17			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: FL-21852.13			
SHEET 4 OF 12			

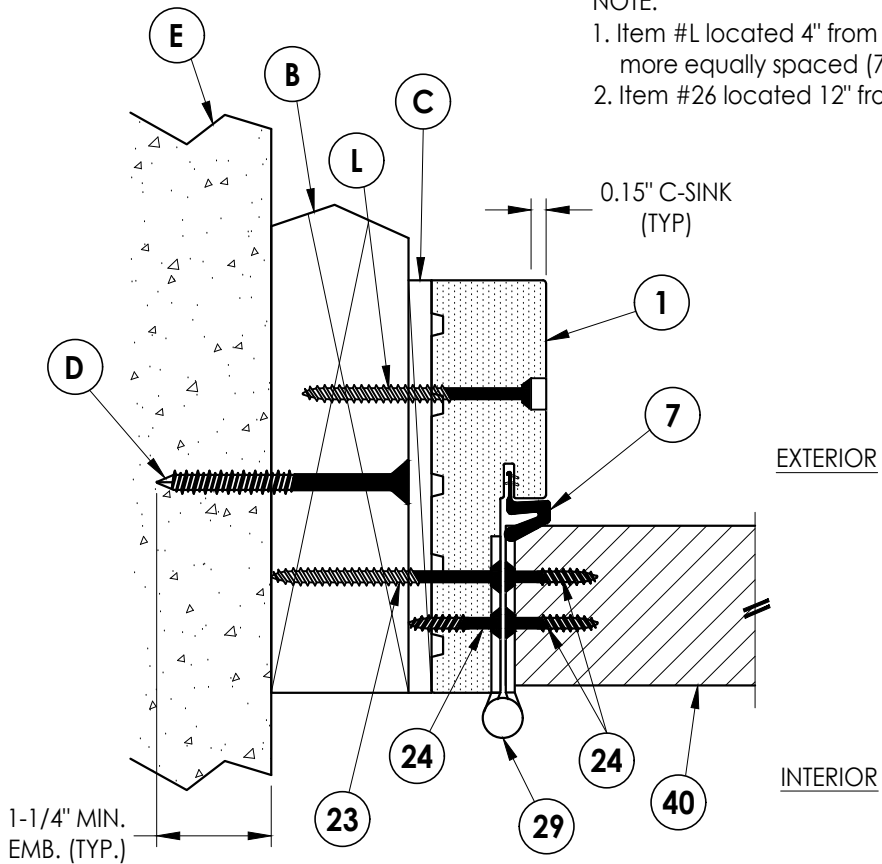


HARDWARE TABLE		
MANUFACTURER	MODEL	
PAMEX	Knob:	FLU600
	Deadbolt:	FD261
KWIKSET	Knob:	SIGNATURE SERIES
	Deadbolt:	SIGNATURE SERIES (980)
SCHLAGE	Knob:	F51
	Deadbolt:	B60N

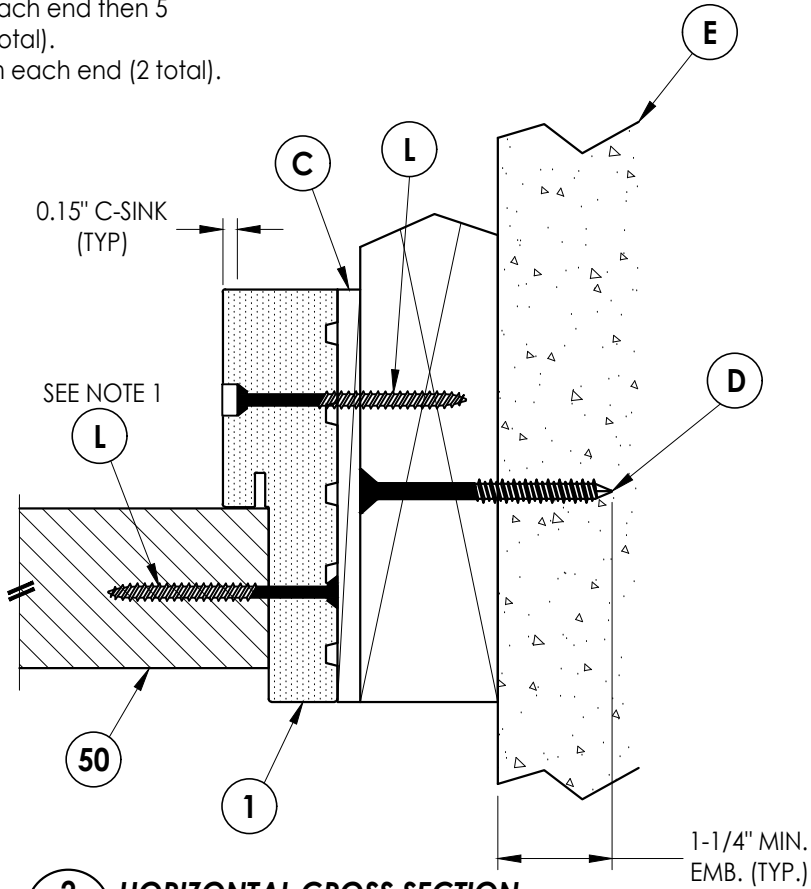
Documents Prepared By: Lyndon F. Schmidt P.E. No. 43409					<i>RW</i> BUILDING CONSULTANTS, INC. P.O. Box 230, Valrico, FL 33595 Phone No.: 813.659.9197 FBPE Registry No. 9813				
PRODUCT: MASTERGRAIN FIBERGLASS DOOR			PART OR ASSEMBLY: ELEVATIONS						
5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC	LFS					
4	7/01/23	UPDATE TO 8TH ED. (2023)	FBC	LFS					
3	7/08/20	UPDATE TO 7TH ED. (2020)	FBC	LFS					
2	6/20/19	ADD ASTRAGAL		LFS					
1	10/03/17	UPDATE TO 6TH ED. (2017)	FBC	JK					
NO.	DATE								
					REVISIONS				
DATE: 02/09/17									
SCALE: N.T.S.									
DWG. BY: JK									
CHK. BY: LFS									
DRAWING NO.: FL-21852.13									
SHEET 5 OF 12									

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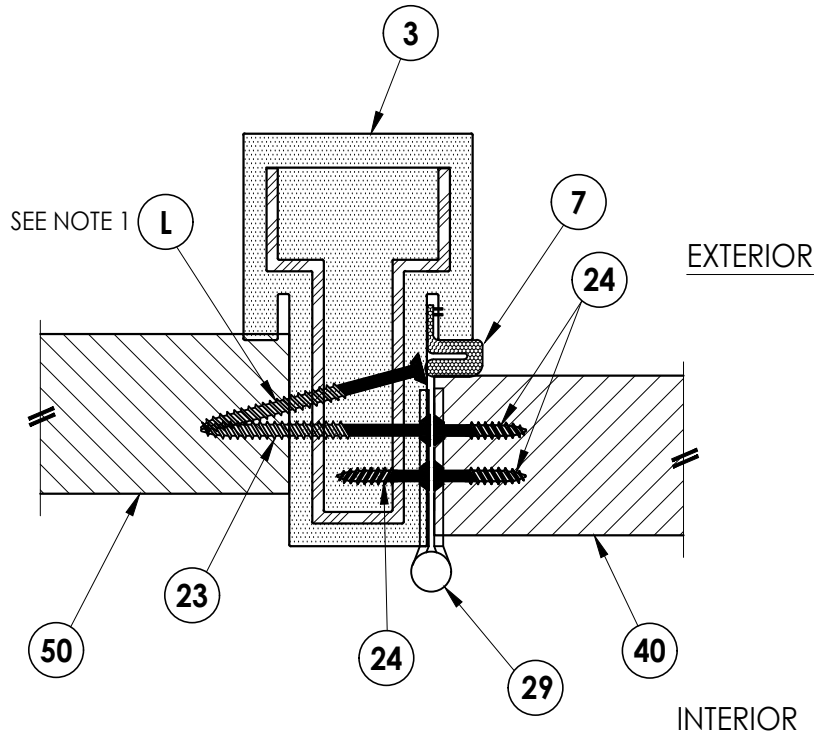
NOTE:
1. Item #L located 4" from each end then 5 more equally spaced (7 total).
2. Item #26 located 12" from each end (2 total).



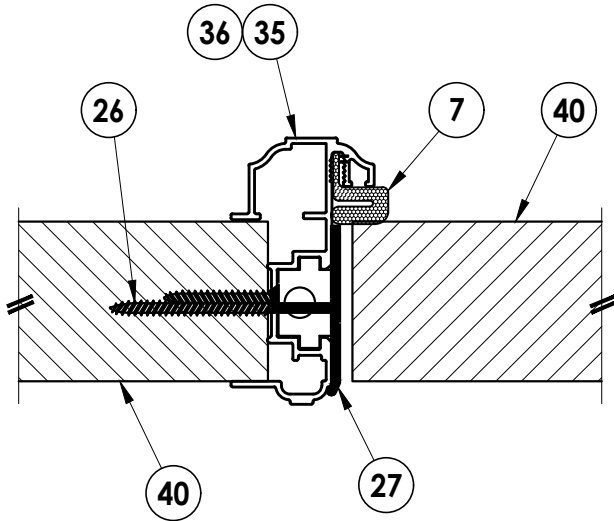
1
6 **HORIZONTAL CROSS SECTION**
Shown w/ 2X Buck
Inswing shown (Outswing similar)



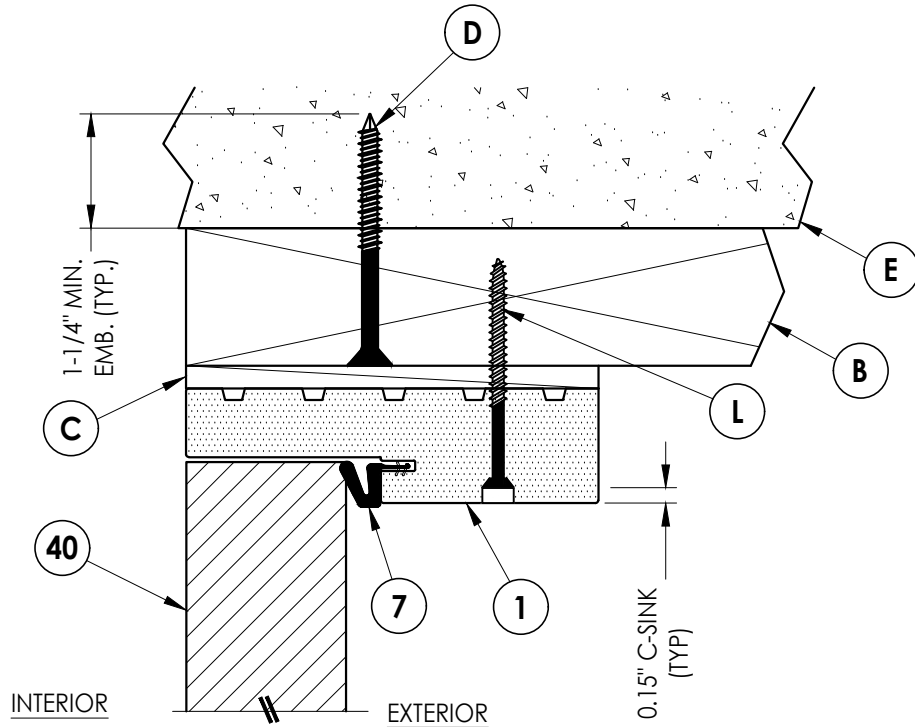
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6 **HORIZONTAL CROSS SECTION**
Shown w/ 2X Buck
Inswing shown (Outswing similar)



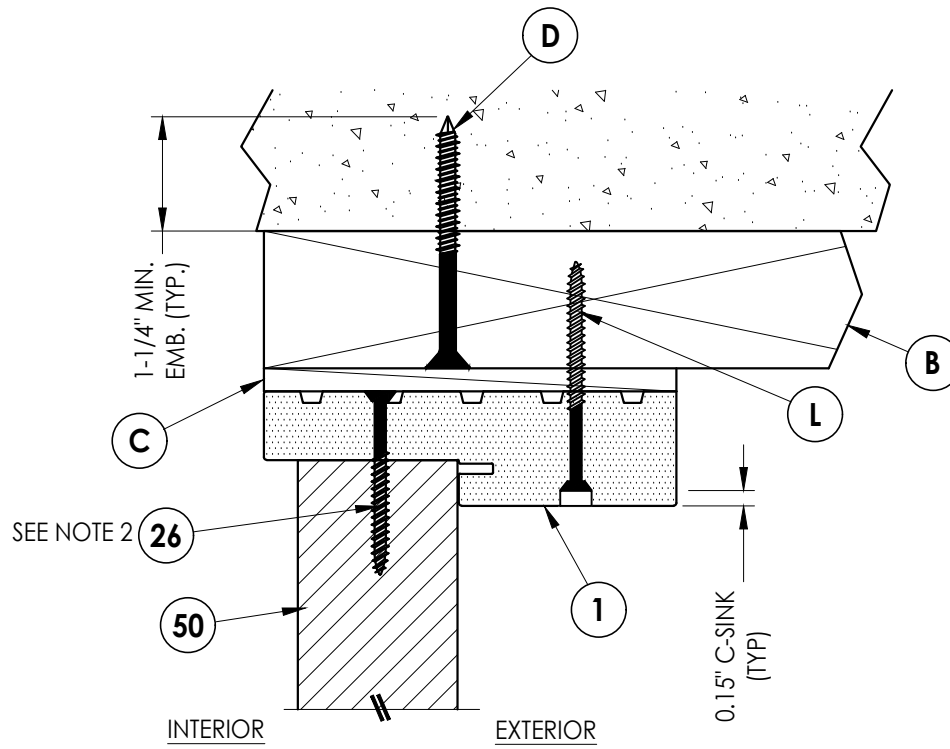
5
6 **HORIZONTAL CROSS SECTION**
Inswing shown (Outswing similar)



6
6 **HORIZONTAL CROSS SECTION**
Inswing shown (Outswing similar)



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



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

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

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

PRODUCT:
MASTERGRAIN
FIBERGLASS DOOR

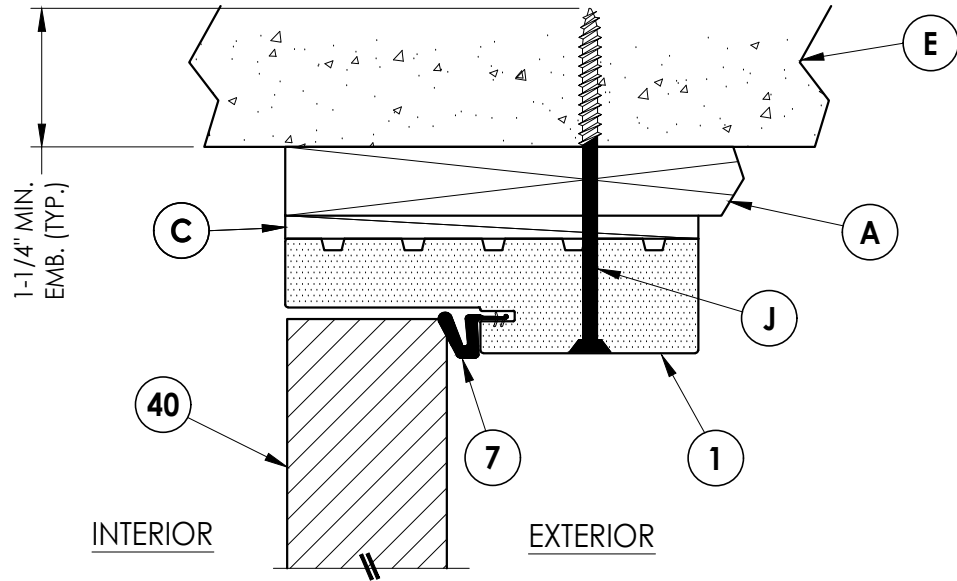
PART OR ASSEMBLY:
HORIZONTAL & VERTICAL
CROSS SECTIONS (2X BUCK)

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		4	7/01/23	UPDATE TO 8TH ED. (2023)	FBC	LFS
		3	7/08/20	UPDATE TO 7TH ED. (2020)	FBC	LFS
		2	6/20/19	ADD ASTRAGAL		LFS
		1	10/03/17	UPDATE TO 6TH ED. (2017)	FBC	JK
		NO.	DATE			BY

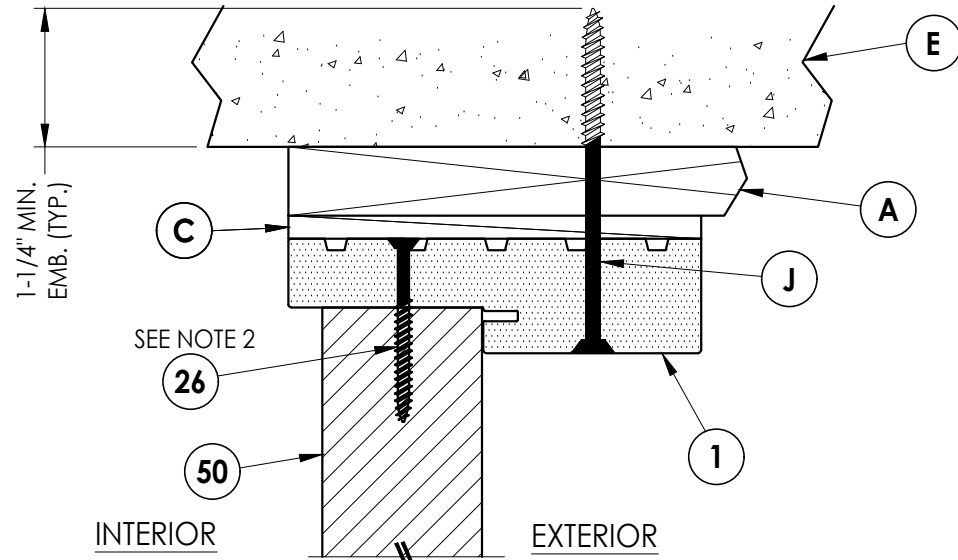
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SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	FL-21852.13
SHEET	6 OF 12

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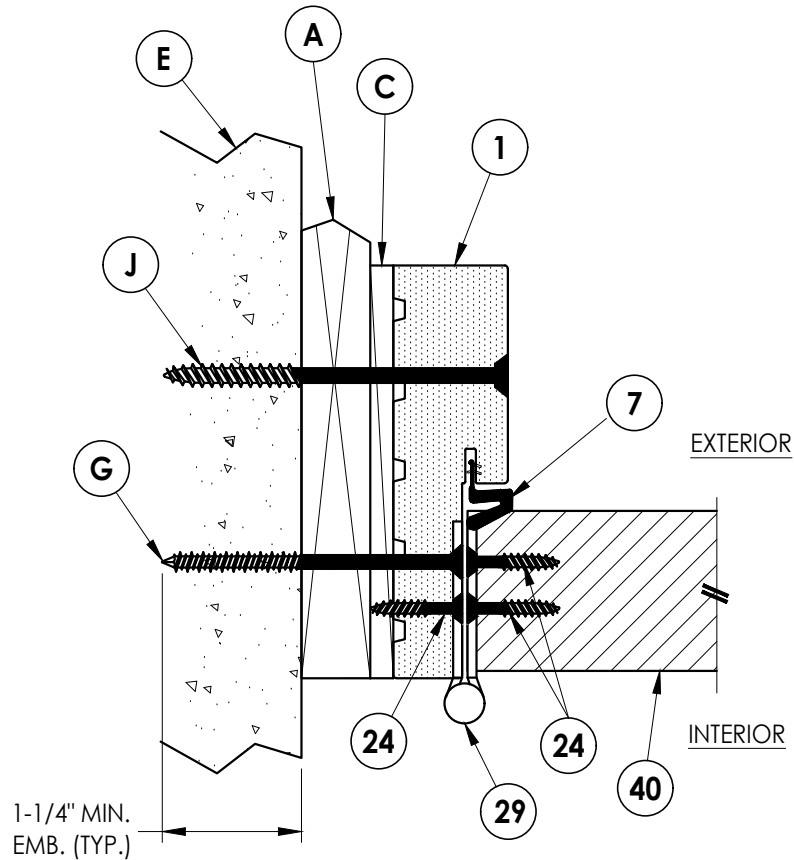
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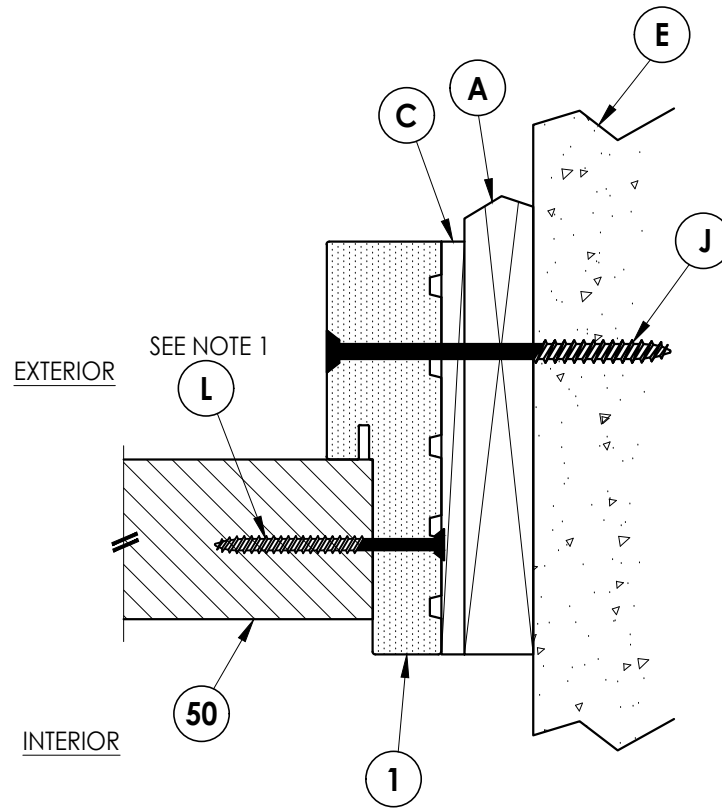
3
7 **VERTICAL CROSS SECTION**
Shown w/ 1X sub-buck
Inswing shown (Outswing similar)



4
7 **VERTICAL CROSS SECTION**
Shown w/ 1X sub-buck
Inswing shown (Outswing similar)



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



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

- NOTE:
- Item #L located 4" from each end then 5 more equally spaced (7 total).
 - Item #26 located 12" from each end (2 total).

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

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

PRODUCT:
MASTERGRAIN
FIBERGLASS DOOR

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

NO.	DATE	REVISIONS
5	7/01/26	UPDATE TO 9TH ED. (2026) FBC LFS
4	7/01/23	UPDATE TO 8TH ED. (2023) FBC LFS
3	7/08/20	UPDATE TO 7TH ED. (2020) FBC LFS
2	6/20/19	ADD ASTRAGAL LFS
1	10/03/17	UPDATE TO 6TH ED. (2017) FBC JK
NO.	DATE	BY

DATE: 02/09/17

SCALE: N.T.S.

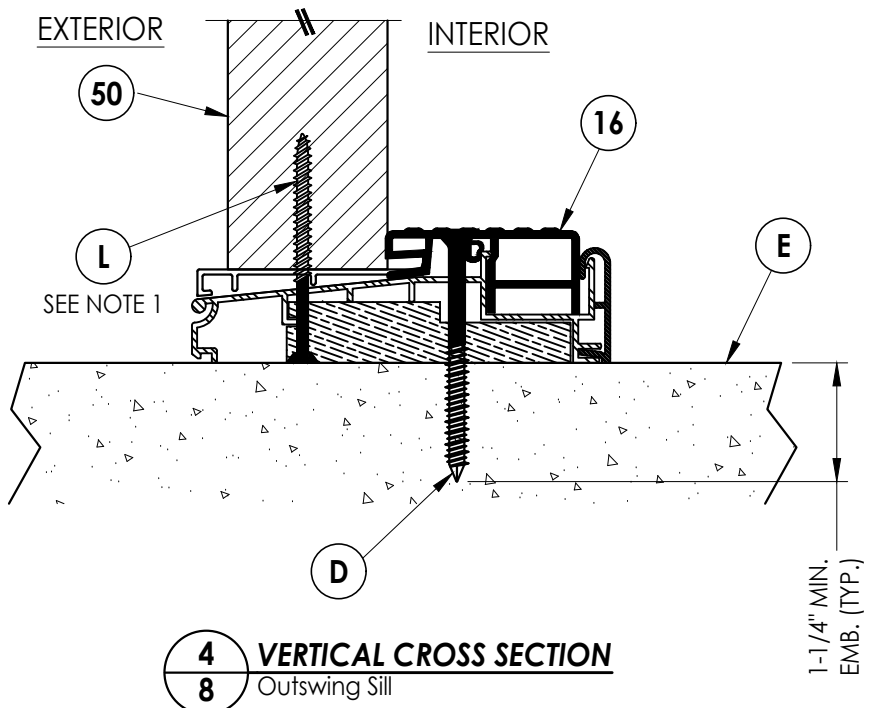
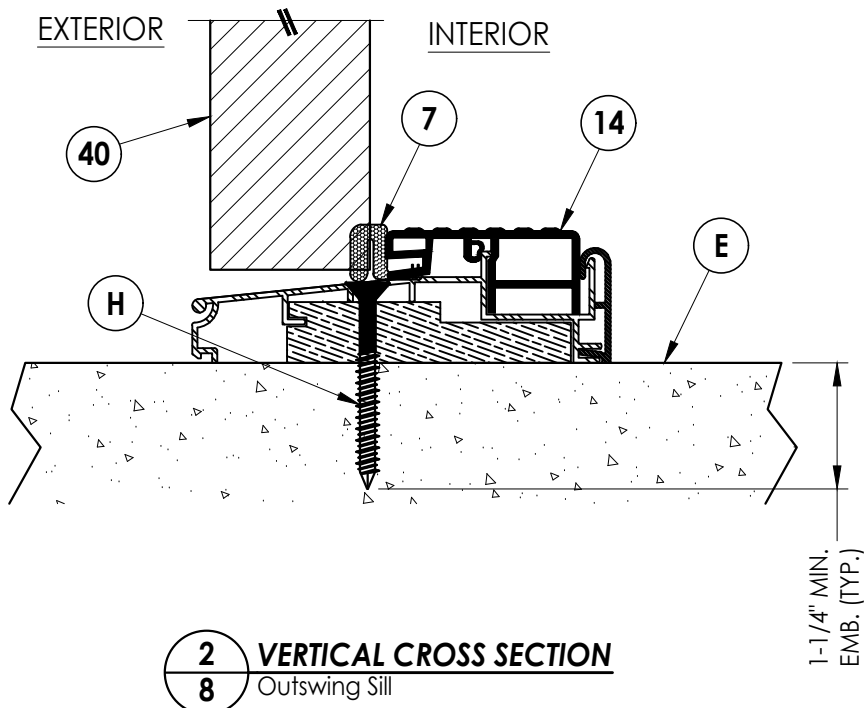
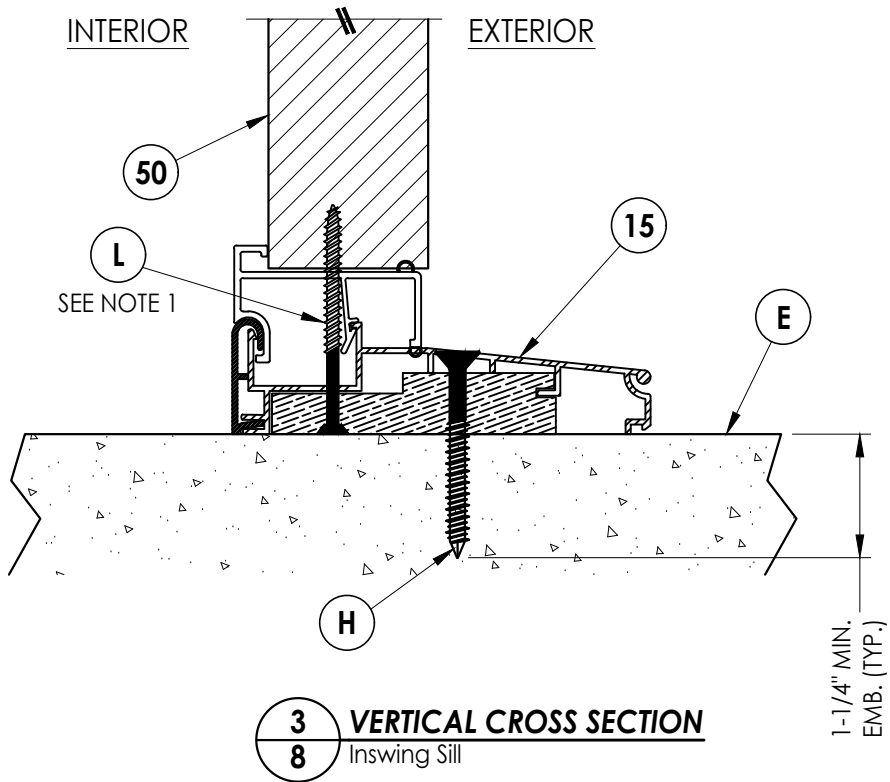
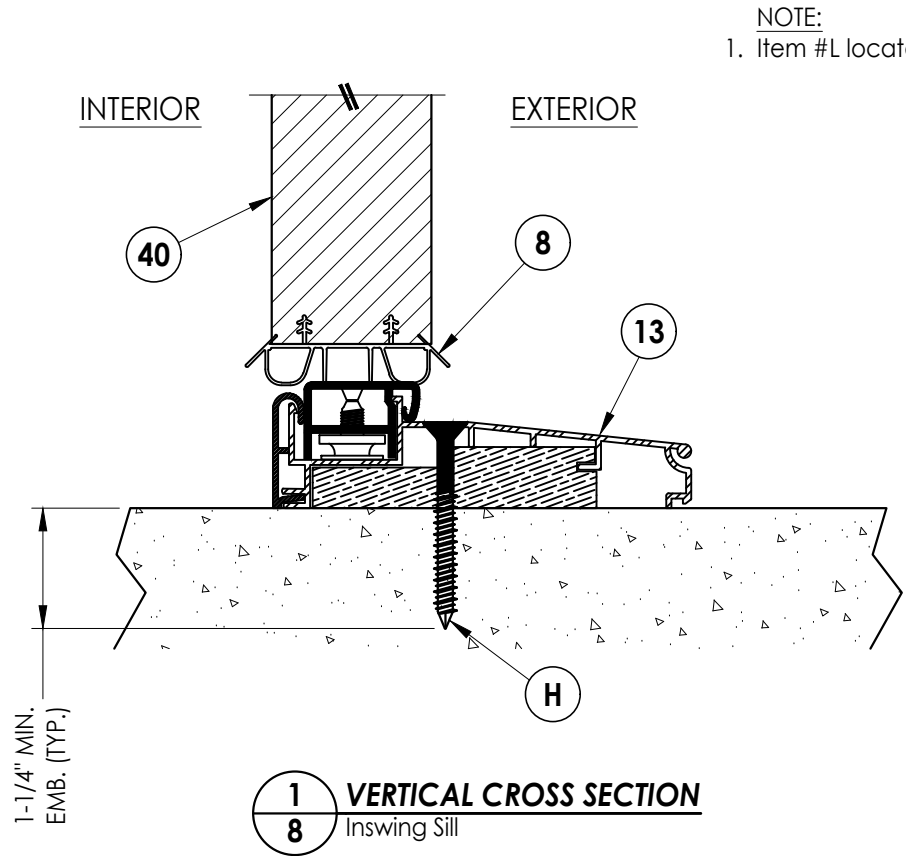
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CHK. BY: LFS

DRAWING NO.: FL-21852.13

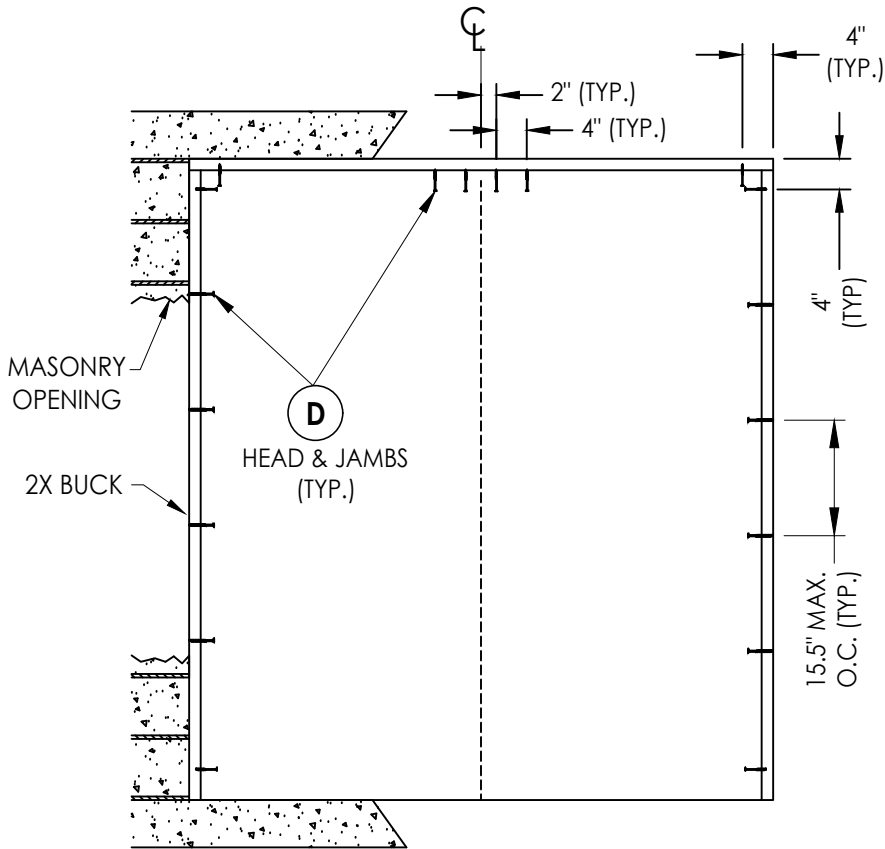
SHEET 7 OF 12

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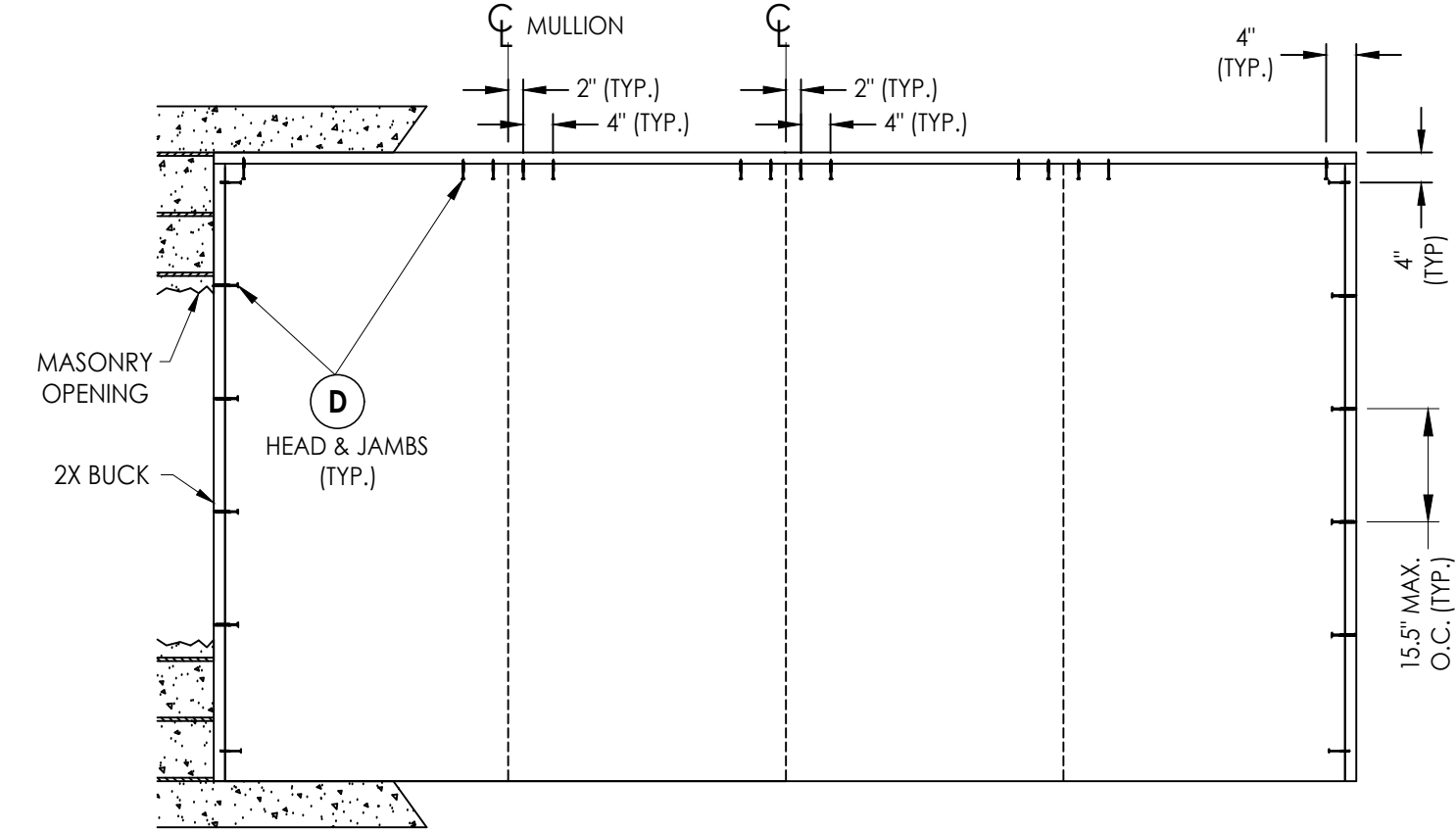


PRODUCT: MASTERGRAIN FIBERGLASS DOOR		PART OR ASSEMBLY: VERTICAL CROSS SECTIONS (THRESHOLDS)		DOCUMENTS PREPARED BY: LYNDON F. SCHMIDT P.E. NO. 43409		BUILDING CONSULTANTS, INC. P.O. Box 230, Valrico, FL 33595 Phone No.: 813.659.9197 FBPE Registry No. 9813	
DATE: 02/09/17		SCALE: N.T.S.		DWG. BY: JK		DRAWING NO.: FL-21852.13	
CHK. BY: LFS		SHEET 8 OF 12					

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XX



OXXO

2X BUCK ANCHORING

NO.	DATE	REVISIONS			
		DATE	BY	JK	LFS
5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC	LFS	
4	7/01/23	UPDATE TO 8TH ED. (2023)	FBC	LFS	
3	7/08/20	UPDATE TO 7TH ED. (2020)	FBC	LFS	
2	6/20/19	ADD ASTRAGAL		LFS	
1	10/03/17	UPDATE TO 6TH ED. (2017)	FBC	JK	

DATE: 02/09/17

SCALE: N.T.S.

DWG. BY: JK

CHK. BY: LFS

DRAWING NO.:

FL-21852.13

SHEET 9 OF 12

PRODUCT:

MASTERGRAIN
FIBERGLASS DOOR

PART OR ASSEMBLY:

BUCK ANCHORING

Documents Prepared By:

Lyndon F. Schmidt
P.E. No. 43409

RW

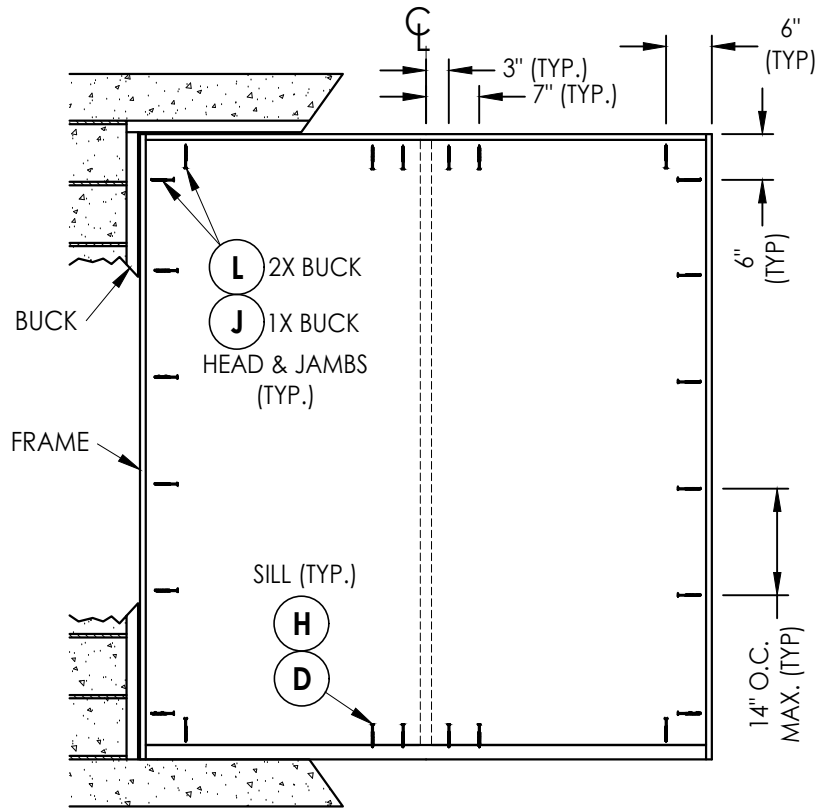
BUILDING CONSULTANTS, INC.

P.O. Box 230, Vairico, FL 33595

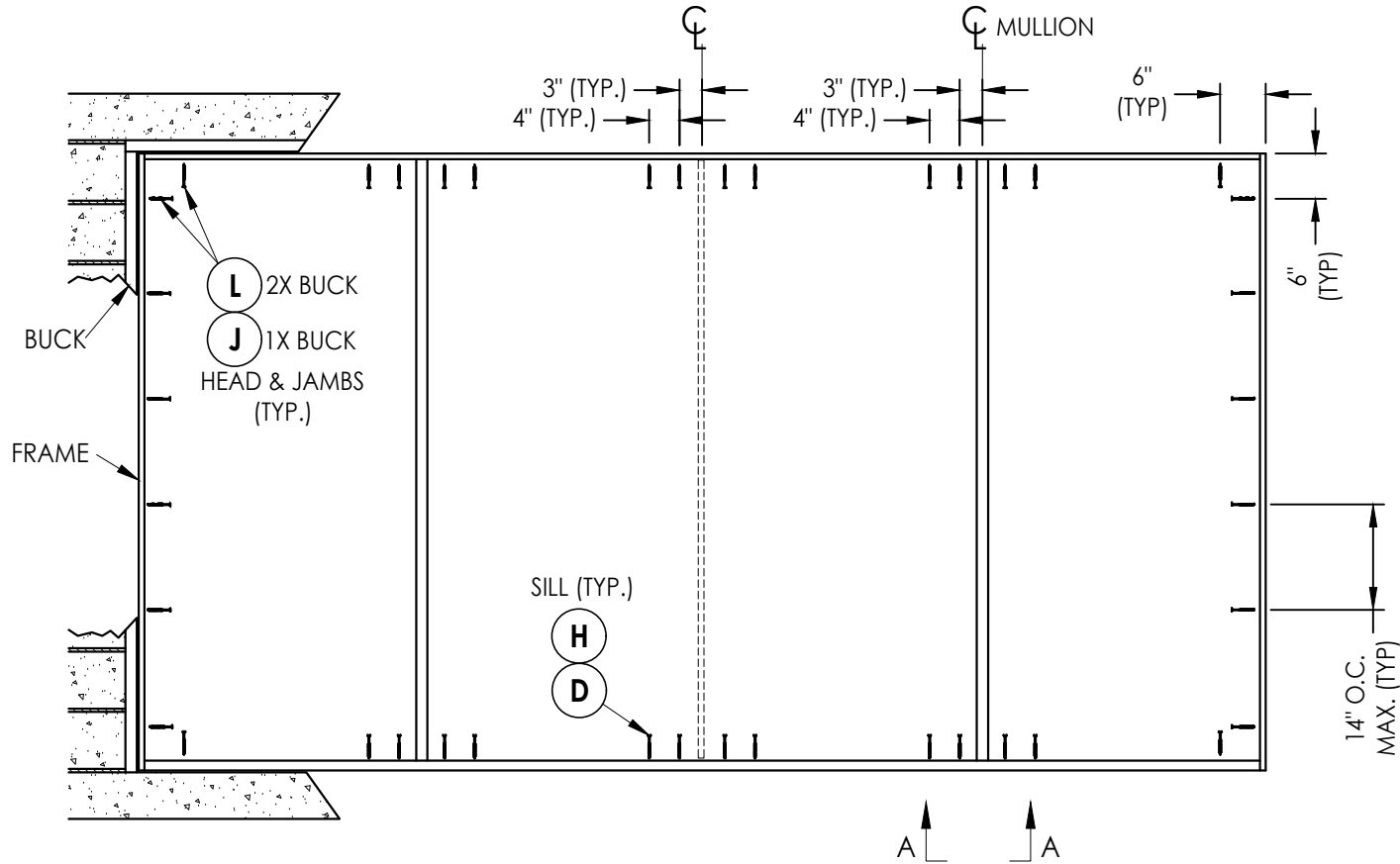
Phone No.: 813.659.9197

FBPE Registry No. 9813

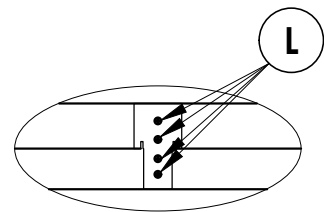
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XX



OXXO



SECTION A-A
(TYP. AT HEAD AND SILL)

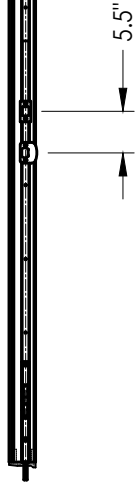
NOTE:
1. ALL FRAME CORNERS SECURED WITH (3) #8 X 2-1/2" FH DEEP THREAD WOOD SCREWS @ HEAD & SILL.

FRAME ANCHORING

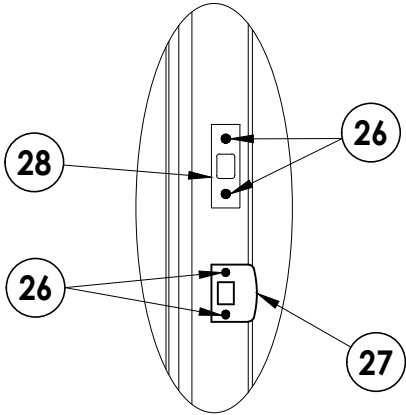
Documents Prepared By: Lyndon F. Schmidt P.E. No. 43409		BUILDING CONSULTANTS, INC. P.O. Box 230, Valrico, FL 33595 Phone No.: 813.659.9197 FBPE Registry No. 9813	
		RW	
PRODUCT:		MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY:		FRAME ANCHORING & HARDWARE DETAILS	
5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC LFS
4	7/01/23	UPDATE TO 8TH ED. (2023)	FBC LFS
3	7/08/20	UPDATE TO 7TH ED. (2020)	FBC LFS
2	6/20/19	ADD ASTRAGAL	LFS
1	10/03/17	UPDATE TO 6TH ED. (2017)	FBC JK
NO.	DATE	REVISIONS	
DATE: 02/09/17		SCALE: N.T.S.	
DWG. BY: JK		CHK. BY: LFS	
DRAWING NO.: FL-21852.13		SHEET 10 OF 12	

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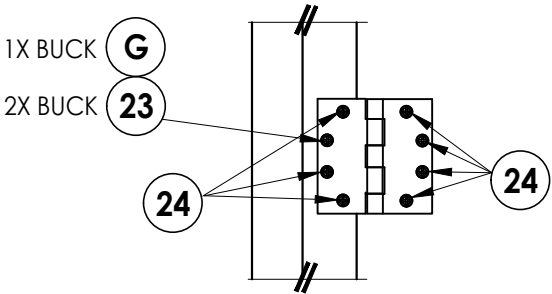
ASTRAGAL



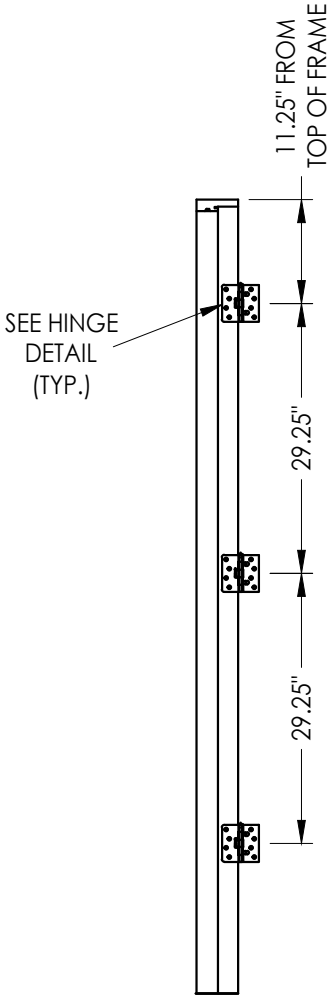
LATCH AND DEADBOLT DETAIL



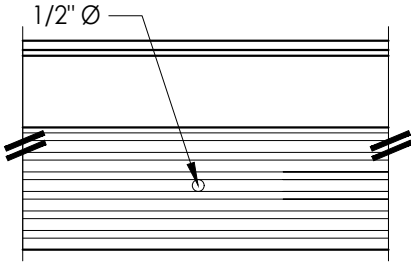
HINGE DETAIL



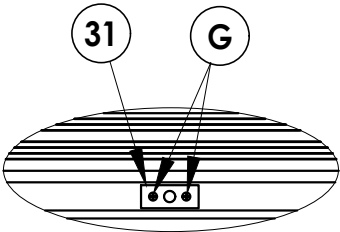
HINGE JAMB



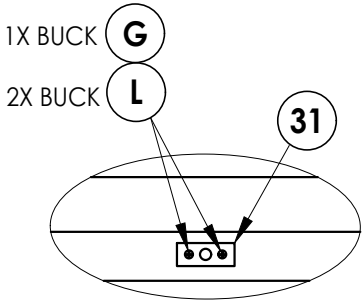
DETAIL 2
Astragal @ Sill (Outswing)



DETAIL 2
Astragal @ Sill (Inswing)



DETAIL 1
Astragal Strike Plate @ Head



SHEET 11 OF 12

DRAWING NO.: FL-21852.13

CHK. BY: LFS

DWG. BY: JK

SCALE: N.T.S.

DATE: 02/09/17

NO.	DATE	REVISIONS
5	7/01/26	UPDATE TO 9TH ED. (2026) FBC LFS
4	7/01/23	UPDATE TO 8TH ED. (2023) FBC LFS
3	7/08/20	UPDATE TO 7TH ED. (2020) FBC LFS
2	6/20/19	ADD ASTRAGAL LFS
1	10/03/17	UPDATE TO 6TH ED. (2017) FBC JK

PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	HARDWARE DETAILS

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

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

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BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
A	1X BUCK (SG >= 0.42)	WOOD
B	2X BUCK (SG >= 0.42)	WOOD
C	1/4" MAX. SHIM SPACE	-
D	1/4" X 2-3/4" PFH DeWALT OR ITW CONCRETE SCREW	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	3/16" X 3-1/4" PFH ITW CONCRETE SCREW	STEEL
H	1/4" X 2-1/4" PFH DeWALT OR ITW CONCRETE SCREW	STEEL
J	1/4" X 3-3/4" PFH DeWALT OR ITW CONCRETE SCREW	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW (1.15" MIN. EMBEDMENT)	STEEL
1	COMPOSITE JAMB	COMP
3	MULLION	ALUM/COMP
7	WEATHERSTRIP	FOAM
8	SWEEP	VINYL
13	INSWING ADJUSTABLE THRESHOLD	ALUM/COMP
14	OUTSWING BUMP THRESHOLD	ALUM/COMP
15	INSWING THRESHOLD (w/ SIDELITE ADAPTER)	ALUM/COMP
16	OUTSWING THRESHOLD (w/ SIDELITE ADAPTER)	ALUM/COMP
23	#12 X 2-1/2" PFH WOOD SCREW	STEEL
24	#12 x 1" PFH WOOD SCREW	STEEL
26	#10 X 2" PFH WOOD SCREW	STEEL
27	LATCH STRIKE PLATE	STEEL
28	DEADBOLT STRIKE PLATE	STEEL
29	4.5" X 4.5" HINGE	STEEL
31	ASTRAGAL STRIKE PLATE	STEEL
35	ASTRAGAL	ALUM
36	ASTRAGAL	ALUM
40	DOOR PANEL	-
50	SIDELITE PANEL	-

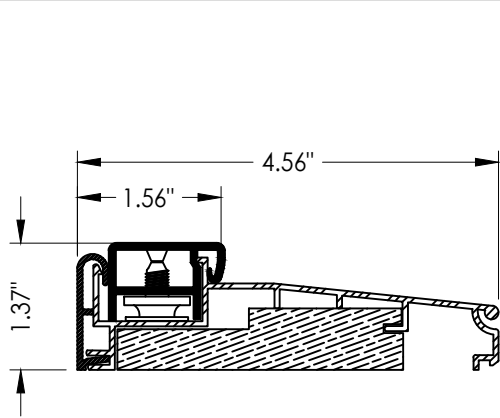
CONCRETE ANCHOR NOTES:

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

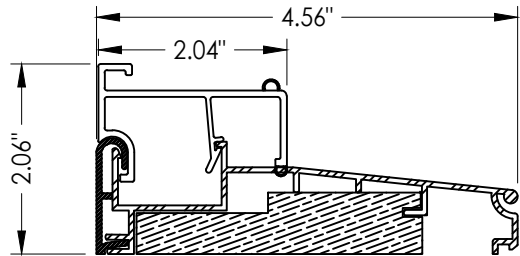
ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-1/4"	2"	4"
DeWALT ULTRACON®	1/4"	1-1/4"	1"	4"
ITW TAPCON®	3/16"	1-1/4"	3"	1-1/2"

WOOD SCREW INSTALLATION NOTES:

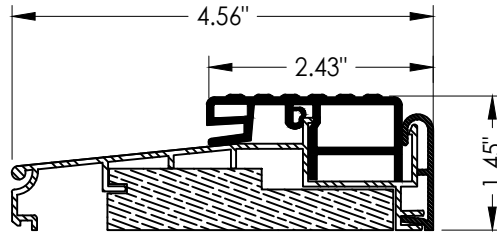
- Maintain a minimum 5/8" edge distance, 1" end distance, & 1" o.c. spacing of wood screws to prevent the splitting of wood.



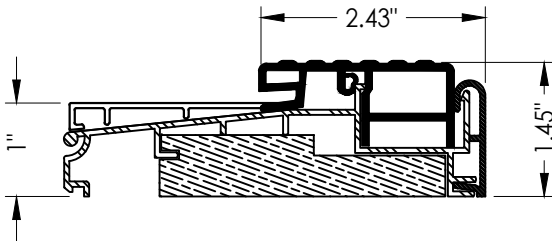
13 INSWING THRESHOLD
WORLDWIDE



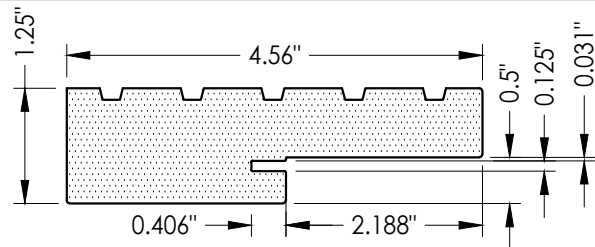
15 INSWING THRESHOLD w/ SIDELITE ADAPTER
WORLDWIDE



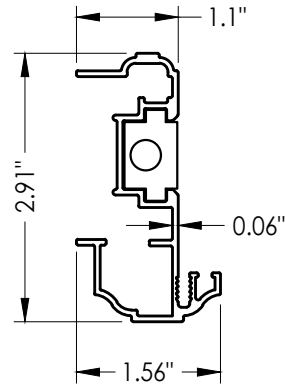
14 OUTSWING THRESHOLD
WORLDWIDE



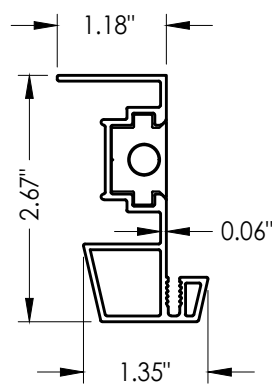
16 OUTSWING THRESHOLD w/ SIDELITE ADAPTER
WORLDWIDE



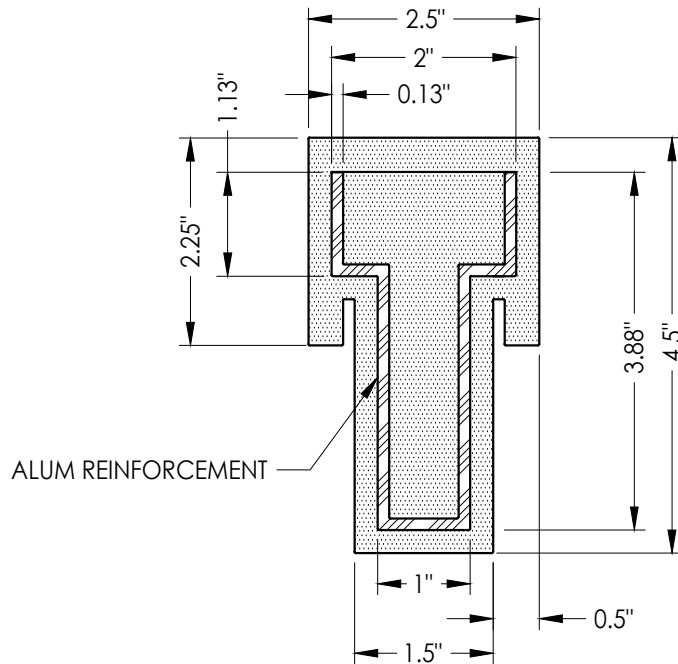
1 COMPOSITE JAMB
WORLDWIDE



35 ASTRAGAL
WORLDWIDE



36 ASTRAGAL
WORLDWIDE



3 COMPOSITE MULLION
WORLDWIDE

Documents Prepared By:
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Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT: MASTERGRAIN
FIBERGLASS DOOR

PART OR ASSEMBLY:
BILL OF MATERIALS
& COMPONENTS

		LFS	FBC	(2026)	UPDATE TO 9TH ED.	LFS	FBC	(2023)	UPDATE TO 8TH ED.	LFS	FBC	(2020)	UPDATE TO 7TH ED.	LFS	ADD ASTRAGAL	JK	UPDATE TO 6TH ED.	BY	REVISIONS
5	7/01/26																		
4	7/01/23																		
3	7/08/20																		
2	6/20/19																		
1	10/03/17																		
NO.	DATE																		

DATE: 02/09/17

SCALE: N.T.S.

DWG. BY: JK

CHK. BY: LFS

DRAWING NO.: FL-21852.13

SHEET 12 OF 12