

Z:\2023 FBC Drawings\MasterGrain\FL-21852 R10\FL-21852.1-3.dwg

500 SERIES

FIBERGLASS OPAQUE

SINGLE DOOR

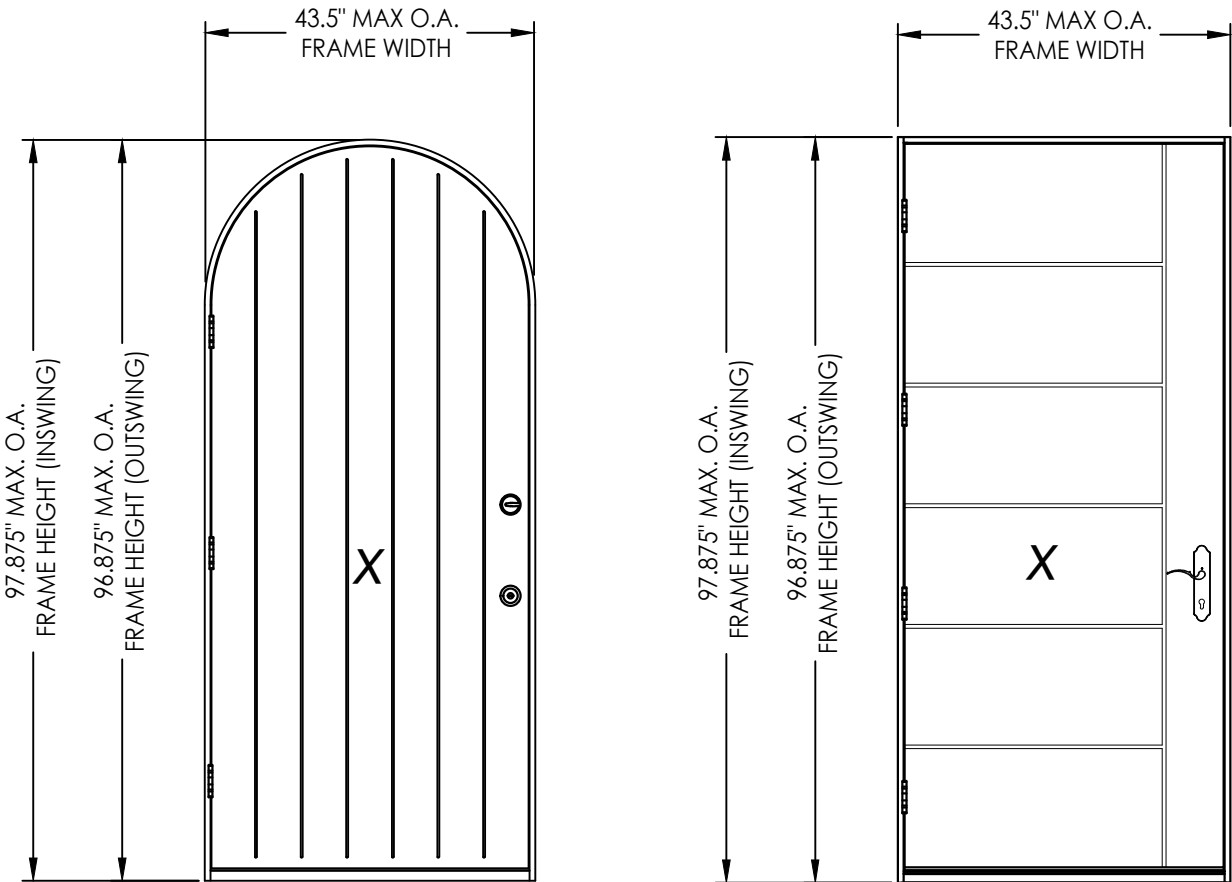
INSWING/OUTSWING

"IMPACT"

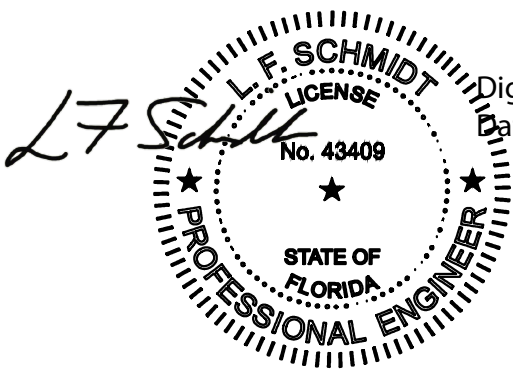
GENERAL NOTES

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.

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SHEET #	DESCRIPTION
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6	Horizontal & Vertical Cross Sections (1X Buck)
7	Vertical Cross Sections (Thresholds)
8	Buck & Frame Anchoring (Arch top door)
9	Buck & Frame Anchoring
10	Hardware Details
11	Bill of Materials & Components



CONFIGURATION	DESIGN PRESSURE (PSF) INSWING		DESIGN PRESSURE (PSF) OUTSWING	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
X	+70.0	-85.0	+70.0	-85.0



Digitally signed by Lyndon F Schmidt
Date: 2026.07.22 17:03:09 -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

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: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

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

DATE: 2/9/17

SCALE: N.T.S.

DWG. BY: JK

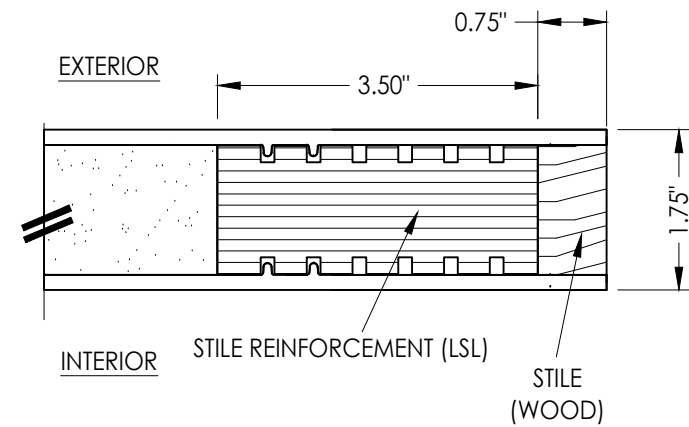
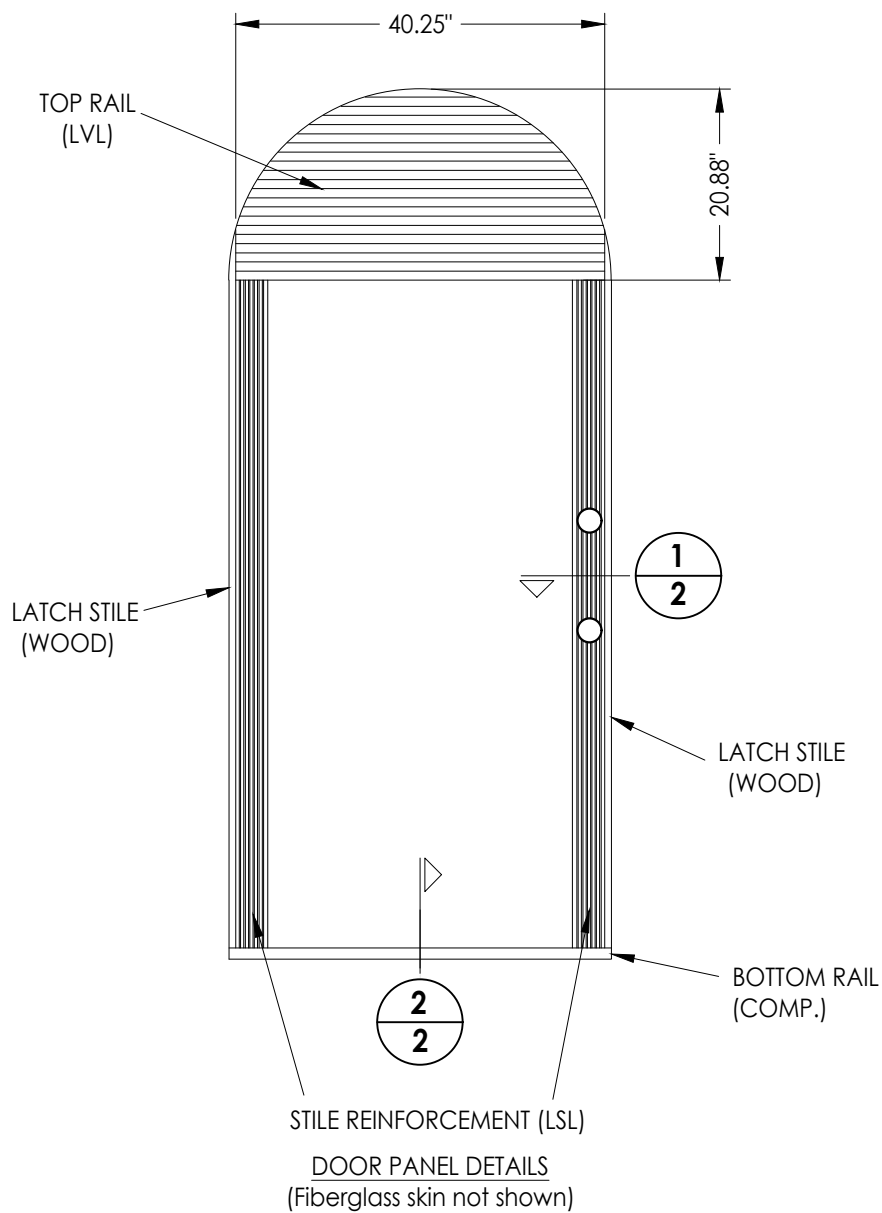
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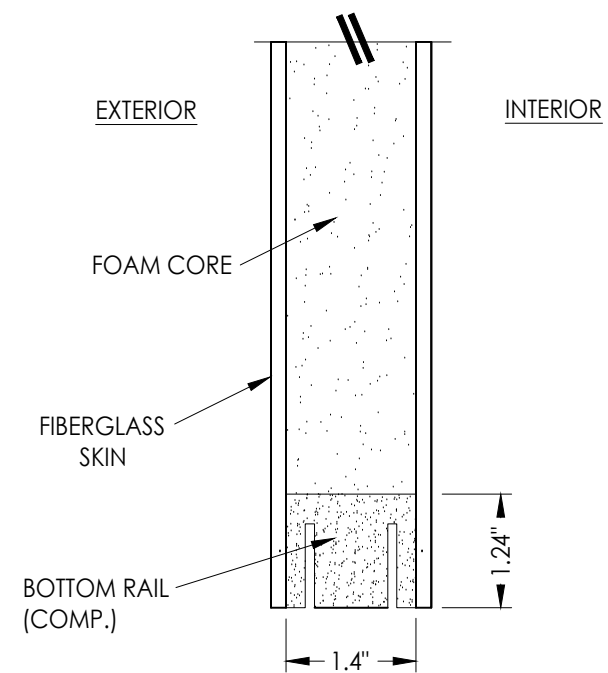
FL-21852.2

SHEET 1 OF 11

FIBERGLASS DOOR SKIN: 0.166" MIN. THK.
FOAM CORE: POLYURETHANE - 1.9 PCF MIN.



1 HORIZONTAL CROSS SECTION



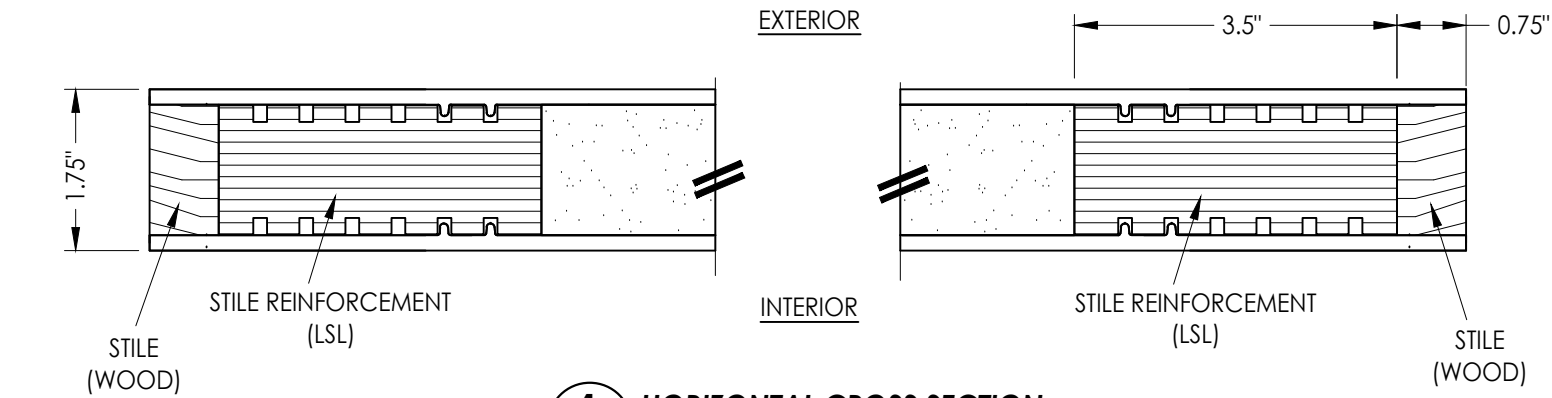
2 VERTICAL CROSS SECTION
2

[illegible]

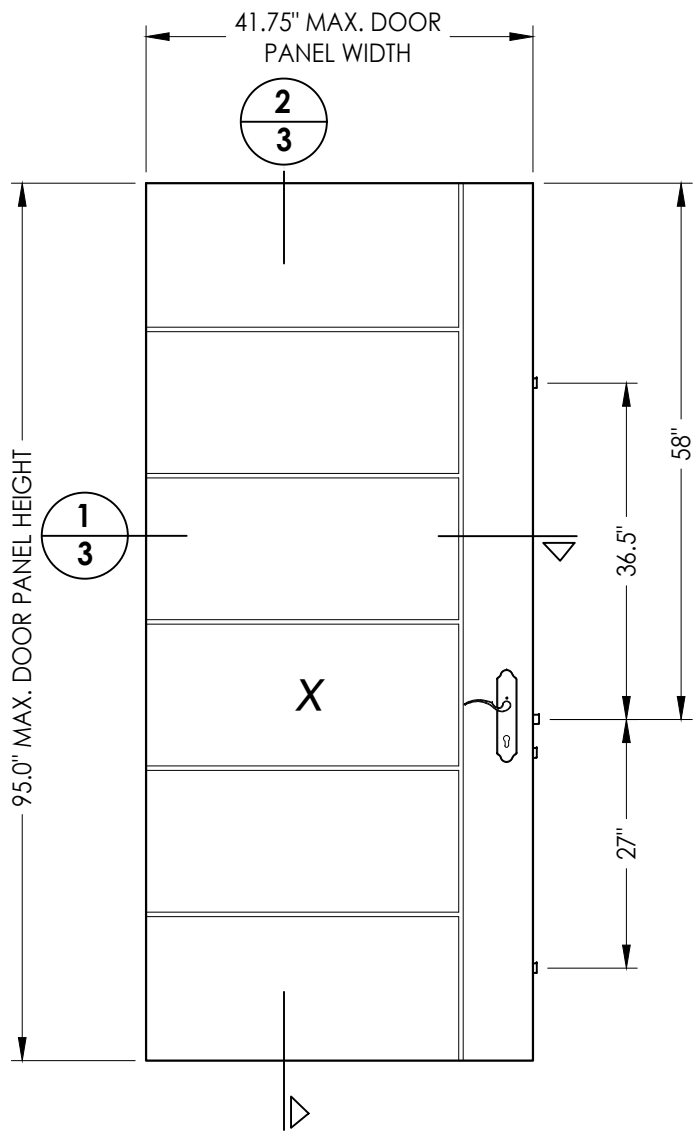
Documents Prepared By:
Lyndon F. Schmidt
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R^{qW} BUILDING CONSULTANTS, INC.
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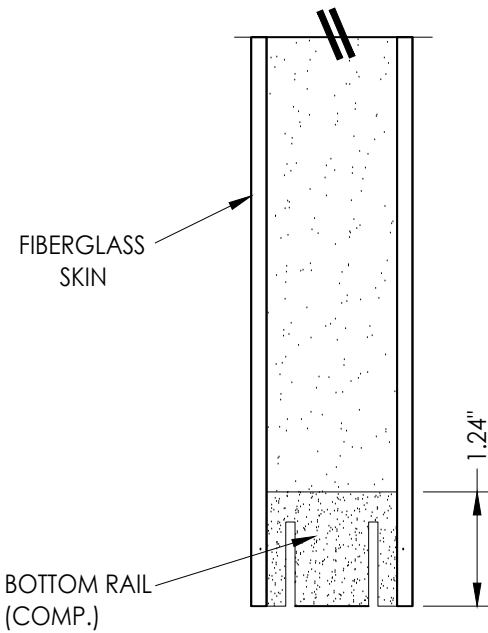
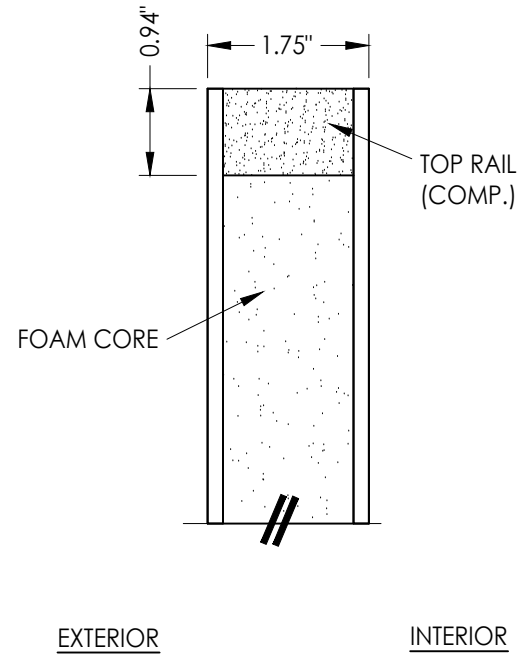


1
3 **HORIZONTAL CROSS SECTION**



41 **DOOR PANEL (ROUTED)**

FIBERGLASS DOOR SKIN: 0.166" MIN. THK.
FOAM CORE: POLYURETHANE - 1.9 PCF MIN.



2
3 **VERTICAL CROSS SECTION**

Documents Prepared By:
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BUILDING CONSULTANTS, INC.
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FBPE Registry No. 9813

PRODUCT:		MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY:		DOOR PANEL DETAILS	

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

DATE: 2/9/17

SCALE: N.T.S.

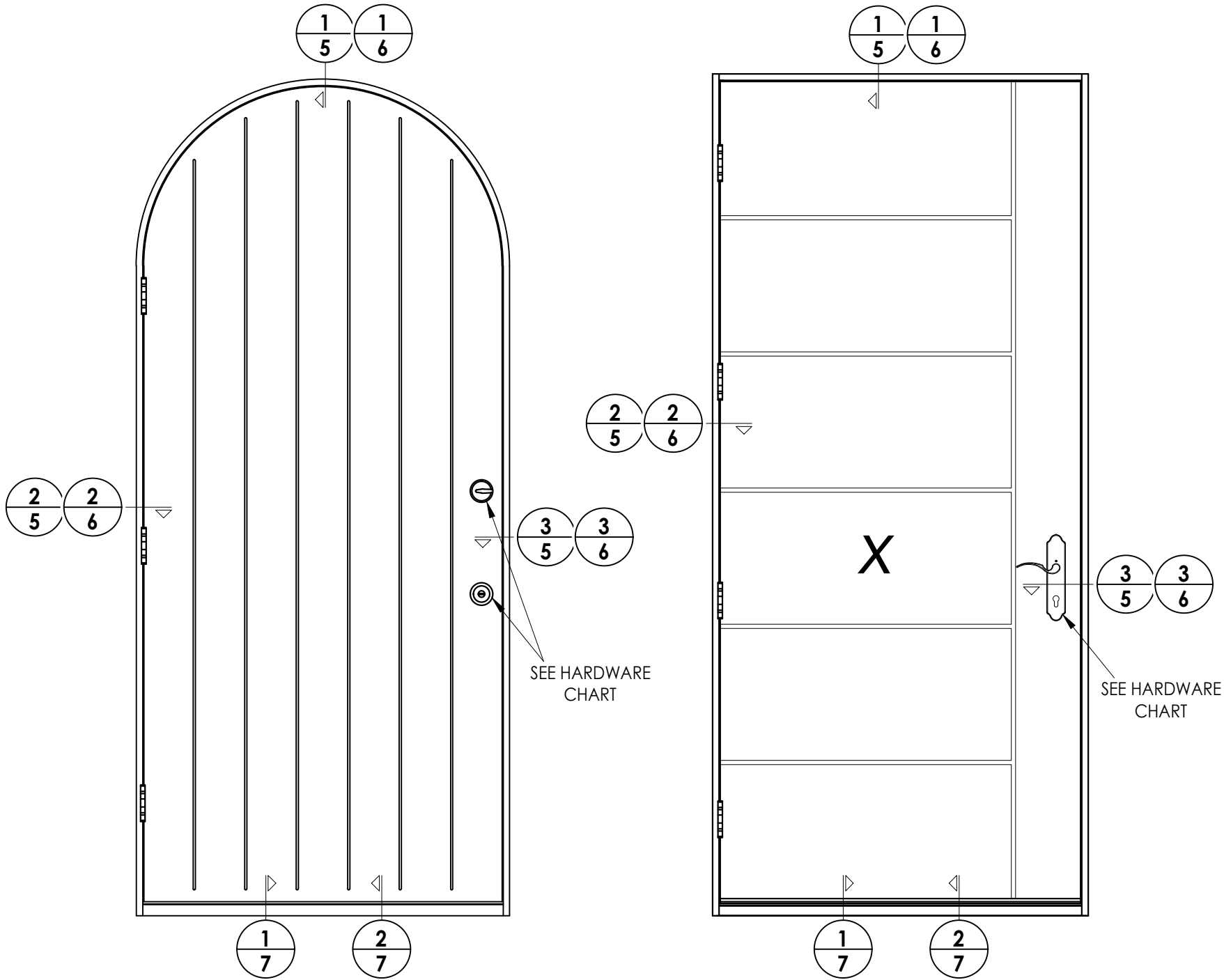
DWG. BY: JK

CHK. BY: LFS

DRAWING NO.: FL-21852.2

SHEET 3 OF 11

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Hardware Table		
Manufacturer	Model	Max. Design Pressure
PAMEX	Knob: FLU600 Deadbolt: FD261	55 PSF
KWIKSET	Knob: SIGNATURE SERIES Deadbolt: SIGNATURE SERIES (980)	85 PSF
SCHLAGE	Knob: F51 Deadbolt: B60N	85 PSF
HOPPE	MULTIPOINT: HLS™ ONE (3 pt. Manual Tongue)	85 PSF

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MASTERGRAIN
FIBERGLASS DOOR

PART OR ASSEMBLY:
ELEVATION

REVISIONS

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

DATE: 2/9/17

SCALE: N.T.S.

DWG. BY: JK

CHK. BY: LFS

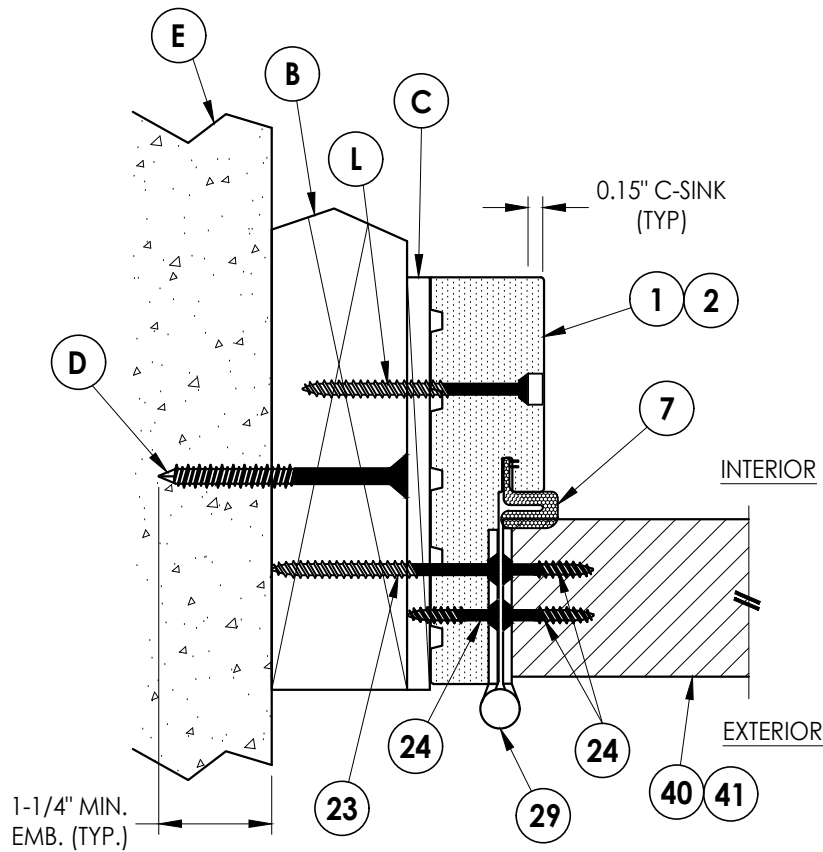
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SHEET 4 OF 11

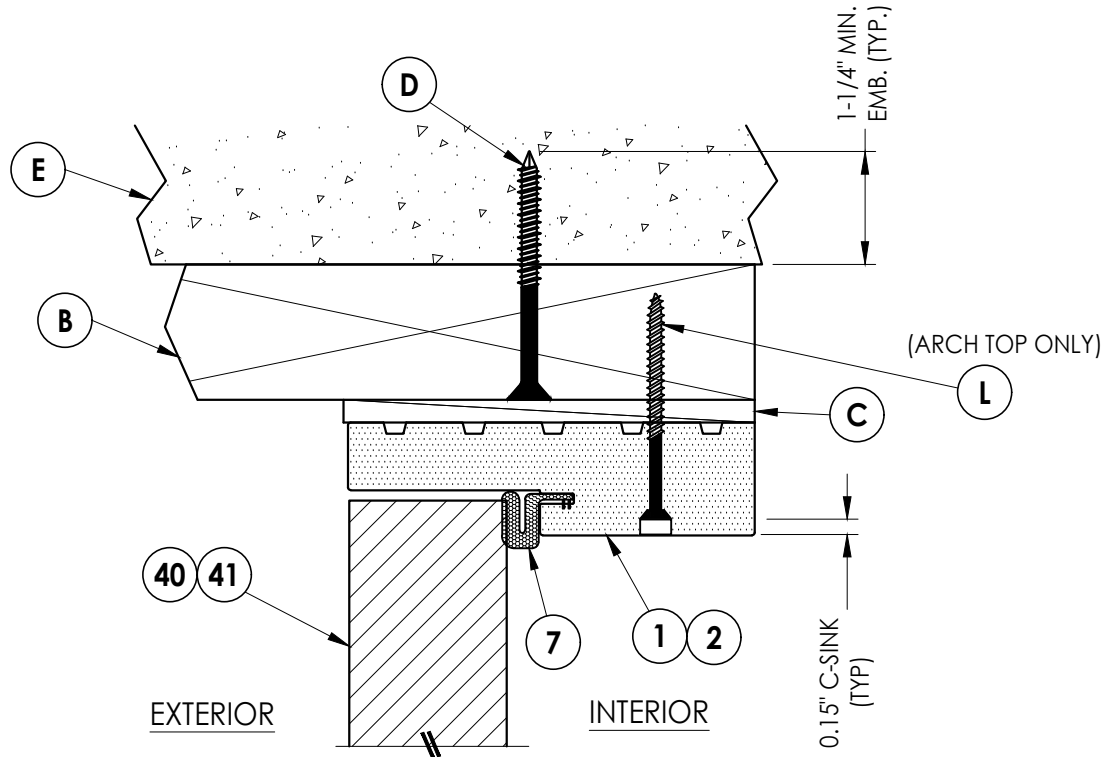
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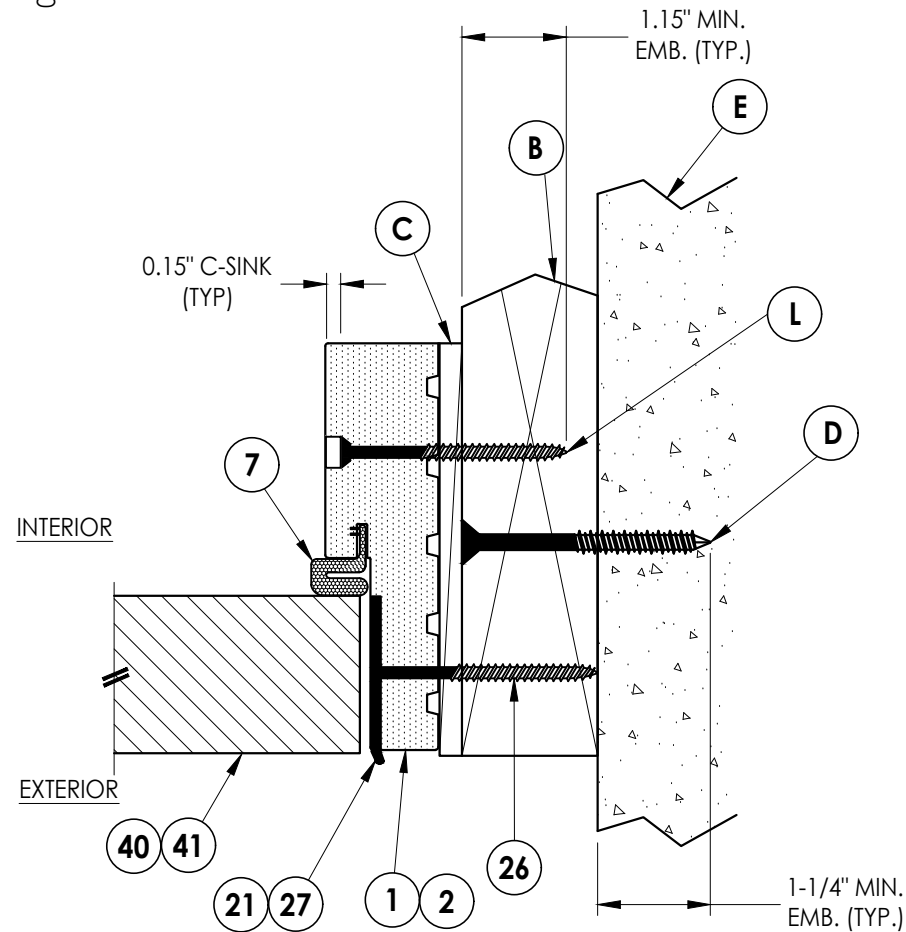
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2 HORIZONTAL CROSS SECTION
5 Shown w/ 2X Buck
Outswing shown (Inswing similar)



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



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

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PRODUCT: MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (2X BUCK)

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

DATE: 2/9/17

SCALE: N.T.S.

DWG. BY: JK

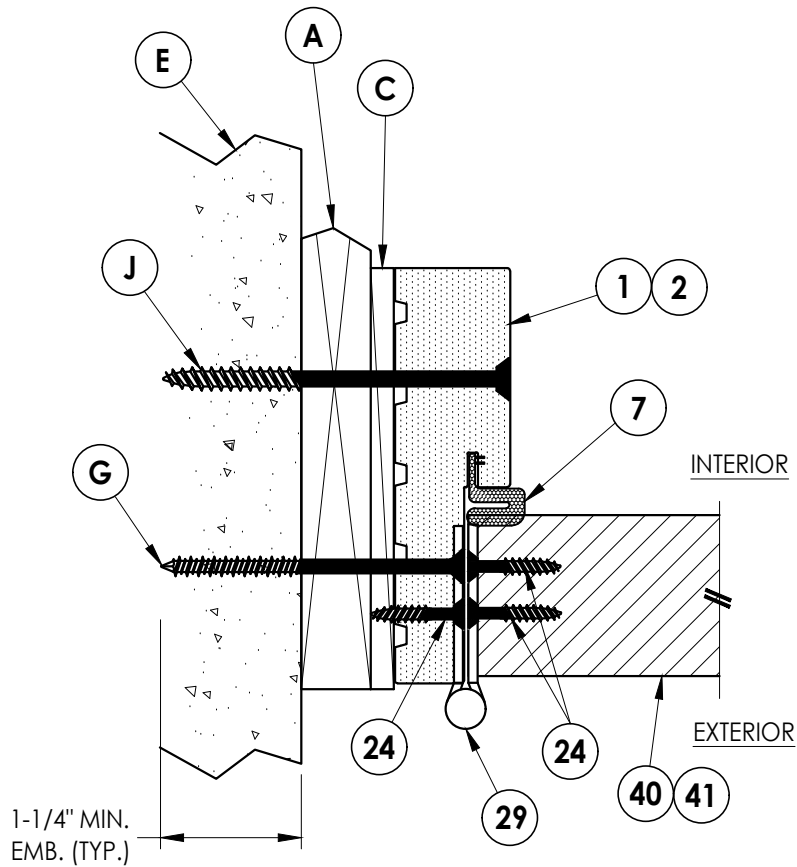
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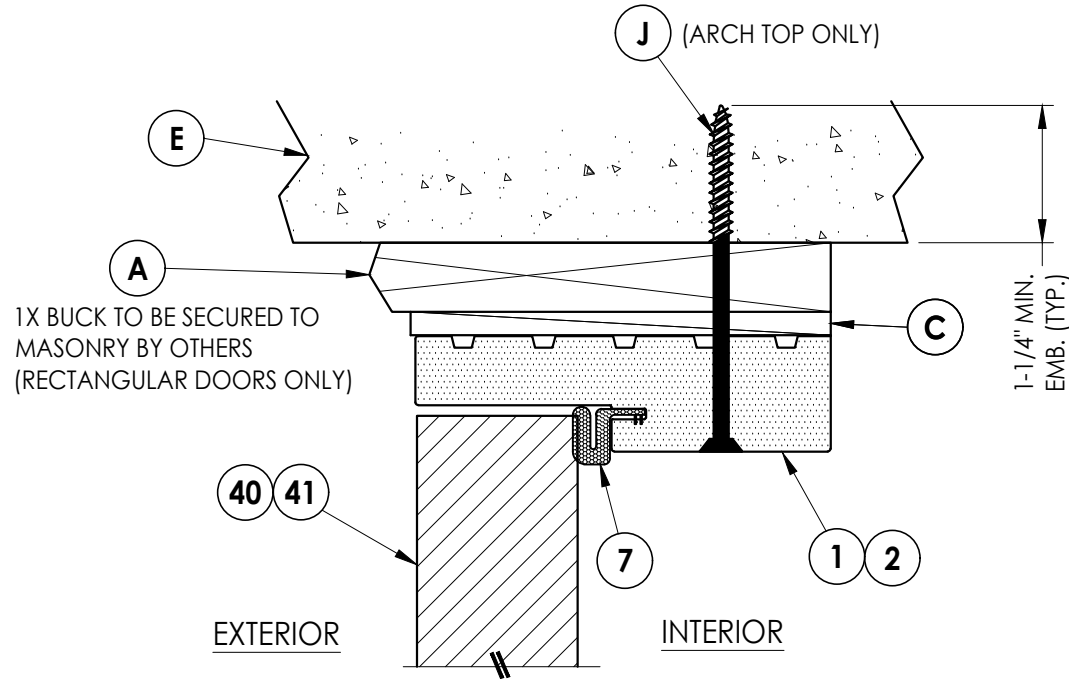
FL-21852.2

SHEET 5 OF 11

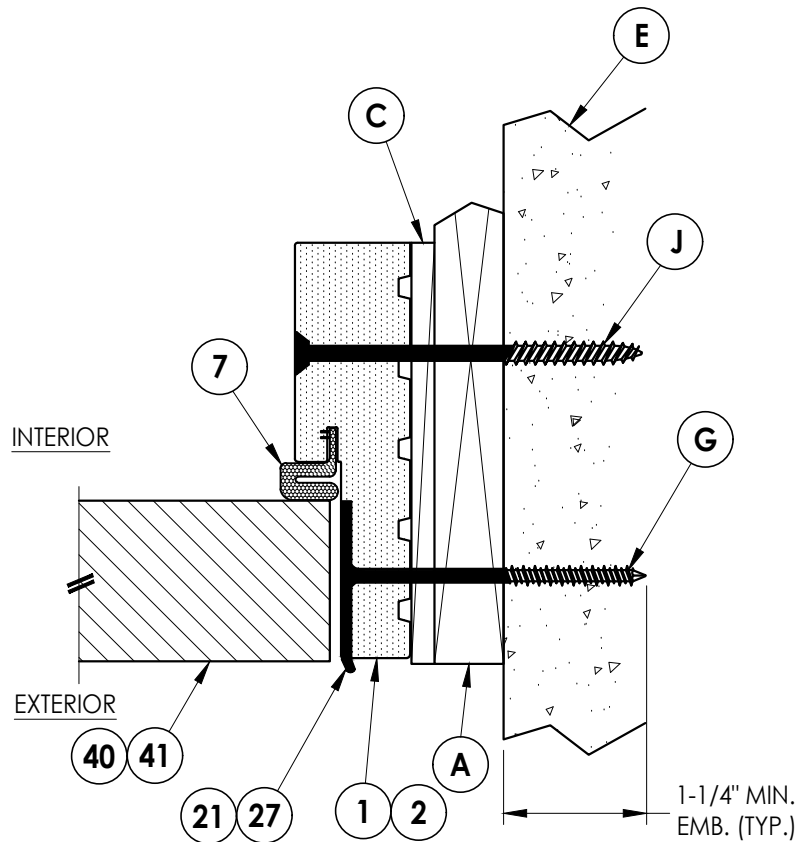
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2 HORIZONTAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)



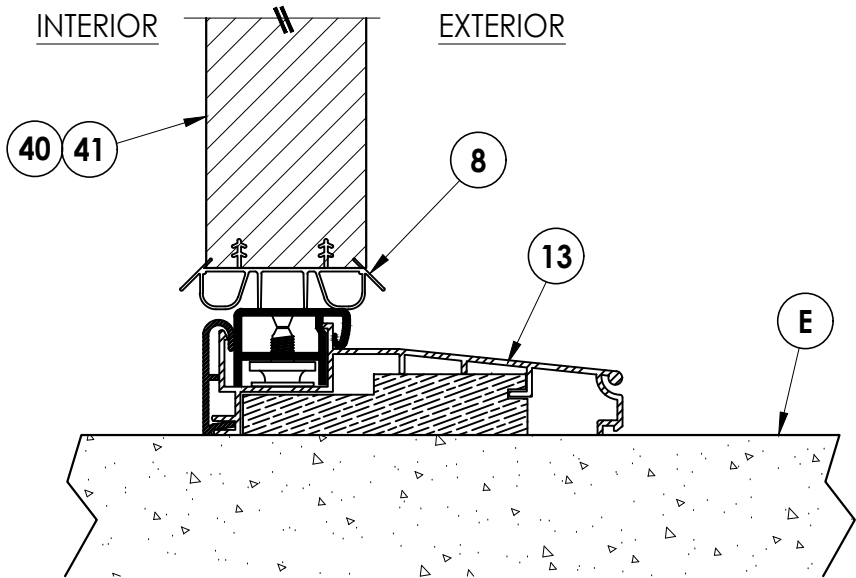
1 VERTICAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)



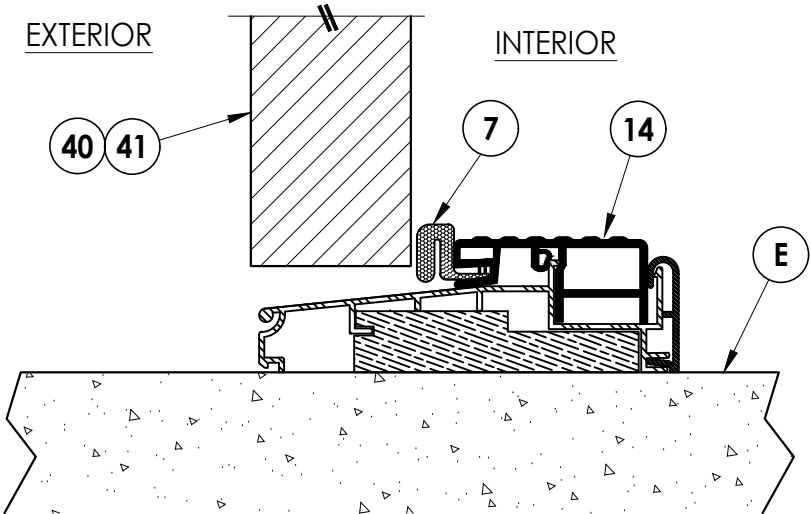
3 HORIZONTAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)

PRODUCT:		MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY:		HORIZONTAL & VERTICAL CROSS SECTIONS (1X BUCK)	
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:		2/9/17	
SCALE:		N.T.S.	
DWG. BY:		JK	
CHK. BY:		LFS	
DRAWING NO.:		FL-21852.2	
SHEET		6 OF 11	

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1
7 **VERTICAL CROSS SECTION**
Inswing Sill



2
7 **VERTICAL CROSS SECTION**
Outswing Sill

DATE:	2/9/17
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	FL-21852.2
SHEET	7 OF 11

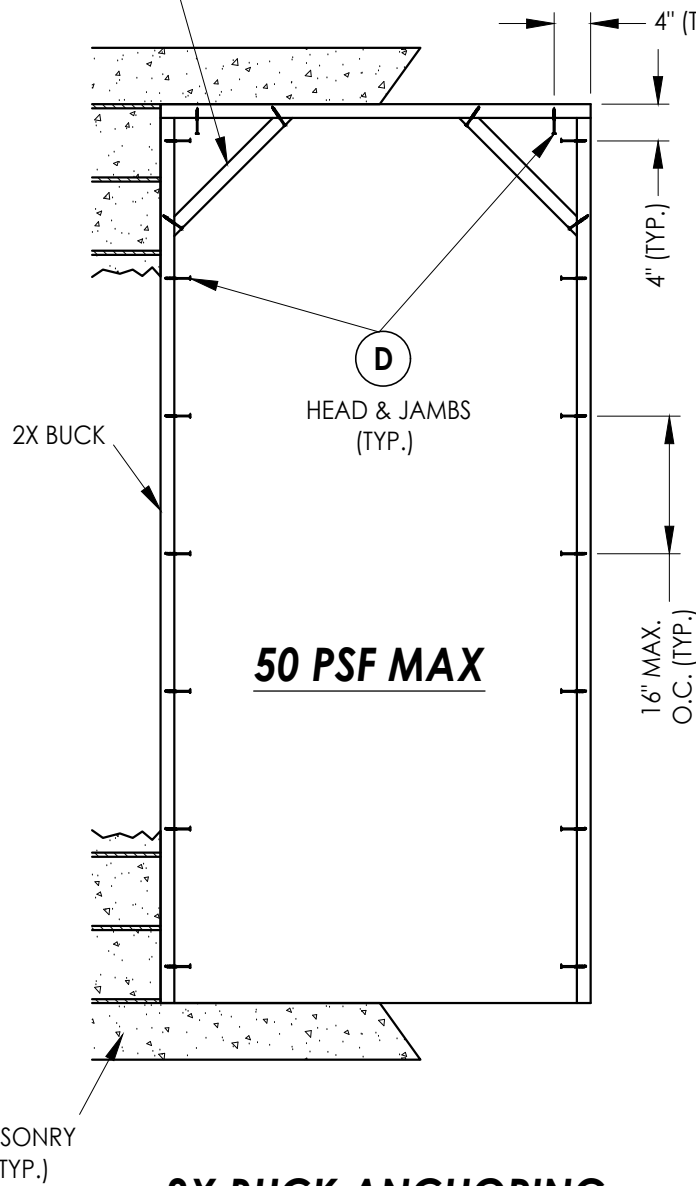
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3	7/01/23	UPDATE TO 8TH ED. (2023) FBC
2	7/08/20	UPDATE TO 7TH ED. (2020) FBC
1	10/03/17	UPDATE TO 6TH ED. (2017) FBC
		BY JK

PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	VERTICAL CROSS SECTIONS (THRESHOLDS)

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
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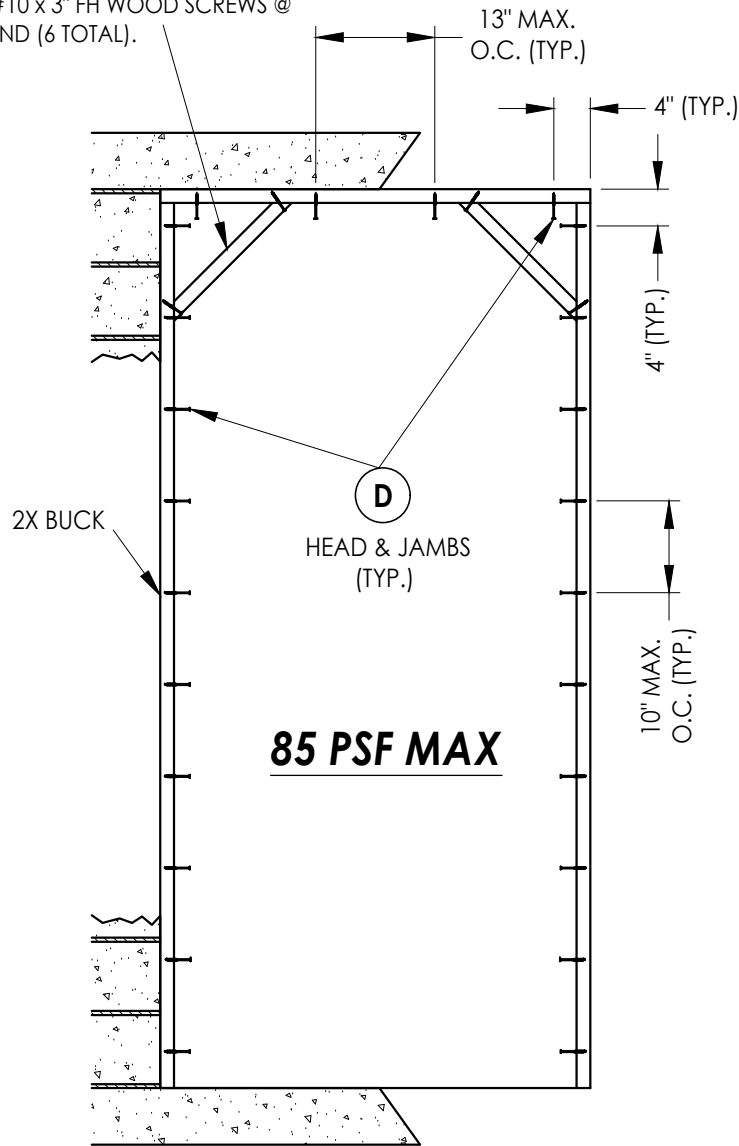
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2X FRAMING (SG >= 0.55). INSTALL
w/ (2) #10 x 3" FH WOOD SCREWS @
EACH END (4 TOTAL).

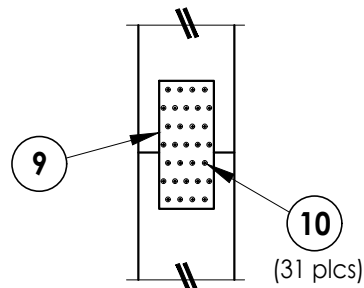


2X BUCK ANCHORING

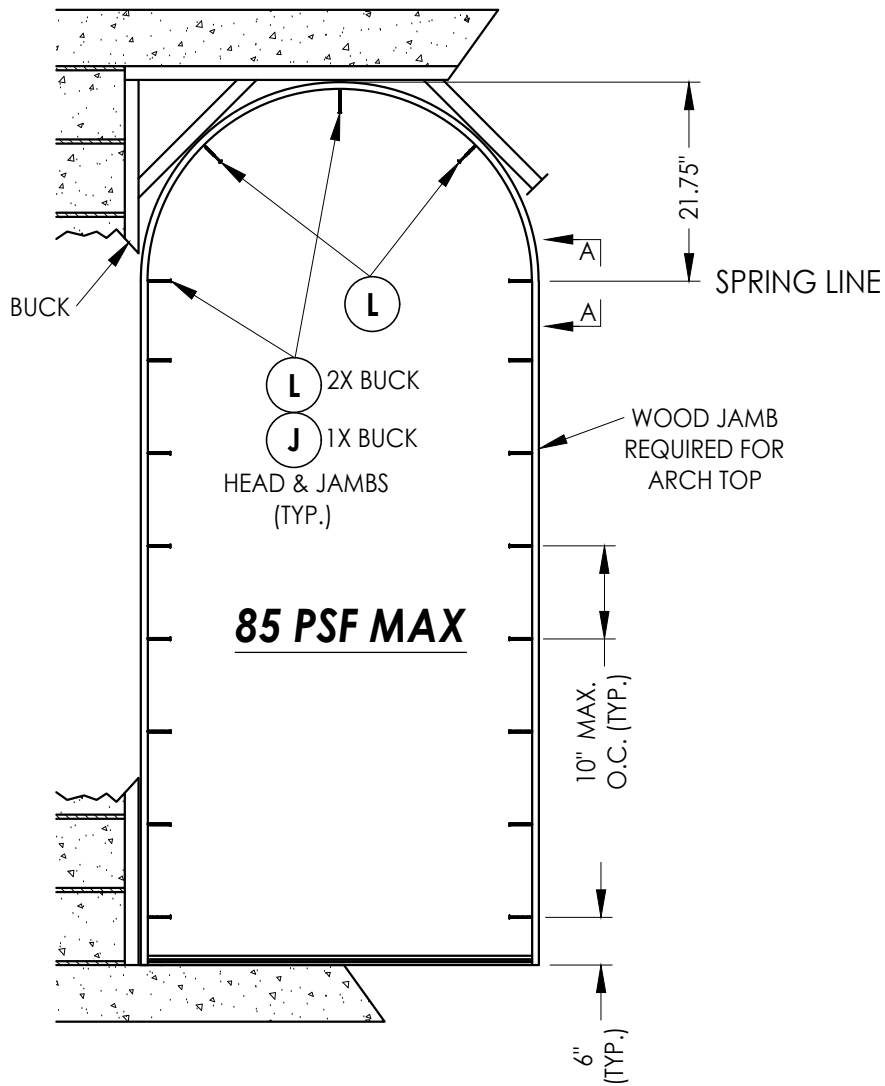
2X FRAMING (SG >= 0.55). INSTALL
w/ (3) #10 x 3" FH WOOD SCREWS @
EACH END (6 TOTAL).



2X BUCK ANCHORING



VIEW A-A



FRAME ANCHORING

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

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FBPE Registry No. 9813

PRODUCT: MASTERGRAIN
FIBERGLASS DOOR

PART OR ASSEMBLY:
BUCK & FRAME ANCHORING
(ARCH TOP DOOR)

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

DATE: 2/9/17

SCALE: N.T.S.

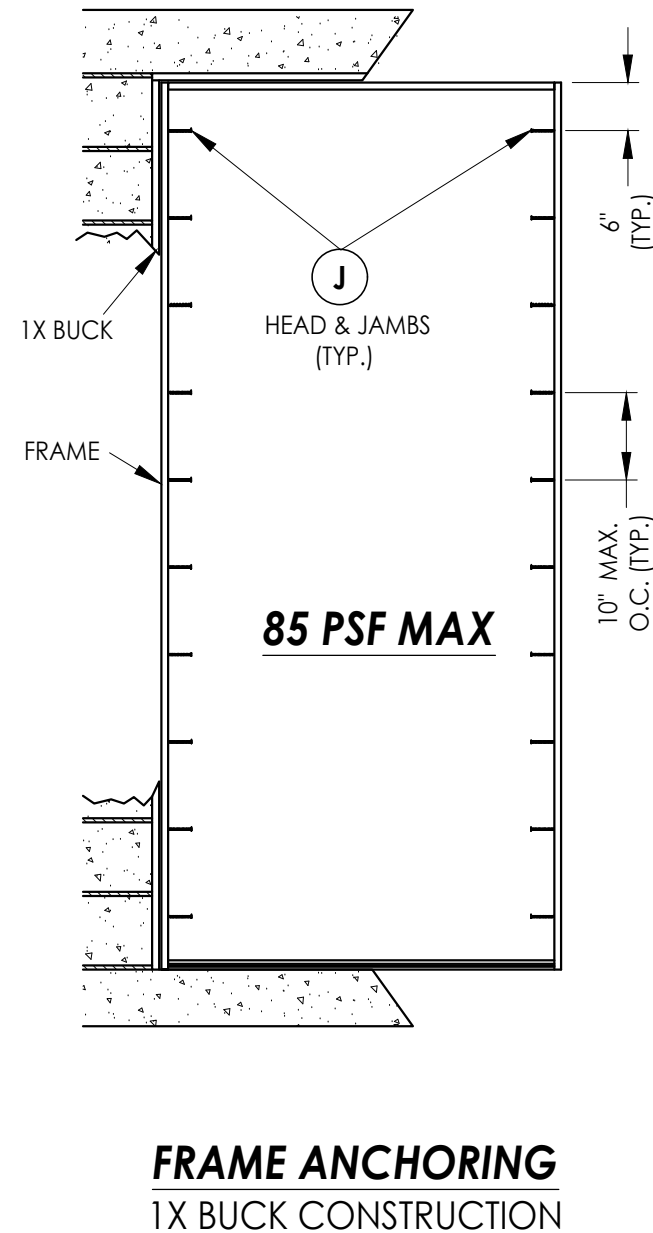
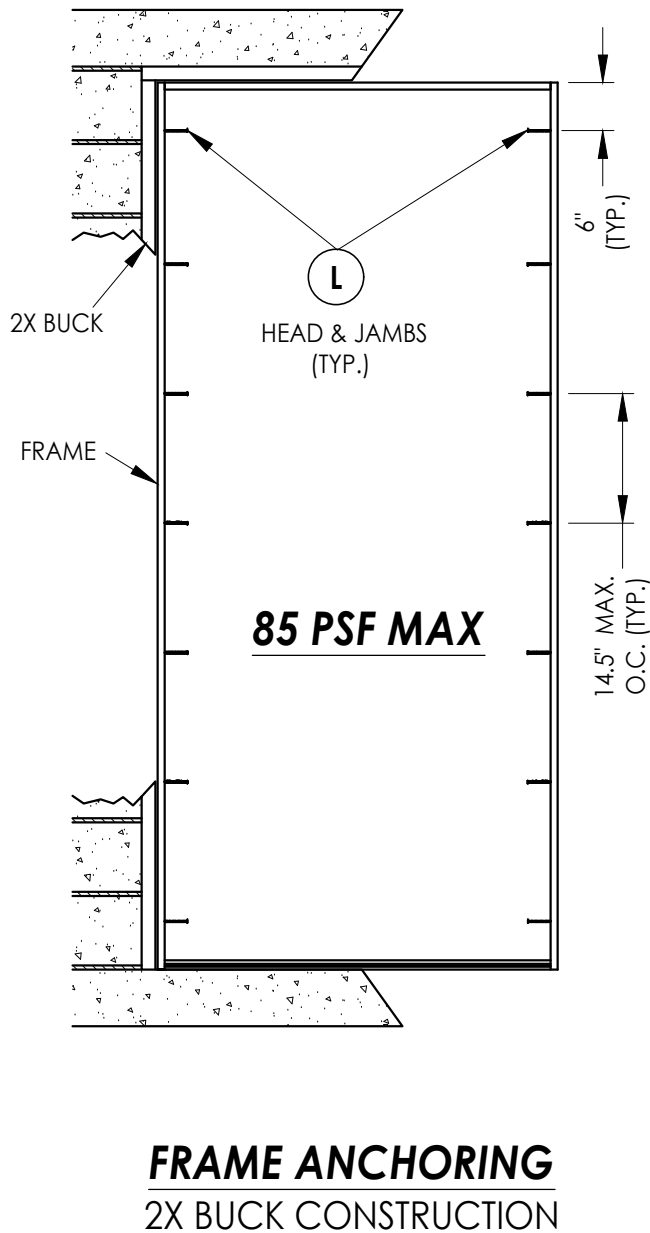
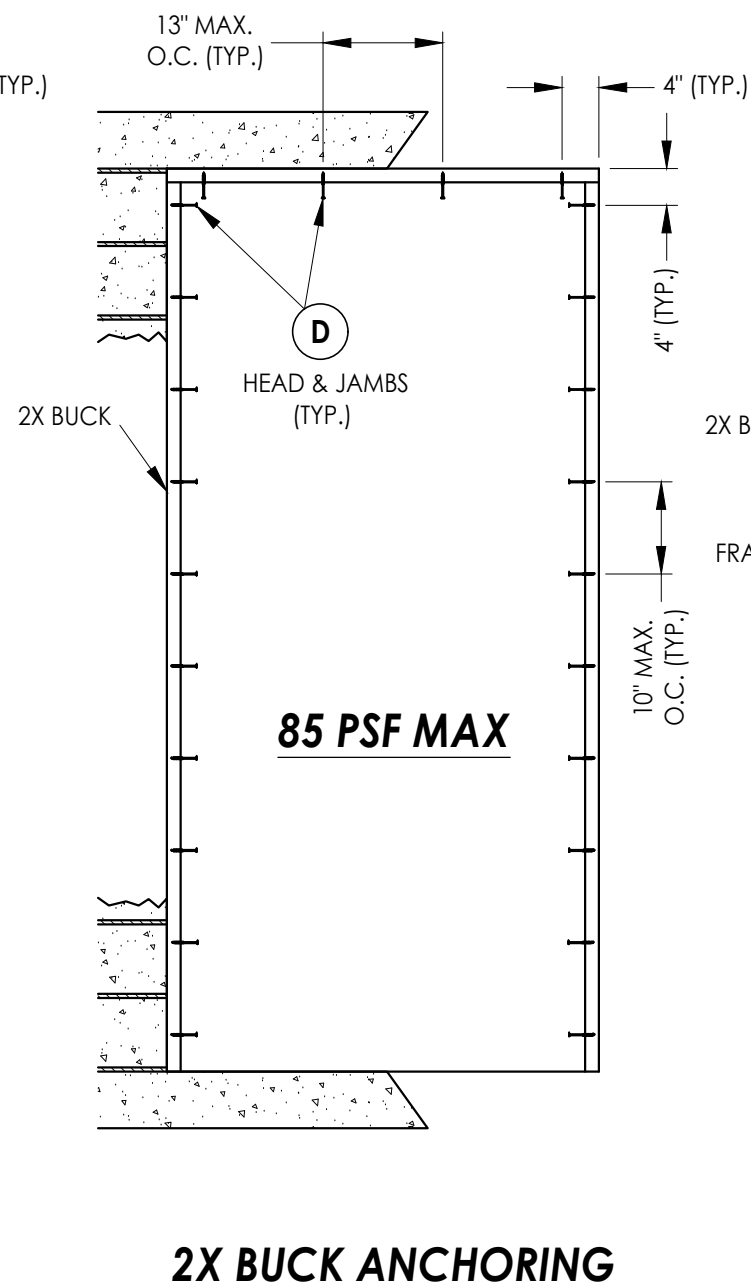
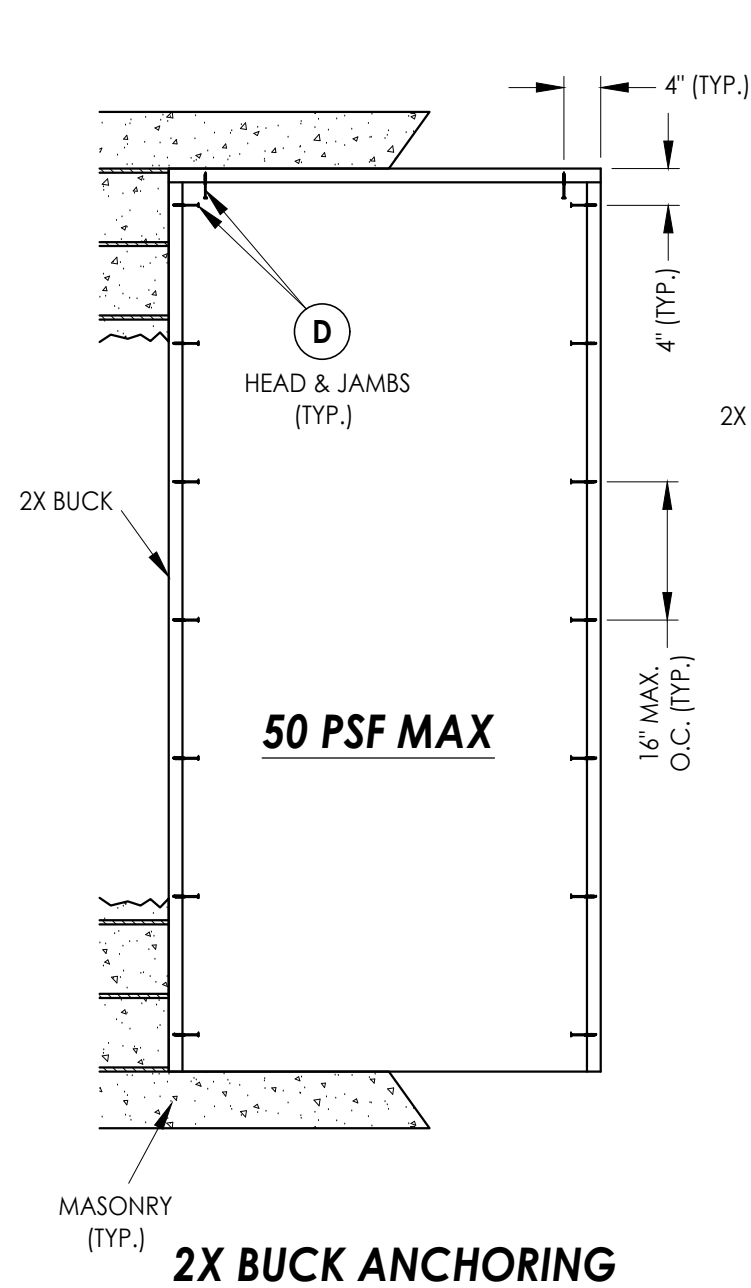
DWG. BY: JK

CHK. BY: LFS

DRAWING NO.:

FL-21852.2

SHEET 8 OF 11



NOTE:

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

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

DATE: 2/9/17

SCALE: *N.T.S.*

DWG. BY: JK

CHK. BY: LFS

DRAWING NO.:

FL-21852.

SHEET 9 OF 1

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

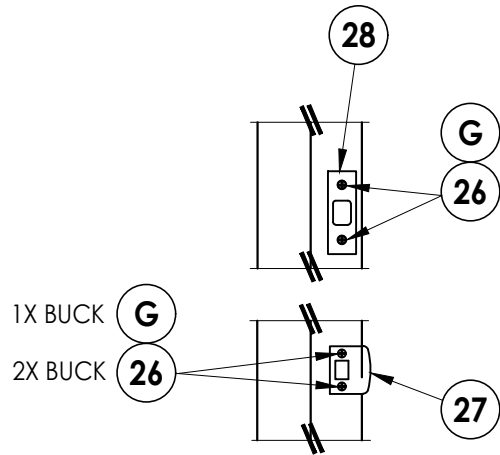
PRODUCT: MASTERGRAIN
FIBERGLASS DOOR

T OR ASSEMBLY:
BUCK & FRAME ANCHORING

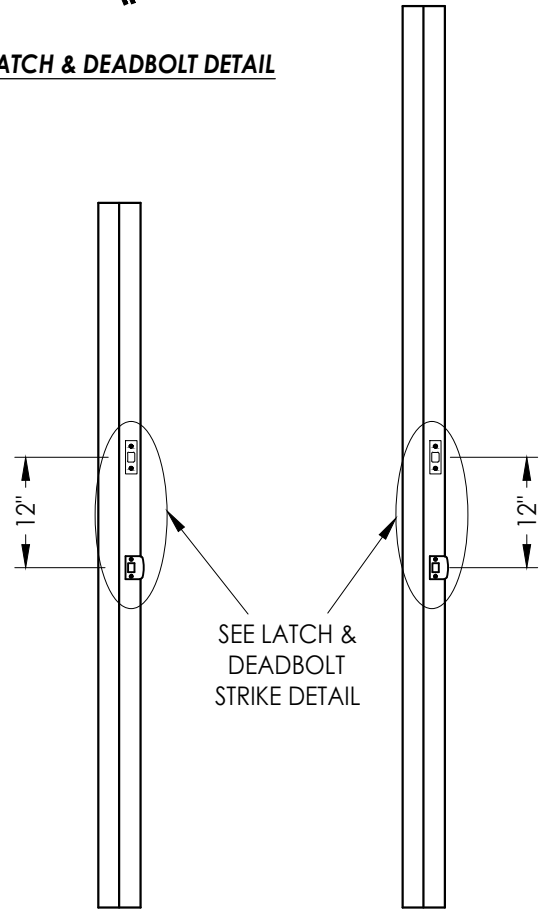
T OR ASSEMBLY:
BUCK & FRAME ANCHORING

BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
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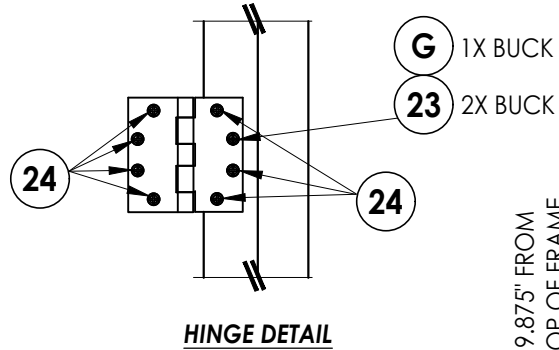


LATCH & DEADBOLT DETAIL

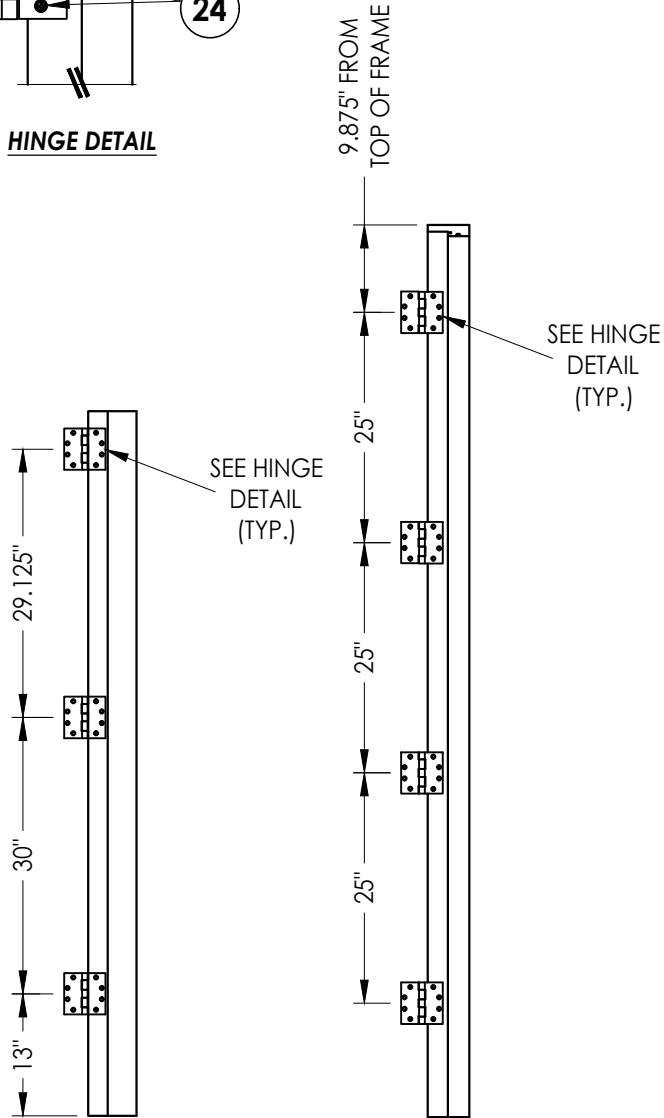


STRIKE JAMB
Latch and Deadbolt
Arch Top Door

STRIKE JAMB
Latch and Deadbolt

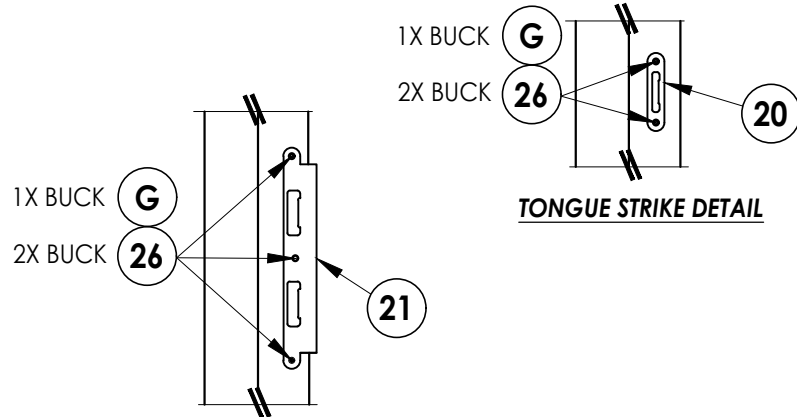


HINGE DETAIL

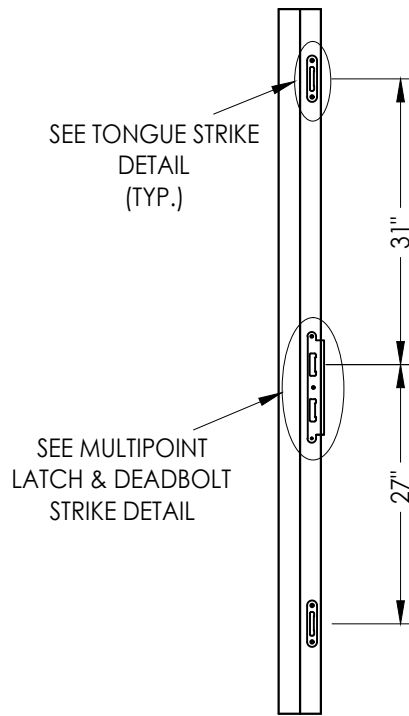


HINGE JAMB
Arch top Door

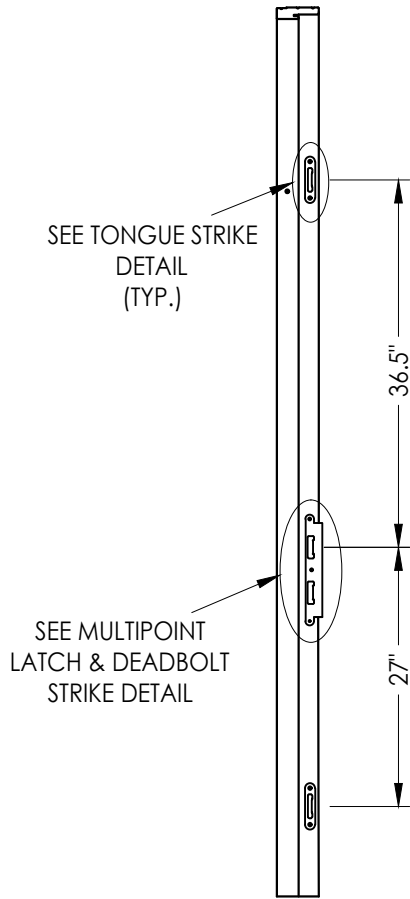
HINGE JAMB



MULTIPOINT LATCH & DEADBOLT STRIKE DETAIL



STRIKE JAMB
Multipoint Lock
Arch top Door



STRIKE JAMB
Multipoint Lock

LATCH & DEADBOLT HARDWARE DETAILS

MULTIPOINT LOCK HARDWARE DETAILS

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

DATE: 2/9/17

SCALE: N.T.S.

DWG. BY: JK

CHK. BY: LFS

DRAWING NO.:

FL-21852.2

SHEET 10 OF 11

Documents Prepared By:
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PRODUCT:
MASTERGRAIN
FIBERGLASS DOOR

PART OR ASSEMBLY:
HARDWARE DETAILS

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
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
2	WOOD JAMB	WOOD
7	WEATHERSTRIP	FOAM
8	SWEEP	VINYL
9	20 GA. SPLICE PLATE (USP NP37)	STEEL
10	#6 X 1/2" PPH WOOD SCREW	STEEL
13	INSWING ADJUSTABLE THRESHOLD	ALUM/COMP
14	OUTSWING BUMP THRESHOLD	ALUM/COMP
20	MULTIPOINT TONGUE STRIKE PLATE	STEEL
21	MULTIPOINT LATCH & DEADBOLT STRIKE PLATE	STEEL
23	#12 X 2-1/2" PFH WOOD SCREW	STEEL
24	#12 x 1" PFH WOOD SCREW	STEEL
26	#8 X 2-1/2" PFH WOOD SCREW	STEEL
27	LATCH STRIKE PLATE	STEEL
28	DEADBOLT STRIKE PLATE	STEEL
29	4.5" X 4.5" HINGE	STEEL
40	DOOR PANEL	-
41	DOOR PANEL	-

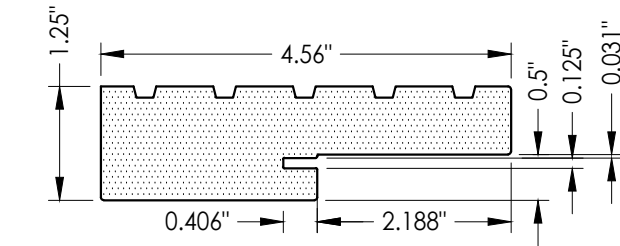
CONCRETE ANCHOR NOTES:

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

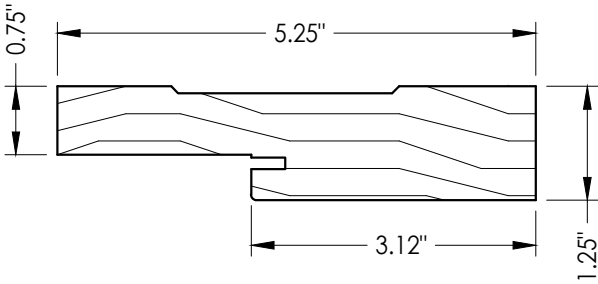
ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-1/4"	2"	4"
DeWALT ULTRACON®	1/4"	1-1/4"	1"	4"
ITW TAPCON®	3/16"	1-1/4"	3"	1-1/2"

WOOD SCREW INSTALLATION NOTES:

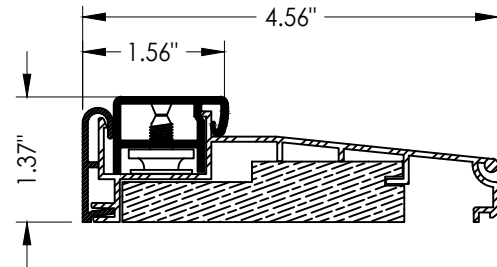
1. Maintain a minimum 5/8" edge distance, 1" end distance, & 1" o.c. spacing of wood screws to prevent the splitting of wood.



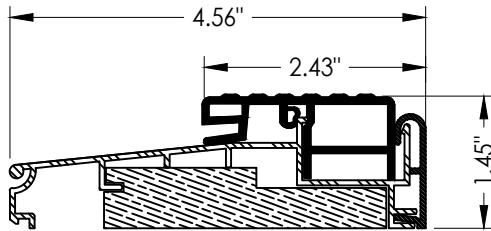
1 COMPOSITE JAMB



2 WOOD JAMB (ARCH TOP)
Sipo (Utile) Wood (S.G. = 0.53)



13 INSWING THRESHOLD



14 OUTSWING THRESHOLD

DATE: 2/9/17		DOCUMENTS PREPARED BY: LYNDON F. SCHMIDT P.E. No. 43409			
SCALE: N.T.S.		 BUILDING CONSULTANTS, INC. P.O. Box 230, Valrico, FL 33595 Phone No.: 813.659.9197 FBPE Registry No. 9813			
DWG. BY: JK					
CHK. BY: LFS					
DRAWING NO.: FL-21852.2					
SHEET 11 OF 11					
NO.		DATE		REVISIONS	
4	7/01/26	UPDATE TO 9TH ED. (2026)	FBC	LFS	PART OR ASSEMBLY: BILL OF MATERIALS & COMPONENTS
3	7/01/23	UPDATE TO 8TH ED. (2023)	FBC	LFS	
2	7/08/20	UPDATE TO 7TH ED. (2020)	FBC	LFS	
1	10/03/17	UPDATE TO 6TH ED. (2017)	FBC	JK	
NO.		DATE		BY	