

# MASTERGRAIN

16566 HIGHWAY 12 PO BOX 399 MIDLAND, ONTARIO, CANADA



## OPAQUE FIBERGLASS DOUBLE DOOR w/ or w/o SIDELITES INSWING "NON-IMPACT"

### EVALUATED FOR USE IN THE STATE OF TEXAS

The Opaque Fiberglass Door system described herein complies with the 2018 International Residential Code (IRC), Sections R301 & R609 and the 2018 International Building Code (IBC), Sections 1404.13, 1609, 1709.5, 2403 and 2404 subject to the following conditions:

1. Anchors shall be as listed and spaced as shown in the details. Anchor embedment to base material shall be beyond wall dressing or stucco.
2. When used in areas requiring wind-borne debris protection this product is required to be protected with an impact resistant covering that complies with Section R301.2.1.2 of the IRC and Section 1609.2 of the IBC.
3. Allowable design pressure requirements must be equal to or less than the design pressure rating shown in the design pressure chart, sheet 1 of this drawing.
4. Conditions not covered by this drawing are subject to further engineering analysis.

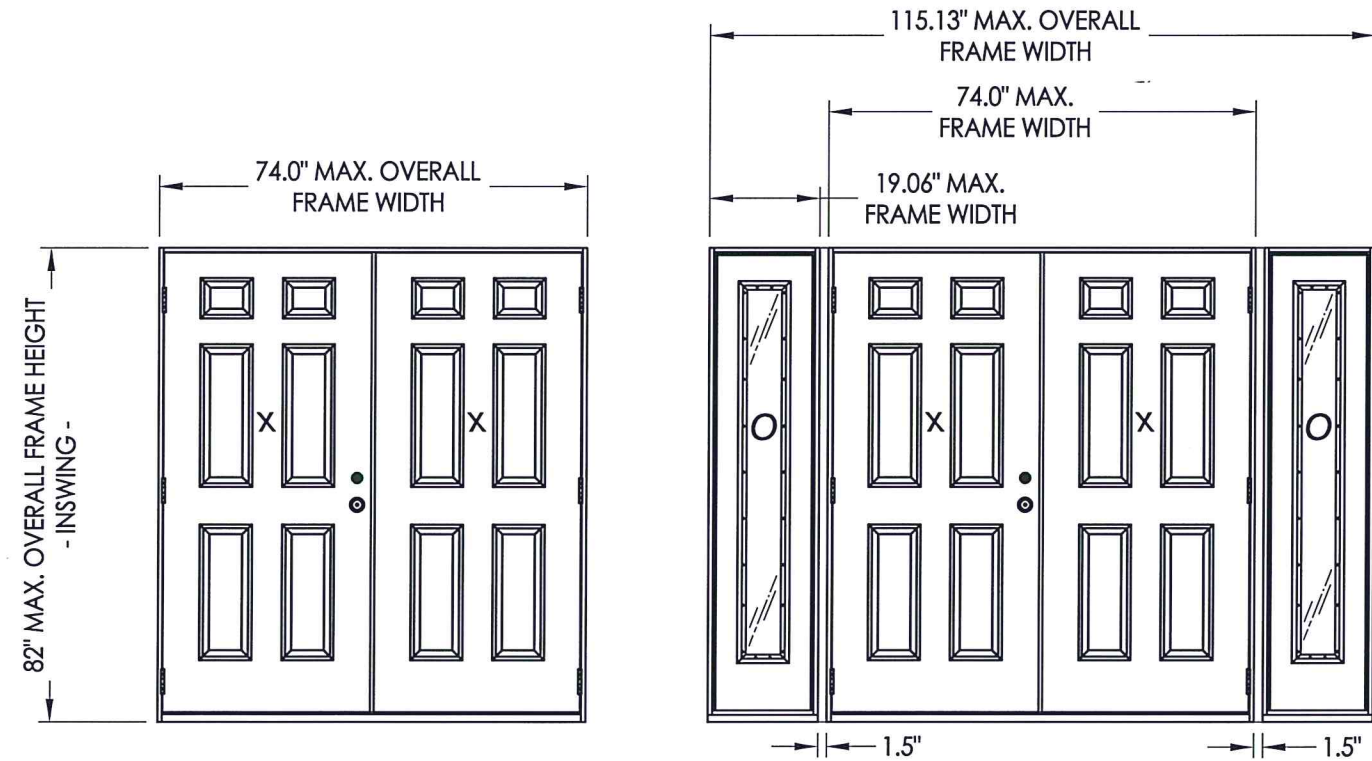


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4	Elevations
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6	Vertical cross sections
7	Vertical cross sections
8	Frame anchoring
9	Bill of materials and components

CONFIGURATION	MAX. FRAME DIMENSION	MAX. D.L.O. DIMENSION	DESIGN PRESSURE (PSF) INSWING	
			POSITIVE	NEGATIVE
XX	74.0" x 82.0"	N/A	+55.0	-60.0
OXXO	115.13" x 82.0"	7.0" x 63.13"	+55.0	-60.0

Documents Prepared By: Lyndon F. Schmidt, P.E.  
TEXAS P.E. #104123

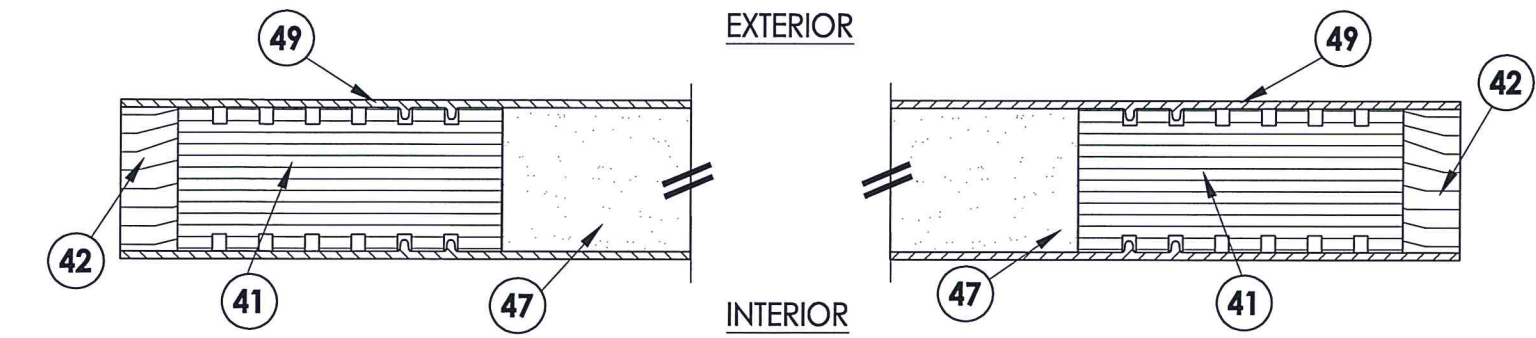
**RW** BUILDING CONSULTANTS, INC.  
P.O. Box 230 Valrico FL 33595  
Phone No.: 813.659.9197  
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR w/ SIDELITE  
PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

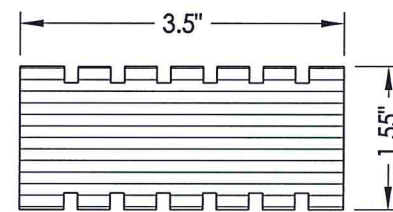
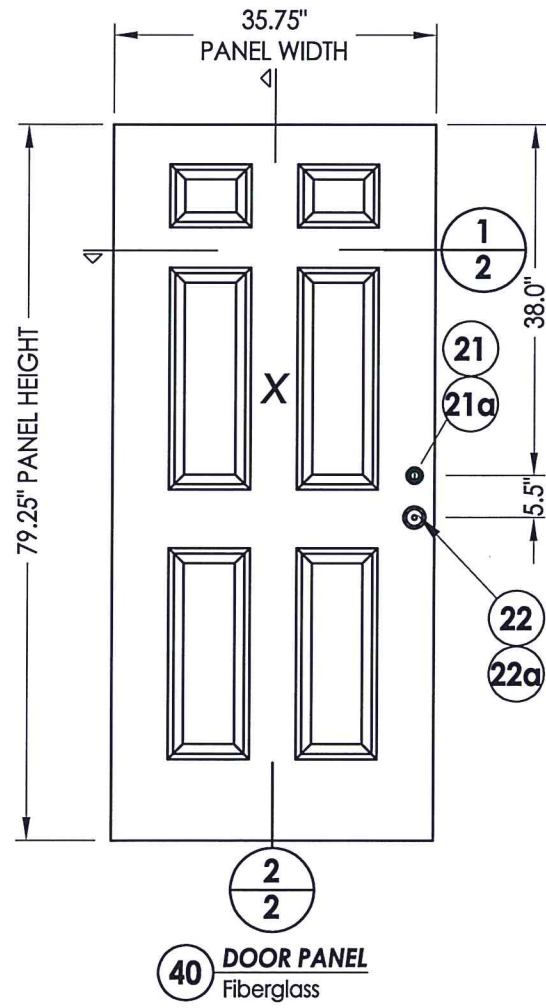
NO.	DATE	DESCRIPTION	BY
1	3/03/20	UPDATE TO 2018 IBC/IRC CODE	LFS

DATE: 01/04/10  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4051  
SHEET 1 OF 9

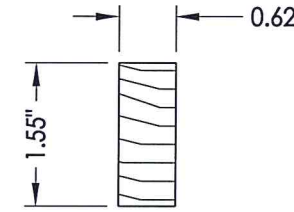




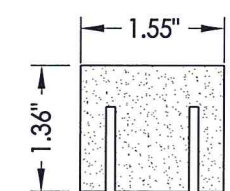
**1**  
**2** HORIZONTAL CROSS SECTION



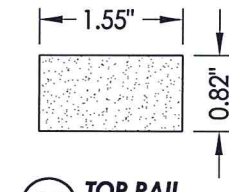
**41** HINGE AND LATCH STILE  
Reinforcement / LSL



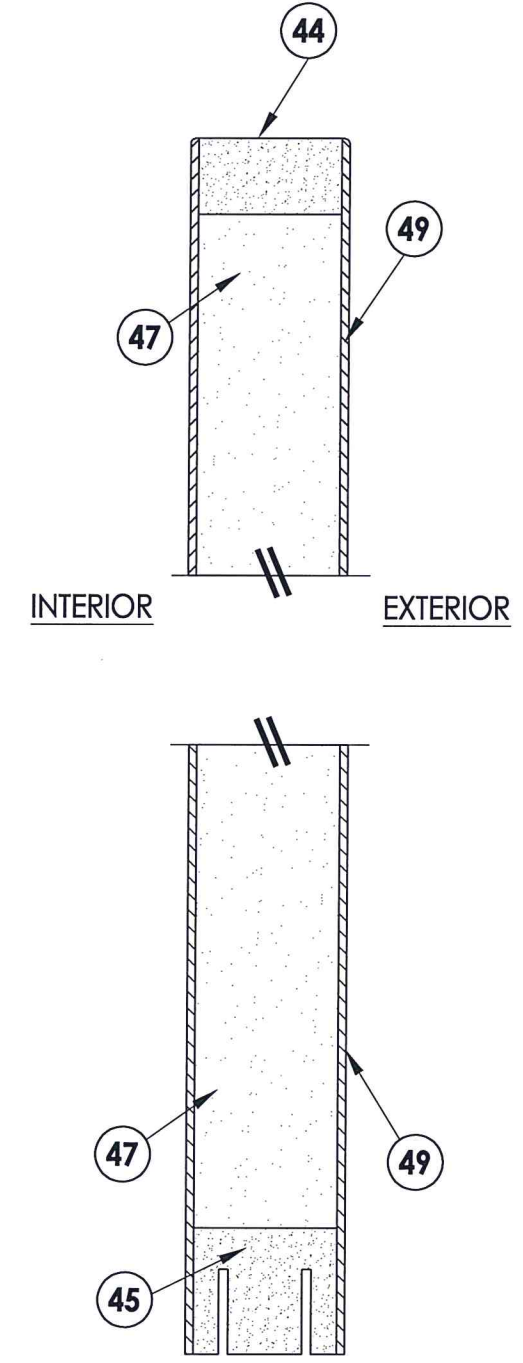
**42** HINGE AND LATCH STILE  
Wood



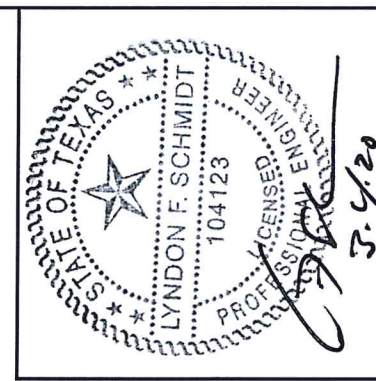
**45** BOTTOM RAIL  
Composite



**44** TOP RAIL  
Composite



**2**  
**2** VERTICAL CROSS SECTION



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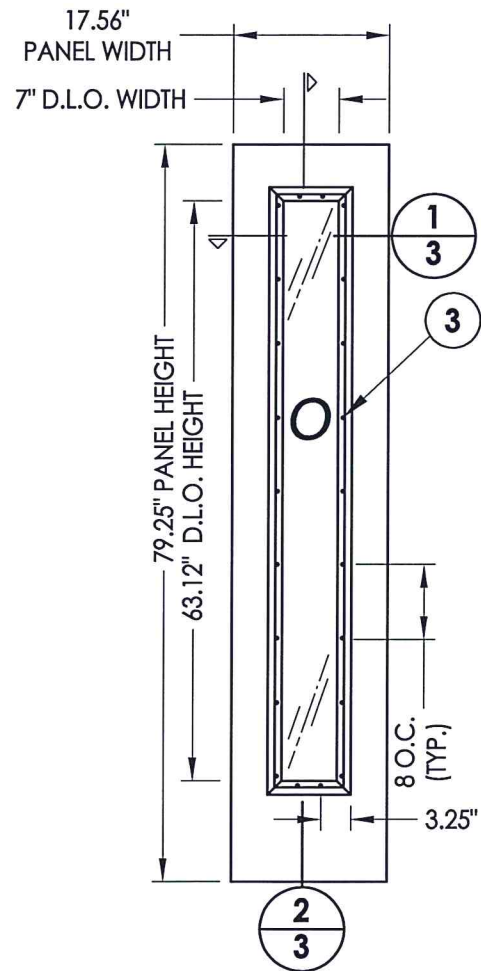
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN  
FIBERGLASS DOOR

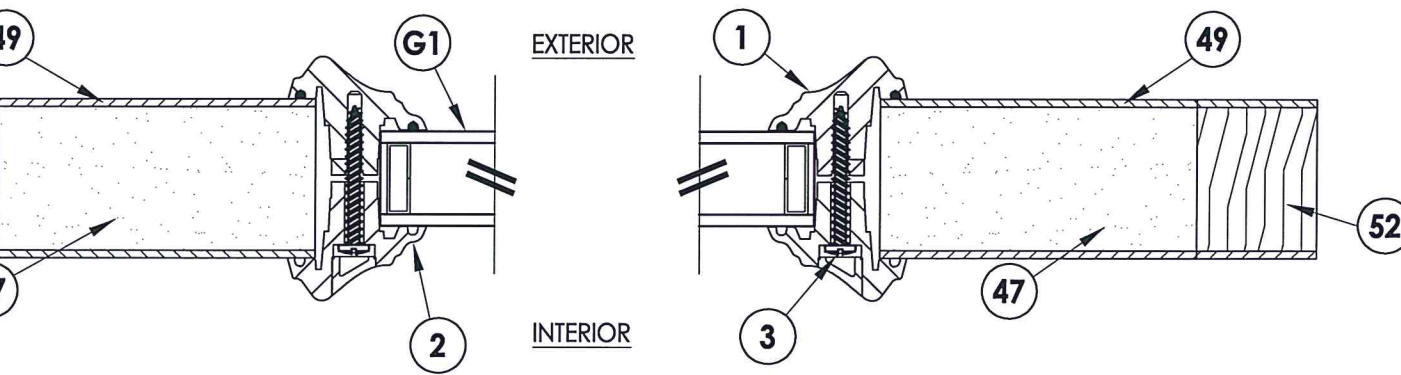
PART OR ASSEMBLY:  
DOOR PANEL DETAILS

NO.	DATE	DESCRIPTION	BY
1	3/03/20	UPDATE TO 2018 IBC/IRC CODE	LFS

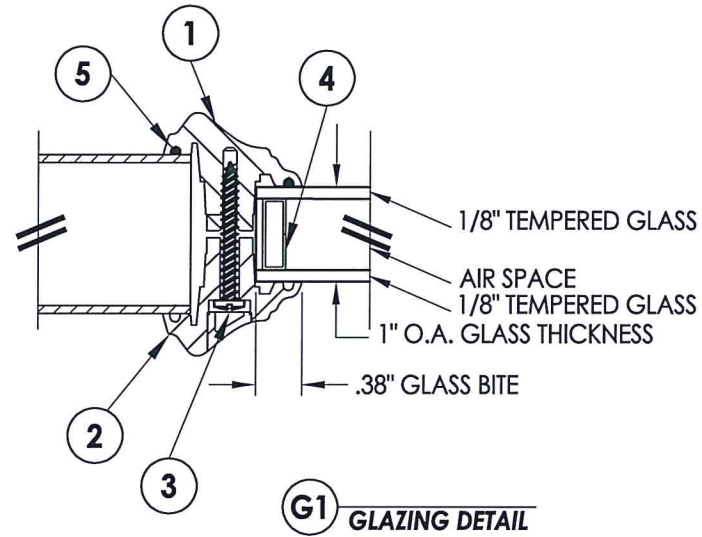
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DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4051  
SHEET 2 OF 9



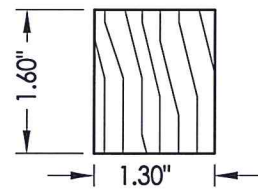
**50 SIDELITE PANEL**  
Fiberglass



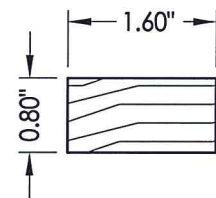
**1**  
**3** HORIZONTAL CROSS SECTION



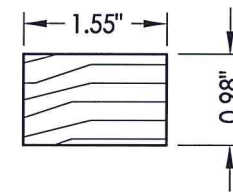
**G1** GLAZING DETAIL



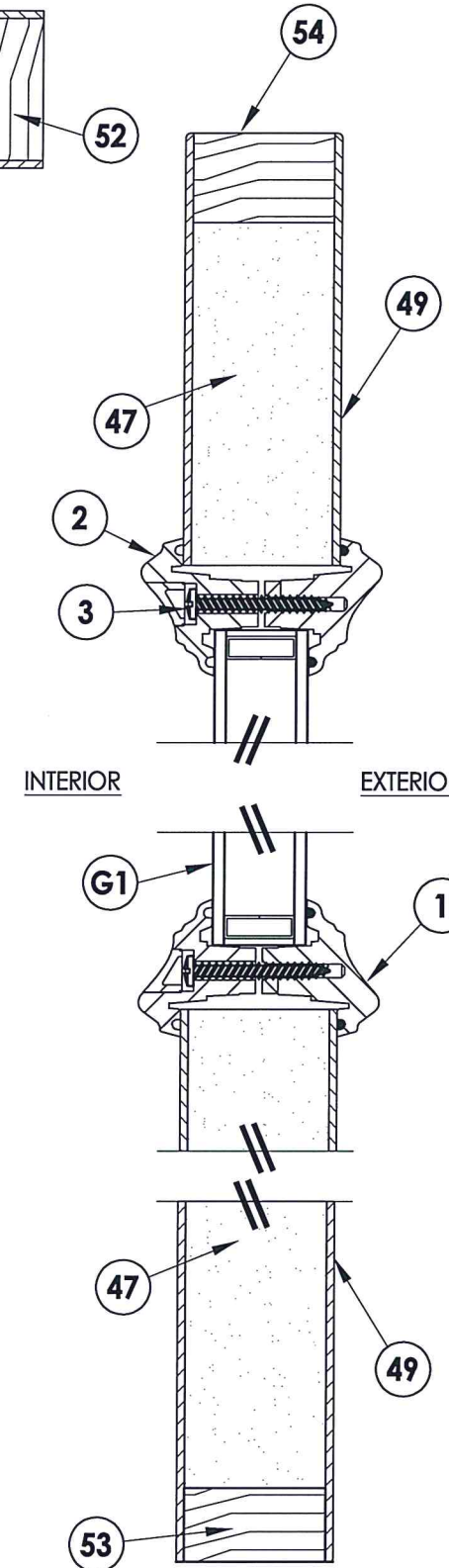
**52 SIDELITE STILE**  
Wood



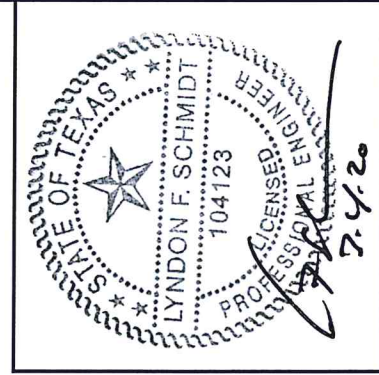
**53 SIDELITE BOTTOM RAIL**  
Wood



**54 SIDELITE TOP RAIL**  
Wood



**2**  
**3** VERTICAL CROSS SECTION



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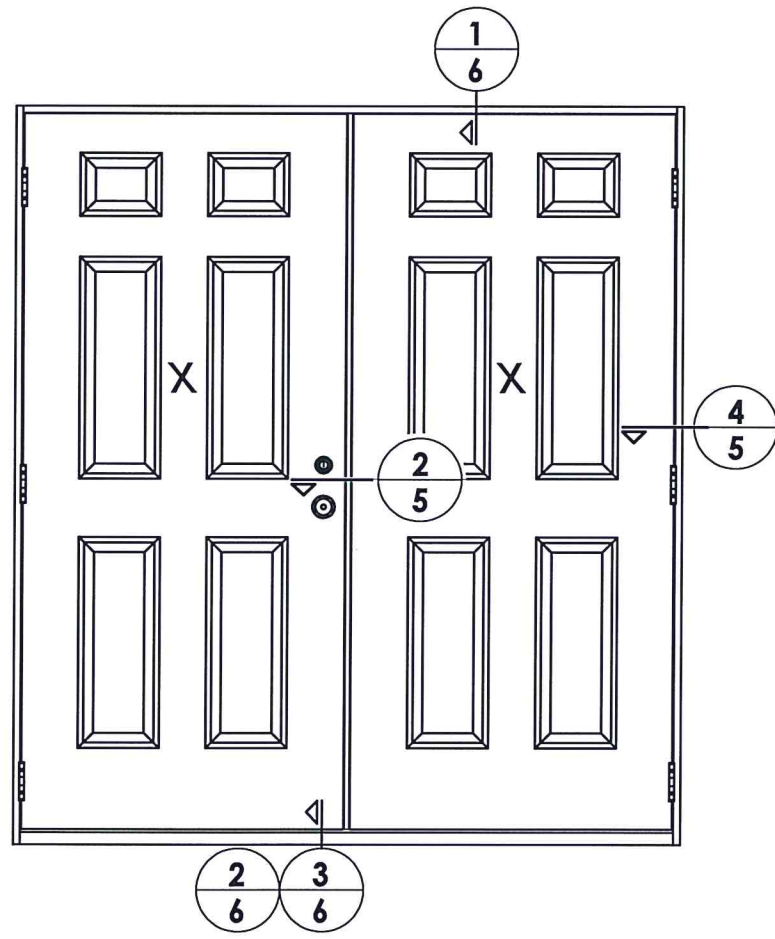
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PRODUCT: MASTERGRAIN FIBERGLASS DOOR  
PART OR ASSEMBLY: SIDELITE PANEL DETAILS AND GLAZING DETAIL

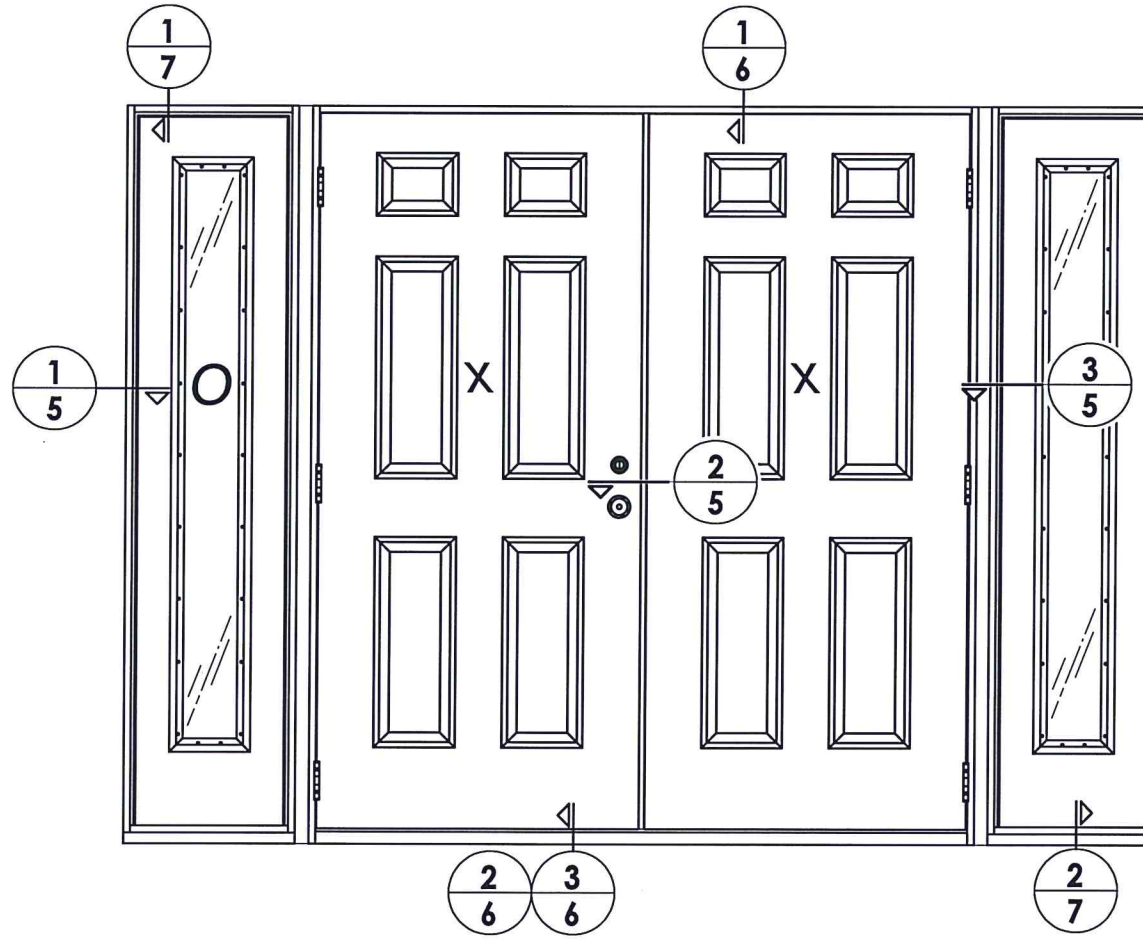
NO.	DATE	REVISIONS
1	3/03/20	UPDATE TO 2018 IBC/IRC CODE
LFS		BY

DATE: 01/04/10  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4051  
SHEET 3 OF 9

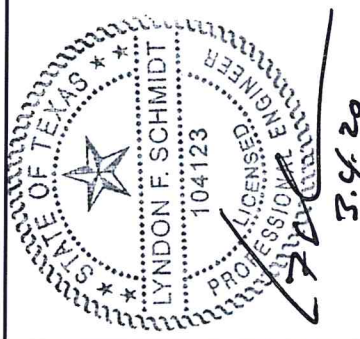




ELEVATION (XX)



ELEVATION (OXXO)

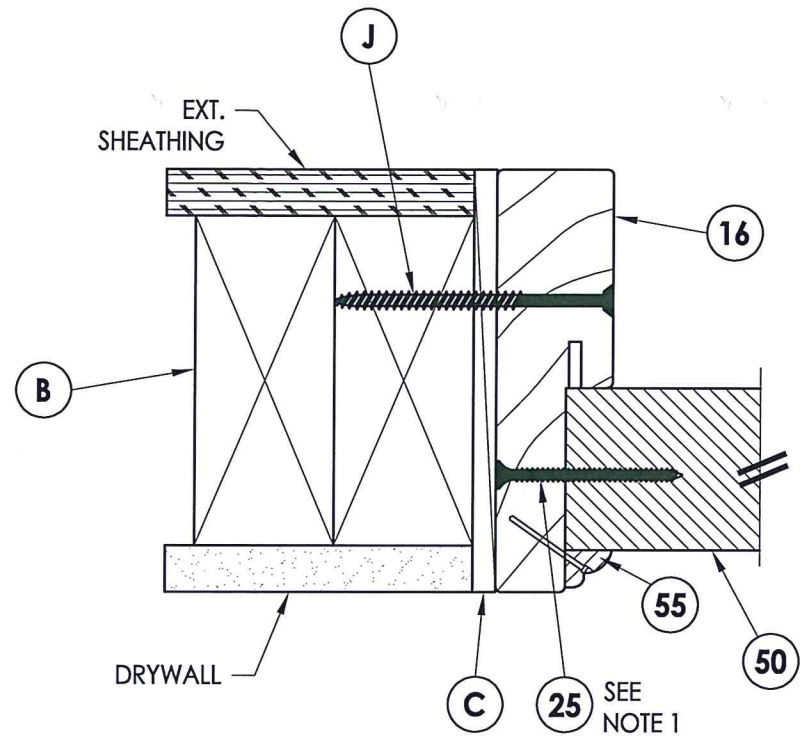


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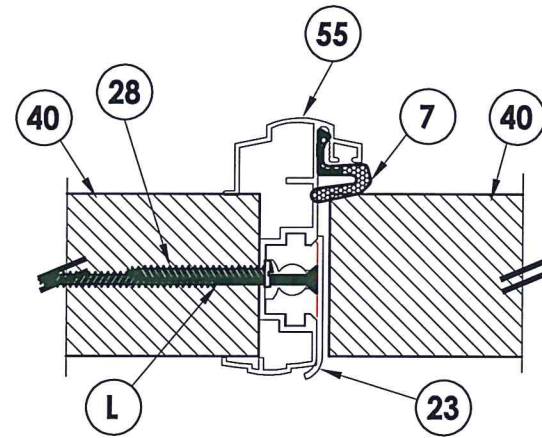
PRODUCT: MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY: ELEVATIONS	
NO.	REVISIONS
1	3/03/20 UPDATE TO 2018 IBC/IRC CODE
	LFS BY
DATE: 01/04/10	
SCALE: N.T.S.	
DWG. BY: JK	
CHK. BY: LFS	
DRAWING NO.: TX-4051	
SHEET 4 OF 9	



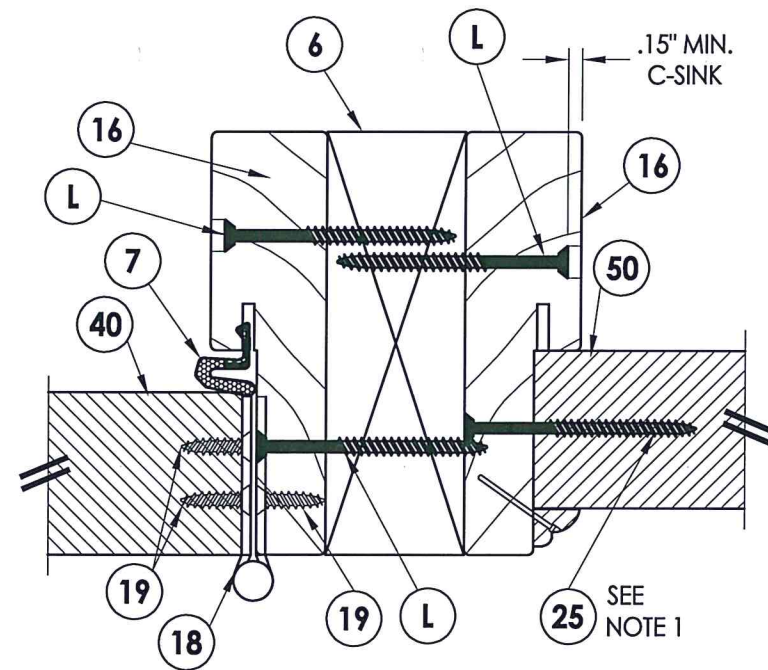
**1**  
**5** HORIZONTAL CROSS SECTION

EXTERIOR

INTERIOR



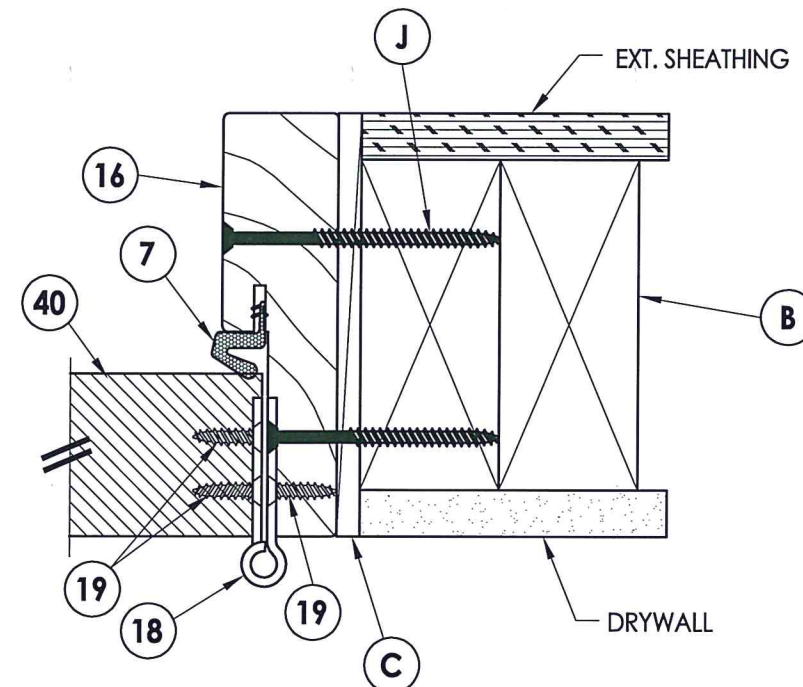
**2**  
**5** HORIZONTAL CROSS SECTION



**3**  
**5** HORIZONTAL CROSS SECTION

EXTERIOR

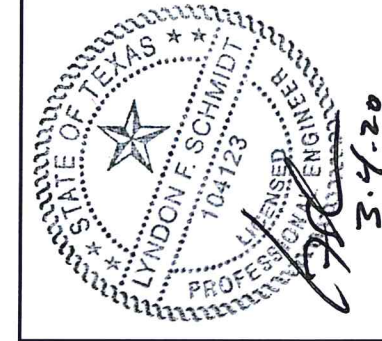
INTERIOR



**4**  
**5** HORIZONTAL CROSS SECTION

**NOTE:**

1. Sidelite ass'y fastener; 6" from each end and 6 more screws equally spaced. (8 screws total per jamb.)
2. Trim secured with 1" Brad Nail @ 6" O.C. (TYP).



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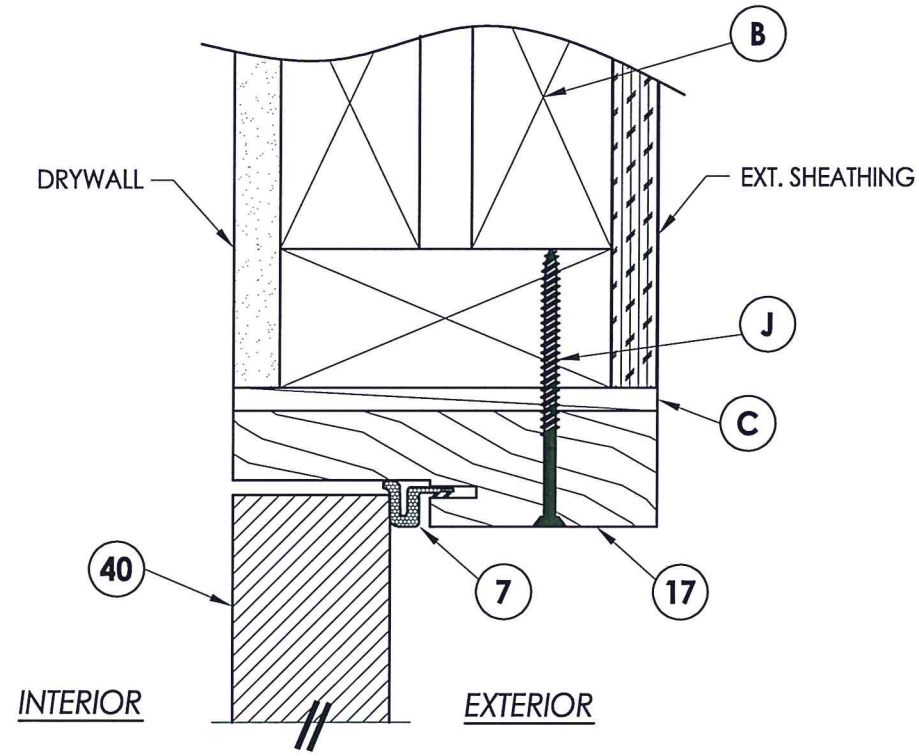
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PRODUCT: MASTERGRAIN FIBERGLASS DOOR  
PART OR ASSEMBLY: HORIZONTAL CROSS SECTIONS

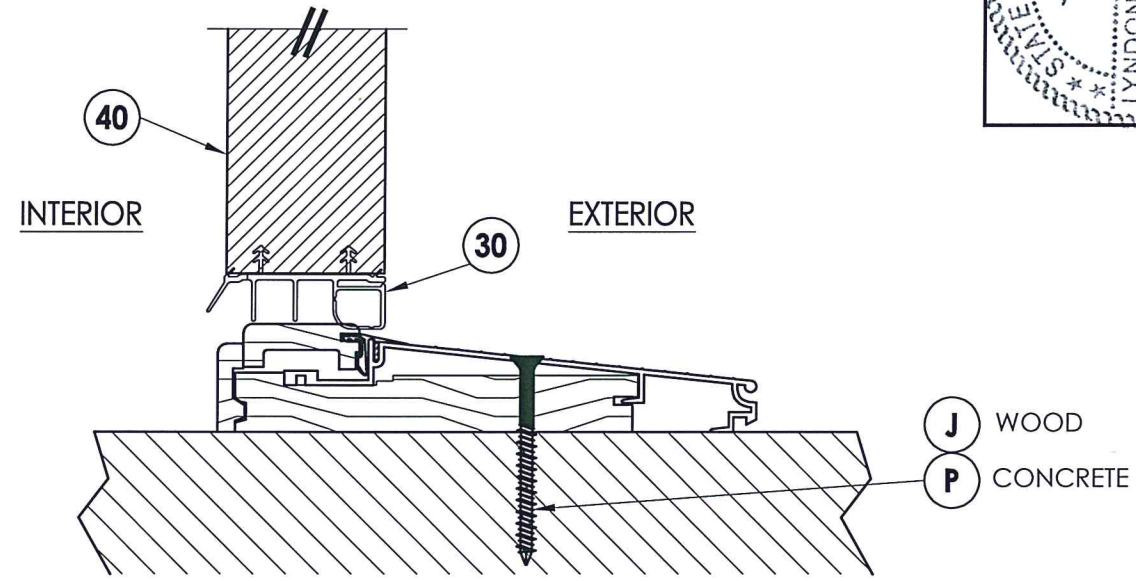
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1	3/03/20	LFS	UPDATE TO 2018 IBC/IRC CODE

DATE: 01/04/10  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4051  
SHEET 5 OF 9

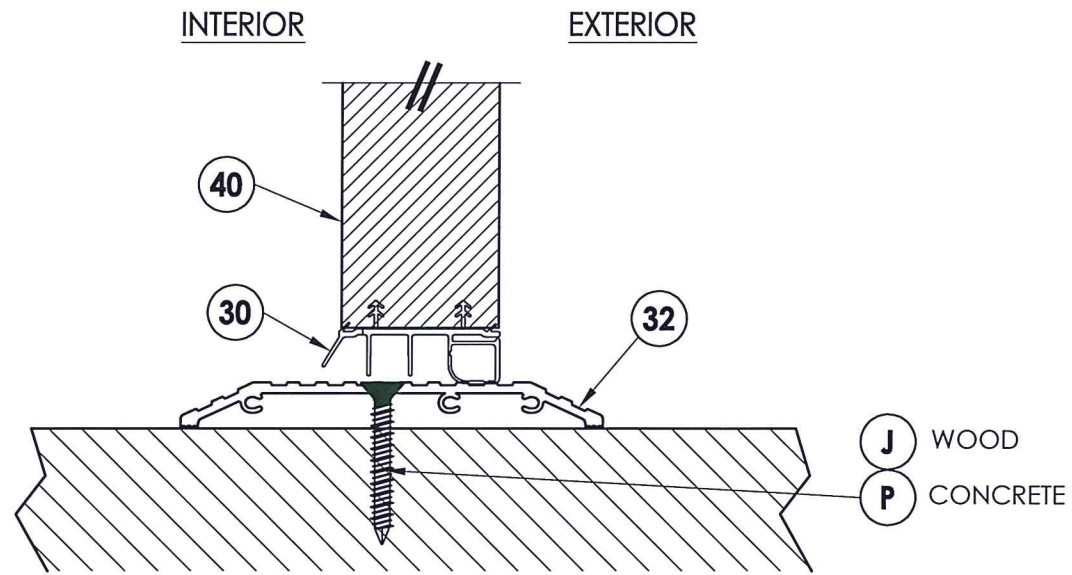




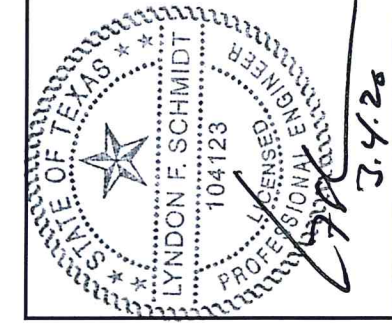
**1**  
**6** VERTICAL CROSS SECTION



**2**  
**6** VERTICAL CROSS SECTION  
Inswing configuration



**3**  
**6** VERTICAL CROSS SECTION  
Shown w/ ADA threshold



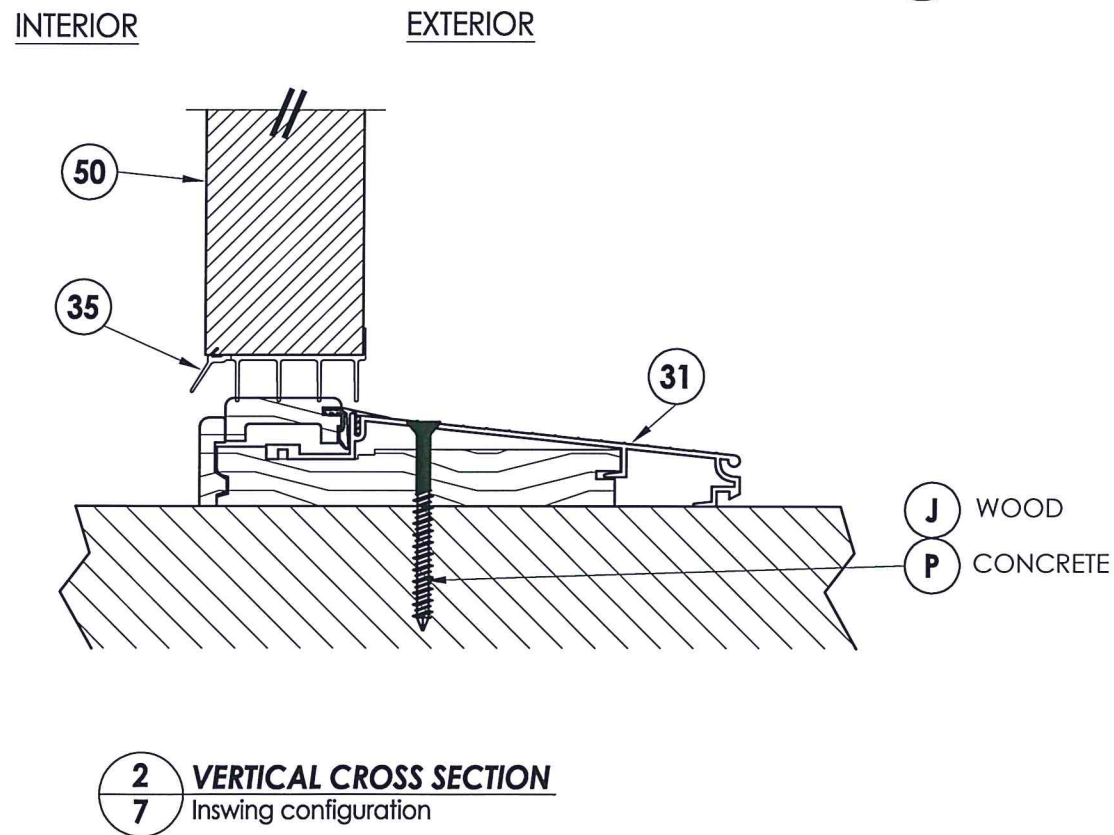
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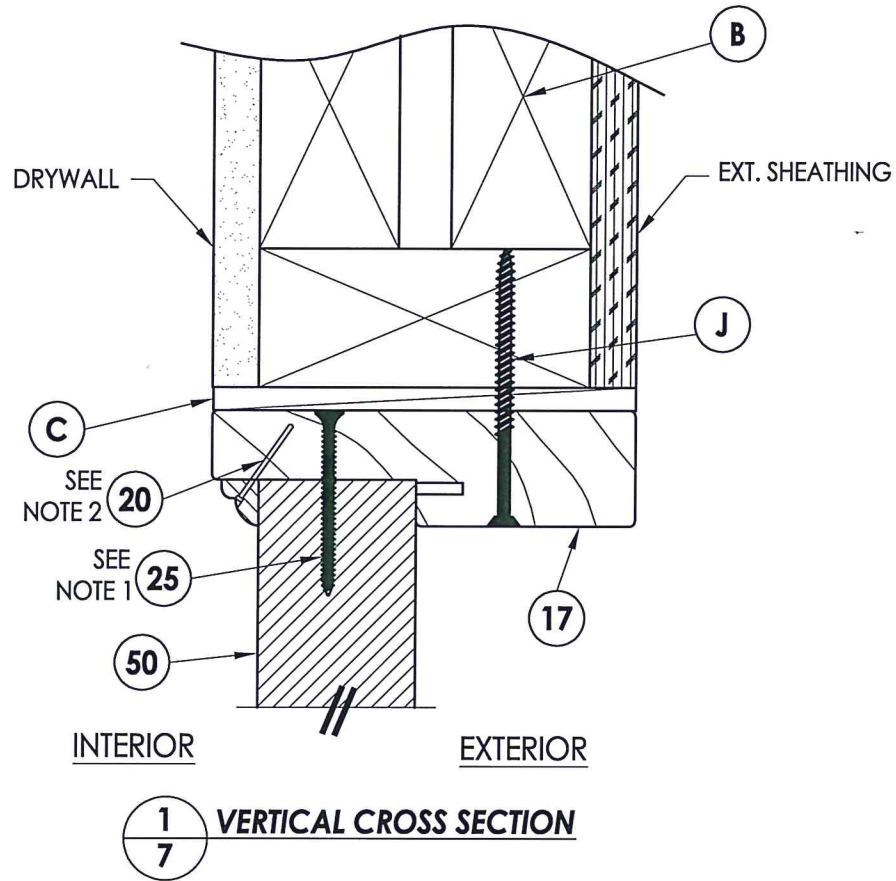
PRODUCT: MASTERGRAIN FIBERGLASS DOOR  
PART OR ASSEMBLY: VERTICAL CROSS SECTIONS

NO.	DATE	REVISIONS
1	3/03/20	UPDATE TO 2018 IBC/IRC CODE
		LFS
		BY

DATE: 01/04/10  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4051  
SHEET 6 OF 9



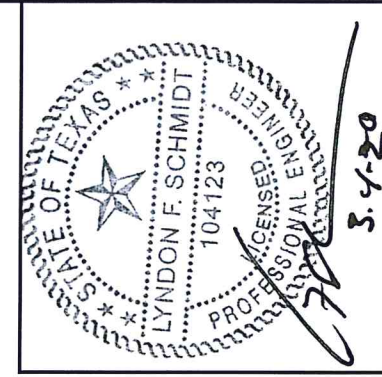
**2** VERTICAL CROSS SECTION  
7 Inswing configuration



**1** VERTICAL CROSS SECTION  
7

**NOTE:**

1. Screws thru head jamb located 3" from each end.
2. Trim secured with 1" Brad Nail @ 6" O.C. (TYP).



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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	VERTICAL CROSS SECTIONS

REVISIONS	
NO.	DATE
1	3/03/20
	UPDATE TO 2018 IBC/IRC CODE
	LFS BY

DATE:	01/04/10
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4051
SHEET	7 OF 9

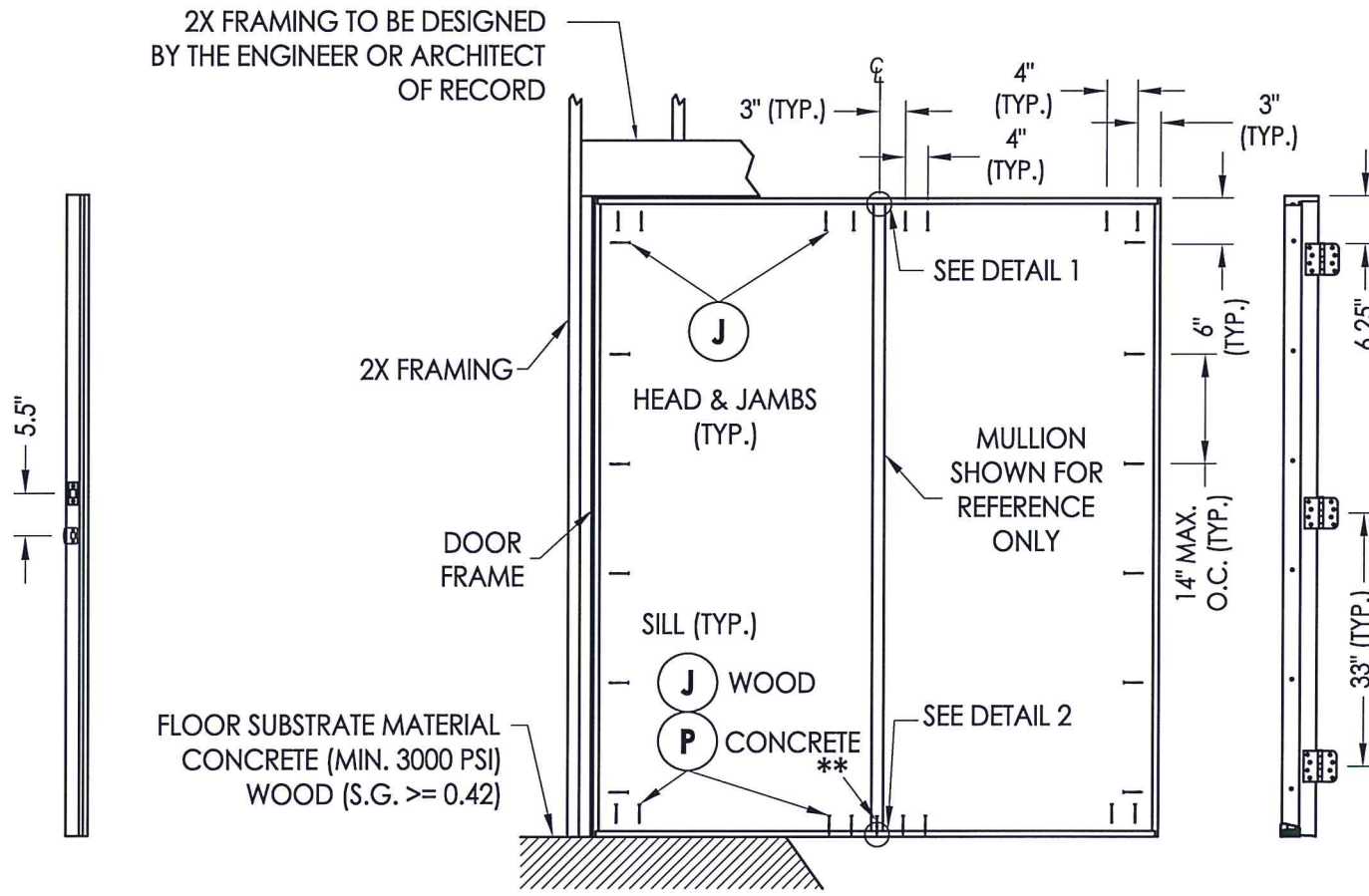


\*\* Additional anchor required for DP > 40 PSF (outswing only)



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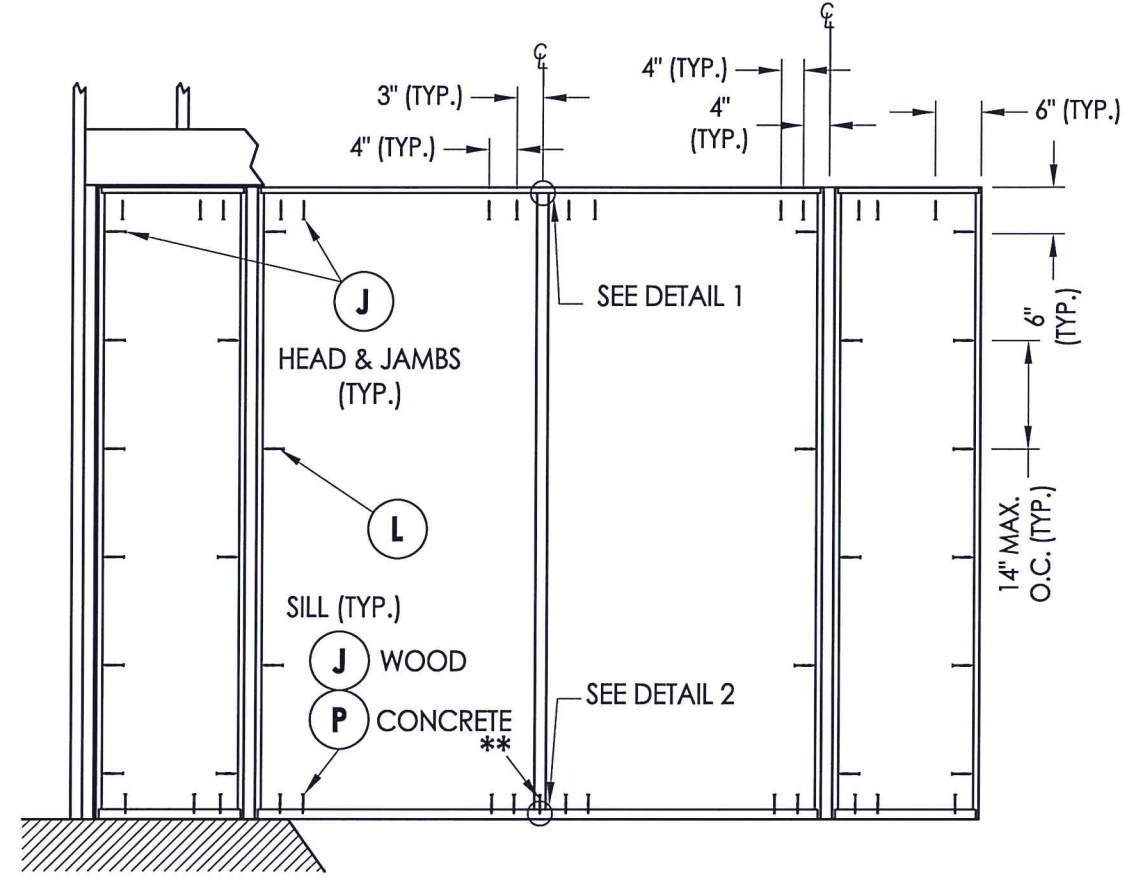
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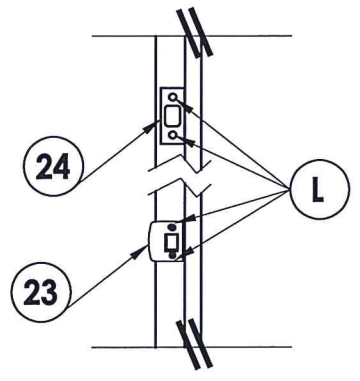
**ASTRAGAL**

**FRAME ANCHORING**  
Masonry construction

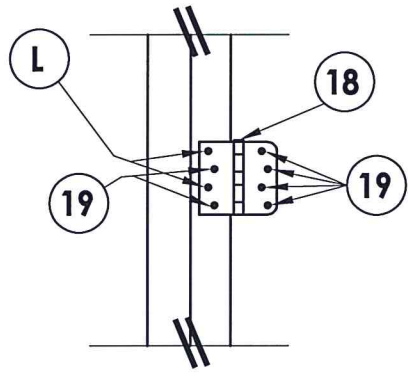
**HINGE JAMB**



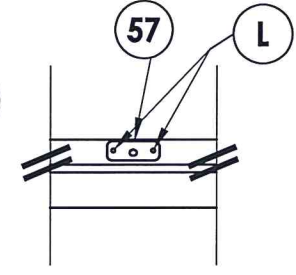
**FRAME ANCHORING**  
Masonry construction



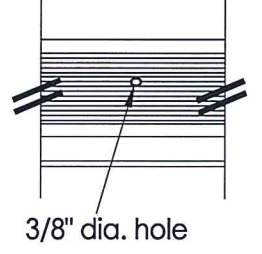
**LATCH & DEADBOLT DETAIL**



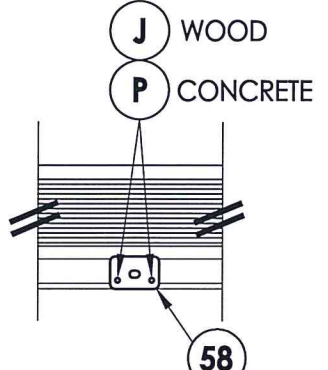
**HINGE DETAIL**



**DETAIL 1**  
Astragal Strike Plate



**DETAIL 2**  
Astragal Strike Plate  
Outswing



**DETAIL 2**  
Astragal Strike Plate  
Inswing

PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	FRAME ANCHORING
NO.	1
DATE	3/03/20
UPDATE TO	2018 IBC/IRC CODE
BY	LFS
REVISIONS	

DATE:	01/04/10
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4051
SHEET	8 OF 9

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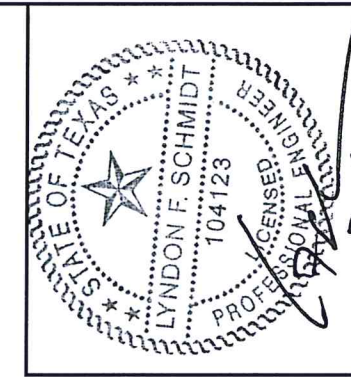
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**BILL OF MATERIALS**

ITEM #	DESCRIPTION	MATERIAL
B	2X FRAMING SG >= 0.42	WOOD
C	1/4" MAX. SHIM SPACE	-
J	#10 X 3" PFH WS	STEEL
K	#9 X 2-1/2" PFH WS	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW	STEEL
P	3/16" ELCO OR ITW PFH CONCRETE SCREW	STEEL
1	FEMALE LITE FRAME - MASTERGRAIN	POLYPROPYLENE
2	MALE LITE FRAME - MASTERGRAIN	POLYPROPYLENE
3	#8 X 1-3/4" PANHEAD SMS (LIGHT FRAME SCREW)	STEEL
4	ALUMINUM SPACER SYSTEM	ALUMINUM
5	SILICONE WEATHER SEAL MG #2500	SILICONE
6	2X MULLION SG > = 0.55	WOOD
7	WEATHER STRIP	FOAM
8	#10 X 1-1/2" PFH	STEEL
16	SIDE JAMB SG > = 0.42	WOOD
17	HEAD JAMB SG > = 0.42	WOOD
18	4" X 4" HINGE MIN 0.1" THICK	STEEL
19	#10 X 3/4" PFH WS	STEEL
20	1" BRAD NAIL	STEEL
21	KWIKSET DEADBOLT -SERIES 690 CP	STEEL
21A	COPPER CREEK DB2410 SC #8003 DEADBOLT	STEEL
22	KWIKSET LOCK -SERIES 690 CP PASSAGE	STEEL
22A	COPPER CREEK BK2040 SC# 8379 PASSAGE	STEEL

23	LATCH STRIKE PLATE	STEEL
24	DEADBOLT STRIKE PLATE	STEEL
25	#8 X 2-1/2" PFH WOOD SCREW	STEEL
26	SECURITY STRIKE PLATE	STEEL
30	DOOR BOTTOM SWEEP	VINYL
31	INSWING THRESHOLD	ALUM/COMP.
32	ADA THRESHOLD	ALUM.
34	SIDELITE THRESHOLD	ALUM./COMP.
35	SIDELITE SWEEP	VINYL
40	DOOR PANEL - SEE DOOR PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS	-
41	HINGE AND LATCH REINFORCMENT	WOOD
42	HINGE AND LATCH STILE - SG >= 0.42	WOOD
44	TOP RAIL	COMP.
45	BOTTOM RAIL	COMP.
47	POLYURETHANE FOAM	POLYURETHANE
49	FIBERGLASS SKIN 0.08" MIN. THICKNESS	FIBERGLASS
50	SIDELITE PANEL - SEE SIDELITE PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS	-
52	SIDELITE STILE - SG >= 0.42	WOOD
53	SIDELITE BOTTOM RAIL SG > = 0.42	WOOD
54	SIDELITE TOP RAIL SG > = 0.42	WOOD
55	ASTRAGAL (IMPERIAL)	ALUMINUM
57	ASTRAGAL TOP STRIKE PLATE	STEEL
58	ASTRAGAL BOTTOM STRIKE PLATE	STEEL



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PRODUCT: MASTERGRAIN FIBERGLASS DOOR  
PART OR ASSEMBLY: BILL OF MATERIALS

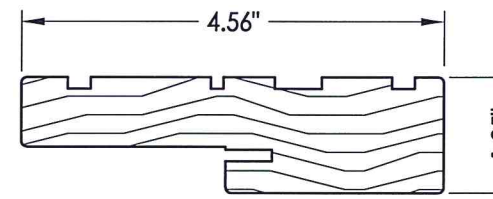
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CHK. BY: LFS  
DRAWING NO.: TX-4051  
SHEET 9 OF 9

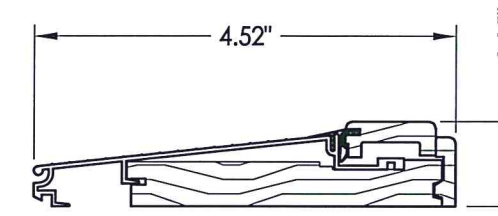
**CONCRETE ANCHOR NOTES:**

- 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:

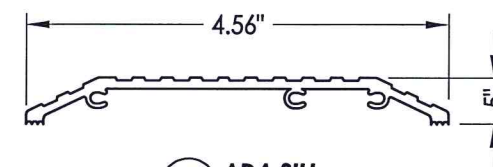
ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-3/4"	1-1/2"	4"
ELCO ULTRACON®	1/4"	1-3/4"	1"	4"



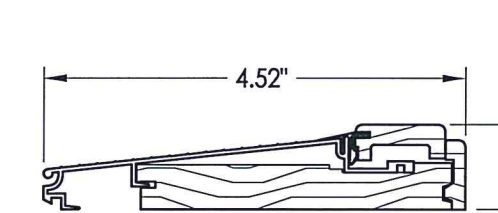
**16 17 HEAD & SIDE Jamb**



**31 INSWING THRESHOLD**



**32 ADA SILL**



**34 SIDELITE THRESHOLD**