

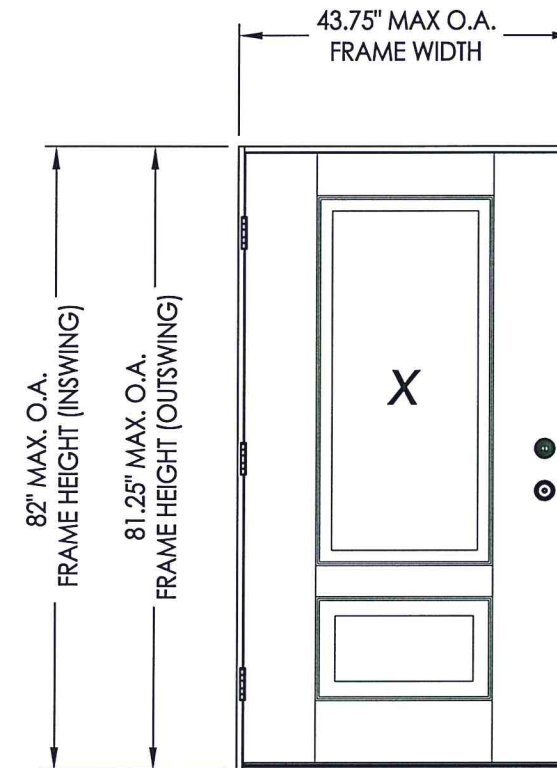
Documents Prepared By: Lyndon F. Schmidt, P.E.  
TEXAS P.E. #104123

**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

## FIBERGLASS OPAQUE SINGLE DOOR

### IN SWING / OUT SWING "IMPACT"



#### EVALUATED FOR USE IN THE STATE OF TEXAS

The 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. This system has been tested and evaluated as a large missile impact protective system for installation in areas that require wind borne debris protection. This product meets missile level "D" as defined in ASTM E 1996.
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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1	Typical Elevations, Design Pressures & General Notes
2	Door Panel Details
3	Elevation
4	Horizontal & Vertical Cross Sections (2X Framing)
5	Horizontal & Vertical Cross Sections (1X Buck)
6	Vertical Cross Sections (Thresholds)
7	Frame Anchoring & Hardware Details
8	Bill of Materials & Components

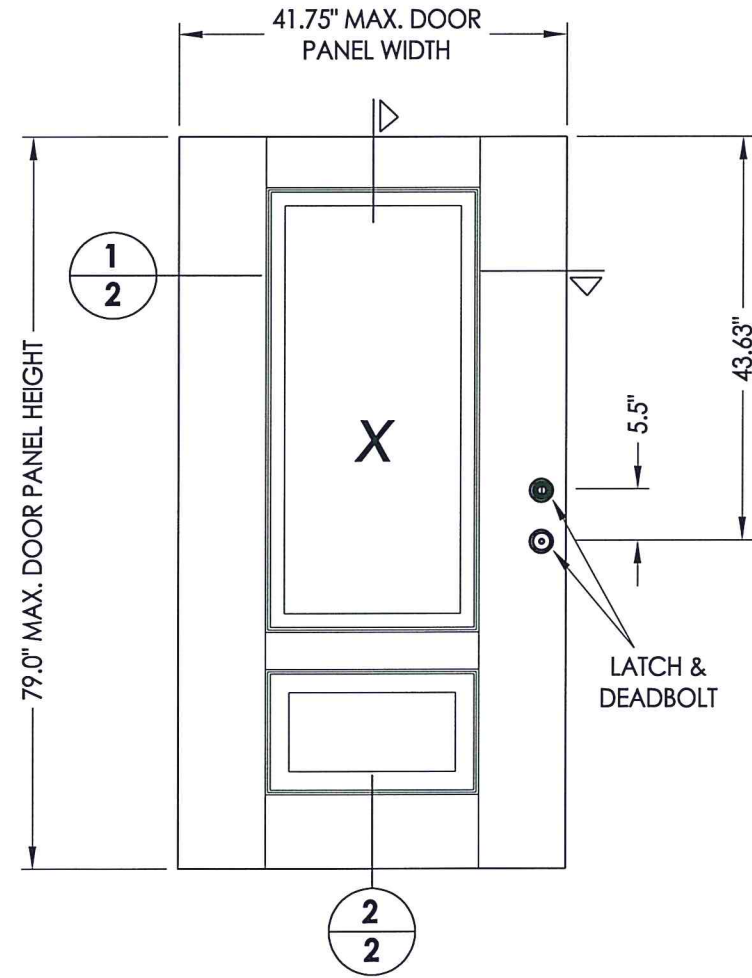
CONFIGURATION	DESIGN PRESSURE (PSF) IN SWING		DESIGN PRESSURE (PSF) OUT SWING	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
X	+75.0	-85.0	+75.0	-75.0

PRODUCT: MASTERGRAIN  
FIBERGLASS DOOR

PART OR ASSEMBLY:  
TYPICAL ELEVATION, DESIGN  
PRESSURES & GENERAL NOTES

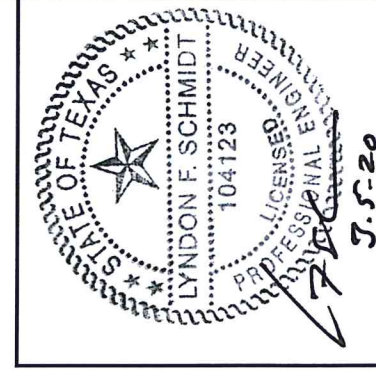
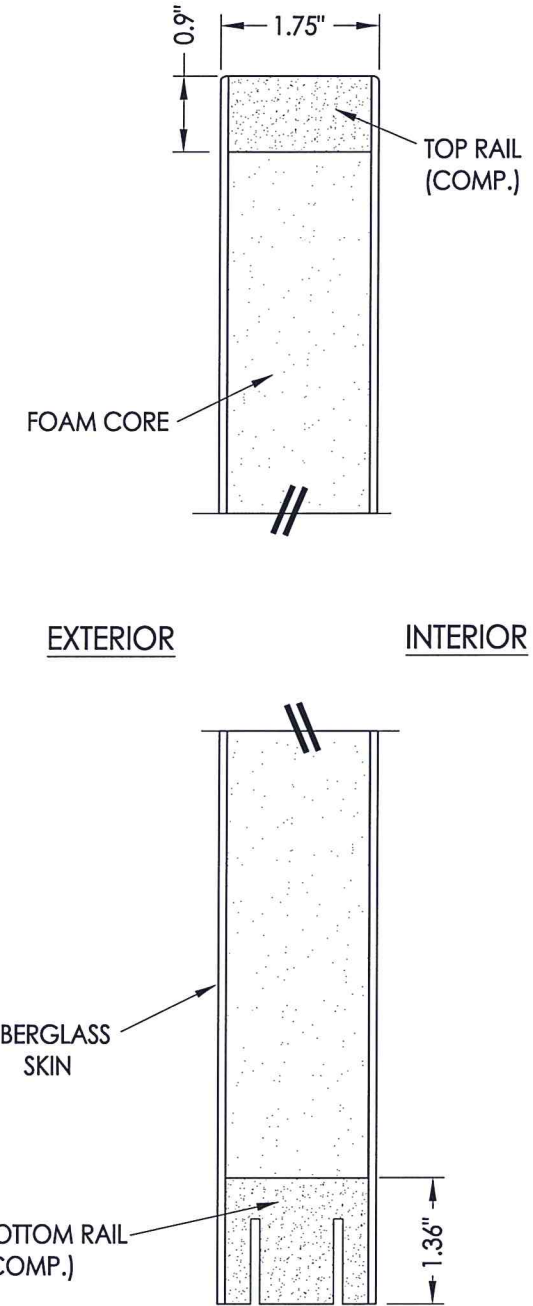
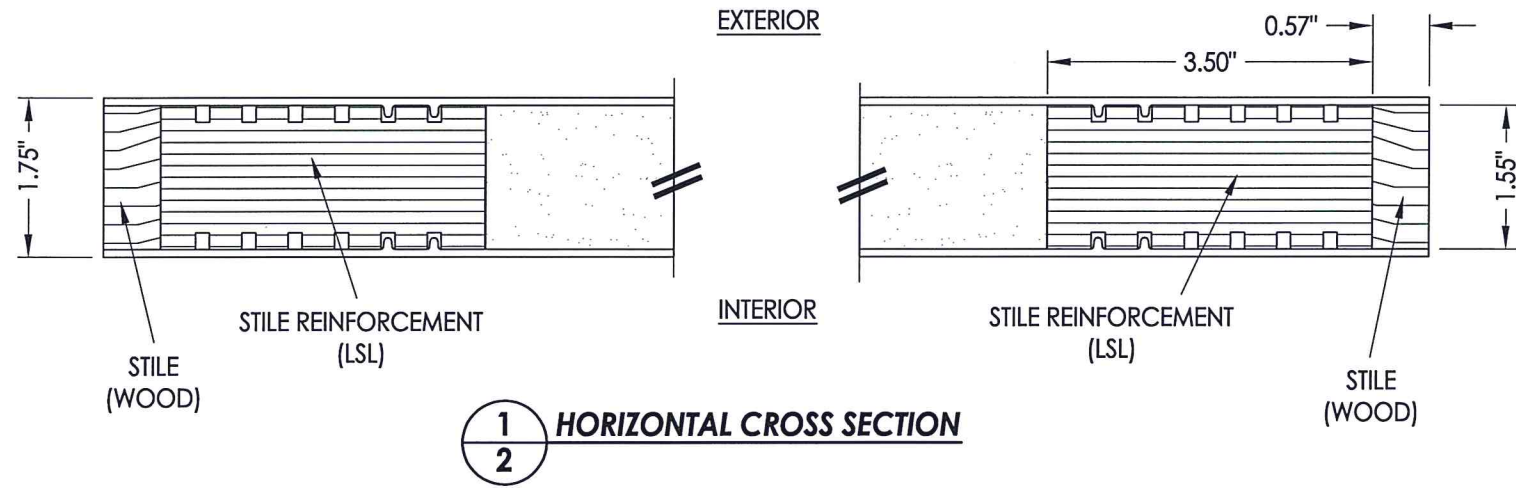
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1	3/05/20	UPDATE TO 2018 IBC/IRC CODE	LFS

DATE: 8/30/18  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4882  
SHEET 1 OF 8



**40 DOOR PANEL**  
Mastergrain

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



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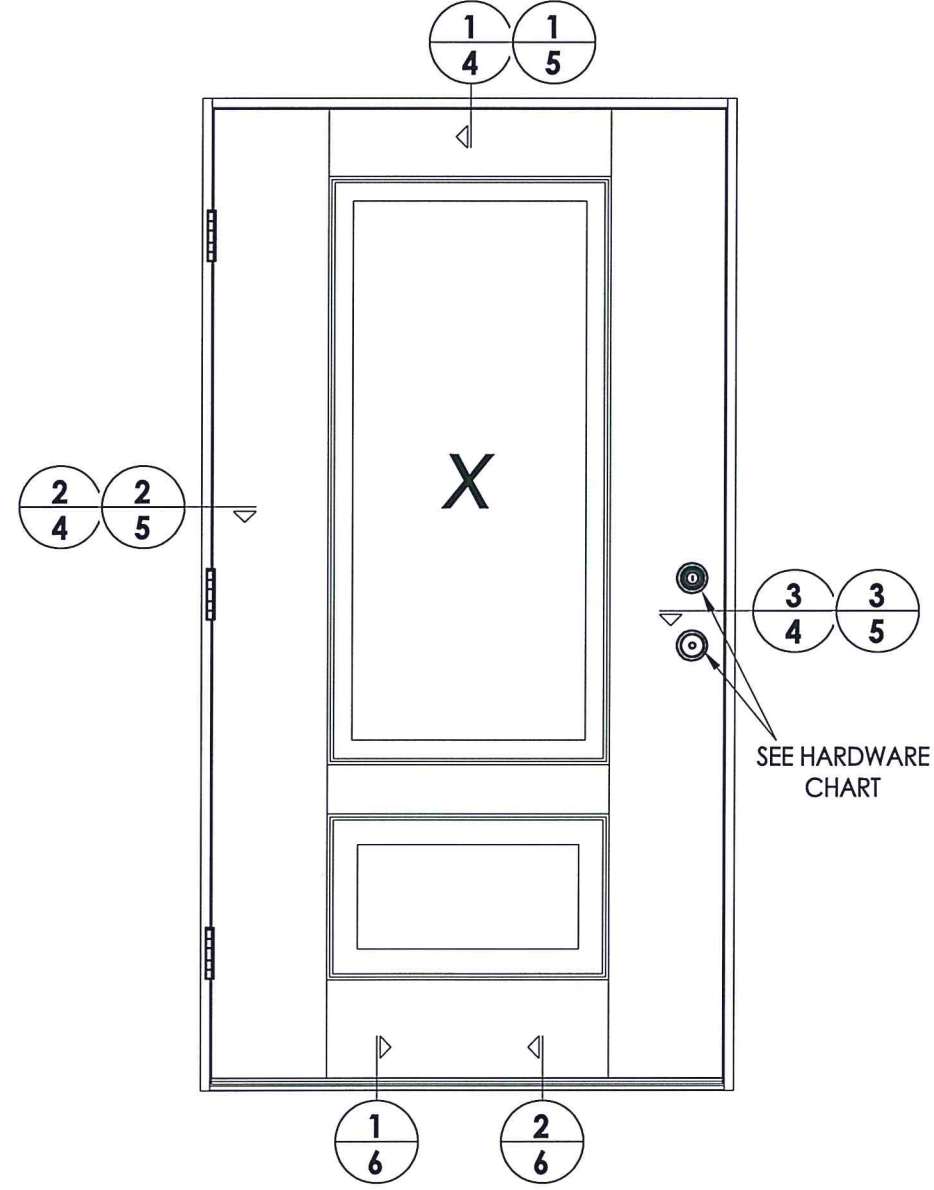
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PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	DOOR PANEL DETAILS

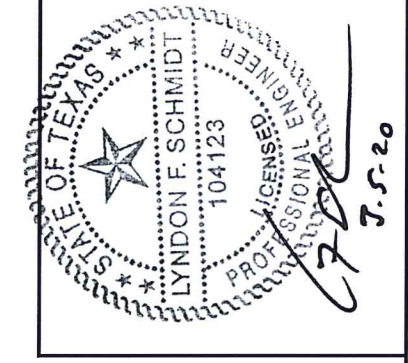
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SHEET	2 of 8





HARDWARE TABLE			
MANUFACTURER	MODEL	MAX. DOOR PANEL WIDTH (NOMINAL)	MAX. DESIGN PRESSURE
PAMEX	KNOB: FLU600 DEADBOLT: FD261	36"	55 PSF
KWIKSET	KNOB: SIGNATURE SERIES DEADBOLT: SIGNATURE SERIES (980)	42"	85 PSF
SCHLAGE	KNOB: F51 DEADBOLT: B60N	42"	85 PSF
HOPPE	MULTIPOINT: HLS™ ONE (3 pt. Manual Tongue)	42"	85 PSF



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PRODUCT: MASTERGRAIN FIBERGLASS DOOR  
PART OR ASSEMBLY: ELEVATION

NO.	DATE	REVISIONS
1	3/05/20	UPDATE TO 2018 IBC/IRC CODE
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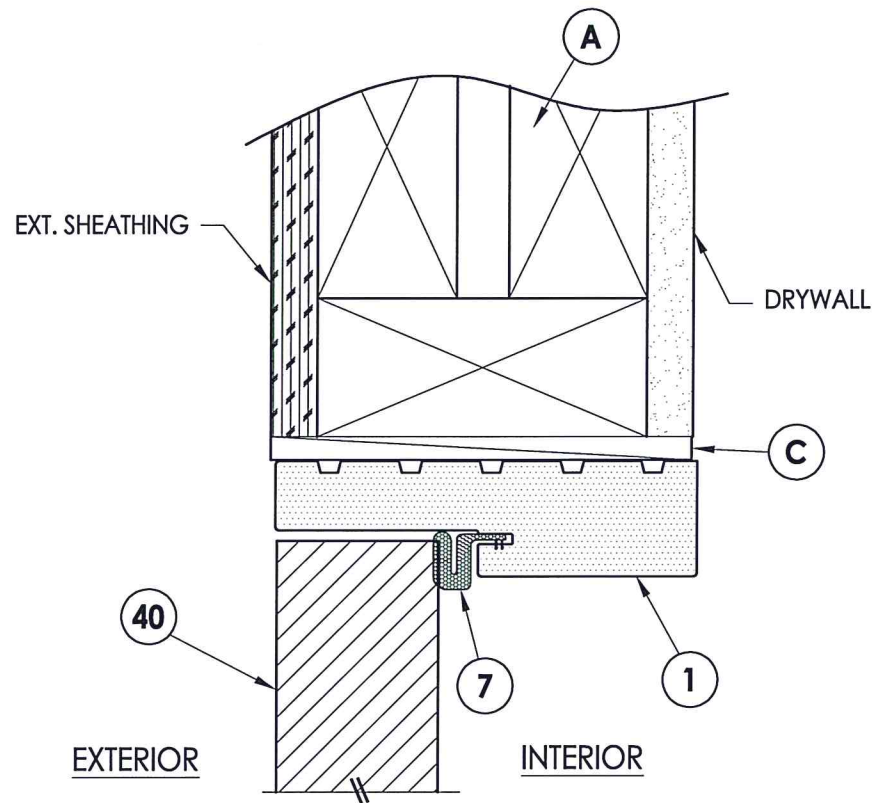
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CHK. BY: LFS  
DRAWING NO.: TX-4882  
SHEET 3 OF 8



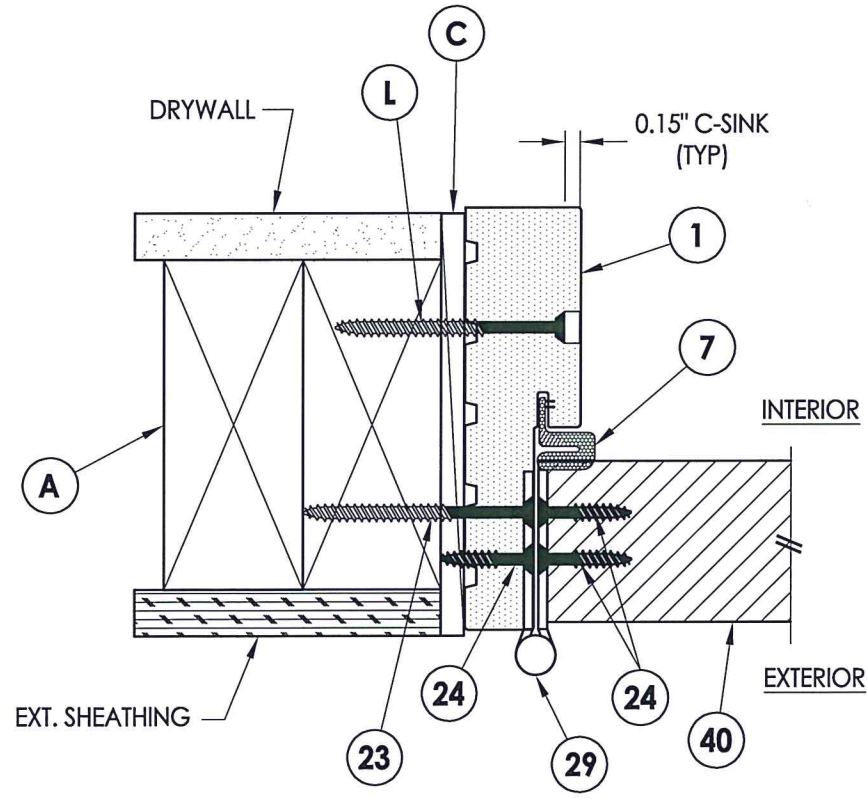
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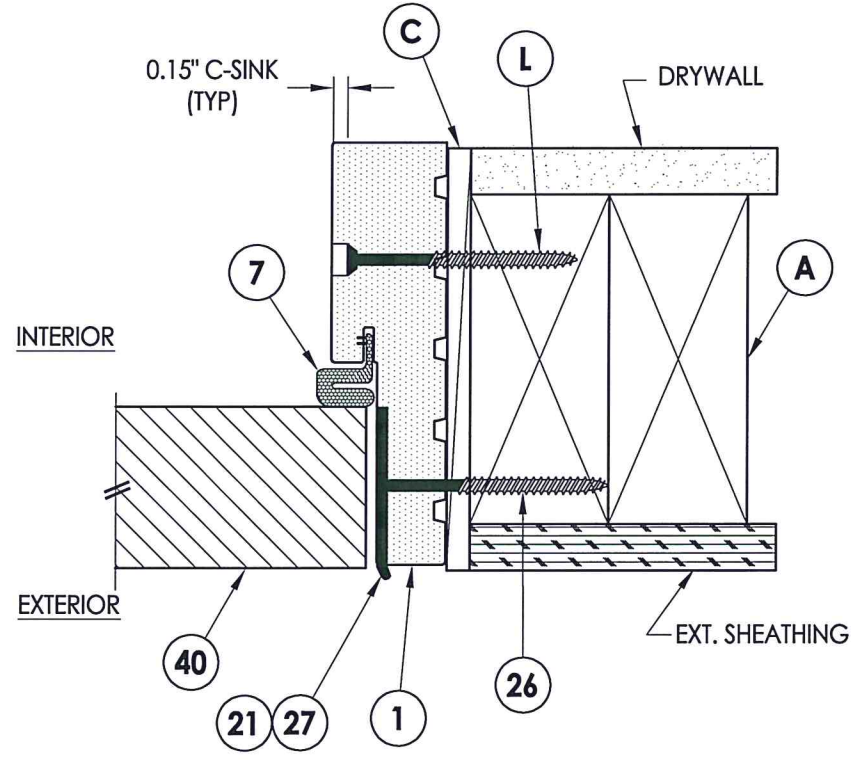
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**1 VERTICAL CROSS SECTION**  
 4 Shown w/ 2X Buck  
 Outswing shown (Inswing similar)



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



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

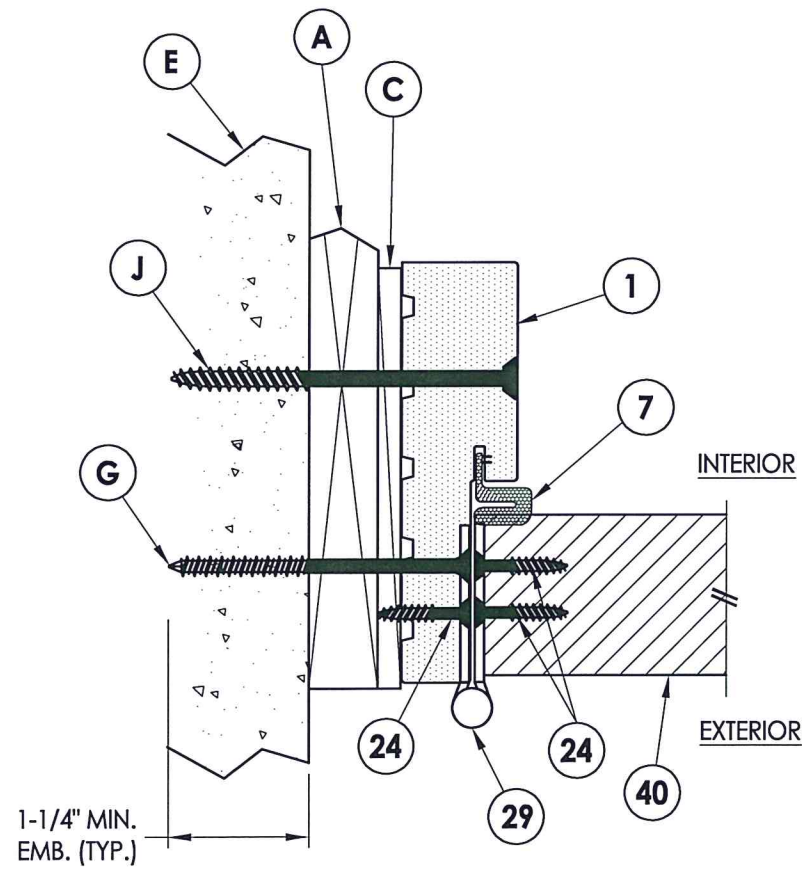
PRODUCT: MASTERGRAIN  
 FIBERGLASS DOOR

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

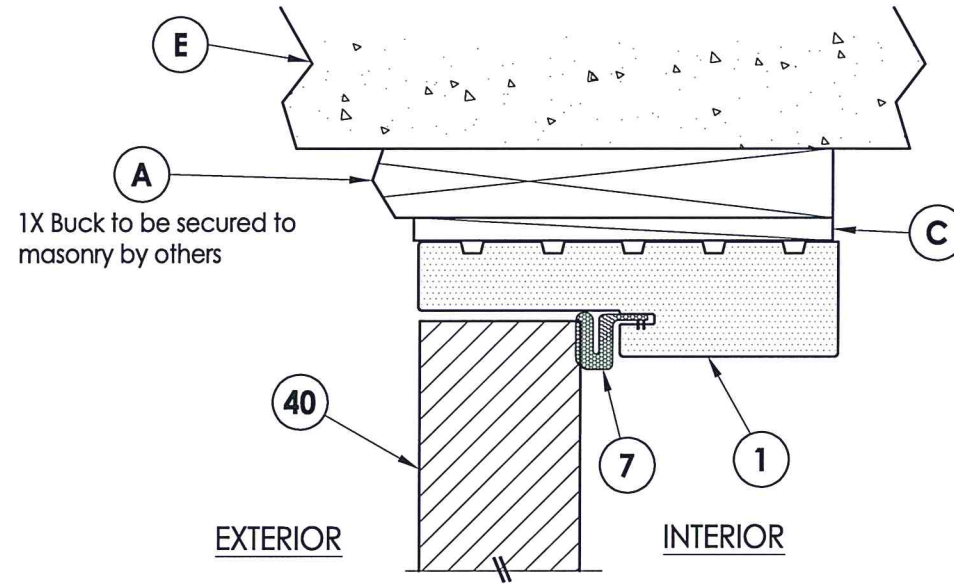
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 SCALE: N.T.S.  
 DWG. BY: JK  
 CHK. BY: LFS  
 DRAWING NO.: TX-4882  
 SHEET 4 OF 8

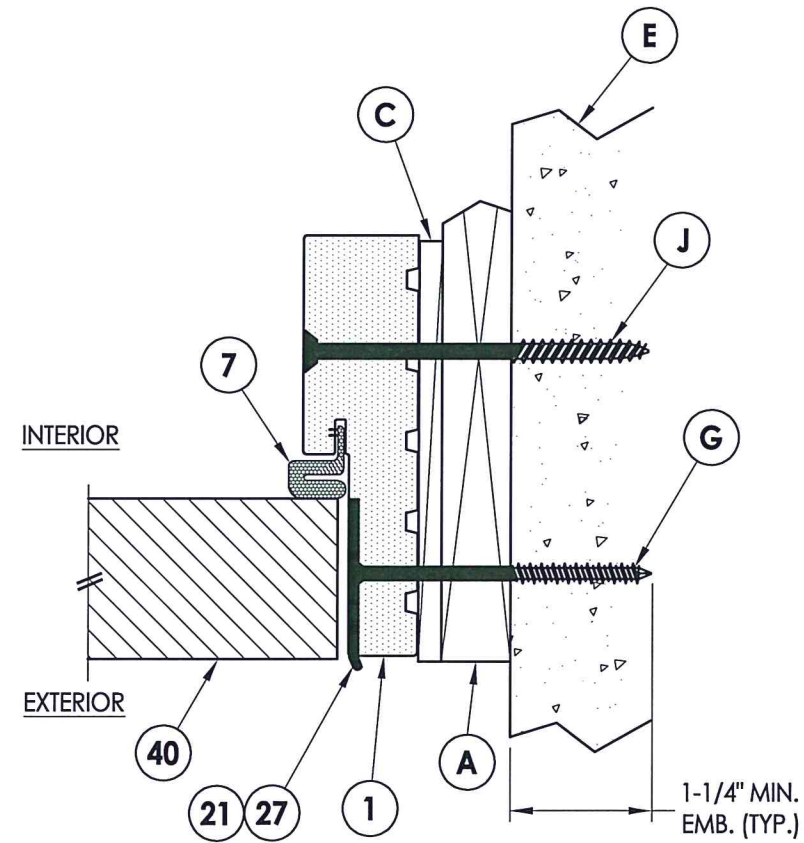




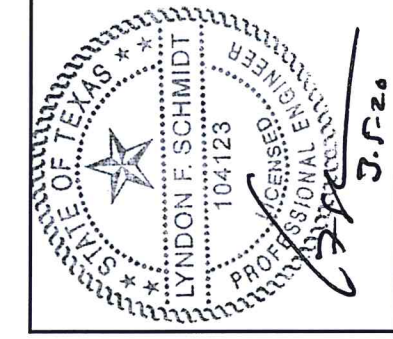
**2 HORIZONTAL CROSS SECTION**  
**5** Shown w/ 1X sub-buck  
 Outswing shown (Inswing similar)



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



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



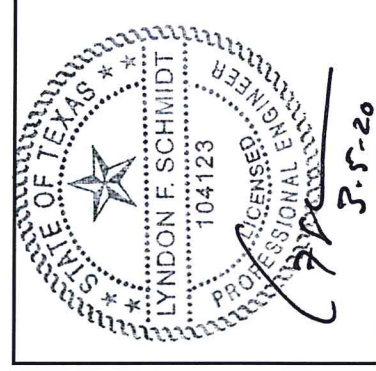
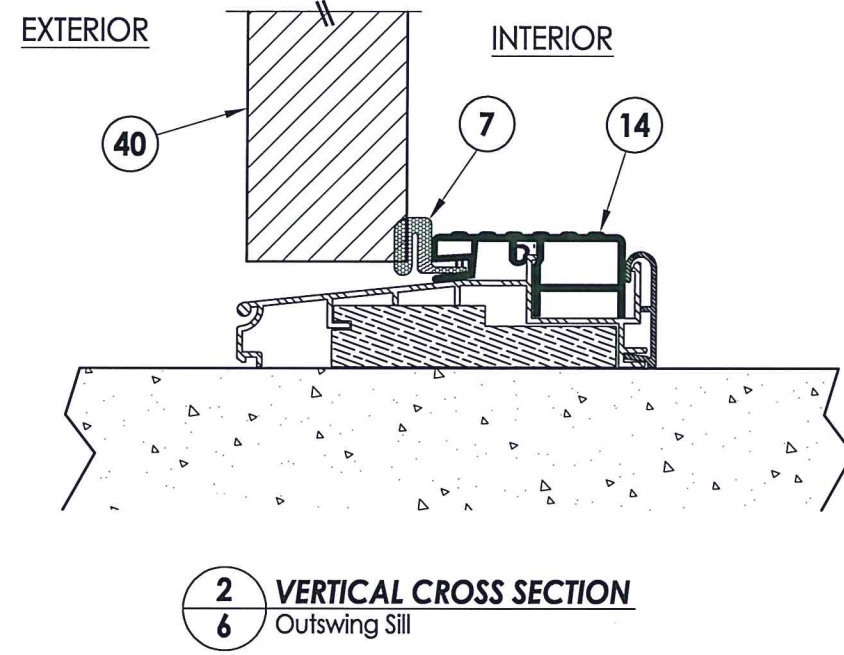
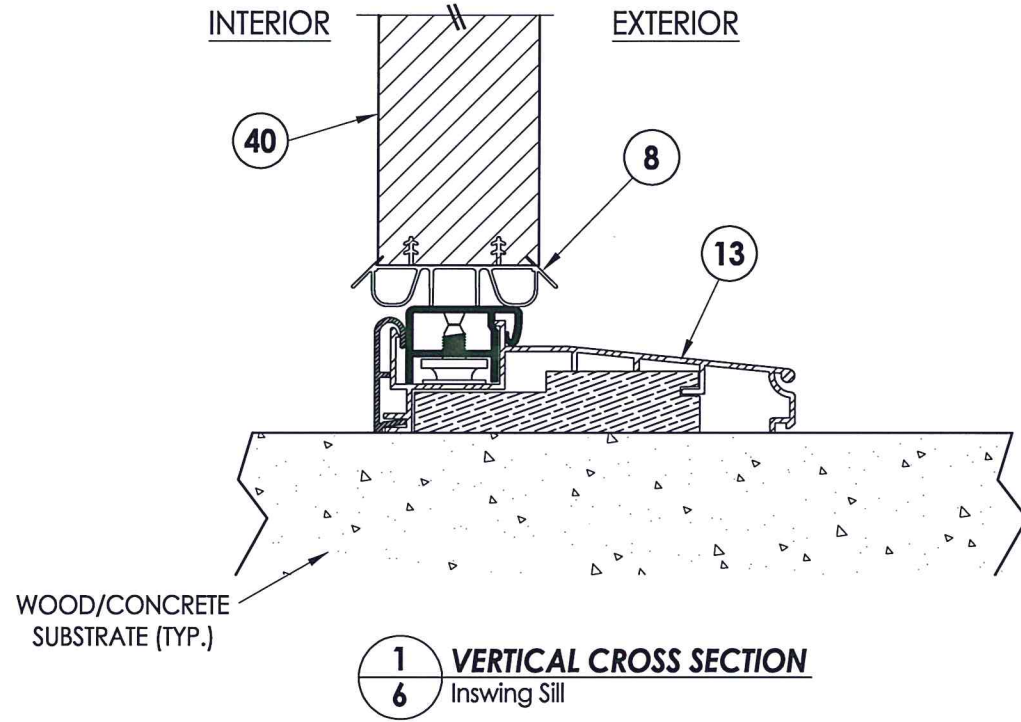
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PRODUCT: MASTERGRAIN FIBERGLASS DOOR  
 PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (1X BUCK)

NO.	DATE	REVISIONS
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 DRAWING NO.: TX-4882  
 SHEET 5 OF 8



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PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: VERTICAL CROSS SECTIONS (THRESHOLDS)

NO.	DATE	DESCRIPTION	BY
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DATE: 8/30/18

SCALE: N.T.S.

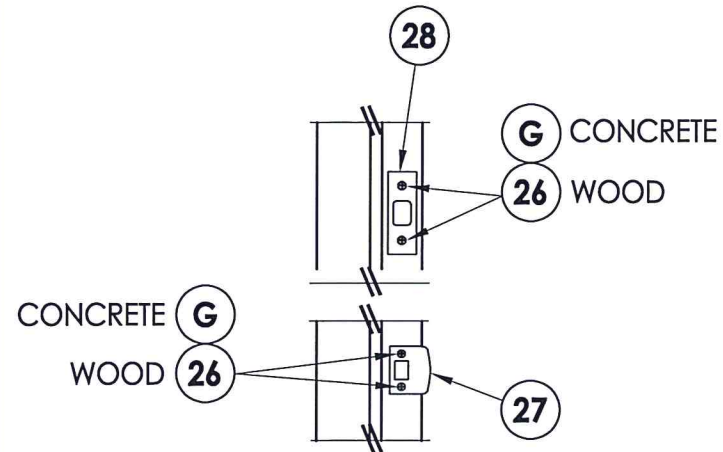
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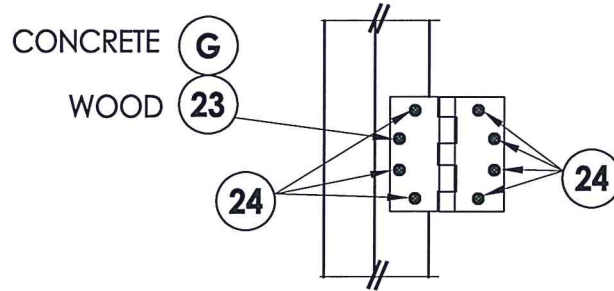
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SHEET 6 OF 8

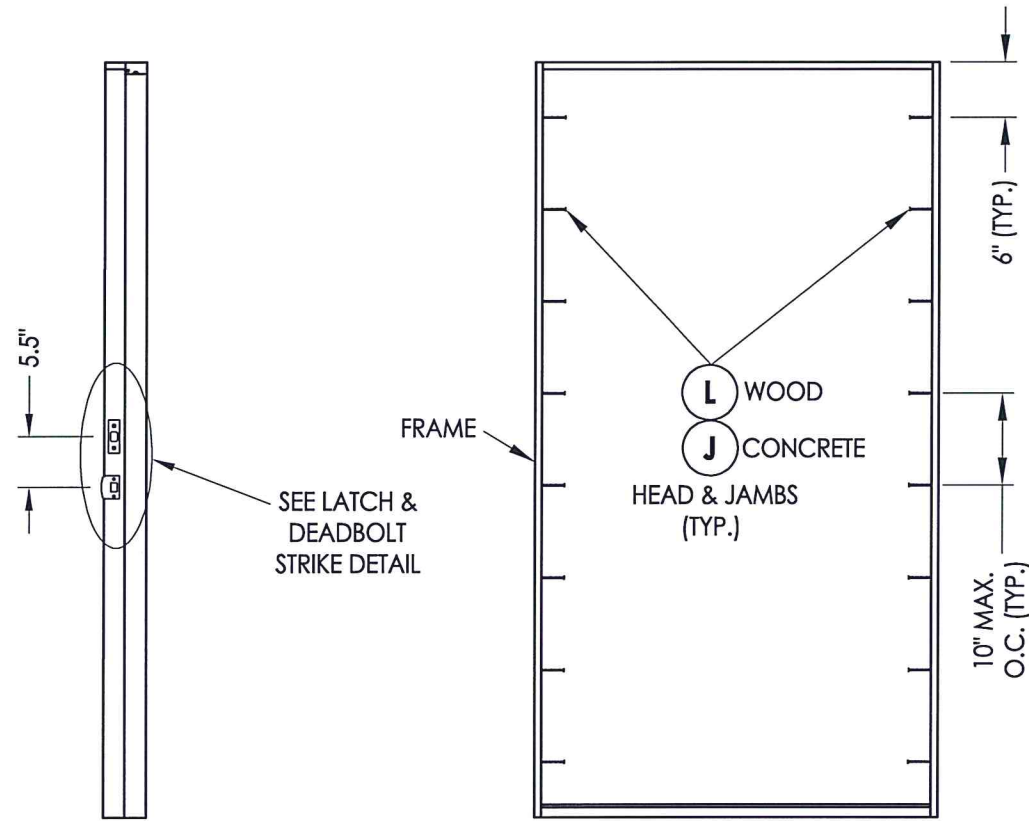




**LATCH & DEADBOLT DETAIL**

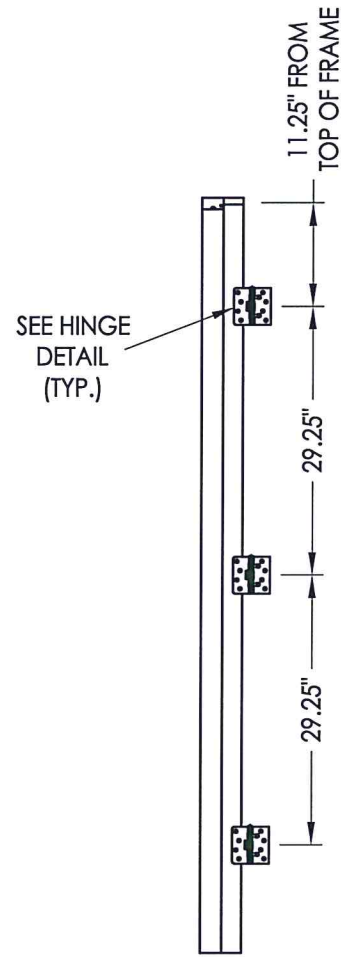


**HINGE DETAIL**

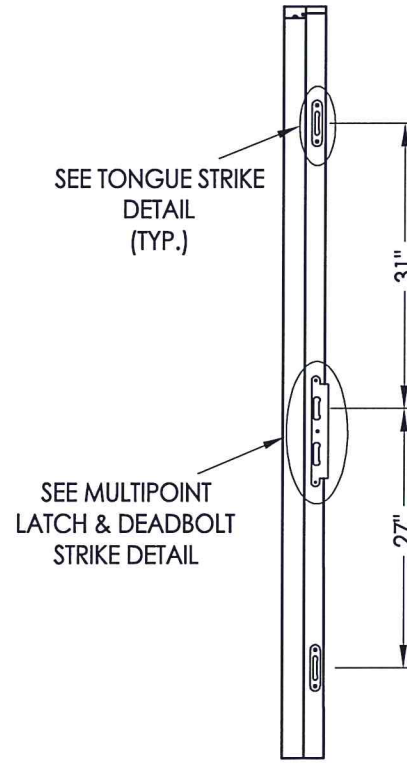


**STRIKE JAMB**  
Latch and Deadbolt

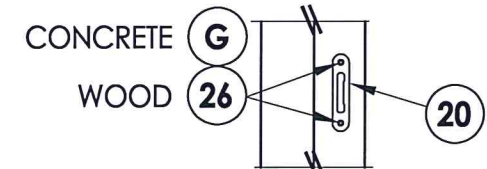
**FRAME ANCHORING**



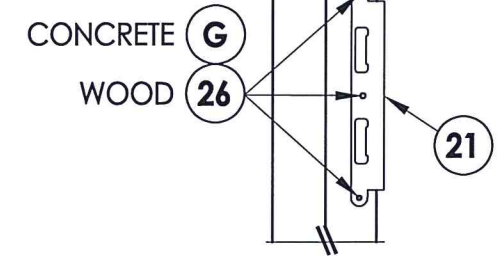
**HINGE JAMB**



**STRIKE JAMB**  
Multipoint Lock



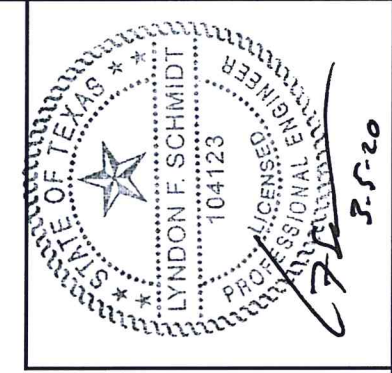
**TONGUE STRIKE DETAIL**



**MULTIPOINT LATCH & DEADBOLT STRIKE DETAIL**

**LATCH & DEADBOLT HARDWARE DETAILS**

**MULTIPOINT LOCK HARDWARE DETAILS**



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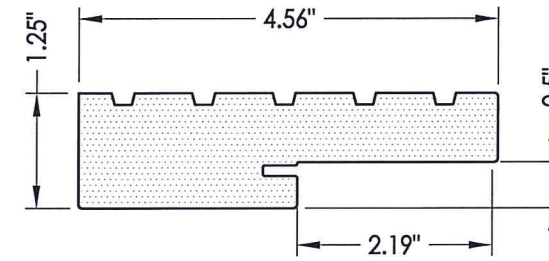
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PART OR ASSEMBLY:	HARDWARE DETAILS

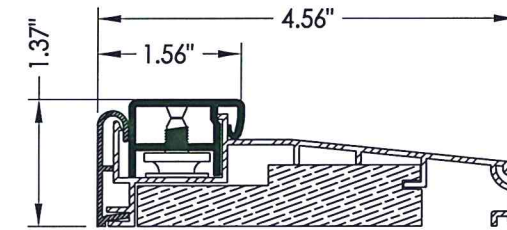
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DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4882
SHEET	7 OF 8

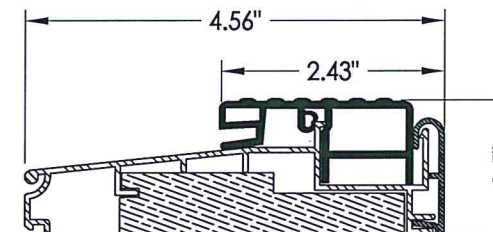
BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
A	2X FRAMING (SG >= 0.42)	WOOD
B	1X BUCK (SG >= 0.42)	WOOD
C	1/4" MAX. SHIM SPACE	-
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	3/16" X 3-1/4" PFH ITW CONCRETE SCREW	STEEL
J	1/4" X 3-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW (1.15" MIN. EMBEDMENT)	STEEL
1	COMPOSITE JAMB	COMP
7	WEATHERSTRIP	FOAM
8	SWEEP	VINYL
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	-



1 COMPOSITE JAMB  
WORLDWIDE



13 INSWING THRESHOLD  
WORLDWIDE



14 OUTSWING THRESHOLD  
WORLDWIDE

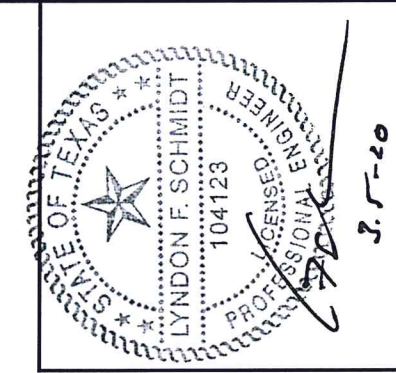
**CONCRETE ANCHOR NOTES:**

- 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"
ELCO 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.



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FIBERGLASS DOOR

PART OR ASSEMBLY:  
BILL OF MATERIALS AND  
COMPONENTS

NO.	DATE	DESCRIPTION	BY
1	3/05/20	UPDATE TO 2018 IBC/IRC CODE	LFS

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DRAWING NO.:

TX-4882

SHEET 8 OF 8