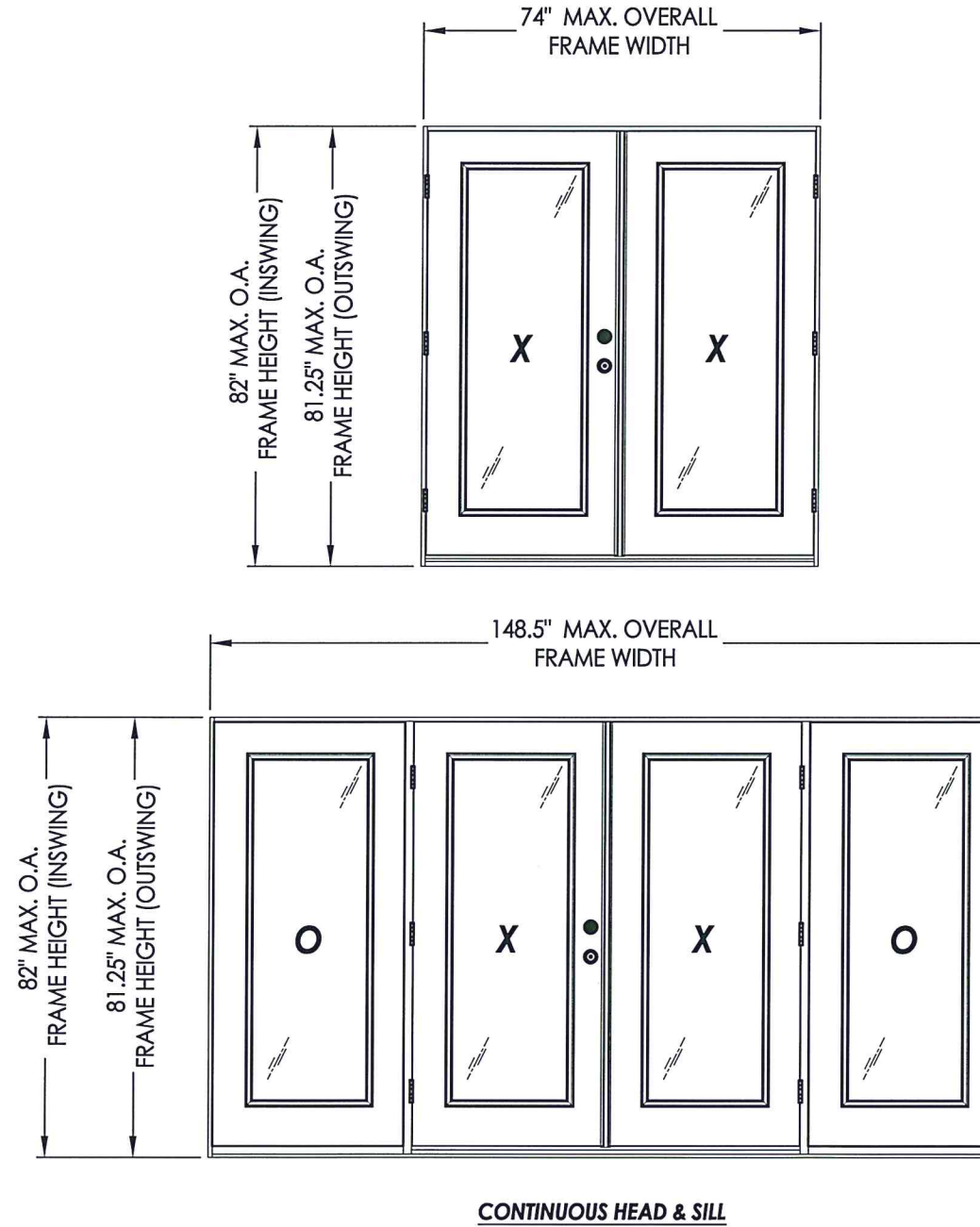


**FIBERGLASS GLAZED  
 DOUBLE DOOR  
 w/ or w/out SIDELITES  
 INSWING/OUTSWING  
 "IMPACT"**



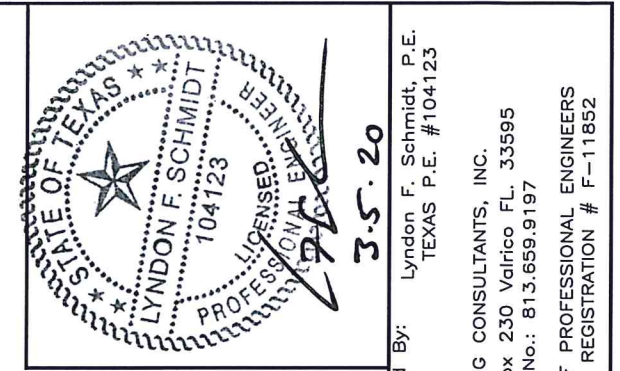
**EVALUATED FOR USE IN THE STATE OF TEXAS**

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.

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 Framing)
7	Horizontal & Vertical Cross Sections (1X Buck)
8	Vertical Cross Sections (Thresholds)
9	Frame Anchoring
10	Hardware Details
11	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

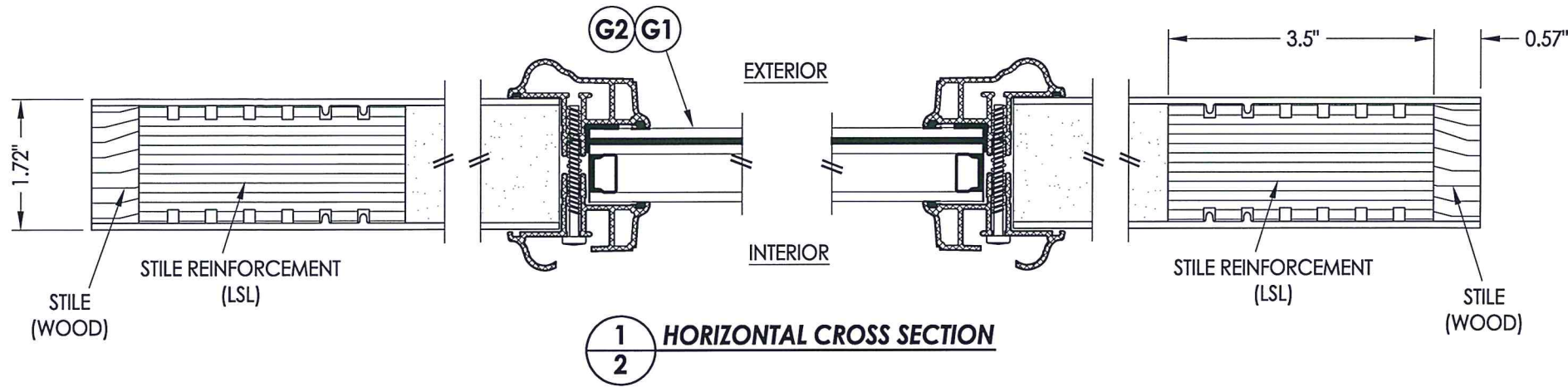


Documents Prepared By: Lyndon F. Schmidt, P.E.  
 TEXAS P.E. #104123

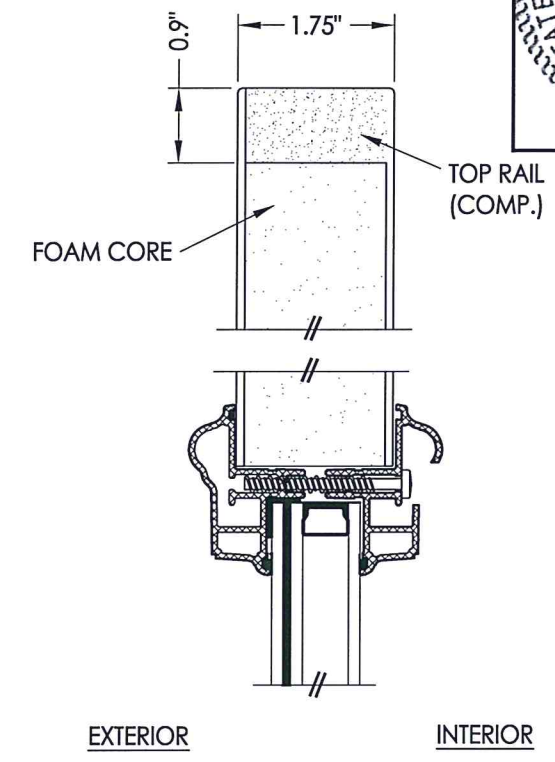
**RW** BUILDING CONSULTANTS, INC.  
 P.O. Box 230 Valrico FL, 33595  
 Phone No.: 813.659.9197

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

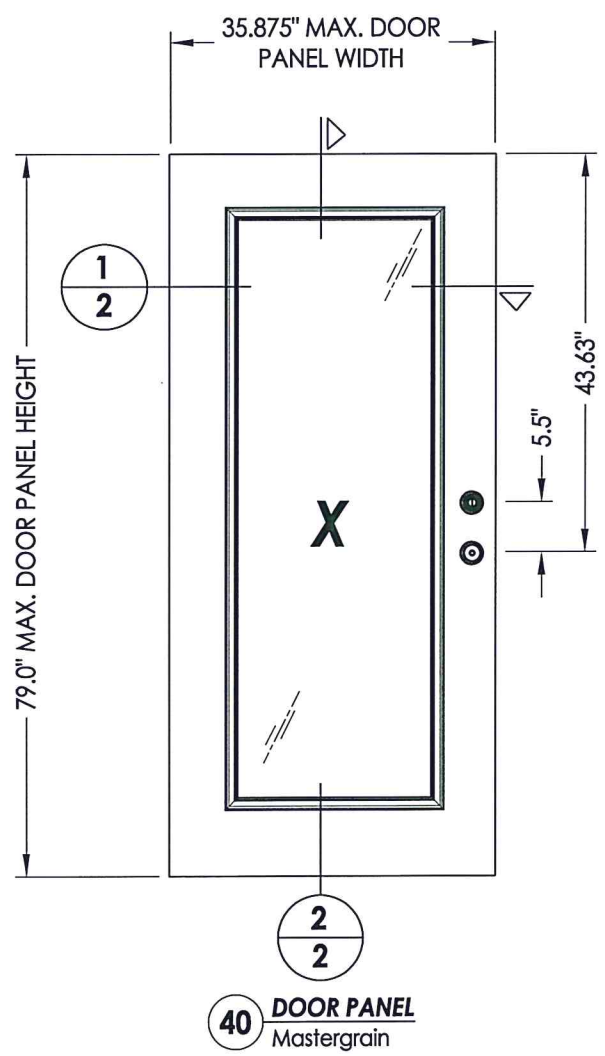
PRODUCT:	MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY:	TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES	
NO.	DATE	BY
1	3/05/20	LFS
UPDATE TO 2018 IBC/IRC CODE		
REVISIONS		
DATE:	9/04/18	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4890	
SHEET	1 OF 11	



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



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



**40** **DOOR PANEL**  
Mastergrain

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



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

**RW** BUILDING CONSULTANTS, INC.  
P.O. Box 230 Vairico FL 33595  
Phone No.: 813.659.9197

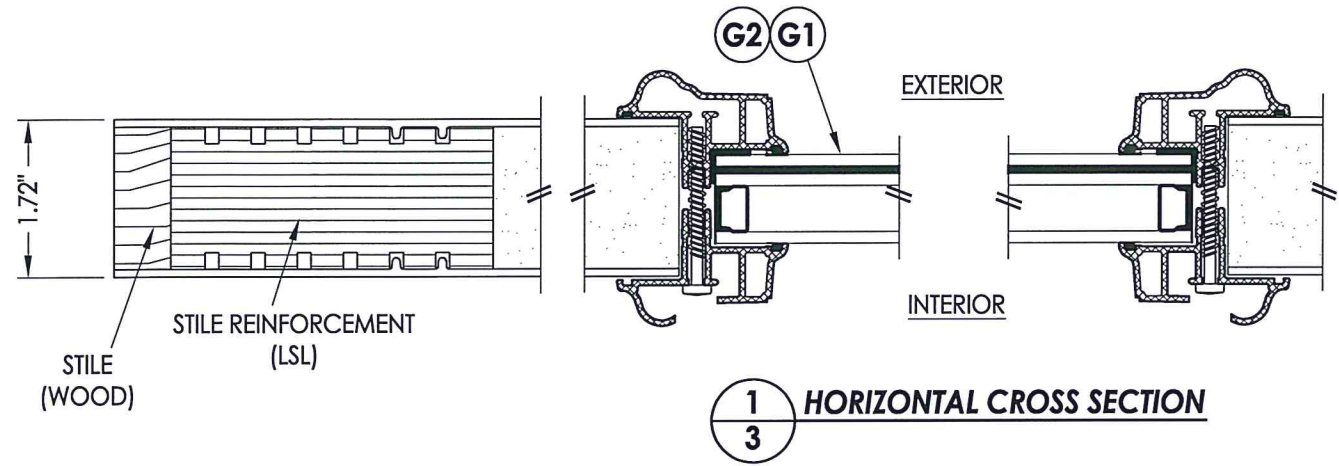
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

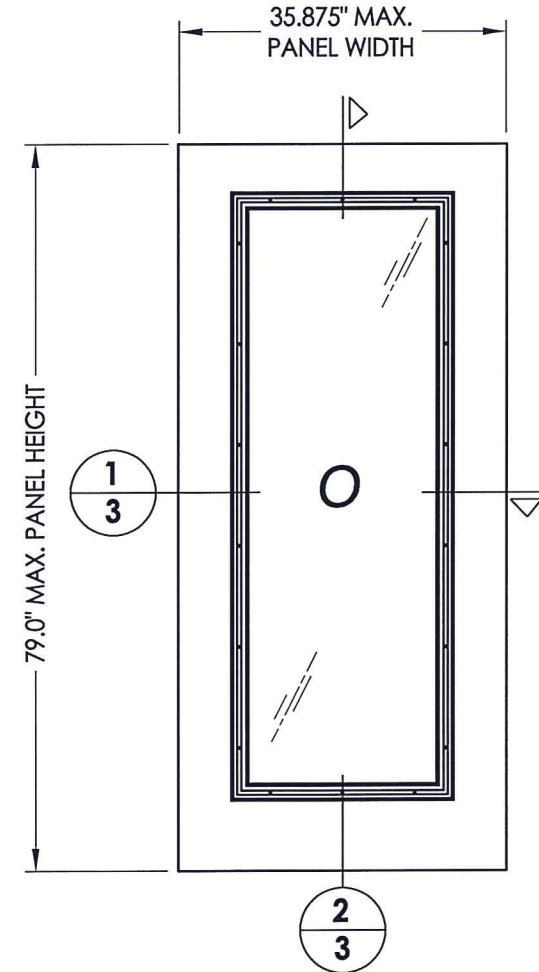
PART OR ASSEMBLY: DOOR PANEL DETAILS

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

DATE: 9/04/18  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4890  
SHEET 2 OF 11

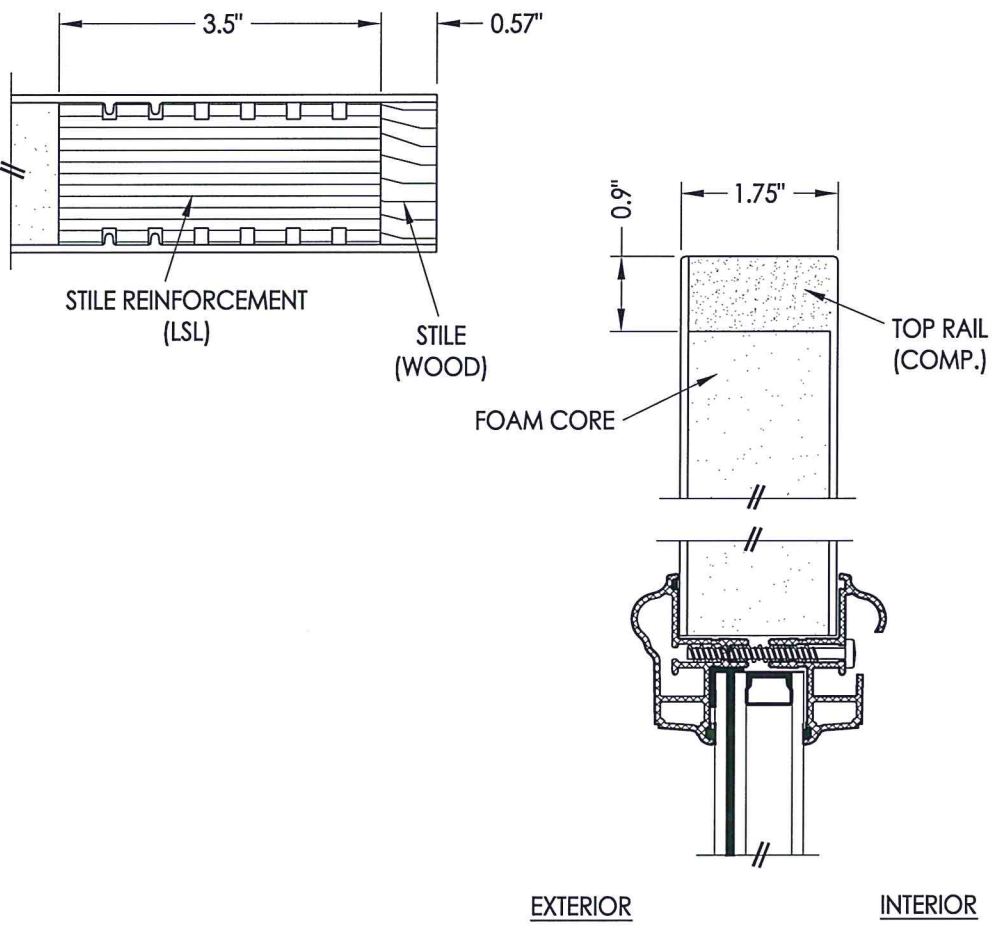


1  
3 HORIZONTAL CROSS SECTION

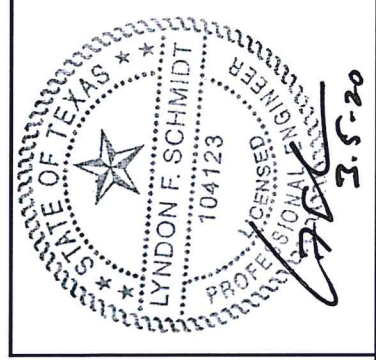


50 SIDELITE PANEL Mastergrain

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



2  
3 VERTICAL CROSS SECTION

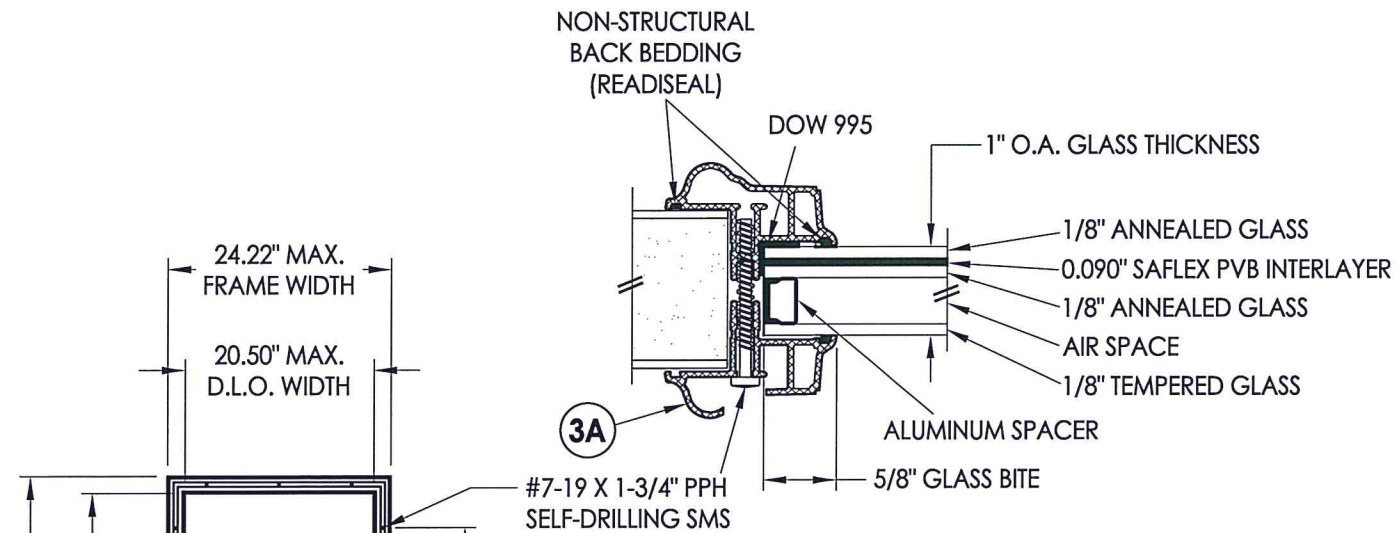


Documents Prepared By: Lyndon F. Schmidt, P.E.  
TEXAS P.E. #104123  
R.W. BUILDING CONSULTANTS, INC.  
P.O. Box 230 Valrico FL, 33595  
Phone No.: 813.659.9197  
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

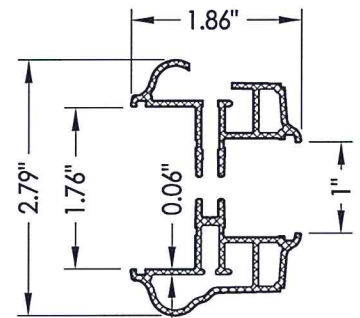
PRODUCT: MASTERGRAIN FIBERGLASS DOOR  
PART OR ASSEMBLY: DOOR PANEL DETAILS

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

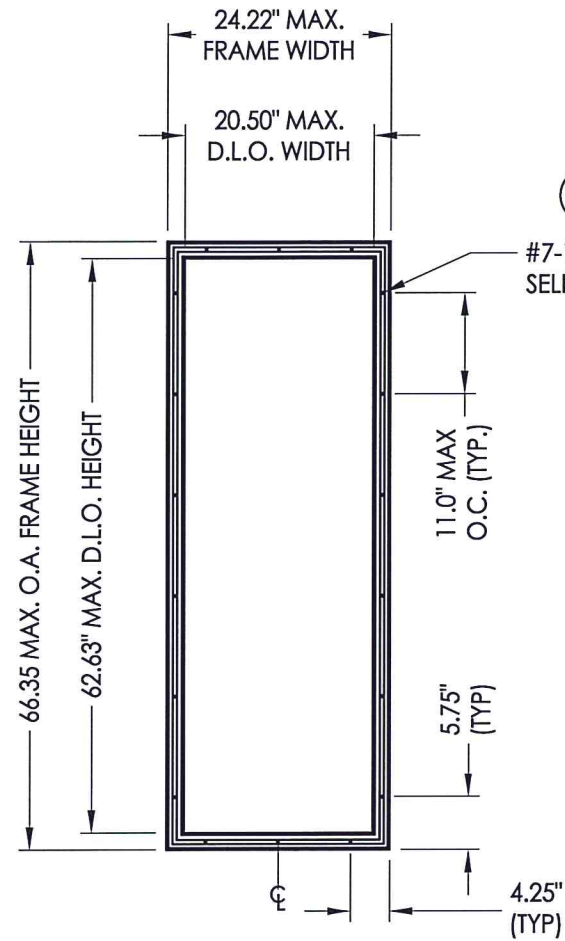
DATE: 9/04/18  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4890  
SHEET 3 OF 11



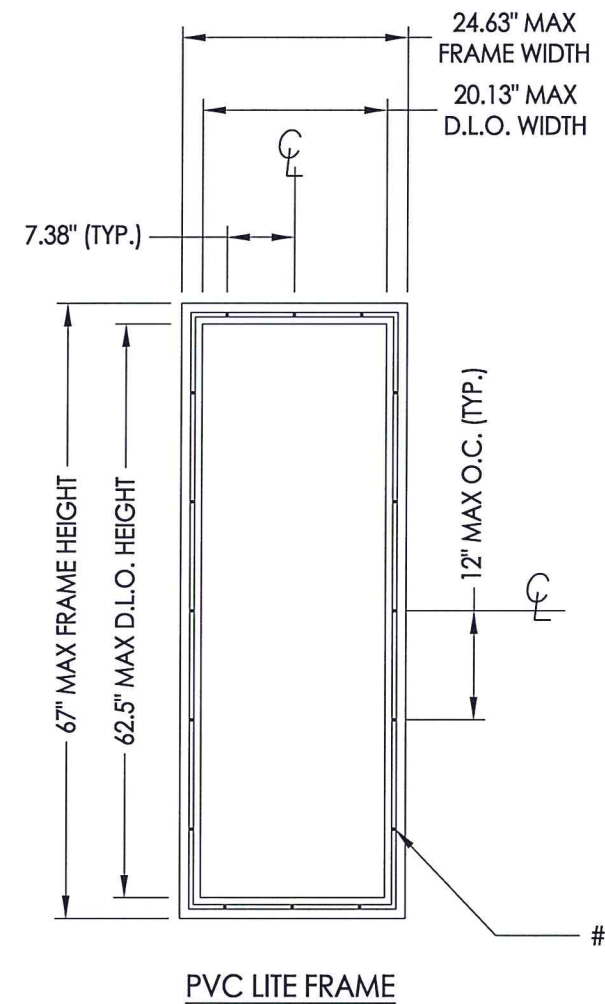
**G1 GLAZING DETAIL**



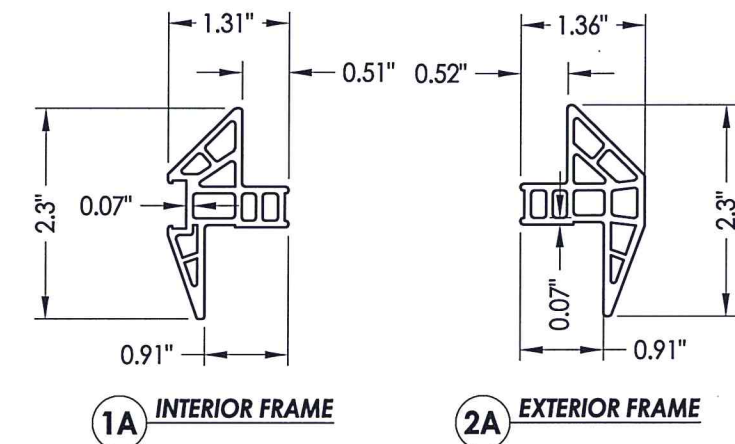
**3A OD LITE FRAME**  
Aluminum



**ODL LITE FRAME DETAIL**

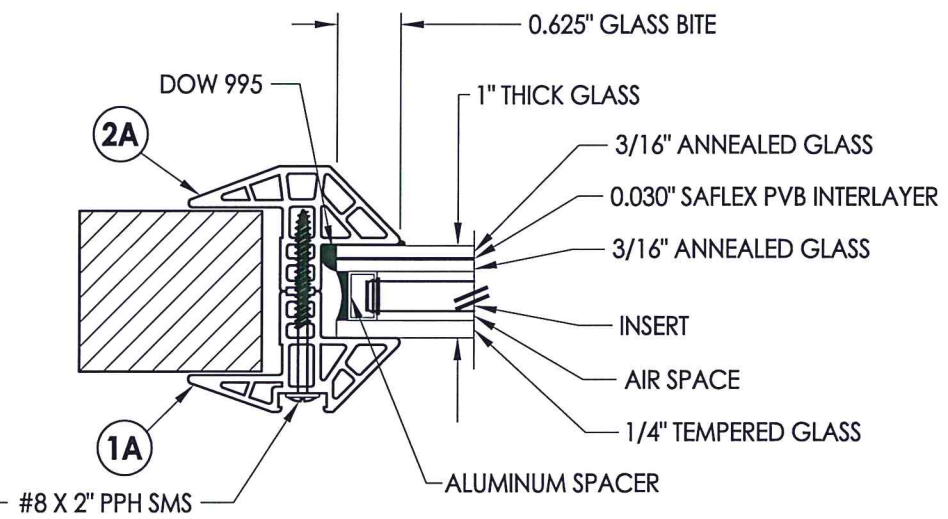


**PVC LITE FRAME**

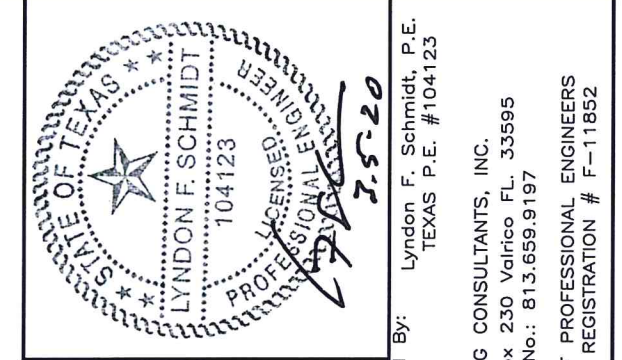


**1A INTERIOR FRAME**

**2A EXTERIOR FRAME**



**G2 GLAZING DETAIL**



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

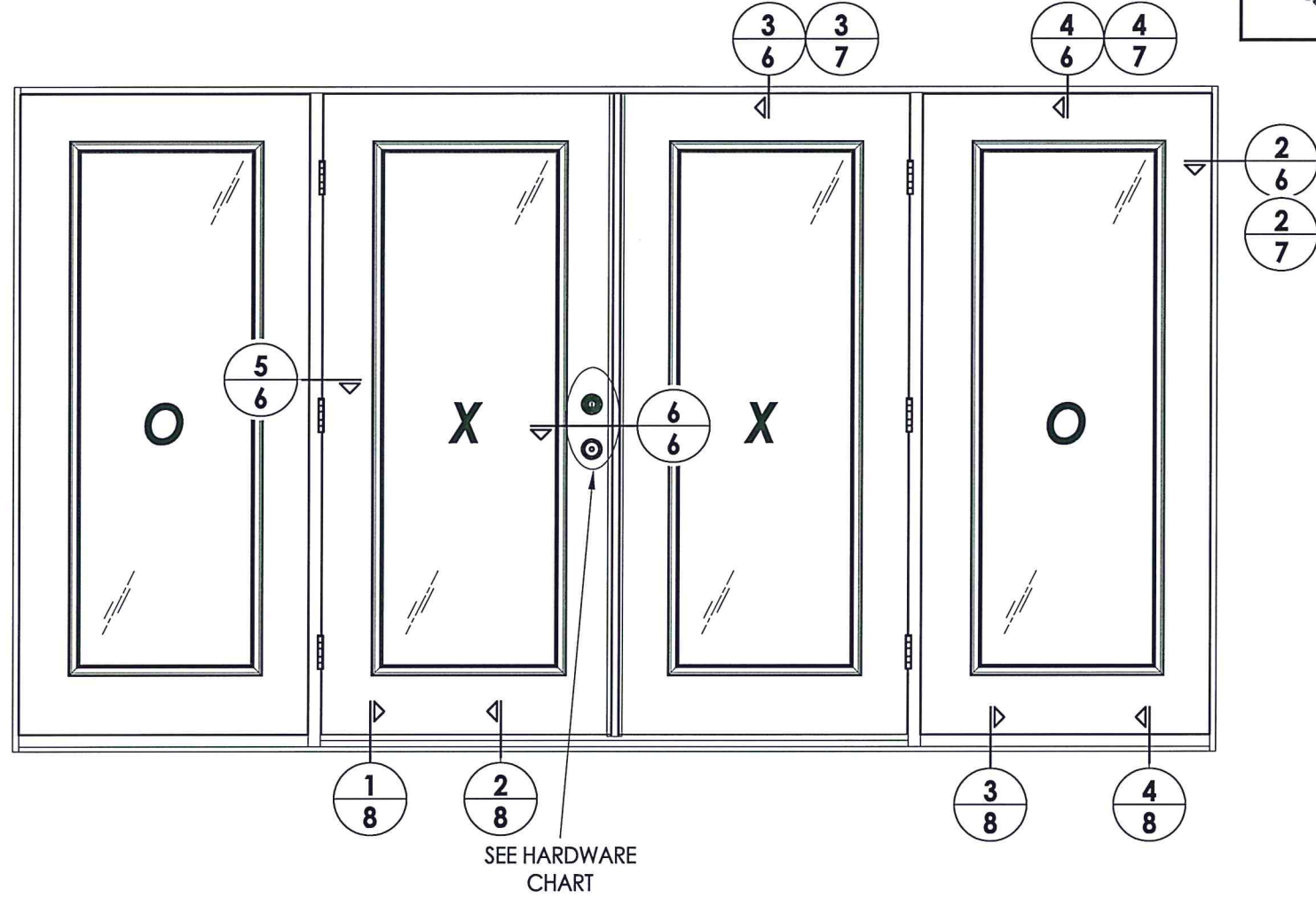
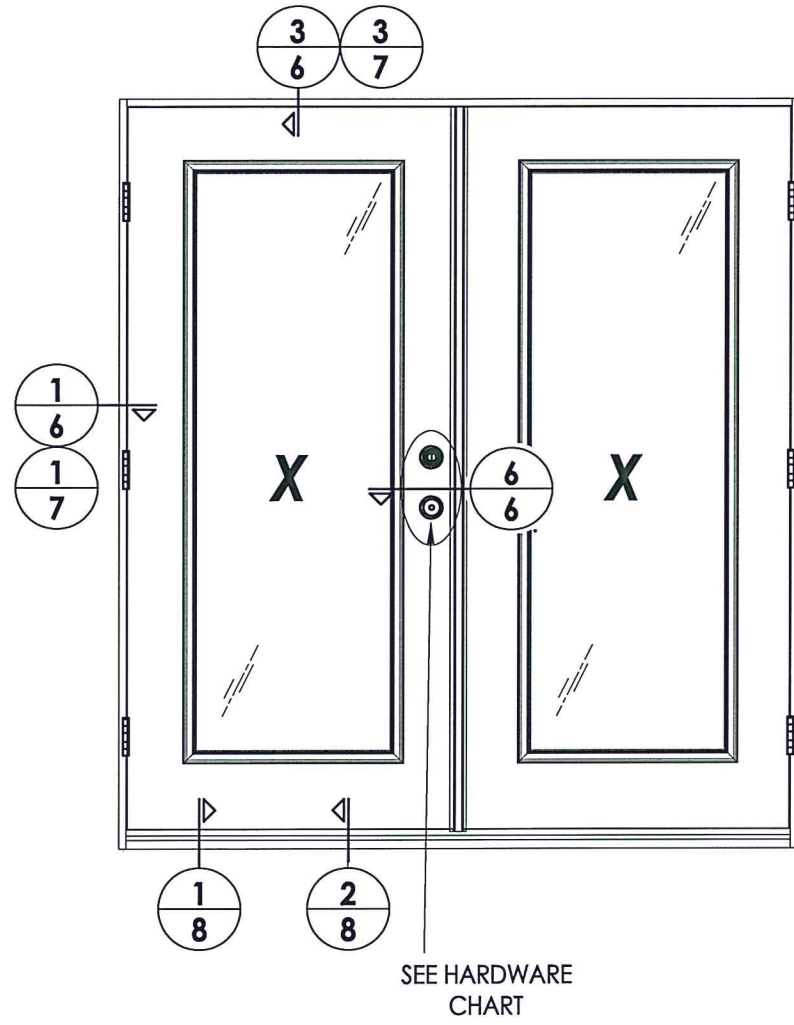
**RW** BUILDING CONSULTANTS, INC.  
P.O. Box 230 Vairico FL 33595  
Phone No.: 813.659.9197

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

PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	GLAZING DETAILS

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

DATE:	9/04/18
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4890
SHEET	4 OF 11



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.  
TEXAS P.E. #104123

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

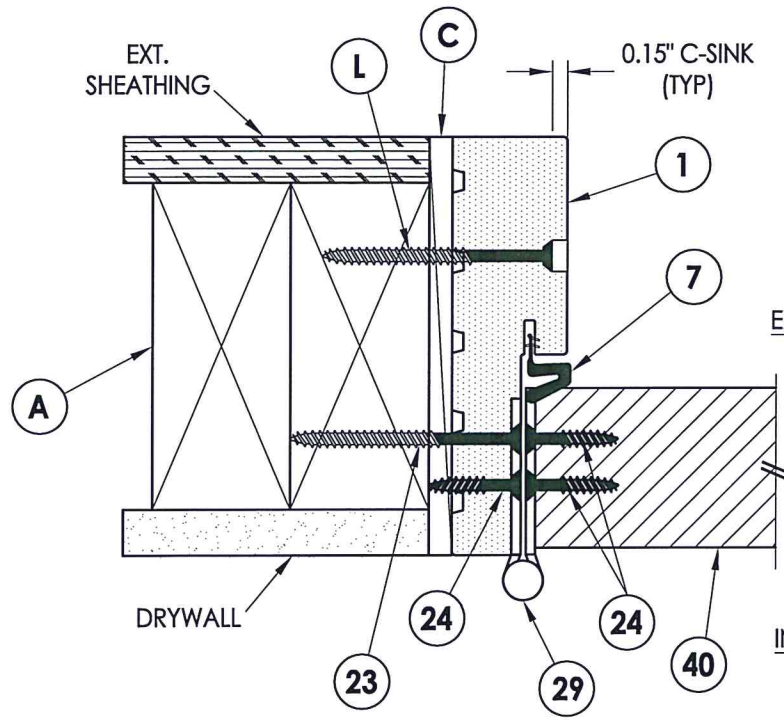
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

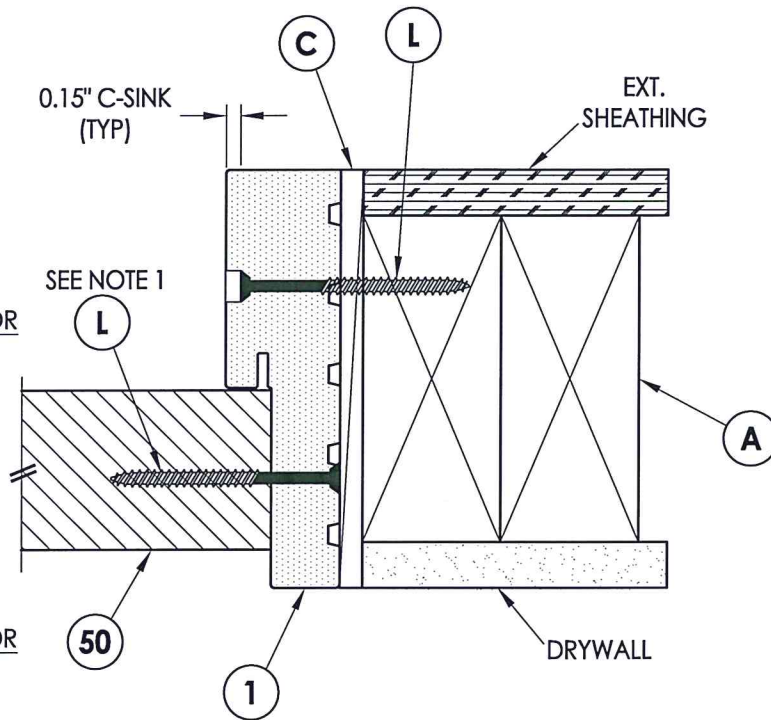
PART OR ASSEMBLY: ELEVATIONS

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

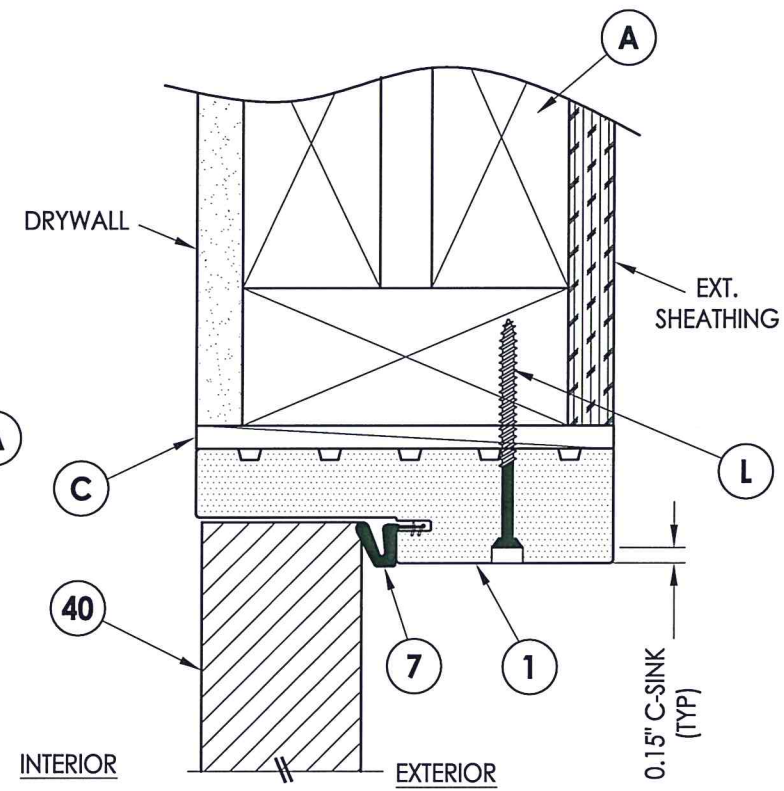
DATE: 9/04/18  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4890  
SHEET 5 OF 11



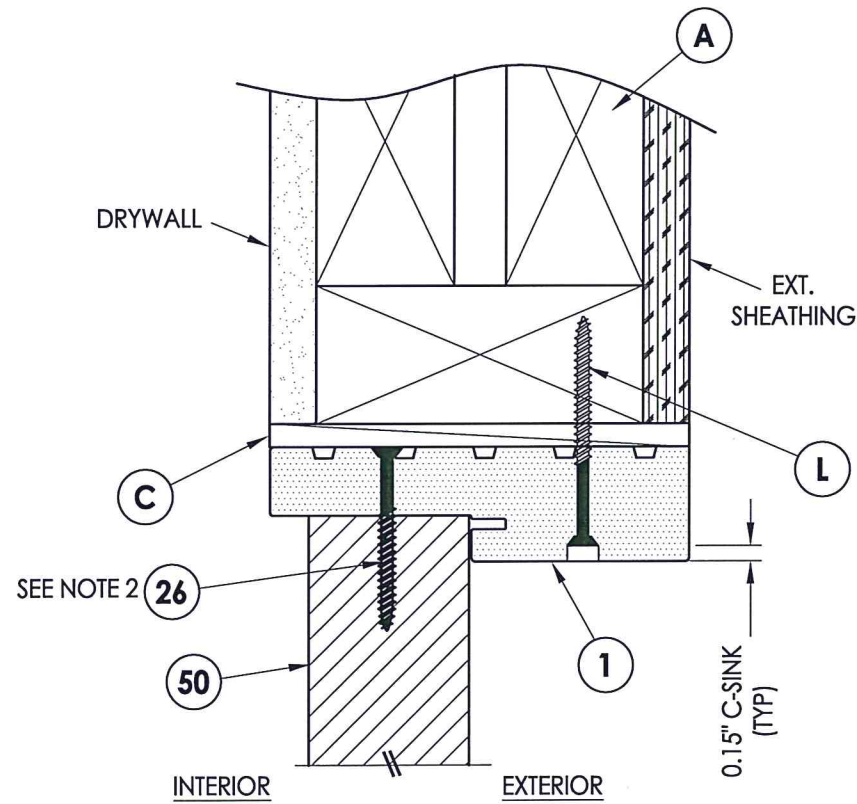
**1**  
**6** **HORIZONTAL CROSS SECTION**  
Shown w/ 2X Buck  
Inswing shown (Outswing similar)



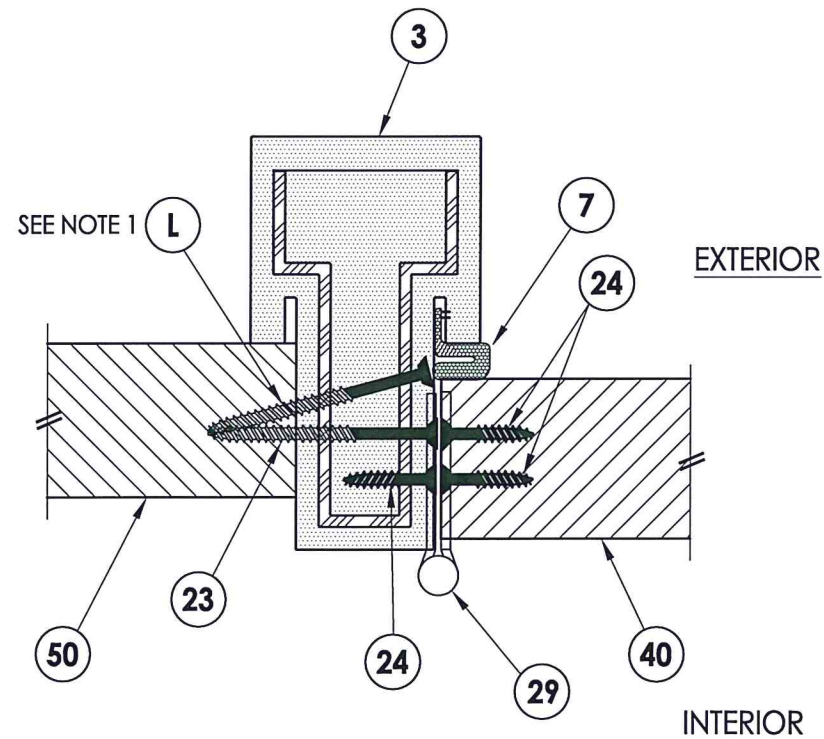
**2**  
**6** **HORIZONTAL CROSS SECTION**  
Shown w/ 2X Buck  
Inswing shown (Outswing similar)



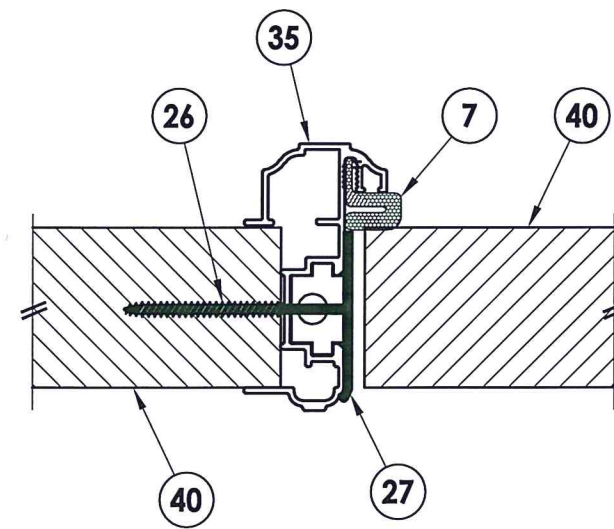
**3**  
**6** **VERTICAL CROSS SECTION**  
Shown w/ 2X Buck  
Inswing shown (Outswing similar)



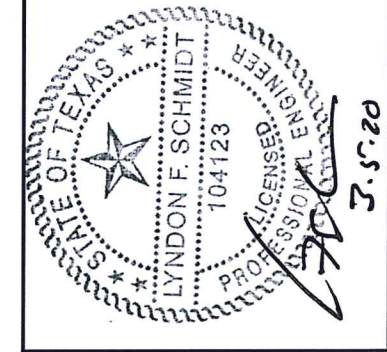
**4**  
**6** **VERTICAL CROSS SECTION**  
Shown w/ 2X Buck  
Inswing shown (Outswing similar)



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



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



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

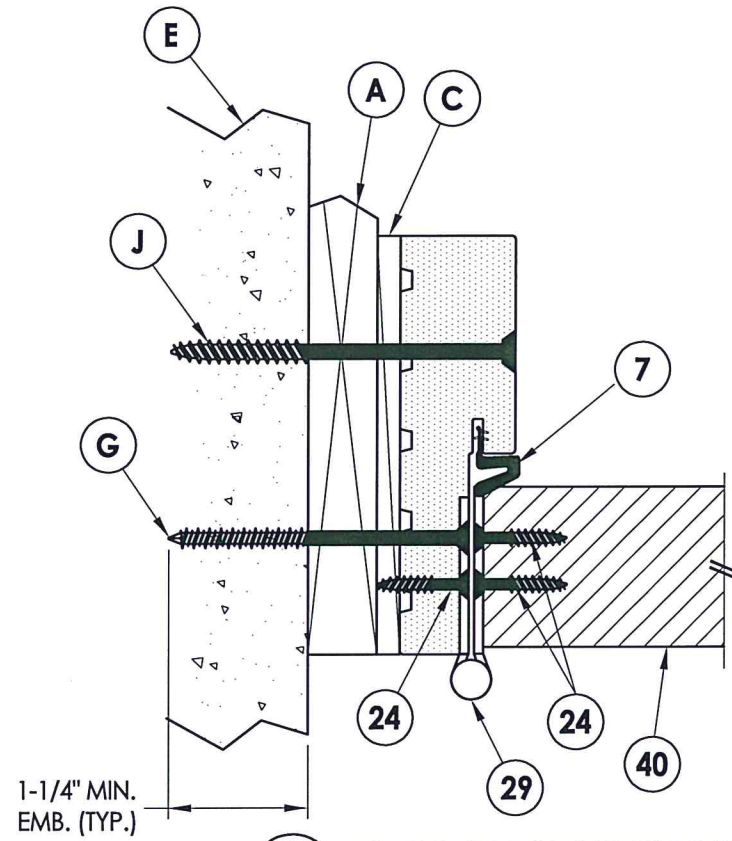
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

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

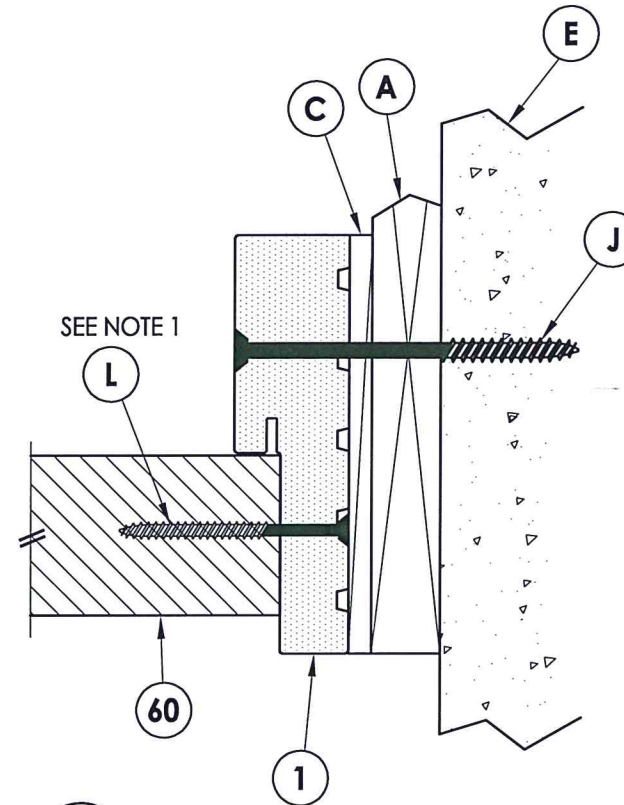
NO.	DATE	REVISIONS
1	3/05/20	UPDATE TO 2018 IBC/IRC CODE
LFS		BY

DATE: 9/04/18  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4890  
SHEET 6 OF 11

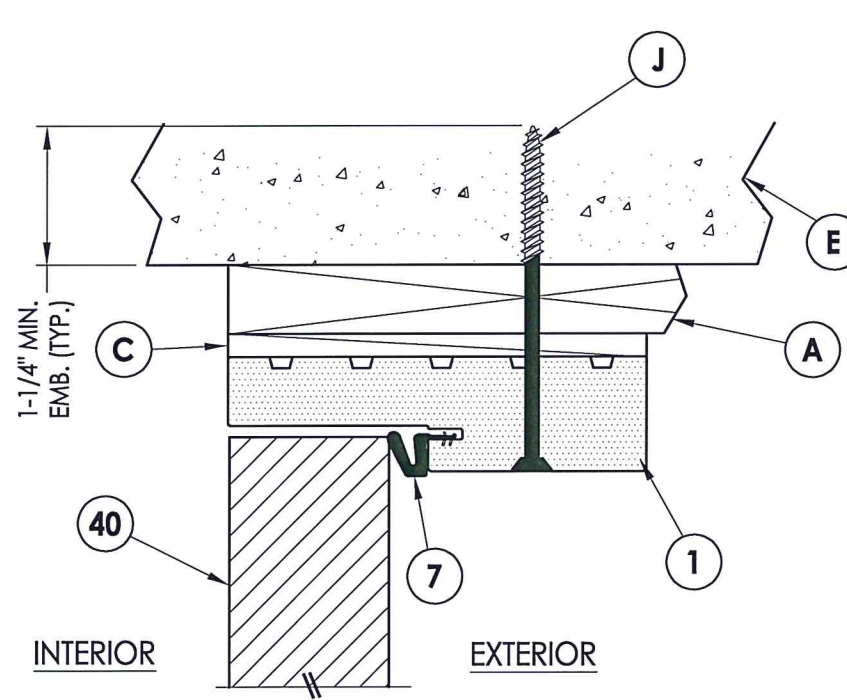


**1 HORIZONTAL CROSS SECTION**  
 7 Shown w/ 1X sub-buck  
 Inswing shown (Outswing similar)

EXTERIOR  
 INTERIOR



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

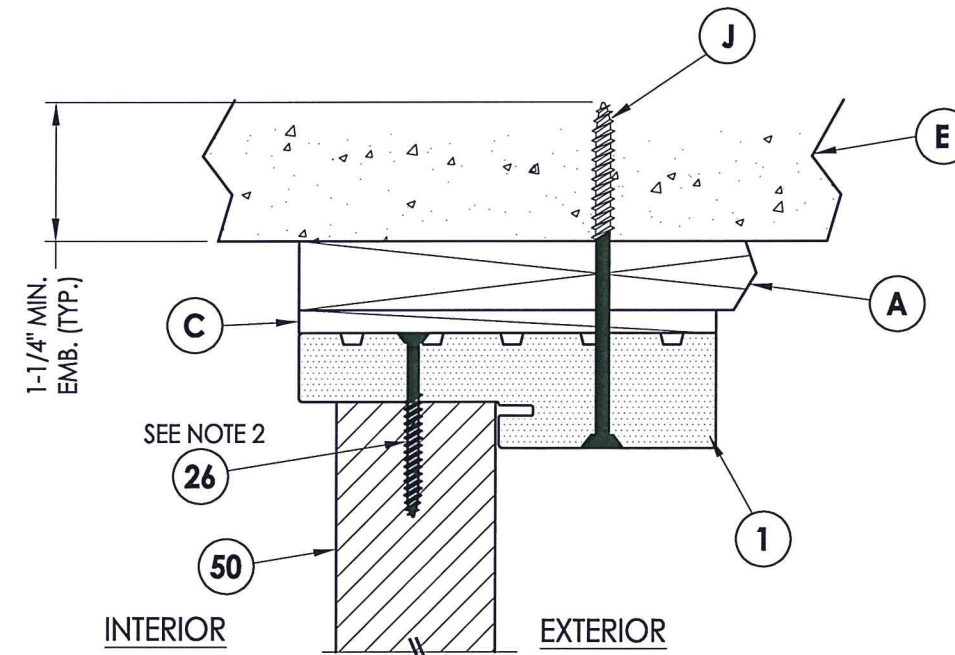


**3 VERTICAL CROSS SECTION**  
 7 Shown w/ 1X sub-buck  
 Inswing shown (Outswing similar)

1-1/4" MIN.  
 EMB. (TYP.)

INTERIOR

EXTERIOR



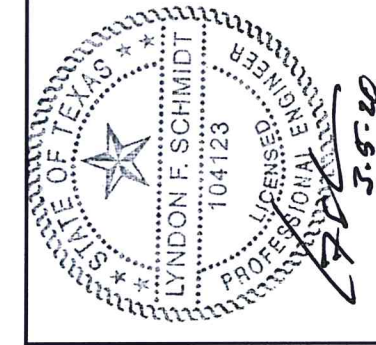
**4 VERTICAL CROSS SECTION**  
 7 Shown w/ 1X sub-buck  
 Inswing shown (Outswing similar)

1-1/4" MIN.  
 EMB. (TYP.)

INTERIOR

EXTERIOR

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

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

DATE: 9/04/18

SCALE: N.T.S.

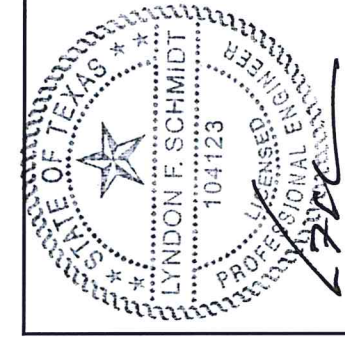
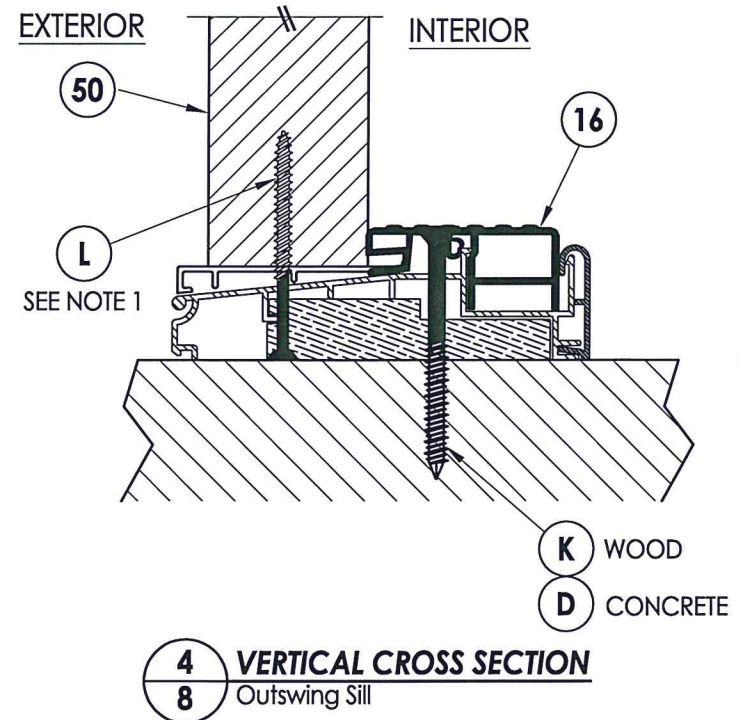
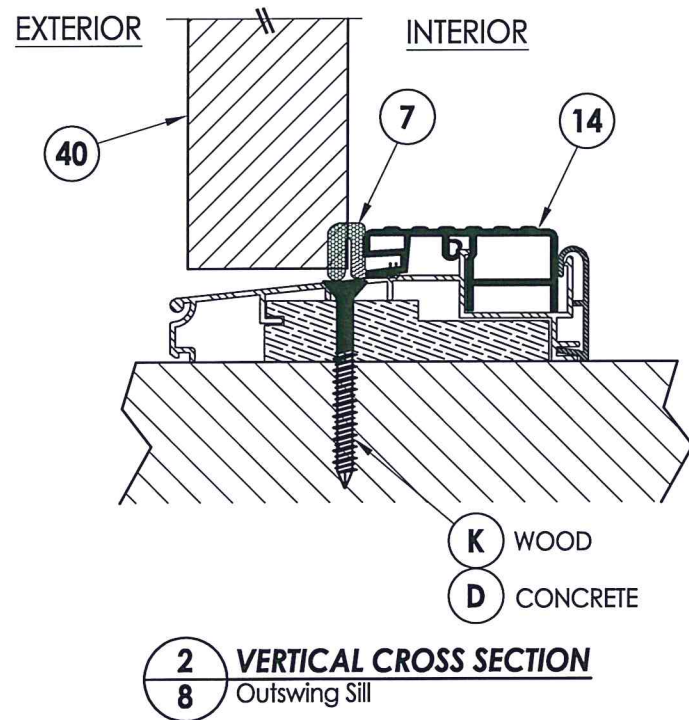
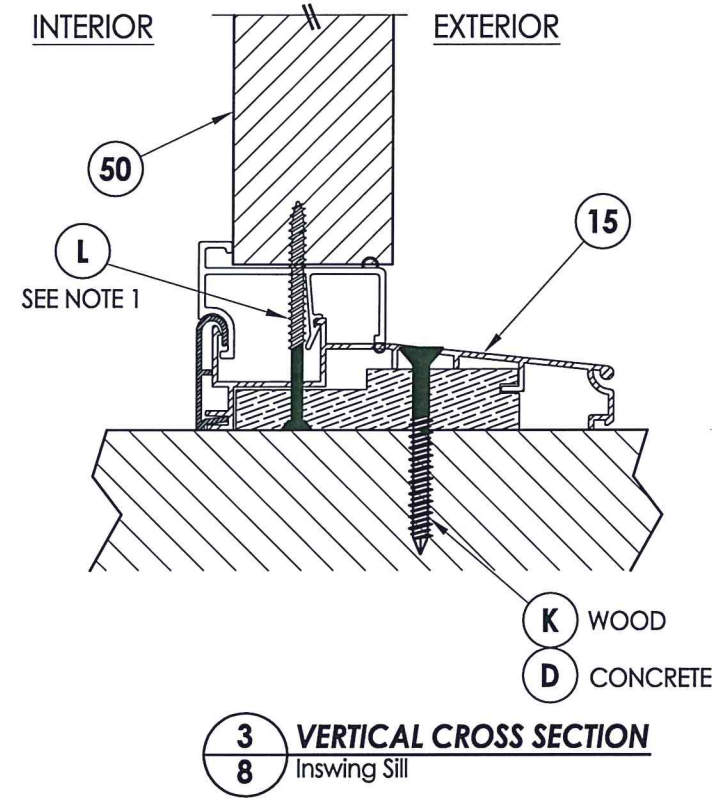
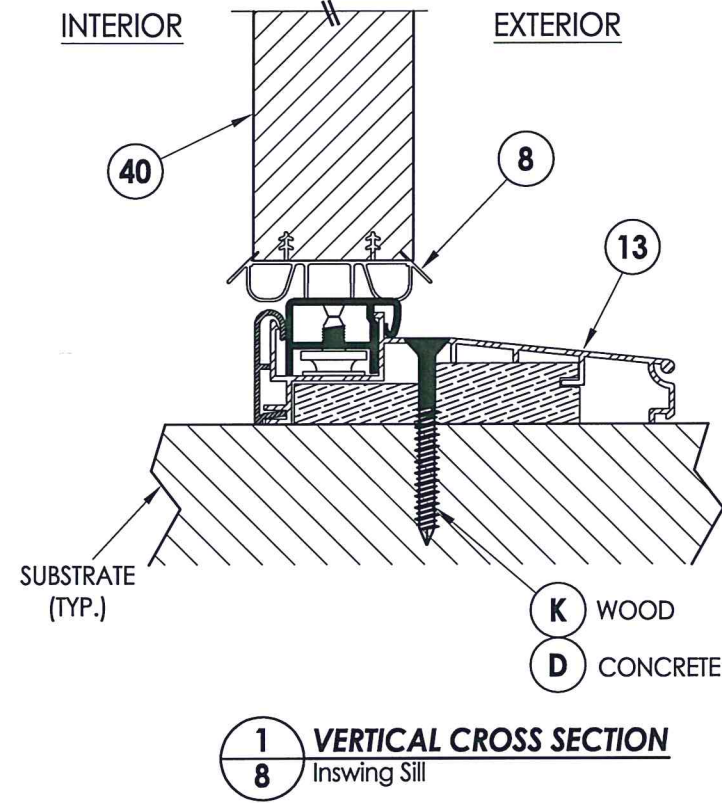
DWG. BY: JK

CHK. BY: LFS

DRAWING NO.: TX-4890

SHEET 7 OF 11

NOTE:  
1. Item #L located 12" from each end (2 total).



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

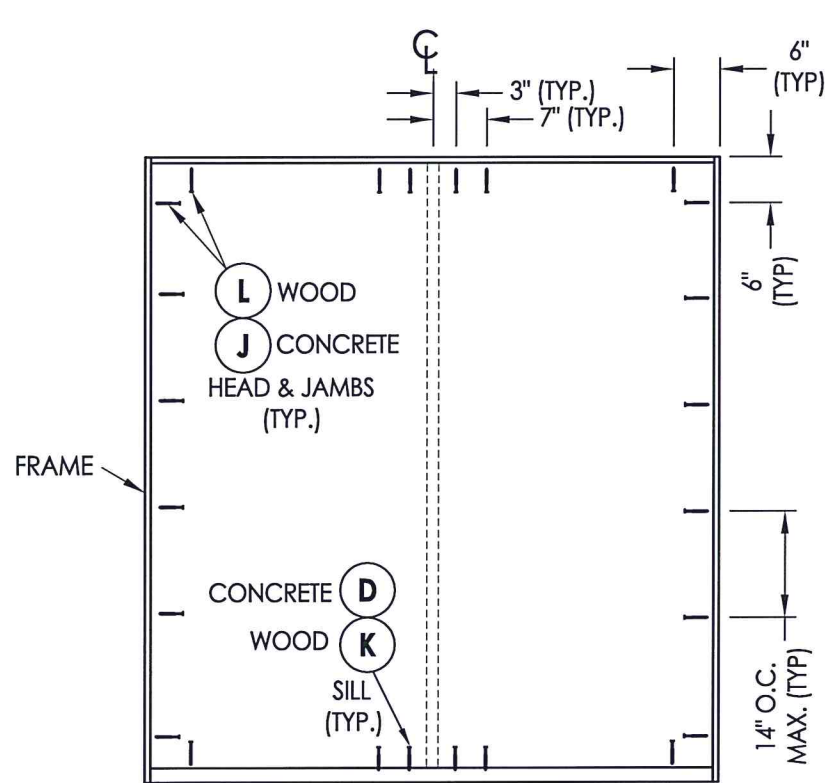
RW BUILDING CONSULTANTS, INC.  
P.O. Box 230 Vairico FL. 33595  
Phone No.: 813.659.9197  
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

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

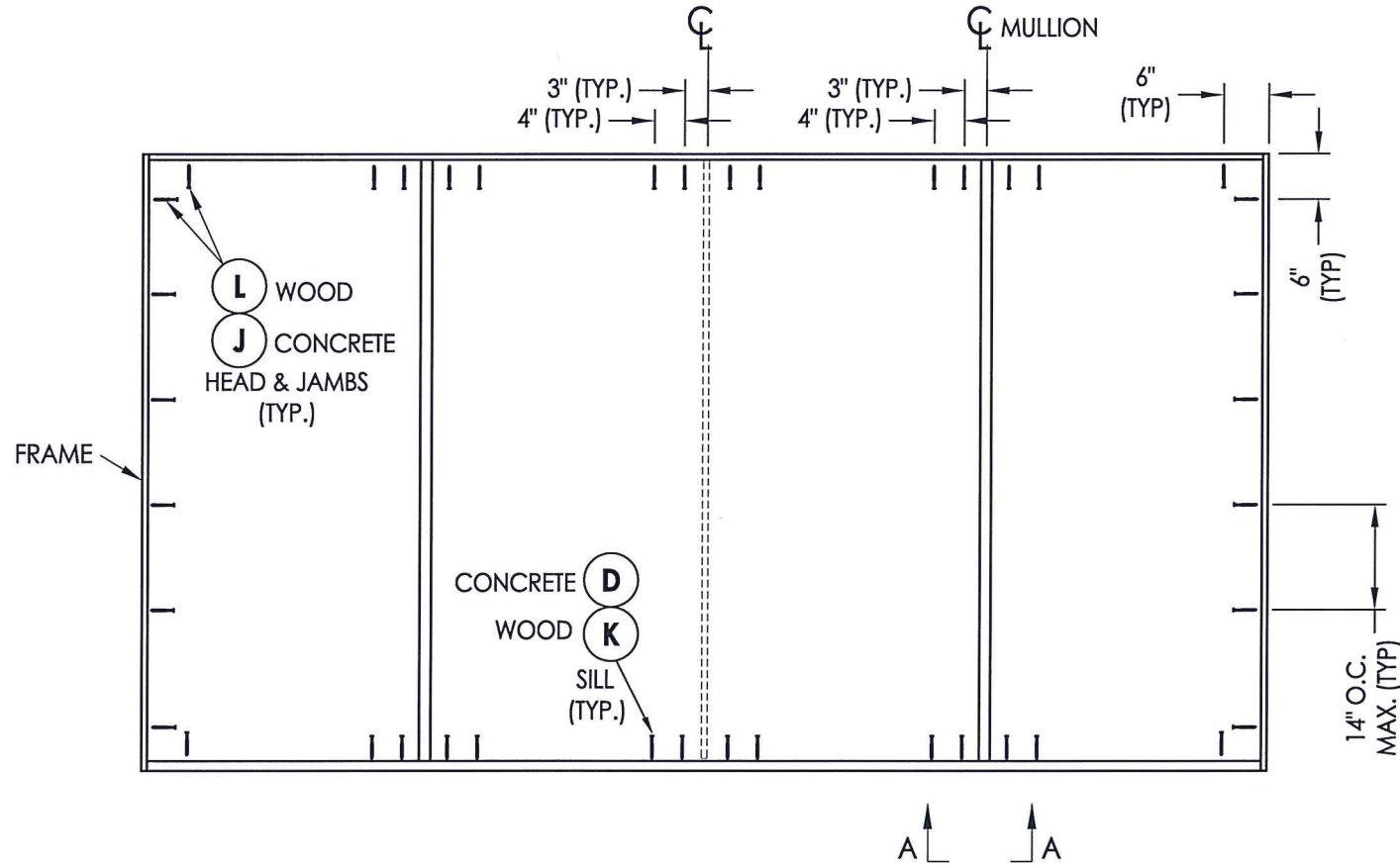
NO.	DATE	DESCRIPTION	BY
1	3/05/20	UPDATE TO 2018 IBC/IRC CODE	LFS

DATE: 9/04/18  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4890  
SHEET 8 OF 11





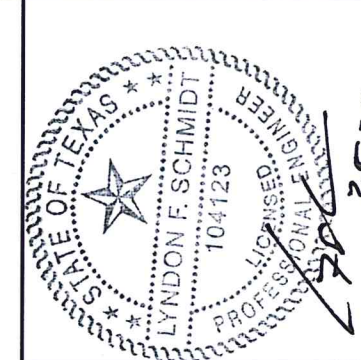
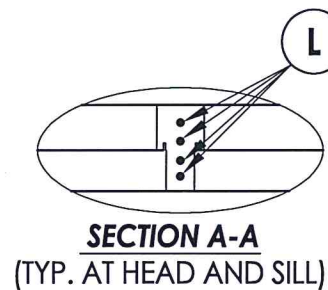
**XX**



**OXXO**

**FRAME ANCHORING**

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

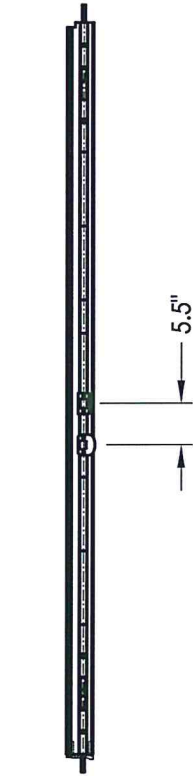


Documents Prepared By: Lyndon F. Schmidt, P.E.  
TEXAS P.E. #104123

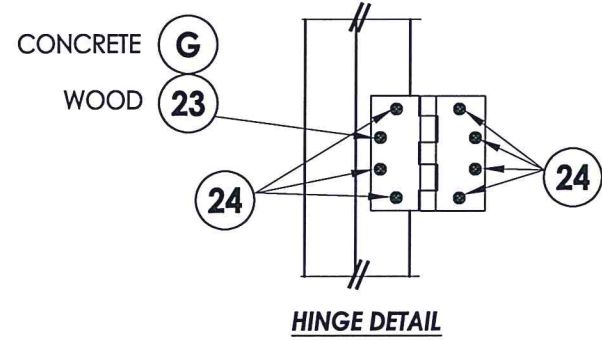
**RW** BUILDING CONSULTANTS, INC.  
P.O. Box 230 Vairico FL. 33595  
Phone No.: 813.659.9197

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

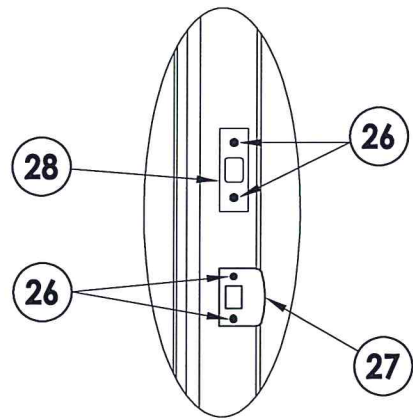
PRODUCT:		MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY:		FRAME ANCHORING & HARDWARE DETAILS	
NO.	DATE	DESCRIPTION	BY
1	3/05/20	UPDATE TO 2018 IBC/IRC CODE	LFS
			REVISIONS
DATE: 9/04/18			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: TX-4890			
SHEET 9 OF 11			



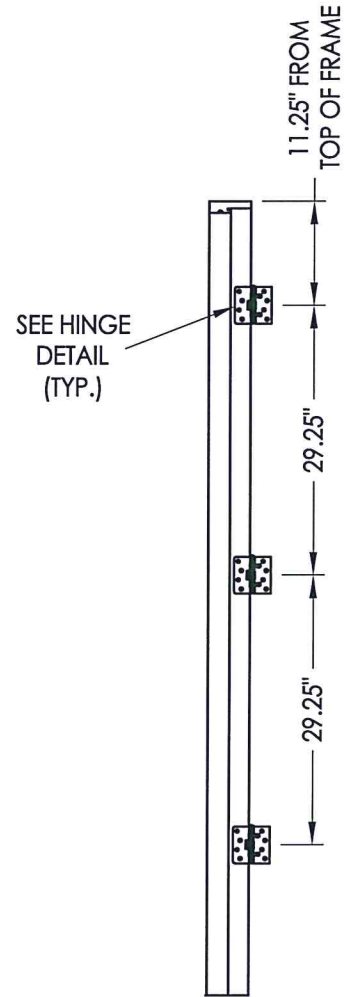
**ASTRAGAL**



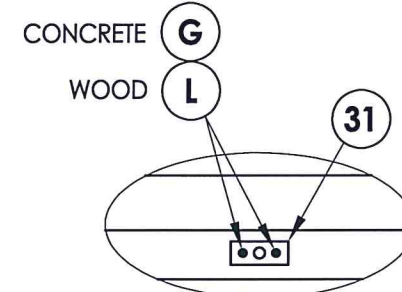
**HINGE DETAIL**



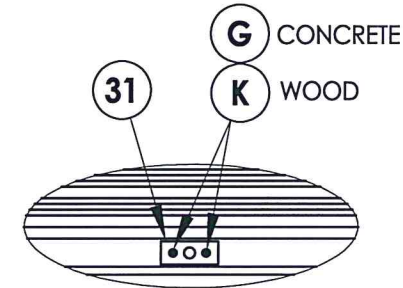
**LATCH AND DEADBOLT DETAIL**



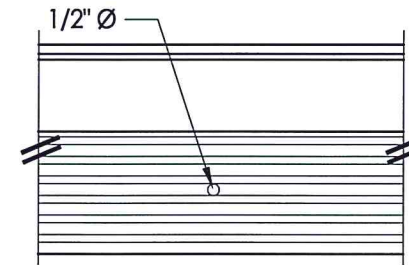
**HINGE JAMB**



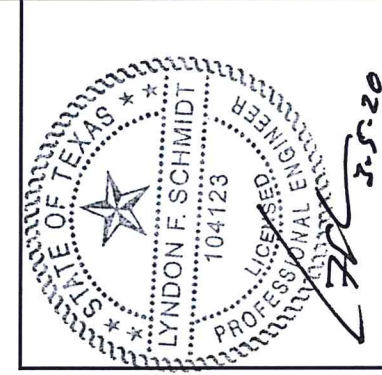
**DETAIL 1**  
Astragal Strike Plate @ Head



**DETAIL 2**  
Astragal @ Sill (Inswing)



**DETAIL 2**  
Astragal @ Sill (Outswing)



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

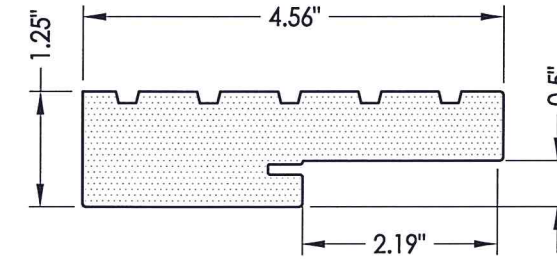
PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	HARDWARE DETAILS

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

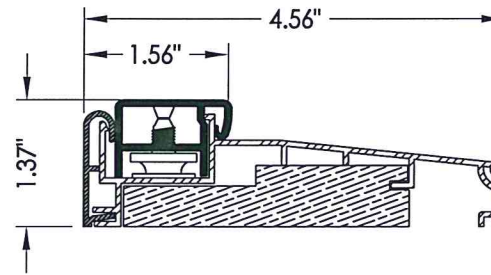
DATE:	9/04/18
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4890
SHEET	10 of 11

**BILL OF MATERIALS**

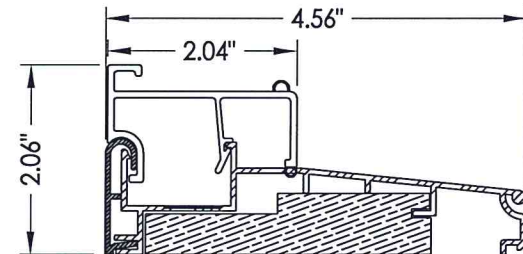
ITEM #	DESCRIPTION	MATERIAL
A	1X BUCK (SG >= 0.42)	WOOD
B	2X BUCK (SG >= 0.42)	WOOD
C	1/4" MAX. SHIM SPACE	-
D	1/4" Ø PFH ELCO OR ITW CONCRETE SCREW (1-3/4" MIN. EMBEDMENT)	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	3/16" X 3-1/4" PFH ITW CONCRETE SCREW	STEEL
J	1/4" X 3-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
K	#10 PFH WS (1-3/4" MIN. EMBEDMENT)	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
40	DOOR PANEL	-
50	SIDELITE PANEL	-



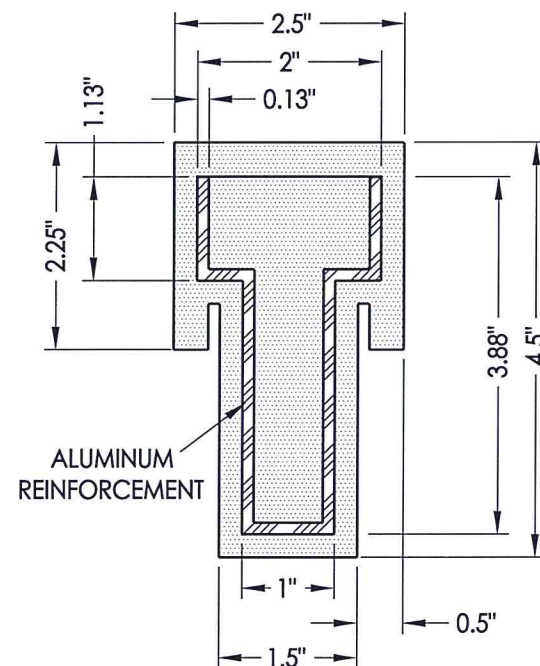
**1 COMPOSITE JAMB**  
WORLDWIDE



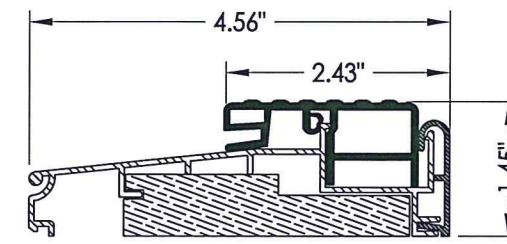
**13 INSWING THRESHOLD**  
WORLDWIDE



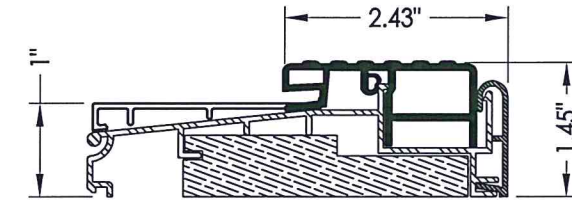
**15 INSWING THRESHOLD w/ SIDELITE ADAPTER**  
WORLDWIDE



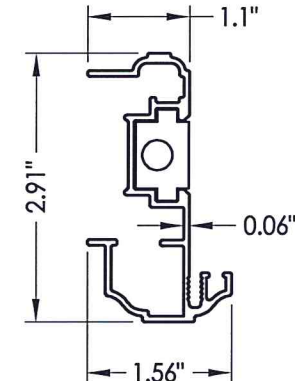
**3 COMPOSITE MULLION**  
WORLDWIDE



**14 OUTSWING THRESHOLD**  
WORLDWIDE



**16 OUTSWING THRESHOLD w/ SIDELITE ADAPTER**  
WORLDWIDE



**35 ASTRAGAL**  
WORLDWIDE

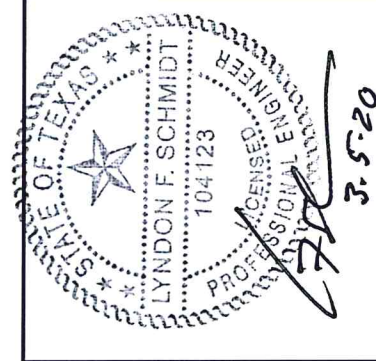
**CONCRETE ANCHOR NOTES:**

- 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.



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

**RW** BUILDING CONSULTANTS, INC.  
P.O. Box 230 Vairico FL 33595  
Phone No.: 813.659.9197

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

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: BILL OF MATERIALS & COMPONENTS

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

DATE: 9/04/18  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4890  
SHEET 11 OF 11