



# Glazed Fiberglass Door

## "NON-IMPACT"

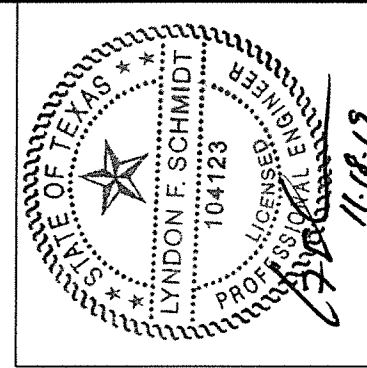
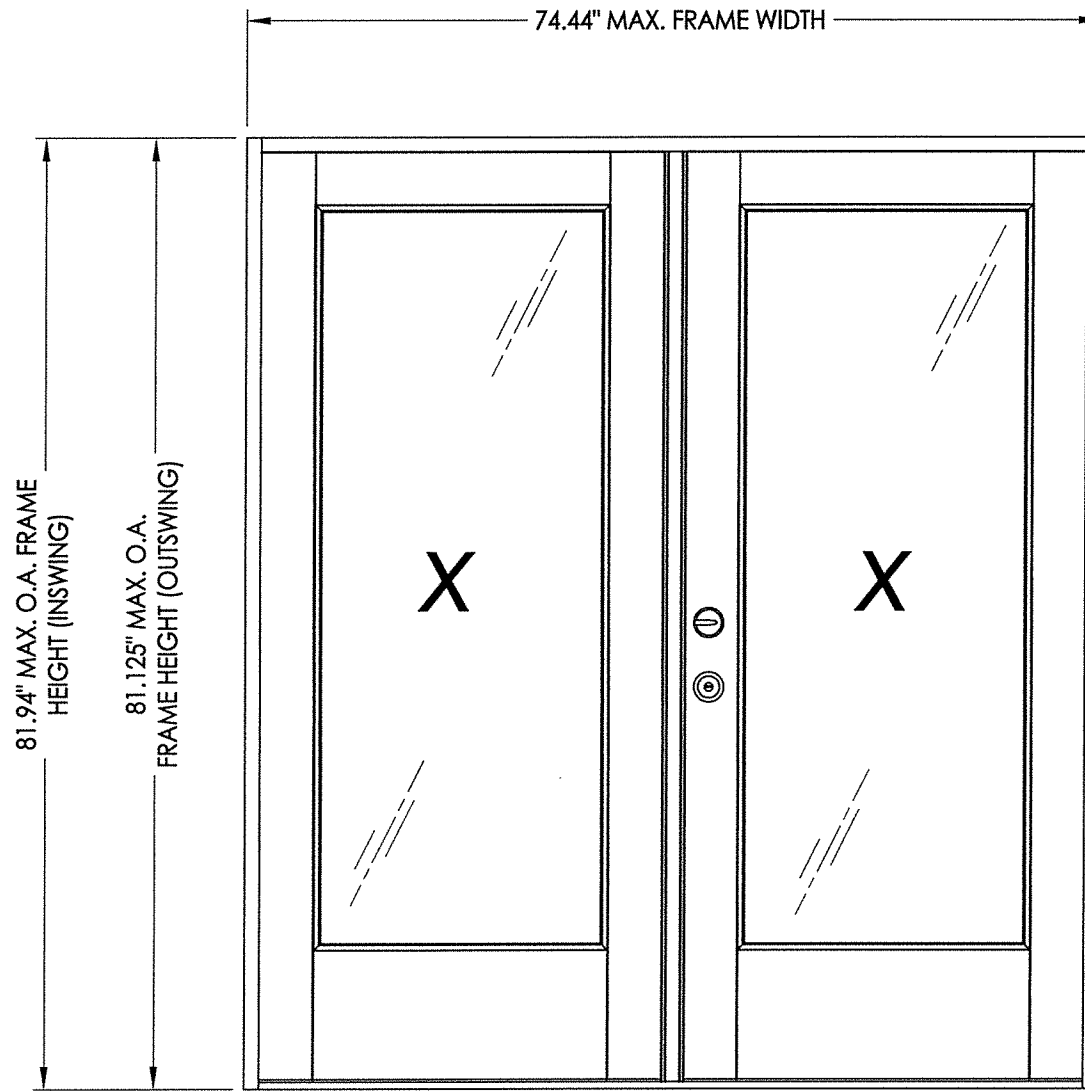
### INSWING / OUTSWING

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

The Glazed 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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5	Door panel details (flush glazing)
6	Horizontal & vertical cross sections
7	Vertical cross sections
8	Frame anchoring



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Phone No.: 813.659.9197

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

PRODUCT: ENDURA

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

CONFIG.	FRAME TYPE	MODEL	DESIGN PRESSURE (PSF) ULTIMATE HURRICANE ASTRAGAL		DESIGN PRESSURE (PSF) ULTIMATE MULTIPOINT ASTRAGAL		DESIGN PRESSURE (PSF) ULTIMATE FLIP LEVER ASTRAGAL	
			POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
XX	PINE	INSWING	+50.0	-55.0	+45.0	-50.0	+35.0	-40.0
XX		OUTSWING	+50.0	-55.0	+45.0	-45.0	+35.0	-35.0
XX	"FusionFrame"	INSWING	+50.0	-50.0	+45.0	-50.0	+35.0	-40.0
XX		OUTSWING	+50.0	-50.0	+45.0	-45.0	+35.0	-35.0

REVISIONS	
NO.	DATE
4	11/18/19
3	9/05/18
2	5/5/15
1	1/07/14

DATE: 8/07/12

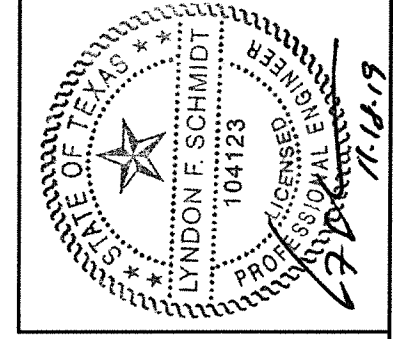
SCALE: N.T.S.

DWG. BY: JK

CHK. BY: LFS

DRAWING NO.: TX-4204

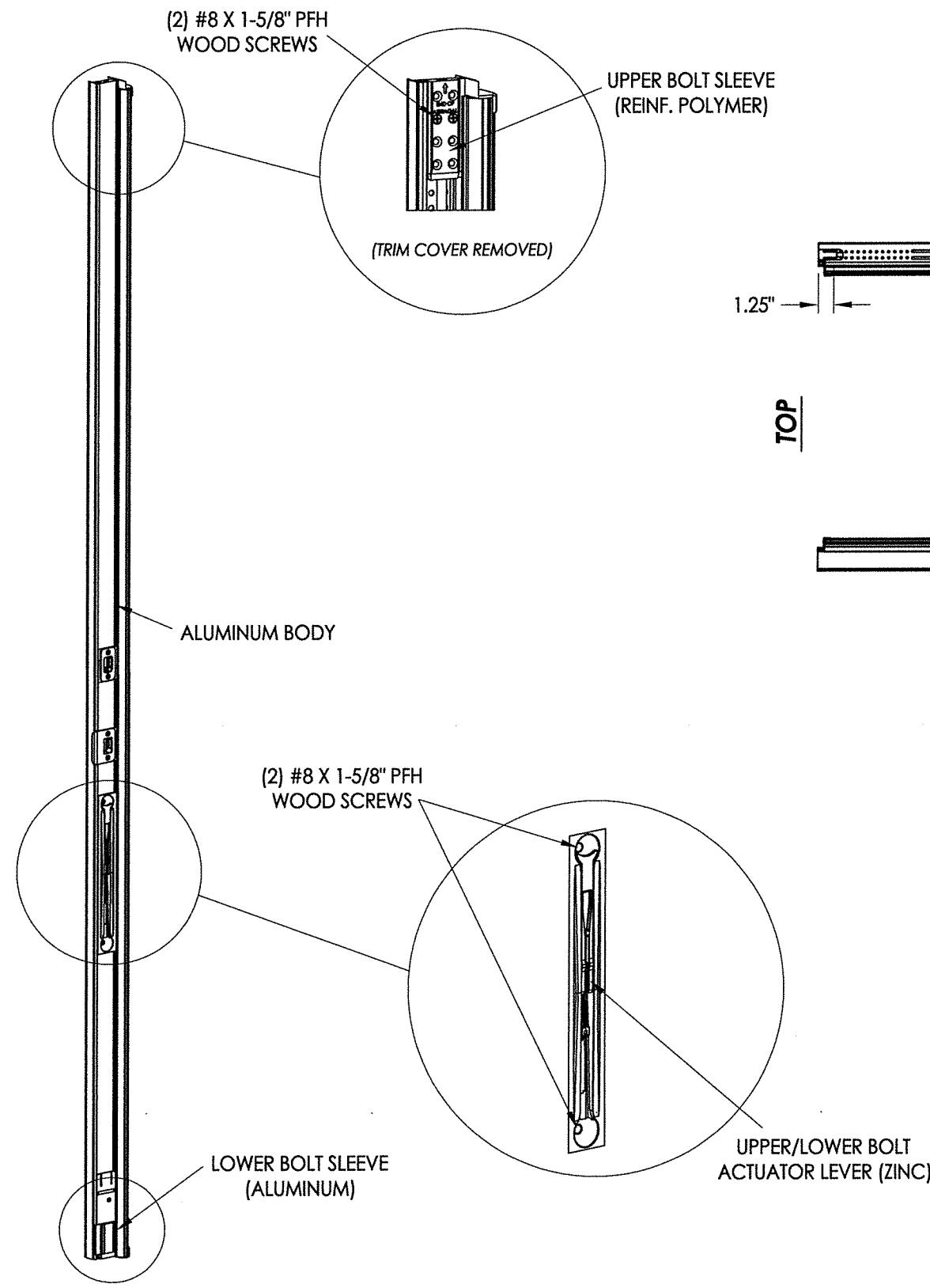
SHEET 1 of 8



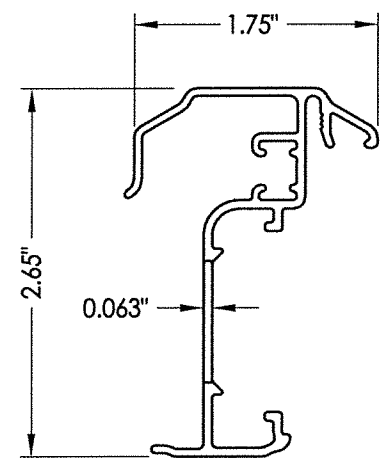
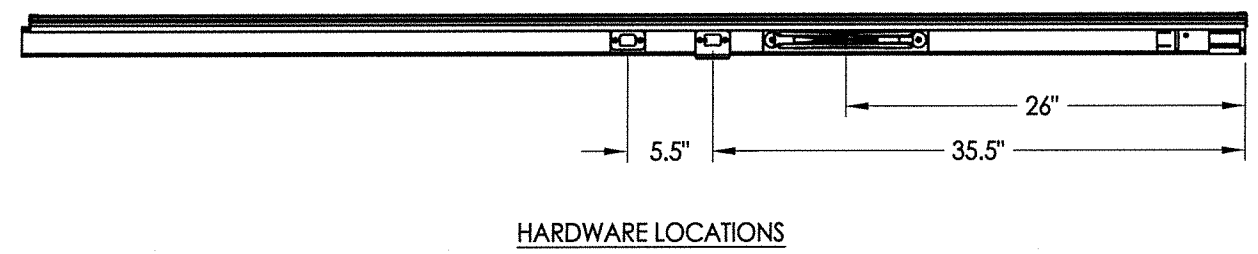
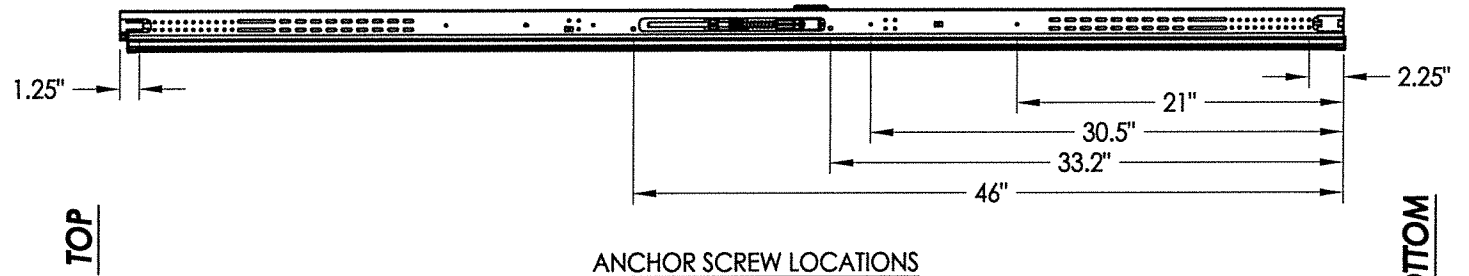
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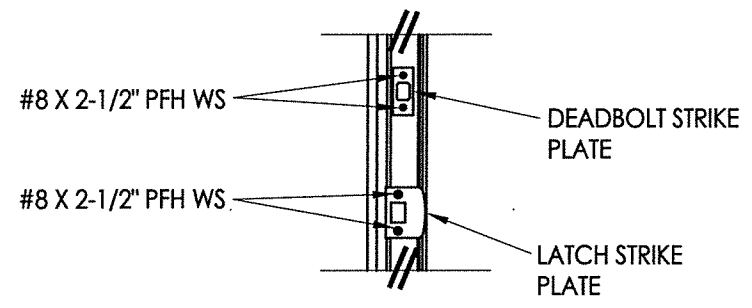
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**ULTIMATE FLIP LEVER ASTRAGAL**



**ASTRAGAL SECTION**



**LATCH & DEADBOLT DETAIL**

PRODUCT: ENDURA

PART OR ASSEMBLY: ASTRAGAL DETAILS (ULTIMATE FLIP LEVER)

NO.	DATE	REVISIONS
4	11/18/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
3	9/05/18	ADDED ADDITIONAL THRESHOLDS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE
1	1/07/14	ADDED ARTICULATING SILL
		BY

DATE: 8/07/12

SCALE: N.T.S.

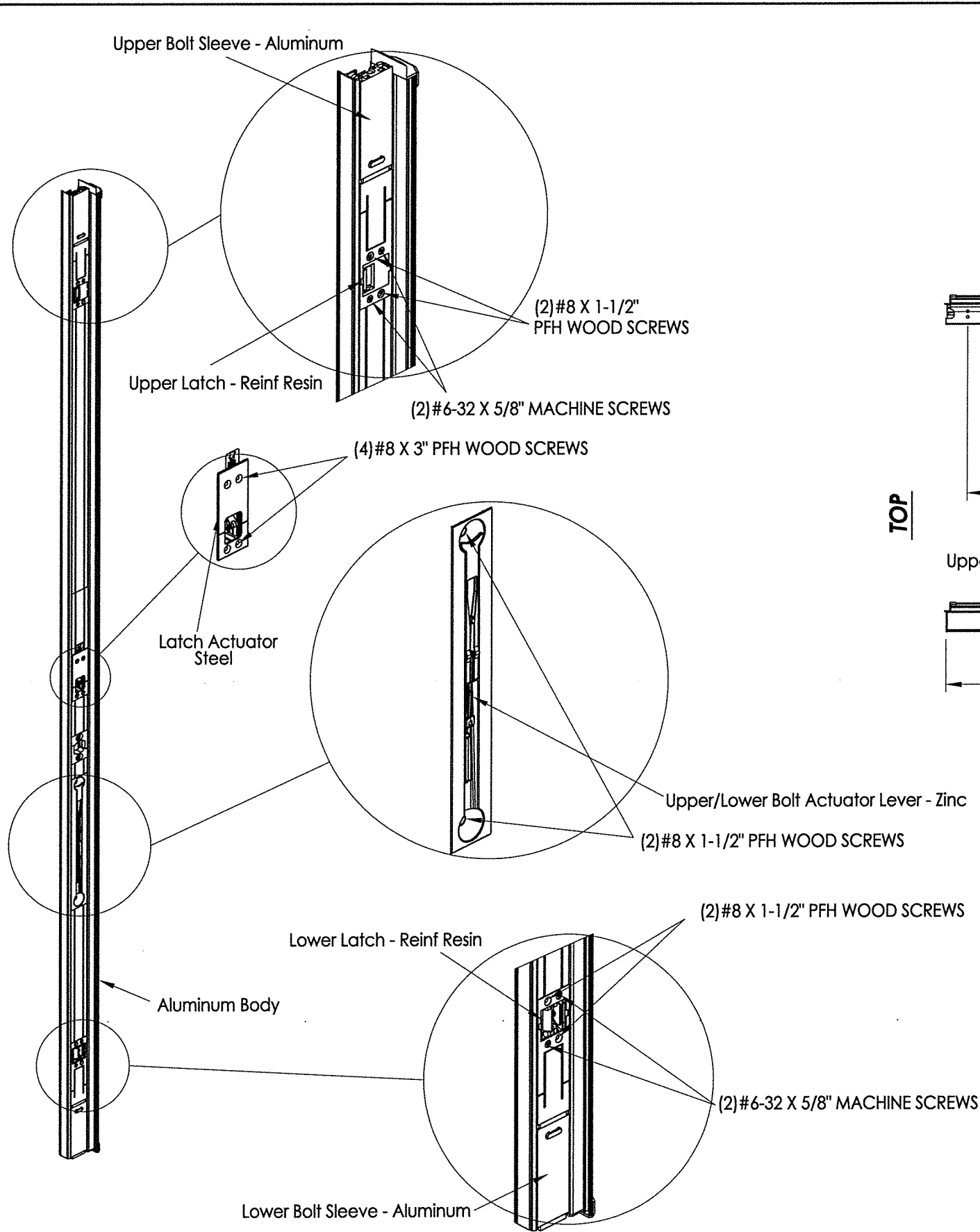
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CHK. BY: LFS

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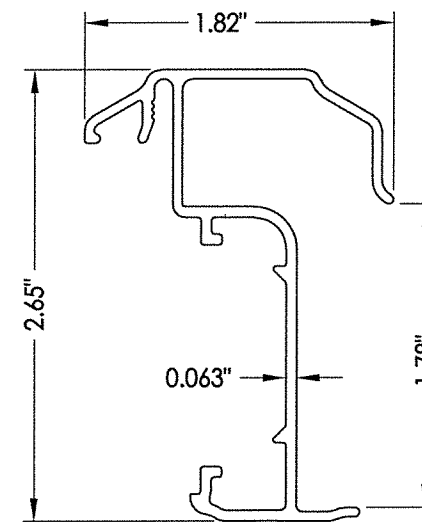
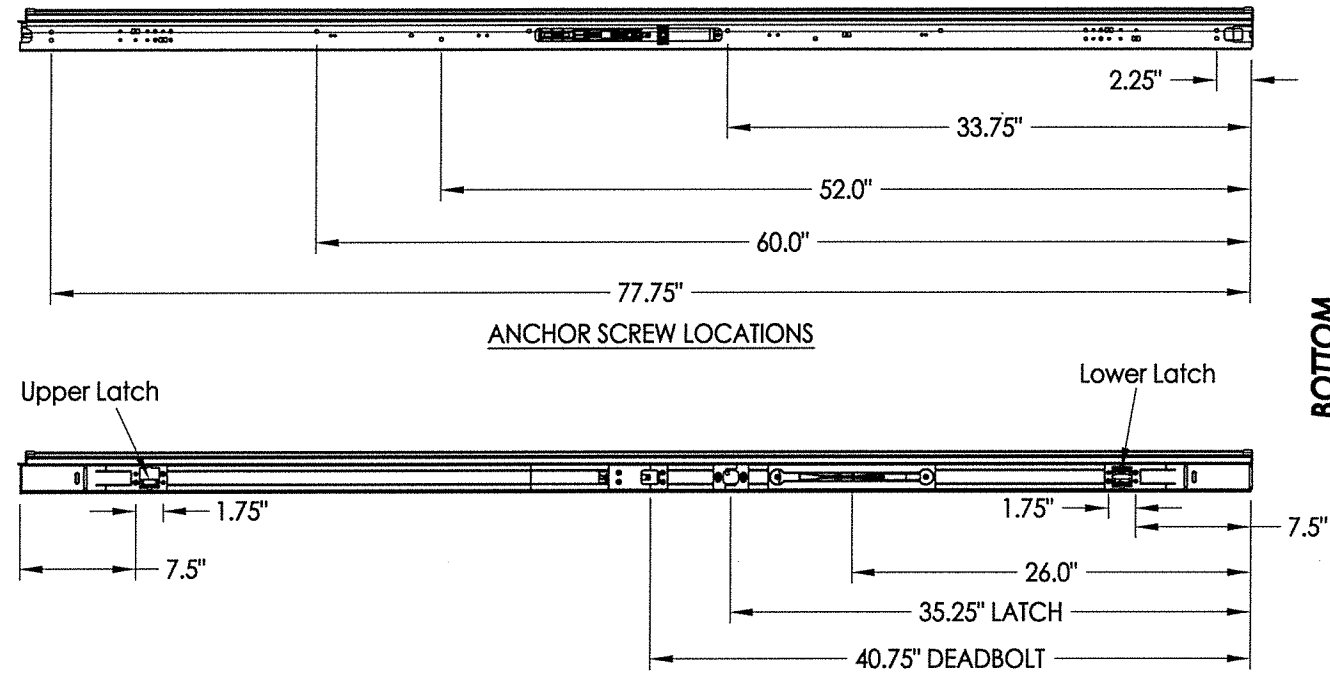
SHEET 2 OF 8

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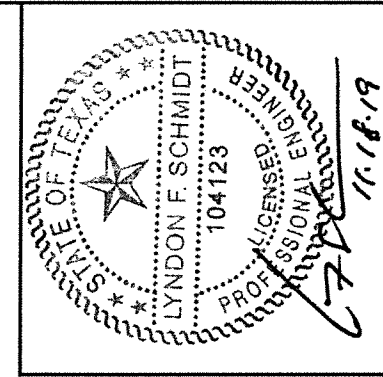
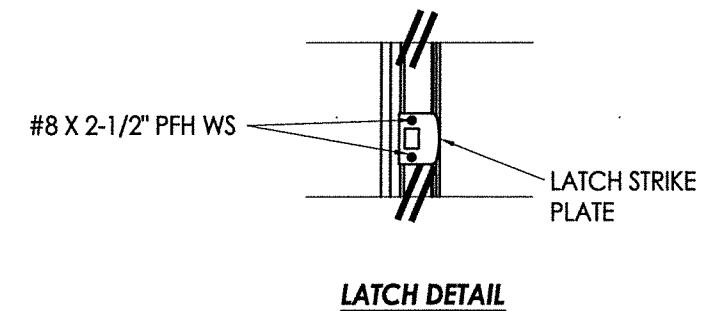


**ULTIMATE MULTIPOINT ASTRAGAL**

**TOP**



**Astragal Section**



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PRODUCT: ENDURA

PART OR ASSEMBLY: ASTRAGAL DETAILS (ULTIMATE MULTI-POINT)

NO.	DATE	REVISIONS
4	11/18/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
3	9/05/18	ADDED ADDITIONAL THRESHOLDS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE
1	1/07/14	ADDED ARTICULATING SILL
		BY

DATE: 8/07/12

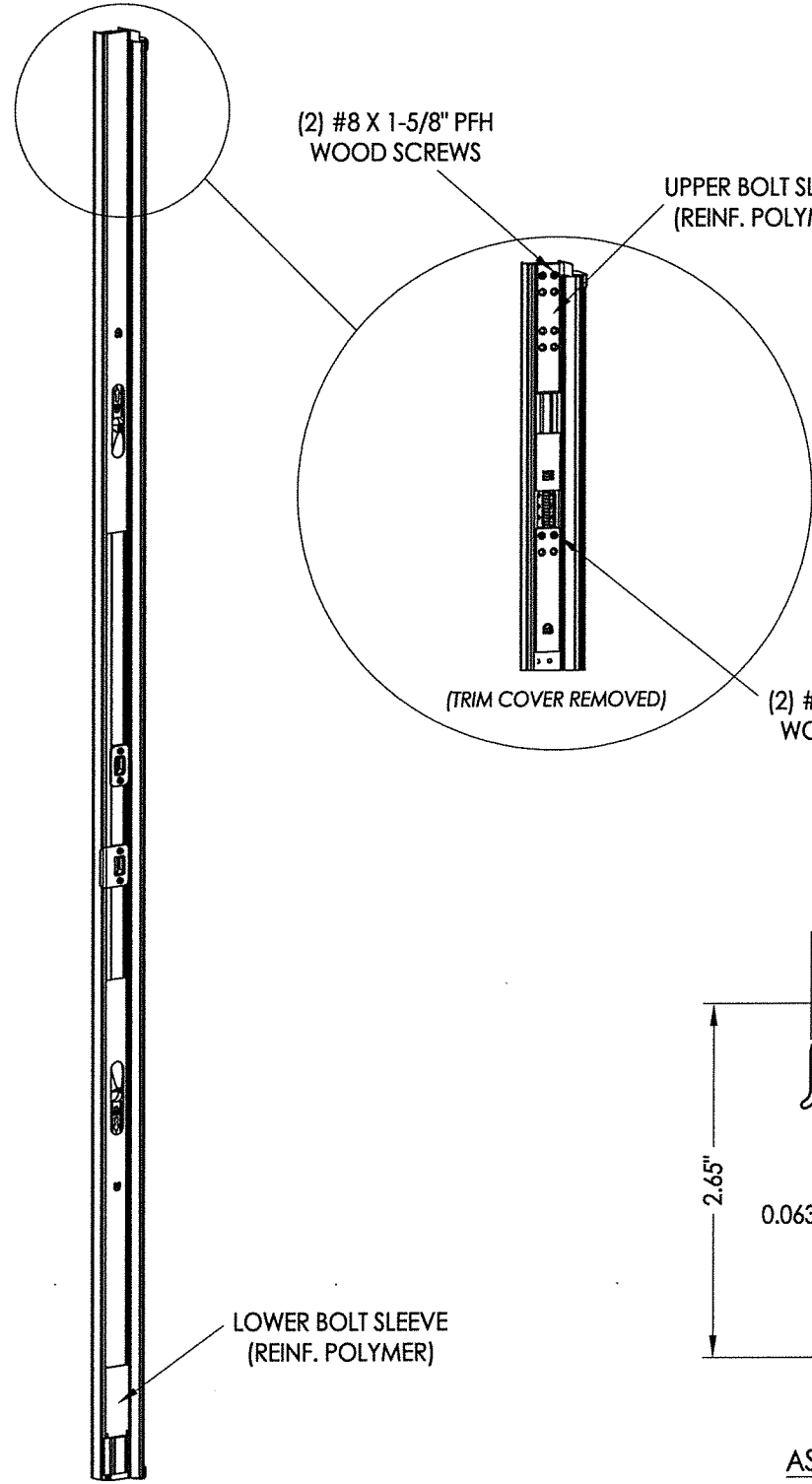
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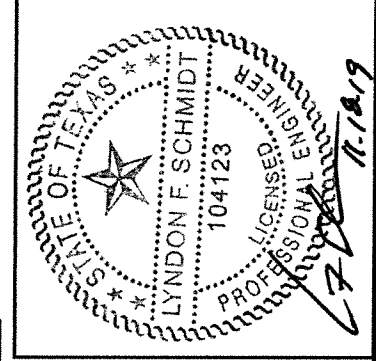
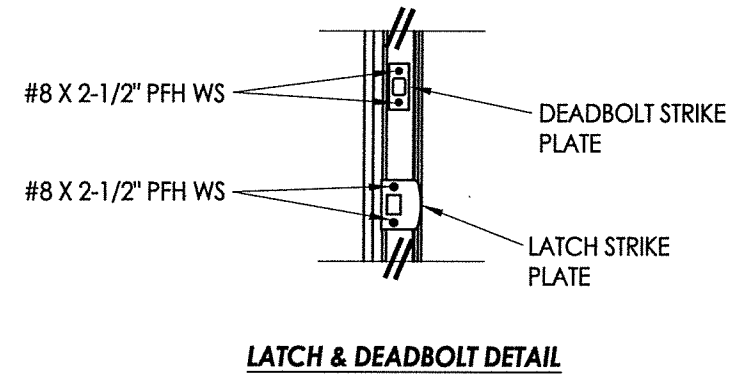
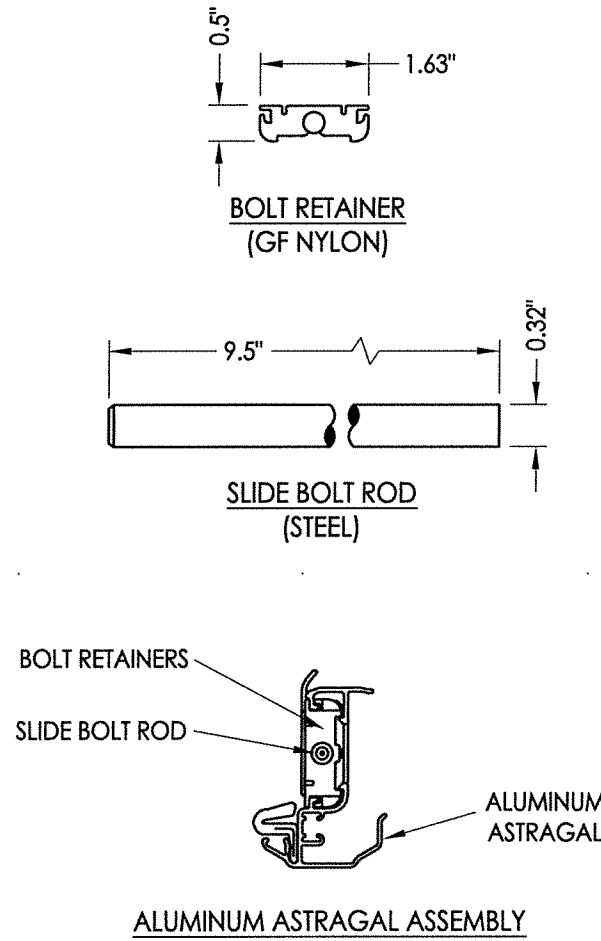
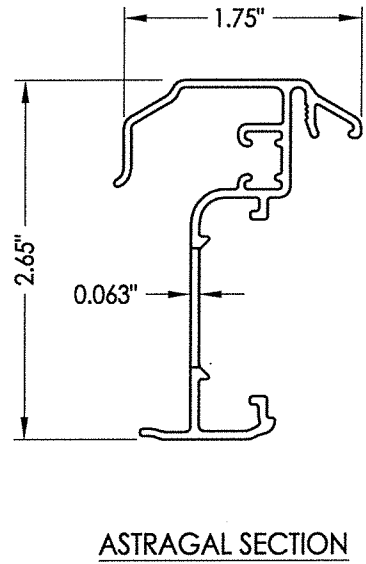
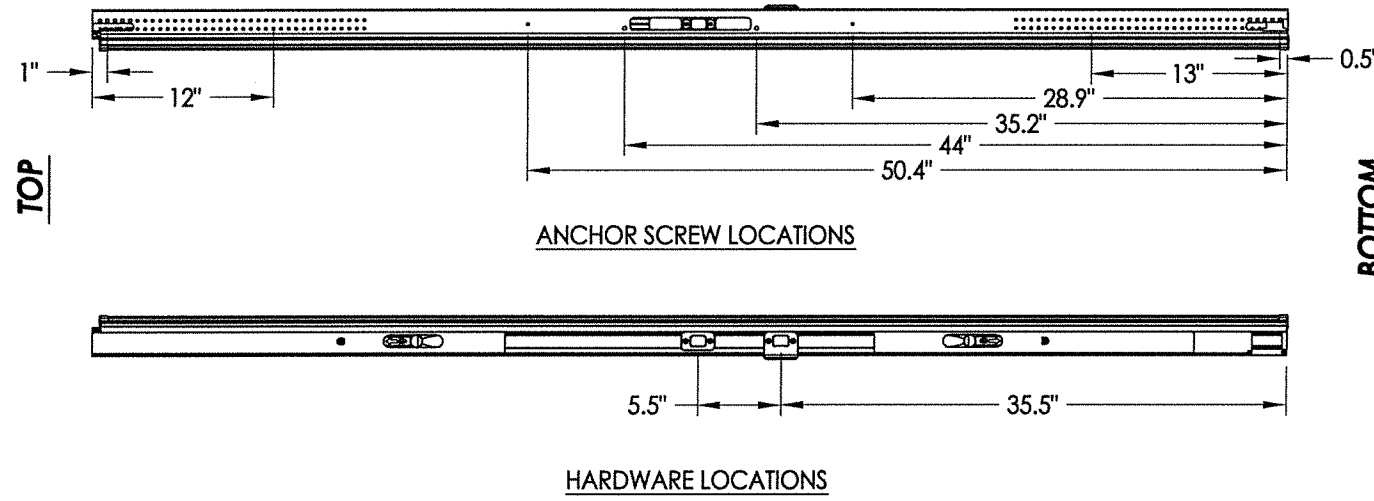
CHK. BY: LFS

DRAWING NO.: TX-4204

SHEET 3 OF 8



**ULTIMATE HURRICANE ASTRAGAL**



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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: ENDURA

PART OR ASSEMBLY: ASTRAGAL DETAILS (ULTIMATE HURRICANE)

NO.	DATE	REVISIONS
4	11/18/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
3	9/05/18	ADDED ADDITIONAL THRESHOLDS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE
1	1/07/14	ADDED ARTICULATING SILL
		NO. DATE

DATE: 8/07/12

SCALE: N.T.S.

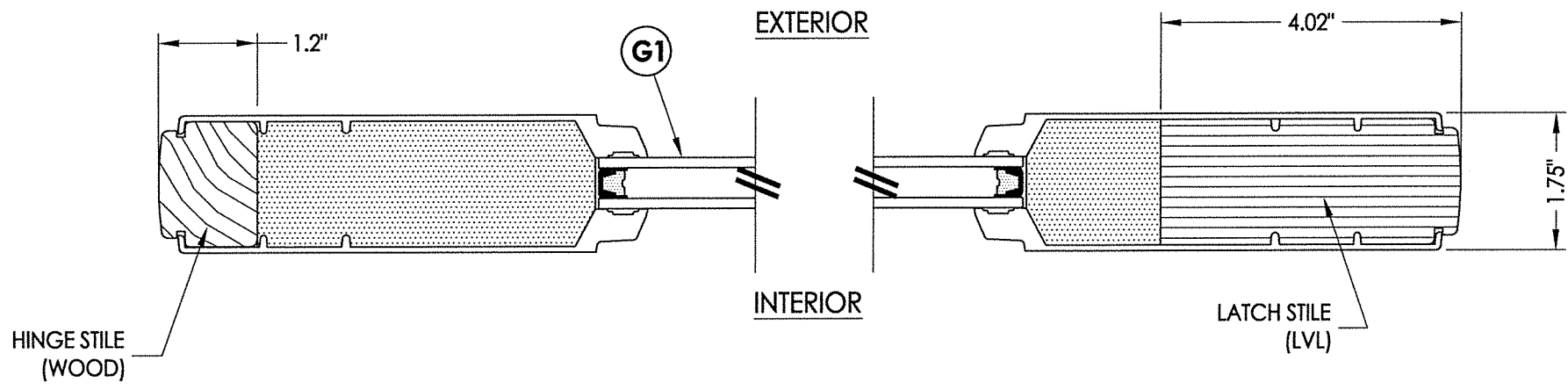
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CHK. BY: LFS

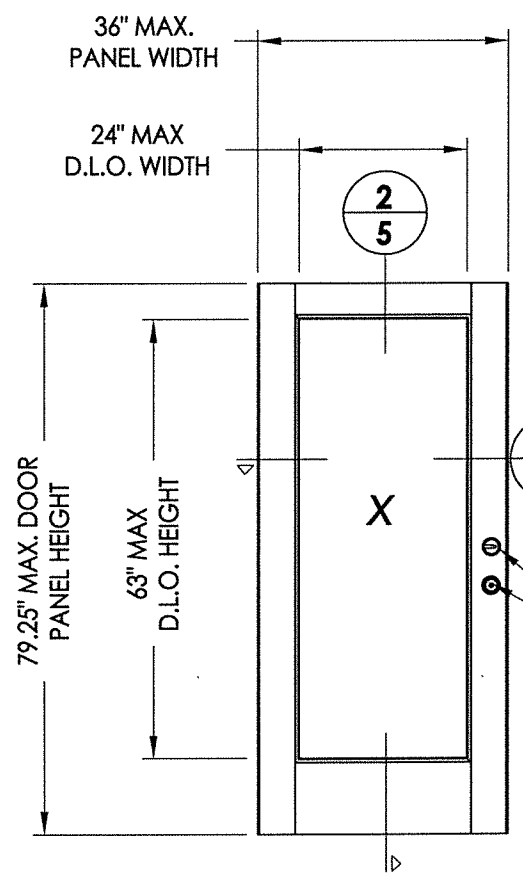
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SHEET 4 OF 8

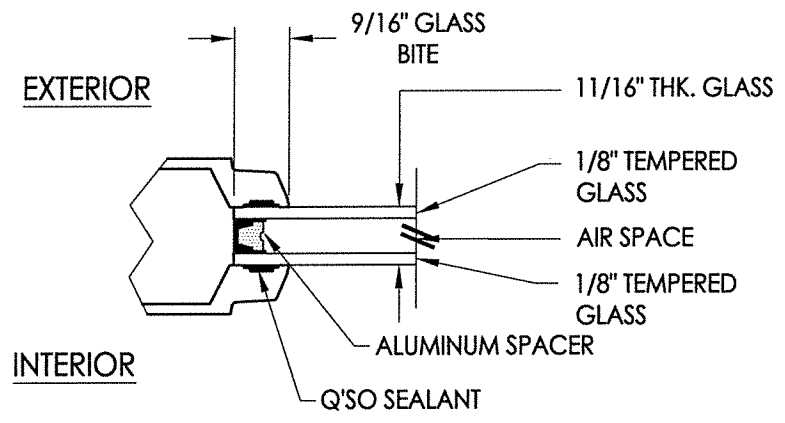
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**1**  
**5** HORIZONTAL CROSS SECTION

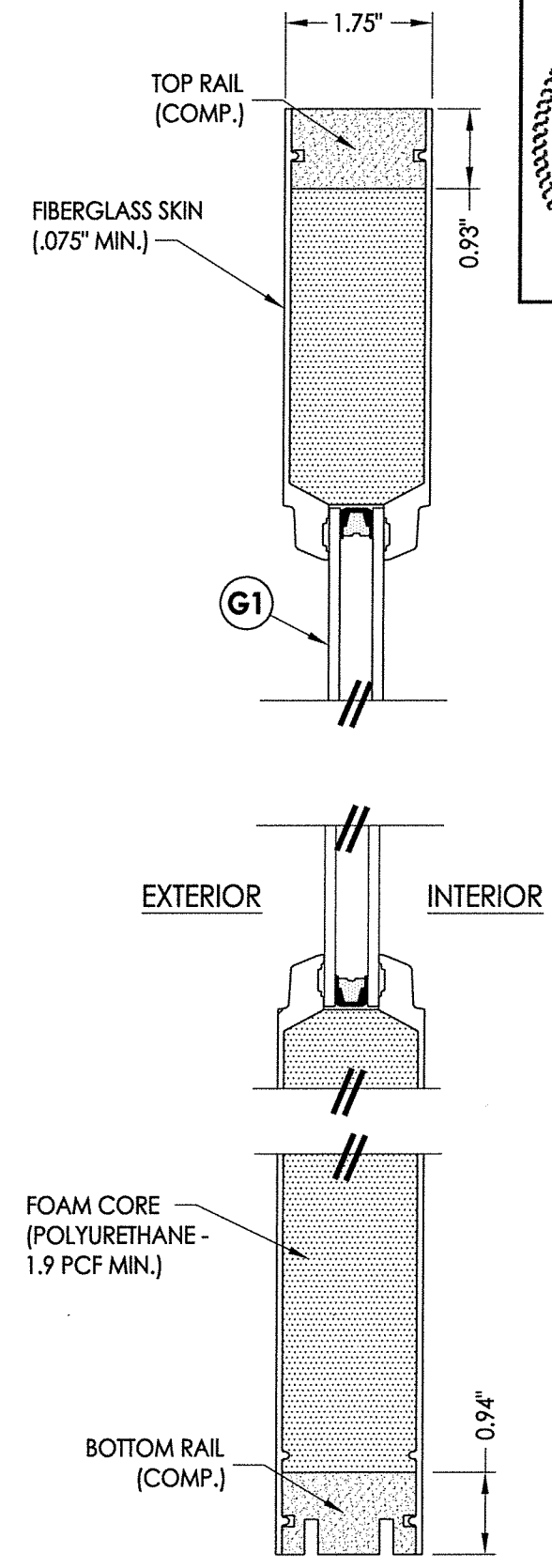


THERMA TRU - Flush Glazed  
Door Panel  
(fiberglass)

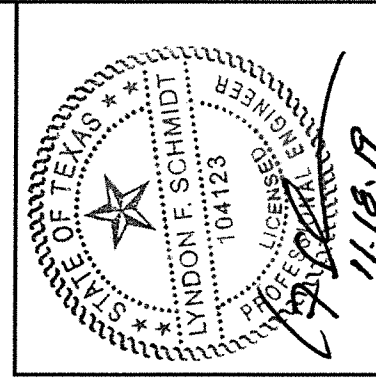


**G1** GLAZING DETAIL

HARDWARE TABLE	
MANUFACTURER	MODEL
KWIKSET	LATCH: KWIKSET SIGNATURE SERIES (991) DEADBOLT: KWIKSET SIGNATURE SERIES (980/985)



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



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

PRODUCT: ENDURA

PART OR ASSEMBLY: DOOR PANEL DETAILS (FLUSH GLAZING)

NO	DATE	BY	REVISIONS
4	11/18/19	LFS	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
3	9/05/18	LFS	ADDED ADDITIONAL THRESHOLDS
2	5/5/15	LFS	ADD NEW ASTRAGAL PIN CAPTURE
1	1/07/14	LFS	ADDED ARTICULATING SILL

DATE: 8/07/12

SCALE: N.T.S.

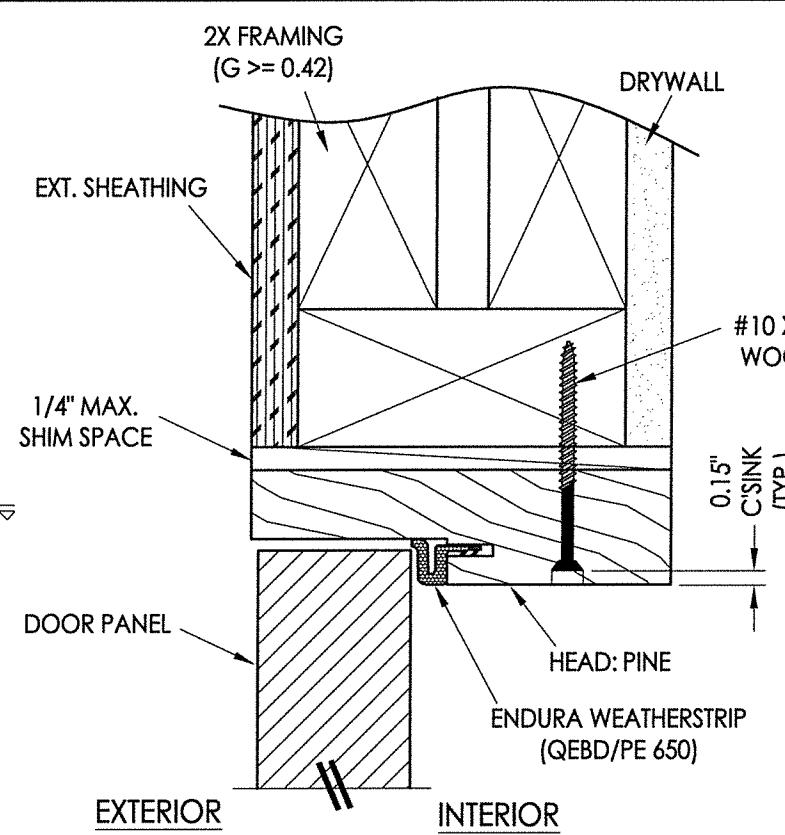
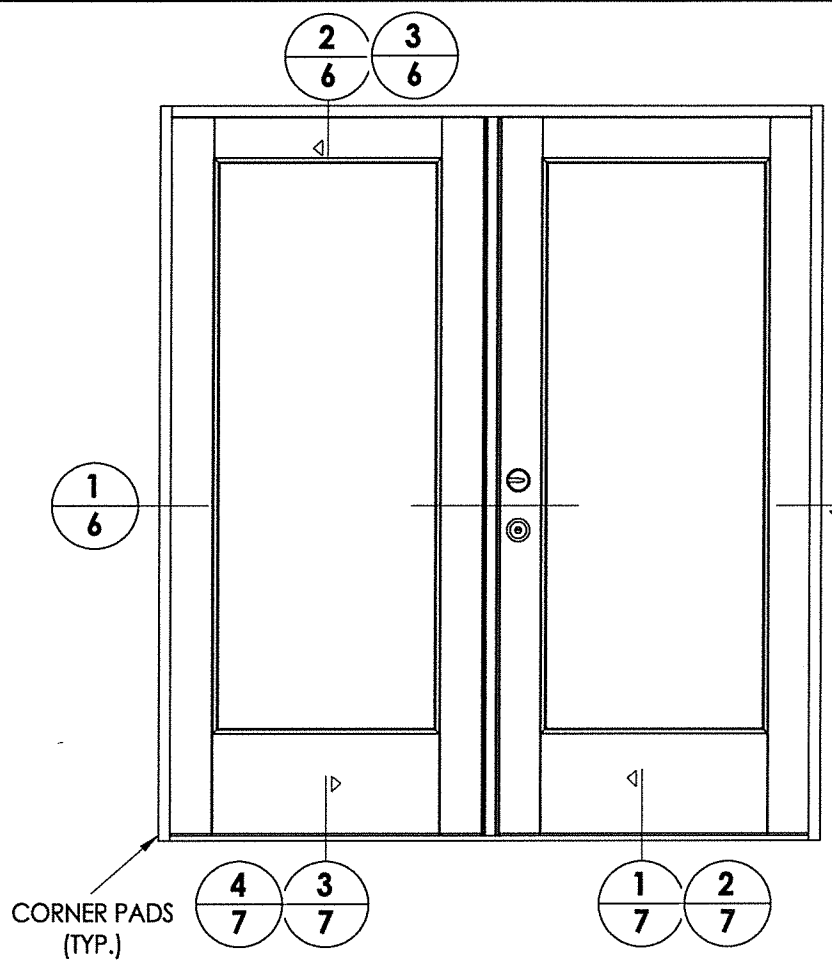
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CHK. BY: LFS

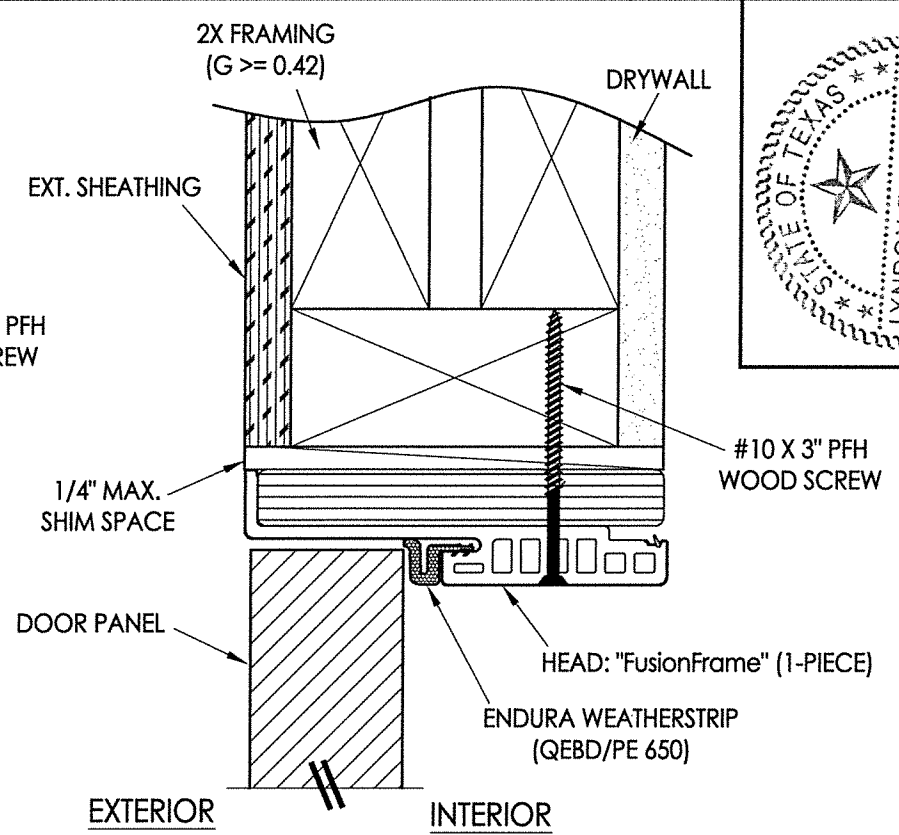
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SHEET 5 OF 8

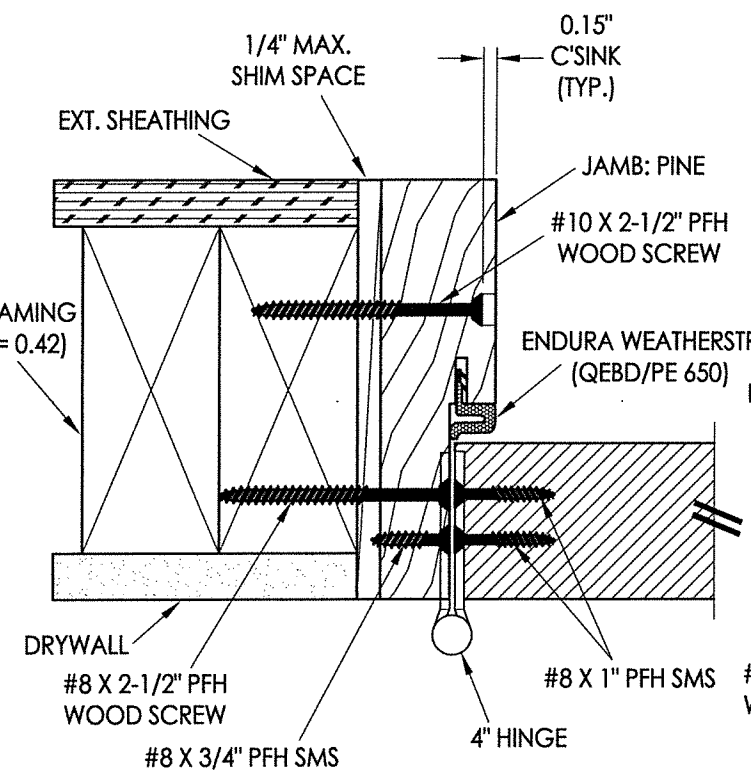
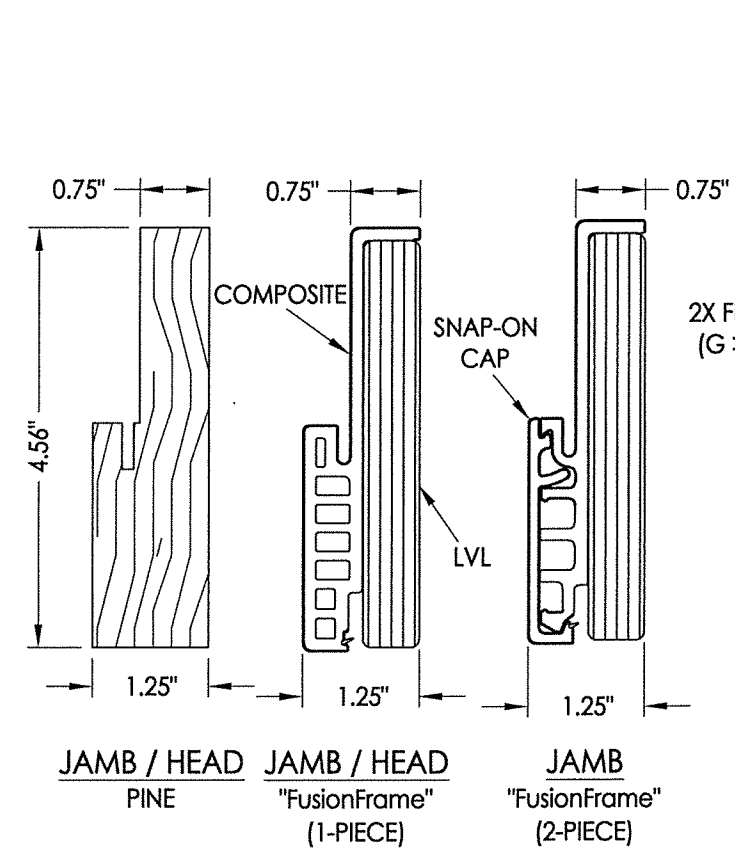
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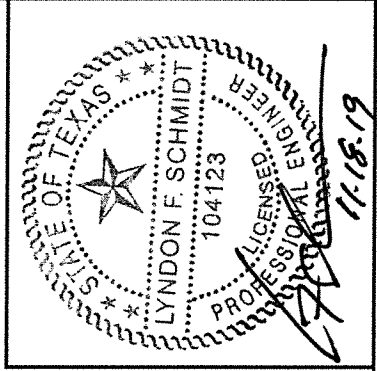
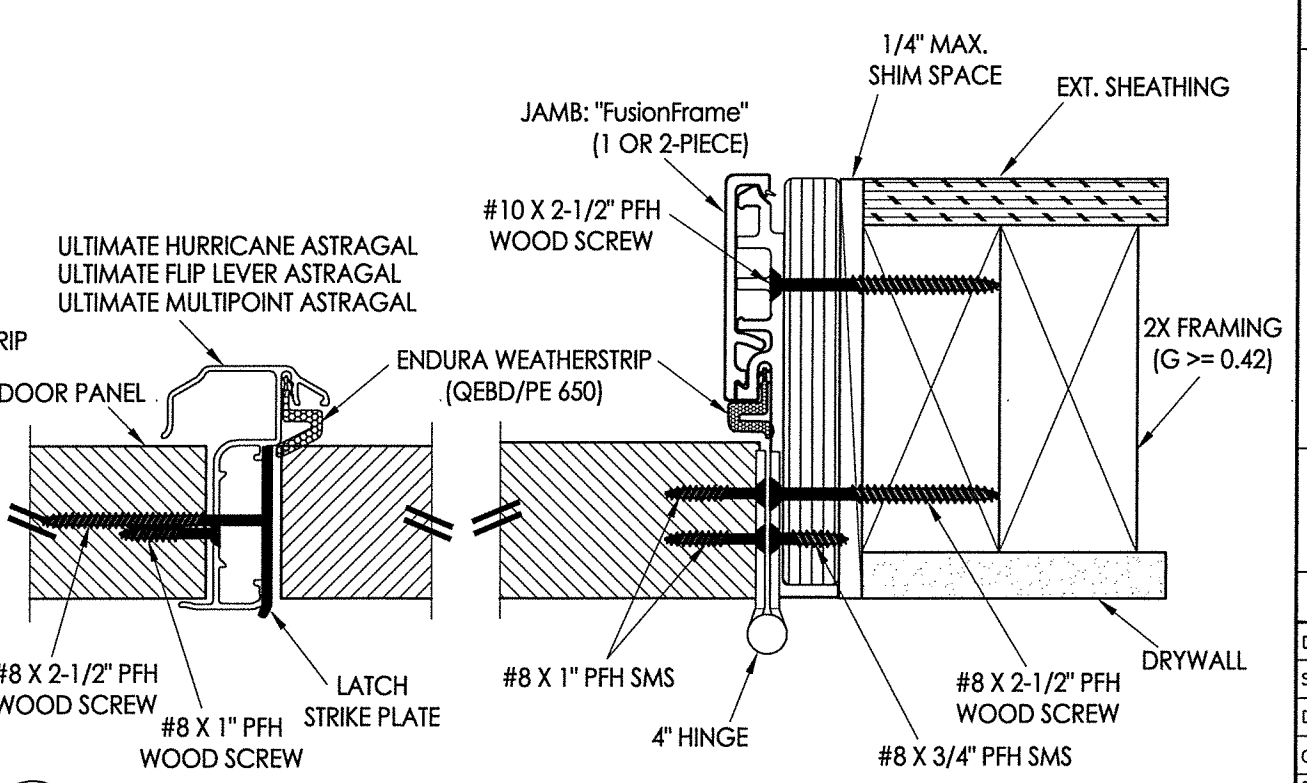
**2** VERTICAL CROSS SECTION  
**6** Outswing shown - inswing also approved



**3** VERTICAL CROSS SECTION  
**6** Outswing shown - inswing also approved



**1** HORIZONTAL CROSS SECTION  
**6** Inswing shown - Outswing also approved



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

PRODUCT: ENDURA

PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS

NO.	DATE	BY	REVISIONS
4	11/18/19	LFS	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
3	9/05/18	LFS	ADDED ADDITIONAL THRESHOLDS
2	5/5/15	LFS	ADD NEW ASTRAGAL PIN CAPTURE
1	1/07/14	LFS	ADDED ARTICULATING SILL

DATE: 8/07/12

SCALE: N.T.S.

DWG. BY: JK

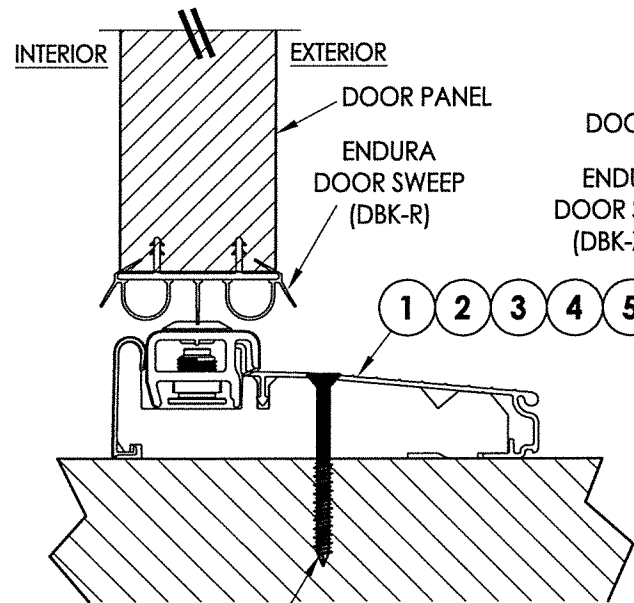
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DRAWING NO.: TX-4204

SHEET 6 OF 8

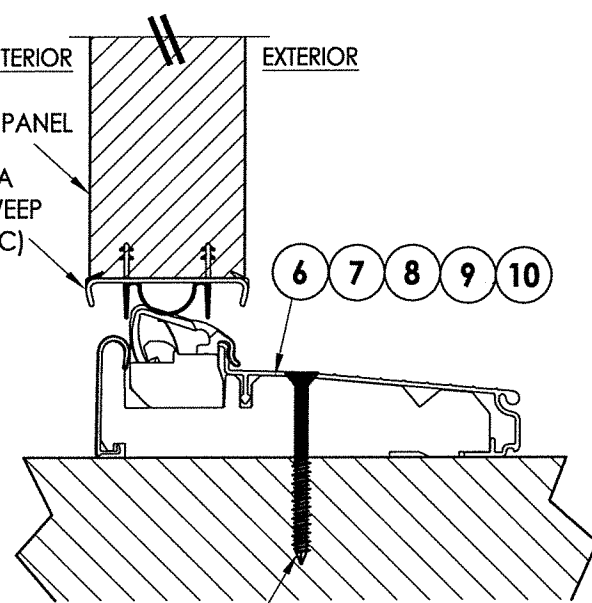
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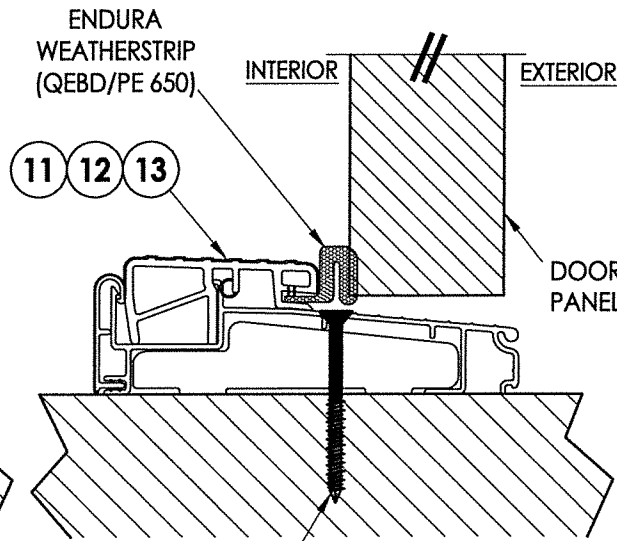
#10 X 2.5" PFH WOOD SCREW OR  
1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

**1 VERTICAL CROSS SECTION**  
7 Inswing Adjustable Threshold



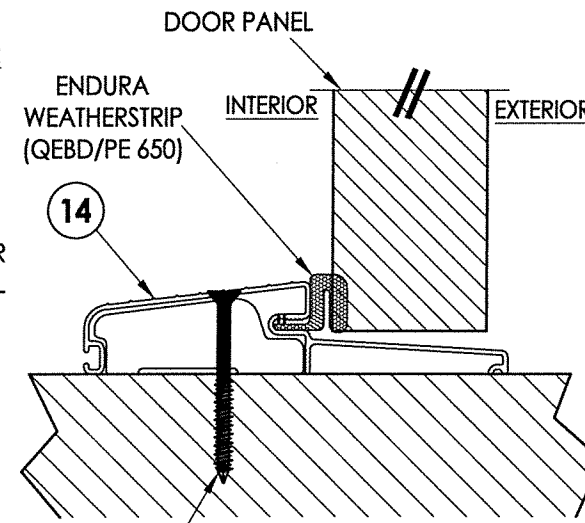
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1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

**2 VERTICAL CROSS SECTION**  
7 Inswing Articulating Threshold  
w/ Pin Capture



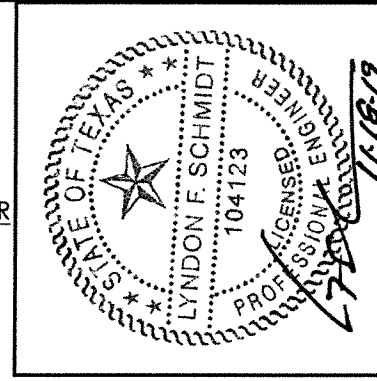
#10 X 2.5" PFH WOOD SCREW OR  
1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

**3 VERTICAL CROSS SECTION**  
7 Inswing Adjustable Threshold



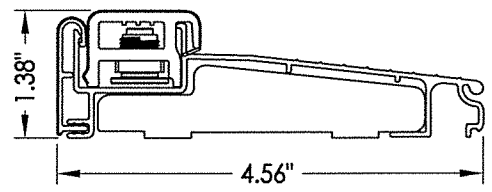
#10 X 2.5" PFH WOOD SCREW OR  
1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

**4 VERTICAL CROSS SECTION**  
7 Inswing Adjustable Threshold

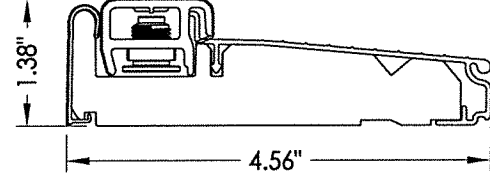


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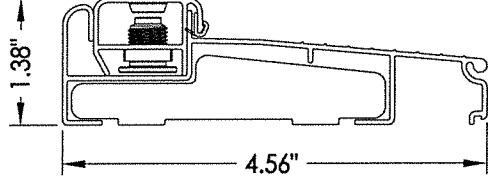
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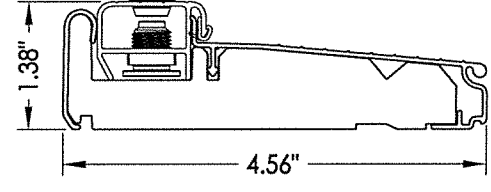
**1 INSWING ADJUSTABLE THRESHOLD**  
ZAIL4565



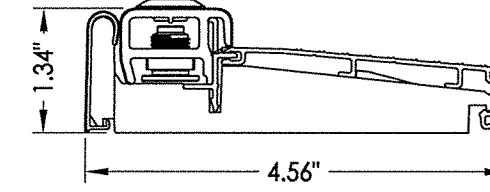
**2 INSWING ADJUSTABLE THRESHOLD**  
ZAI4565FN  
MAX. DESIGN PRESSURE = +40/-45 PSF



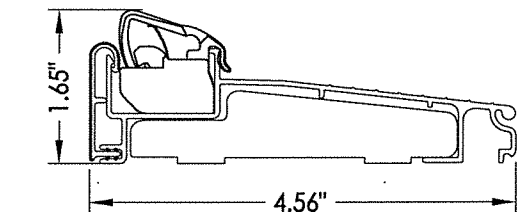
**3 INSWING ADJUSTABLE THRESHOLD**  
ZAILAA4565



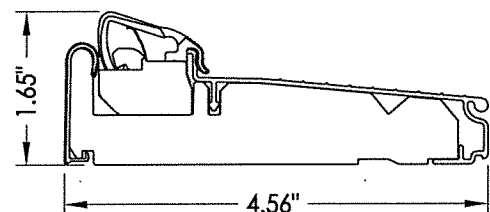
**4 INSWING ADJUSTABLE THRESHOLD**  
ZAI4565FN  
MAX. DESIGN PRESSURE = +40/-45 PSF



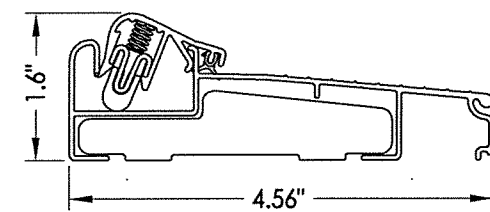
**5 INSWING ADJUSTABLE THRESHOLD**  
ZAI4565RDS  
MAX. DESIGN PRESSURE = ±50 PSF



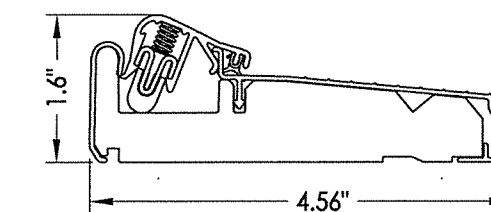
**6 INSWING ARTICULATING THRESHOLD**  
ZACL4565  
MAX. DESIGN PRESSURE = ±50 PSF



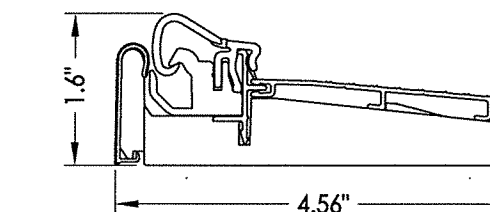
**7 INSWING ARTICULATING THRESHOLD**  
ZAC4565FN  
MAX. DESIGN PRESSURE = +40/-45 PSF



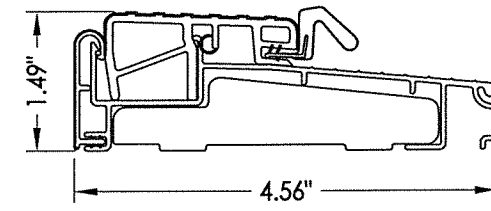
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ZACLA4565  
MAX. DESIGN PRESSURE = ±50 PSF



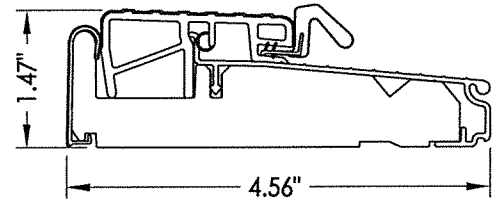
**9 INSWING ARTICULATING THRESHOLD**  
ZACAA4565FN  
MAX. DESIGN PRESSURE = +40/-45 PSF



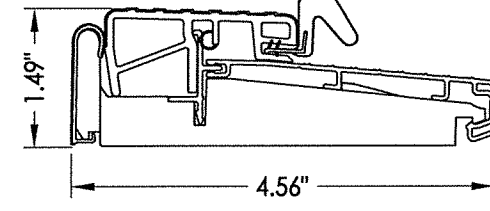
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ZAC4565RDS  
MAX. DESIGN PRESSURE = ±45 PSF



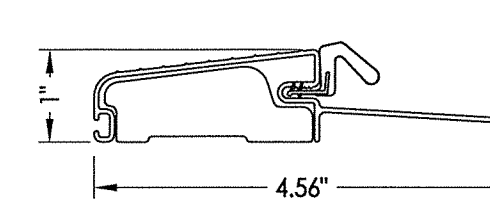
**11 OUTSWING THRESHOLD**  
ZOBL4565



**12 OUTSWING THRESHOLD**  
ZOB4565FN



**13 OUTSWING THRESHOLD**  
ZOB4565RDS

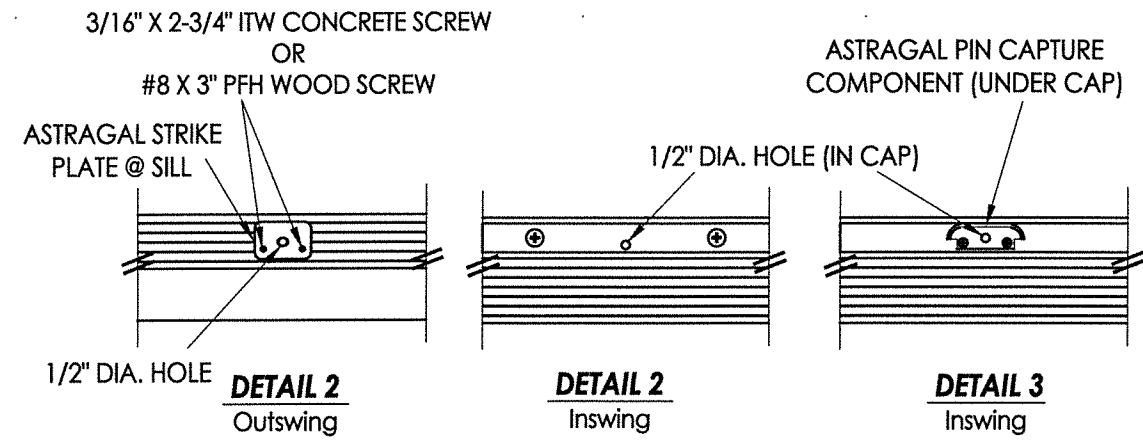
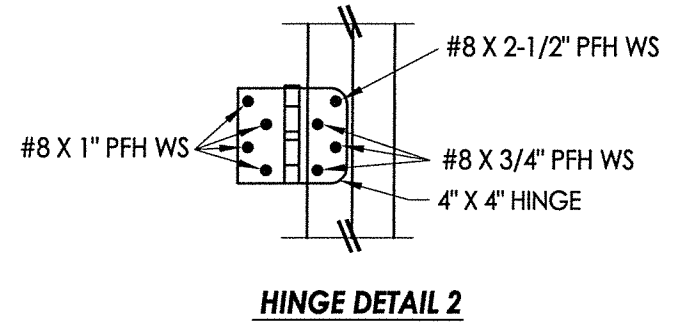
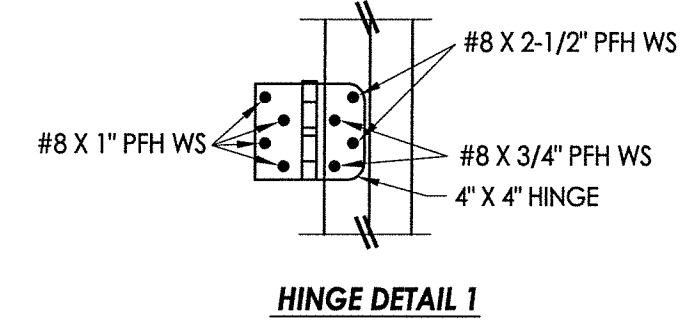
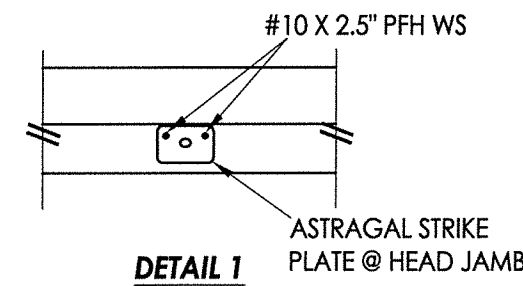
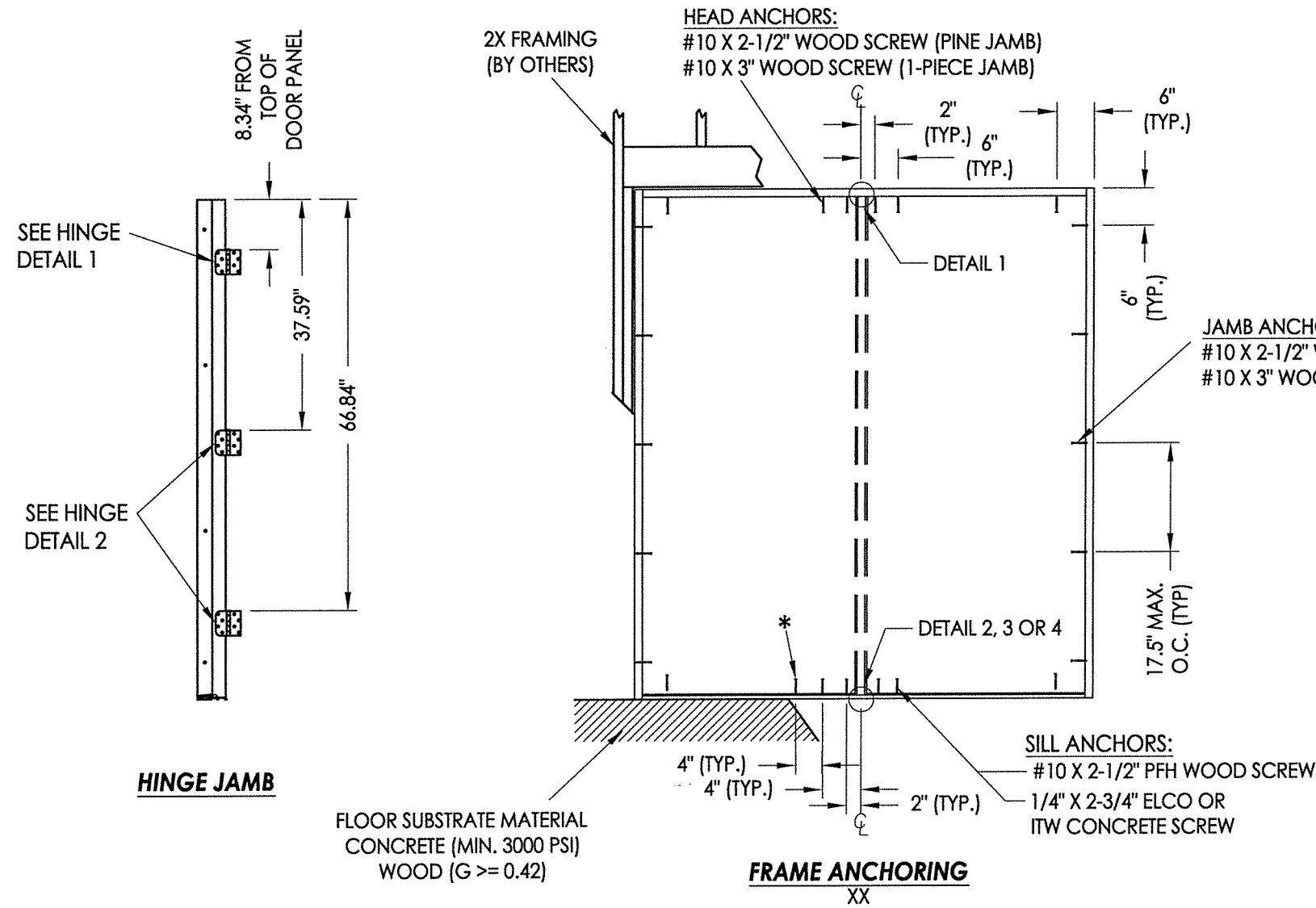


**14 OUTSWING THRESHOLD**  
FOB4566

PRODUCT:		ENDURA	
PART OR ASSEMBLY:		VERTICAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
4	11/18/19	LFS	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
3	9/05/18	LFS	ADDED ADDITIONAL THRESHOLDS
2	5/5/15	LFS	ADD NEW ASTRAGAL PIN CAPTURE
1	1/07/14	LFS	ADDED ARTICULATING SILL
DATE: 8/07/12		SCALE: N.T.S.	
DWG. BY: JK		CHK. BY: LFS	
DRAWING NO.: TX-4204		SHEET 7 OF 8	

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R:\Clients\Endura PERMANENT\B - Texas Dept of Ins\TDI - DR-610 Therma-Tru Flush GLZ\Drawings\2019 REV\TX-4204-05.dwg, 1-8

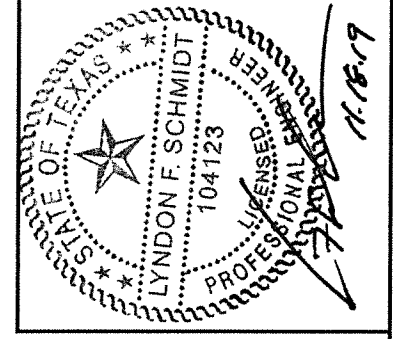


**JAMB NOTES:**  
 THE PINE OR "FusionFrame" 1-PIECE JAMB MAY BE INSTALLED @ THE HEAD OR SIDE JAMB.  
 THE FusionFrame" 2-PIECE JAMB MAY BE INSTALLED @ THE SIDE JAMBS ONLY.

- 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®	3/16"	1-3/4"	3"	1-1/2"
ITW TAPCON®	1/4"	1-3/4"	1-1/2"	4"
ELCO ULTRACON®	1/4"	1-3/4"	1"	4"

- 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

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

PRODUCT: ENDURA

PART OR ASSEMBLY: FRAME ANCHORING

NO.	DATE	REVISIONS
4	11/18/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
3	9/05/18	ADDED ADDITIONAL THRESHOLDS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE
1	1/07/14	ADDED ARTICULATING SILL

DATE: 8/07/12  
 SCALE: N.T.S.  
 DWG. BY: JK  
 CHK. BY: LFS  
 DRAWING NO.: TX-4204  
 SHEET 8 OF 8