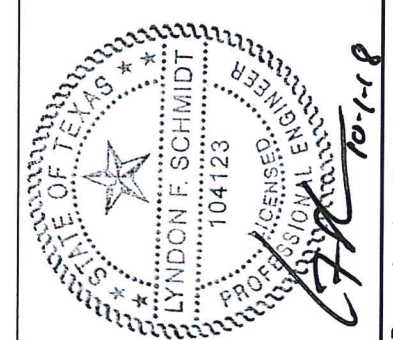
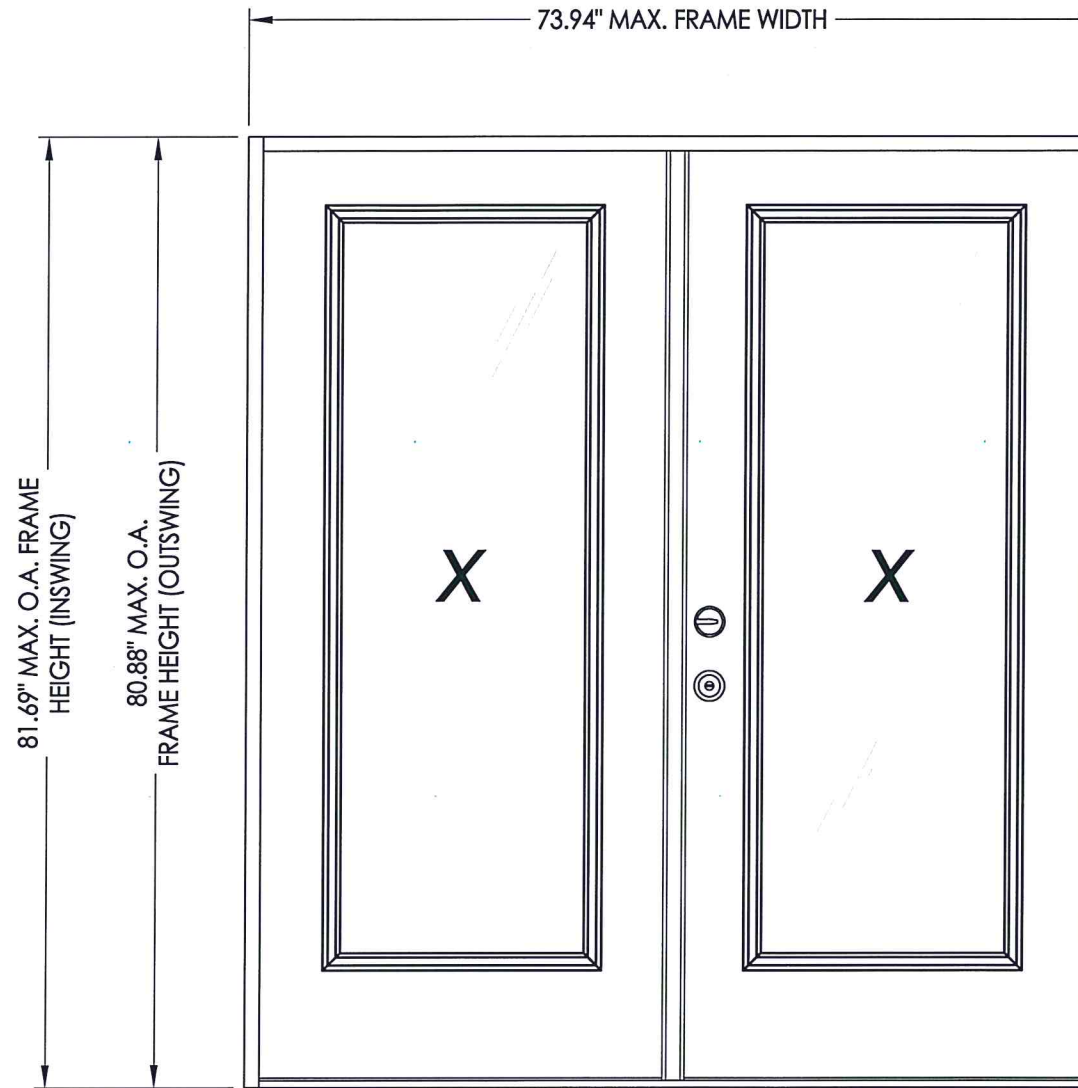




Glazed Steel Door

"NON-IMPACT"
INSWING / 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

EVALUATED FOR USE IN THE STATE OF TEXAS

The Glazed Steel Door system described herein complies with the 2006 International Residential Code (IRC), Sections R301 & R613 and the 2006 International Building Code (IBC), Sections 1405.12, 1609, 1714.5, 2403 and 2404 (including Texas revisions) 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 1609.1.2 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.

TABLE OF CONTENTS	
SHEET#	DESCRIPTION
1	Typical elevations, design pressures & general notes
2	Astragal details (Ultimate Flip Lever)
3	Astragal details (Ultimate Multi-point)
4	Astragal details (Ultimate Hurricane)
5	Door panel details (lip lite insert glazing)
6	Horizontal cross sections
7	Vertical cross sections
8	Frame anchoring

CONFIG.	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	INSWING	+50.0	-50.0	+40.0	-40.0	+40.0	-40.0
	OUTSWING	+55.0	-55.0	+40.0	-40.0	+40.0	-40.0

PRODUCT: ENDURA

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

NO.	DATE	BY	REVISIONS
4	9/27/18	LFS	UPDATE FOR NEW TESTING
3	11/01/16	LFS	ADDED THRESHOLDS
2	5/05/15	LFS	ADD NEW ASTRAGAL PIN CAPTURE
1	1/09/14	LFS	ADDED ARTICULATING SILL

DATE: 8/20/12

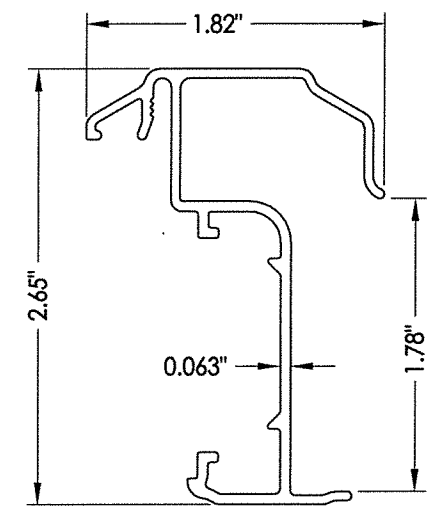
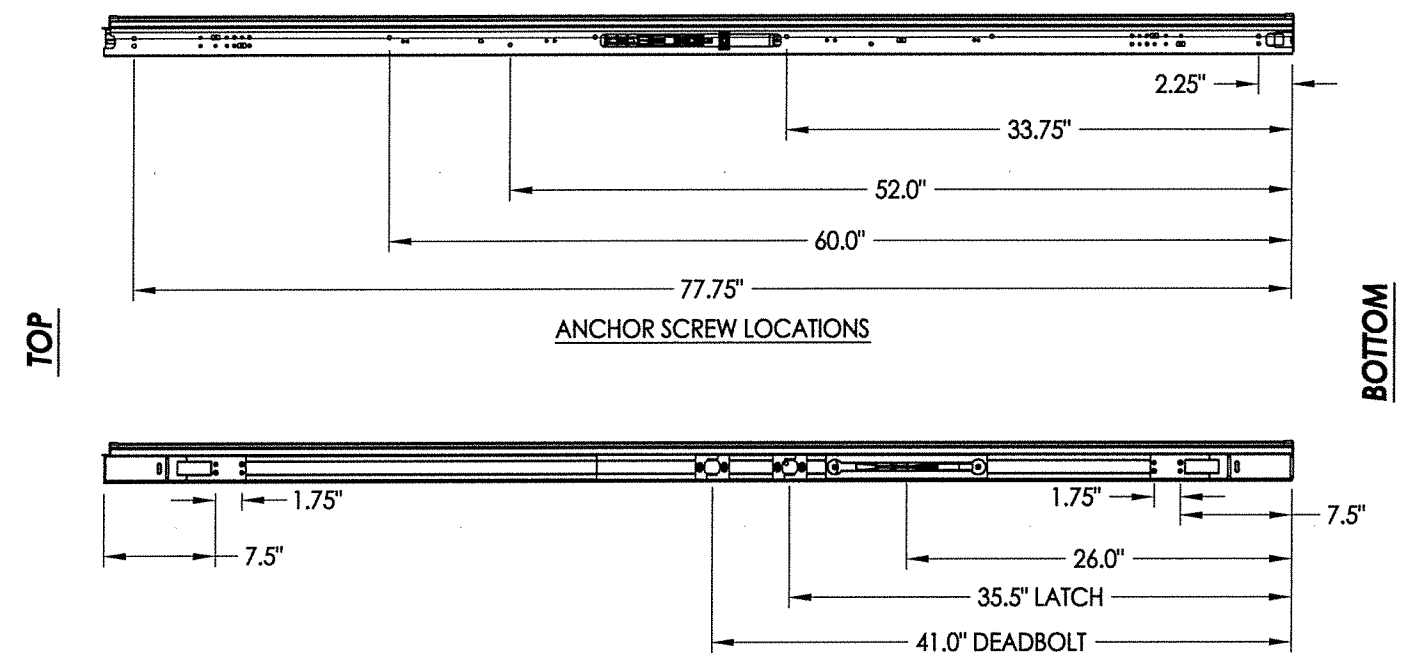
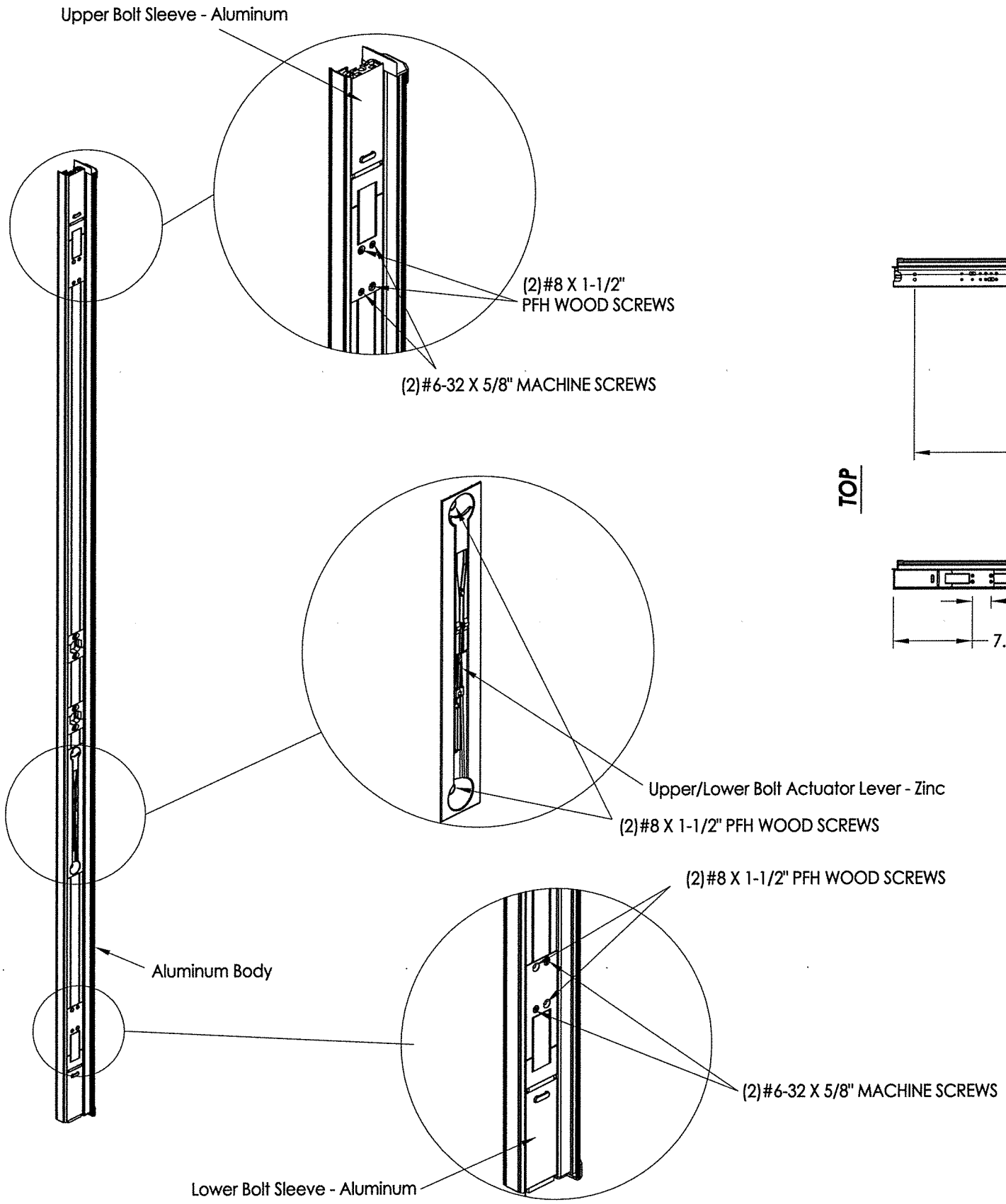
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DWG. BY: JK

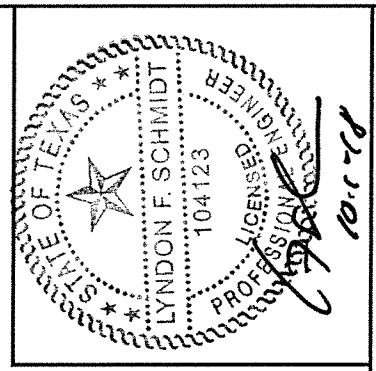
CHK. BY: LFS

DRAWING NO.: TX-4224

SHEET 1 OF 8



Astragal Section



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 CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: ENDURA

PART OR ASSEMBLY: ASTRAGAL DETAILS (ULTIMATE FLIP LEVER)

NO.	DATE	REVISIONS	BY
4	9/27/18	UPDATE FOR NEW TESTING	LFS
3	11/01/16	ADDED THRESHOLDS	LFS
2	5/05/15	ADD NEW ASTRAGAL PIN CAPTURE	LFS
1	1/09/14	ADDED ARTICULATING SILL	LFS

DATE: 8/20/12

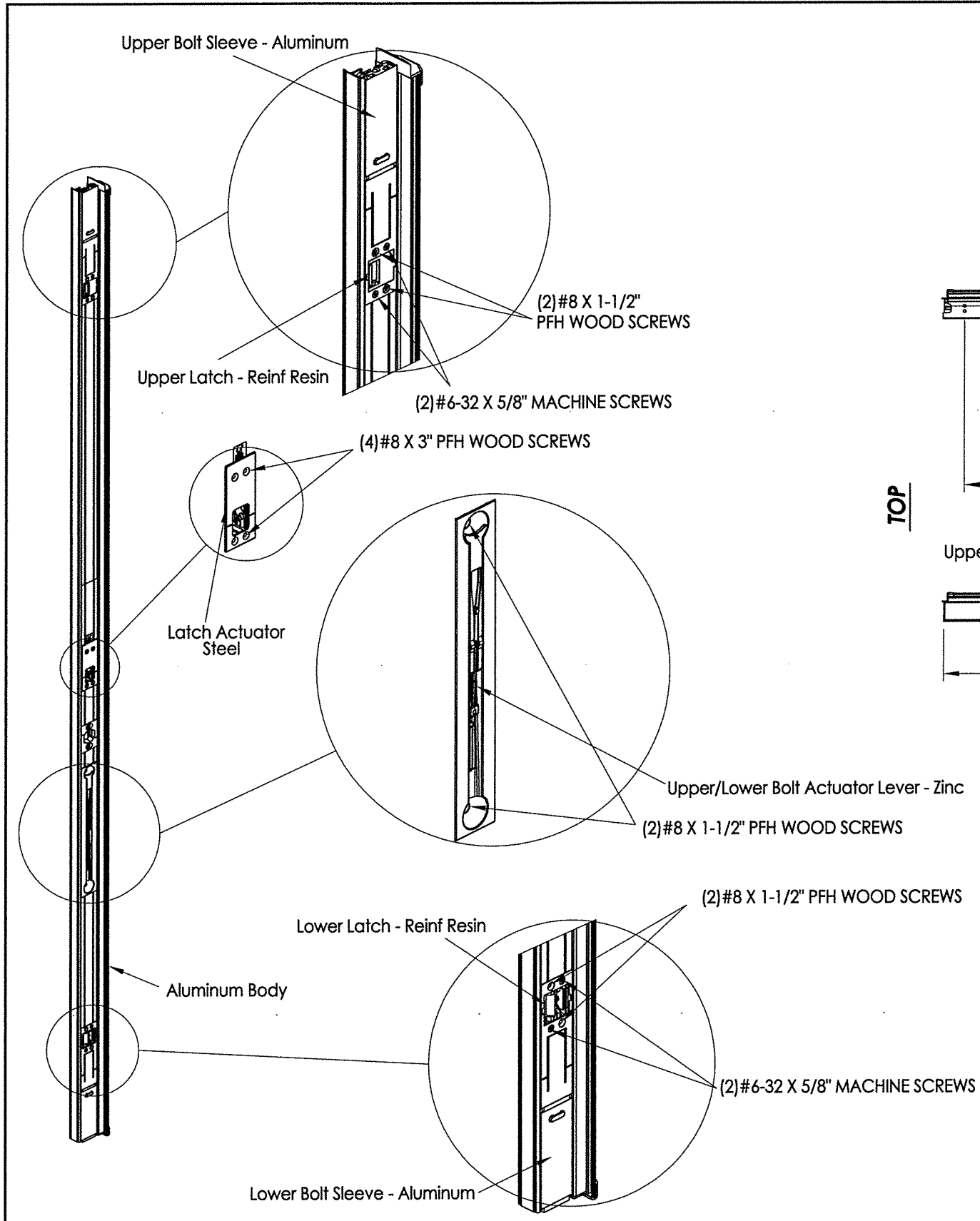
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DWG. BY: JK

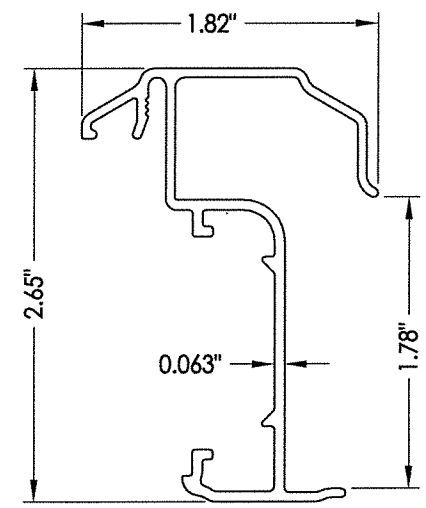
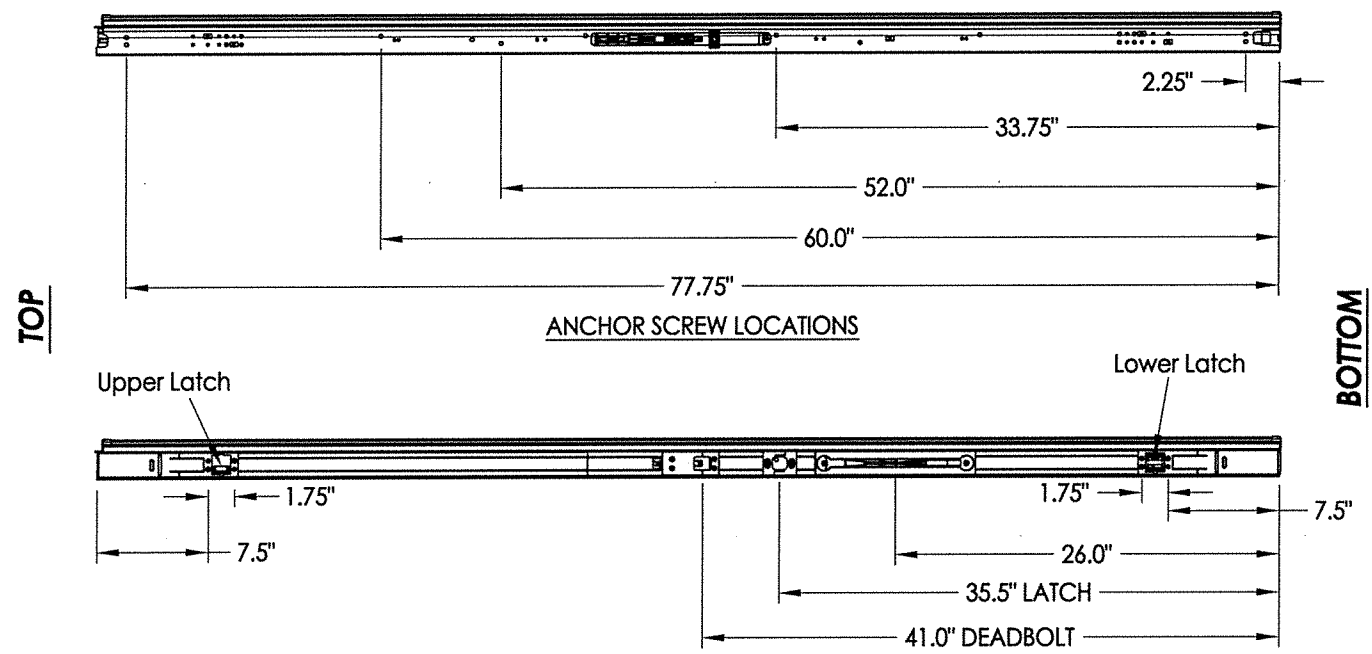
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DRAWING NO.: TX-4224

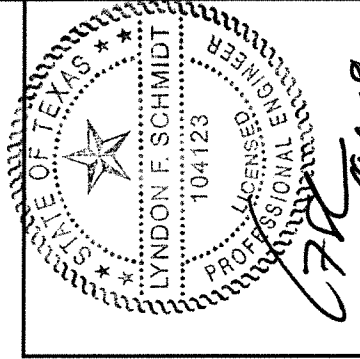
SHEET 2 OF 8



ULTIMATE MULTI-POINT ASTRAGAL



Astragal Section

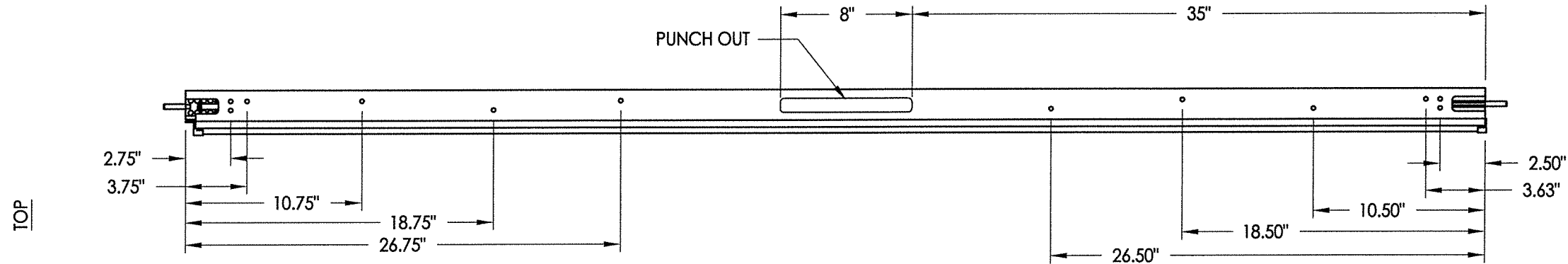


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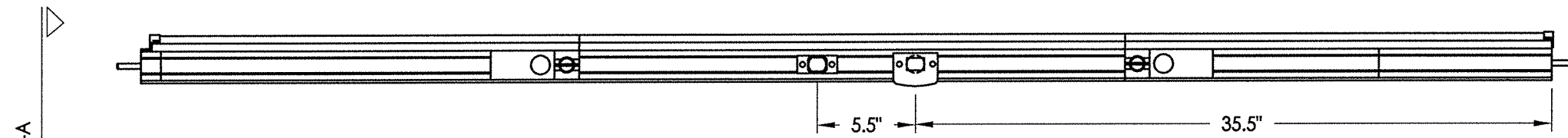
TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	ENDURA	
PART OR ASSEMBLY:	ASTRAGAL DETAILS (ULTIMATE MULTI-POINT)	
NO.	DATE	BY
4	9/27/18	LFS
3	11/01/16	LFS
2	5/05/15	LFS
1	1/09/14	LFS
REVISIONS		
DATE:	8/20/12	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4224	
SHEET	3	OF 8

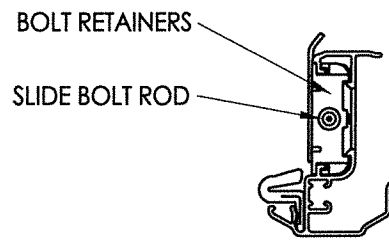


BOTTOM

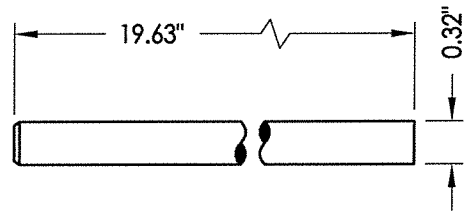
ANCHOR SCREW LOCATIONS



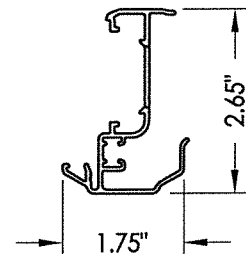
6'-8" ALUMINUM ASTRAGAL ASSEMBLY
By Endura



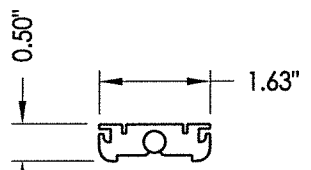
VIEW A-A
Aluminum Astragal Assembly



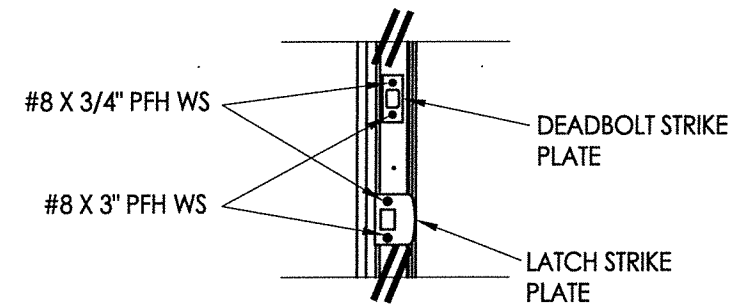
SLIDE BOLT ROD
MATL: Steel



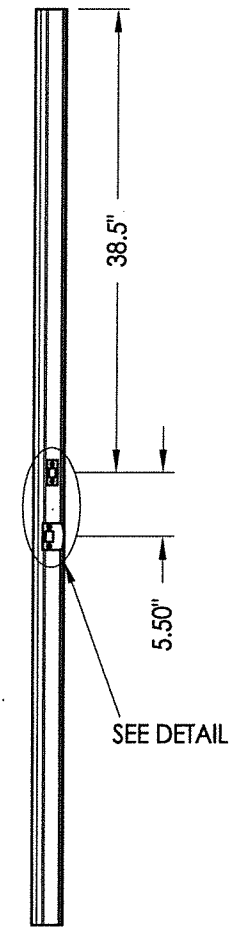
ULTIMATE HURRICANE ASTRAGAL



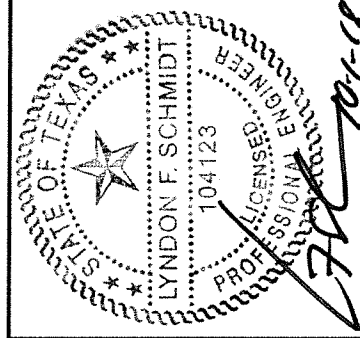
BOLT RETAINER
MATL: 9-3/4" Aluminum



LATCH & DEADBOLT DETAIL



ASTRAGAL



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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: ENDURA

PART OR ASSEMBLY: ASTRAGAL DETAILS (ULTIMATE HURRICANE)

NO.	DATE	REVISIONS	BY
4	9/27/18	UPDATE FOR NEW TESTING	LFS
3	11/01/16	ADDED THRESHOLDS	LFS
2	5/05/15	ADD NEW ASTRAGAL PIN CAPTURE	LFS
1	1/09/14	ADDED ARTICULATING SILL	LFS

DATE: 8/20/12

SCALE: N.T.S.

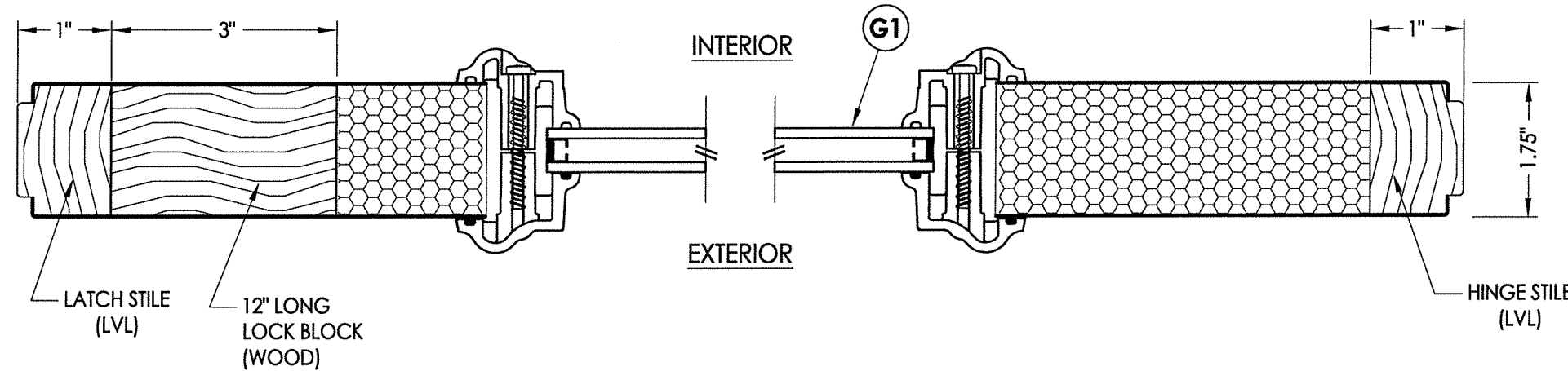
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CHK. BY: LFS

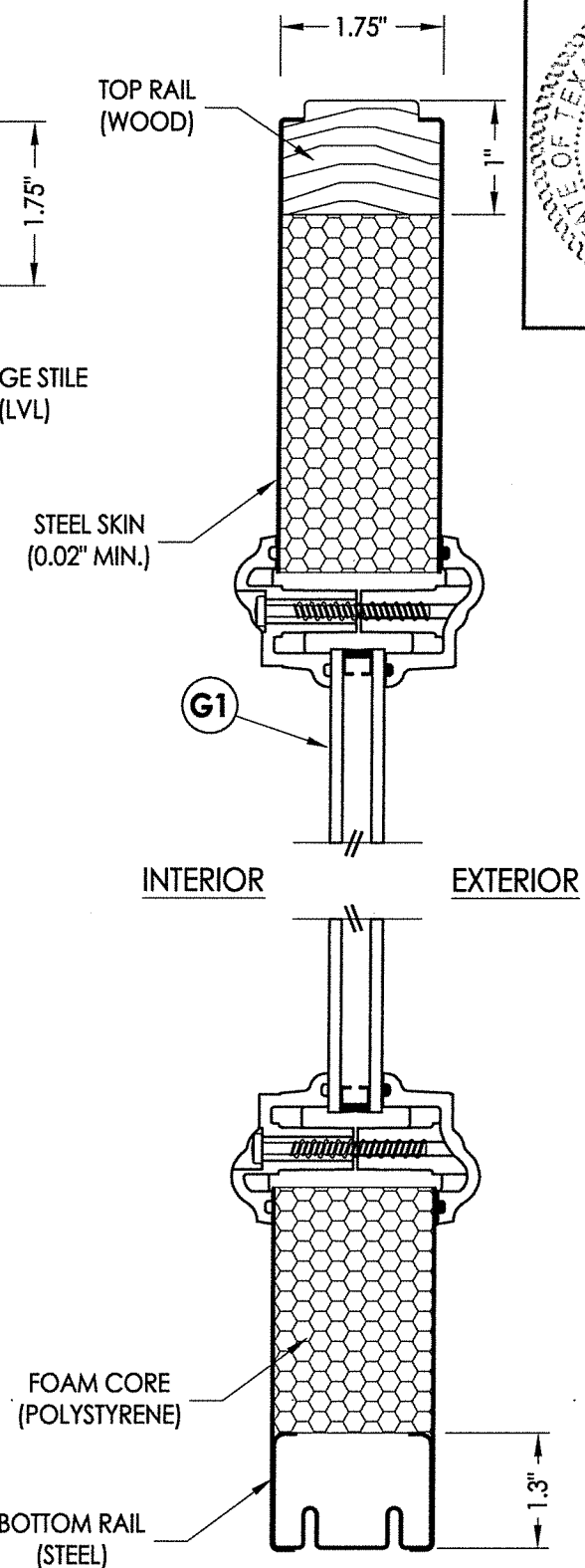
DRAWING NO.: TX-4224

SHEET 4 OF 8

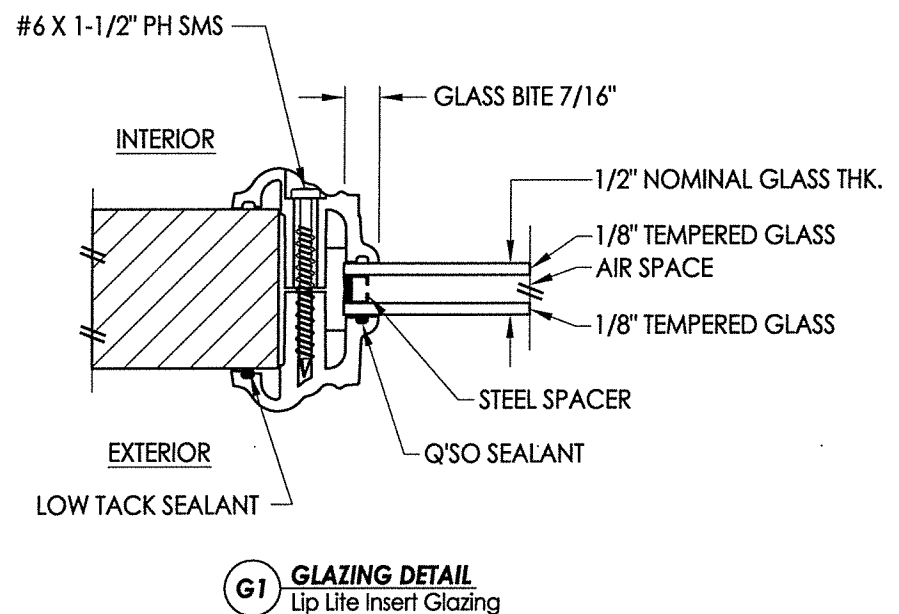
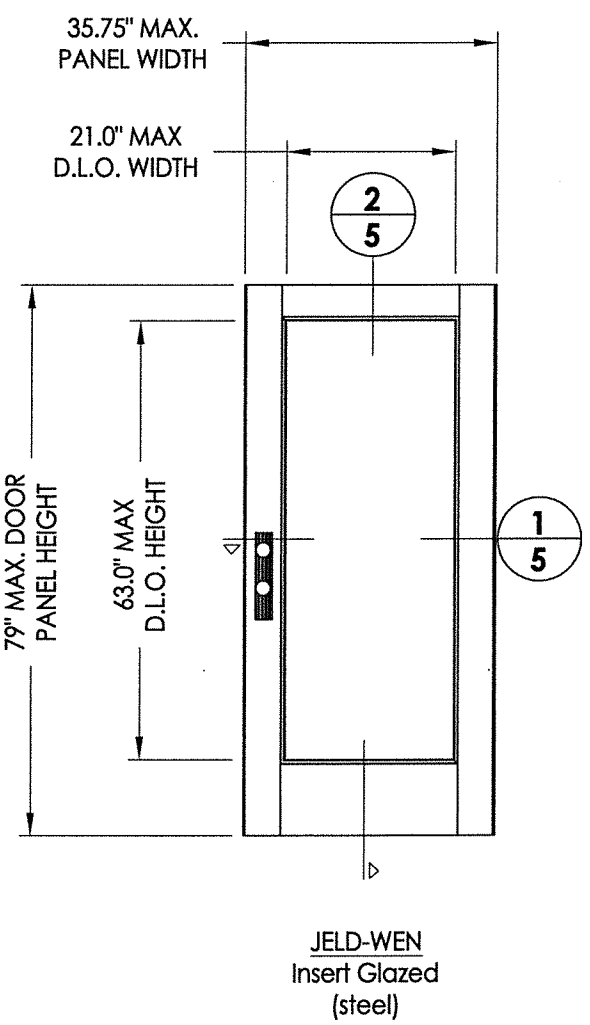
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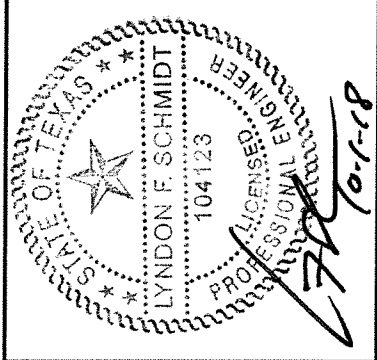
1
5 HORIZONTAL CROSS SECTION



2
5 VERTICAL CROSS SECTION



G1 GLAZING DETAIL
Lip Lite Insert Glazing



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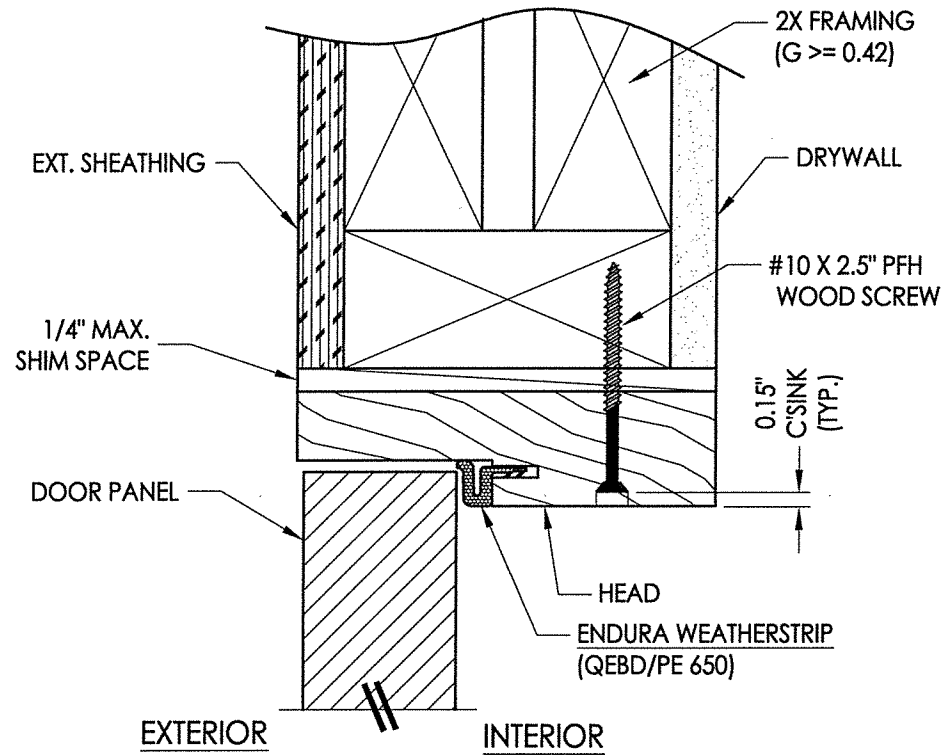
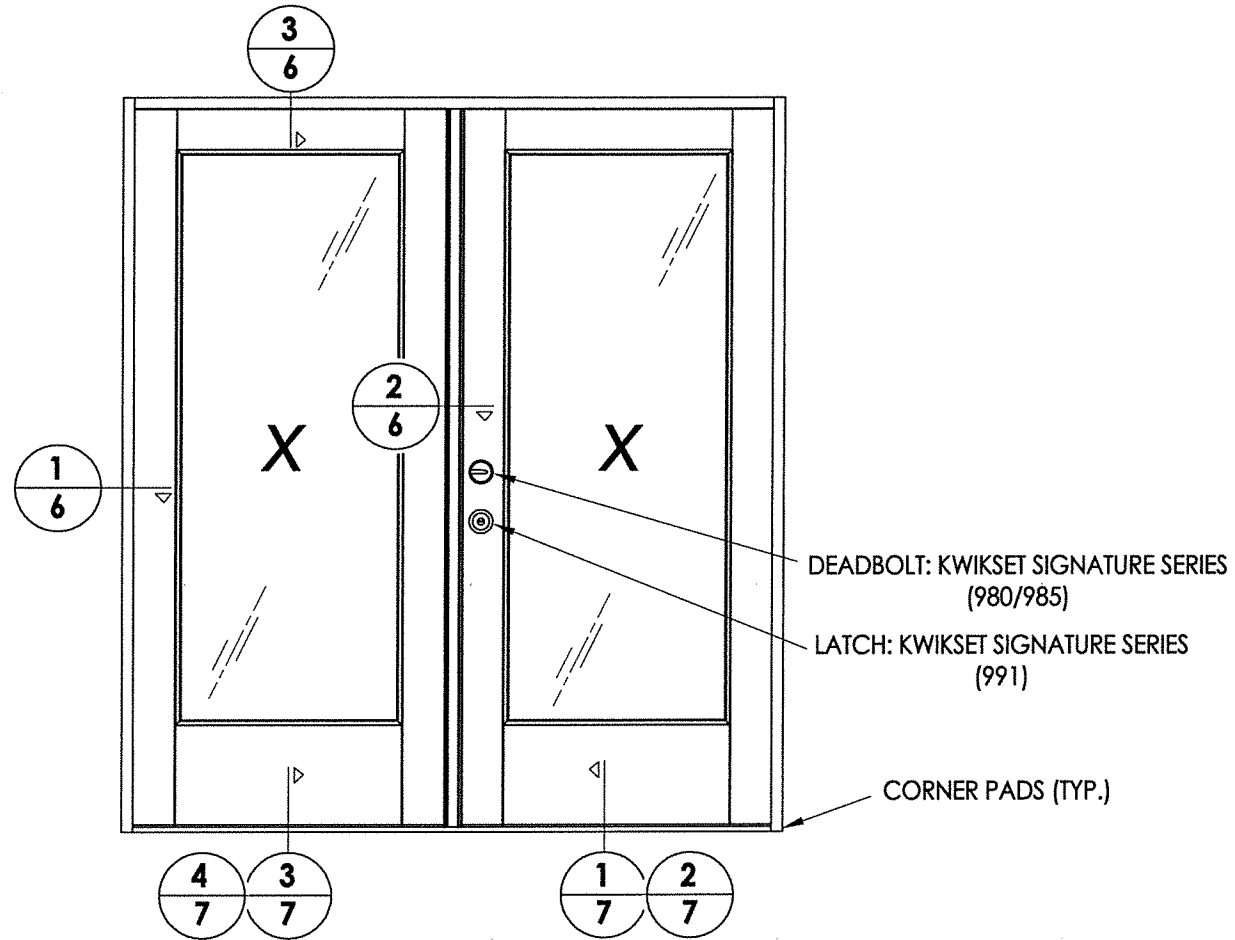
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Phone No.: 813.659.9197

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CERTIFICATE OF REGISTRATION # F-11852

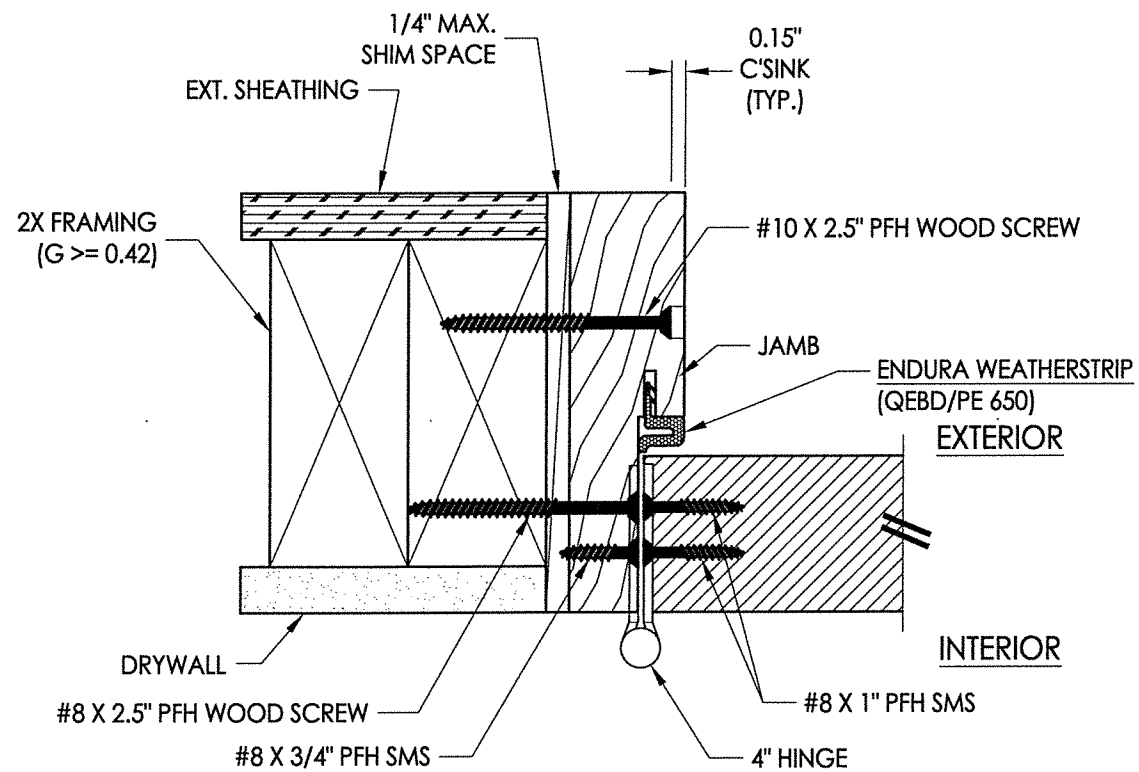
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PART OR ASSEMBLY:	DOOR PANEL DETAILS (LIP LITE INSERT GLAZING)		
NO.	DATE	BY	
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3	11/01/16	ADDED THRESHOLDS	LFS
2	5/05/15	ADD NEW ASTRAGAL PIN CAPTURE	LFS
1	1/09/14	ADDED ARTICULATING SILL	LFS
REVISIONS			
DATE: 8/20/12			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: TX-4224			
SHEET 5 OF 8			

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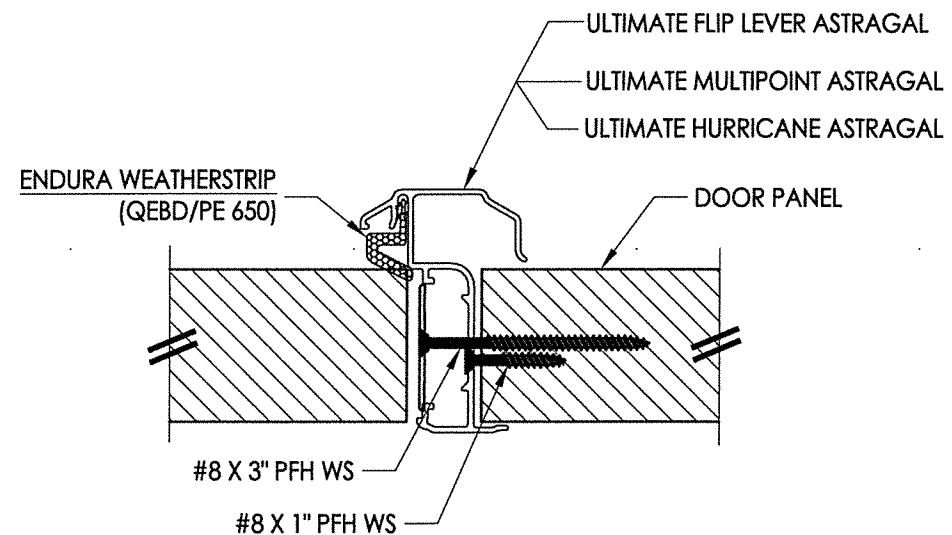
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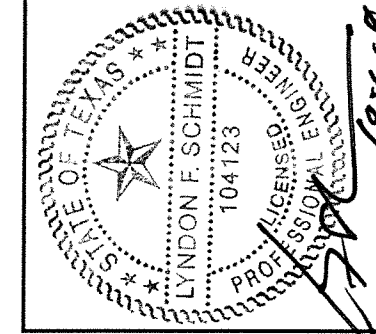
3 VERTICAL CROSS SECTION
 6 Outswing shown - inswing also approved



1 HORIZONTAL CROSS SECTION
 6 Inswing shown - Outswing also approved



2 HORIZONTAL CROSS SECTION
 6



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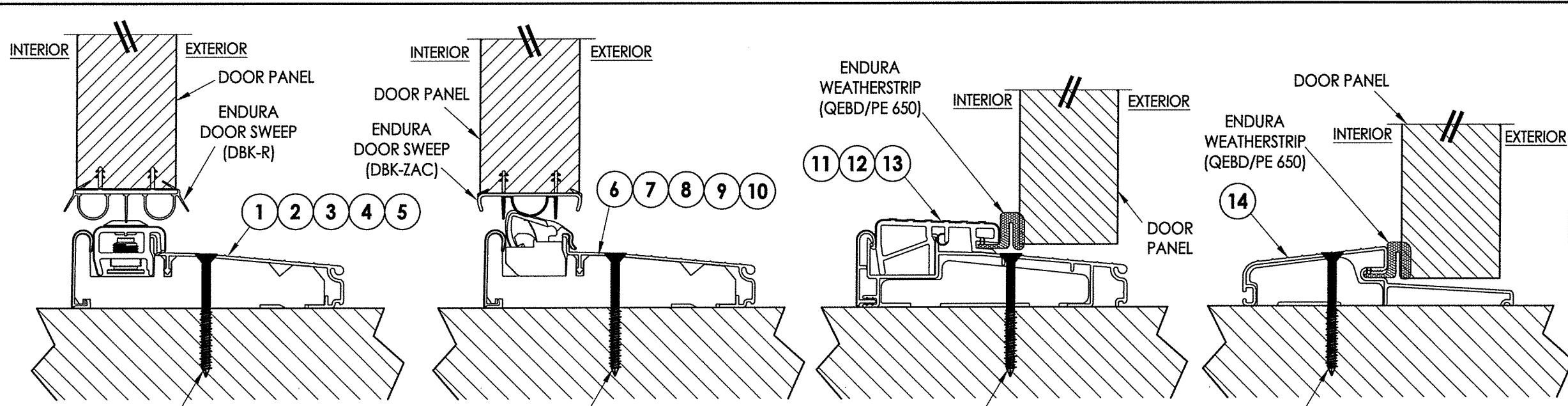
TEXAS BOARD OF PROFESSIONAL ENGINEERS
 CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	ENDURA
PART OR ASSEMBLY:	HORIZONTAL CROSS SECTIONS

NO.	DATE	BY	REVISIONS
3	11/01/16	LFS	ADDED THRESHOLDS
2	5/05/15	LFS	ADD NEW ASTRAGAL PIN CAPTURE
1	1/09/14	LFS	ADDED ARTICULATING SILL

DATE: 8/20/12
 SCALE: N.T.S.
 DWG. BY: JK
 CHK. BY: LFS
 DRAWING NO.: TX-4224
 SHEET 6 OF 8

R:\Clients\Endura PERMANENT B - Texas Dept of Ins\TDI - 630 (Sub ID 6614) (Exp. 11-1-18)\C - Drawings\Current\TX-4224-25.dwg, 1-7



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

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

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

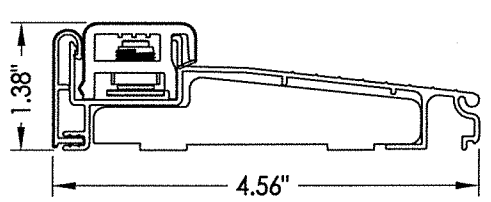
#10 X 2.5" PFH WOOD SCREW OR
1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

1 VERTICAL CROSS SECTION
7 Inswing Adjustable Threshold

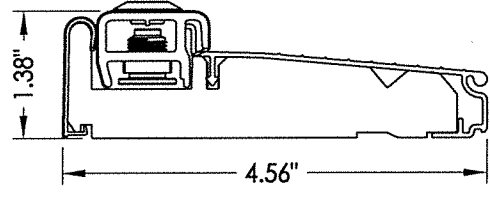
2 VERTICAL CROSS SECTION
7 Inswing Articulating Threshold
w/ Pin Capture

3 VERTICAL CROSS SECTION
7 Outswing Bump Threshold

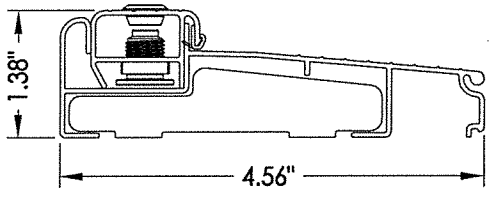
4 VERTICAL CROSS SECTION
7 Outswing Bump Threshold



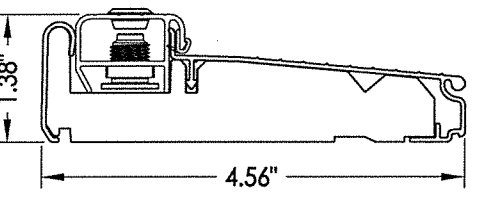
1 INSWING ADJUSTABLE THRESHOLD
ZAIL4565



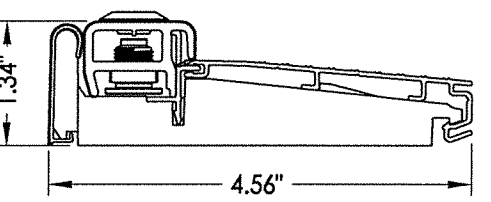
2 INSWING ADJUSTABLE THRESHOLD
ZAI4565FN
MAX. DESIGN PRESSURE = ±40 PSF



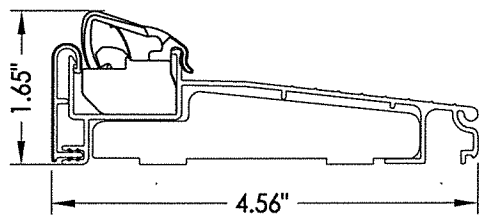
3 INSWING ADJUSTABLE THRESHOLD
ZAILAA4565



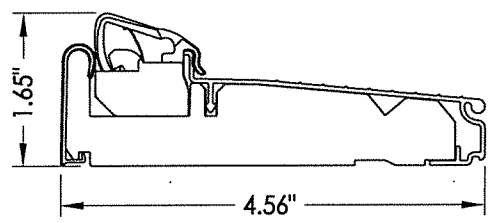
4 INSWING ADJUSTABLE THRESHOLD
ZAI4565FN
MAX. DESIGN PRESSURE = ±40 PSF



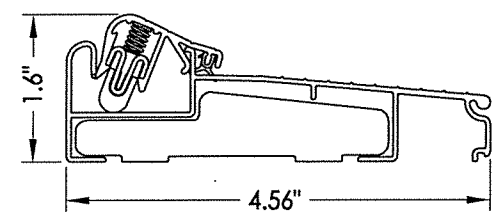
5 INSWING ADJUSTABLE THRESHOLD
ZAI4565RDS



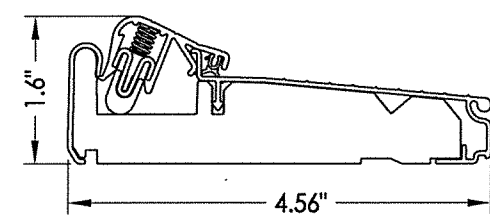
6 INSWING ARTICULATING THRESHOLD
ZACL4565



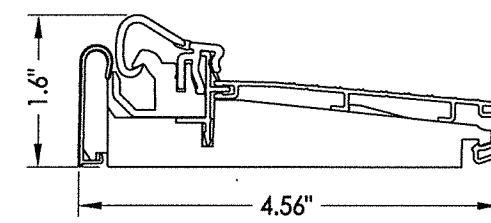
7 INSWING ARTICULATING THRESHOLD
ZAC4565FN
MAX. DESIGN PRESSURE = ±40 PSF



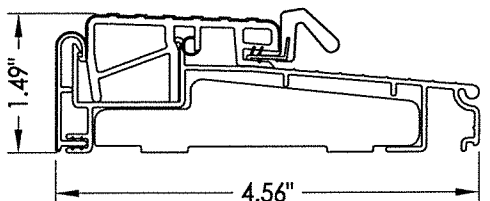
8 INSWING ARTICULATING THRESHOLD
ZACLAA4565



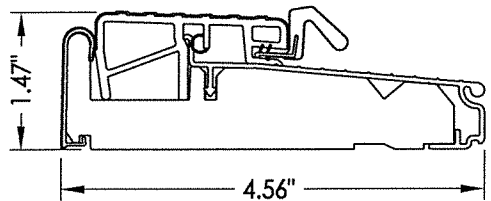
9 INSWING ARTICULATING THRESHOLD
ZACAA4565FN
MAX. DESIGN PRESSURE = ±40 PSF



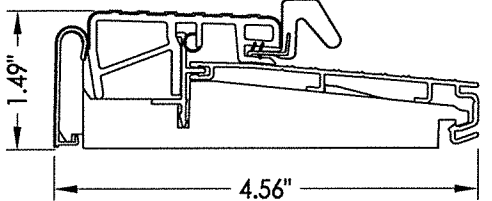
10 INSWING ARTICULATING THRESHOLD
ZAC4565RDS
MAX. DESIGN PRESSURE = ±45 PSF



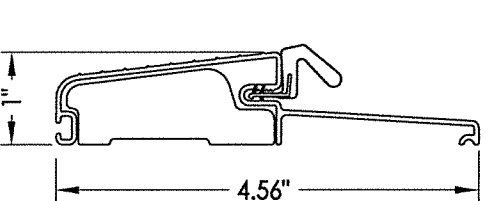
11 OUTSWING THRESHOLD
ZOBL4565



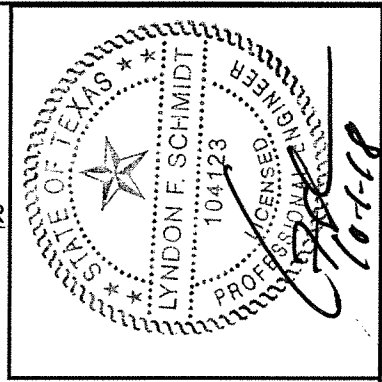
12 OUTSWING THRESHOLD
ZOB4565FN



13 OUTSWING THRESHOLD
ZOB4565RDS



14 OUTSWING THRESHOLD
FOB4566

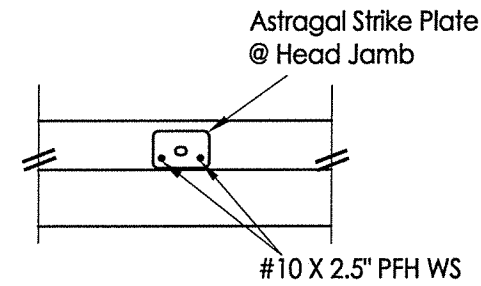
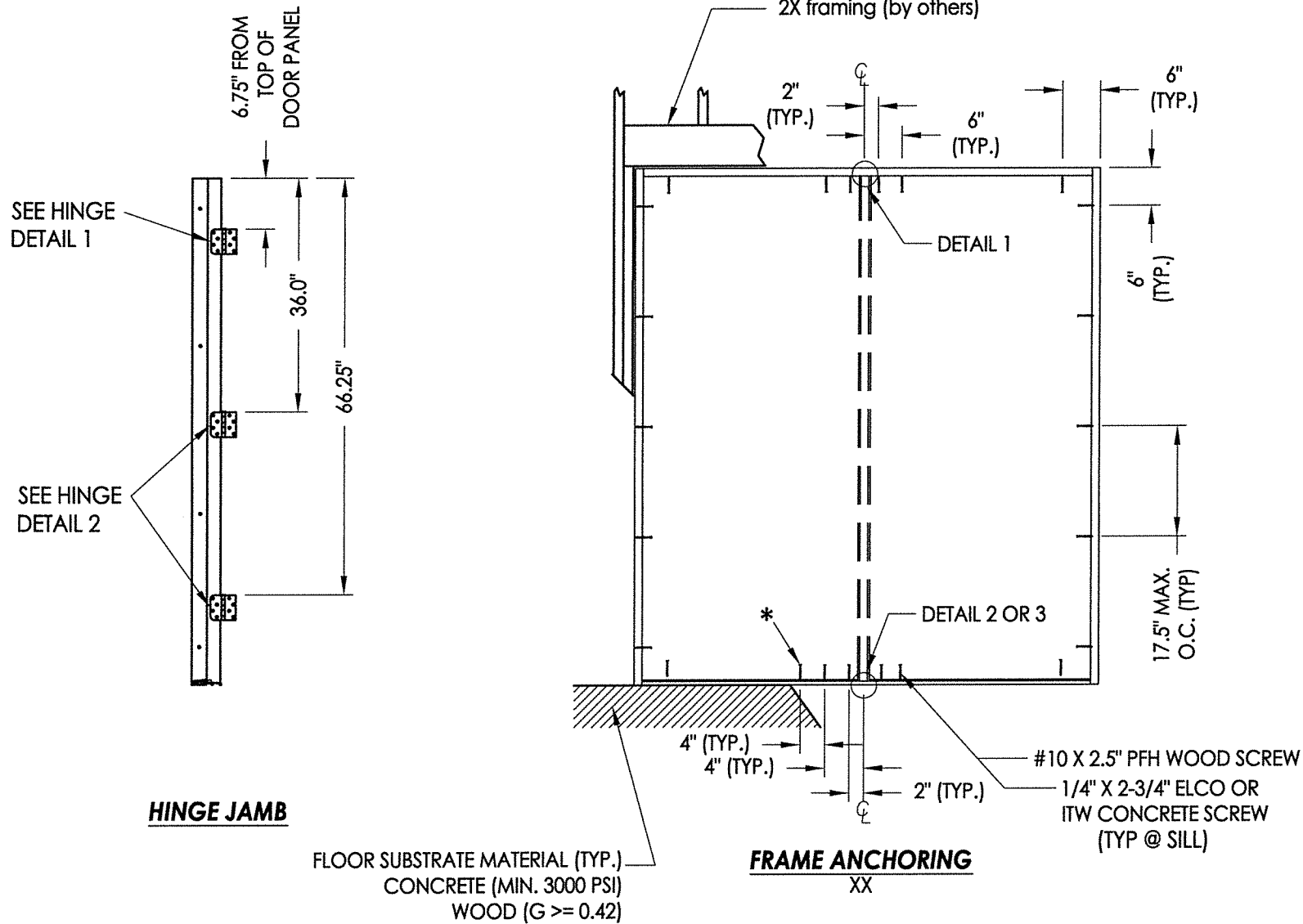


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TEXAS P.E. #104123

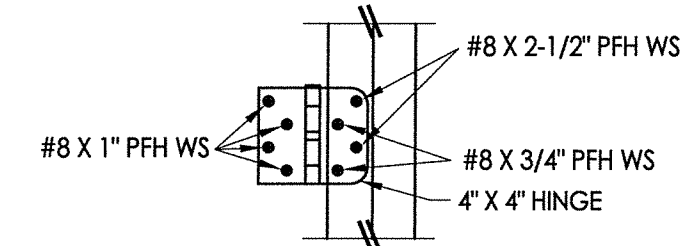
RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL, 33595
Phone No.: 813.659.9197

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

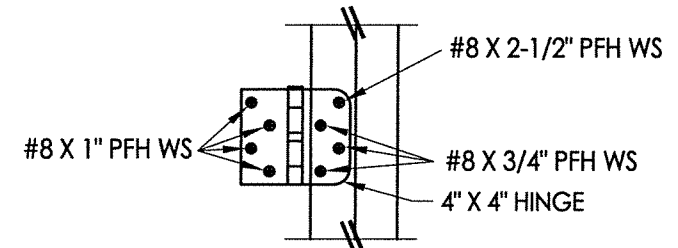
PRODUCT: ENDURA		PART OR ASSEMBLY: VERTICAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
4	9/27/18	LFS	UPDATE FOR NEW TESTING
3	11/01/16	LFS	ADDED THRESHOLDS
2	5/05/15	LFS	ADD NEW ASTRAGAL PIN CAPTURE
1	1/09/14	LFS	ADDED ARTICULATING SILL
DATE: 8/20/12		SCALE: N.T.S.	
DWG. BY: JK		CHK. BY: LFS	
DRAWING NO.: TX-4224		SHEET 7 OF 8	



DETAIL 1



HINGE DETAIL 1



HINGE DETAIL 2

FLOOR SUBSTRATE MATERIAL (TYP.)
 CONCRETE (MIN. 3000 PSI)
 WOOD (G >= 0.42)

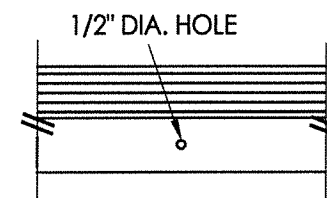
FRAME ANCHORING
 XX

* NOTE: This additional anchor required for D.P. > 40 PSF.

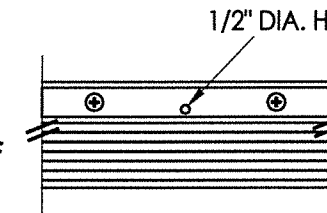
CONCRETE ANCHOR NOTES:

- 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:

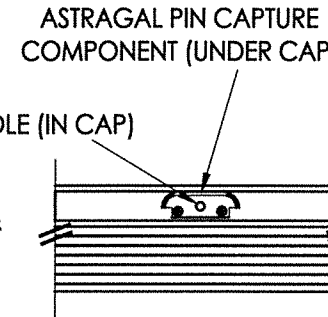
ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-3/4"	2-1/2"	3"
ELCO ULTRACON®	1/4"	1-3/4"	1"	3"



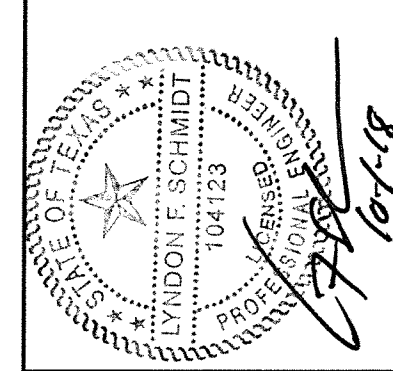
DETAIL 2
 Outswing



DETAIL 2
 Inswing



DETAIL 3
 Inswing



Documents Prepared By: Lyndon F. Schmidt, P.E.
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TEXAS BOARD OF PROFESSIONAL ENGINEERS
 CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	ENDURA
PART OR ASSEMBLY:	FRAME ANCHORING

NO.	DATE	BY	REVISIONS
4	9/27/18	LFS	UPDATE FOR NEW TESTING
3	11/01/16	LFS	ADDED THRESHOLDS
2	5/05/15	LFS	ADD NEW ASTRAGAL PIN CAPTURE
1	1/09/14	LFS	ADDED ARTICULATING SILL

DATE:	8/20/12
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4224
SHEET	8 OF 8