Trinity Glass INTERNATIONAL
4621 192nd STREET TACOMA, WA 98446

6'0 X 6'8 FLUSH-GLAZED FIBERGLASS DOUBLE DOOR INSWING / OUTSWING "NON-IMPACT"

EVALUATED FOR USE IN THE STATE OF TEXAS

The Trinity Flush-Glazed Premium Fiberglass Double Door 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.

SUPPORTING DOCUMENTS & EVIDENCE

1. Testing per ASTM E330-02 as performed by Testing Evaluation Laboratories Inc. and reported in test report numbers TEL 05-0411-7, TEL 08-01370020 and TEL 06-0223-3 signed by Wendell W. Haney, P.E.
2. Calculations (Anchoring and Glass load resistance report ASTM E1300-04) prepared by Lyndon F. Schmidt, P.E.
3. Certificate of Participation issued by the National Accreditation and Management Institute, Inc., certifying that Trinity Glass Int'l is manufacturing products within a Quality Assurance program.

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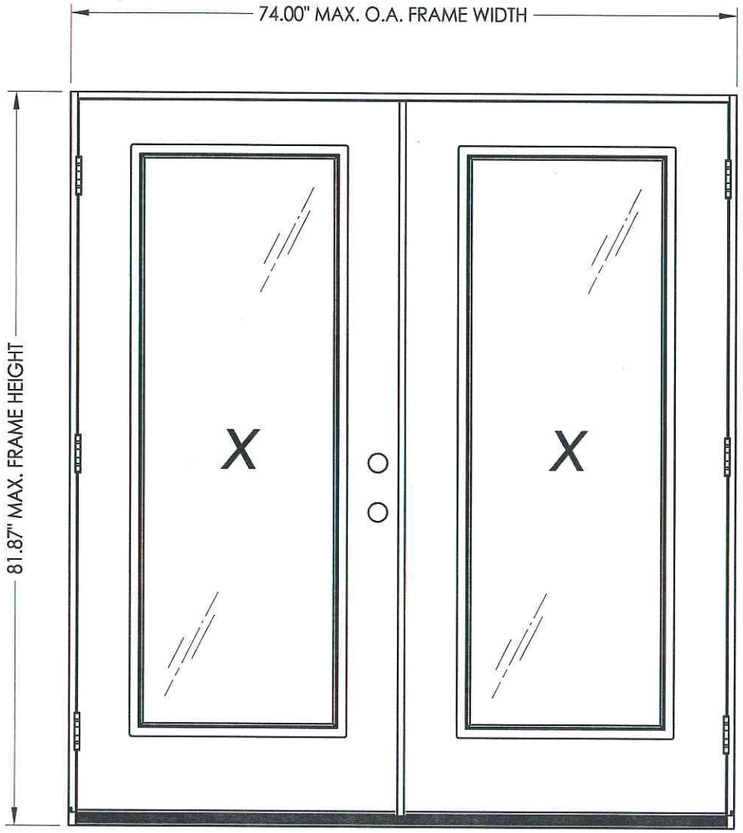

ASTRAGAL TYPE	SWING	MAX. FRAME DIMENSION	GLASS TYPE	DESIGN PRESSURE PSF) POSITIVE	DESIGN PRESSURE PSF) NEGATIVE
ENDURA	INSWING	74.00" x 81.88"	G1, G2 & G3	+55.0	-60.0
	OUTSWING	74.00" x 80.75"		+55.0	-55.0
TRC	INSWING	74.00" x 81.88"	G1, G2 & G3	+65.0	-65.0
	OUTSWING	74.00" x 80.75"		+65.0	-65.0
PVC	INSWING	74.00" x 81.88"	G1, G2 & G3	+43.0	-47.0
	OUTSWING	74.00" x 80.75"		+43.0	-43.0
COLUMBIA	INSWING	74.00" x 81.88"	G1, G2 & G3	+47.0	-55.0
	OUTSWING	74.00" x 80.75"		+47.0	-47.0

Refer to Table (sheet 3) for Passage Lock Rating Limitations

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1.2.10

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: TRINITY GLASS INT'L 6'8 FLUSH-GLAZED
PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

NO.	DATE	REVISIONS	BY
2	7/27/09	TDI PRODUCT EVALUATION UPDATE	AL
1	6/28/06	REVISED LOCKSET NOMENCLATURE	EW

DATE: 8/29/05
SCALE: N.T.S.
DWG. BY: WH
CHK. BY: LFS
DRAWING NO.: TX-601
SHEET 1 OF 11

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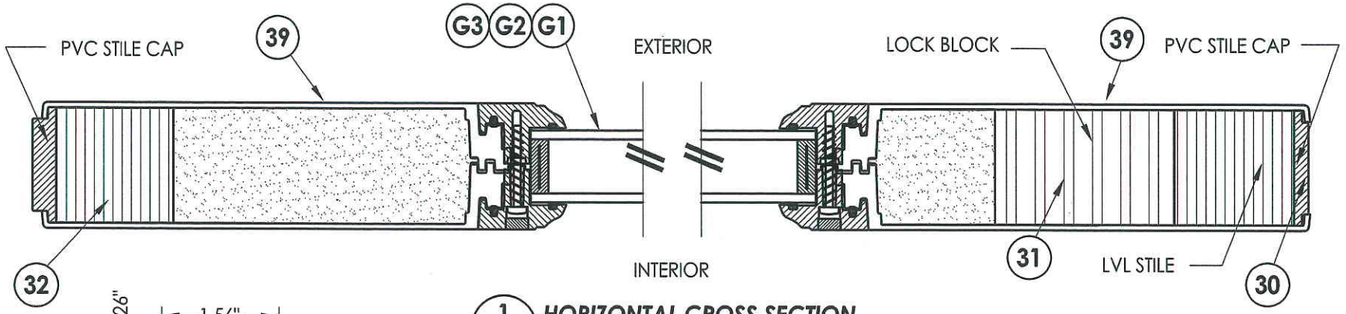
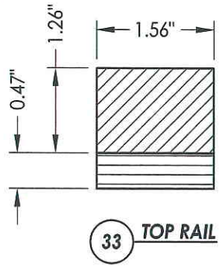
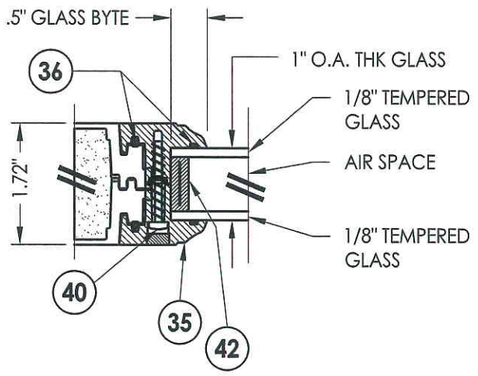


1/2 **HORIZONTAL CROSS SECTION**



33 **TOP RAIL**



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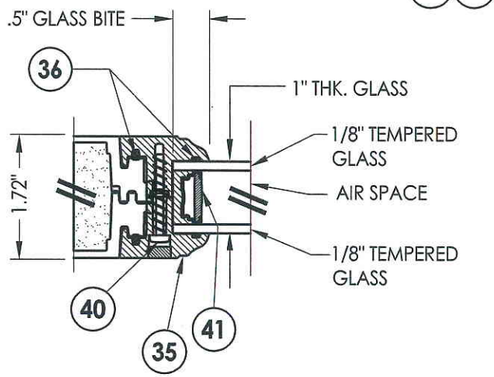

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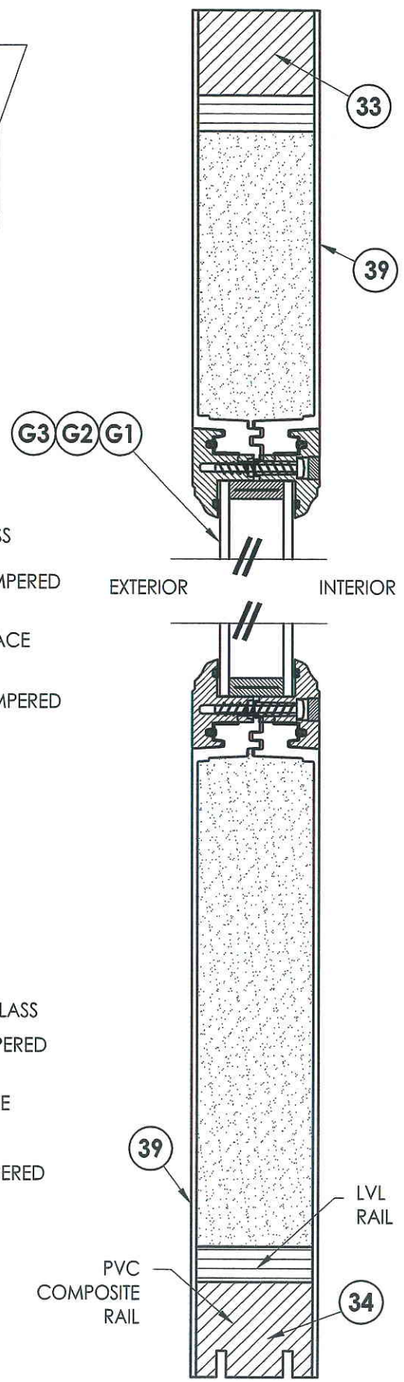

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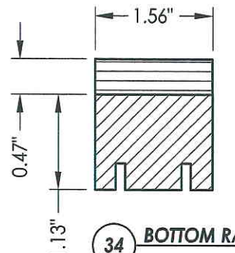

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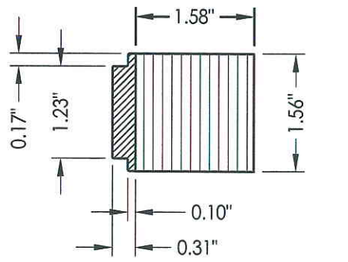

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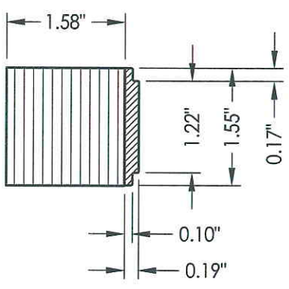

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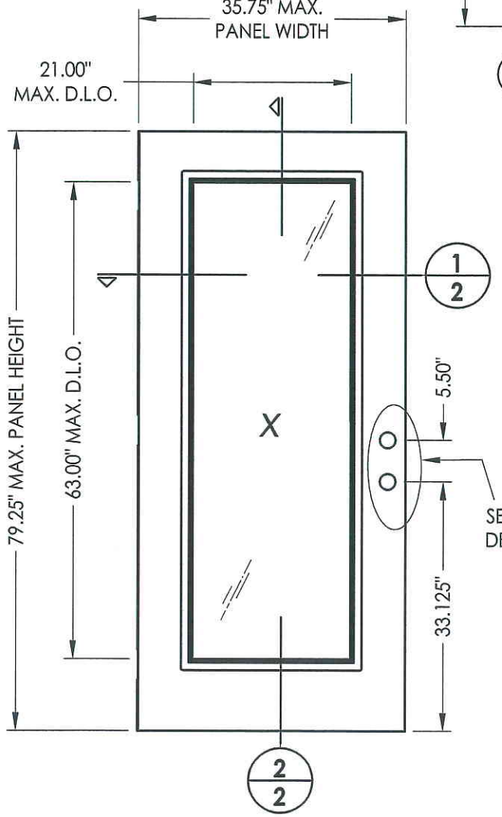
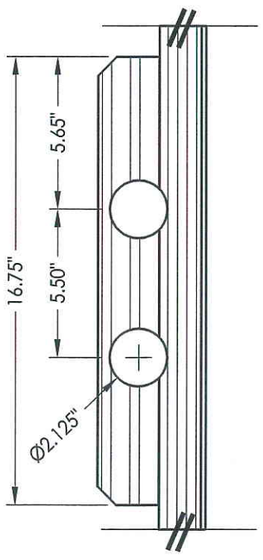
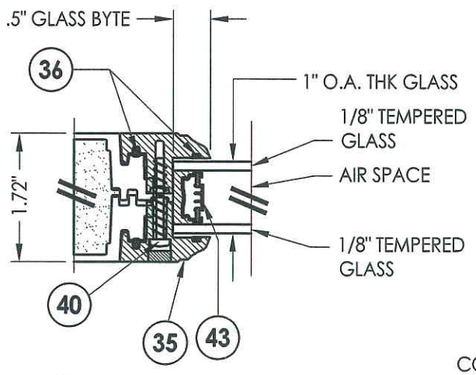


IMPACT FLUSH-GLAZED DOOR



DETAIL 1



G3 **GLASSING DETAIL**

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LYNDON F. SCHMIDT
104123
LICENSED PROFESSIONAL ENGINEER
1-7-10

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: TRINITY GLASS INT'L 6'8 FLUSH-GLAZED

PART OR ASSEMBLY: DOOR PANEL CONSTRUCTION DETAILS AND GLAZING DETAILS

NO.	DATE	REVISIONS	BY
2	7/27/09	TDI PRODUCT EVALUATION UPDATE	AL
1	6/28/06	REVISED LOCKSET NOMENCLATURE	EW

DATE: 8/29/05
SCALE: N.T.S.
DWG. BY: WH
CHK. BY: LFS
DRAWING NO.: TX-601
SHEET 2 OF 11

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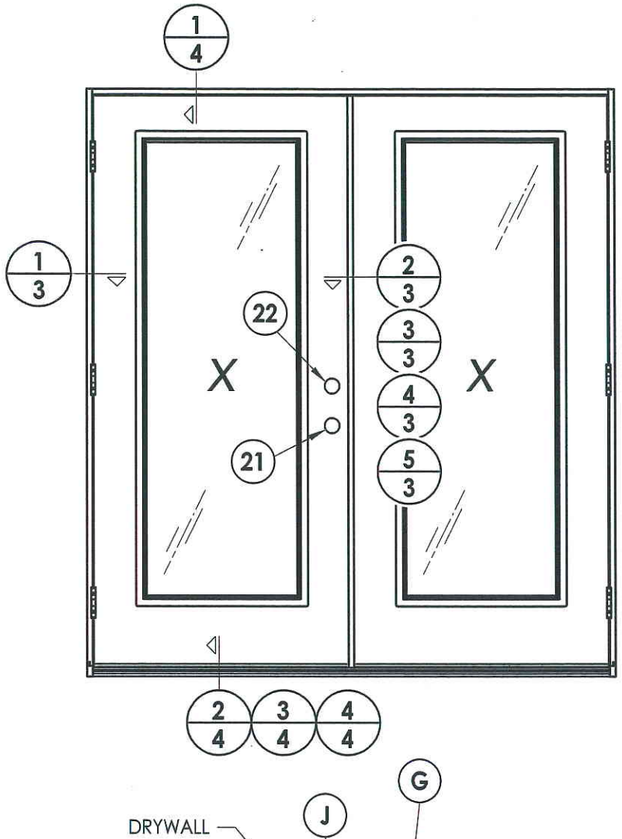
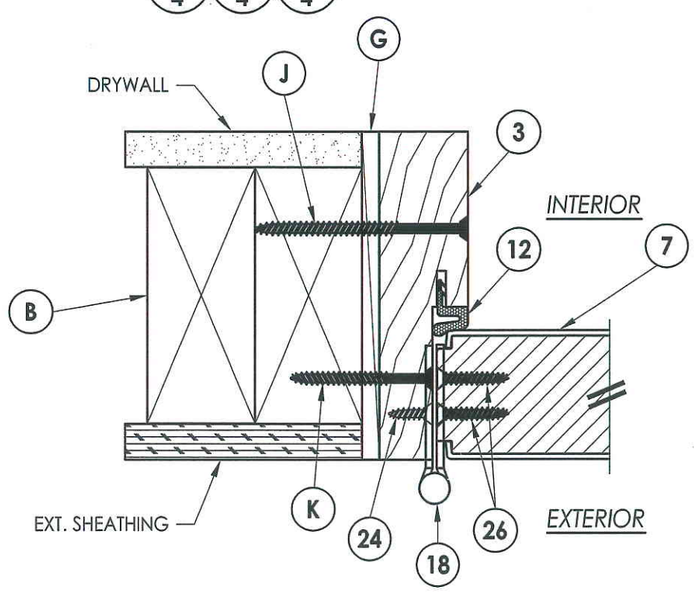
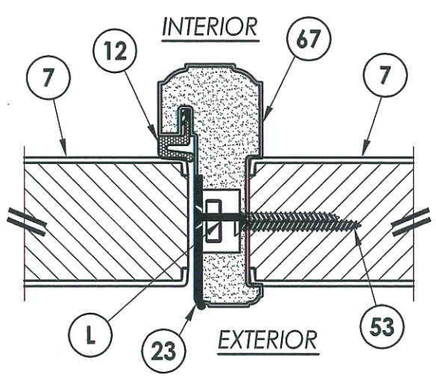


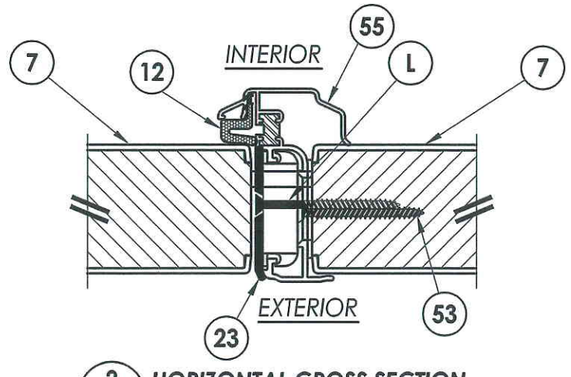
LOCK & DEADBOLT RATINGS CHART				
MANUFACTURER	MODEL	ITEM #	MAX. DESIGN PRESSURE (PSF) POSITIVE	MAX. DESIGN PRESSURE (PSF) NEGATIVE
KWIKSET	LOCK: 740 DEADBOLT: 780	21 22	+65.0	-65.0
KWIKSET	LOCK: COMBO 660 DEADBOLT: COMBO 660	21 22	+65.0	-65.0
SCHLAGE	LOCK: MAX. SECURITY DEADBOLT: MAX. SECURITY	21 22	+60.0	-60.0



1/3 **HORIZONTAL CROSS SECTION**
Outswing shown
Inswing also approved



4/3 **HORIZONTAL CROSS SECTION**
PVC astragal



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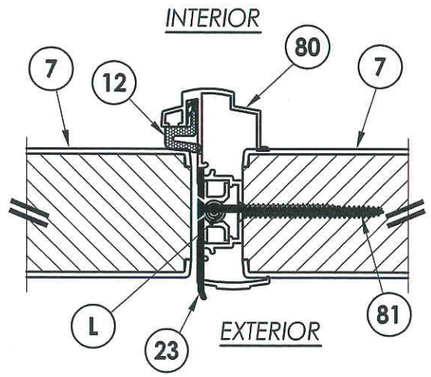
Endura astragal



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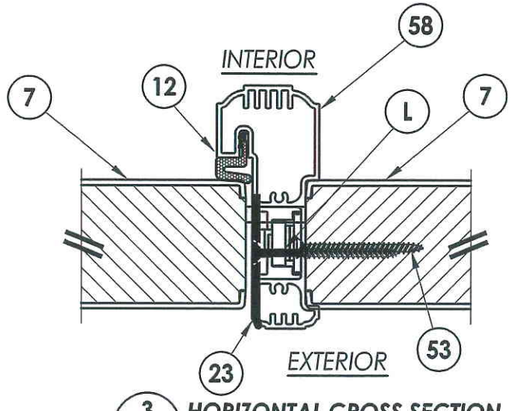
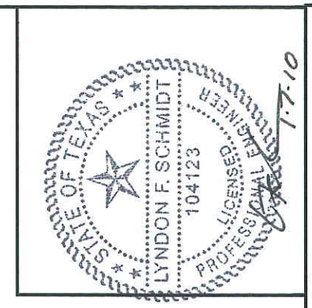
Columbia astragal



3/3 **HORIZONTAL CROSS SECTION**
TRC astragal



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.: 813.859.9197

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

PRODUCT: TRINITY GLASS INT'L 6'8 FLUSH-GLAZED

PART OR ASSEMBLY: HORIZONTAL CROSS SECTIONS

NO.	DATE	REVISIONS	BY
2	7/27/09	TDI PRODUCT EVALUATION UPDATE	AL
1	6/28/06	REVISED LOCKSET NOMENCLATURE	EW

DATE: 8/29/05
SCALE: N.T.S.
DWG. BY: WH
CHK. BY: LFS
DRAWING NO.: TX-601
SHEET 3 OF 11

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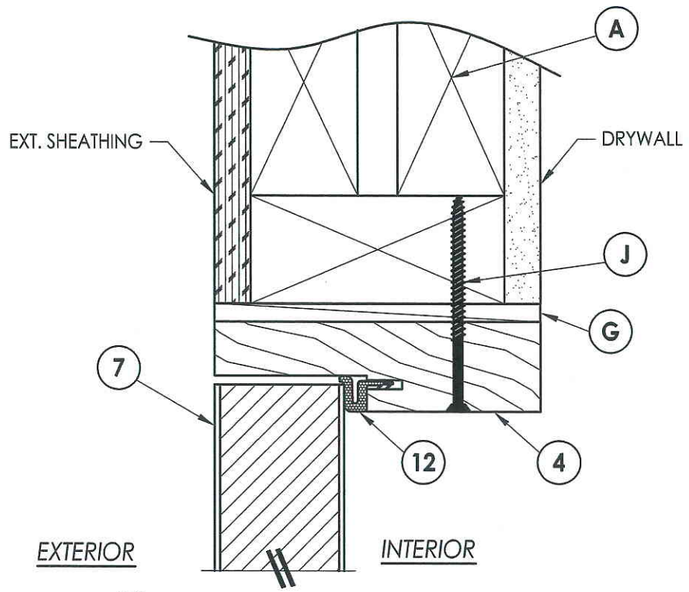
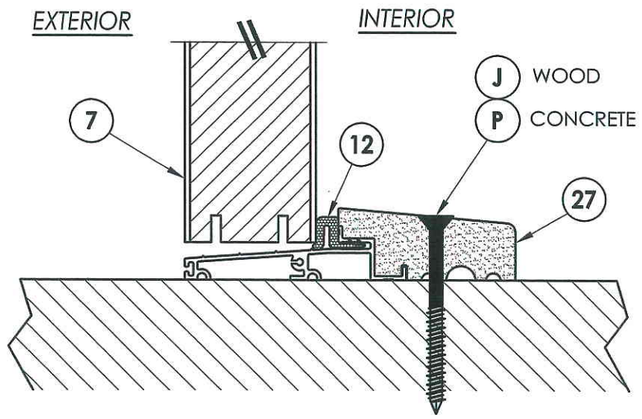
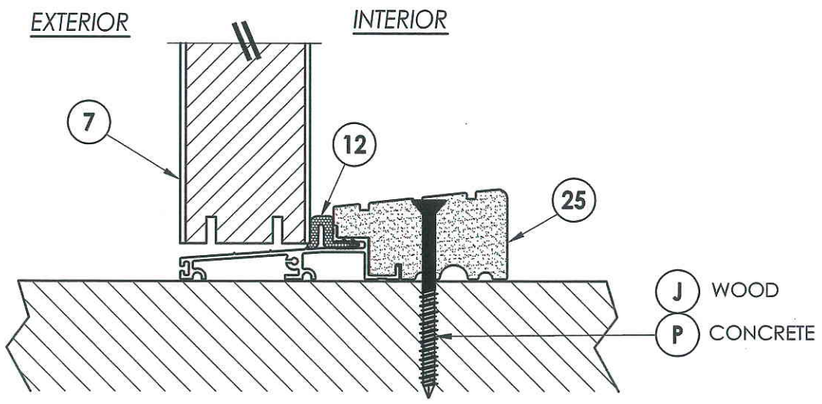


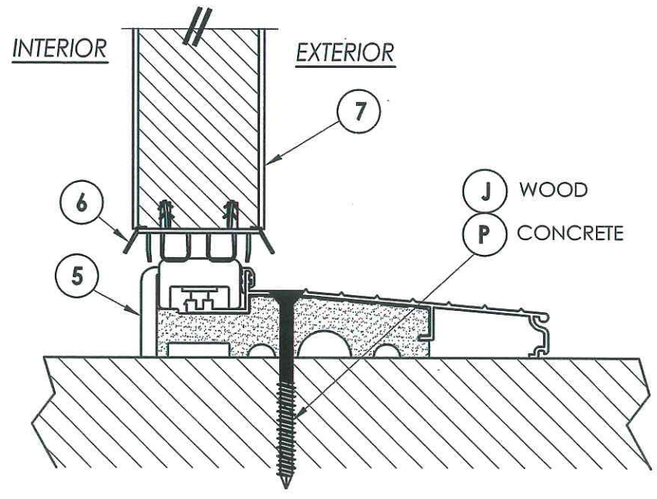
1/4 **VERTICAL CROSS SECTION**
Outswing shown
Inswing also approved



2/4 **VERTICAL CROSS SECTION**
Outswing configuration



3/4 **VERTICAL CROSS SECTION**
Outswing configuration



4/4 **VERTICAL CROSS SECTION**
Inswing configuration

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

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P.O. Box 230 Valrico FL. 33595
Phone No.: 813.659.9197

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CERTIFICATE OF REGISTRATION # F-11852

STATE OF TEXAS · LYNDON F. SCHMIDT · 104123 · LICENSED PROFESSIONAL ENGINEER
1.7.10

PRODUCT: TRINITY GLASS INT'L 6'8 FLUSH-GLAZED

PART OR ASSEMBLY: VERTICAL CROSS SECTIONS

NO.	DATE	REVISIONS	BY
2	7/27/09	TDI PRODUCT EVALUATION UPDATE	AL
1	6/28/06	REVISED LOCKSET NOMENCLATURE	EW

DATE: 8/29/05
SCALE: N.T.S.
DWG. BY: WH
CHK. BY: LFS
DRAWING NO.: TX-601
SHEET 4 OF 11

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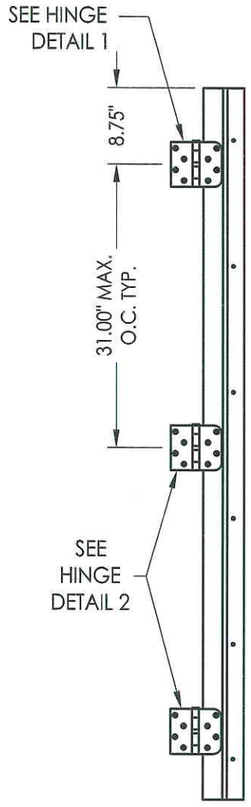
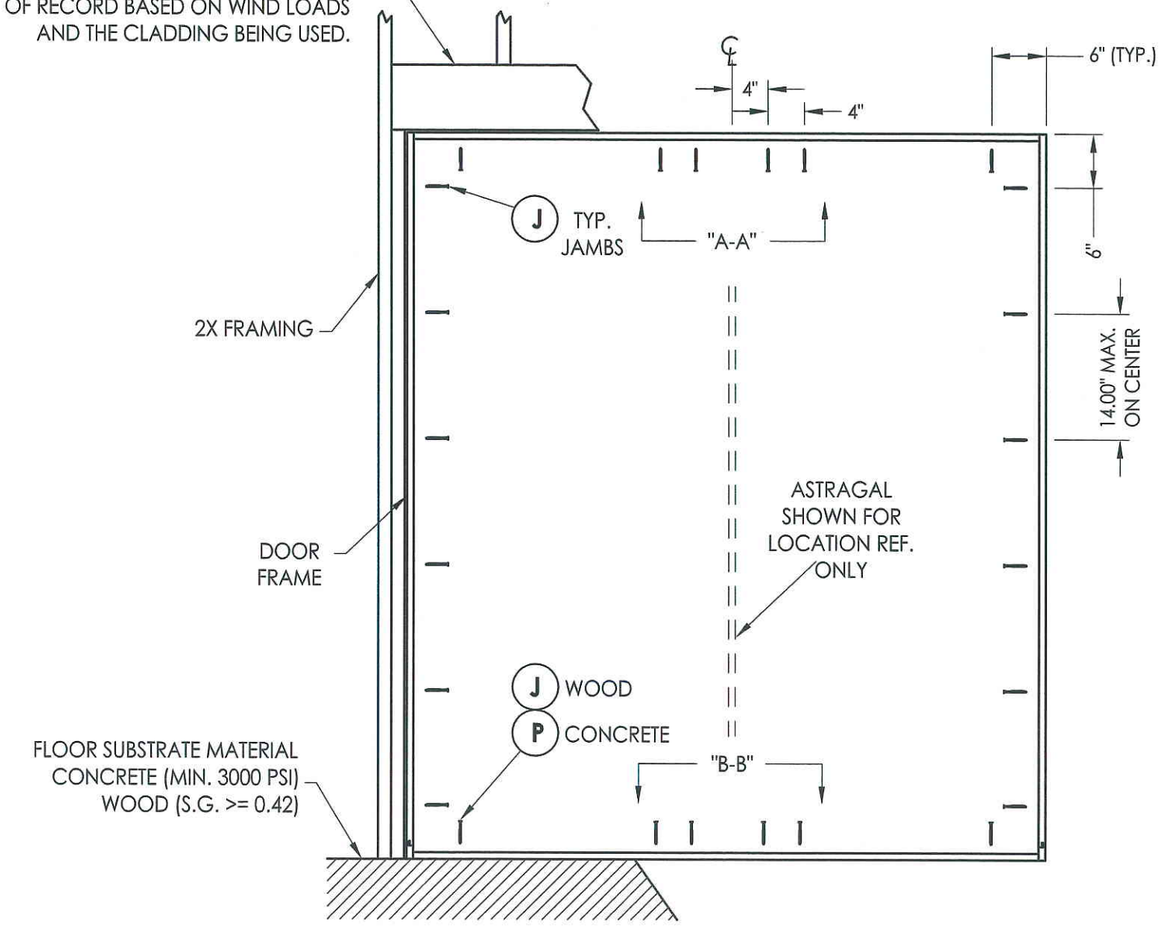
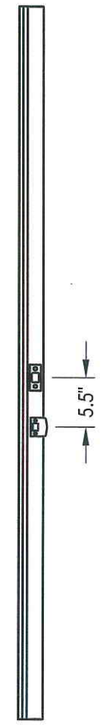


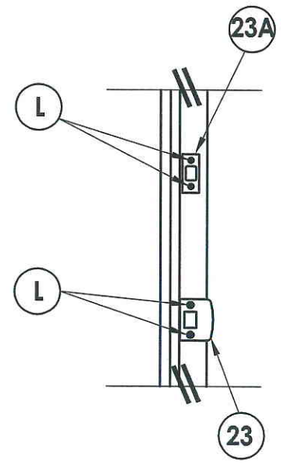
HINGE JAMB



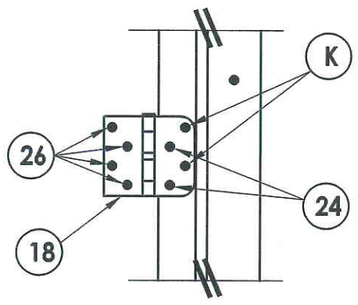
FRAME ANCHORING
Stud construction



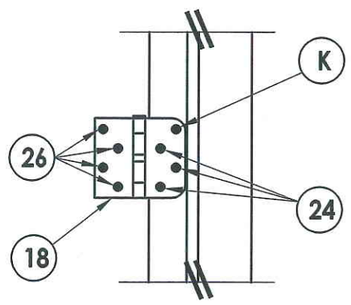
ASTRAGAL



STRIKE PLATE DETAIL
Astragal



HINGE DETAIL 1



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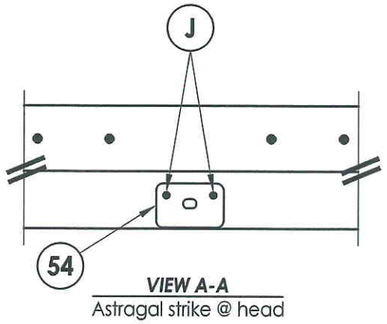
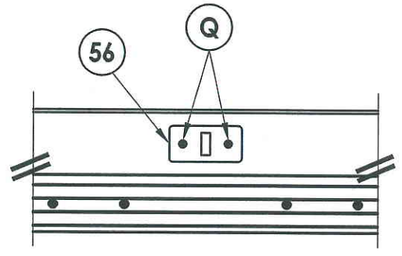


VIEW A-A
Astragal strike @ head



VIEW B-B
Astragal strike @ sill

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: TRINITY GLASS INT'L 6'8 FLUSH-GLAZED

PART OR ASSEMBLY: FRAME ANCHORING

NO.	DATE	REVISIONS	BY
2	7/27/09	TDI PRODUCT EVALUATION UPDATE	AL
1	6/28/06	REVISED LOCKSET NOMENCLATURE	EW

DATE: 8/29/05
SCALE: N.T.S.
DWG. BY: WH
CHK. BY: LFS
DRAWING NO.: TX-601
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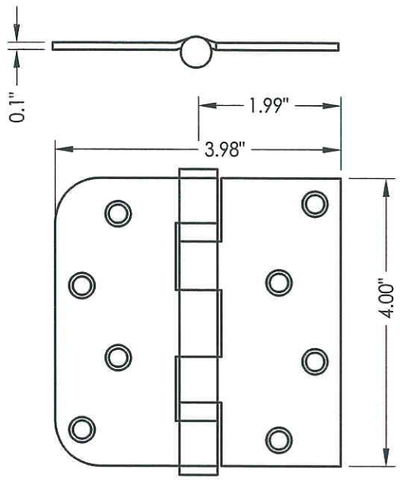
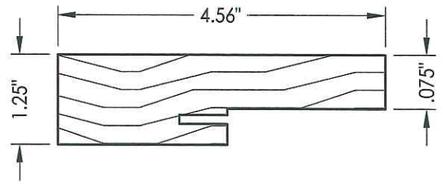
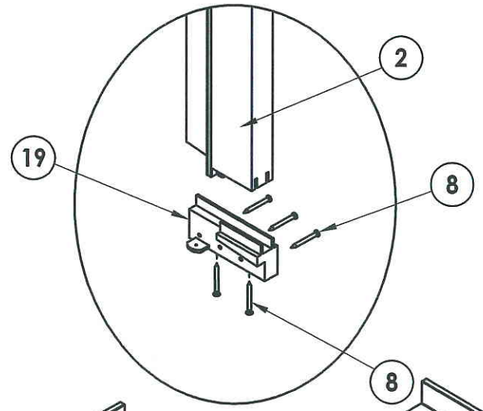
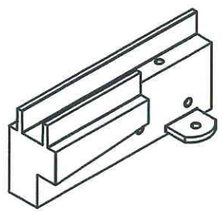


18 **HINGE**



4 3 2 **SIDE & HEAD JAMBS**





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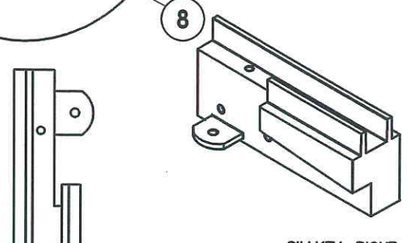

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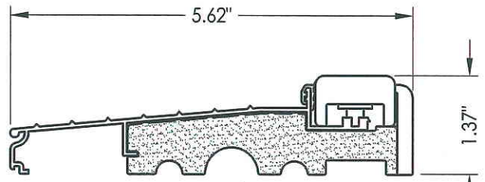
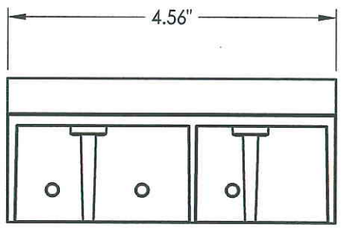
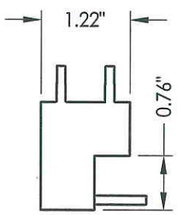
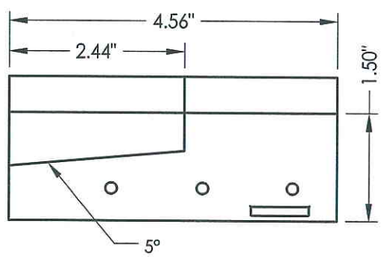


5 **INSWING THRESHOLD**

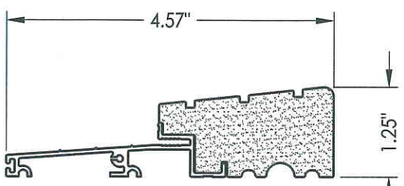
6 **DOOR BOTTOM SWEEP**



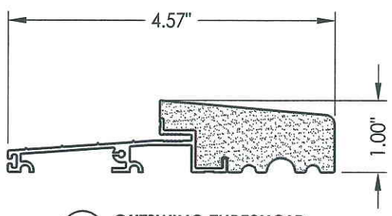




19 **SILLKEY DETAILS**
Optional



25 **OUTSWING THRESHOLD**
High-dam option



27 **OUTSWING THRESHOLD**

STATE OF TEXAS
LYNDON F. SCHMIDT
104123
LICENSED PROFESSIONAL ENGINEER
1.7.10

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: TRINITY GLASS INT'L 68 FLUSH-GLAZED

PART OR ASSEMBLY: COMPONENTS

NO.	DATE	REVISIONS	BY
2	7/27/09	TDI PRODUCT EVALUATION UPDATE	AL
1	6/28/06	REVISED LOCKSET NOMENCLATURE	EW

DATE: 8/29/05
SCALE: N.T.S.
DWG. BY: WH
CHK. BY: LFS
DRAWING NO.: TX-601
SHEET 6 OF 11

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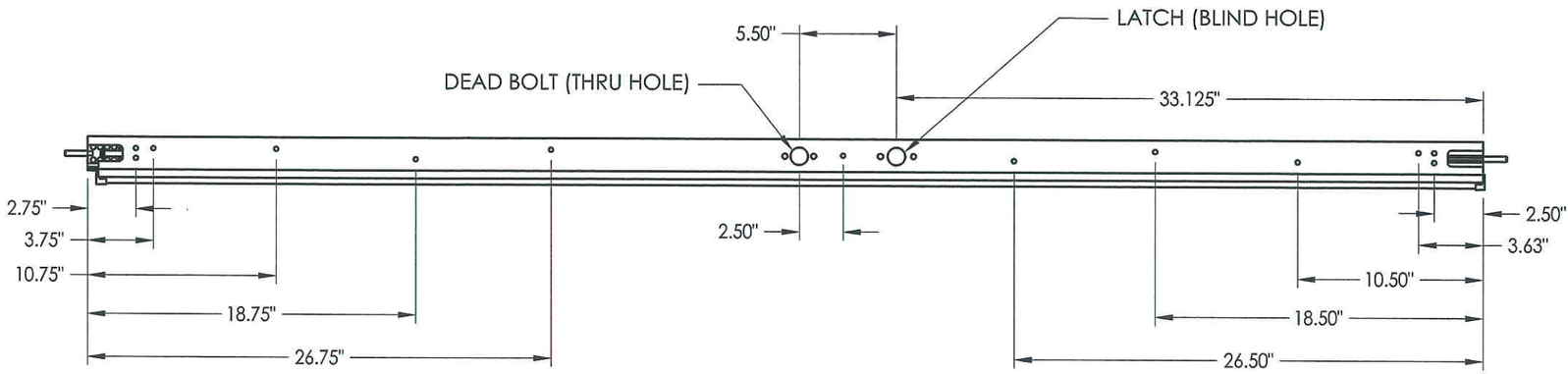
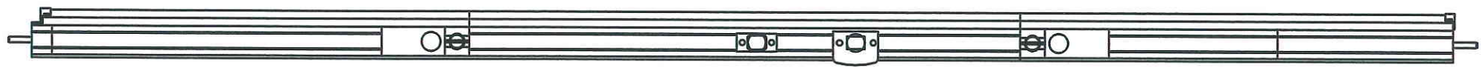


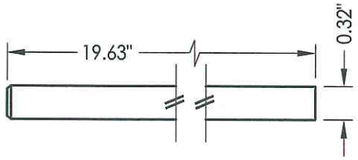
TOP

BOTTOM

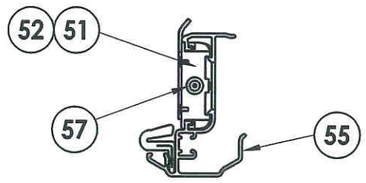
A-A



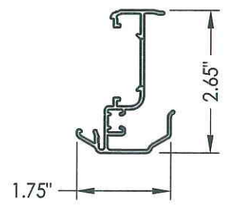
6'8 ALUMINUM ASTRAGAL ASSEMBLY
By Endura Products



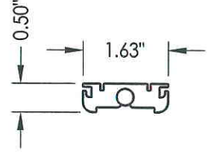
(57) **SLIDE BOLT ROD**
MATL: Steel



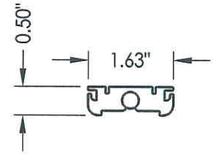
VIEW A-A
Aluminum Astragal Assembly



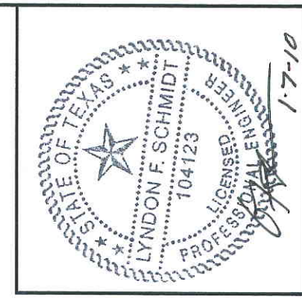
(55) **ALUMINUM ASTRAGAL**
By Endura Products



(52) **TOP BOLT RETAINER**
MATL: 9-3/4" Long Aluminum



(51) **TOP BOLT RETAINER**
MATL: 4-3/4" Long HDPE



1-7-10

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: TRINITY GLASS INT'L 6'8 FLUSH-GLAZED

PART OR ASSEMBLY: ENDURA ASTRAGAL DETAILS

NO.	DATE	REVISIONS	BY
2	7/27/09	TDI PRODUCT EVALUATION UPDATE	AL
1	6/28/06	REVISED LOCKSET NOMENCLATURE	EW

DATE: 8/29/05
SCALE: N.T.S.
DWG. BY: WH
CHK. BY: LFS
DRAWING NO.: TX-601
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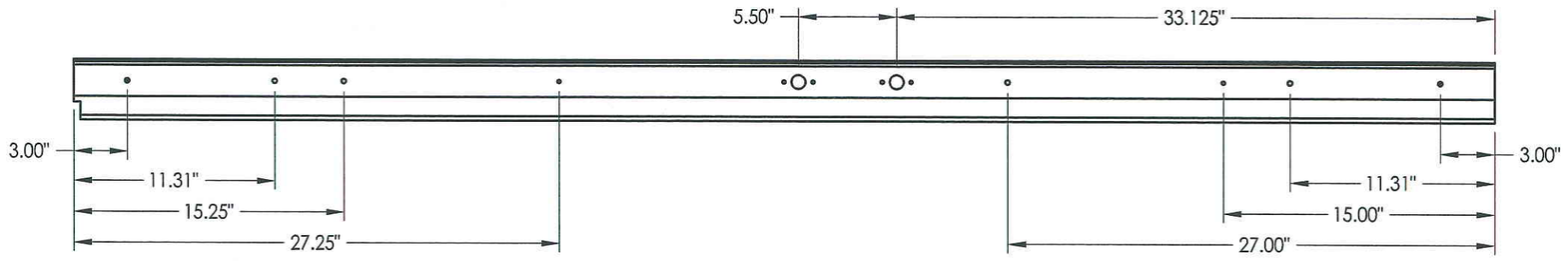
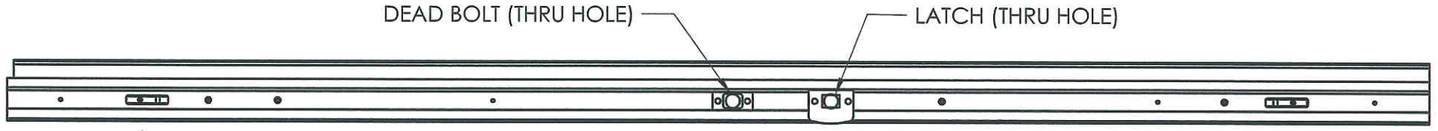


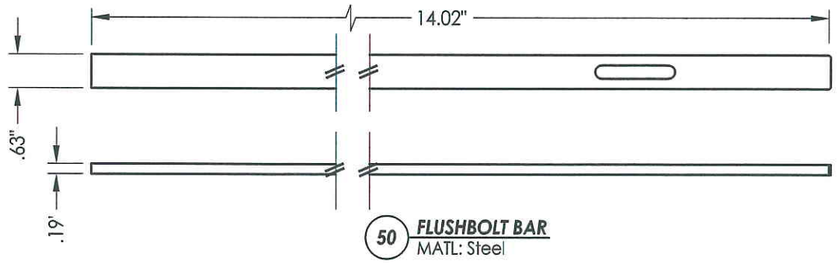
TOP

BOTTOM

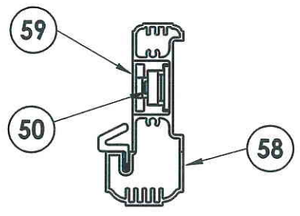


B-B

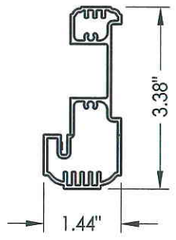
6'8 ALUMINUM ASTRAGAL ASSEMBLY
By Trinity



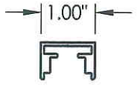
50 ***FLUSHBOLT BAR***
MATL: Steel



VIEW B-B
Aluminum Astragal Assembly



58 ***TRC ALUMINUM ASTRAGAL***
By Trinity



59 ***TRC ASTRAGAL CHANNEL***
By Trinity

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: *TRINITY GLASS INT'L 6'8 FLUSH-GLAZED*

PART OR ASSEMBLY: *TRC ASTRAGAL DETAILS*

NO.	DATE	REVISIONS	BY
2	7/27/09	TDI PRODUCT EVALUATION UPDATE	AL
1	6/28/06	REVISED LOCKSET NOMENCLATURE	EW

DATE: 8/29/05
SCALE: N.T.S.
DWG. BY: WH
CHK. BY: LFS
DRAWING NO.: TX-601
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TOP

BOTTOM

6'8 PVC ASTRAGAL ASSEMBLY
By Trinity

C-C

VIEW C-C
PVC ASTRAGAL ASSEMBLY

67 **PVC ASTRAGAL**
BY Trinity

69 **FLUSHBOLT BAR**
MATL: DIE CAST ZINC

68 **FLUSHBOLT**
MATL: 8.75" DIE CAST ZINC

1-7-10

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

R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL. 33595
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TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: TRINITY GLASS INT'L 6'8 FLUSH-GLAZED

PART OR ASSEMBLY: PVC ASTRAGAL DETAILS

NO.	DATE	REVISIONS	BY
2	7/27/09	TDI PRODUCT EVALUATION UPDATE	AL
1	6/28/06	REVISED LOCKSET NOMENCLATURE	EW

DATE: 8/29/05
SCALE: N.T.S.
DWG. BY: WH
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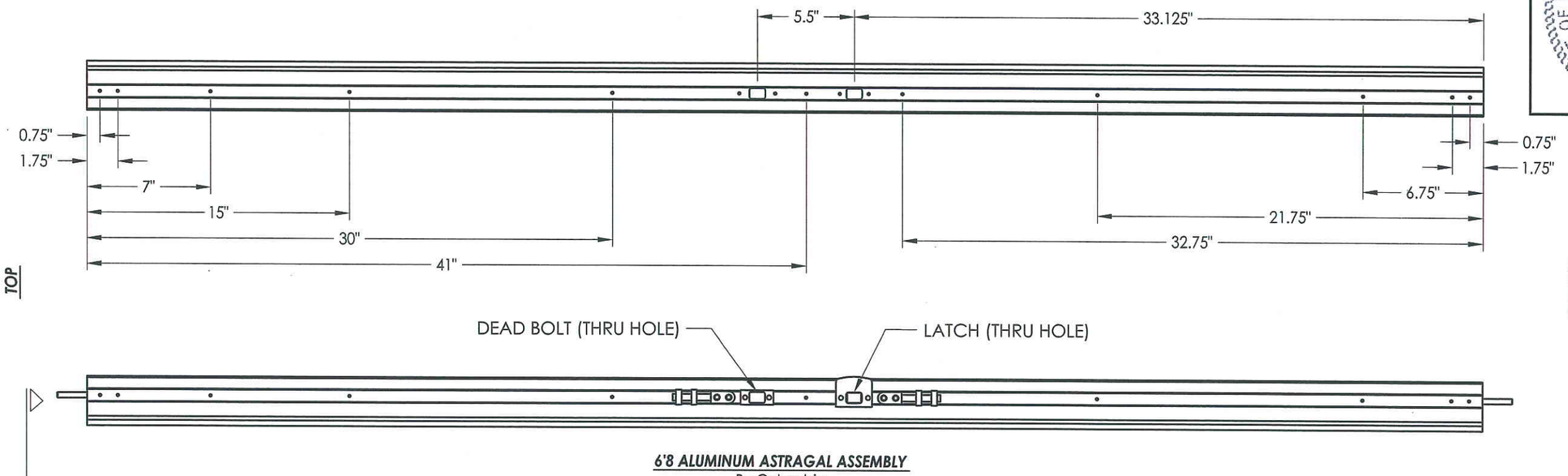
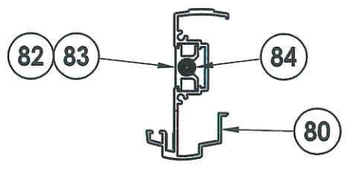
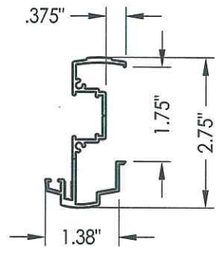


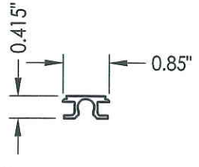
6'8 ALUMINUM ASTRAGAL ASSEMBLY
By Columbia



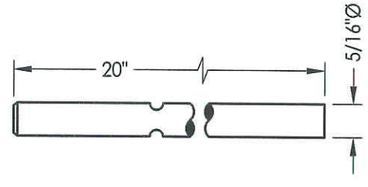
VIEW D-D
Aluminum Astragal Assembly



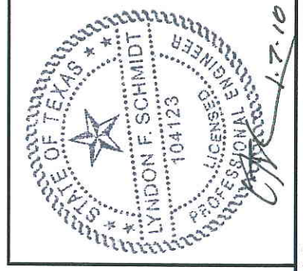
80 **ALUMINUM ASTRAGAL**
BY Columbia



82 83 **FLUSHBOLT RETAINER**
Top / bottom
Aluminum 6063-T5



84 **FLUSHBOLT ROD**
Steel



7.10

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

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P.O. Box 230 Valrico FL. 33595
Phone No.: 813.659.9197

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

PRODUCT: TRINITY GLASS INT'L 6'8 FLUSH-GLAZED

PART OR ASSEMBLY: COLUMBIA ASTRAGAL DETAILS

NO.	DATE	REVISIONS	BY
2	7/27/09	TDI PRODUCT EVALUATION UPDATE	AL
1	6/28/06	REVISED LOCKSET NOMENCLATURE	EW

DATE: 8/29/05
SCALE: N.T.S.
DWG. BY: WH
CHK. BY: LFS
DRAWING NO.: TX-601
SHEET 10 OF 11

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BILL OF MATERIALS

ITEM	DESCRIPTION	MATERIAL
A	2X HEADER FRAMING SG >= 0.42	WOOD
B	2X FRAMING SG >= 0.42	WOOD
G	MAX. 1/4" SHIM SPACE	WOOD
J	#10 X 3" PFH WS	STEEL
K	#9 X 2" PFH WS	STEEL
L	#8 X 2-1/2" PFH WS	STEEL
P	3/16" X 2-3/4" ELCO OR ITW PFH CONCRETE SCREW	STEEL
Q	3/16" X 3-1/4" ITW CONCRETE SCREW	STEEL
2	STRIKE JAMB - FINGER-JOINT PINE - SG >= 0.42	WOOD
3	HINGE JAMB - FINGER-JOINT PINE - SG >= 0.42	WOOD
4	HEAD - FINGER-JOINT PINE - SG >= 0.42	WOOD
5	INSWING THRESHOLD ALUMINUM W/ COMPOSITE SUBSTRATE	ALUMINUM
6	DOOR BOTTOM SWEEP	PVC
7	DOOR PANEL - SEE DOOR PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS	-
8	#6 X 1-1/4 PFH DRYWALL SCREW	STEEL
12	WEATHER STRIP QEBD650 Q-LON	-
18	3.983" X 4.0" HINGE MIN 0.098" THICK	STEEL
19	SILLKEY	PC/ASA
21	LOCK (SEE LOCK & DEADBOLT RATINGS CHART)	STEEL
22	DEADBOLT (SEE LOCK & DEADBOLT RATINGS CHART)	STEEL
23	STRIKE PLATE	STEEL
23A	DEADBOLT PLATE	STEEL
24	#9 X 5/8" PFH WS	STEEL
25	OUTSWING HIGH-DAM THRESHOLD ALUMINUM W/ COMPOSITE SUBSTRATE	ALUM./ COMP.
26	#9 X 1.0" PFH WS	STEEL
27	OUTSWING THRESHOLD ALUMINUM W/ COMPOSITE SUBSTRATE	ALUM./ COMP.
30	LATCH STILE - SG >= 0.42	LVL/PVC
31	LVL LOCK BLOCK	POPLAR
32	HINGE STILE - SG >= 0.42	LVL/PVC
33	TOP RAIL - POPLAR LVL & WPC COMBINATION	POPLAR/WPC
34	BOTTOM RAIL - POPLAR LVL & WPC COMBINATION	POPLAR/WPC
35	LITE FRAME	PC/ASA
36	GLAZING COMPOUND	SILICONE
39	FIBERGLASS SKIN 0.079" MIN. THICKNESS (Fy = 5,203 PSI MIN.)	FIBERGLASS
40	#8 X 1-1/8" SELF THREDING SCREW	STEEL
41	POLYPROPYLENE & ALUMINUM COMBINATION GLAZING SPACER	POLY./ALUM.
42	ALUMINUM & BUTYL SPACER SYSTEM	ALUM./BUTYL
43	PVC & ALUMINUM SPACER SYSTEM	PVC/ ALUM.
50	FLUSHBOLT BAR	STEEL
51	4-3/4" LENGTH TOP BOLT RETAINER	HDPE
52	9-8/4" LENGTH TOP BOLT RETAINER	ALUMINUM
53	#8 X 1-3/4" PFH SMS	STEEL
54	ASTRAGAL STRIKE @ HEAD	STEEL
55	ASTRAGAL BY ENDURA PRODUCT	ALUMINUM
56	ASTRAGAL STRIKE @ SILL	STEEL
57	SLIDE BOLT ROD	STEEL

BILL OF MATERIALS

ITEM	DESCRIPTION	MATERIAL
58	ASTRAGAL BY TRC	ALUMINUM
59	ASTRAGAL CHANNEL BY TRC	ALUMINUM
67	PVC ASTRAGAL BY TRC	PVC
68	ASTRAGAL CHANNEL BY TRC	DIE CAST ZINC
69	#8 x 2" PFH SCREW	DIE CAST ZINC
80	EXTRUDED ALUMINUM ASTRAGAL BY COLUMBIA ALUM. PROD.	ALUMINUM
81	#8 X 2-1/2" PFH WS	STEEL
82	TOP FLUSHBOLT RETAINER 6063-T5	ALUM. /STEEL
83	BOTTOM FLUSHBOLT RETAINER 6063-T5	ALUM. /STEEL
84	5/16"Ø X 20" LONG FLUSHBOLT ROD	STEEL

CONCRETE ANCHOR NOTES:

1. *Substitution of equal concrete anchors from a different supplier may have different edge distance and center distance requirements.*
2. *Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints. If 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" dimensions are not exceeded.*
3. *Concrete anchor table:*

ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW	3/16"	1-3/4"	2-5/8"	2-1/4"
ELCO	3/16"	1-3/4"	1"	3"

STATE OF TEXAS · LYNDON F. SCHMIDT · 104123 · LICENSED PROFESSIONAL ENGINEER

1-7-16

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: *TRINITY GLASS INT'L 6'8 FLUSH-GLAZED*

PART OR ASSEMBLY: *BILL OF MATERIALS*

NO.	DATE	REVISIONS	BY
2	7/27/09	TDI PRODUCT EVALUATION UPDATE	AL
1	6/28/06	REVISED LOCKSET NOMENCLATURE	EW

DATE: 8/29/05
SCALE: N.T.S.
DWG. BY: WH
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DRAWING NO.: TX-601
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