

FF70 SERIES GLAZED STEEL FOUR-FOLD DOOR

(LEVEL E or LEVEL D) LMI GLAZED or OPAQUE STEEL BI-FOLD DOOR IN STEEL FRAME (HVHZ)

GENERAL NOTES:

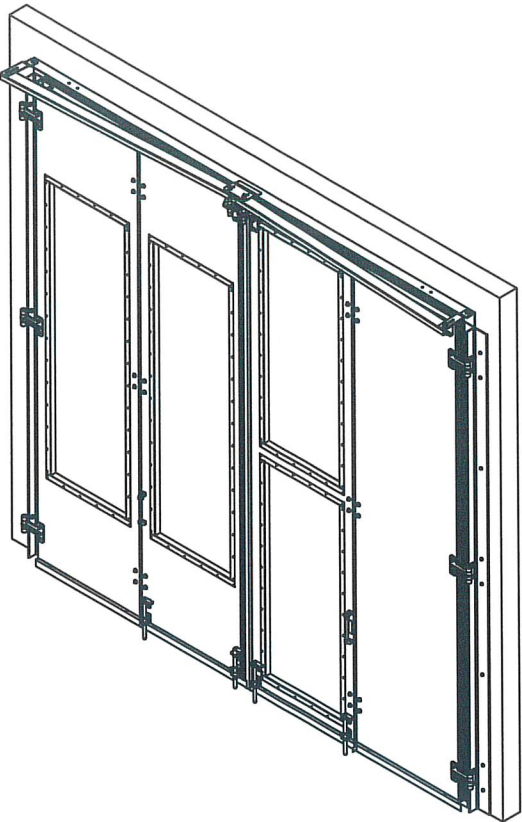
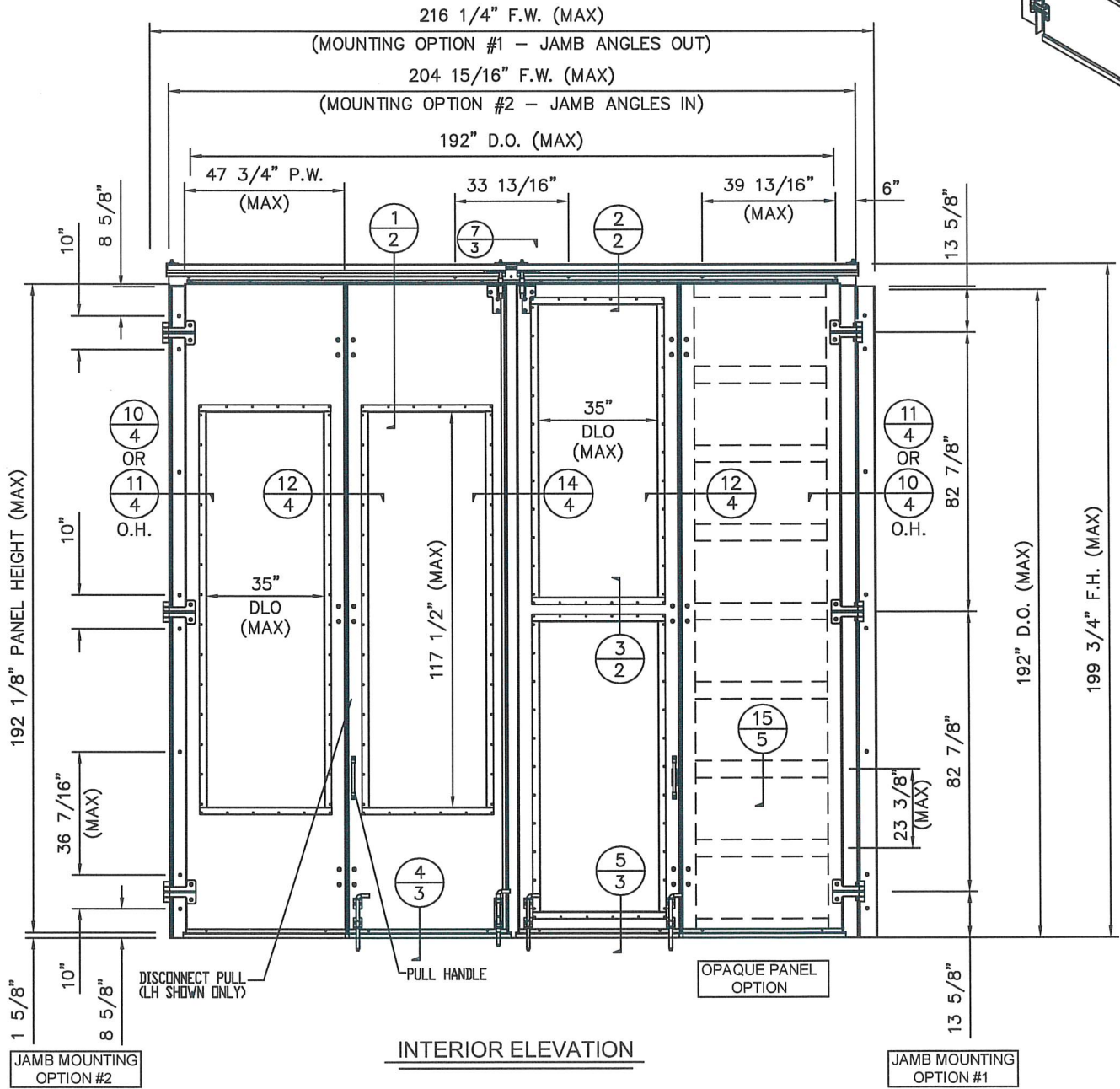
- 1. THIS SYSTEM HAS BEEN DESIGNED AND TESTED TO MEET ALL OF THE REQUIREMENTS OF THE CURRENT EDITION OF THE FLORIDA BUILDING CODE, INCLUDING THE HVHZ PROVISIONS.
- 2. THIS SYSTEM HAS BEEN TESTED PER TAS 201, 202 (STRUCTURAL ONLY), 203, ASTM E330, E1886, AND E1996 FOR LEVEL D (GLASS TYPE 1) AND LEVEL E (GLASS TYPE 2 and OPAQUE) LARGE AND SMALL MISSILE IMPACT RESISTANCE. SHUTTERS ARE NOT REQUIRED IN WINDBORNE DEBRIS REGIONS.
- 3. THIS DOOR SYSTEM IS NOT TESTED OR RATED FOR WATER INFILTRATION RESISTANCE. IT IS INTENDED FOR USE ONLY IN LOCATIONS WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED OR WHERE IT IS PROTECTED BY AN OVERHANG MEETING THE REQUIREMENTS OF FBC SECTION 1709.5.1.
- 4. ANCHOR TYPE, SIZE, SPACING, AND EMBEDMENT SHALL BE AS LISTED IN THE TABLE ON THIS SHEET. ANCHOR EMBEDMENT IN SUBSTRATE SHALL BE BEYOND WALL DRESSING OR STUCCO.
- 5. THE DESIGN OF THE SUBSTRATE IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD OR OTHER SPECIALTY ENGINEER, AND IS NOT A PART OF THIS APPROVAL. THE SUBSTRATE MUST SAFELY TRANSFER THE LOADS APPLIED TO THIS SYSTEM TO THE BUILDING STRUCTURE.
- 6. FIRE RATINGS OR FIRE RESISTANCE IS NOT A PART OF THIS REVIEW.
- 7. ALL ANCHORS SECURING THE SYSTEM THAT COME INTO CONTACT WITH PRESSURE TREATED WOOD SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE CHEMICALS IN THE WOOD.
- 8. MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL BE PROTECTED PER FBC REQUIREMENTS.
- 9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. Cd=1.6 WAS USED FOR WOOD SCREWS ONLY.
- 10. THREAD-CUTTING FASTENERS INSTALLED IN STEEL SHALL BE OF SUFFICIENT LENGTH TO FULLY PENETRATE THE METAL WITH THREE ADDITIONAL THREADS BEYOND.

CORNER CONSTRUCTION:

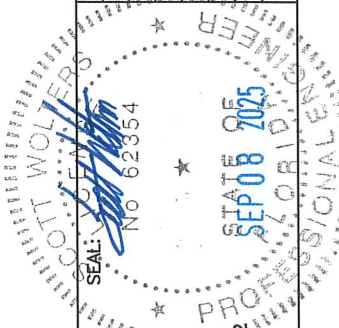
- 1. DOOR PANEL STILES AND RAILS ARE SQUARE CUT AND WELDED AT EACH CORNER USING 1/8" FILLET WELDS.

TABLE 1 - FRAME ANCHORS			
SUBSTRATE TYPE	ANCHOR TYPE	MINIMUM EMBEDMENT	MINIMUM EDGE DISTANCE
STEEL (A36, 1/4" MIN)	1/2" DIA. F-TYPE THREAD-CUTTING SCREW (GR. 5 MIN)	FULL**	1"
	1/2" DIA. ELCO TAP-FLEX	FULL**	1"
CONCRETE (4000 psi MIN)	1/2" DIA. DEWALT POWER-STUD+ SD1 WEDGE ANCHOR	3 3/4"	4"
	1/2" DIA. HILTI KWIK BOLT 3 EXPANSION ANCHOR	4 1/4"	4"
	1/2" DIA. SIMPSON STRONG-BOLT 2 WEDGE ANCHOR	3 7/8"	4"

** FULLY PENETRATES METAL WITH 3 THREADS BEYOND



DESIGN PRESSURE
+/- 65 Psf

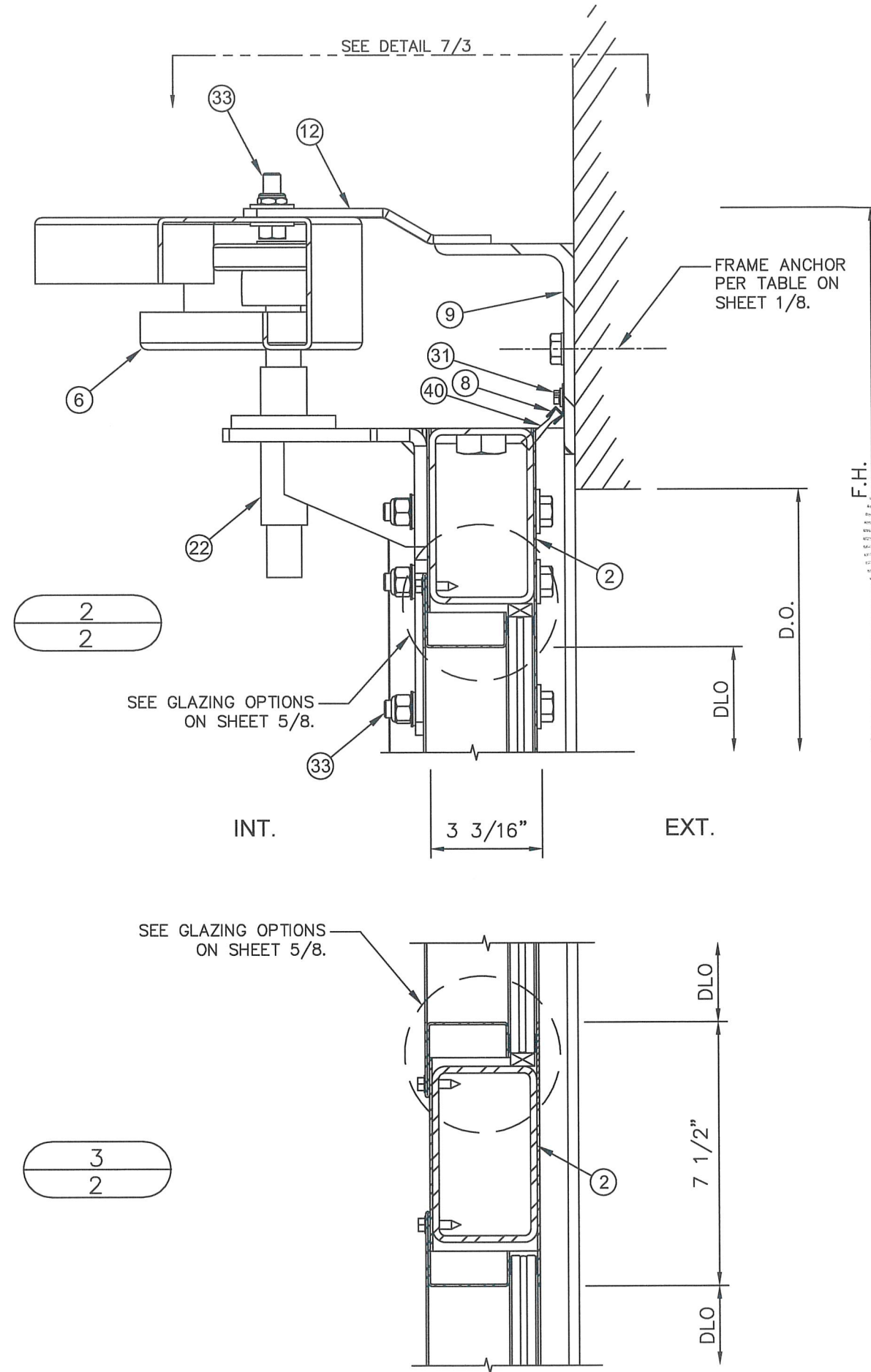
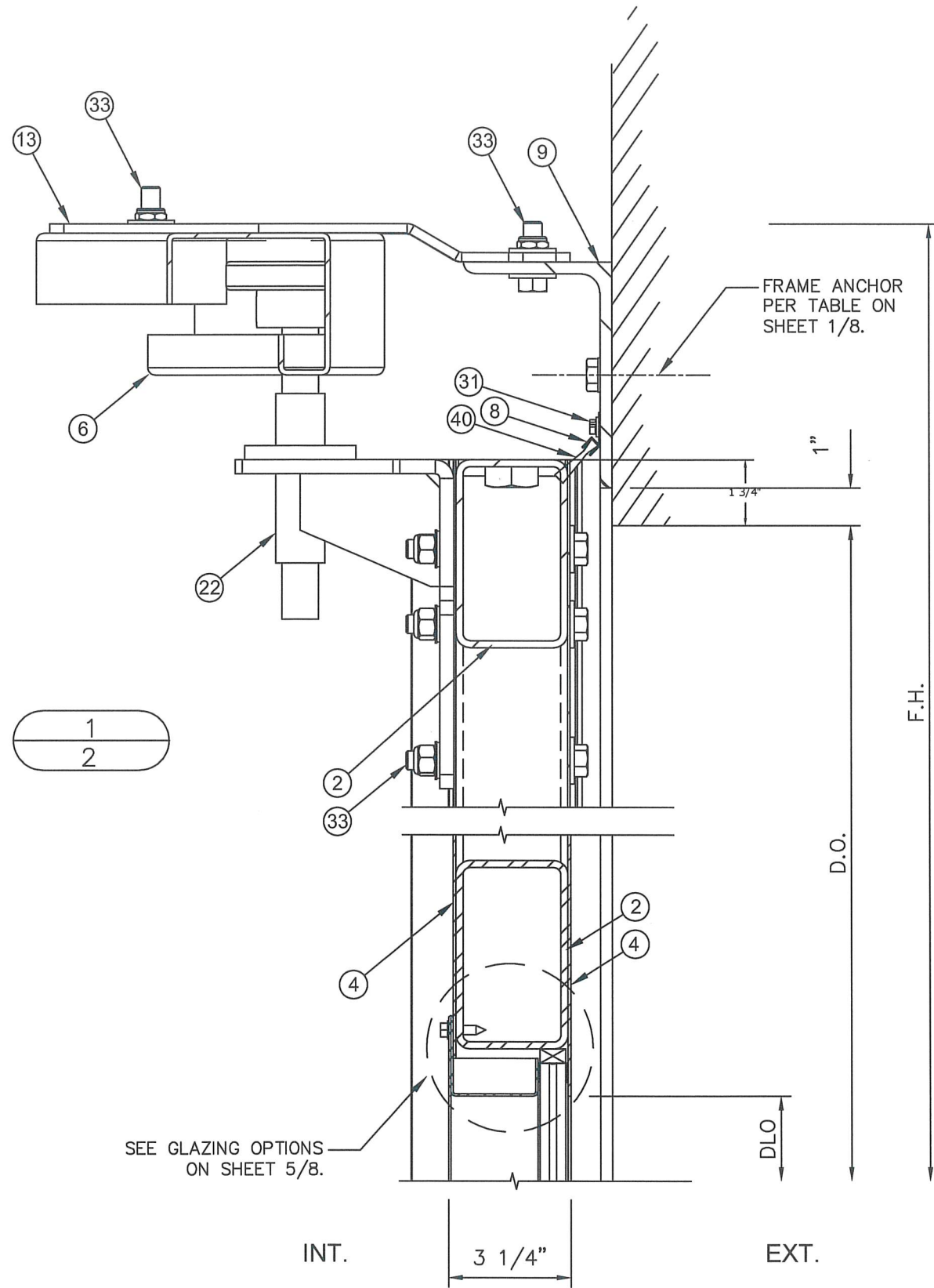


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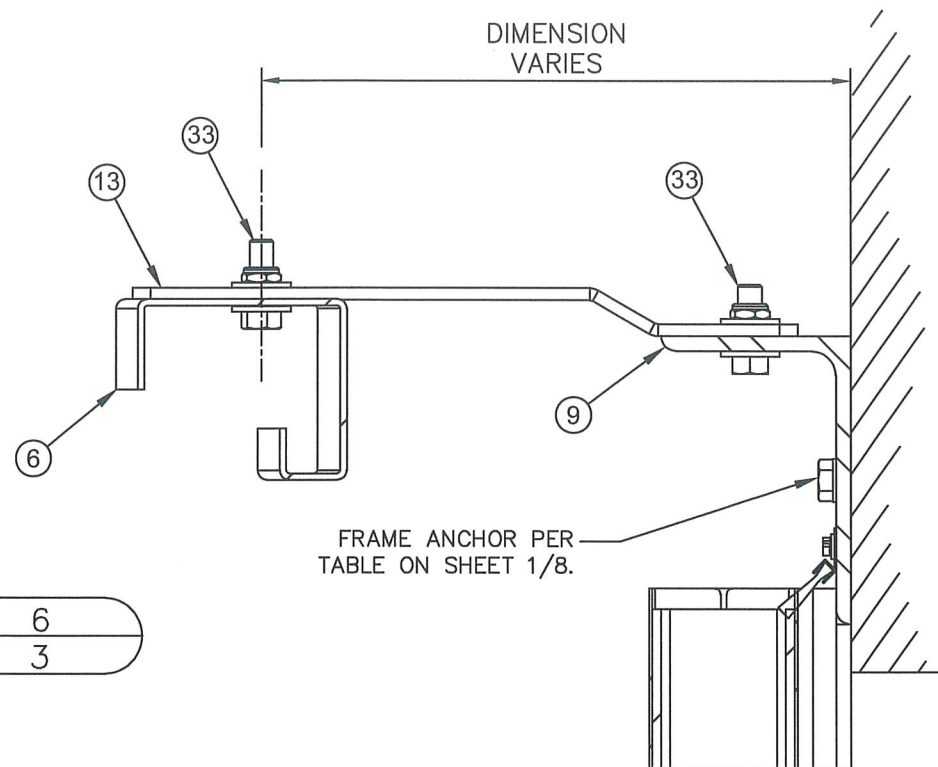
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DWG: FF70-LMI
SHEET: 1/8

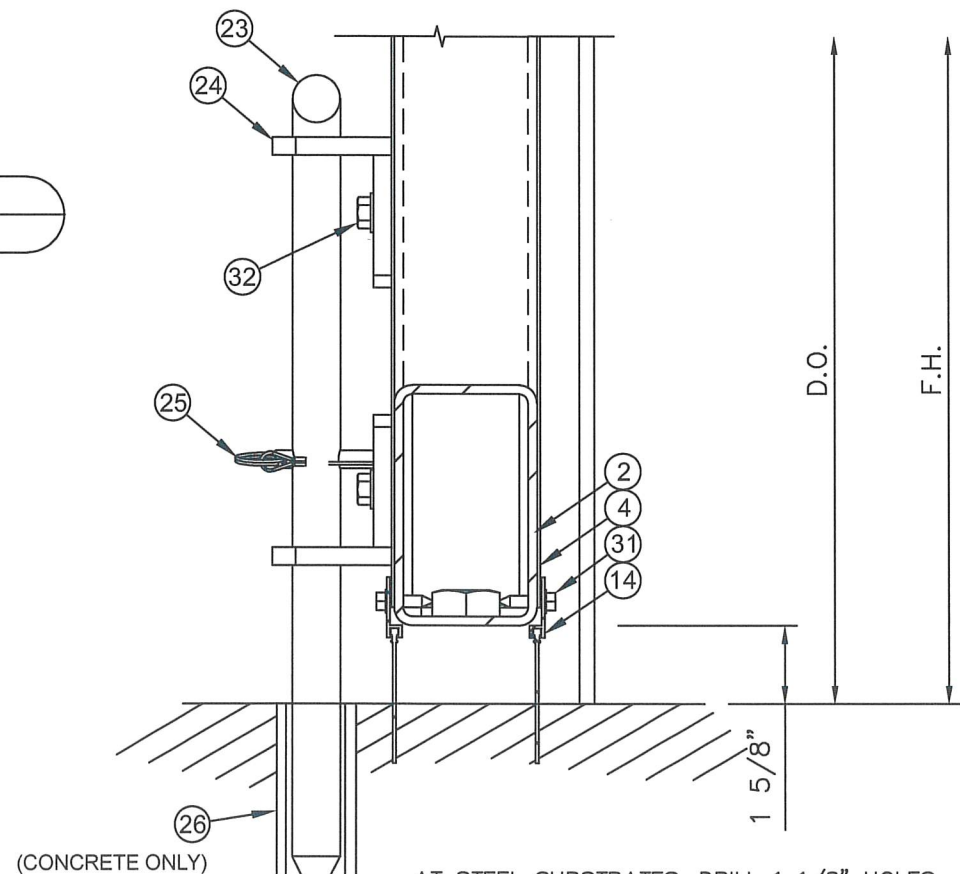


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SEP 08 2025		PROFESSIONAL ENGINEER	
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1		9/5/25	
2		7/3/25	
PRINTS ISSUED FOR		REV#	

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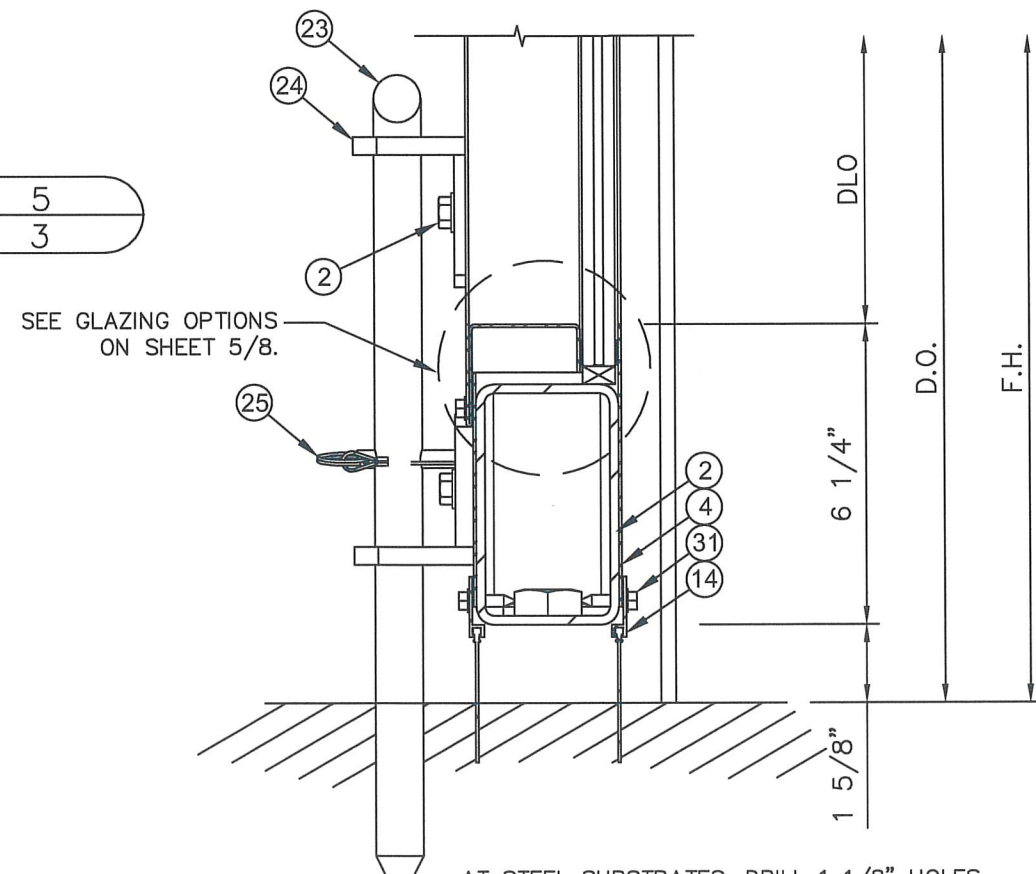


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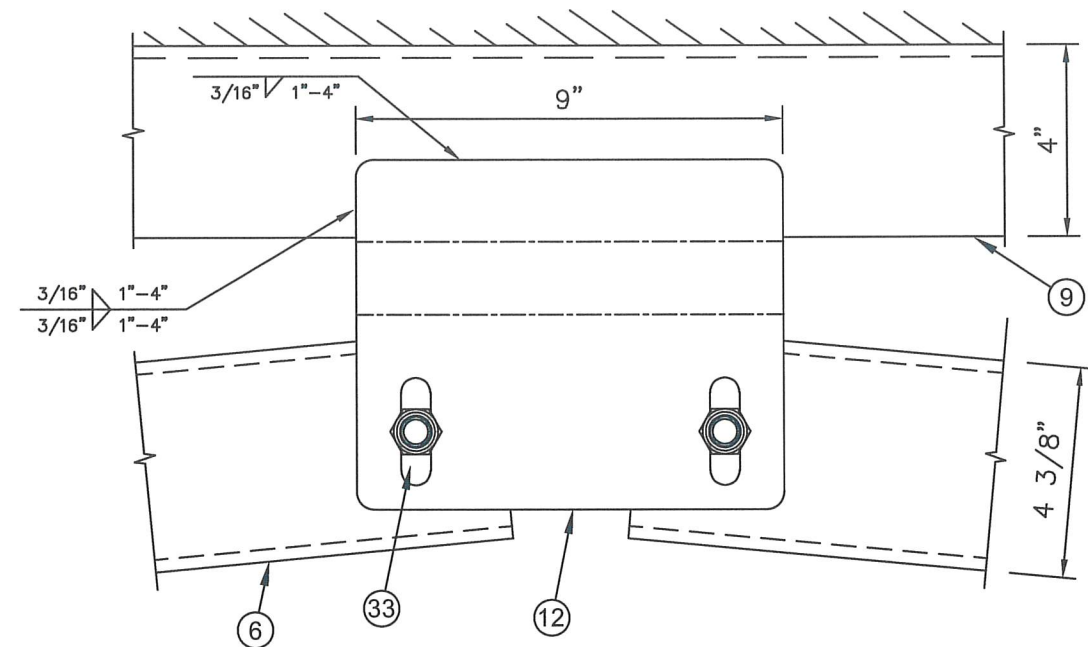


AT STEEL SUBSTRATES, DRILL 1 1/8" HOLES FOR CANE BOLTS. AT CONCRETE SUBSTRATES, DRILL FOR 1 1/4" SCHED. 40 GALV. INSERT.

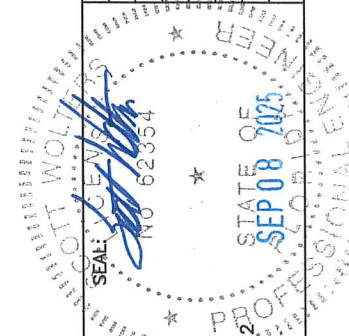
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AT STEEL SUBSTRATES, DRILL 1 1/8" HOLES FOR CANE BOLTS. AT CONCRETE SUBSTRATES, DRILL FOR 1 1/4" SCHED. 40 GALV. INSERT.



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3



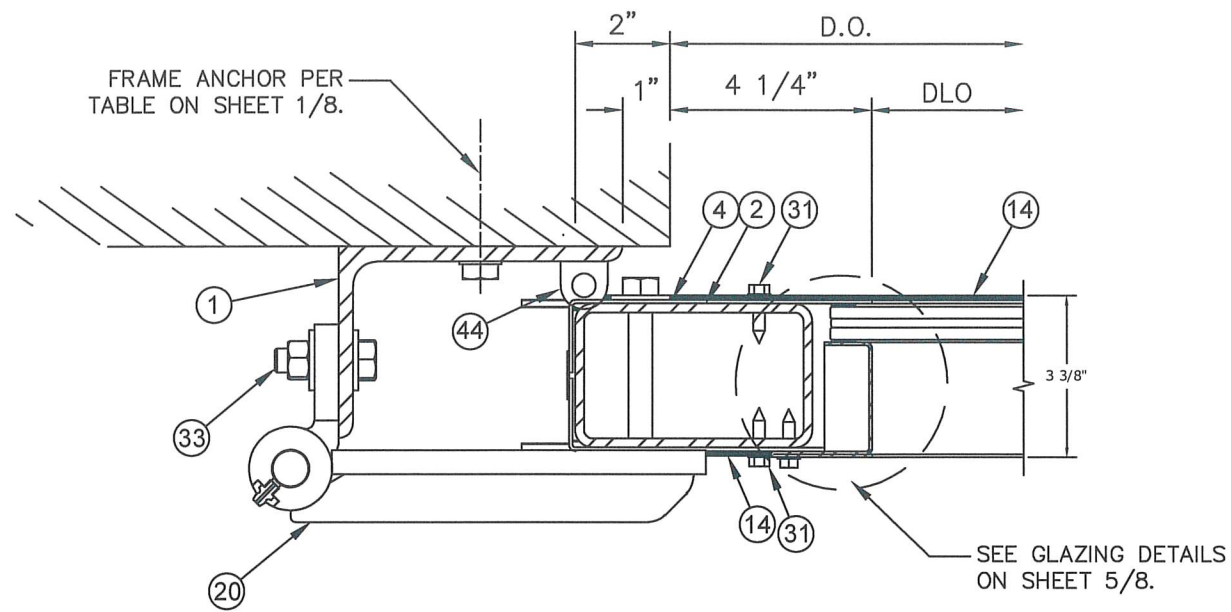
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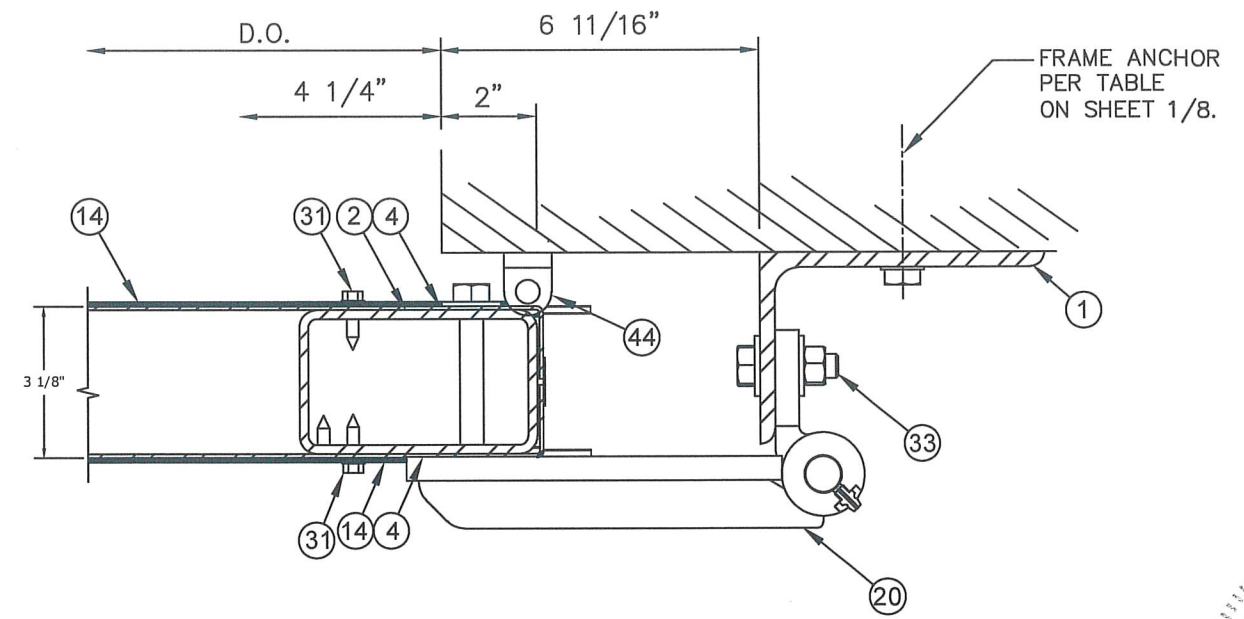
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JAMB MOUNTING
OPTION #2
(ANGLES IN)

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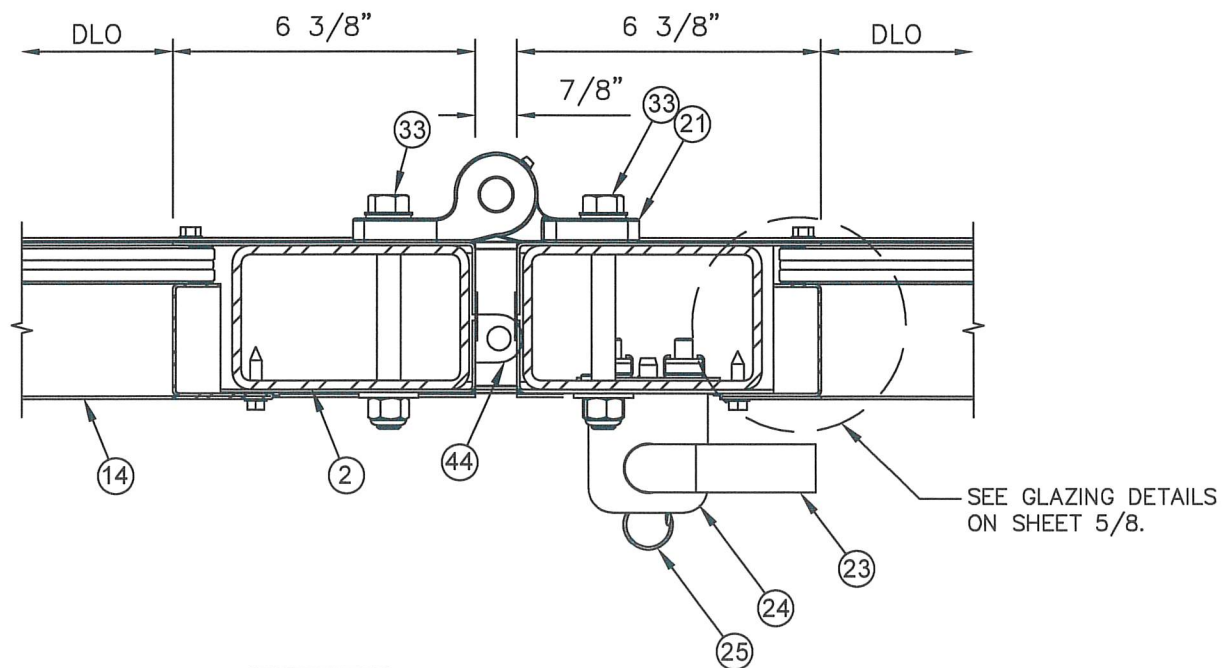
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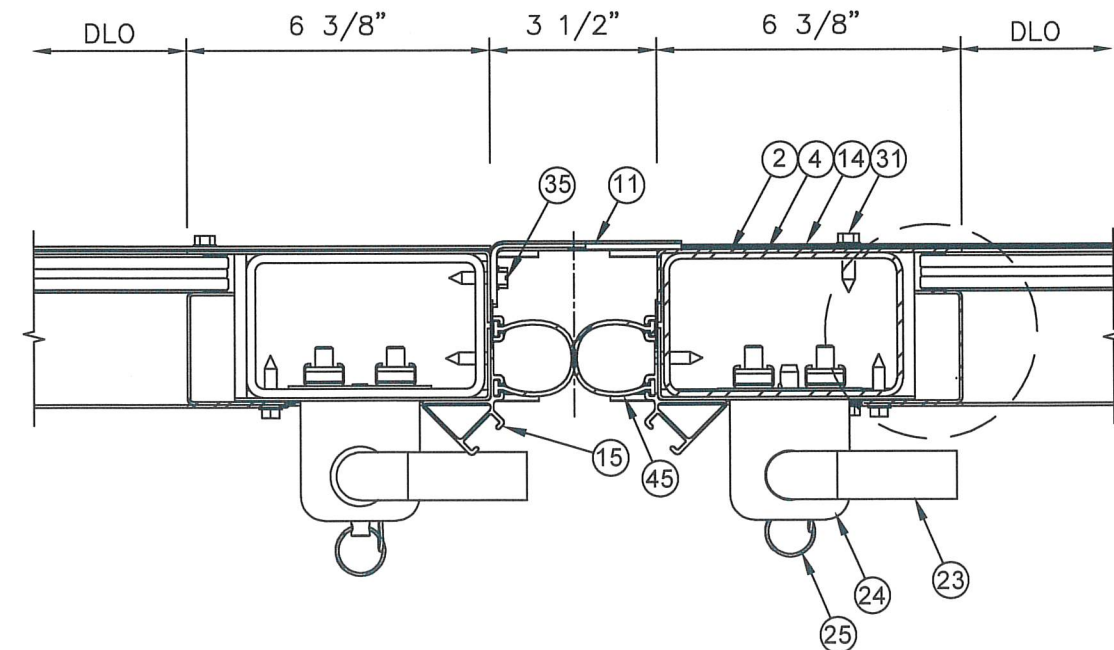
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OPTION #1
(ANGLES OUT)

11
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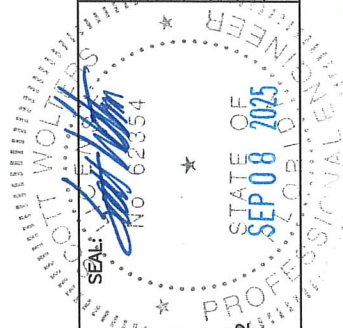
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12
4



14
4



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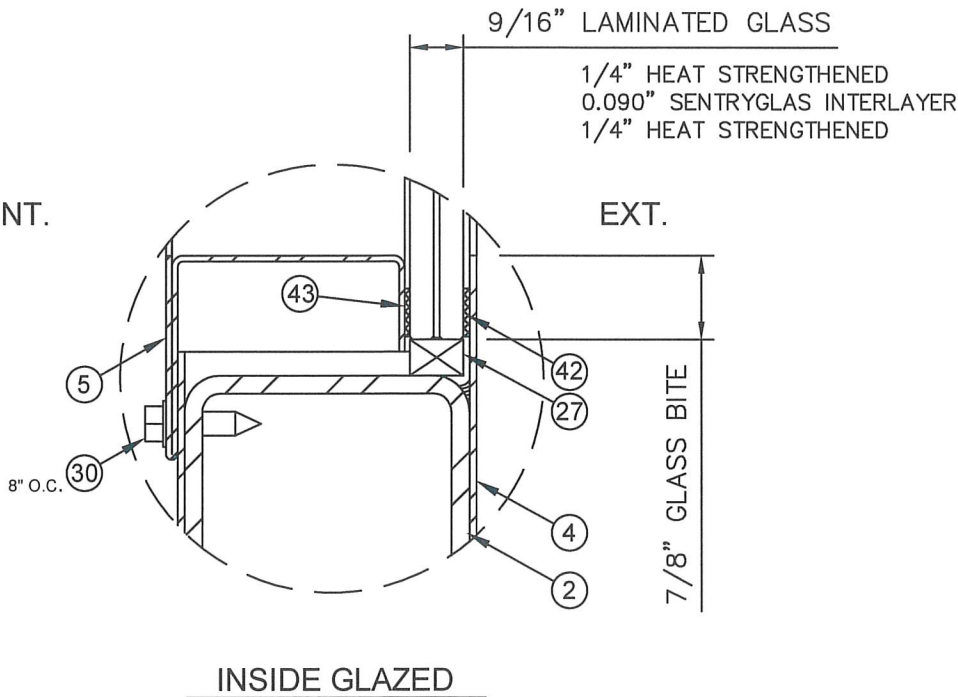
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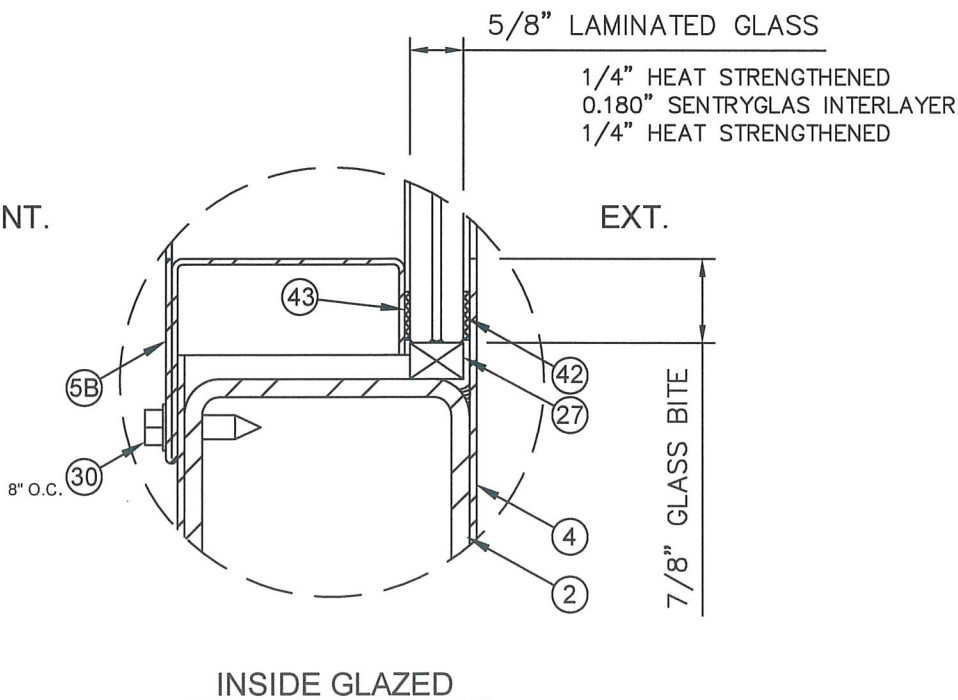
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	9/5/25		

GLAZING DETAILS

GLASS TYPE 1: (LEVEL D) LARGE AND SMALL MISSILE IMPACT RESISTANT



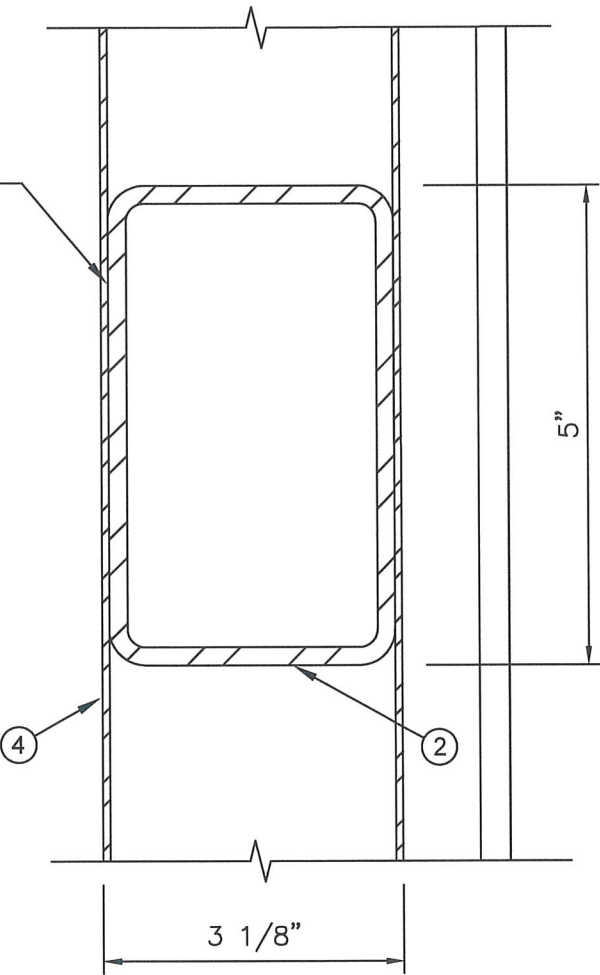
GLASS TYPE 2: (LEVEL E) LARGE AND SMALL MISSILE IMPACT RESISTANT



OPAQUE PANELS

16ga STEEL SKINS ARE LAMINATED TO STEEL TUBE FRAME WITH 3M 2-PART ACRYLIC GLUE

15
5



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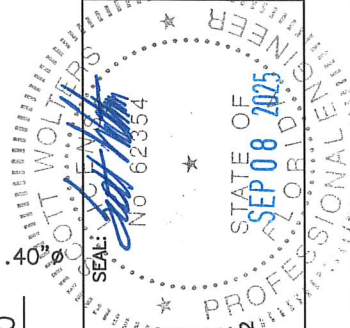
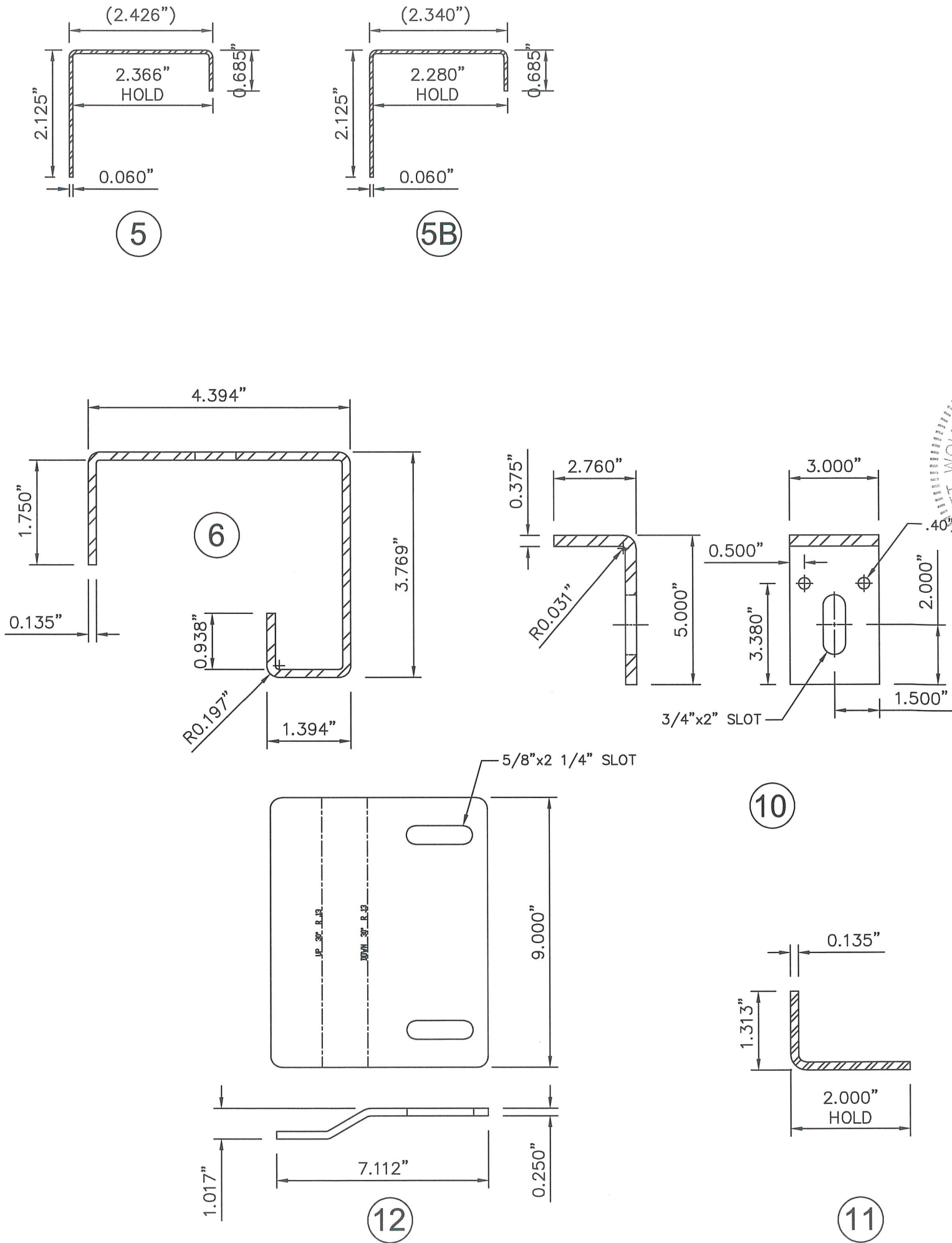
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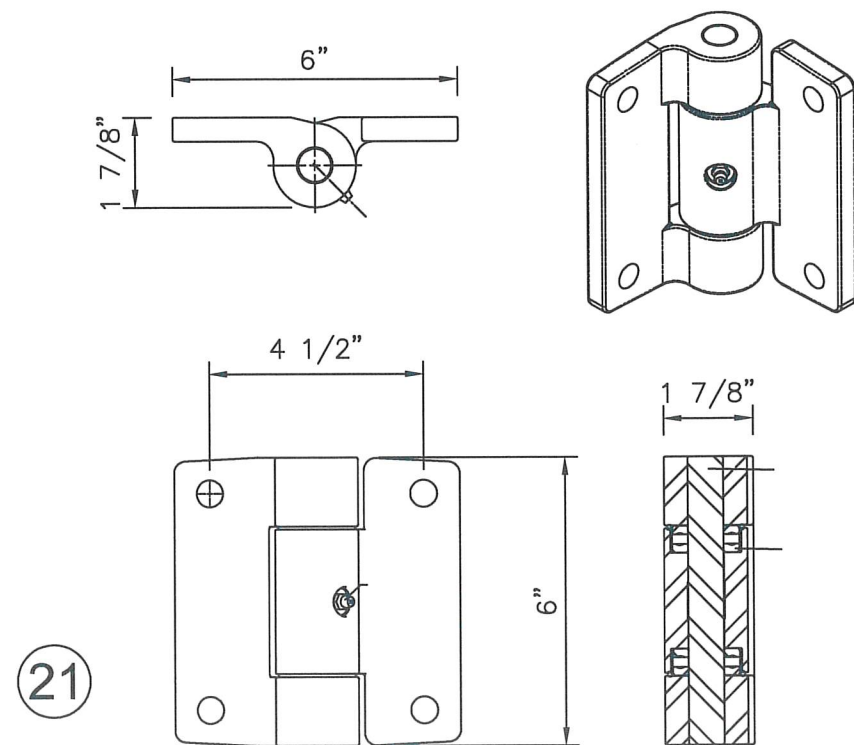
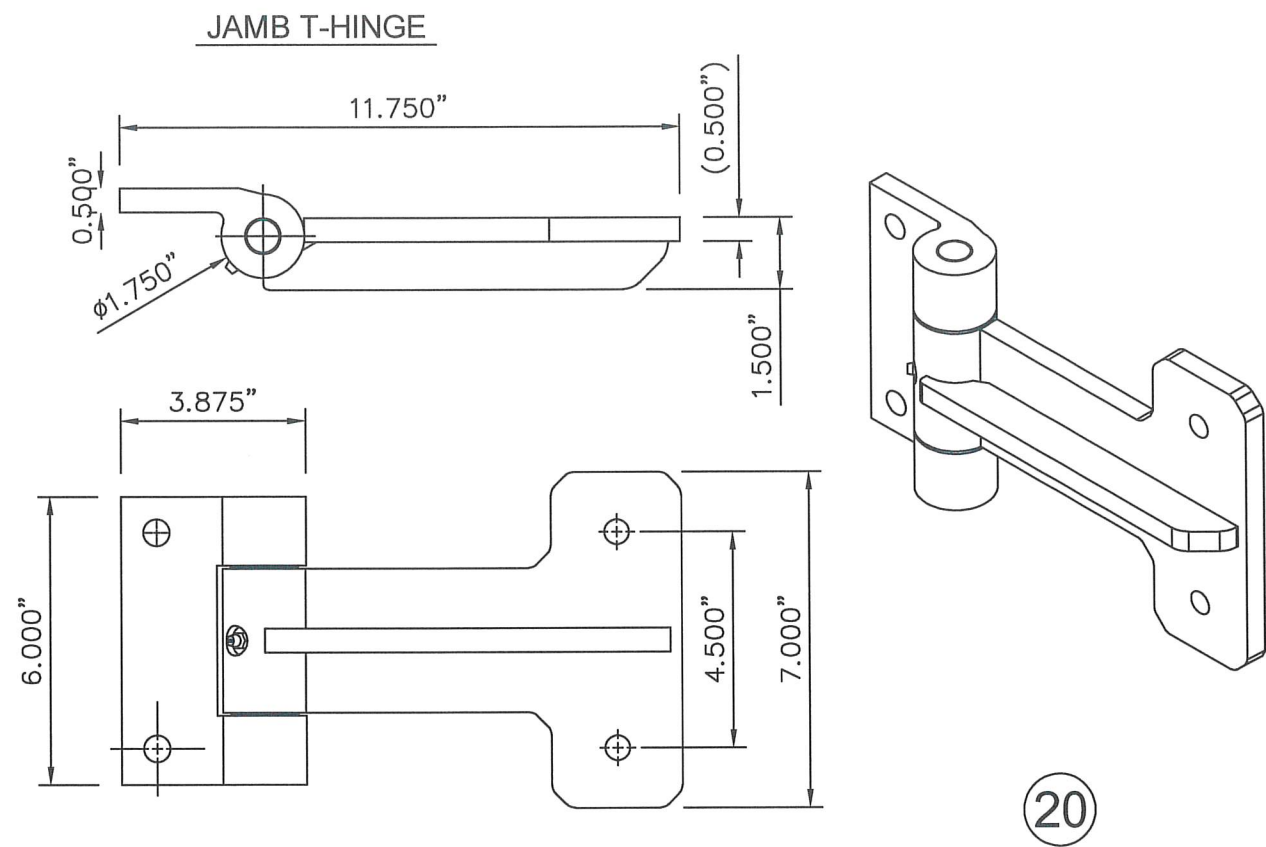
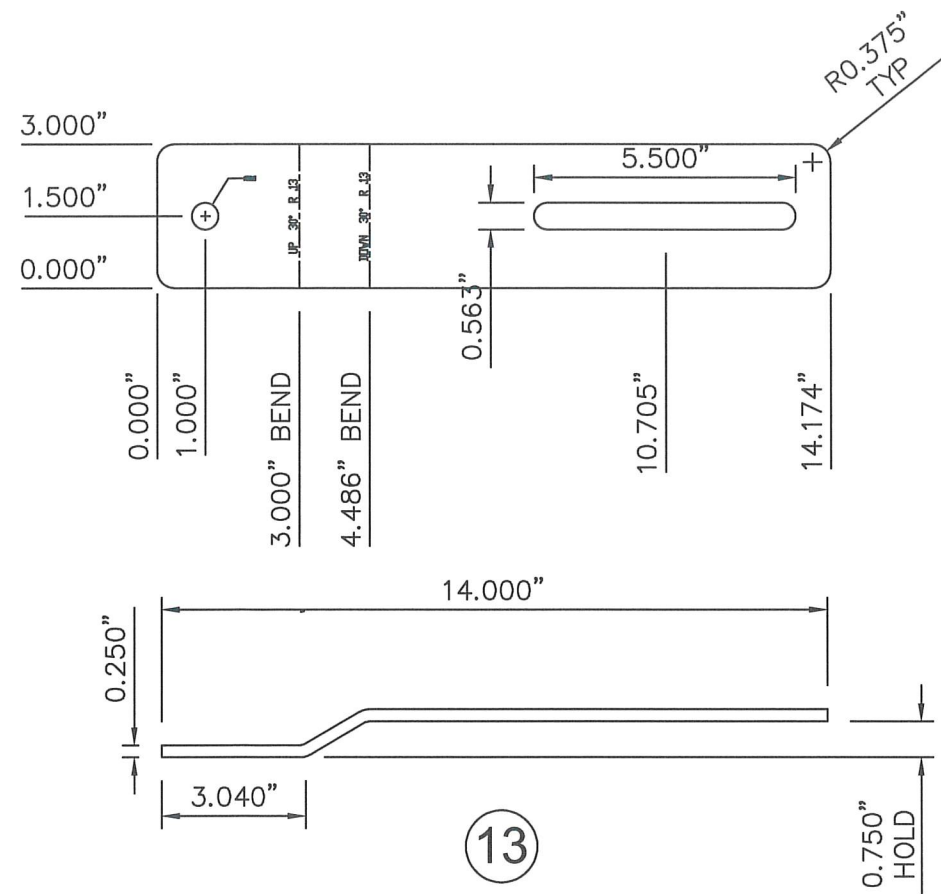
BILL OF MATERIALS		
MARK	DESCRIPTION	MATERIAL
1	6"x4"x5/16" STEEL ANGLE JAMB	A36
2	5"x3"x 11 ga STEEL TUBE DOOR STILE/RAIL	A500
3		
4	16ga. STEEL INTERIOR/EXTERIOR PANEL SHEETING	A526
5	16ga. FORMED STEEL GLASS STOP (9/16" INFILL)	A526
5B	16ga. FORMED STEEL GLASS STOP (5/8" INFILL)	A526
6	10ga. FORMED GALVANIZED STEEL HV1 TRACK	G90
8	1" 45° ALUMINUM BRUSH RETAINER	
9	6"x4"x5/16" FORMED STEEL ANGLE TRACK SUPPORT	A36
10	5"x2 3/4"x3/8" BENT STEEL TRACK REINF. ANGLE	A36
11	10 Ga. FORMED STEEL ASTRAGAL	A526
12	1/4" BENT STEEL CENTER TRACK SUPPORT	A1011
13	1/4" BENT STEEL END TRACK SUPPORT	A1011
14	ALUM. DOOR SWEEP WITH EPDM INSERT	
15	EXTRUSION FOR CENTER BULB	6063-T5
16		
17		
18		
20	JAMB T-HINGE	
21	BI-FOLD HINGE	
22	HV1 TROLLEY	
23	1" DIA. "CANE BOLT" SURFACE MOUNTED FLOOR BOLT	304SS
24	CANE BOLT HOUSING	A36
25	CANE BOLT QUICK RELEASE PIN	304SS
26	1 1/4" SCHED 40 GALVANIZED STEEL INSERT, 3 5/8" LONG	A53
27	SETTING BLOCKS (9/16" GLAZING), (4) PER LITE	RUBBER
28		
30	1/4"-14 HWH TEKS SCREW, 8" O.C. (MAX)	GR. 5 MIN.
31	1/4"x1" HWH TEKS SCREW, 20" O.C. (MAX)	GR. 5 MIN.
32	3/8" DIA. HH F-TYPE THREAD CUTTING SCREW	GR. 5 MIN.
33	1/2" DIA. HH CAP SCREW, NUT, & WASHERS	GR. 5 MIN.
34	1/2" DIA. HH F-TYPE THREAD CUTTING SCREW	GR. 5 MIN.
35	1/4"-14 HWH TEKS SCREW, 7" FROM ENDS AND 12" MAX. O.C.	GR. 5 MIN.
36	1/4"x1 1/2" HWH TEKS SCREW	GR. 5 MIN.
42	1/16"x1/2" BUTYL TAPE	
43	1/8"x1/2" FOAM GLAZING TAPE	
44	1" D-SEAL	EPDM
45	FOAM FILLED RUBBER BULB GASKET	



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