

Z:\2023 FBC Drawings\Metal Mfg Industries\FL-12169 R4\FL-12169.1-4.dwg



PRIV. DE RIO SANTIAGO #30
COL. LA RAZA
SOLEDAD DE GRACIANO SANCHEZ
SAN LUIS POTOSI, C.P. 78433

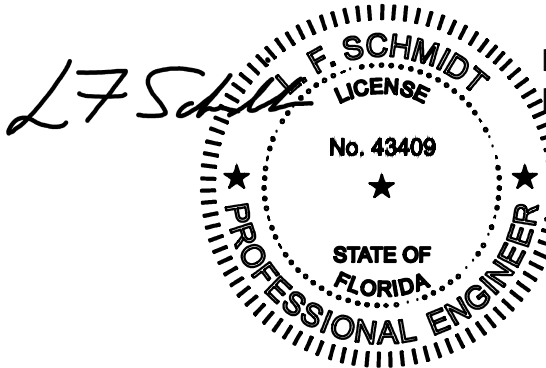
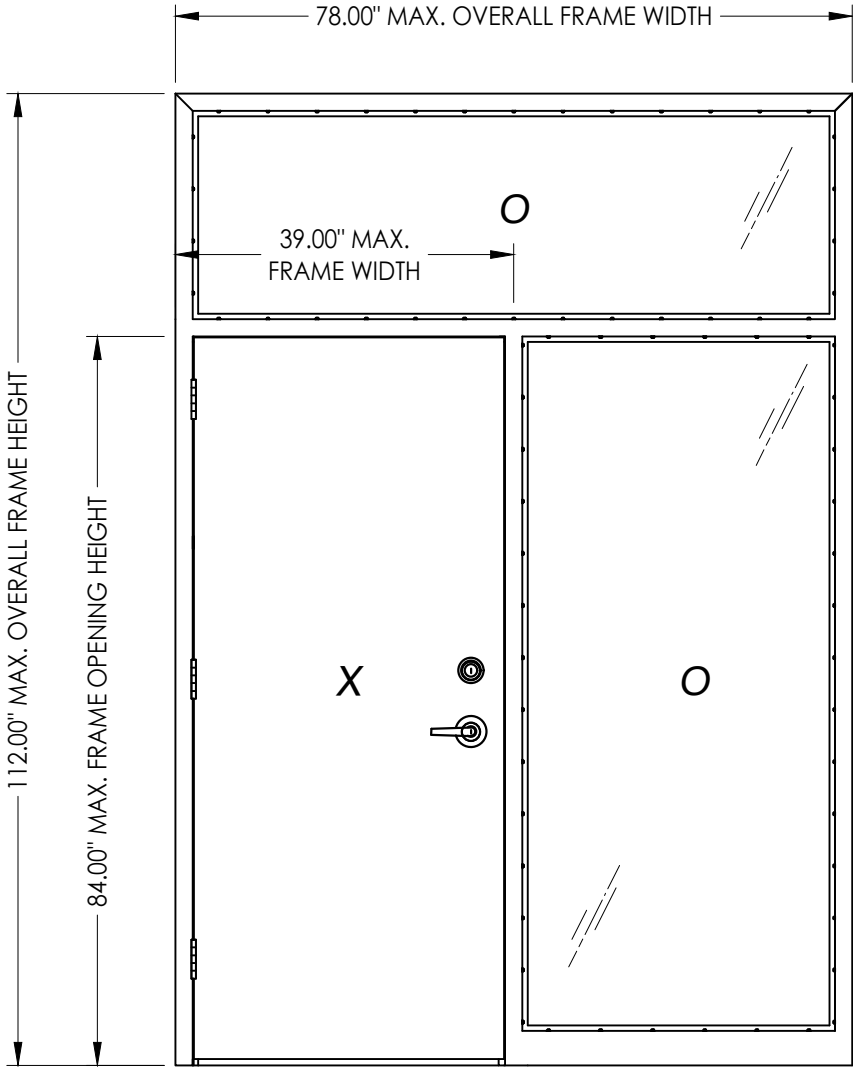
"N" SERIES COMMERCIAL STEEL DOOR W/ SIDELITE & TRANSOM OUTSWING "IMPACT"

GENERAL NOTES

1. This product has been evaluated and is in compliance with the 8th Edition (2023) Florida Building Code (FBC) structural requirements including the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing or stucco.
3. When used in the "HVHZ" this product complies with Section 1626 of the Florida Building Code and does not require an impact resistant covering.
4. When used in areas outside of the "HVHZ" requiring wind borne debris protection this product complies with Section 1609.1.2 of the FBC and does not require an impact resistant covering. This product meets missile level "D" and includes Wind Zone 4 as defined in ASTM E1996 and Section 1609.1.2.2 of the FBC.
5. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.
6. Outswing configurations using high water dam threshold item #78 meet water infiltration requirements for "HVHZ".
7. Outswing configurations using sill item #40, #41 or #42 do not meet the water infiltration requirements for the "HVHZ" and shall be installed only in non-habitable areas or at habitable locations protected by an overhang or canopy such that the angle between the edge of canopy or overhang to sill is less that 45 degrees.
8. The "N" door achieves a Class III stiffness classification per Section 8.2.2 of ANSI A250.13 (based on opaque door).
9. When used in the "HVHZ", steel must be protected as specified in FBC Section 2222.6.

TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Typical elevations, design pressures, & general notes
2	Door panel sections 161 lock prep
3	Horizontal cross sections
4	Vertical cross sections
5	Vertical cross sections
6	Anchoring details
7	Glazing detail & components
8	Bill of materials & components

OVERALL FRAME DIMENSION	SIDELITE D.L.O. DIMENSION	TRANSOM D.L.O. DIMENSION	LOCK TYPE	GLASS TYPE	DESIGN PRESSURE (PSF)	
					POSITIVE	NEGATIVE
78.00" x 112.00"	34.75" x 78.75"	72.75" x 22.75"	161 LATCH (SCHLAGE)	G1	+55.0	-55.0
			161 LATCH & DEADBOLT (DESIGN HARDWARE)		+65.0	-65.0



Digitally signed by Lyndon F Schmidt
Date: 2023.07.11 08:59:30 -04'00'

This item has been digitally signed and sealed by
L. F. Schmidt, P.E. on the date adjacent to the seal.
Printed copies of this document are not
considered signed and sealed and the signature
must be verified on any electronic copies.

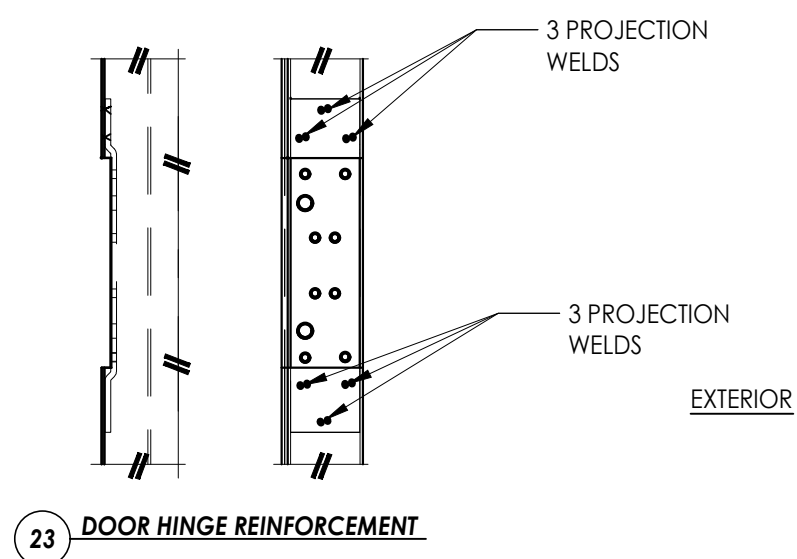
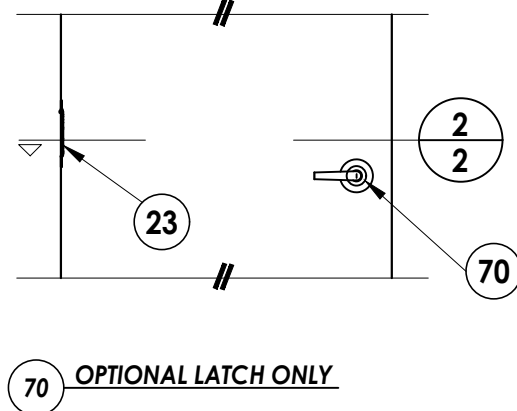
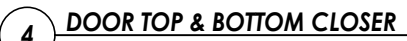
THIS PRODUCT APPROVAL IS VALID
ONLY FOR THE STATE OF FLORIDA

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT:	METAL MANUFACTURING INDUSTRIES		"N" STEEL DOOR		PART OR ASSEMBLY:		TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES	
	4	3	2	1	NO.	DATE	REVISIONS	
	7/11/23	7/30/20	7/17/17	10/14/16				
	UPDATE TO 8TH ED. (2023)	UPDATE TO 7TH ED. (2020)	UPDATE TO 6TH ED. (2017)	UPDATE TO 5TH ED. (2014)				
	FBC	FBC	FBC	FBC				
	LFS	DAC	LFS	JK				
				BY				

DATE: 2/19/09
SCALE: N.T.S.
DWG. BY: AL
CHK. BY: LFS
DRAWING NO.: FL-12169.3
SHEET 1 OF 8

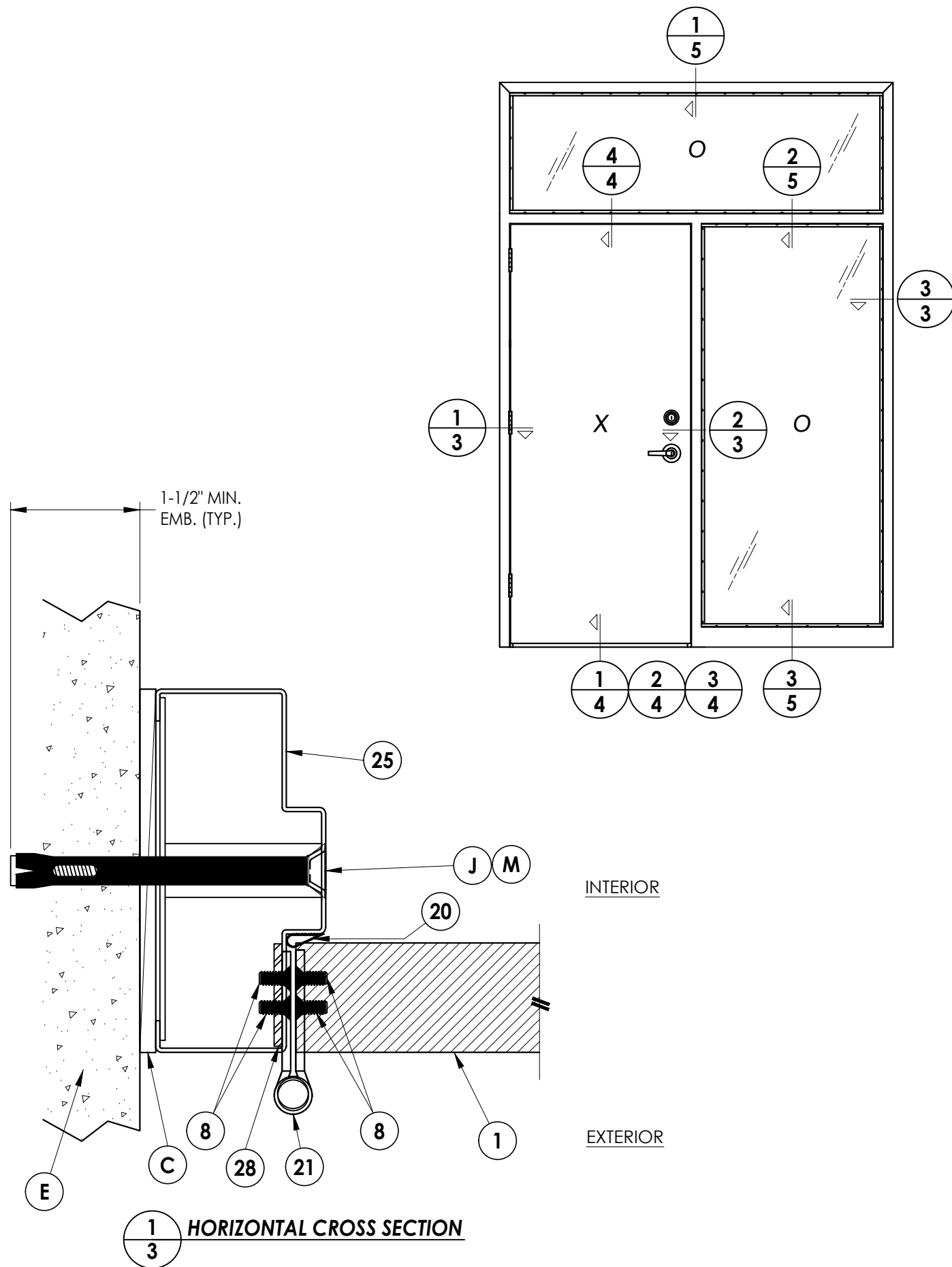


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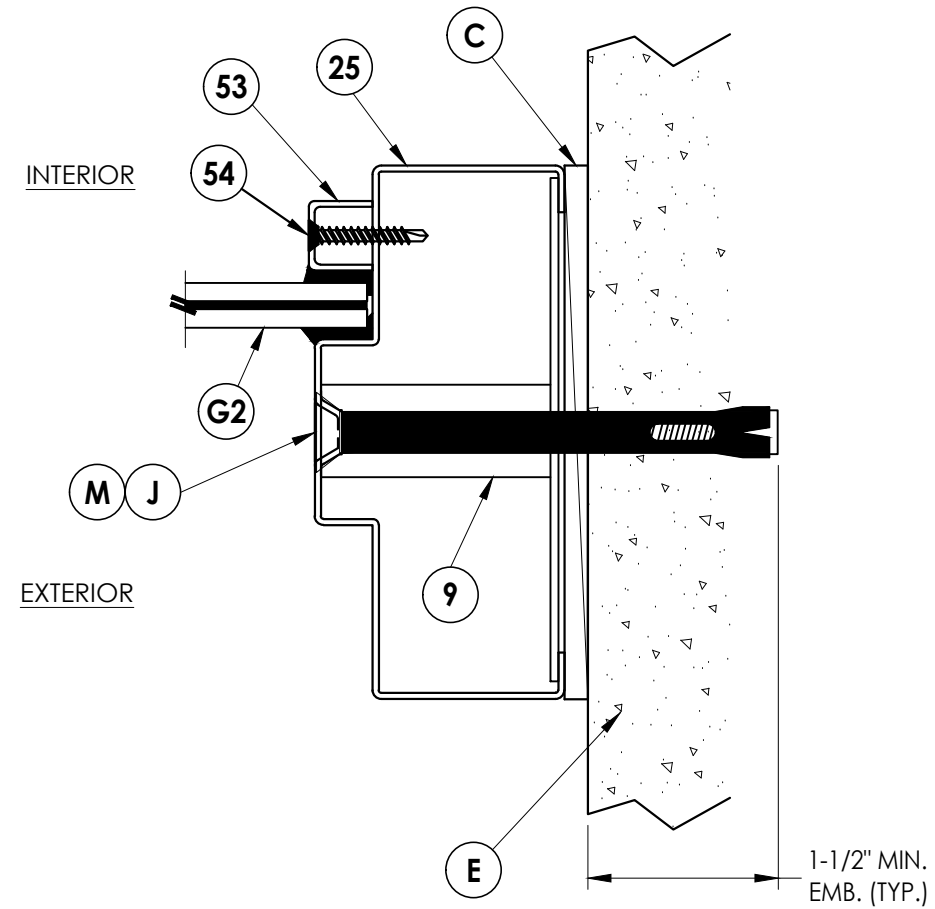
PRODUCT: METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR

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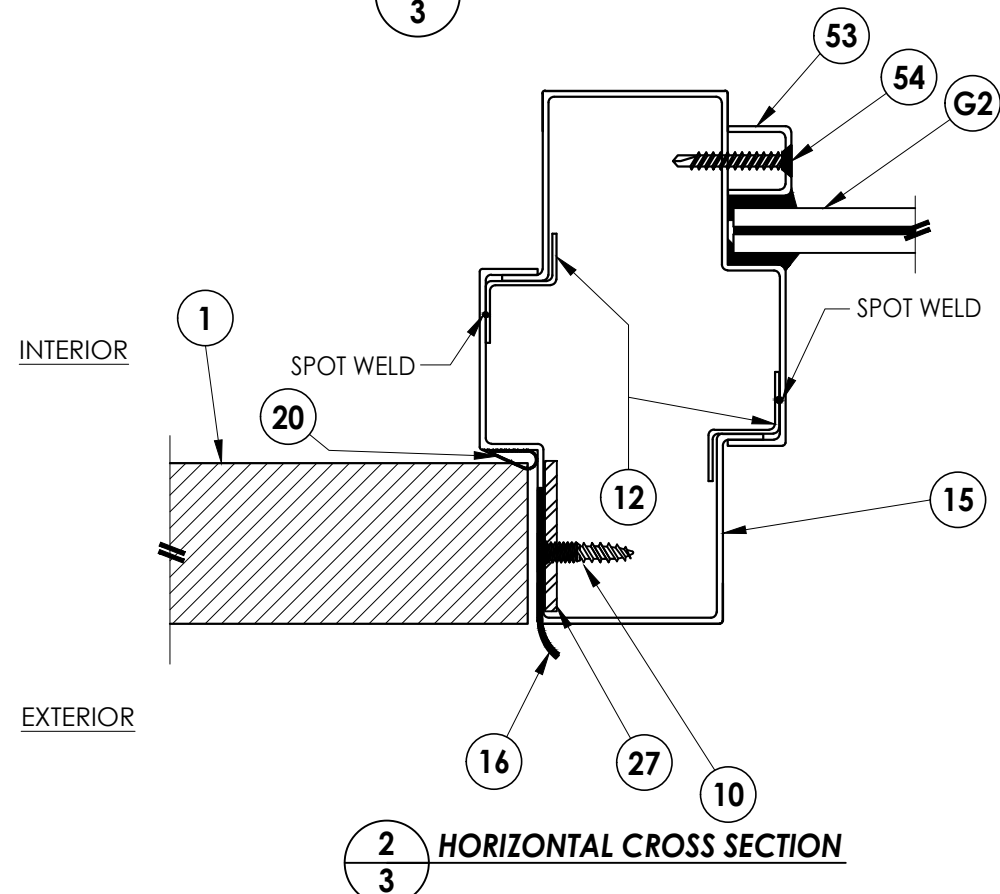
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3	7/30/20	UPDATE TO 7th ED. (2020)	FBC	DAC		
2	7/17/17	UPDATE TO 6TH ED. (2017)	FBC	LFS		
1	10/14/16	UPDATE TO 5TH ED. (2014)	FBC	JK		
NO.	DATE					BY
REVISIONS						
DATE: 2/19/09						
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DWG. BY: AL						
CHK. BY: LFS						
DRAWING NO.: FL-12169.3						
SHEET 2 OF 8						



1 **HORIZONTAL CROSS SECTION**
3



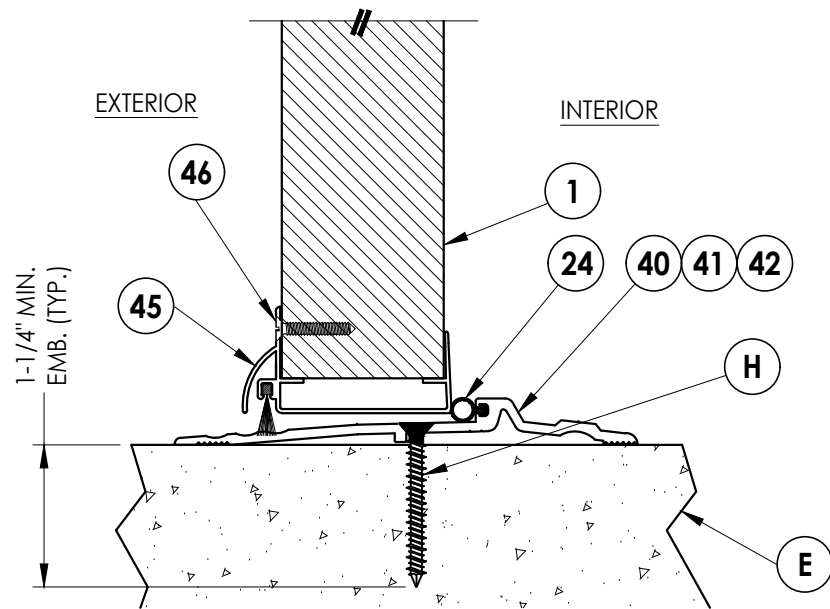
3 HORIZONTAL CROSS SECTION 53



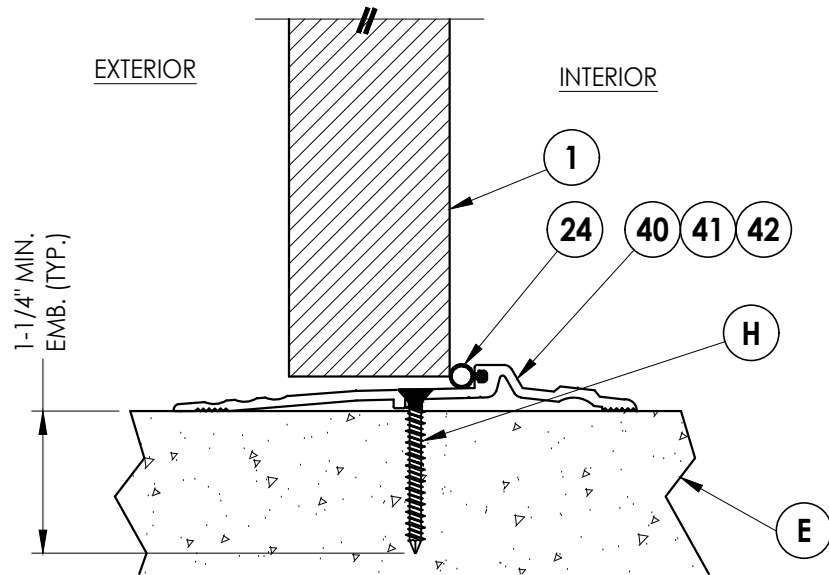
2 HORIZONTAL CROSS SECTION

DATE: 2/19/09		DRAWING NO.: FL-12169.3		SHEET 3 OF 8	
SCALE: N.T.S.		CHK. BY: LFS		DWG. BY: AL	
NO. DATE		REVISIONS		BY	
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1	10/14/16	UPDATE TO 5TH ED. (2014)	FBC	JK	
PRODUCT: METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR		PART OR ASSEMBLY: HORIZONTAL CROSS SECTIONS		BUILDING CONSULTANTS, INC. P.O. Box 230, Valrico, FL 33595 Phone No.: 813.659.9197 FBPE Registry No. 9813	
DOCUMENTS PREPARED BY: Lyndon F. Schmidt P.E. No. 43409		R _W			

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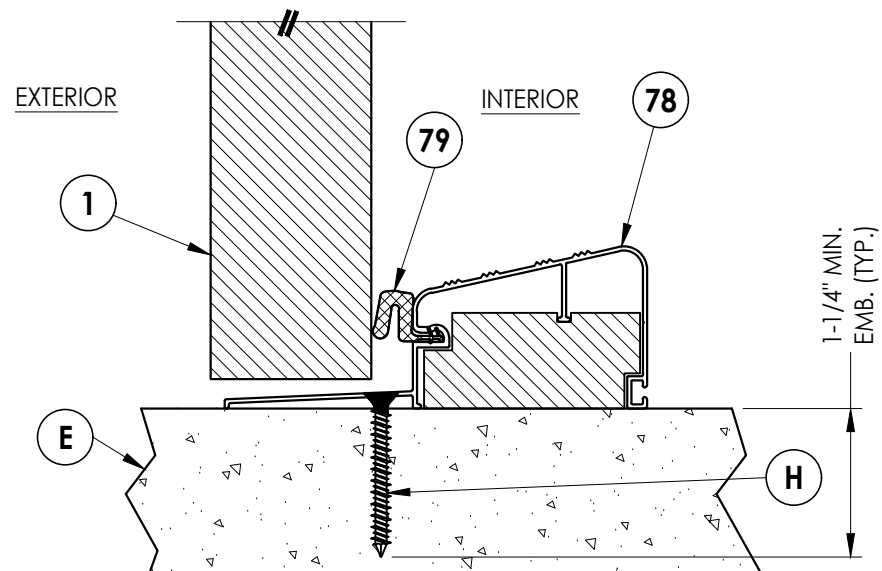


1
4 **VERTICAL CROSS SECTION**
See general notes, sheet 1
for "HVHZ" water infiltration
requirements

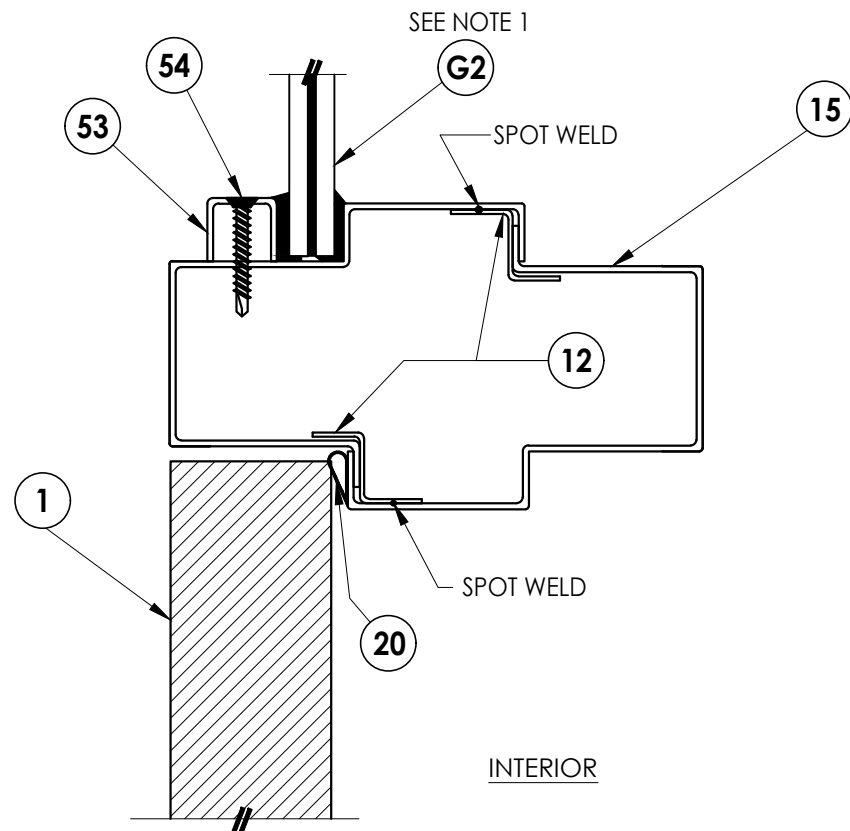


2
4 **VERTICAL CROSS SECTION**
See general notes, sheet 1
for "HVHZ" water infiltration
requirements

NOTE:
1. GLAZING > 36" WIDE REQUIRES TWO (2) SETTING
BLOCKS CONFORMING TO FBC SECTION 2411.3.3.1.



3
4 **VERTICAL CROSS SECTION**
See general notes, sheet 1
for "HVHZ" water infiltration
requirements



4
4 **VERTICAL CROSS SECTION**

Documents Prepared By:
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PRODUCT:
METAL MANUFACTURING
INDUSTRIES
"N" STEEL DOOR

PART OR ASSEMBLY:
VERTICAL CROSS SECTIONS

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
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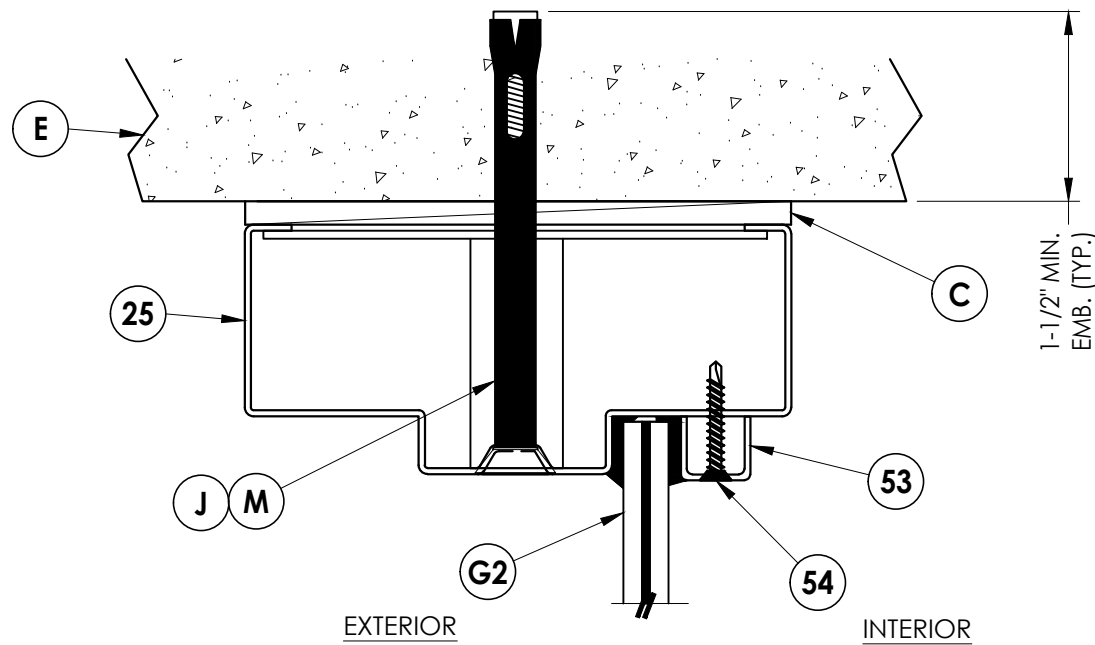
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FL-12169.3

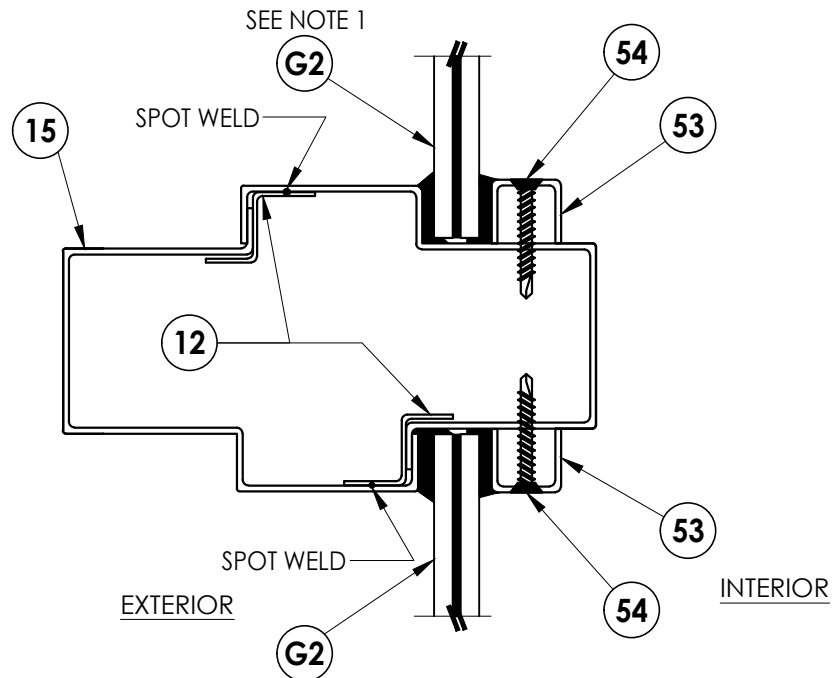
SHEET 4 OF 8

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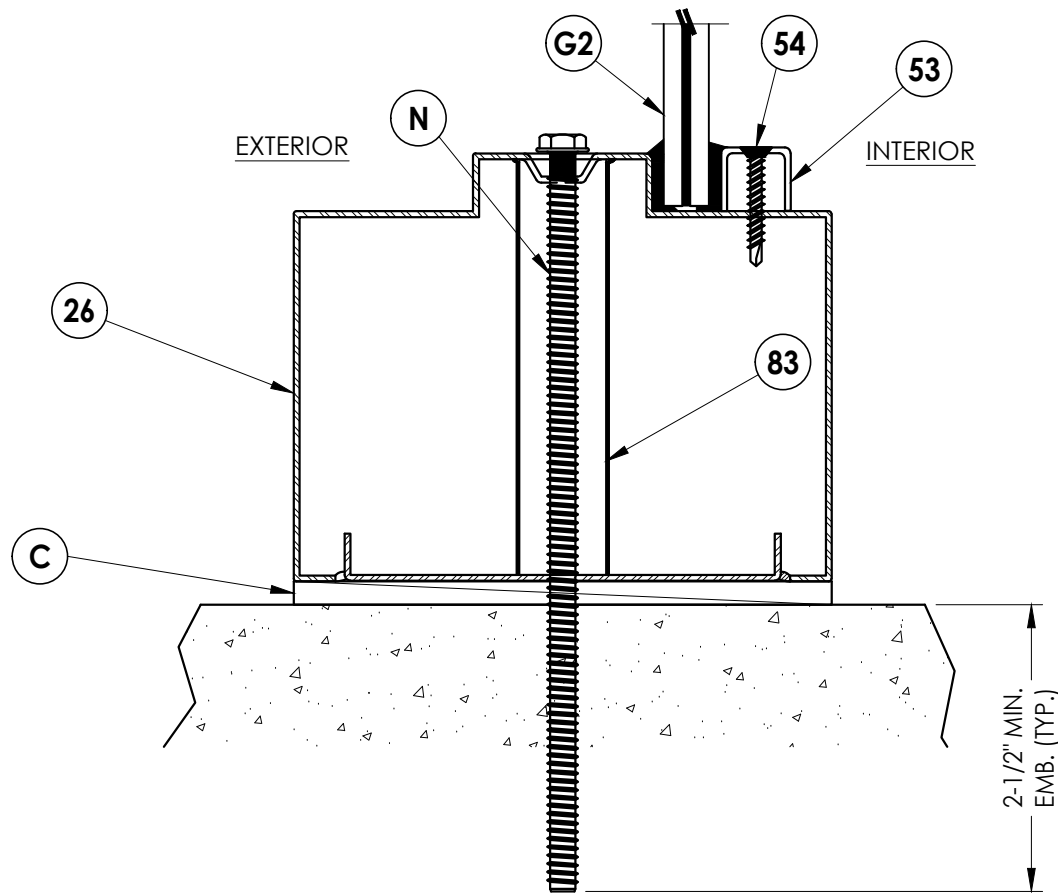


1
5 VERTICAL CROSS SECTION

NOTE:
1. GLAZING > 36" WIDE REQUIRES TWO (2) SETTING
BLOCKS CONFORMING TO FBC SECTION 2411.3.3.1.



2
5 VERTICAL CROSS SECTION



3
5 VERTICAL CROSS SECTION

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PRODUCT:
METAL MANUFACTURING
INDUSTRIES
"N" STEEL DOOR
PART OR ASSEMBLY:

VERTICAL CROSS SECTIONS

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1	10/14/16	UPDATE TO 5TH ED. (2014) FBC JK

DATE: 2/19/09

SCALE: N.T.S.

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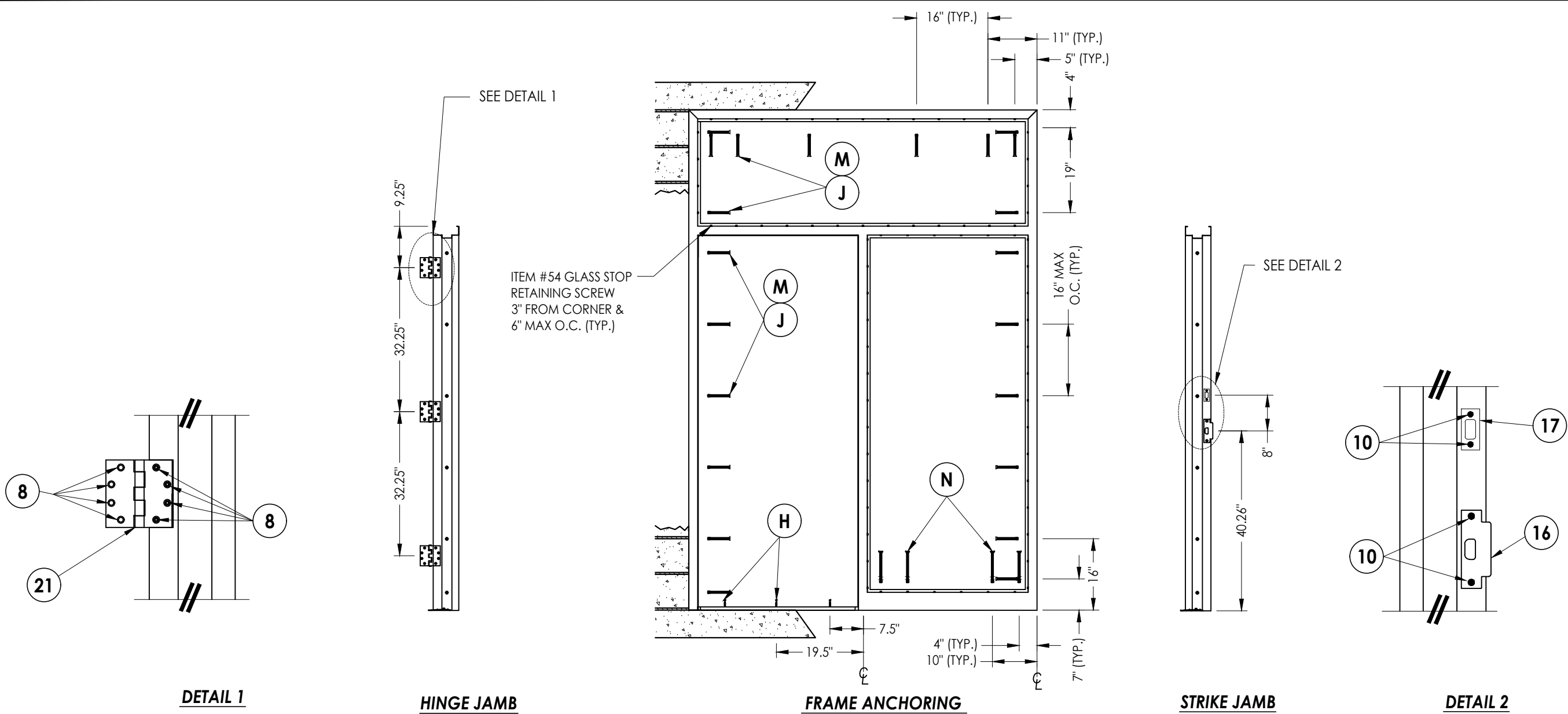
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DRAWING NO.:

FL-12169.3

SHEET 5 OF 8

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CONCRETE ANCHOR NOTES:

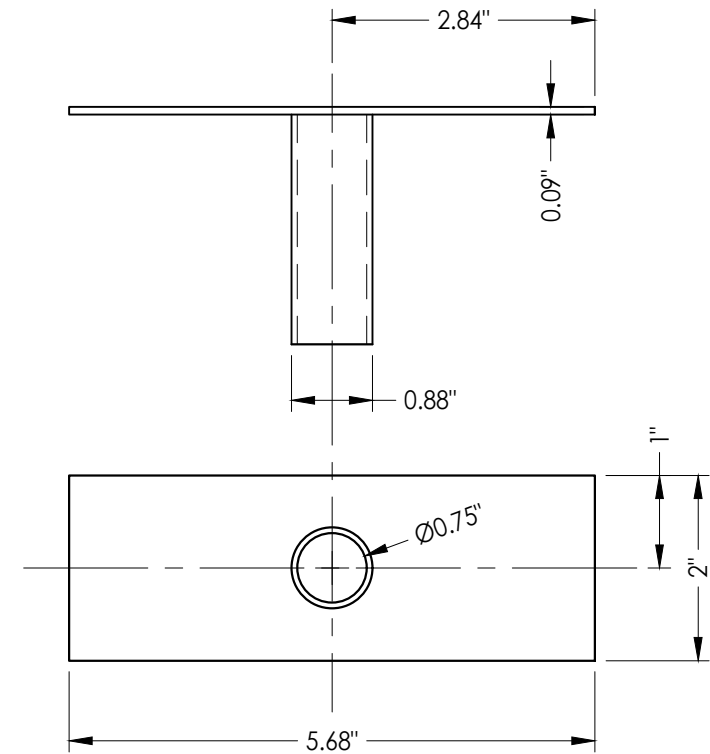
- Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.
- Concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. ON 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"	2-1/2"	4"
DYNABOLT SLEEVE ANCHOR	3/8"	1-1/2"	2-1/4"	4-1/2"
TAPPER	3/8"	1-1/2"	4-1/4"	6"
SCREW-BOLT+™	1/2"	2-1/2"	6"	6"

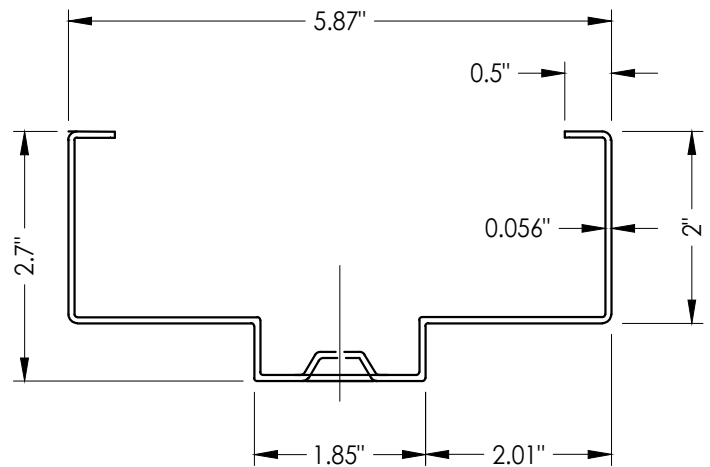
- Embedment may be through 1-1/4" face shell of hollow block.

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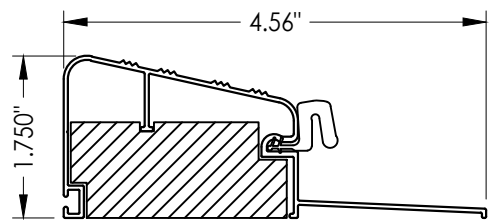
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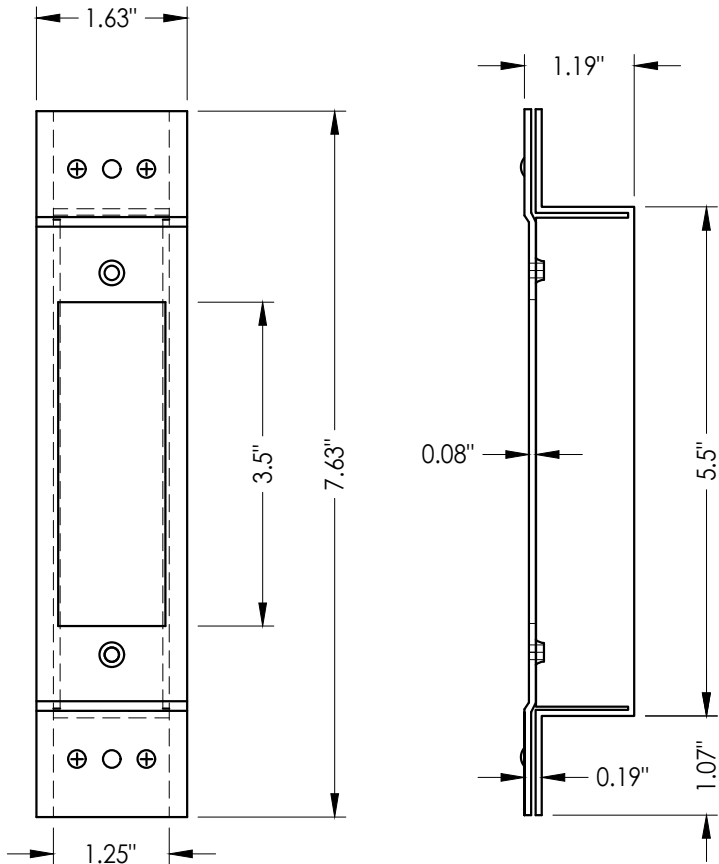
9 TUBE ANCHOR



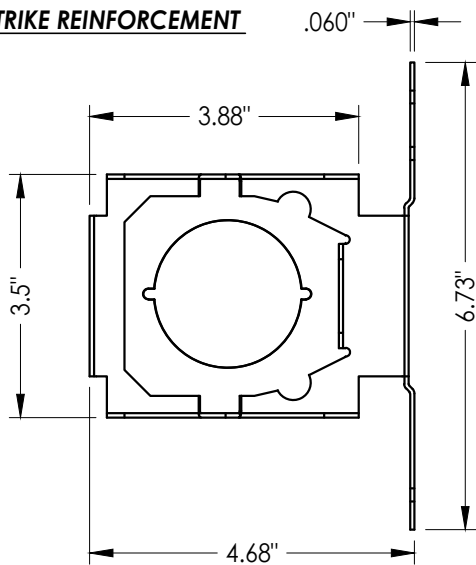
25 HOLLOW METAL FRAME



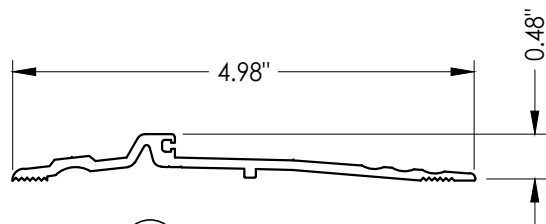
78 OUTSWING THRESHOLD



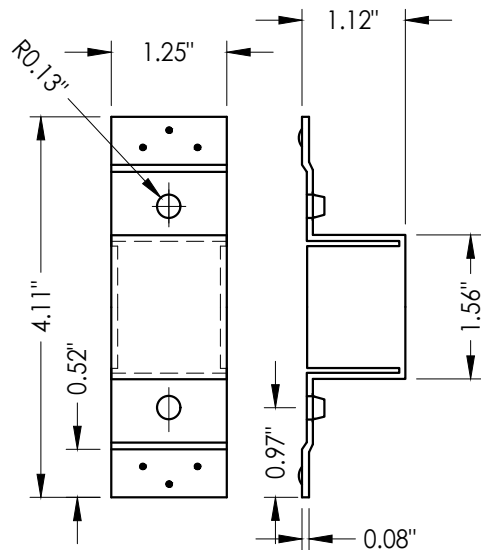
27 LATCH STRIKE REINFORCEMENT



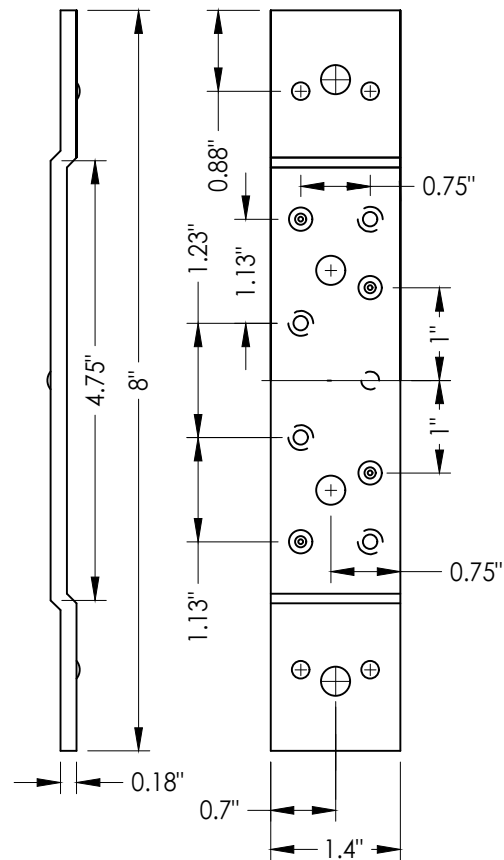
5 LOCK BOX REINFORCEMENT



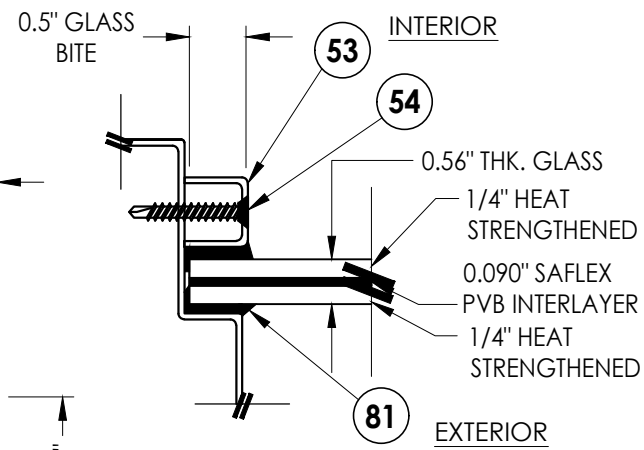
40 THRESHOLD



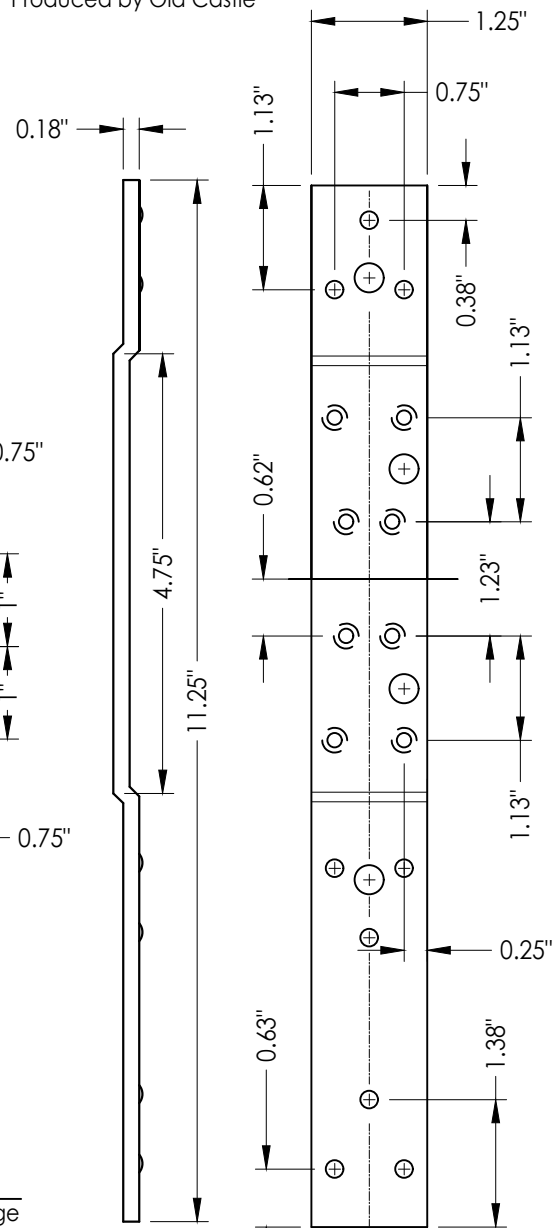
19 DEADBOLT STRIKE REINFORCEMENT



23 STANDARD (SHORT) DOOR HINGE
Reinforcement middle and bottom hinge



G1 GLAZING DETAIL
9/16" Monolithic glass
Produced by Old Castle



22 STANDARD (LONG) DOOR HINGE
Reinforcement top hinge

Documents Prepared By:
Lyndon F. Schmidt
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PRODUCT:
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PART OR ASSEMBLY:
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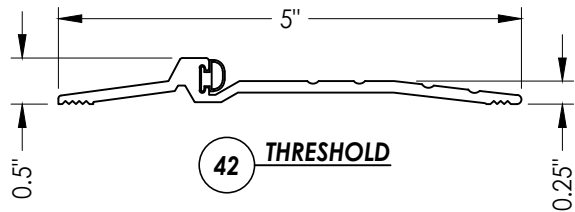
FL-12169.3

SHEET 7 OF 8

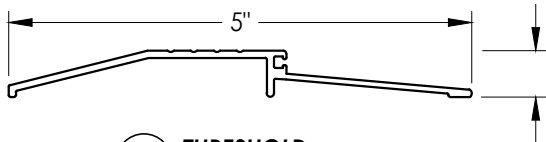
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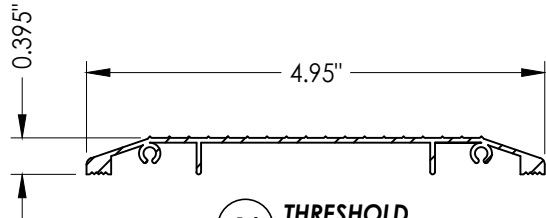
BILL OF MATERIALS					
ITEM	DESCRIPTION	MATERIAL	ITEM	DESCRIPTION	MATERIAL
C	MAX. 1/4" SHIM SPACE	-	23	STANDARD (SHORT) DOOR HINGE MIDDLE BOTTOM REINFORCEMENT	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE	24	WEATHER STRIP (THRESHOLD)	NEOPRENE
H	1/4" x 1-3/4" ITW PFH CONCRETE SCREW	STEEL	25	FRAME 5-3/4" X 2" MIN. (0.056" THK)	STEEL
J	3/8" X 5" PFH ITW DYNABOLT SLEEVE ANCHOR	STEEL	26	FRAME SILL 5-3/4" X 4" MIN. (0.056" THK)	STEEL
M	3/8" X 5" TAPPER CONCRETE SCREW BY POWERS FASTENERS	STEEL	27	LATCH STRIKE REINFORCEMENT	STEEL
N	1/2" X 8" HH SCREW-BOLT+ CONCRETE ANCHOR BY DeWALT/POWERS	STEEL	28	FRAME HINGE REINFORCEMENT	STEEL
1	"N" OPAQUE STEEL DOOR PANEL	-	40	THRESHOLD NATIONAL GUARD PRODUCTS, INC. #896	ALUMINUM
2	DOOR SKIN (0.042" THK. STEEL, Fy = 40,300 PSI MIN.)	STEEL	41	THRESHOLD NATIONAL GUARD PRODUCTS, INC. #950	ALUMINUM
3	FOAM 1.0 PCF MIN. DENSITY	POLYSTYRENE	42	OUTSWING THRESHOLD PEMKO #2005V	ALUMINUM
4	DOOR TOP & BOTTOM CLOSER	STEEL	45	95WHA DOOR SWEEP NATIONAL GUARD PRODUCTS, INC.	ALUMINUM
5	LOCK BOX REINFORCEMENT	STEEL	46	#6 X 3/4" PHILIPS HEAD SMS	STEEL
6	CLOSER REINFORCEMENT	STEEL	53	U-CHANNEL GLASS STOP	STEEL
8	#12-24 x 1/2" SELF TAPPER	STEEL	54	#8 X 1.25" PFH SHEET METAL SCREW	STEEL
9	TUBE ANCHOR	STEEL	70	SCHLAGE LOCK SET ASSEMBLY ND53PD	STEEL
10	#12-24 x 1.0" COMBINATION MACHINE / WOOD SCREW	STEEL	71	DESIGN HARDWARE D1-S SERIES DEADBOLT	STEEL
12	MULLION Z BRACKET	STEEL	72	DESIGN HARDWARE "Z" SERIES ENTRY	STEEL
14	COLUMBIA ADA THRESHOLD #6510	ALUMINUM	76	DESIGN HARDWARE D2-S SERIES DEADBOLT	STEEL
15	MULLION MIN. (0.056" THK)	STEEL	77	DESIGN HARDWARE "X" SERIES ENTRY	STEEL
16	ANSI LATCH STRIKE	STEEL	78	OUTSWING THRESHOLD QOSH BY DLP	ALUM/WOOD
17	DEADBOLT STRIKE	STEEL	79	WEATHER-STRIP	FOAM
19	DEADBOLT STRIKE REINFORCEMENT	STEEL	81	DOW 995 STRUCTURAL SILICONE	SILICONE
20	WEATHER-STRIP	NEOPRENE	83	SILL TUBE ANCHOR	STEEL
21	4-1/2" X 4-1/2" X 0.125" TEMPLATE HINGE	STEEL			
22	STANDARD (LONG) DOOR HINGE TOP HINGE REINFORCEMENT	STEEL			



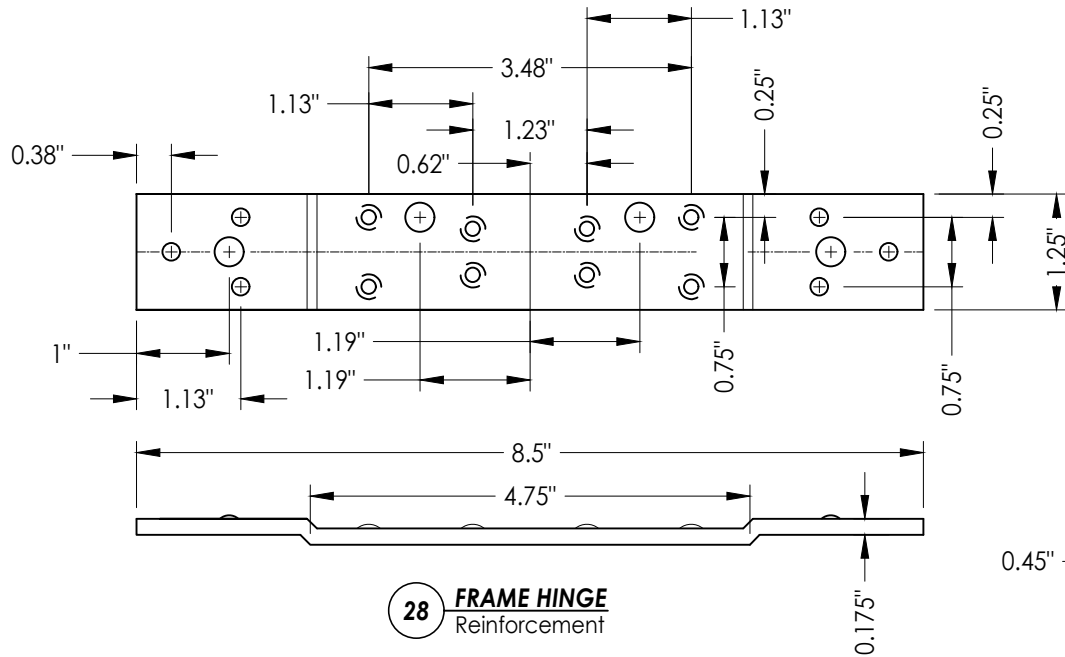
42 THRESHOLD



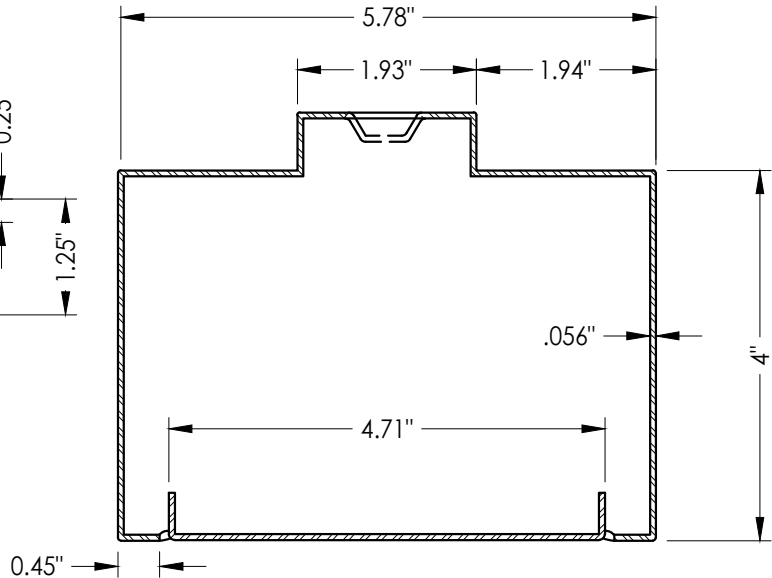
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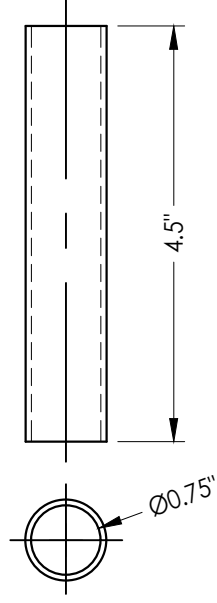
14 THRESHOLD ADA



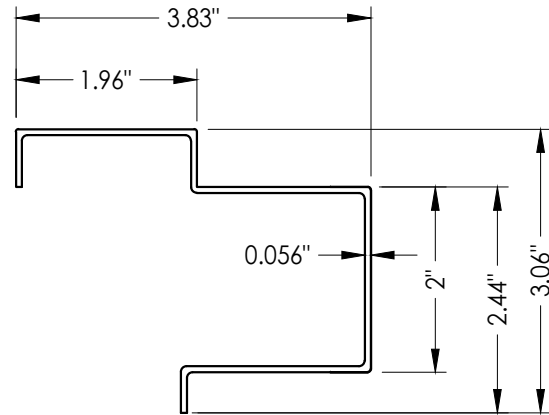
28 FRAME HINGE Reinforcement



26 HOLLOW METAL FRAME SILL

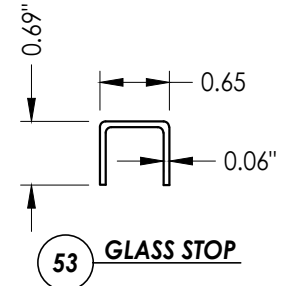
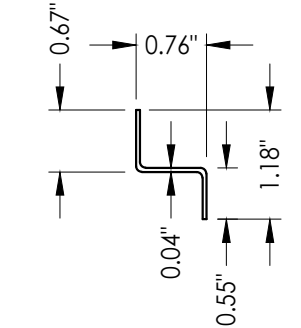


83 SILL TUBE ANCHOR

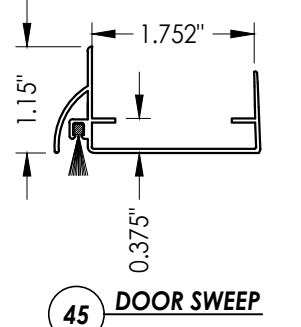


15 MULLION

12 MULLION Z BRACKET



53 GLASS STOP



45 DOOR SWEEP

Documents Prepared By: Lyndon F. Schmidt P.E. No. 43409		BUILDING CONSULTANTS, INC. P.O. Box 230, Valrico, FL 33595 Phone No.: 813.659.9197 FBPE Registry No. 9813	
PRODUCT:	METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR		BILL OF MATERIALS AND COMPONENTS
	PART OR ASSEMBLY:		
	4	7/11/23	UPDATE TO 8TH ED. (2023)
	3	7/30/20	UPDATE TO 7th ED. (2020)
	2	7/17/17	UPDATE TO 6TH ED. (2017)
	1	10/14/16	UPDATE TO 5TH ED. (2014)
	NO.	DATE	BY
REVISIONS			
DATE: 2/19/09			
SCALE: N.T.S.			
DWG. BY: AL			
CHK. BY: LFS			
DRAWING NO.: FL-12169.3			
SHEET 8 OF 8			