

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN DASMA 108 & 115, AND ASTM E330, E1886, E1996, & F588. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-16 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN THE END ZONE, ROOF AT ANY SLOPE):

WIND SPEED (MPH)	180	164	156	149	143
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY
A	ADDED HERITAGE MODEL/DRAWING UPDATES	3/1/22	RLR

MAX SIZE  
16' x 14'

DESIGN LOADS  
+29.7 PSF  
-33.8 PSF

TEST LOADS  
(1.5 x DESIGN LOADS)  
+44.6 PSF  
-50.7 PSF

LARGE MISSILE IMPACT RESISTANCE

Thomas L. Shelmerdine, PE (TX PE #85829)  
Structural Solutions, PA (TX Firm #F-004063)  
5921-G W. Friendly Ave., Greensboro, NC 27410 TX

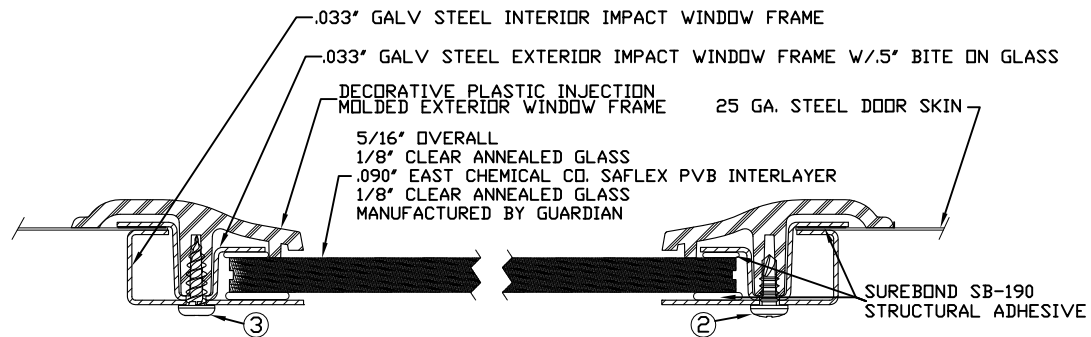
**Amarr**

MODEL #625 AMARR LINCOLN 1000, 2000  
MODEL #675 AMARR HILLCREST 1000, 2000  
MODEL #950 AMARR HERITAGE 1000, 2000

SIZE	DRAWN BY	RLR	DATE	5/20/20	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	5/20/20	IRC-6216-140-24-1

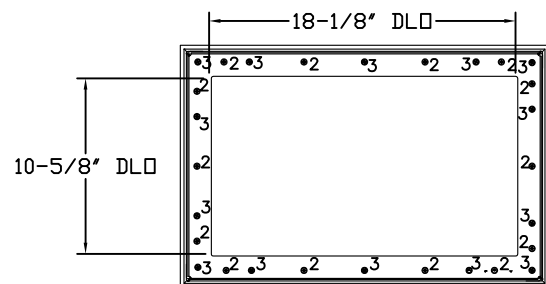
AMARR COMPANY  
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105

SHEET 1 OF 3

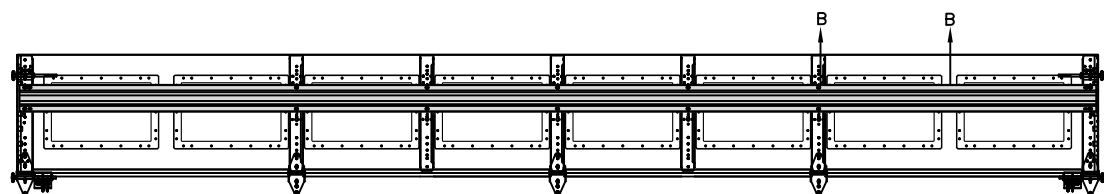


2. 3/16" X 1/2" SCREW - USED TO FASTEN THE STEEL EXTERIOR IMPACT WINDOW FRAME TO THE STEEL INTERIOR IMPACT WINDOW FRAME.
3. 11/64" X 1/2" SCREW - USED TO FASTEN DECORATIVE PLASTIC MOLDED WINDOW FRAME TO THE ASSEMBLY

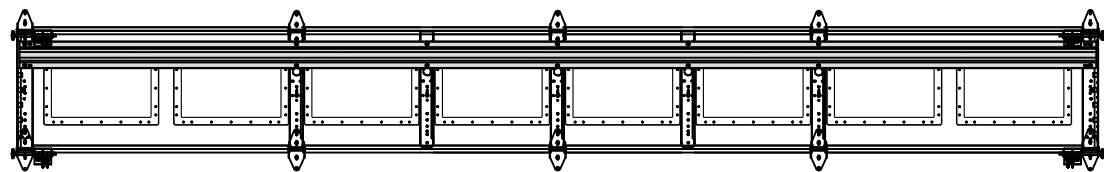
SECTION B-B IMPACT WINDOW DETAIL  
N.T.S.



IMPACT GLAZING FASTENER DETAIL  
N.T.S.



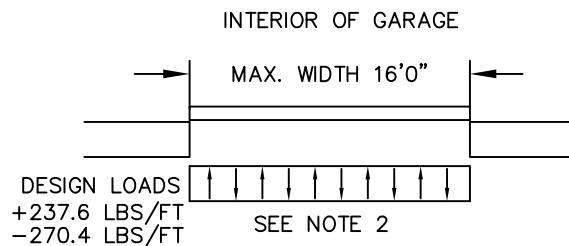
OPTIONAL SHORT PANEL TOP GLAZED SECTION (STRUT AND STILE LAYOUT)



OPTIONAL SHORT PANEL INTERMEDIATE GLAZED SECTION (STRUT AND STILE LAYOUT)

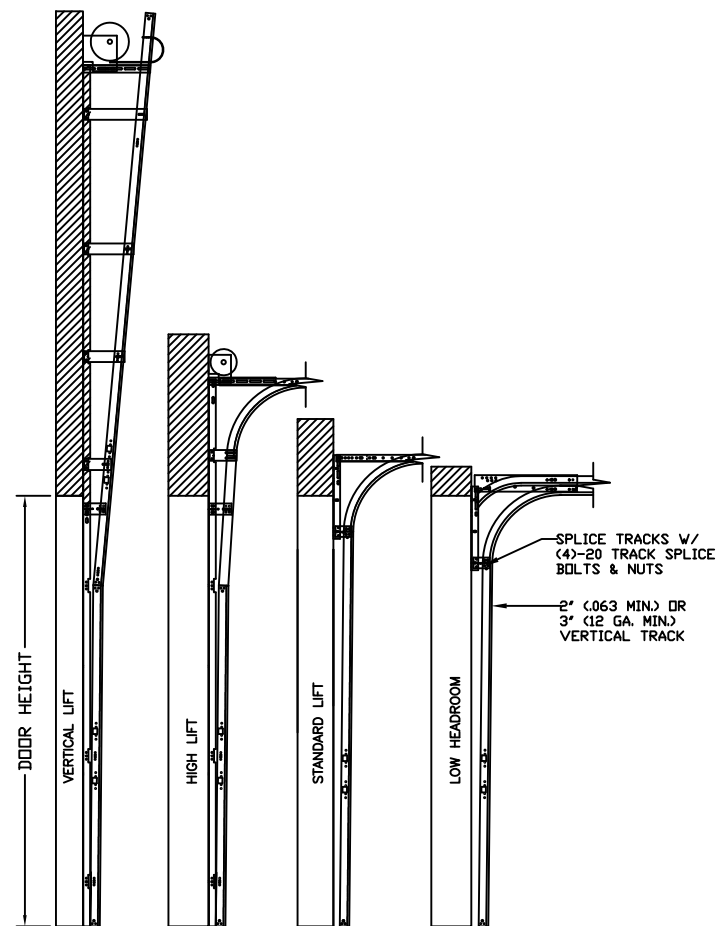
SPECIFICATIONS AND NOTES

1. ALL THE LOAD FROM THE DOOR IS TRANSFERRED TO THE VERTICAL TRACK, FROM THE TRACK THE LOAD IS TRANSFERRED TO THE VERTICAL JAMBS. THE HORIZONTAL JAMB OR HEADER RECEIVES NO PORTION OF THE LOAD TRANSFERRED FROM THE DOOR.
2. EACH VERTICAL JAMBS RECEIVES MAXIMUM DESIGN LOADS OF: +237.6 LBS/FT & -270.4 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 25 GA. (.019) MIN. ROLLED FORMED LIGHT COMMERCIAL QUALITY
5. SEE TABLE 2 ON PAGE 3 FOR REINFORCEMENT SCHEDULE
6. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.
7. REFER TO TABLES ON PAGE 3 FOR ADDITIONAL DOOR WIDTHS AND THEIR DESIGN PRESSURES
8. DOOR IS MANUFACTURED AND TESTED IN ACCORDANCE WITH THE 2018 IRC/IBC

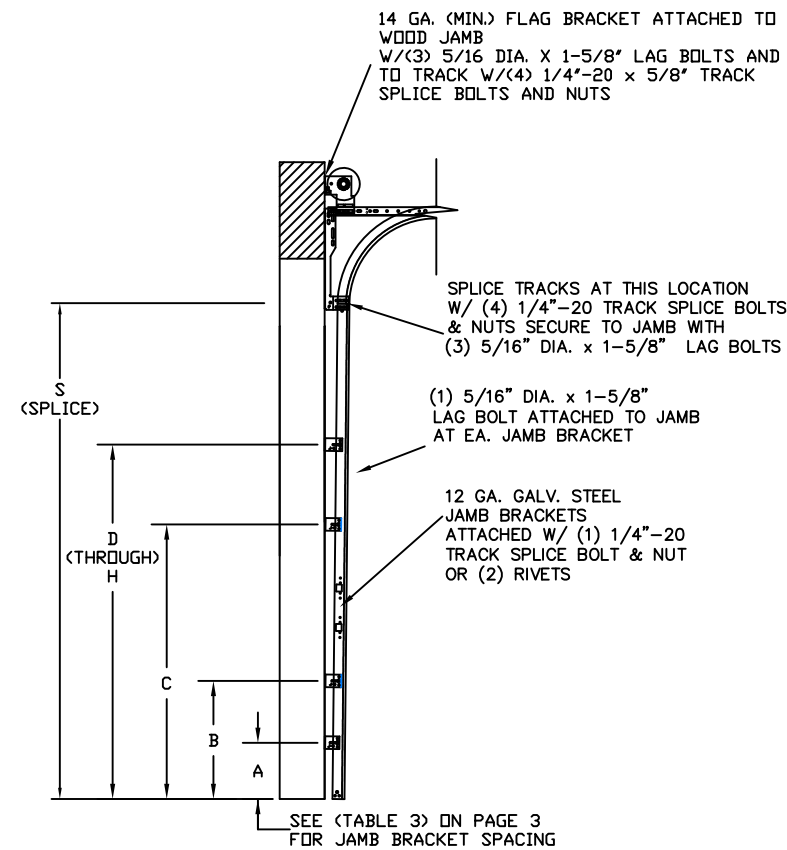


DESIGN LOADS  
+237.6 LBS/FT  
-270.4 LBS/FT

SEE NOTE 2



AVAILABLE TRACK CONFIGURATIONS  
N.T.S.



TRACK CONFIGURATION FOR 6" UP TO 14' TALL DOORS  
N.T.S.

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A	ADDED HERITAGE MODEL/DRAWING UPDATES	3/1/22	RLR

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16' x 14'  
DESIGN LOADS  
+29.7 PSF  
-33.8 PSF  
TEST LOADS  
(1.5 x DESIGN LOADS)  
+44.6 PSF  
-50.7 PSF

This document has been digitally signed & sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered signed & sealed, and the signature must be verified on any electronic copies.



LARGE MISSILE IMPACT RESISTANCE

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TABLE 1

DOOR HEIGHT	SECTION HEIGHTS							
	Btm	#2	#3	#4	#5	#6	#7	#8
14' 0"	21"	21"	21"	21"	21"	21"	21"	21"
13' 6"	21"	21"	21"	21"	21"	18"	18"	21"
13' 0"	21"	21"	21"	18"	18"	18"	18"	21"
12' 6"	21"	18"	18"	18"	18"	18"	18"	21"
12' 0"	21"	21"	21"	21"	21"	18"	21"	
11' 6"	21"	21"	21"	18"	18"	18"	21"	
11' 0"	21"	18"	18"	18"	18"	18"	21"	
10' 6"	21"	21"	21"	21"	21"	21"		
10' 0"	21"	21"	21"	18"	18"	21"		
9' 6"	21"	18"	18"	18"	18"	21"		
9' 0"	18"	18"	18"	18"	18"	18"		
8' 6"	21"	21"	21"	18"	21"			
8' 0"	21"	18"	18"	18"	21"			
7' 6"	18"	18"	18"	18"	18"			
7' 0"	21"	21"	21"	21"				
6' 6"	21"	18"	18"	21"				

TABLE 2

SECTION	STRUT SIZE
TOP	4.5"
7TH	4.5"
6TH	4.5"
5TH	4.5"
4TH	4.5"
3RD	4.5"
2ND	4.5"
BOTTOM	4.5" 3"

WOOD JAMB ATTACHMENT TO STRUCTURE (OPTIONAL)

**2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE**  
 5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS  
 THEN 20" O.C. (1 1/2" EMBEDMENT)

**2 X 6 VERTICAL JAMB ATTACHMENT TO 2,000 PSI CONCRETE**  
 HILTI KWIK BOLT 3/8" X 4" STARTING 6" FROM ENDS  
 THEN 24" O.C. (2 1/2" EMBEDMENT)  
 HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS  
 THEN 18" O.C. (1 1/4" EMBEDMENT)  
 ITW/RAMSET REDHEAD (TRU-BOLT) 3/8" X 4" STARTING 6" FROM ENDS  
 THEN 24" O.C. (2 1/2" EMBEDMENT)

**2 X 6 VERTICAL JAMB ATTACHMENT TO HOLLOW C-90 BLOCK**  
 SIMPSON 1/4" X 3" TITEN SCREWS STARTING 6" FROM ENDS,  
 USE PAIRS OF FASTENERS (3" APART)  
 AT 8" O.C. (1 1/2" EMBEDMENT)  
 HILTI 1/4" X 2-3/4" KWIK-CON II+ SCREWS STARTING 6" FROM ENDS,  
 USE PAIRS OF FASTENERS (3" APART) AT 8" O.C. (1 1/4" EMBEDMENT)

**2 X 6 VERTICAL JAMB ATTACHMENT TO GROUTED C-90 BLOCK (2000 PSI GROUT)**  
 HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS  
 THEN 20" O.C. (1 1/4" EMBEDMENT)  
 (OR, USE FASTENERS FOR HOLLOW C-90 BLOCK)

\*LAGS AND BOLTS CAN BE COUNTERSUNK TO PROVIDE A FLUSH MOUNTING SURFACE.  
 \*PREPARATION OF WOOD JAMBS BY OTHERS

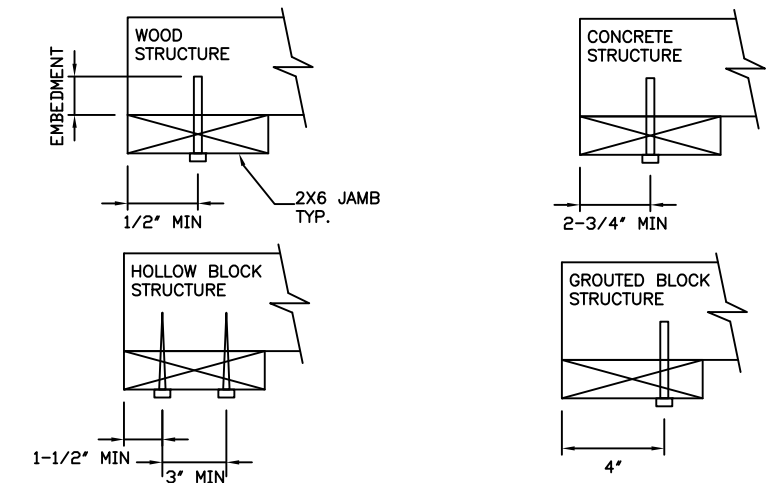


TABLE 3

DOOR HEIGHT	TRACK ATTACHMENT									
	A	B	C	D	E	F	G	H	I	
6' 6"	3.5"	10"	21"	39"	57"					
7'	3.5"	10"	21"	42"	63"					
7' 6"	3.5"	10"	18"	36"	54"	72"				
8'	3.5"	10"	21"	39"	57"	75"				
8' 6"	3.5"	10"	21"	42"	63"	81"				
9'	3.5"	10"	18"	36"	54"	72"	90"			
9' 6"	3.5"	10"	21"	39"	57"	75"	93"			
10'	3.5"	10"	21"	42"	63"	81"	99"			
10' 6"	3.5"	10"	21"	42"	63"	84"	105"			
11'	3.5"	10"	21"	39"	57"	75"	93"	111"		
11' 6"	3.5"	10"	21"	42"	63"	81"	99"	117"		
12'	3.5"	10"	21"	42"	63"	84"	105"	123"		
12' 6"	3.5"	10"	21"	39"	57"	75"	93"	111"	129"	
13'	3.5"	10"	21"	42"	63"	81"	99"	117"	135"	
13' 6"	3.5"	10"	21"	42"	63"	84"	105"	123"	141"	
14'	3.5"	10"	21"	42"	63"	84"	105"	126"	147"	

ALL TRACK AND ATTACHMENT SPACING +/- 2" ALLOWED WITH SYP OR SPF NO. 2 OR BETTER ONLY

TABLE 4

Section Width (ft)	Panel Type	Center Stile Locations (Measured from Left Edge)				
		1st (in)	2st (in)	3rd (in)	4th (in)	5th (in)
10' 0"	Short	48.41	71.59			
10' 0"	Long	30.00	60.00	90.00		
10' 0"	Bead Board	30.63	60.00	89.38		
12' 0"	Short	48.81	72.00	95.19		
12' 0"	Long	49.63	72.00	94.38		
12' 0"	Bead Board	48.31	72.00	95.69		
12' 2"	Short	49.64	73.00	96.36		
12' 2"	Long	50.08	73.00	95.92		
12' 2"	Bead Board	49.06	73.00	96.94		
12' 4"	Short	50.64	74.00	97.36		
12' 4"	Long	51.08	74.00	96.92		
12' 4"	Bead Board	49.81	74.00	98.19		
12' 6"	Short	50.67	75.00	99.33		
12' 6"	Long	51.17	75.00	98.83		
12' 6"	Bead Board	50.56	75.00	99.44		
12' 8"	Short	51.67	76.00	100.33		
12' 8"	Long	52.10	76.00	99.90		
12' 8"	Bead Board	51.31	76.00	100.69		
12' 10"	Short	52.25	77.00	101.75		
12' 10"	Long	53.10	77.00	100.90		
12' 10"	Bead Board	52.06	77.00	101.94		
13' 0"	Short	53.00	78.00	103.00		
13' 0"	Long	54.10	78.00	101.90		
13' 0"	Bead Board	52.81	78.00	103.19		
13' 2"	Short	54.00	79.00	104.00		
13' 2"	Long	55.10	79.00	102.90		
13' 2"	Bead Board	53.56	79.00	104.44		
13' 4"	Short	54.40	80.00	105.60		
13' 4"	Long	54.90	80.00	105.10		
13' 4"	Bead Board	54.31	80.00	105.69		
13' 6"	Short	55.40	81.00	106.60		
13' 6"	Long	55.90	81.00	106.10		
13' 6"	Bead Board	55.06	81.00	106.94		
13' 8"	Short	56.40	82.00	107.60		
13' 8"	Long	56.63	82.00	107.38		
13' 8"	Bead Board	55.81	82.00	108.19		
13' 10"	Short	57.16	83.00	108.71		
13' 10"	Long	57.17	83.00	108.83		
13' 10"	Bead Board	56.56	83.00	109.44		

TABLE 4 (CONTINUED)

Section Width (ft)	Panel Type	Center Stile Locations (Measured from Left Edge)				
		1st (in)	2st (in)	3rd (in)	4th (in)	5th (in)
14' 0"	Short	57.76	84.00	110.11		
14' 0"	Long	58.63	84.00	109.38		
14' 0"	Bead Board	57.31	84.00	110.69		
14' 2"	Short	58.85	85.00	111.41		
14' 2"	Long	59.17	85.00	110.83		
14' 2"	Bead Board	58.06	85.00	111.94		
14' 4"	Short	59.16	86.00	112.71		
14' 4"	Long	60.17	86.00	111.83		
14' 4"	Bead Board	58.81	86.00	113.19		
14' 6"	Short	59.86	87.00	114.01		
14' 6"	Long	61.17	87.00	112.83		
14' 6"	Bead Board	59.56	87.00	114.44		
14' 8"	Short	60.56	88.00	115.31		
14' 8"	Long	44.81	66.41	88.00	109.59	131.19
14' 8"	Bead Board	60.31	88.00	115.69		
14' 10"	Short	61.26	89.00	116.61		
14' 10"	Long	45.60	67.30	89.00	110.70	132.40
14' 10"	Bead Board	61.06	89.00	116.94		
15' 0"	Short	61.94	75.97	90.00	103.97	117.94
15' 0"	Long	46.60	68.30	90.00	111.70	133.40
15' 2"	Short	62.66	76.83	91.00	105.11	119.21
15' 2"	Long	47.60	69.30	91.00	112.70	134.40
15' 4"	Short	53.60	79.20	104.80	130.40	
15' 4"	Long	47.25	69.63	92.00	114.38	136.75
15' 6"	Short	46.62	69.81	93.00	116.19	139.38
15' 6"	Long	47.60	70.30	93.00	115.70	138.40
15' 6"	Bead Board	47.42	70.21	93.00	115.79	138.58
15' 8"	Short	47.62	70.81	94.00	117.19	140.38
15' 8"	Long	48.60	71.30	94.00	116.70	139.40
15' 8"	Bead Board	48.02	71.01	94.00	116.99	139.98
15' 10"	Short	48.62	71.81	95.00	118.19	141.38
15' 10"	Long	49.17	72.08	95.00	117.92	140.83
15' 10"	Bead Board	48.62	71.81	95.00	118.19	141.38
16' 0"	Short	49.62	72.81	96.00	119.19	142.38
16' 0"	Long	50.60	73.30	96.00	118.70	141.40
16' 0"	Bead Board	48.42	72.21	96.00	119.79	143.58

^ Stiles do not need to be hinged

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SHEET 3 OF 3