

LARGE MISSILE IMPACT RESISTANT

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN ASTM E330, E1886, E1996, F588 AND DASMA 108, 115. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-98/02/05 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN THE END ZONE, ROOF AT ANY SLOPE, AND I=1.0):

WIND SPEED (MPH)	180	163	155	148	142
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 9' x 14'

DESIGN LOADS +51.1 PSF -60.3 PSF

LARGE MISSILE IMPACT RESISTANCE

Thomas L. Shelmerdine, PE (TX PE #85829) Structural Solutions, PA (TX Firm #F-004063)

STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER
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165 CARRIAGE COURT WINSTON-SALEM, NC. 27105 WWW.AMARR.COM

MODEL 950 HERITAGE (24 GA) 1000, 2000
MODEL 655 OAK SUMMIT (24 GA) 1000, 2000
SHORT, LONG, FLUSH, AND OAK SUMMIT PANELS

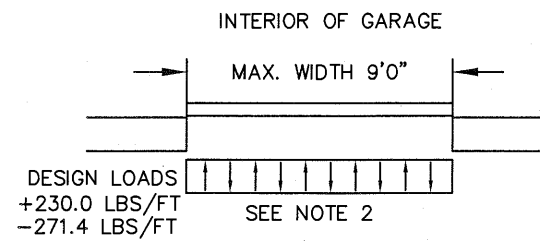
SIZE	DRAWN BY	RLR	DATE	03/12/13	DRAWING NUMBER
B	CHECKED BY		DATE		IRC-9509-180-21-G

SHEET 1 OF 3

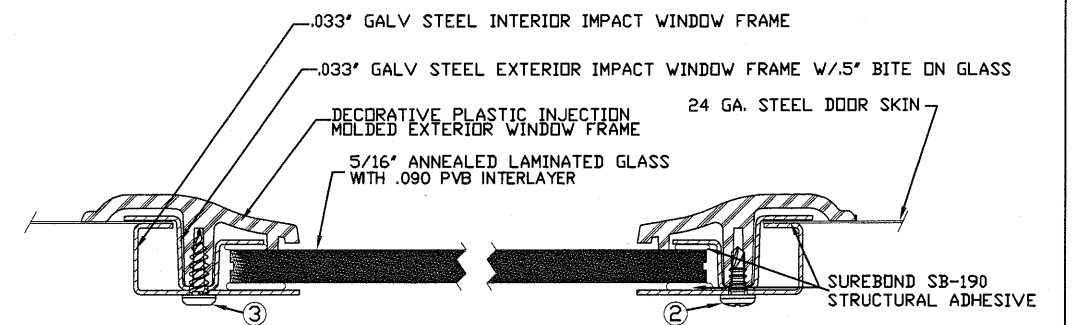
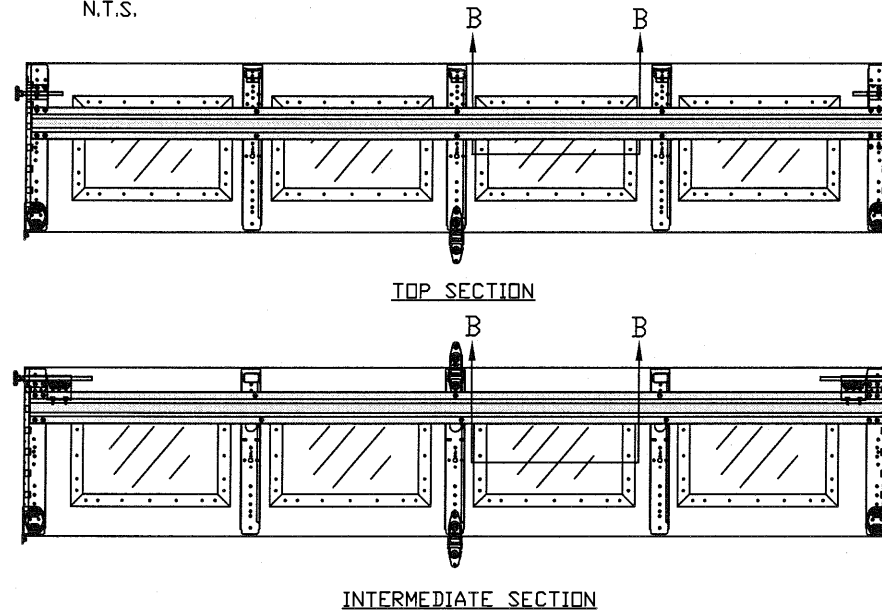
dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410

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: +230.0 LBS/FT & -271.4 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 24 GA. (.0216) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 7'0" HIGH CONSIST OF (4) SECTIONS AS SHOWN. USE (1) 3 5/8" R-TRUSS PER SECTION
6. DOORS OVER (4) SECTIONS REFER TO TABLES 1 AND 2 ON PAGE 3
7. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.

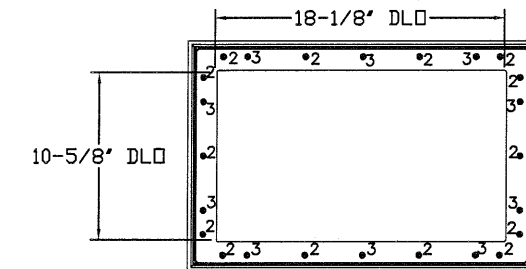


OPTIONAL SHORT PANEL GLAZED SECTION STRUT AND STILE LAYOUTS
N.T.S.

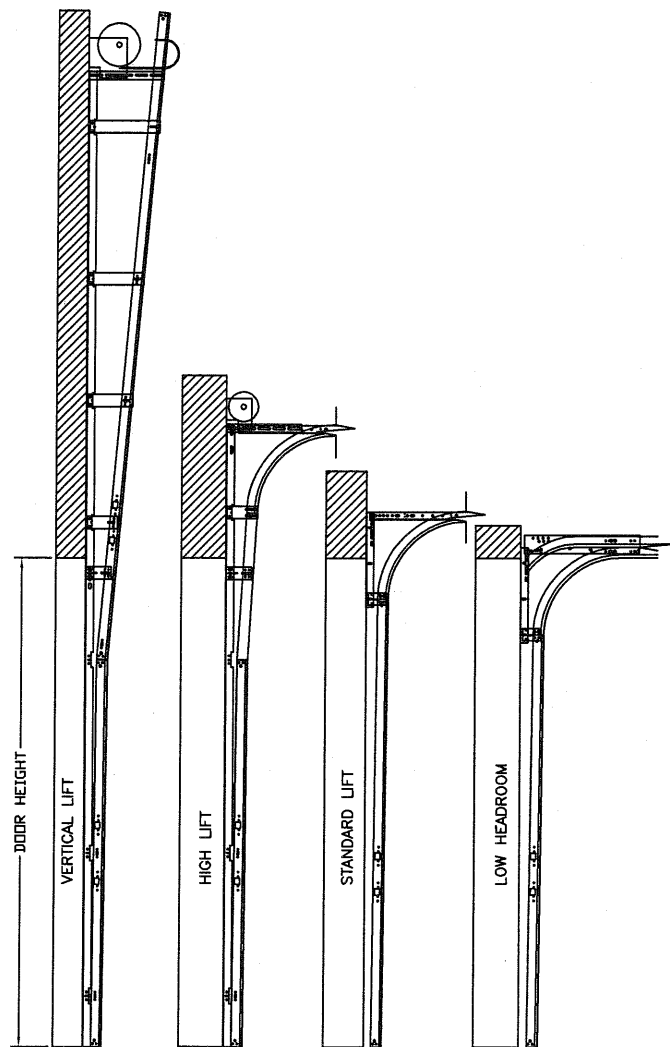


2. 3/16" X 1/2" SCREW - USED TO FASTEN THE STEEL EXTERIOR IMPACT WINDOW FRAME TO THE STEEL INTERIOR IMPACT WINDOW FRAME.
3. 11/64" X 1/2" SCREW - USED TO FASTEN DECORATIVE PLASTIC MOLDED WINDOW FRAME TO THE ASSEMBLY

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



IMPACT GLAZING FASTENER DETAIL
N.T.S.
GLAZING MEETS ASTM E1300-04

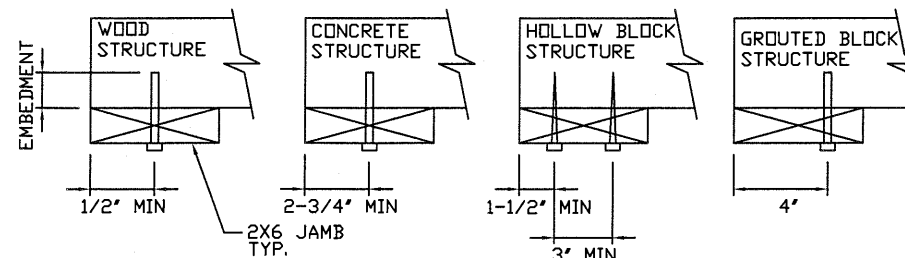


AVAILABLE TRACK CONFIGURATIONS
N.T.S.

WOOD JAMB ATTACHMENT TO STRUCTURE

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 22" 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



REV	DESCRIPTION OF REVISIONS	DATE	BY
	MAX SIZE 9' x 14'		
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165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105 WWW.AMARR.COM MODEL 950 HERITAGE (24 GA) 1000, 2000 MODEL 655 OAK SUMMIT (24 GA) 1000, 2000 SHORT, LONG, FLUSH, AND OAK SUMMIT PANELS			
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			SHEET 2 OF 3

Thomas L. Shelmerdine, PE (TX PE #85829)
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TABLE 1

DOOR HEIGHT	STRUT SPACING (BASED ON RECOMMENDED SECTION CONFIGURATION)								TOP
	A	B	C	D	E	F	G	H	
6' 6"	5 1/2"	16"	34"	52"					70 1/2"
7'	5 1/2"	16"	37"	58"					76 1/2"
7' 6"	5 1/2"	13"	31"	49"	67"				82 1/2"
8'	5 1/2"	16"	34"	52"	70"				88 1/2"
8' 6"	5 1/2"	16"	37"	58"	76"				94 1/2"
9'	5 1/2"	13"	31"	49"	67"	85"			100 1/2"
9' 6"	5 1/2"	16"	34"	52"	70"	88"			106 1/2"
10'	5 1/2"	16"	37"	58"	76"	94"			112 1/2"
10' 6"	5 1/2"	16"	37"	58"	79"	100"			118 1/2"
11'	5 1/2"	16"	34"	52"	70"	88"	106"		124 1/2"
11' 6"	5 1/2"	16"	37"	58"	76"	94"	112"		130 1/2"
12'	5 1/2"	16"	37"	58"	79"	100"	118"		136 1/2"
12' 6"	5 1/2"	16"	34"	52"	70"	88"	106"	124"	142 1/2"
13'	5 1/2"	16"	37"	58"	76"	94"	112"	130"	148 1/2"
13' 6"	5 1/2"	16"	37"	58"	79"	100"	118"	136"	154 1/2"
14'	5 1/2"	16"	37"	58"	79"	100"	121"	142"	160 1/2"

TABLE 2

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 4

Section Width (ft)	Panel Type	Center Stile Location (Measured from Left Edge)		
		1st (in)	2st (in)	3rd (in)
8' 0"	Short	24.812	48.000	71.188
8' 0"	Long	24.000	48.000	72.000
8' 0"	Bead	24.625	48.000	71.375
8' 2"	Short	24.316	49.000	73.684
8' 2"	Long	24.500	49.000	73.500
8' 2"	Bead	25.125	49.000	72.875
8' 4"	Short	24.580	50.000	75.420
8' 4"	Long	25.000	50.000	75.000
8' 4"	Bead	25.625	50.000	74.375
8' 6"	Short	26.029	51.000	75.971
8' 6"	Long	25.500	51.000	76.500
8' 6"	Bead	26.125	51.000	75.875
8' 8"	Short	26.659	52.000	77.341
8' 8"	Long	26.000	52.000	78.000
8' 8"	Bead	26.625	52.000	77.375
8' 10"	Short	27.034	53.000	78.966
8' 10"	Long	26.500	53.000	79.500
8' 10"	Bead	27.125	53.000	78.875
9' 0"	Short	27.596	54.000	80.404
9' 0"	Long	27.000	54.000	81.000
9' 0"	Bead	27.625	54.000	80.375

TABLE 3

DOOR HEIGHT	TRACK ATTACHMENT														SPLICE	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N		S
6' 6"	3"	14"	27"	38"	46"	56"	64"									70"
7'	3"	14"	27"	38"	46"	56"	68"									76"
7' 6"	3"	14"	27"	38"	46"	56"	68"	78"								82"
8'	3"	14"	27"	38"	46"	56"	68"	78"								88"
8' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"							94"
9'	3"	14"	27"	38"	46"	56"	68"	78"	88"							100"
9' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"	98"						106"
10'	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"						112"
10' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	110"					118"
11'	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	110"					124"
11' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	110"	120"				130"
12'	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	110"	122"				136"
12' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	109"	122"	132"			142"
13'	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	114"	122"	134"			148"
13' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	109"	122"	134"	144"		154"
14'	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	114"	122"	134"	146"		160"

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

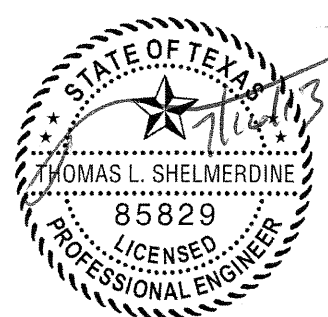
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SHEET 3 OF 3

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