

REV	DESCRIPTION OF REVISIONS	DATE	BY
A	ADDED GLAZING NOTE	12/20/12	JBK

FL

THOMAS L. SHELBERG
PROFESSIONAL ENGINEER
STATE OF FLORIDA
No. 46875

Thomas L. Shelberg, P.E. (FL #29412)
Structural Solutions, PA (FL #29412)

5921 G.W. Friendly Ave., Greensboro, NC 27410

Amarr

MODEL #650 AMARR OAK SUMMIT SERIES 1000 & 2000
MODEL #900 AMARR STRATFORD SERIES 1000 & 2000
MODEL #950 AMARR HERITAGE SERIES 1000 & 2000

DESIGN LOADS:
MAX. SIZE 9' x 14'
+28.7 PSF
-31.6 PSF

TEST LOADS:
+40.1 PSF
-47.4 PSF

LAGS MISSILE IMPACT RESISTANT

SIZE	DRWN BY	CHK	DATE	11/18/09	DRAWING NUMBER
B	DESIGNED BY	JBK	DATE	11/18/09	IRC-6009-130-15-1

ISS: GARAGE CABINET, VENTILATOR, SHAFT, INS. 27008

SHEET 1 OF 3



TRACK CONFIGURATION FOR 6'6\"/>

N.T.S.



DESIGN LOADS:
+120.2 LBS/FT
-142.2 LBS/FT

SEE NOTE 2

- SEPARATIONS AND NOTES**
- ALL THE LOAD FROM THE DOOR IS TRANSFERRED TO THE VERTICAL TRACK. FROM THE TRACK THE LOAD IS TRANSFERRED TO THE VERTICAL JAMBS. THE LOAD IS NOT TRANSFERRED FROM THE DOOR.
 - EACH VERTICAL JAMB RECEIVES MAXIMUM DESIGN LOADS OF:
 - DOORS AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASHA.
 - DOOR SECTIONS SHALL BE 25 GA. MIN. (C/P) ROLLED FORMED LIGHT GA. STEEL.
 - SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS.
 - AMARR MANUFACTURES AND DISTRIBUTES GARAGE DOORS UNDER MANY BRAND NAMES. PLEASE SEE AMARR-MANUFACTURED PRIVATE LABEL CHART FOR REFERENCE OF EQUIVALENT PRODUCTS FOR WINDLOAD APPROVAL AND THEIR DESIGN PROCEDURES.
 - PANEL STAMP DOES NOT EFFECT WINDLOAD CAPABILITIES.



TYPICAL BOTTOM BRACKET

N.T.S.



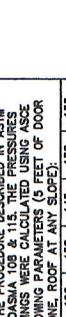
TYPICAL CENTER HINGE

N.T.S.



TYPICAL STIFFENER

N.T.S.



OPTIONAL VENT DETAIL

N.T.S.



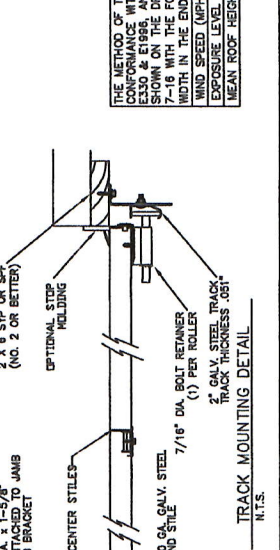
INSIDE ELEVATION

N.T.S.



TYPICAL END HINGE

N.T.S.



TRACK MOUNTING DETAIL

N.T.S.

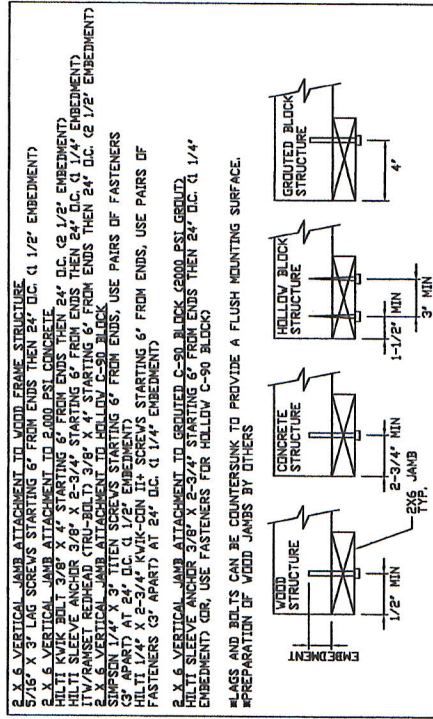
LARGE MISSILE IMPACT RESISTANT

THE METHOD OF TESTING WAS IN SUBSTANTIALLY CONFORMANCE WITH THE PROVISIONS OF ASTM E330 & E1996 AND DASHA 100 & 115. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-18 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN THE END ZONE, ROOF AT ANY SLOPE):

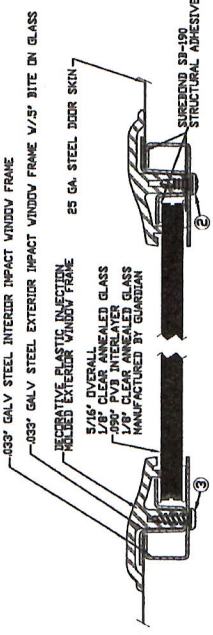
WIND SPEED (MPH)	168	152	145	138	133
EXPOSURE LEVEL	B	C	C	C	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

FL 13521.6

WOOD JAMB ATTACHMENT TO STRUCTURE

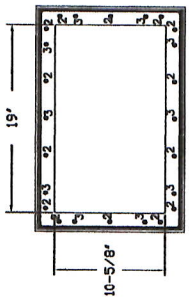


- 2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
- 5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2' EMBEDMENT)
- 2 X 6 VERTICAL JAMB ATTACHMENT TO 2,000 PSI CONCRETE
- HITL SLEEVE ANCHOR 3/8" X 2-3/4" STARTING FROM ENDS THEN 24" O.C. (1 1/2' EMBEDMENT)
- ITW/RANSET RETREAD STRU-BOLTS 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C. (1 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 24" O.C. (1 1/2' EMBEDMENT)
- 2 X 6 VERTICAL JAMB ATTACHMENT TO GRUATED C-90 BLOCK (2,000 PSI GROUT)
- HITL SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" 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

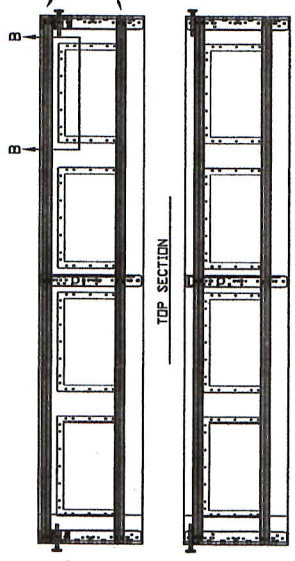


- 2 2/16" X 1/2" SCREW - USED TO FASTEN THE STEEL EXTERIOR IMPACT WINDOW FRAME TO THE STEEL INTERIOR IMPACT WINDOW FRAME.
- 1 1/4" X 1/4" SCREW - USED TO FASTEN DECORATIVE PLASTIC MOLDED WINDOW FRAME TO THE ASSEMBLY

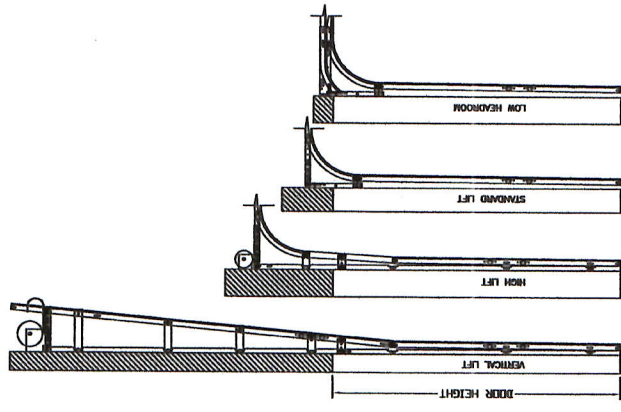
SECTION B-B IMPACT WINDOW DETAIL
N.T.S.



IMPACT GLAZING FASTENER DETAIL
N.T.S.



OPTIONAL SHORT PANEL GLAZED SECTION STRUT AND STILE LAYOUT
GLAZING OPTION DETAIL
N.T.S.



AVAILABLE TRACK CONFIGURATIONS
N.T.S.

REV	DESCRIPTION OF REVISIONS	DATE	BY
A	ADDED DRAWING NOTE	12/20/12	NR

MAX SIZE
9' x 14'

DESIGN LOADS
+26.7 PSF
-31.6 PSF

TEST LOADS
+40.1 PSF
-47.4 PSF

LARGE MISSILE IMPACT RESISTANT

FL

Thomas L. Shelmerdine, P.E. (FL #E 4008529)

Structural Solutions, Inc. (FL #E 4029412)

5921-C W. Friendly Ave., Greensboro, NC 27410

THOMAS L. SHELMERDINE
No. 48579
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Amarr

MODEL #660 AMARR OAK SUMMIT SERIES 1000 & 2000
MODEL #600 AMARR STRAITFORD SERIES 1000 & 2000
MODEL #950 AMARR HERITAGE SERIES 1000 & 2000

SIZE	DRAWN BY	DATE	DRAWING NUMBER
B	BRG	11/19/09	IRC-6000-130-15-1

ENTRANCE
185 CARRAGE COURT, WINSTON-SALEM, NC 27155

SHEET 2 OF 3

TABLE 1

DOOR HEIGHT	STRUT SPACING (BASED ON RECOMMENDED SECTION CONFIGURATION)												TOP T	
	A	B	C	D	E	F	G	H						
6' 6"	5 1/2"	18 1/4"	36 1/4"	54 1/4"										67 1/2"
7'	5 1/2"	18 1/4"	39 1/4"	60 1/4"										73 1/2"
7' 6"	5 1/2"	15 1/4"	33 1/4"	51 1/4"	69 1/4"									81"
8'	5 1/2"	18 1/4"	36 1/4"	54 1/4"	72 1/4"									85 1/2"
8' 6"	5 1/2"	18 1/4"	39 1/4"	60 1/4"	78 1/4"									91 1/2"
9'	5 1/2"	15 1/4"	33 1/4"	51 1/4"	69 1/4"	87 1/4"								99"
9' 6"	5 1/2"	18 1/4"	36 1/4"	54 1/4"	72 1/4"	90 1/4"								103 1/2"
10'	5 1/2"	18 1/4"	39 1/4"	60 1/4"	78 1/4"	96 1/4"								109 1/2"
10' 6"	5 1/2"	18 1/4"	39 1/4"	60 1/4"	81 1/4"	102 1/4"								115 1/2"
11'	5 1/2"	18 1/4"	36 1/4"	54 1/4"	72 1/4"	90 1/4"	108 1/4"							121 1/2"
11' 6"	5 1/2"	18 1/4"	39 1/4"	60 1/4"	78 1/4"	96 1/4"	114 1/4"							127 1/2"
12'	5 1/2"	18 1/4"	36 1/4"	54 1/4"	72 1/4"	90 1/4"	108 1/4"	120 1/4"						133 1/2"
12' 6"	5 1/2"	18 1/4"	39 1/4"	60 1/4"	81 1/4"	102 1/4"	120 1/4"	139 1/2"						145 1/2"
13'	5 1/2"	18 1/4"	39 1/4"	60 1/4"	81 1/4"	102 1/4"	120 1/4"	138 1/4"	151 1/2"					157 1/2"
13' 6"	5 1/2"	18 1/4"	39 1/4"	60 1/4"	81 1/4"	102 1/4"	123 1/4"	144 1/4"	157 1/2"					

■ ADDITIONAL STRUTS MAY BE ADDED TO DOOR WHEN GLAZED FOR COUNTERBALANCE PURPOSES

TABLE 2

DOOR HEIGHT	SECTION HEIGHTS							
	#1	#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"	21"	18"	18"	18"	21"
12' 6"	21"	18"	18"	18"	18"	18"	18"	21"
12' 0"	21"	21"	21"	21"	21"	18"	18"	21"
11' 6"	21"	21"	21"	18"	18"	18"	18"	21"
10' 6"	21"	21"	21"	21"	21"	21"	21"	21"
10' 0"	21"	21"	21"	21"	18"	18"	18"	21"
9' 6"	21"	18"	18"	18"	18"	18"	18"	21"
9' 0"	18"	18"	18"	18"	18"	18"	18"	21"
8' 6"	21"	21"	21"	21"	18"	18"	18"	21"
8' 0"	21"	18"	18"	18"	18"	18"	18"	21"
7' 6"	18"	18"	18"	18"	18"	18"	18"	21"
7' 0"	21"	21"	21"	21"	21"	21"	21"	21"
6' 6"	21"	18"	18"	18"	18"	18"	18"	21"

TABLE 3

DOOR HEIGHT	TRACK ATTACHMENT												SPLICE	
	A	B	C	D	E	F	G	H			H	S		
6' 6"	3.5"	21"	39"	57"									70"	
7'	3.5"	21"	42"	63"									76"	
7' 6"	3.5"	18"	36"	54"	72"								82"	
8'	3.5"	21"	39"	57"	75"								88"	
8' 6"	3.5"	21"	42"	63"	81"								94"	
9'	3.5"	18"	36"	54"	72"	90"							100"	
9' 6"	3.5"	21"	39"	57"	75"	93"							106"	
10'	3.5"	21"	42"	63"	81"	99"							112"	
10' 6"	3.5"	21"	42"	63"	84"	105"							118"	
11'	3.5"	21"	39"	57"	75"	93"	111"						124"	
11' 6"	3.5"	21"	42"	63"	81"	99"	117"						130"	
12'	3.5"	21"	42"	63"	84"	105"	123"						136"	
12' 6"	3.5"	21"	39"	57"	75"	93"	111"	129"					142"	
13'	3.5"	21"	42"	63"	81"	99"	117"	135"	148"				148"	
13' 6"	3.5"	21"	42"	63"	84"	105"	123"	141"	154"				154"	
14'	3.5"	21"	42"	63"	84"	105"	126"	147"	160"				160"	

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

TABLE 4

Section	Panel Type	Center Stile Location (Measured from Left Edge)	Max Design Loads Allowed	
			Positive (PSF)	Negative (PSF)
8'0"	Short, Oak Summit	48,000	29.9	35.4
8'0"	Long	48,000	29.9	35.4
8'2"	Short, Oak Summit	49,000	29.3	34.7
8'2"	Long	49,000	29.3	34.7
8'4"	Short, Oak Summit	50,000	28.7	34.0
8'4"	Long	50,000	28.7	34.0
8'6"	Short, Oak Summit	51,000	28.1	33.3
8'6"	Long	51,000	28.1	33.3
8'8"	Short, Oak Summit	52,000	27.6	32.7
8'8"	Long	52,000	27.6	32.7
8'10"	Short, Oak Summit	53,000	27.1	32.0
8'10"	Long	53,000	27.1	32.0
9'0"	Short, Oak Summit	54,000	26.7	31.6
9'0"	Long	54,000	26.7	31.6

REV	DESCRIPTION OF REVISIONS	DATE	BY
A	ADDED GLAZING NOTE	12/20/12	RCR

MAX SIZE
9" x 14"

DESIGN LOADS
+26.7 PSF
-31.6 PSF

TEST LOADS
+40.1 PSF
-47.4 PSF

LARGE MISSILE IMPACT RESISTANT

THOMAS L. SHELMERDINE
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STATE OF FLORIDA
No. 11587
12/13/12

Thomas L. Shelmerdine, PE (FL #4008529)
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MODEL #650 AMARR OAK SUMMIT SERIES 1000 & 2000
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SIZE	DRAWN BY	DATE	1/16/09	DRAWING NUMBER	IRC-6009-130-15-1
B	CREATED BY	DATE	11/16/09		

ENGINEERED BY: JEFFREY W. SALES, N.C. 27105
SHEET 3 OF 3