

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURES DESCRIBED IN DASMA 108. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-98/02/05 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN END ZONE, ROOF SLOPE 10° OR LESS, AND I=1.0):

WIND SPEED (MPH)	130	118	112	107	103
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 16'2 x 24'  
DESIGN LOADS +23.3 PSF -26.3 PSF  
TEST LOADS +35.0 PSF -39.5 PSF

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

STATE OF TEXAS  
THOMAS L. SHELMERDINE  
85829  
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5921-G W. Friendly Ave., Greensboro, NC 27410

**ENTRE/MATIC**  
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105

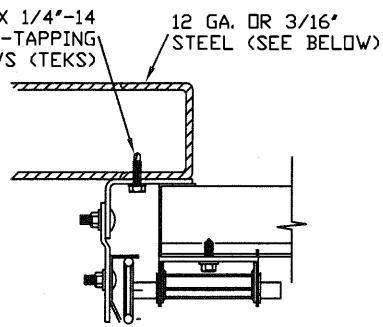
**AMARR MODEL 1350 (27GA)**  
**AMARR MODEL 2700 (27GA)**

SIZE	DRAWN BY	RS	DATE	1/16/15	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	1/16/15	IBC-1316-130-15

SHEET 1 OF 4

# TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS

ITW BUILDDEX 1/4"-14 X 3/4" SELF-TAPPING SCREWS (TEKS)

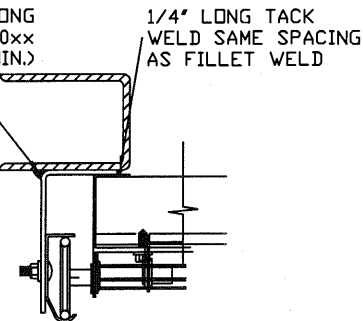


CLIP STYLE REVERSE ANGLE MOUNT SHOWN BRACKET, CONTINUOUS AND TAPERED ANGLE MOUNT AVAILABLE

12 GA. STEEL FRAMING  
232 LBS./SCREW ALLOWABLE LOAD - 6' FROM ENDS AND 12' O.C.  
REFER TO NOTES: 1, 2 AND 5

3/16" STEEL FRAMING  
569 LBS./SCREW ALLOWABLE LOAD - 6' FROM ENDS AND 24' O.C.  
REFER TO NOTES: 1, 2 AND 5

1/8" NDM X 1" LONG FILLET WELD (E60xx ELECTRODES MIN.)



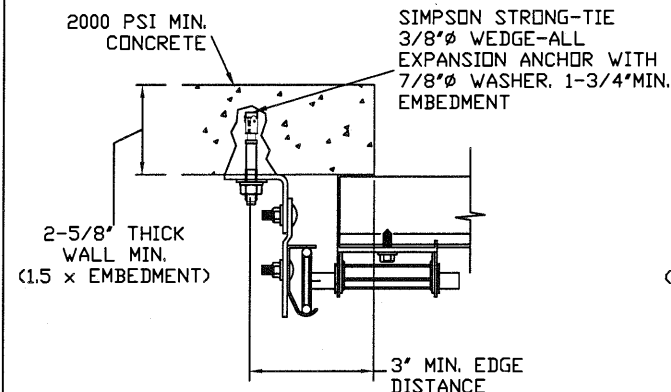
REVERSE ANGLE MOUNT SHOWN BRACKET, CONTINUOUS AND TAPERED ANGLE MOUNT AVAILABLE

STEEL FRAMING 12GA OR BETTER  
1590 LBS./IN. ALLOWABLE LOAD - 6' FROM ENDS AND 24' O.C.  
REFER TO NOTES: 1, 2, 5, 6, 7, 8 AND 9

### NOTES:

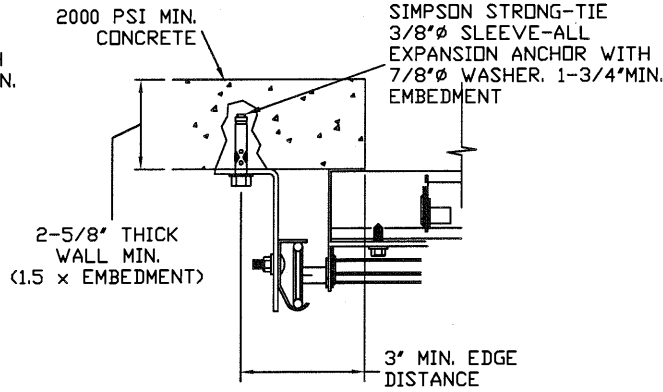
1. ANCHORS TO BE EVENLY SPACED BETWEEN THE HEADER AND FLOOR.
2. FIRST (BOTTOM) ANCHOR STARTING AT NO MORE THAN HALF OF THE MAXIMUM ON-CENTER DISTANCE, HIGHEST ANCHOR INSTALLED AT LEAST AS HIGH AS THE DOOR OPENING.
3. MIN. EDGE DISTANCE OF 3" REQUIRED.
4. USE WASHERS PROVIDED BY THE ANCHOR MANUFACTURER.
5. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS IN ADDITION TO OTHER LOADS.
6. MOST GARAGE DOOR TRACK IS GALVANIZED STEEL. USE ALL NECESSARY PRECAUTIONS WHEN WELDING GALVANIZED STEEL.
7. ALL WELDS SHOULD BE PERFORMED BY A CERTIFIED WELDER OR INSPECTED BY A CERTIFIED WELDING INSPECTOR TO VERIFY THE INTEGRITY OF THE WELD.
8. FILLET WELDS TO HAVE A STRAIGHT OR CONVEX FACE SURFACE.
9. TACK WELD TOE OF ANGLE AT SAME SPACING TO PREVENT ROTATION OF TRACK ANGLE.

# WOOD JAMB ATTACHMENT TO STRUCTURE (OPTIONAL)



CLIP STYLE CONTINUOUS ANGLE MOUNT SHOWN BRACKET, REVERSE AND TAPERED ANGLE MOUNT AVAILABLE

2000 PSI CONCRETE OR GREATER  
351 LBS./EXPANSION ANCHOR ALLOWABLE LOAD - 6' FROM ENDS AND 18' O.C.  
REFER TO NOTES: 1, 2, 3, 4 AND 5



CONTINUOUS ANGLE MOUNT SHOWN BRACKET, CONTINUOUS AND TAPERED ANGLE MOUNT AVAILABLE

2000 PSI CONCRETE OR GREATER  
336 LBS./EXPANSION ANCHOR ALLOWABLE LOAD - 6' FROM ENDS AND 18' O.C.  
REFER TO NOTES: 1, 2, 3, 4 AND 5

**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**  
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 22" 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)

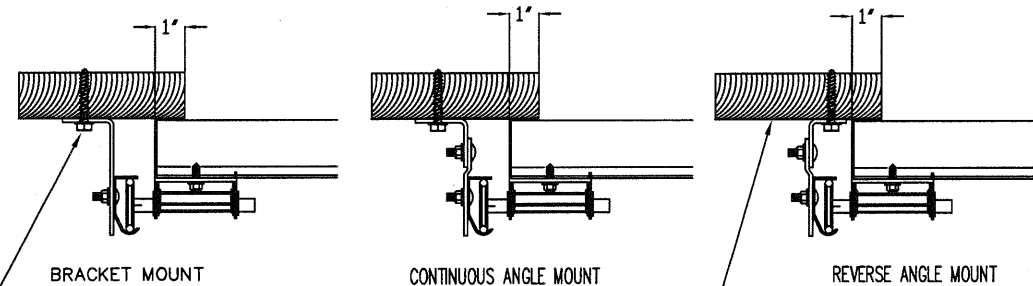
**2 X 6 VERTICAL JAMB ATTACHMENT TO HOLLOW C-90 BLOCK**  
SIMPSON 1/4" X 3" TITEN SCREWS STARTING 6" FROM ENDS, USE PAIRS OF FASTENERS (3" APART) AT 16" O.C. (1 1/2" EMBEDMENT)  
HILTI 1/4" X 2-3/4" KWIK-CON II+ SCREWS STARTING 6" FROM ENDS, USE PAIRS OF FASTENERS (3" APART) AT 16" O.C. (1 1/4" EMBEDMENT)

**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 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

# TRACK CONNECTION TO WOOD JAMB OPTIONS

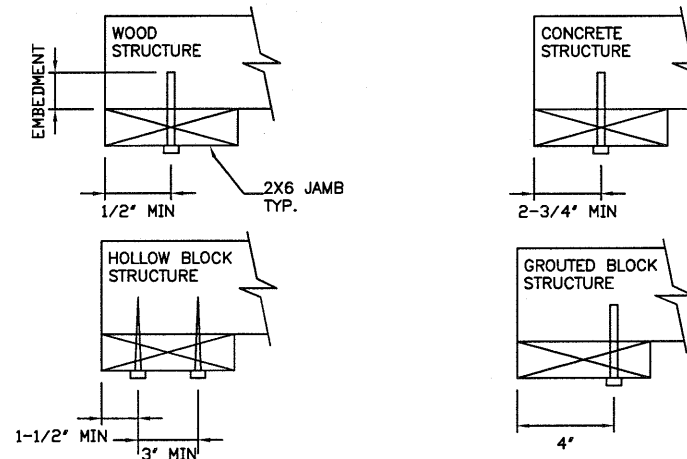
FOR LAG SCREWS & BRACKET SPACING SEE TRACK CONFIGURATION DETAIL



BRACKET MOUNT  
5/16" x 1 5/8" LAG SCREW (1) PER JAMB BRACKET (1-1/2" EMBEDMENT MINIMUM) (TYP.)

CONTINUOUS ANGLE MOUNT  
2x6 WOOD JAMB SYP OR SPF (NO.2) OR BETTER (TYP.)

REVERSE ANGLE MOUNT



REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE: 16'2" x 24'

DESIGN LOADS: +23.3 PSF, -26.3 PSF

TEST LOADS: +35.0 PSF, -39.5 PSF

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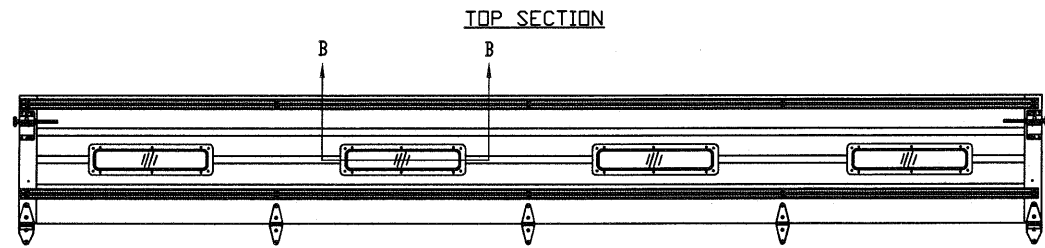
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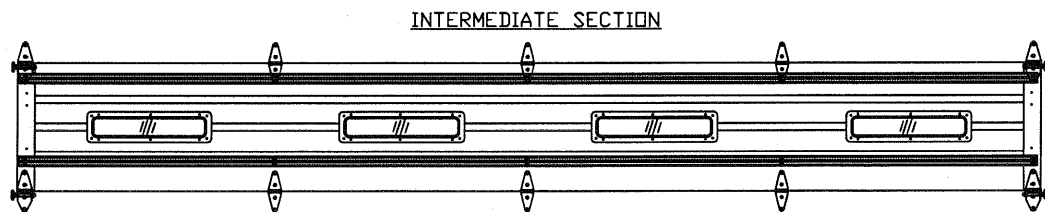
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AMARR MODEL 2700 (27GA)

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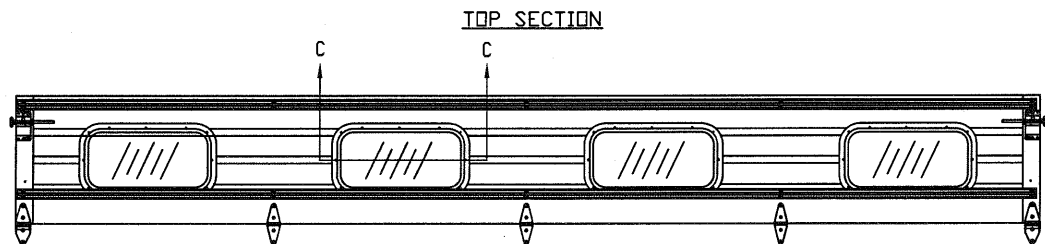
N.T.S.

OPTIONAL GLAZED SECTION W/ 24' X 6' WINDOWS



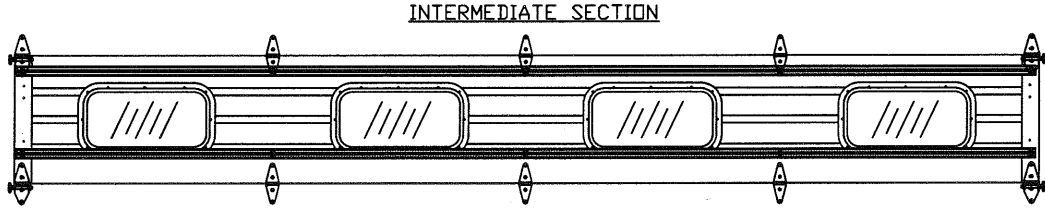
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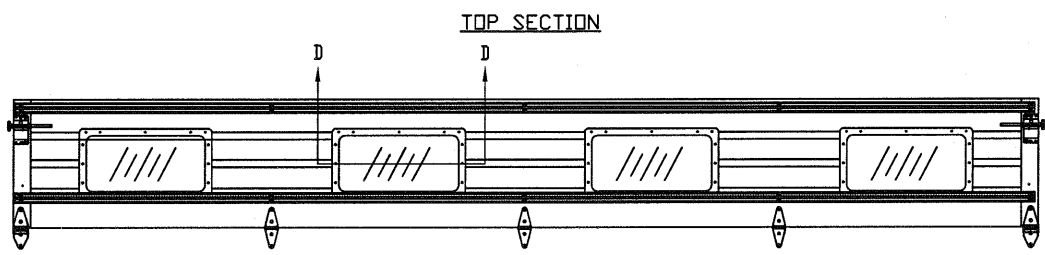
N.T.S.

OPTIONAL GLAZED SECTION W/ 26' X 13' WINDOWS



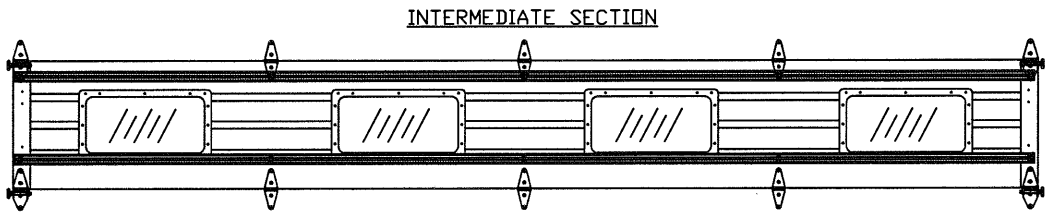
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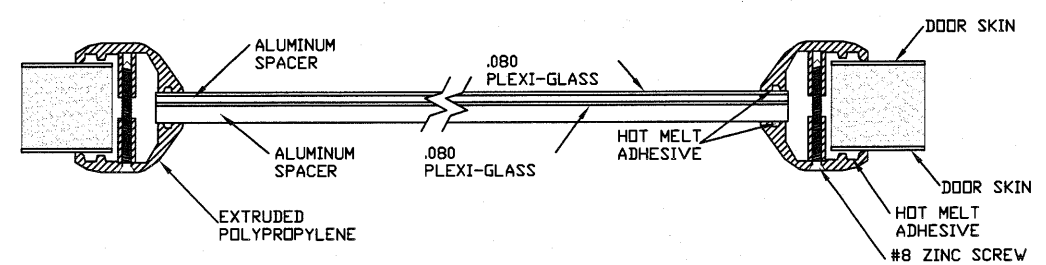
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OPTIONAL GLAZED SECTION W/ 24' X 12' WINDOWS



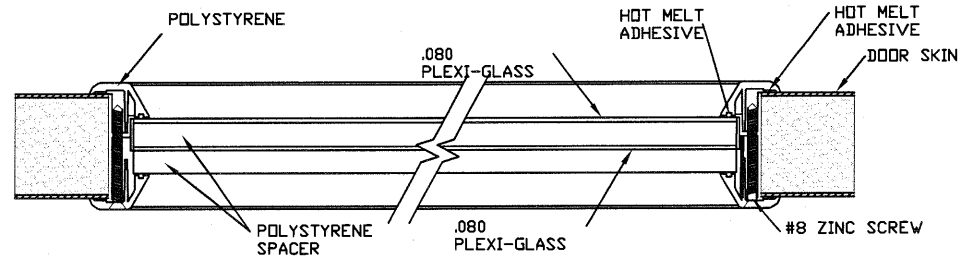
OPTIONAL GLAZED SECTION W/ 24' X 12' WINDOWS

N.T.S.



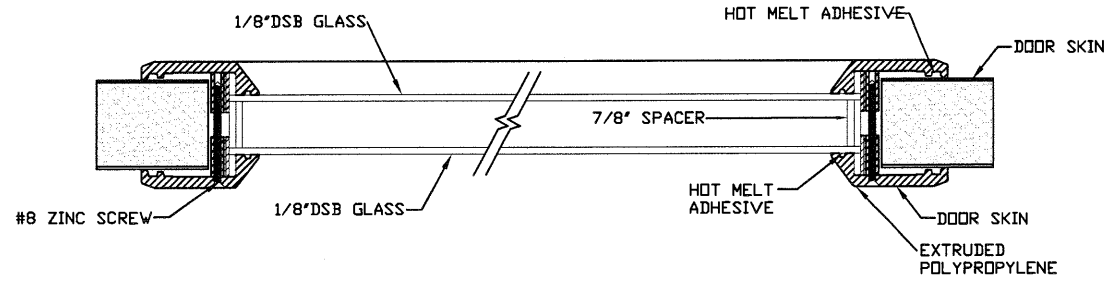
SECTION B-B 24' X 6' WINDOW DETAIL W/ .080 PLEXI-GLASS

N.T.S.



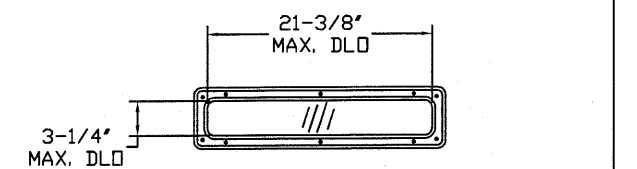
SECTION C-C 26' X 13' WINDOW DETAIL W/ INSULATED PLEXI-GLASS

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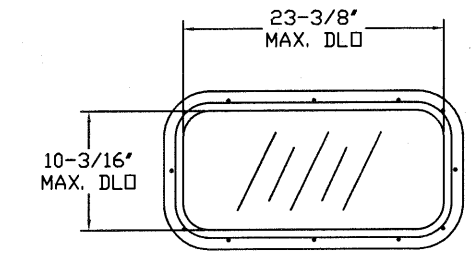
SECTION D-D 24' X 12' WINDOW DETAIL W/ 1-1/8' INSULATED GLASS

N.T.S.



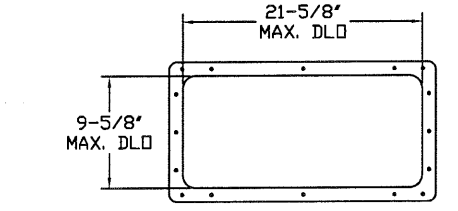
24' X 6' DAY LIGHT OPENING AND FASTENER DETAIL

N.T.S.



26' X 13' DAY LIGHT OPENING AND FASTENER DETAIL

N.T.S.



24' X 12' DAY LIGHT OPENING AND FASTENER DETAIL

N.T.S.

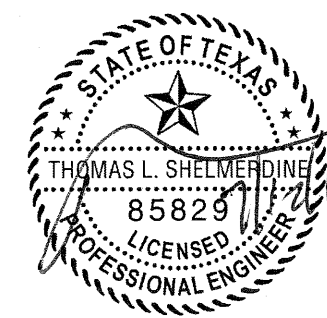
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-26.3 PSF

TEST LOADS  
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-39.5 PSF

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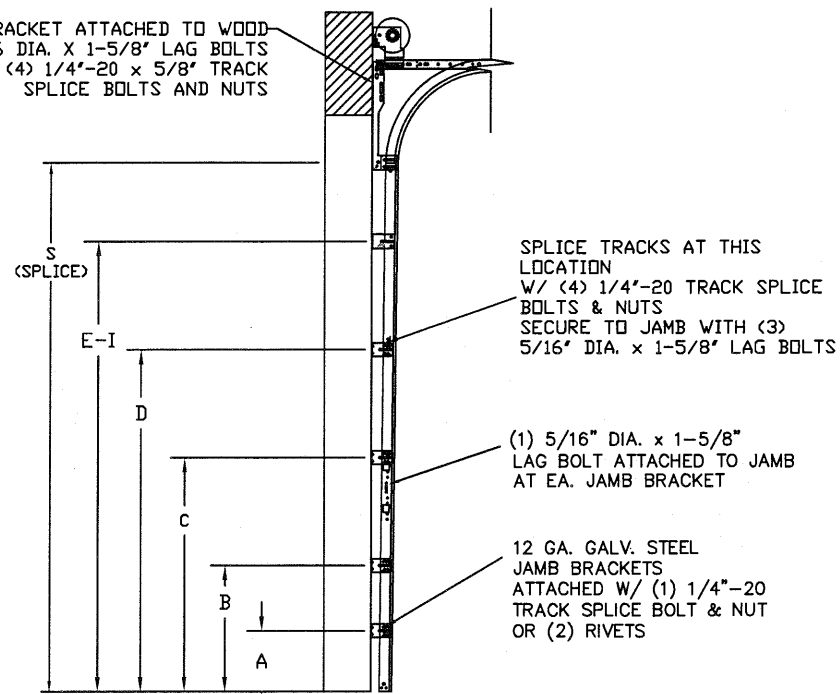
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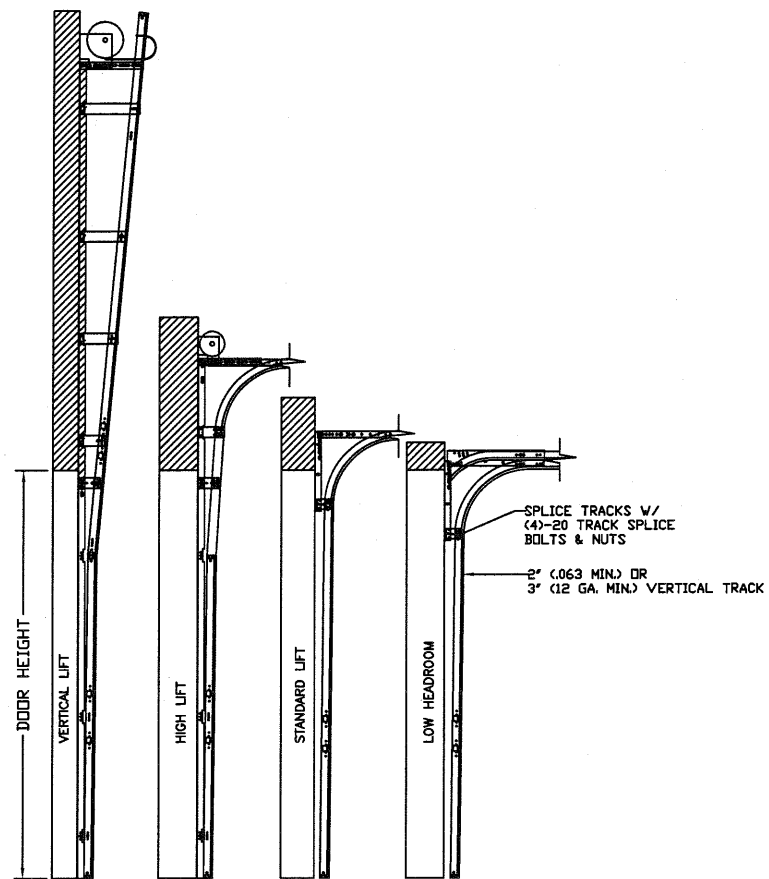
SHEET 3 OF 4

14 GA. FLAG BRACKET ATTACHED TO WOOD JAMB W/ (3) 5/16 DIA. X 1-5/8" LAG BOLTS AND TO TRACK W/ (4) 1/4"-20 X 5/8" TRACK SPLICE BOLTS AND NUTS



TRACK CONFIGURATION FOR UP TO 24' TALL DOORS  
N.T.S.

SEE TABLE 2 FOR TRACK ATTACHMENT SPACING



AVAILABLE TRACK CONFIGURATIONS  
N.T.S.

TABLE 1

Section Width (ft)	Center Stile Locations (Measured from Left Edge)			Max Design Loads Allowed	
	1st (in)	2nd (in)	3rd (in)	Positive (PSF)	Negative (PSF)
12' 4"	51.084	96.916	-	23.2	26.1
12' 6"	51.170	98.830	-	22.7	25.6
12' 8"	52.100	99.900	-	22.5	25.4
12' 10"	53.100	100.900	-	22.2	25.1
13' 0"	54.100	101.900	-	22.0	24.9
13' 2"	55.1	102.9	-	21.8	24.6
13' 4"	54.900	105.100	-	21.3	24.1
13' 6"	55.900	106.100	-	21.1	23.9
13' 8"	56.625	107.375	-	20.9	23.6
13' 10"	57.170	108.830	-	20.6	23.3
14' 0"	58.625	109.375	-	20.5	23.2
14' 2"	59.2	110.8	-	20.2	22.9
14' 4"	60.170	111.830	-	20.1	22.6
14' 6"	61.170	112.830	-	19.9	22.4
14' 8"	44.812	88.000	131.188	25.5	28.8
14' 10"	45.600	89.000	132.400	25.2	28.5
15' 0"	46.600	90.000	133.400	24.9	28.2
15' 2"	47.6	91.0	134.4	24.7	27.8
15' 4"	47.250	92.000	136.750	24.4	27.5
15' 6"	47.600	93.000	138.400	24.1	27.2
15' 8"	48.600	94.000	139.400	23.9	27.0
15' 10"	49.167	95.000	140.833	23.6	26.7
16' 0"	50.600	96.000	141.400	23.4	26.4
16' 2"	51.2	97.0	142.8	23.3	26.3

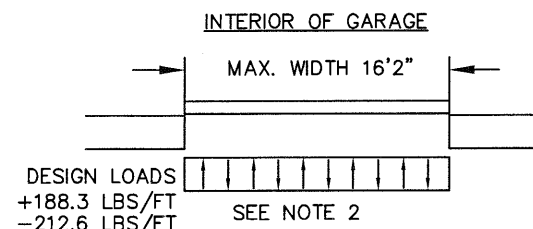
TABLE 2

DOOR HEIGHT	TRACK ATTACHMENT													TYPICAL SPLICE
	A	B	C	D	E	F	G	H	I	J	K	L	M	
7' 0"	10.0"	21"	39"											76"
7' 6"	10.0"	21"	39"	57"										82"
8' 0"	10.0"	21"	39"	57"	75"									88"
8' 6"	10.0"	21"	39"	57"	75"									94"
9' 0"	10.0"	21"	39"	57"	75"	93"								100"
9' 6"	10.0"	21"	39"	57"	75"	93"								106"
10' 0"	10.0"	21"	39"	57"	75"	93"	111"							112"
11' 0"	10.0"	21"	39"	57"	75"	93"	111"							124"
12' 0"	10.0"	21"	39"	57"	75"	93"	111"							136"
13' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"						148"
14' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"						160"
15' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"	147"					172"
16' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"	147"					184"
17' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"	147"	165"				196"
18' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"	147"	165"				208"
19' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"	147"	165"	183"			220"
20' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"	147"	165"	183"			232"
21' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"	147"	165"	183"	201"		244"
22' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"	147"	165"	183"	201"		256"
23' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"	147"	165"	183"	201"	219"	268"
24' 0"	10.0"	21"	39"	57"	75"	93"	111"	129"	147"	165"	183"	201"	219"	280"

ALL TRACK ATTACHMENT SPACING +/-2" ALLOWED WITH SPF OR SYP NO. 2 OR BETTER ONLY  
AMARR MODEL 1350 ONLY AVAILABLE UP TO 14'

SPECIFICATIONS 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 HORIZONTAL JAMB OR HEADER RECEIVES NO PORTION OF THE LOAD TRANSFERRED FROM THE DOOR.
- EACH VERTICAL JAMBS RECEIVES MAXIMUM DESIGN LOADS OF: +188.3 LBS/FT & -212.6 LBS/FT
- DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
- DOOR SECTIONS SHALL BE 27 GA. (.015) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
- DOORS UP TO 24'0" HIGH HAVE (2) 3" 20GA STRUTS PER SECTION
- SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.



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MAX SIZE 16'2 x 24'

DESIGN LOADS +23.3 PSF -26.3 PSF

TEST LOADS +35.0 PSF -39.5 PSF

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