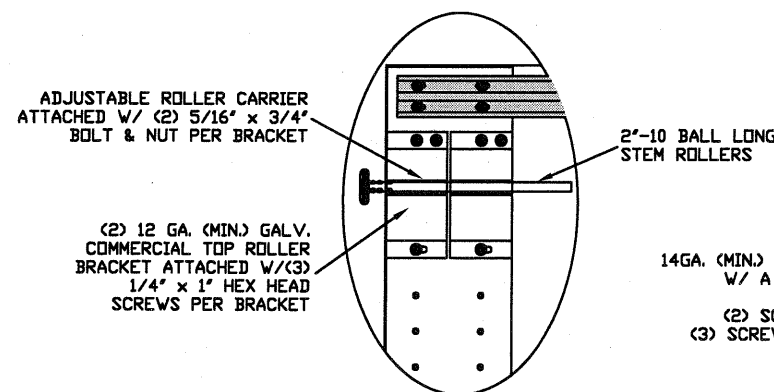
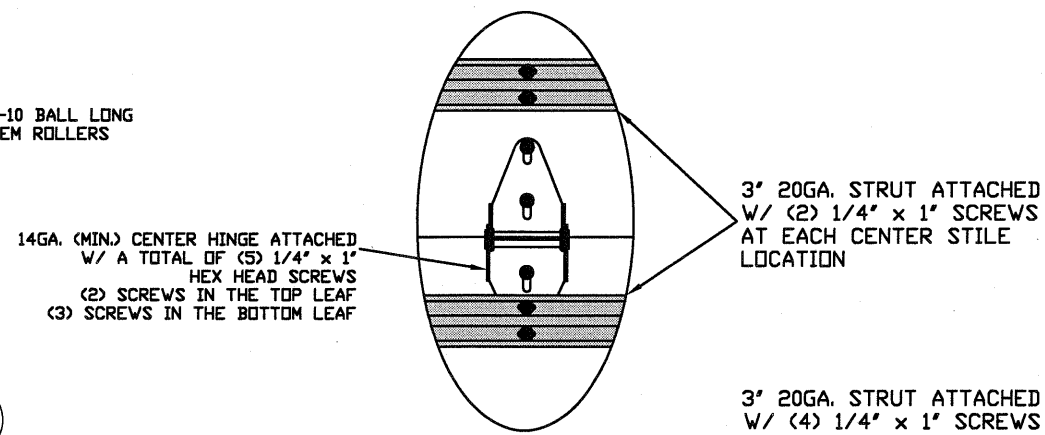
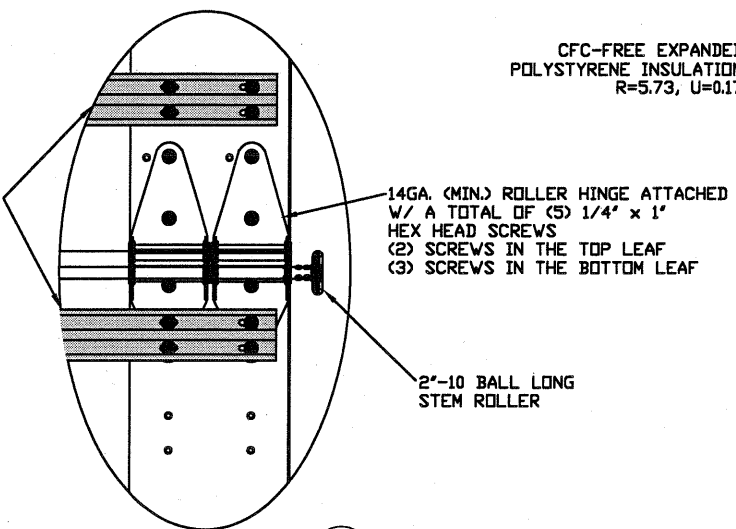




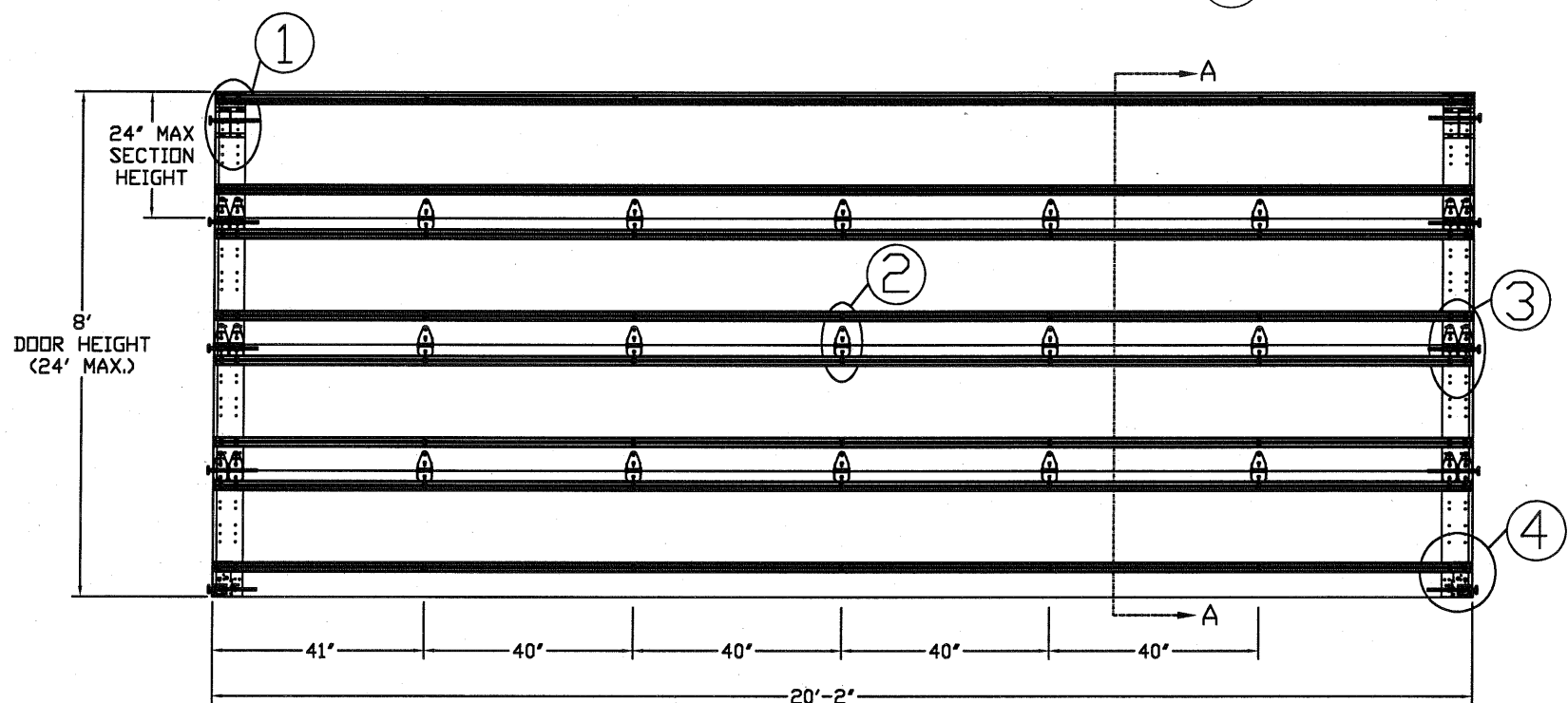
TYPICAL TOP FIXTURES
N.T.S. 1



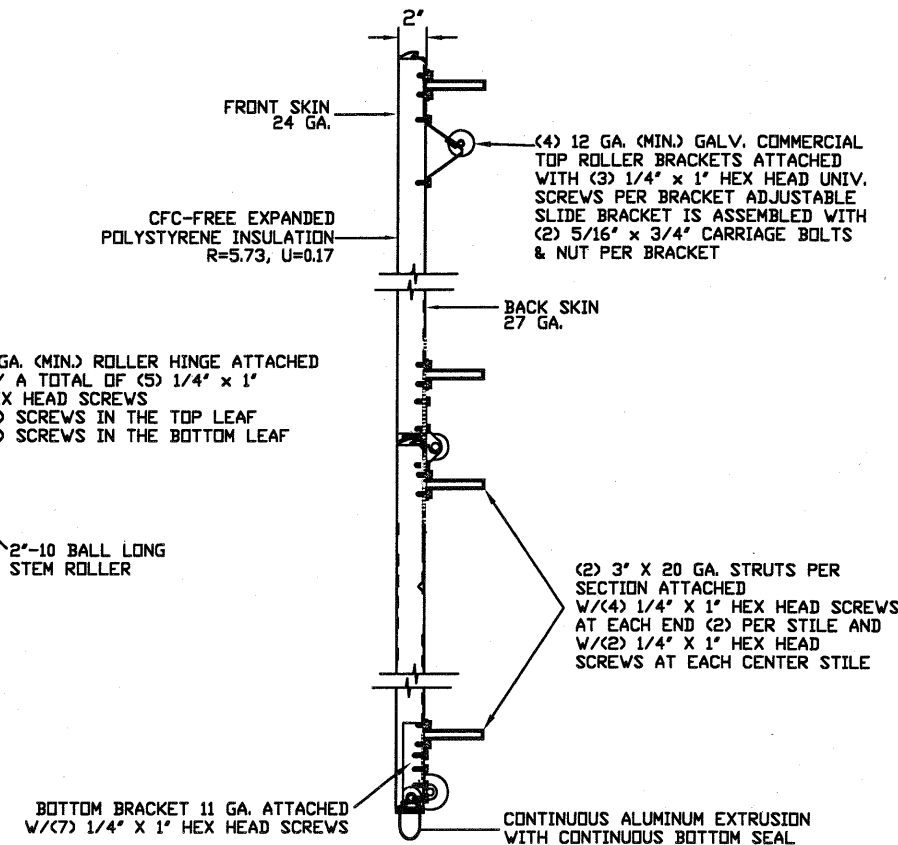
TYPICAL CENTER HINGE
N.T.S. 2



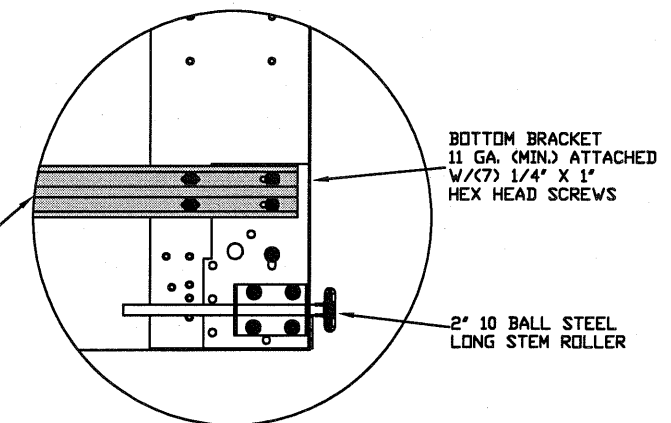
TYPICAL END HINGE
N.T.S. 3



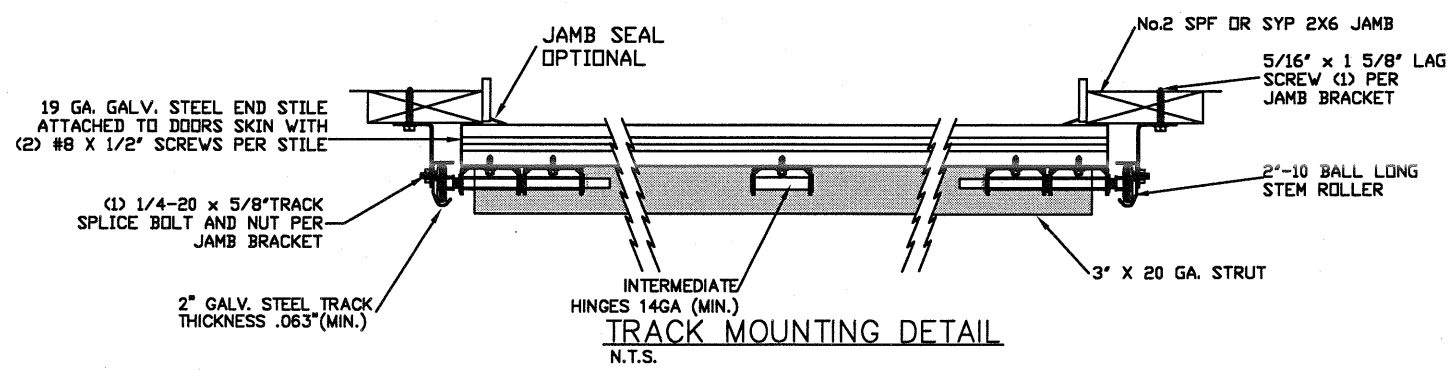
INSIDE ELEVATION
N.T.S.



SECTION A-A (SIDE VIEW)
N.T.S.



TYPICAL BOTTOM BRACKET
N.T.S. 4



TRACK MOUNTING DETAIL
N.T.S.

EDGE OF DOOR 1" OVERLAP ON EACH SIDE

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURES DESCRIBED IN AND DASMA 108. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-16 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN END ZONE, ROOF SLOPE 10° OR LESS):

WIND SPEED (MPH)	135	122	116	111	106
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
20'2" x 24'

DESIGN LOADS
+14.7 PSF
-16.5 PSF

TEST LOADS
+22.1 PSF
-24.8 PSF

Thomas L. Shelmerdine, PE (FL PE #0048579)
Structural Solutions, PA (FL Firm #29412)

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

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

Amarr

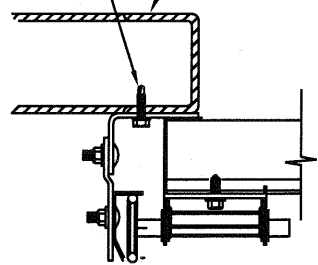
MODEL 1000 AMARR 2432

SIZE	DRAWN BY	RLR	DATE	4/5/17	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	4/5/17	IBC-1020-104-15

ENTREMATIC
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105

SHEET 1 OF 4

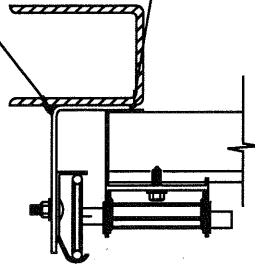
ITW BUILDEX 1/4"-14 X 3/4" SELF-TAPPING SCREWS (TEKS) 12 GA. OR 3/16" STEEL (SEE BELOW)



12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6'
FROM ENDS AND 18" 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

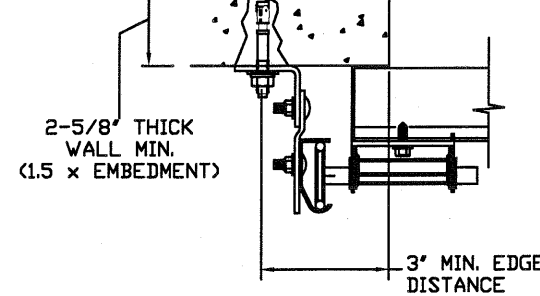
1/8" NOM X 1' LONG FILLET WELD (E60xx ELECTRODES MIN.)	1/4" LONG TACK WELD SAME SPACING / AS FILLET WELD
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STEEL FRAMING 12GA OR BETTER
1590 LBS./IN. ALLOWABLE LOAD -
6" FROM ENDS AND 24" O.C.
REFER TO NOTES: 1, 2, 5, 6, 7, 8
AND 9

2000 PSI MIN.
CONCRETE

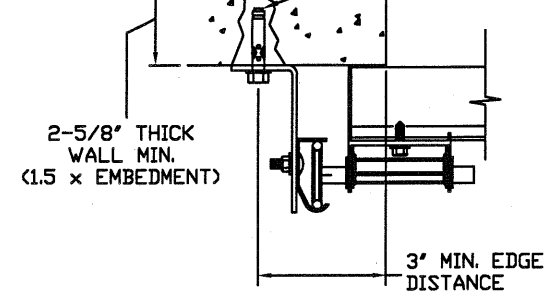
SIMPSON STRONG-TIE
3/8"Ø WEDGE-ALL
EXPANSION ANCHOR WITH
7/8"Ø WASHER, 1-3/4"MIN.
EMBEDMENT



2000 PSI CONCRETE OR GREATER
351 LBS./EXPANSION ANCHOR ALLOWABLE LOAD -
6" FROM ENDS AND 24" O.C.
REFER TO NOTES 1, 2, 3, 4 AND 5

2000 PSI MIN.
CONCRETE

SIMPSON STRONG-TIE
3/8"Ø SLEEVE-ALL
EXPANSION ANCHOR WITH
7/8"Ø WASHER, 1-3/4"MIN.
EMBEDMENT



2000 PSI CONCRETE OR GREATER
336 LBS./EXPANSION ANCHOR ALLOWABLE
LOAD - 6" FROM ENDS AND 24" O.C.
REFER TO NOTES: 1, 2, 3, 4 AND 5

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:
+148.2 LBS/FT & -166.4 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. (.022) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 24'0" HIGH USE (2) 3" 20GA STRUTS PER SECTION
6. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.

5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS
THEN 24" O.C. (1 1/2" EMBEDMENT)

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 24" 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)

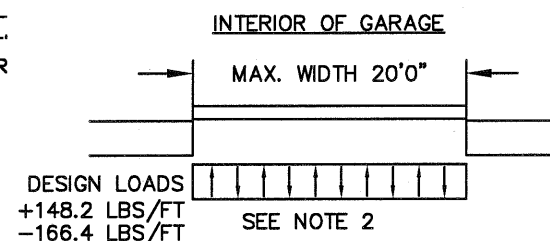
SIMPSON 1/4" X 3" TITEN SCREWS STARTING 6" FROM ENDS,
USE PAIRS OF FASTENERS (3" APART)

HILTI 1/4" X 2-3/4" KWIK-CON II+ SCREWS STARTING 6" FROM ENDS,
USE PAIRS OF FASTENERS (3" APART) AT 24" O.C. (1 1/4" EMBEDMENT)

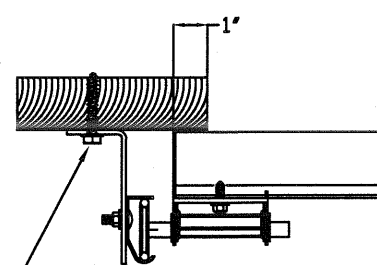
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS
THEN 24" O.C. (1 1/4" EMBEDMENT)

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

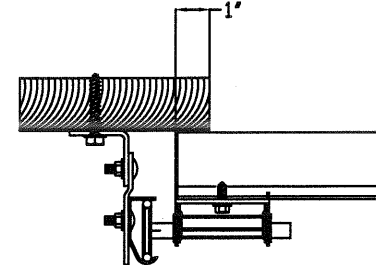
1. ANCHORS TO BE EVENLY SPACED BETWEEN THE HEADER AND FLOOR.
2. FIRST (BOTTOM) ANCHOR STARTING AT NO MORE THAN HALF OF THE MAXIMUM ON-CENTER DISTANCE. HIGHEST ANCHOR INSTALLED AT LEAST AS HIGH AS THE DOOR OPENING.
3. MIN. EDGE DISTANCE OF 3' REQUIRED.
4. USE WASHERS PROVIDED BY THE ANCHOR MANUFACTURER.
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.



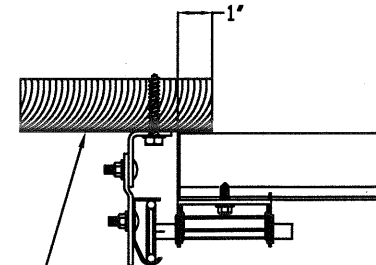
FOR LAG SCREWS & BRACKET SPACING SEE TABLE 2 ON PAGE 4



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

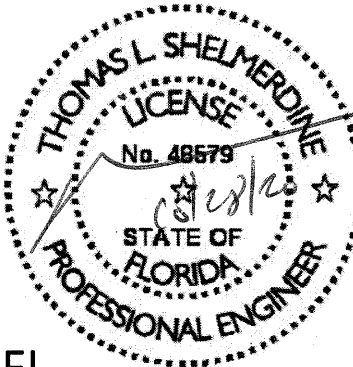


2x6 WOOD JAMB SYP
(NO.2) OR BETTER (TYP.)



REVERSE ANGLE MOUNT

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 20'2 x 24' DESIGN LOADS +14.7 PSF -16.5 PSF TEST LOADS +22.1 PSF -24.8 PSF	Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412) FL	 Thomas L. Shelmerdine, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410
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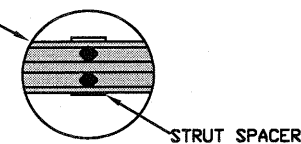


MODEL 1000 AMARR 2432			
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SIZE	DRAWN BY	RLR	DATE	4/5/17	DRAWING NUMBER IEC-1020-104-15
B	CHECKED BY	RLR	DATE	4/5/17	

ENTREMATRIC 165 CARRIAGE COURT WINSTON-SALEM, NC 27105	SHEET 2 OF 4
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3" 20GA. STRUT
ATTACHED W/ (2) 1/4" x 1"
HEX HEAD SCREWS
AT EACH CENTER STILE



(5)

Technical drawing of a bridge structure, showing a cross-section with six rectangular panels, each containing diagonal hatching. The panels are supported by a central pier and two side piers. The drawing includes dimensions and labels.

5

The diagram illustrates a continuous beam with six spans. Each span contains a rectangular panel with diagonal hatching. The beam is supported by seven vertical supports. The top and bottom reinforcement bars are shown with hooks at the ends.

A detailed cross-sectional diagram of a door assembly. The diagram shows a central core made of two layers of .080 PLEXI-GLASS held together by HOT MELT ADHESIVE. This core is flanked by ALUMINUM SPACERS. The entire assembly is encased in a layer of EXTRUDED POLYPROPYLENE, which is then covered by a DOOR SKIN. The diagram illustrates the internal structure and the materials used in the door's construction.

1/8"DSB GLASS

HOT MELT ADHESIVE

DOOR SKIN

7/8" SPACER

#8 ZINC SCREW

1/8"DSB GLASS

HOT MELT ADHESIVE

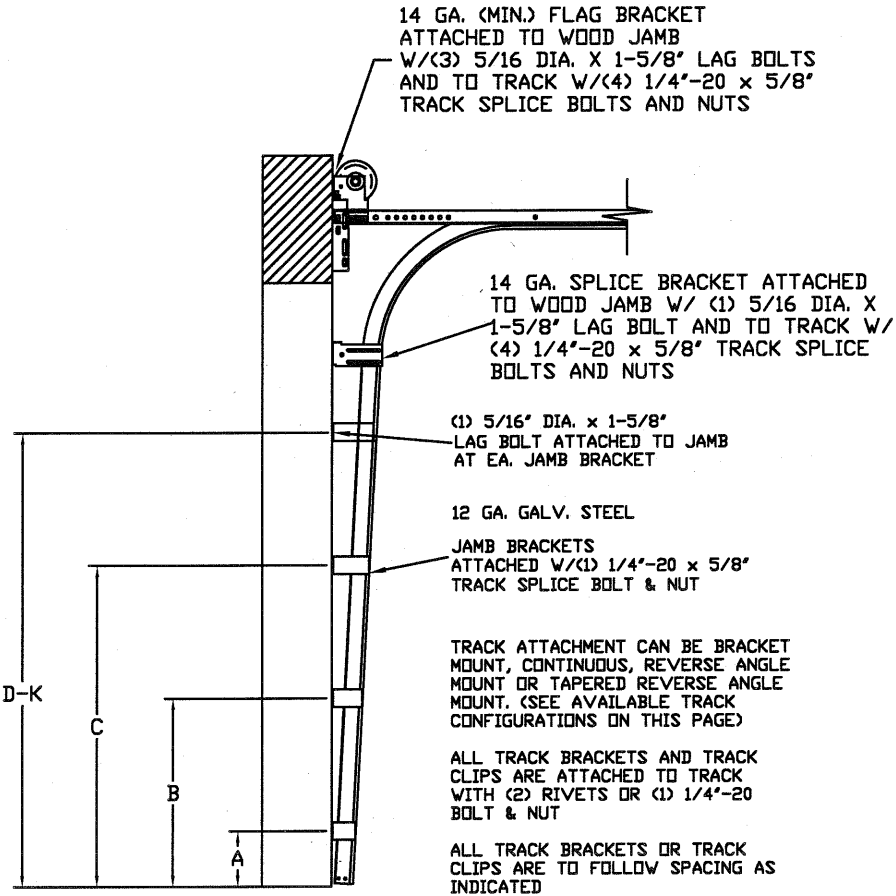
DOOR SKIN

EXTRUDED POLYPROPYLENE

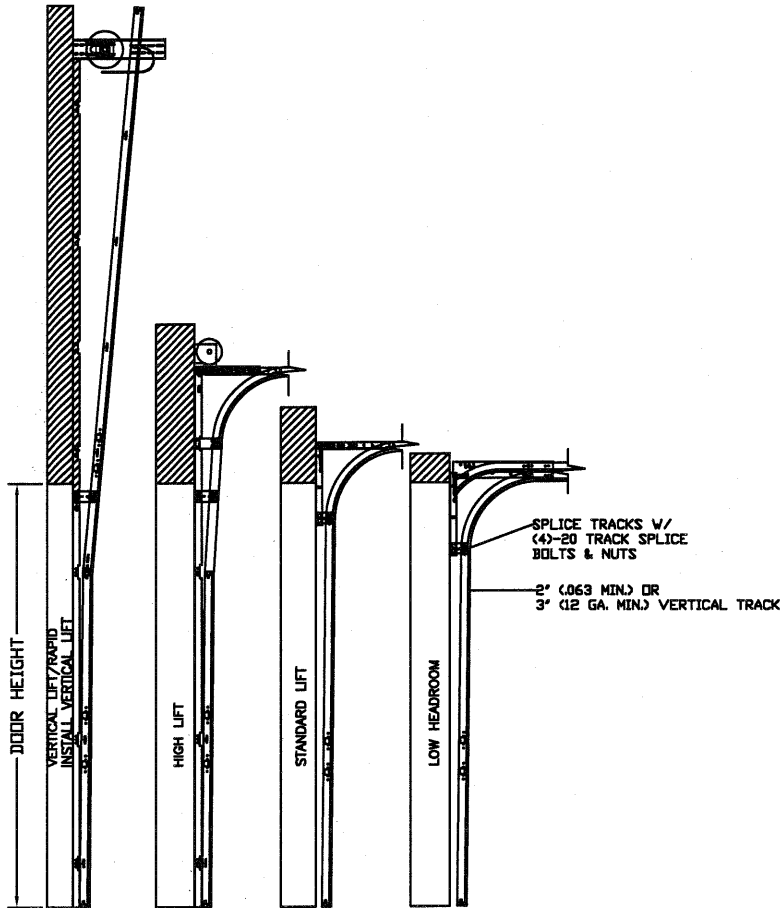
REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE 20'2 x 24' DESIGN LOADS +14.7 PSF -16.5 PSF TEST LOADS +22.1 PSF -24.8 PSF		Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412) FL dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410	
MODEL 1000 AMARR 2432			
SIZE	DRAWN BY	RLR	DATE 4/5/17
B	CHECKED BY	RLR	DATE 4/5/17
ENTREMATRIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			DRAWING NUMBER IBC-1020-104-15
SHEET 3 OF 4			SHEET 3 OF 4

TABLE 1

Section Width		Center Stile Locations (Measured from Left Edge)					Max Design Loads Allowed	
(ft)	(in)	1st (in)	2nd (in)	3rd (in)	4th (in)	5th (in)	Positive (PSF)	Negative (PSF)
18'	4	45.5	88.5	131.5	174.5		13.4	15.1
18'	6	46.5	89.5	132.5	175.5		13.3	14.9
18'	8	47.5	90.5	133.5	176.5		13.1	14.7
18'	10	48.5	91.5	134.5	177.5		13	14.6
19'	0	49.5	92.5	135.5	178.5		12.8	14.4
19'	2	50.5	93.5	136.5	179.5		12.7	14.2
19'	4	36	76	116	156	196	14.8	16.7
19'	6	37	77	117	157	197	14.8	16.7
19'	8	38	78	118	158	198	14.8	16.7
19'	10	39	79	119	159	199	14.8	16.7
20'	0	40.0	80	120	160	200	14.8	16.6
20'	2	41.0	81	121	161	201	14.7	16.5



TRACK CONFIGURATION FOR UP TO 24' TALL DOORS
SEE TABLE 2



AVAILABLE TRACK CONFIGURATIONS
N.T.S.

TABLE 2

DOOR HEIGHT	TRACK ATTACHMENT											TYPICAL SPLICE
	A	B	C	D	E	F	G	H	I	J	K	
7' 0"	10.0"	34"	58"									76"
7' 6"	10.0"	34"	58"									82"
8' 0"	10.0"	34"	58"									88"
8' 6"	10.0"	34"	58"	82"								94"
9' 0"	10.0"	34"	58"	82"								100"
9' 6"	10.0"	34"	58"	82"								106"
10' 0"	10.0"	34"	58"	82"								112"
11' 0"	10.0"	34"	58"	82"	106"							124"
12' 0"	10.0"	34"	58"	82"	106"							136"
13' 0"	10.0"	34"	58"	82"	106"	130"						148"
14' 0"	10.0"	34"	58"	82"	106"	130"						160"
15' 0"	10.0"	34"	58"	82"	106"	130"	154"					172"
16' 0"	10.0"	34"	58"	82"	106"	130"	154"					184"
17' 0"	10.0"	34"	58"	82"	106"	130"	154"	178"				196"
18' 0"	10.0"	34"	58"	82"	106"	130"	154"	178"				208"
19' 0"	10.0"	34"	58"	82"	106"	130"	154"	178"	202"			220"
20' 0"	10.0"	34"	58"	82"	106"	130"	154"	178"	202"			232"
21' 0"	10.0"	34"	58"	82"	106"	130"	154"	178"	202"	226"		244"
22' 0"	10.0"	34"	58"	82"	106"	130"	154"	178"	202"	226"		256"
23' 0"	10.0"	34"	58"	82"	106"	130"	154"	178"	202"	226"	250"	268"
24' 0"	10.0"	34"	58"	82"	106"	130"	154"	178"	202"	226"	250"	280"

ALL TRACK ATTACHMENTS +/- 2" ALLOWED USING SYP OR SPF NO.2 OR BETTER ONLY

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
20'2 x 24'

DESIGN LOADS
+14.7 PSF
-16.5 PSF

TEST LOADS
+22.1 PSF
-24.8 PSF

Thomas L. Shelmerdine, PE (FL PE #0048579)
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ENTREMATIC
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105

SHEET 4 OF 4