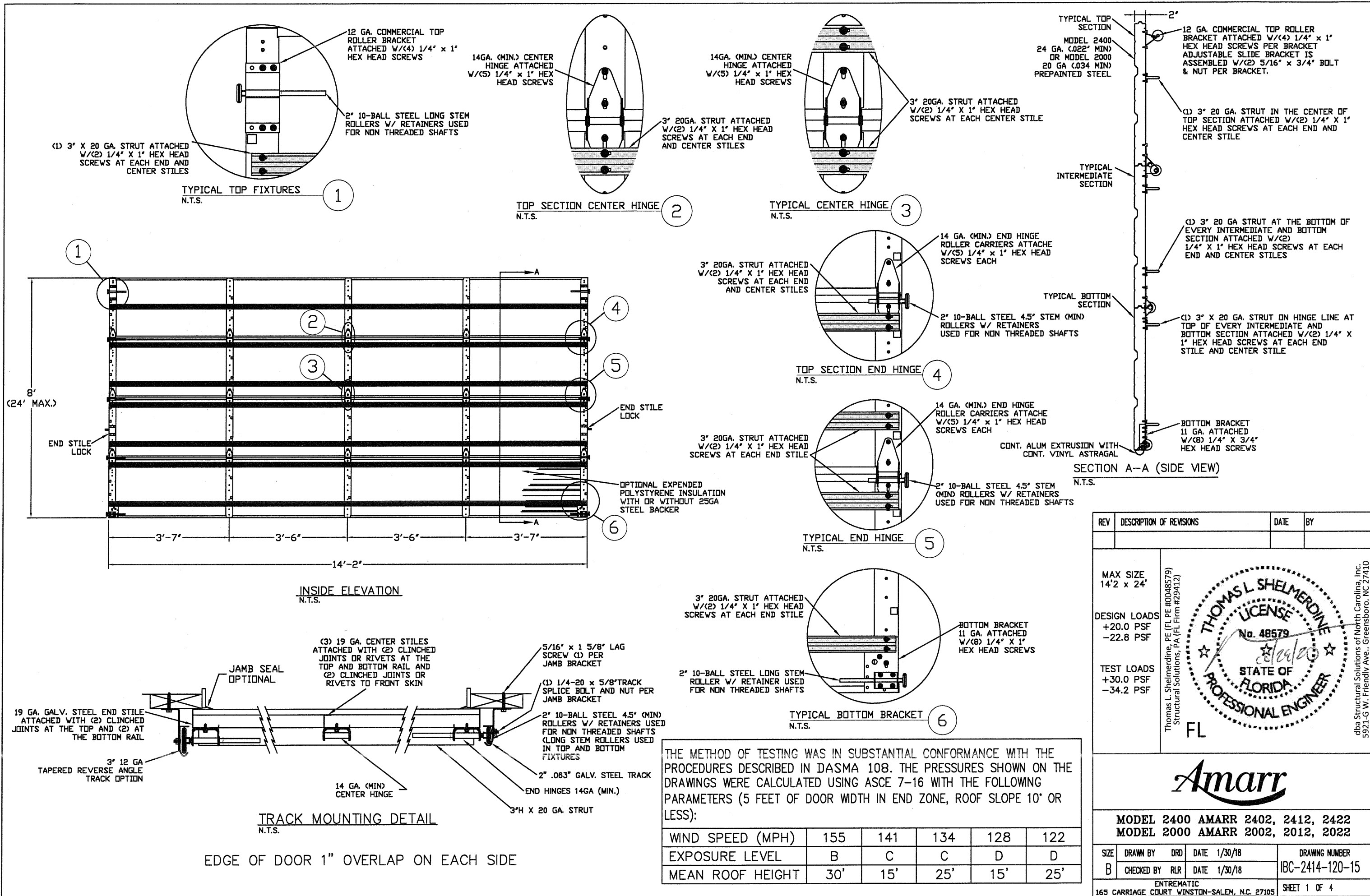




REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
14'2 x 24'

DESIGN LOADS
+20.0 PSF
-22.8 PSF

TEST LOADS
+30.0 PSF
-34.2 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

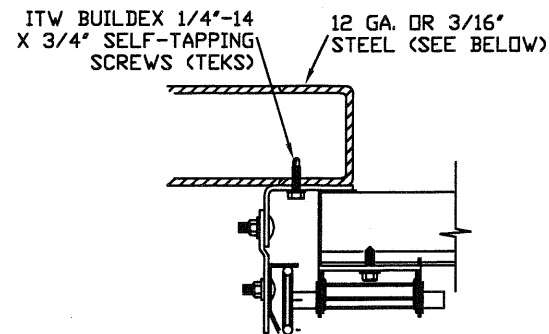
MODEL 2400 AMARR 2402, 2412, 2422			
MODEL 2000 AMARR 2002, 2012, 2022			

SIZE	DRAWN BY	DRD	DATE	1/30/18	DRAWING NUMBER IBC-2414-120-15
B	CHECKED BY	RLR	DATE	1/30/18	

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

SHEET 1 OF 4

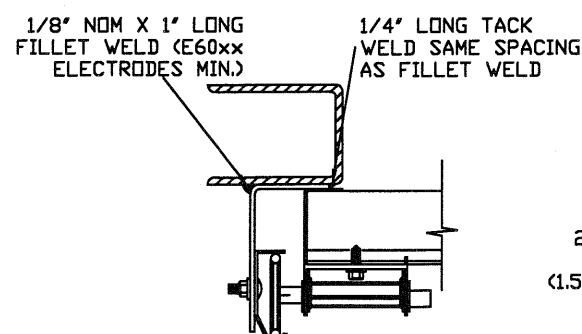
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

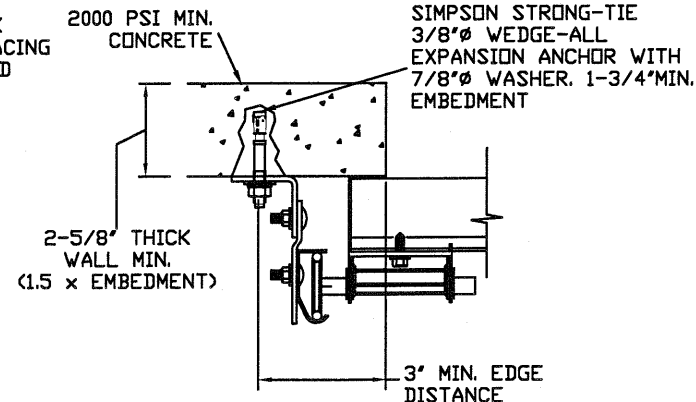
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6'
FROM ENDS AND 18" O.C.
REFER TO NOTES: 1, 2 AND 5

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



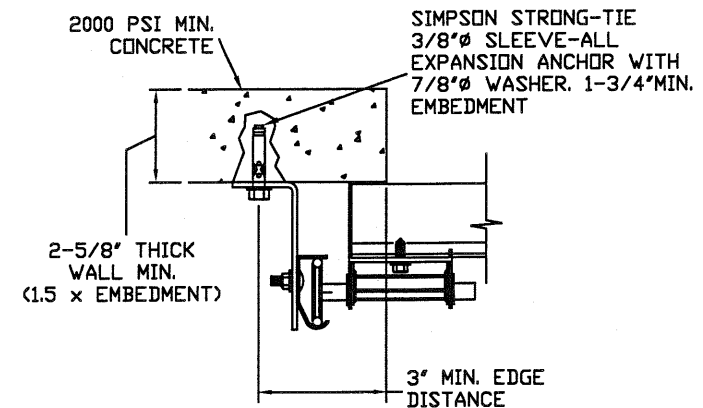
REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND
TAPERED ANGLE MOUNT AVAILABLE

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



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 24" 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 24" O.C.
REFER TO NOTES 1, 2, 3, 4 AND 5

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:
+141.7 LBS/FT AND -161.5 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, GALVANIZATION W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 24' HIGH USE (2) 3" 20GA STRUTS ON EVERY INTERMEDIATE AND BOTTOM SECTION AND (1) 3" 20GA STRUT IN THE CENTER OF TOP 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.

WOOD JAMB ATTACHMENT TO STRUCTURE (OPTIONAL)

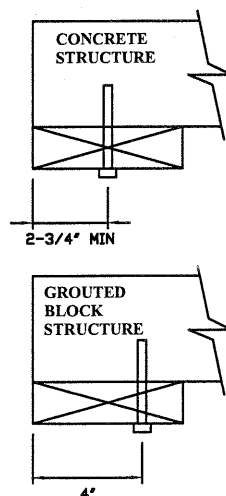
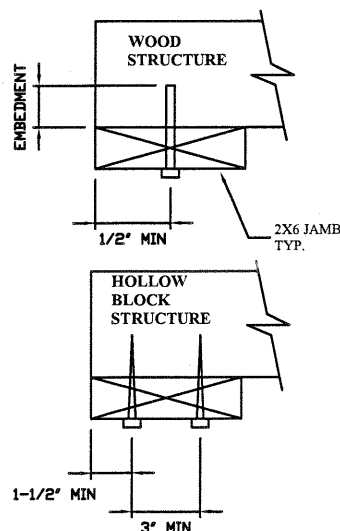
2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2" EMBEDMENT)

2 X 6 VERTICAL JAMB AT 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 24" O.C. (1 1/4" EMBEDMENT)
ITW/RAMSEY 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 24" 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 24" O.C. (1 1/4" EMBEDMENT)

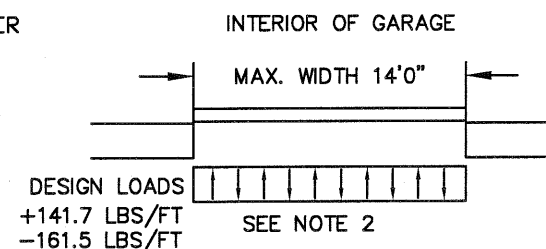
2 X 6 VERTICAL JAMB ATTACHMENT TO GROUTED C-90 BLOCK (2000 PSI GROUT)
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C. (1 1/4" EMBEDMENT)
(OR, USE FASTENERS FOR HOLLOW C-90 BLOCK)

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



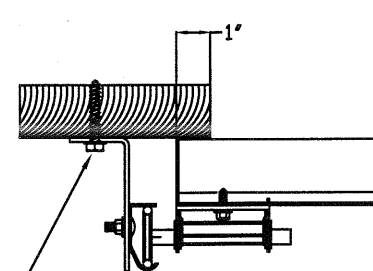
- NOTES:

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.



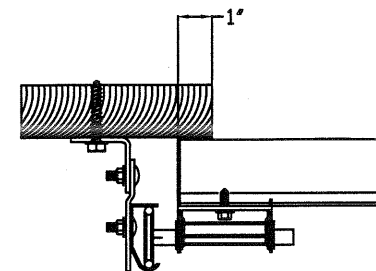
TRACK CONNECTION TO WOOD JAMB OPTIONS

FOR LAG SCREWS & BRACKET SPACING SEE PAGE 4 FOR TRACK CONFIGURATION DETAIL

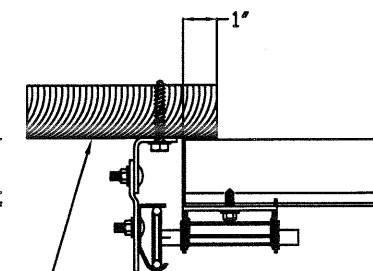


BRACKET MOUNT

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



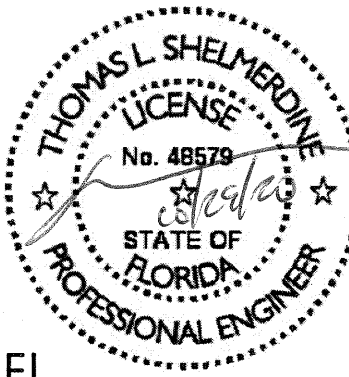
CONTINUOUS ANGLE MOUNT



REVERSE ANGLE MOUNT

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

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 14'2" x 24'	DESIGN LOADS +20.0 PSF -22.8 PSF	TEST LOADS +30.0 PSF -34.2 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 2400 AMARR 2402, 2412, 2422			
MODEL 2000 AMARR 2002, 2012, 2022			

SIZE B	DRAWN BY DRD	DATE 1/30/18	DRAWING NUMBER IBC-2414-120-15
	CHECKED BY RLR	DATE 1/30/18	

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

SHEET 2 OF 4

The diagram shows a horizontal beam supported by four vertical supports. The supports are located at the left end, one-third of the way across, two-thirds of the way across, and at the right end. The distance between each support is labeled as l . Two downward-pointing arrows, each labeled C , represent concentrated loads applied to the beam between the first and second supports, and between the third and fourth supports. The beam is shown with a central longitudinal axis and a cross-section at the right end.

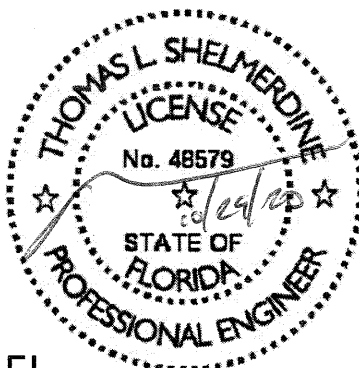
A perspective drawing of a long, narrow wooden structure, possibly a bridge or a walkway. It features a central support post and decorative elements at the ends, including what appear to be small, rectangular openings or windows. The structure is rendered in a simple, line-art style.

A detailed cross-sectional diagram of a door hinge assembly. The diagram shows a hinge mechanism with a central pin. The hinge is mounted to a door skin. The door skin is secured with hot melt adhesive. A .080 PLEXI-GLASS plate is positioned between the hinge and the door skin. The hinge is made of 0.0135" POLYPROPYLENE. The door skin is made of #8 3/4" ZINC SCREW. The hot melt adhesive is applied to the hinge and the door skin.

Diagram illustrating the assembly of a door skin to a structural member. The assembly consists of a door skin (0.0135" POLYPROPYLENE) attached to a structural member (1/8" DSB) using #8 3/4" ZINC SCREWS and HOT MELT ADHESIVE. The diagram shows the door skin being secured to the structural member, with the adhesive applied to the door skin and the screws passing through the door skin into the structural member.

Diagram of a rectangular plate with dimensions and mounting holes:

- Overall width: $21\text{--}5/8"$ MAX. DLO
- Overall height: $9\text{--}5/8"$ MAX. DLO
- The plate features a central rectangular cutout.
- There are four mounting holes along the top edge, four along the bottom edge, and two along each of the left and right edges of the central cutout.

REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE 14'2 x 24' DESIGN LOADS +20.0 PSF -22.8 PSF TEST LOADS +30.0 PSF -34.2 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 2400 AMARR 2402, 2412, 2422 MODEL 2000 AMARR 2002, 2012, 2022			
SIZE	DRAWN BY	DRD	DATE 1/30/18
B	CHECKED BY	RLR	DATE 1/30/18
DRAWING NUMBER			
IBC-2414-120-15			
ENTREMATIC			
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			
SHEET 3 OF 4			

Section Width (ft)		Center Stile Locations (Measured from Left)			Max Design Loads Allowed	
		1st (in)	2nd (in)	3rd (in)	Positive (PSF)	Negative (PSF)
9'	4"	36"	76"	-	22.2	25.3
9'	6"	37"	77"	-	21.9	25.0
9'	8"	38"	78"	-	21.6	24.7
9'	10"	39"	79"	-	21.4	24.4
10'	0"	40"	80"	-	21.1	24.1
10'	2"	41"	81"	-	20.8	23.8
10'	4"	42"	82"	-	20.6	23.5
10'	6"	43"	83"	-	20.3	23.2
10'	8"	44"	84"	-	20.1	22.9
10'	10"	45"	85"	-	19.9	22.6
11'	0"	46"	86"	-	19.6	22.4
11'	2"	47"	87"	-	19.4	22.1
11'	4"	48"	88"	-	19.2	21.9
11'	6"	49"	89"	-	19.0	21.6
11'	8"	50"	90"	-	18.7	21.4
11'	10"	51"	91"	-	18.5	21.1
12'	0"	48"	96"	-	17.6	20.0
12'	2"	49"	97"	-	17.4	19.8
12'	4"	50"	98"	-	17.2	19.6
12'	6"	51"	99"	-	17.0	19.4
12'	8"	52"	100"	-	16.9	19.2
12'	10"	53"	101"	-	16.7	19.0
13'	0"	36"	78"	120"	20.1	22.9
13'	2"	37"	79"	121"	20.1	22.9
13'	4"	38"	80"	122"	20.1	22.9
13'	6"	39"	81"	123"	20.1	22.9
13'	8"	40"	82"	124"	20.1	22.9
13'	10"	41"	83"	125"	20.1	22.9
14'	0"	42"	84"	126"	20.1	22.9
14'	2"	43"	85"	127"	20.0	22.8

14 GA. (MIN.) 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

13 GA. SPLICE BRACKET ATTACHED
TO WOOD JAMB W/ (1) 5/16 DIA. X
1-5/8' LAG BOLT AND TO TRACK W/
(4) 1/4'-20 x 5/8' TRACK SPLICE
BOLTS AND NUTS

(1) 5/16' DIA. x 1-5/8'
LAG BOLT ATTACHED TO JAMB
AT EA. JAMB BRACKET

12 GA. GALV. STEEL
JAMB BRACKETS
ATTACHED W/ (1) 1/4'-20 x 5/8'
TRACK SPLICE BOLT & NUT

TRACK ATTACHMENT CAN BE BRACKET
MOUNT, CONTINUOUS, REVERSE ANGLE
MOUNT OR TAPERED REVERSE ANGLE
MOUNT. (SEE AVAILABLE TRACK
CONFIGURATIONS)

ALL TRACK BRACKETS AND TRACK
CLIPS ARE ATTACHED TO TRACK
WITH (2) RIVETS OR (1) 1/4'-20
BOLT & NUT

ALL TRACK BRACKETS OR TRACK
CLIPS ARE TO FOLLOW SPACING AS
INDICATED

10"

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

DOOR HEIGHT

VERTICAL LIFT/RAPID
INSTALL VERTICAL LIFT

HIGH LIFT

STANDARD LIFT

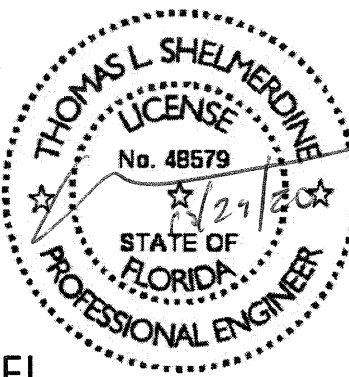
LOW HEADROOM

SPLICE TRACKS W/
(4)-20 TRACK SPLICE
BOLTS & NUTS

2" (.063 MIN.) OR
3" (12 GA. MIN.) VERTICAL TRACK

AVAILABLE TRACK CONFIGURATIONS
N.T.S.

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 14'2" x 24' DESIGN LOADS +20.0 PSF -22.8 PSF TEST LOADS +30.0 PSF -34.2 PSF	Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29410) FL		dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410
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MODEL 2400	AMARR 2402,	2412,	2422
MODEL 2000	AMARR 2002,	2012,	2022

SIZE	DRAWN BY	DRD	DATE	1/30/18	DRAWING NUMBER IBC-2414-120-15
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ENTREMATIC		SHEET 4 OF 4
165 CARRIAGE COURT WINSTON-SALEM, NC 27105		