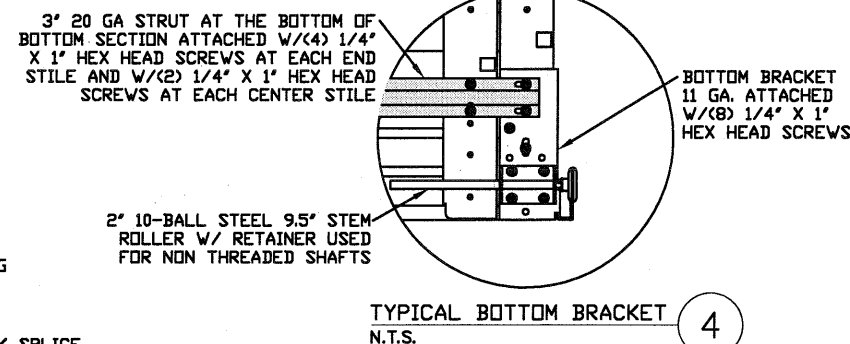
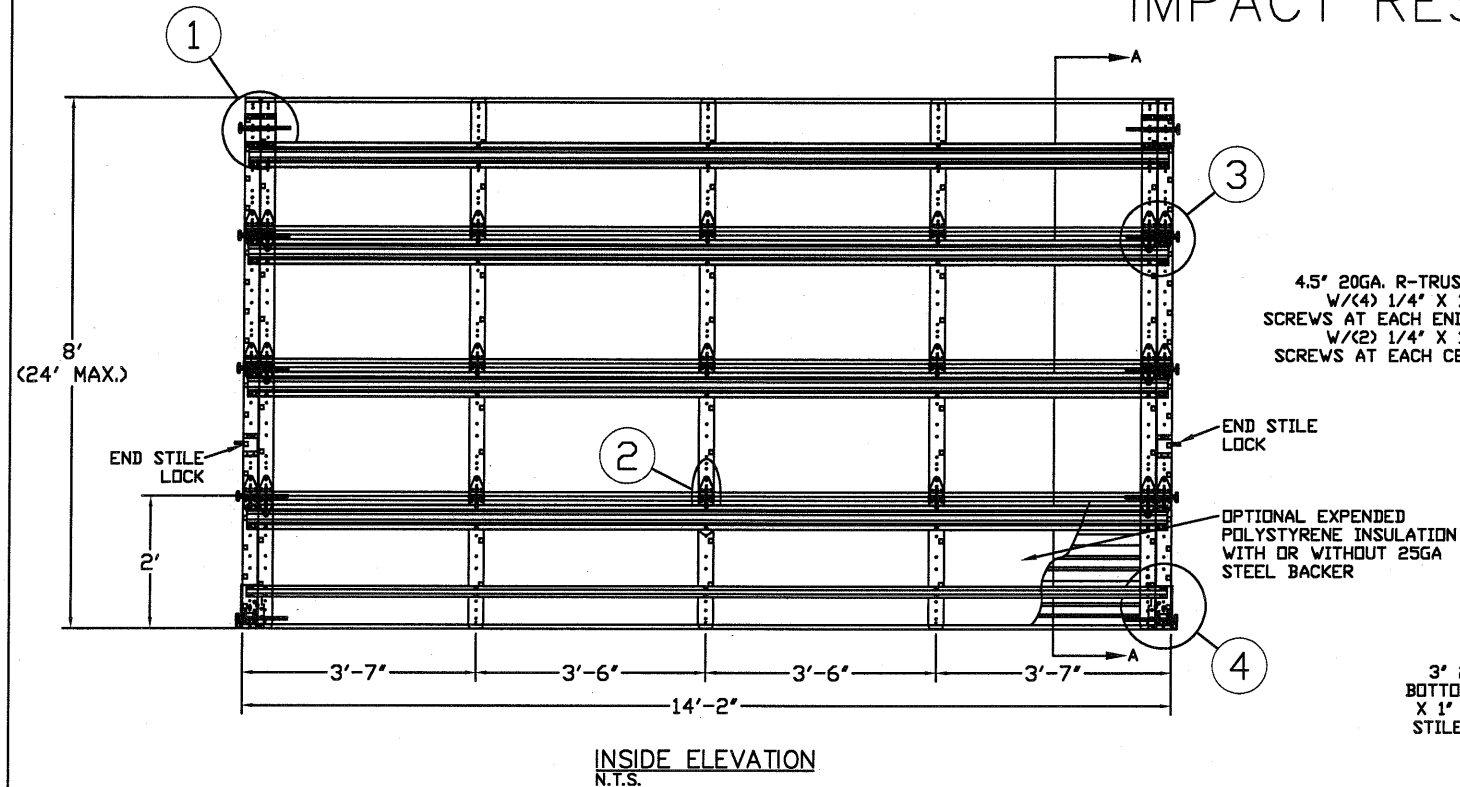
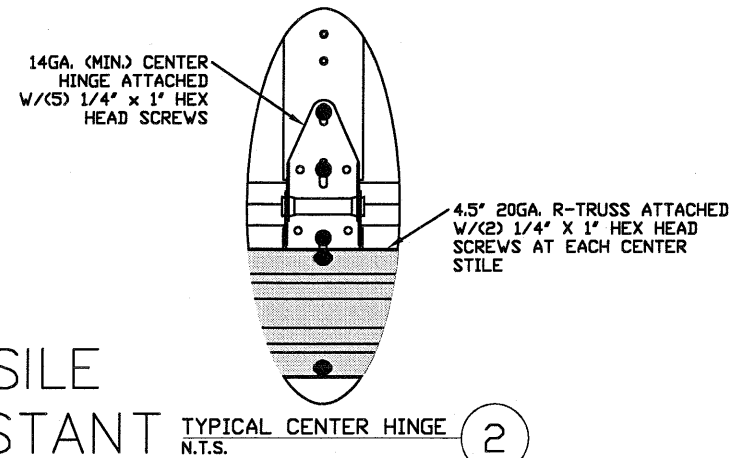


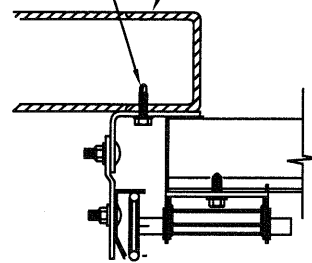


WIND SPEED (MPH)	194	176	168	160	154
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

Amar

SIZE	DRAWN BY	R/LR	DATE	7/30/19	DRAWING NUMBER IBC-2414-150-24-1
B	CHECKED BY	R/LR	DATE	7/30/19	
ENTREMATC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 1 OF 3

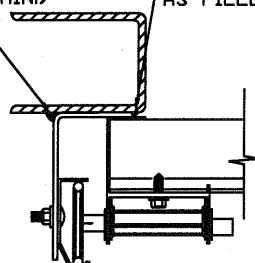
ITW BUILDEX 1/4"-14
X 3/4" SELF-TAPPING
SCREWS (TEKS) 12 GA. OR 3/16"
STEEL (SEE BELOW)



12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6"
FROM ENDS AND 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" NOM X 1" LONG
FILLET WELD (E60xx
ELECTRODES MIN.)

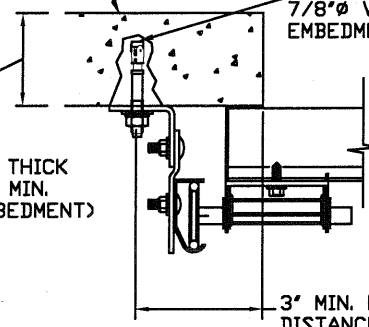


STEEL FRAMING 12GA OR BETTER
1590 LBS./IN. ALLOWABLE LOAD -
6" FROM ENDS AND 24" O.C.
REFER TO NOTES: 1, 2, 5, 6, 7, 8
AND 9

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.

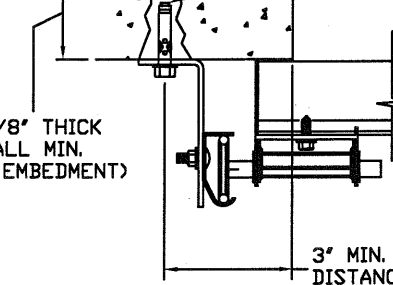
2000 PSI MIN.
CONCRETE

2-5/8" THICK
WALL MIN.
(1.5 x EMBEDMENT)



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

2-5/8" THICK
WALL MIN.
5 x EMBEDMENT)



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

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:
+223.1 LBS/FT AND -254.3 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 (1) 4 1/2" R-TRUSS ON EACH SECTION AND (1) 3" STRUT ON BOTTOM SECTION
6. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADS.

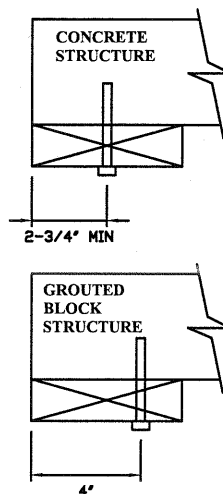
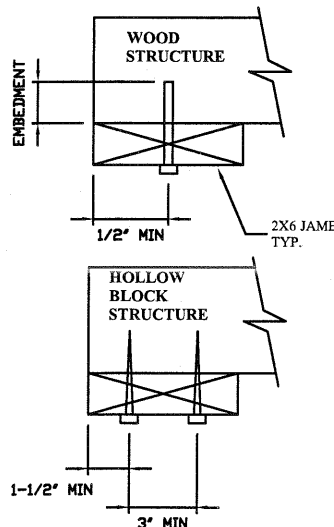
2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 22" O.C. (1 1/2" EMBEDMENT)

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/RAMSEY REDHEAD (TRU-BOLT) 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C. (2 1/2" EMBEDMENT)

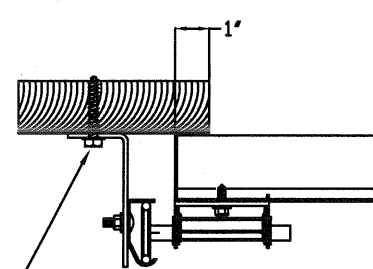
2 X 6 VERTICAL JAMB ATTACHMENT TO HOLLOW C-90 BLOCK
SIMPSON 1/4" X 3" TITEN SCREWS STARTING 6" FROM ENDS, USE PAIRS OF FASTENERS
(3" APART) AT 16" O.C. (1 1/2" EMBEDMENT)
HILTI 1/4" X 2-3/4" KWIK-CON II+ SCREWS STARTING 6" FROM ENDS, USE PAIRS OF FASTENERS
(3" APART) AT 16" O.C. (1 1/4" EMBEDMENT)

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 22" O.C. (1 1/4" EMBEDMENT)
(OR, USE FASTENERS FOR HOLLOW C-90 BLOCK)

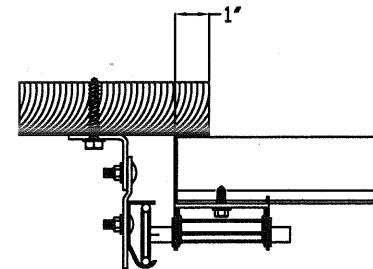
*LAGS AND BOLTS CAN BE COUNTERSUNK TO PROVIDE A FLUSH MOUNTING SURFACE.
*PREPARATION OF WOOD JAMBS BY OTHERS



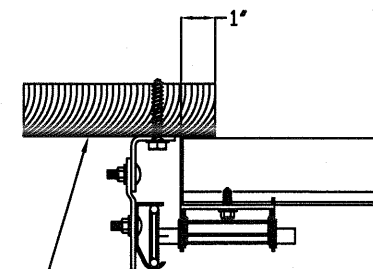
FOR LAG SCREWS & BRACKET SPACING SEE PAGE 3 FOR TRACK CONFIGURATION DETAIL



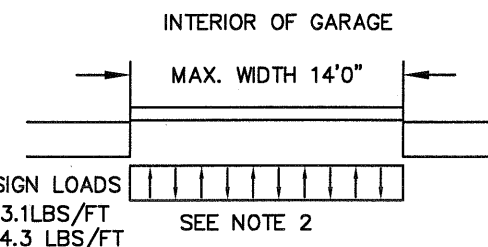
5/16" x 1 5/8" LAG SCREW (1)
PER JAMB BRACKET (1-1/2"
EMBEDMENT MINIMUM) (TYP.)



CONTINUOUS ANGLE MOUNT



REVERSE ANGLE MOUNT



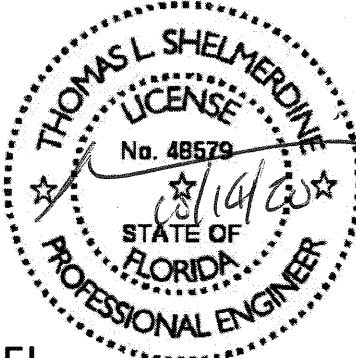
REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE 14'2 x 24' DESIGN LOADS +31.5 PSF -35.9 PSF TEST LOADS +47.3 PSF -53.9 PSF LARGE MISSILE IMPACT RESISTANCE	Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412) FL	 Thomas L. Shelmerdine, Inc. 5921-G.W. Friendly Ave., Greensboro, NC 27410	
			
MODEL 2400 AMARR 2402, 2412, 2422 MODEL 2000 AMARR 2002, 2012, 2022			
SIZE B	DRAWN BY RLR	DATE 7/30/19	DRAWING NUMBER IBC-2414-150-24-1
	CHECKED BY RLR	DATE 7/30/19	
ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, NC 27105			SHEET 2 OF 3

TABLE 1

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"	-	35.0	39.9
9'	6"	37"	77"	-	34.5	39.4
9'	8"	38"	78"	-	34.1	38.9
9'	10"	39"	79"	-	33.7	38.4
10'	0"	40"	80"	-	33.3	37.9
10'	2"	41"	81"	-	32.8	37.4
10'	4"	42"	82"	-	32.4	37.0
10'	6"	43"	83"	-	32.0	36.5
10'	8"	44"	84"	-	31.7	36.1
10'	10"	45"	85"	-	31.3	35.7
11'	0"	46"	86"	-	30.9	35.3
11'	2"	47"	87"	-	30.6	34.8
11'	4"	48"	88"	-	30.2	34.5
11'	6"	49"	89"	-	29.9	34.1
11'	8"	50"	90"	-	29.6	33.7
11'	10"	51"	91"	-	29.2	33.3
12'	0"	48"	96"	-	27.7	31.6
12'	2"	49"	97"	-	27.4	31.3
12'	4"	50"	98"	-	27.1	30.9
12'	6"	51"	99"	-	26.9	30.6
12'	8"	52"	100"	-	26.6	30.3
12'	10"	53"	101"	-	26.3	30.0
13'	0"	36"	78"	120"	31.7	36.1
13'	2"	37"	79"	121"	31.7	36.1
13'	4"	38"	80"	122"	31.7	36.1
13'	6"	39"	81"	123"	31.7	36.1
13'	8"	40"	82"	124"	31.7	36.1
13'	10"	41"	83"	125"	31.7	36.1
14'	0"	42"	84"	126"	31.7	36.1
14'	2"	43"	85"	127"	31.5	35.9

TABLE 3

DOOR HEIGHT	Section # (From Bottom)											
	1	2	3	4	5	6	7	8	9	10	11	12
8'	3"	4.5"	4.5"	4.5"	4.5"							
9'	3"	4.5"	4.5"	4.5"	4.5"	4.5"						
10'	3"	4.5"	4.5"	4.5"	4.5"	4.5"						
11'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"					
12'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"					
13'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"				
14'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"				
15'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"			
16'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"			
17'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"		
18'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"		
19'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	
20'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	
21'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"
22'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"
23'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"
24'	3"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"

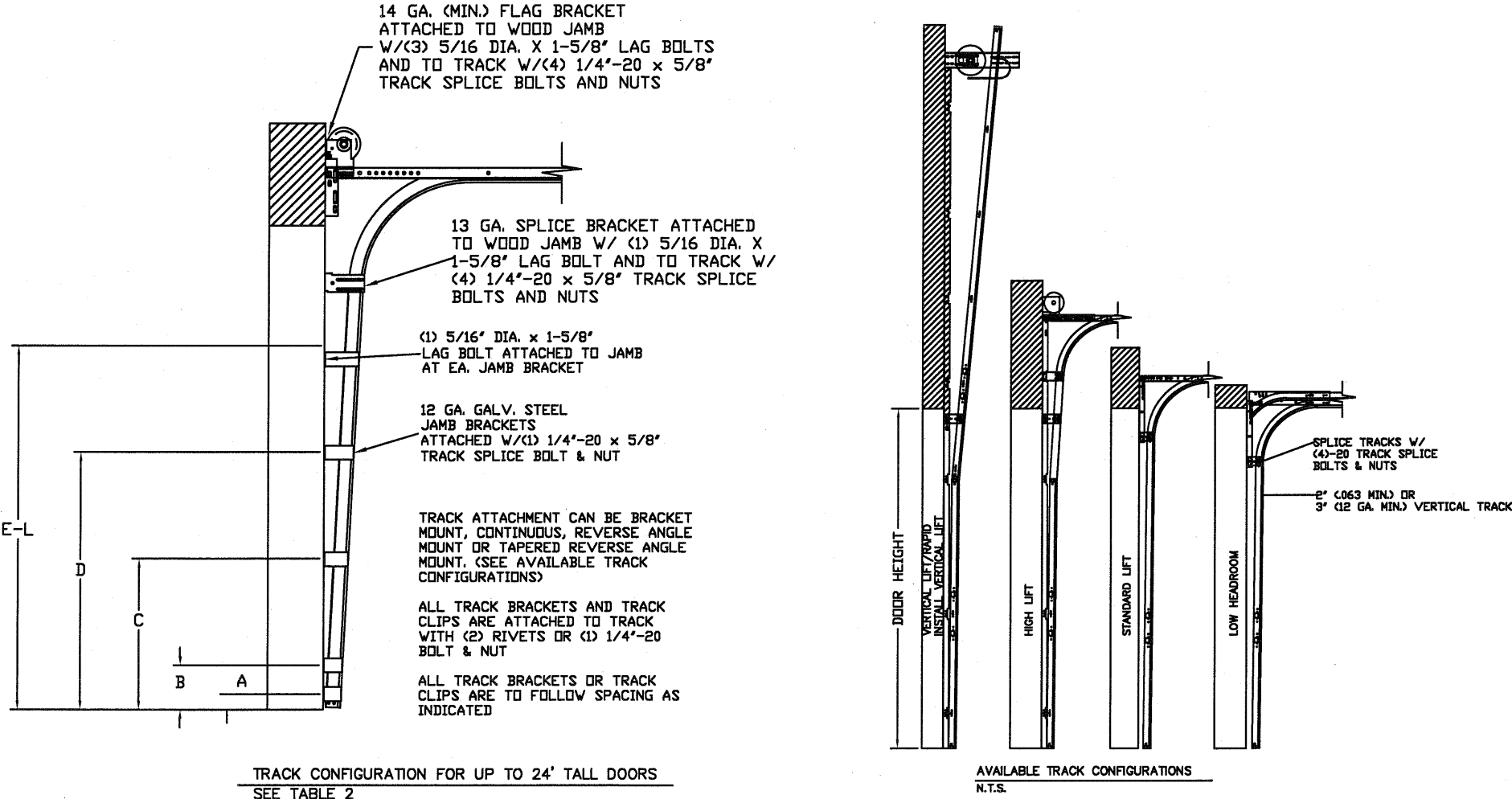


TABLE 2

DOOR HEIGHT	TRACK ATTACHMENT													TYPICAL SPLICE
	A	B	C	D	E	F	G	H	I	J	K	L	M	
7' 0"	3.5"	10.0"	21"	39"										76"
7' 6"	3.5"	10.0"	21"	39"	58"									82"
8' 0"	3.5"	10.0"	21"	39"	58"	75"								88"
8' 6"	3.5"	10.0"	21"	39"	58"	75"								94"
9' 0"	3.5"	10.0"	21"	39"	58"	75"	93"							100"
9' 6"	3.5"	10.0"	21"	39"	58"	75"	93"							106"
10' 0"	3.5"	10.0"	21"	39"	58"	75"	93"							112"
11' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"						124"
12' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"					136"
13' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"					148"
14' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"	147"				160"
15' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"	147"	165"			172"
16' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"	147"	165"			184"
17' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"	147"	165"	183"		196"
18' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"	147"	165"	183"	201"	208"
19' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"	147"	165"	183"	201"	220"
20' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"	147"	165"	183"	201"	232"
21' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"	147"	165"	183"	201"	244"
22' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"	147"	165"	183"	201"	256"
23' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"	147"	165"	183"	201"	268"
24' 0"	3.5"	10.0"	21"	39"	58"	75"	93"	111"	129"	147"	165"	183"	201"	280"

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

REV

DESCRIPTION OF REVISIONS

DATE

BY

MAX SIZE
14'2" x 24'

DESIGN LOADS
+31.5 PSF
-35.9 PSF

TEST LOADS
+47.3 PSF
-53.9 PSF

LARGE MISSILE
IMPACT
RESISTANCE

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

SIZE

DRAWN BY

RLR

DATE

7/30/19

CHECKED BY

RLR

DATE

7/30/19

ENTREMATIC
165 CARRIAGE COURT WINSTON-SALEM, NC. 27105

DRAWING NUMBER

IBC-2414-150-24-1

SHEET 3 OF 3