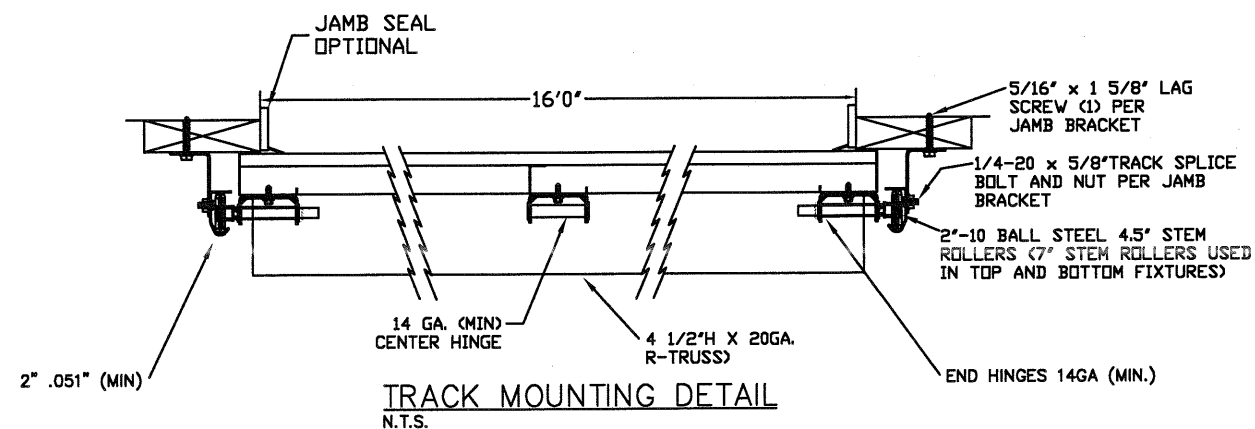
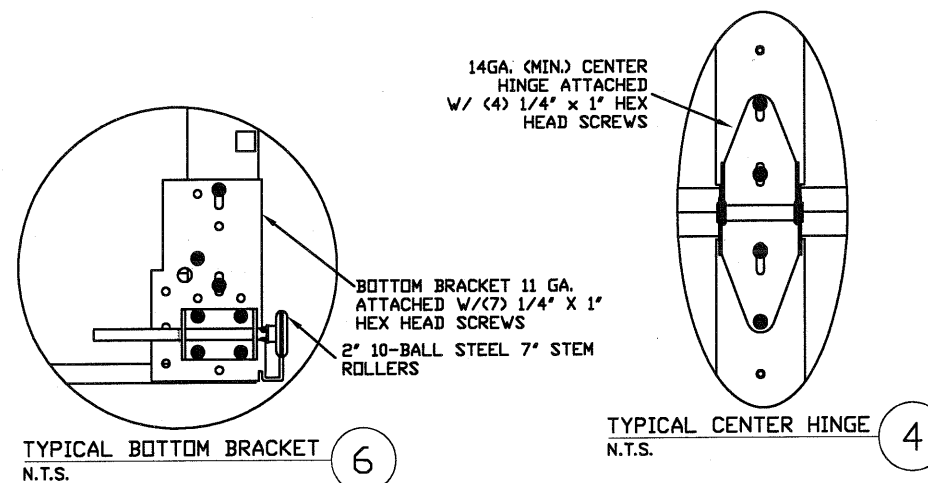
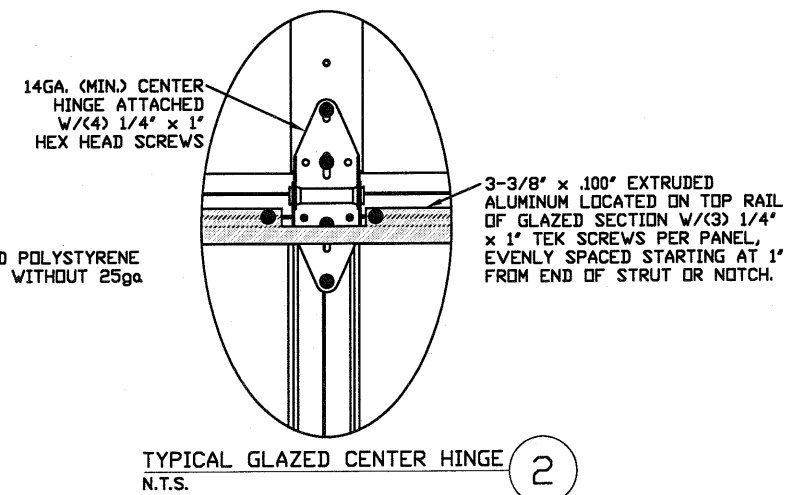
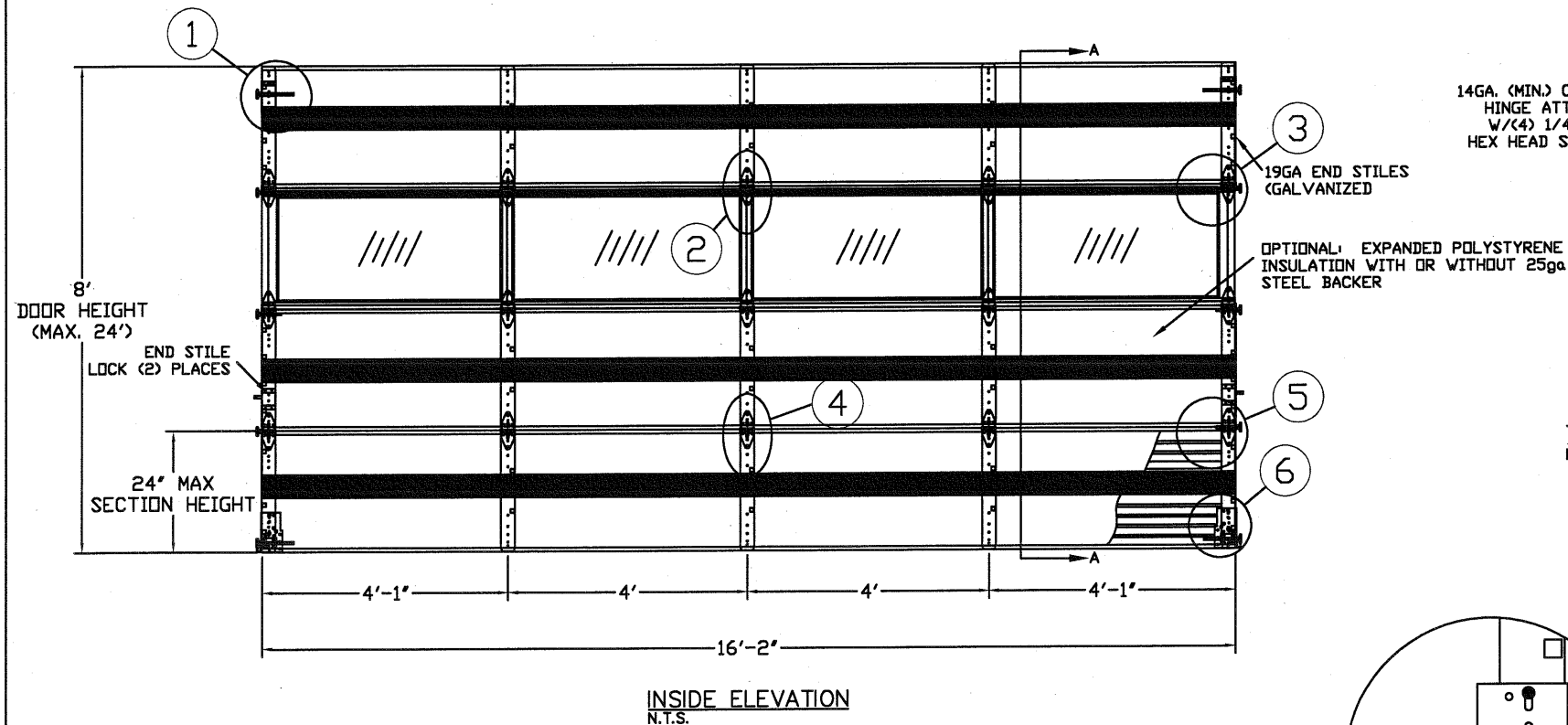
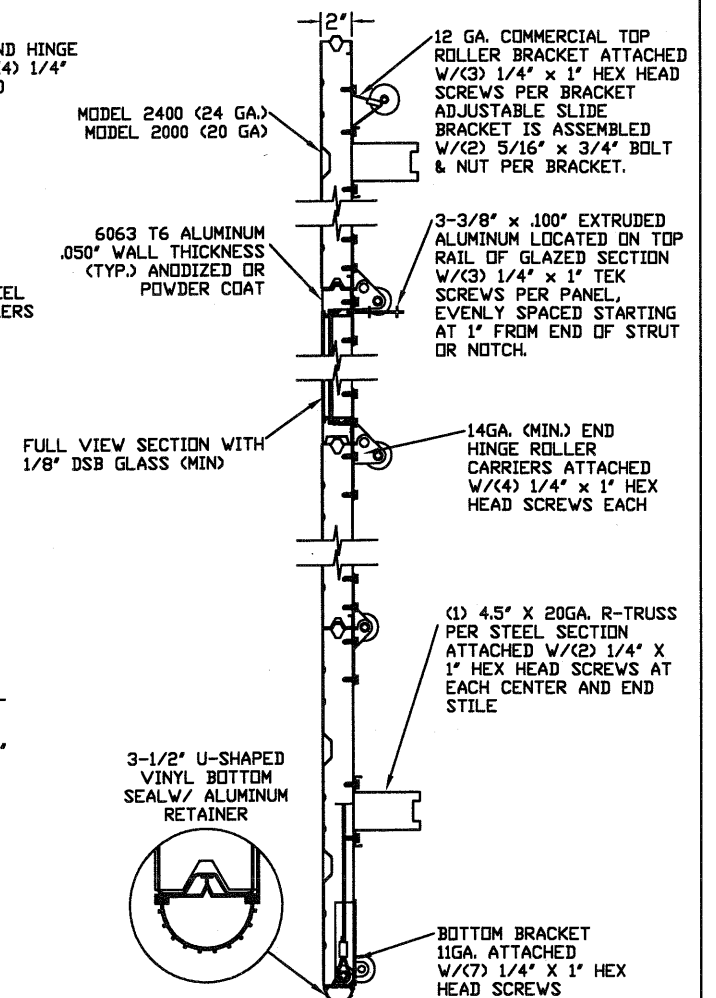
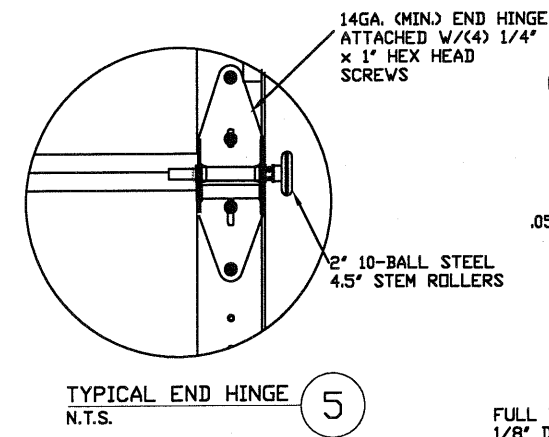
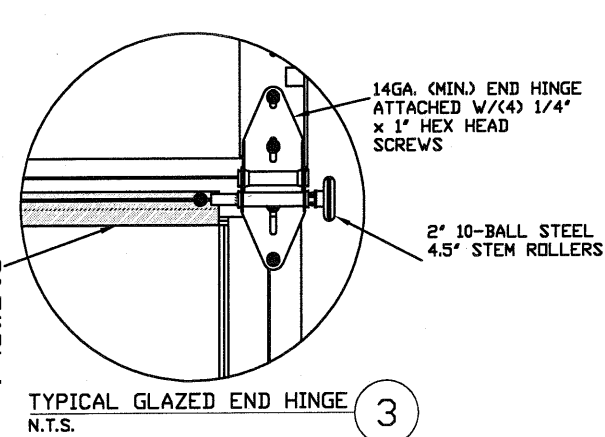
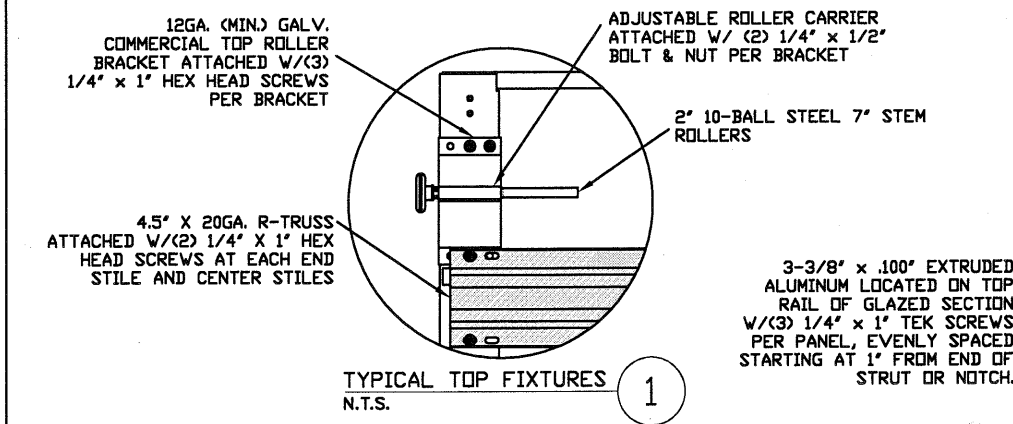




EDGE OF DOOR 1" OVERLAP ON EACH SIDE

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURES DESCRIBED IN DASMA 108 AND ASTM E330. 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)	142	129	123	117	112
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY
A			

MAX SIZE 16'2" x 24'

DESIGN LOADS
+16.7 PSF
-18.9 PSF

TEST LOADS
+25.1 PSF
-28.4 PSF

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

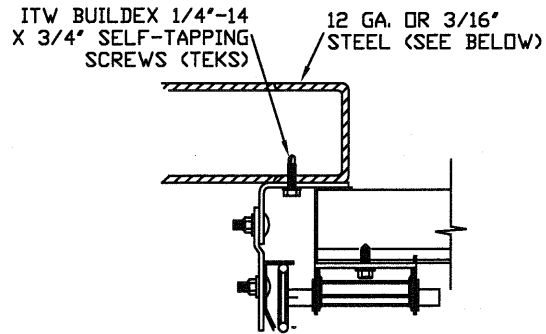
THOMAS L. SHELMERDINE
LICENSE
No. 48579
STATE OF FLORIDA
PROFESSIONAL ENGINEER
FL

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

Amarr

MODEL 2400/3550 AMARR 2402/3552, 2412/3552, 2422/3552 MODEL 2000/3550 AMARR 2002/3552, 2012/3552, 2022/3552	SIZE B	DRAWN BY DLJ	DRD DATE 9/18/18	DATE 12/04/18	DRAWING NUMBER IBC-2416-110-63-A
ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105	SHEET 1 OF 3				

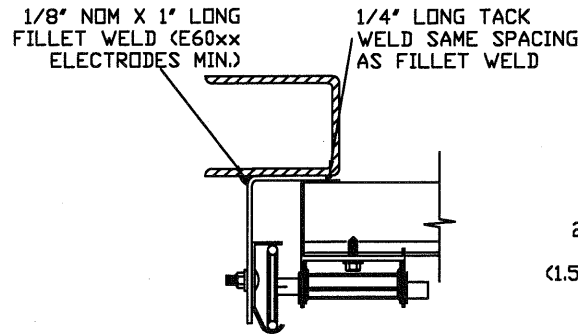
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

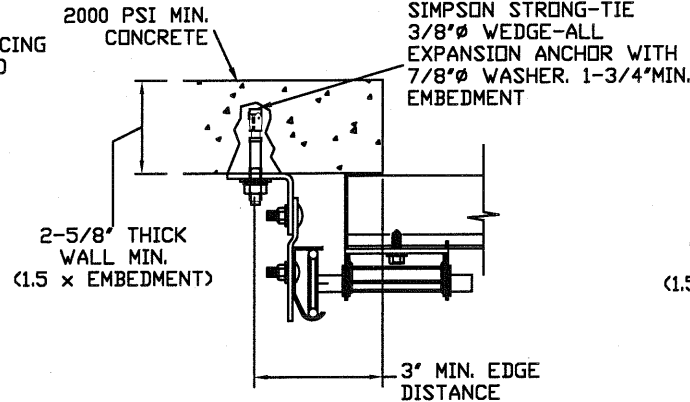
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6"
FROM ENDS AND 20" O.C.
REFER TO NOTES 1, 2 AND 5

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



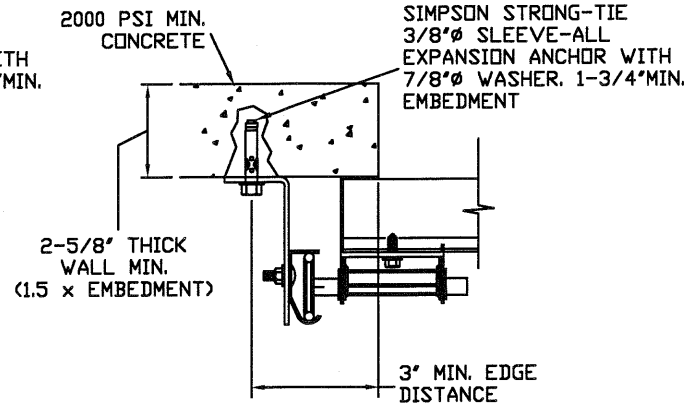
REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND
TAPERED ANGLE MOUNT AVAILABLE

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

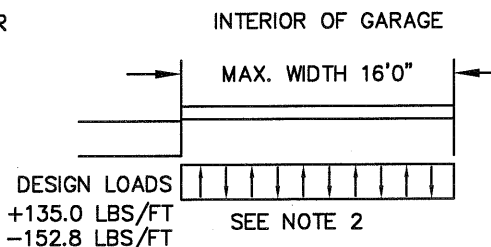


CONTINUOUS ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED ANGLE
MOUNT AVAILABLE

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

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.



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:
+135.0 LBS/FT AND -152.8 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASHA.
4. DOOR SECTIONS SHALL BE 24 GA. (.022) MIN. EXTERIOR SKIN ROLLED FORMED, GALVANIZATION W/ BAKED ON POLYESTER FINISH
5. 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)

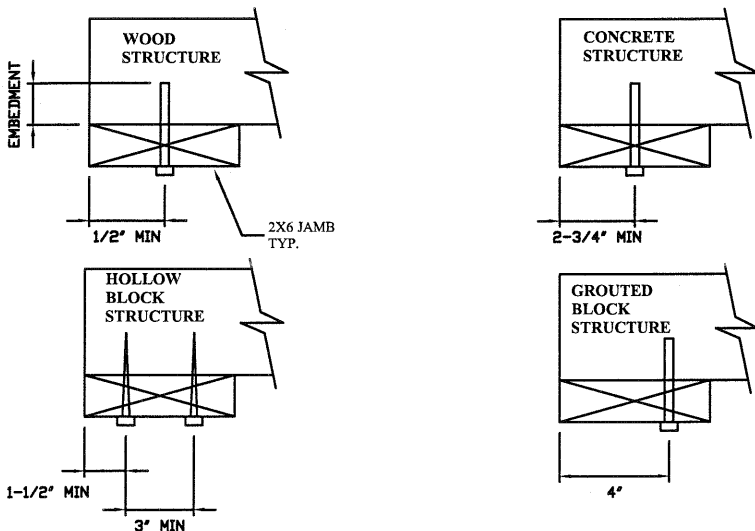
2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2" EMBEDMENT)

2 X 6 VERTICAL JAMB 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/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 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)

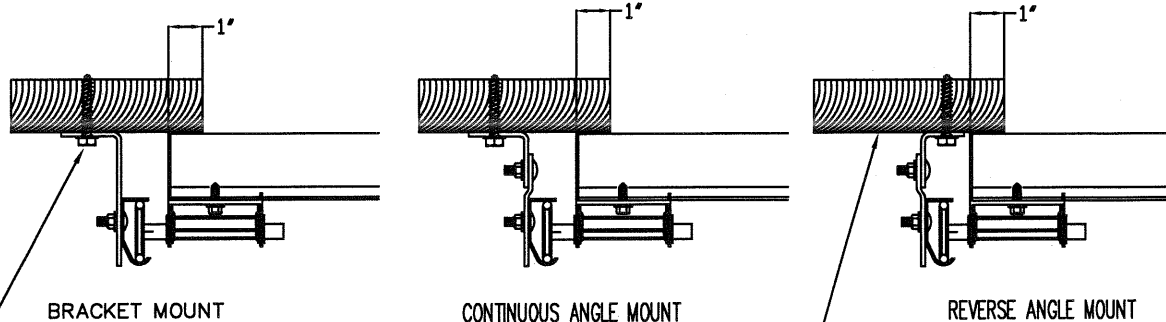
2 X 6 VERTICAL JAMB ATTACHMENT TO GROUTED C-90 BLOCK (2000 PSI GROUT)
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C. (1 1/4" EMBEDMENT)
(OR, USE FASTENERS FOR HOLLOW C-90 BLOCK)

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



TRACK CONNECTION TO WOOD JAMB OPTIONS

FOR LAG SCREWS & BRACKET SPACING SEE TABLE 2 ON PAGE 3



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

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

REV	DESCRIPTION OF REVISIONS	DATE	BY
A			
MAX SIZE 16'2 x 24' DESIGN LOADS +16.7 PSF -18.9 PSF TEST LOADS +25.1 PSF -28.4 PSF Thomas L. Shelmerdine, PE (FL #00048579) Structural Solutions, PA (FL Firm #29412) FL THOMAS L. SHELMERDINE LICENSE No. 48579 STATE OF FLORIDA PROFESSIONAL ENGINEER dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410			
Amarr MODEL 2400/3550 AMARR 2402/3552, 2412/3552, 2422/3552 MODEL 2000/3550 AMARR 2002/3552, 2012/3552, 2022/3552 SIZE B DRAWN BY DRD CHECKED BY DLJ DATE 9/18/18 DATE 12/04/18 ENTREMATICS 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105 DRAWING NUMBER IBC-2416-110-63-A SHEET 2 OF 3			

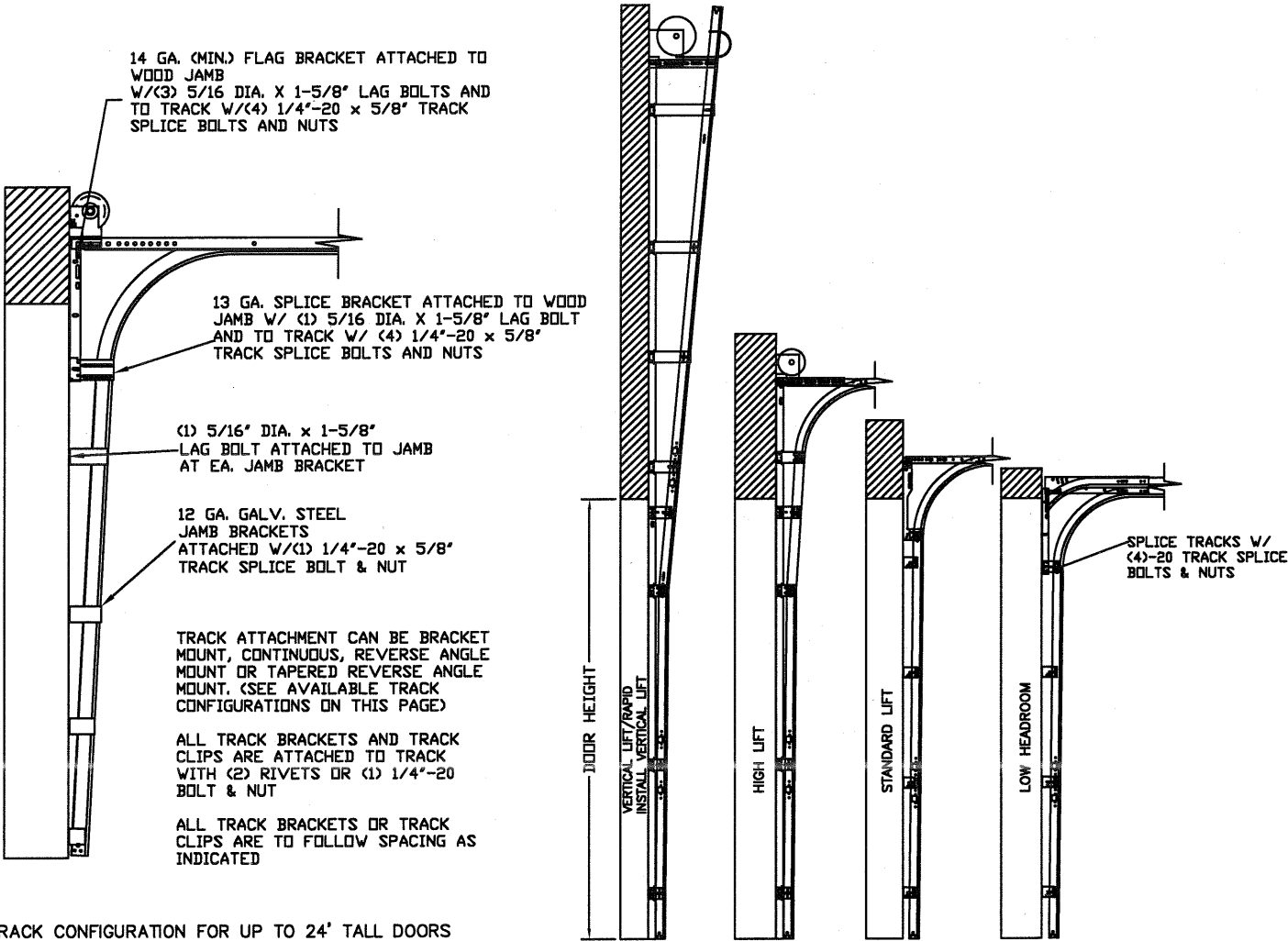
TABLE 1

Section Width (ft)		Center Stile Locations (Measured from Left Edge)			Max Design Loads Allowed	
		1st (in)	2nd (in)	3rd (in)	Positive (PSF)	Negative (PSF)
9'	4"	36"	76"	-	21.2	24.0
9'	6"	37"	77"	-	20.9	23.6
9'	8"	38"	78"	-	20.6	23.3
9'	10"	39"	79"	-	20.4	23.0
10'	0"	40"	80"	-	20.1	22.8
10'	2"	41"	81"	-	19.8	22.5
10'	4"	42"	82"	-	19.6	22.2
10'	6"	43"	83"	-	19.4	21.9
10'	8"	44"	84"	-	19.1	21.7
10'	10"	45"	85"	-	18.9	21.4
11'	0"	46"	86"	-	18.7	21.2
11'	2"	47"	87"	-	18.5	20.9
11'	4"	48"	88"	-	18.3	20.7
11'	6"	49"	89"	-	18.1	20.4
11'	8"	50"	90"	-	17.9	20.2
11'	10"	51"	91"	-	17.7	20.0
12'	0"	48"	96"	-	16.7	19.0
12'	2"	49"	97"	-	16.6	18.8
12'	4"	50"	98"	-	16.4	18.6
12'	6"	51"	99"	-	16.2	18.4
12'	8"	52"	100"	-	16.1	18.2
12'	10"	53"	101"	-	15.9	18.0
13'	0"	36"	78"	120"	19.1	21.7
13'	2"	37"	79"	121"	19.1	21.7
13'	4"	38"	80"	122"	19.1	21.7
13'	6"	39"	81"	123"	19.1	21.7
13'	8"	40"	82"	124"	19.1	21.7
13'	10"	41"	83"	125"	19.1	21.7
14'	0"	42"	84"	126"	19.1	21.7
14'	2"	43"	85"	127"	18.9	21.4
14'	4"	44"	86"	128"	18.7	21.2
14'	6"	45"	87"	129"	18.5	20.9
14'	8"	46"	88"	130"	18.3	20.7
14'	10"	47"	89"	131"	18.1	20.4
15'	0"	48"	90"	132"	17.9	20.2
15'	2"	49"	91"	133"	17.7	20.0
15'	4"	50"	92"	134"	17.5	19.8
15'	6"	51"	93"	135"	17.3	19.6
15'	8"	52"	94"	136"	17.1	19.4
15'	10"	53"	95"	137"	16.9	19.2
16'	0"	48"	96"	144"	16.7	19.0
16'	2"	49"	97"	145"	16.7	18.9

TABLE 2

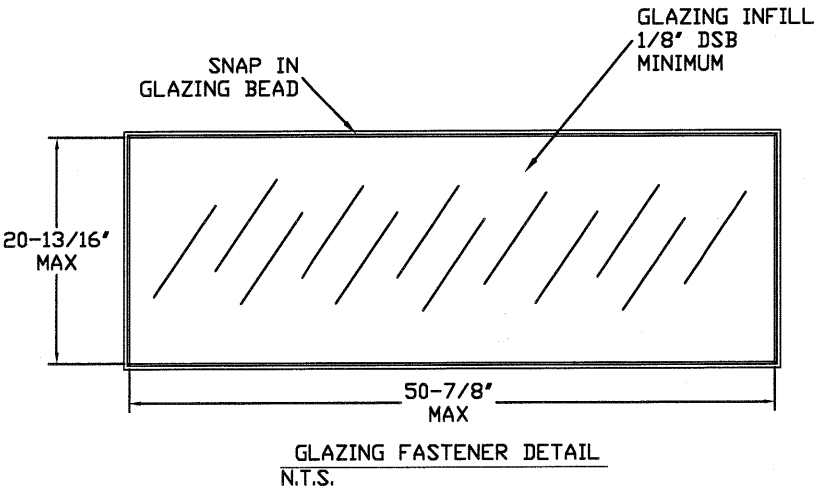
DOOR HEIGHT	TRACK ATTACHMENT											TYPICAL SPLICE
	A	B	C	D	E	F	G	H	I	J	K	
7'	0"	10.0"	38"	58"								76"
7'	6"	10.0"	38"	58"								82"
8'	0"	10.0"	38"	58"								88"
8'	6"	10.0"	38"	58"	82"							94"
9'	0"	10.0"	38"	58"	82"							100"
9'	6"	10.0"	38"	58"	82"							106"
10'	0"	10.0"	38"	58"	82"							112"
11'	0"	10.0"	38"	58"	82"	106"						124"
12'	0"	10.0"	38"	58"	82"	106"						136"
13'	0"	10.0"	38"	58"	82"	106"	130"					148"
14'	0"	10.0"	38"	58"	82"	106"	130"					160"
15'	0"	10.0"	38"	58"	82"	106"	130"	154"				172"
16'	0"	10.0"	38"	58"	82"	106"	130"	154"				184"
17'	0"	10.0"	38"	58"	82"	106"	130"	154"	178"			196"
18'	0"	10.0"	38"	58"	82"	106"	130"	154"	178"			208"
19'	0"	10.0"	38"	58"	82"	106"	130"	154"	178"	202"		220"
20'	0"	10.0"	38"	58"	82"	106"	130"	154"	178"	202"		232"
21'	0"	10.0"	38"	58"	82"	106"	130"	154"	178"	202"	226"	244"
22'	0"	10.0"	38"	58"	82"	106"	130"	154"	178"	202"	226"	256"
23'	0"	10.0"	38"	58"	82"	106"	130"	154"	178"	202"	226"	256"
24'	0"	10.0"	38"	58"	82"	106"	130"	154"	178"	202"	226"	280"

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



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

AVAILABLE TRACK CONFIGURATIONS
N.T.S.



REV	DESCRIPTION OF REVISIONS	DATE	BY
A			

MAX SIZE
16'2 x 24'

DESIGN LOADS
+16.7 PSF
-18.9 PSF

TEST LOADS
+25.1 PSF
-28.4 PSF

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

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

MODEL 2400/3550 AMARR 2402/3552, 2412/3552, 2422/3552
MODEL 2000/3550 AMARR 2002/3552, 2012/3552, 2022/3552

SIZE	DRAWN BY	DRD	DATE	9/18/18	DRAWING NUMBER
B	CHECKED BY	DLJ	DATE	12/04/18	IBC-2416-110-63-A

ENTREMATIC
165 CARRIAGE COURT WINSTON-SALEM, NC. 27105

SHEET 3 OF 3