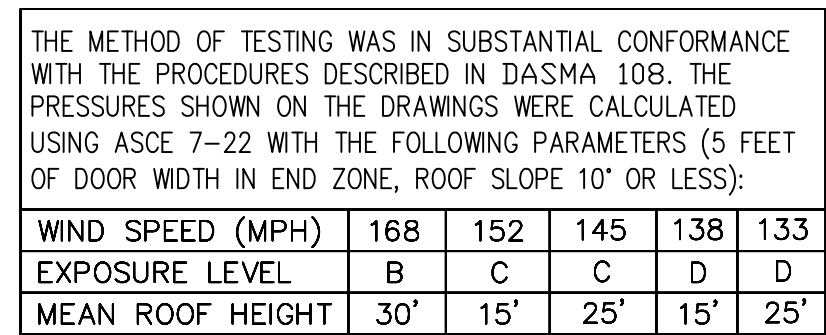
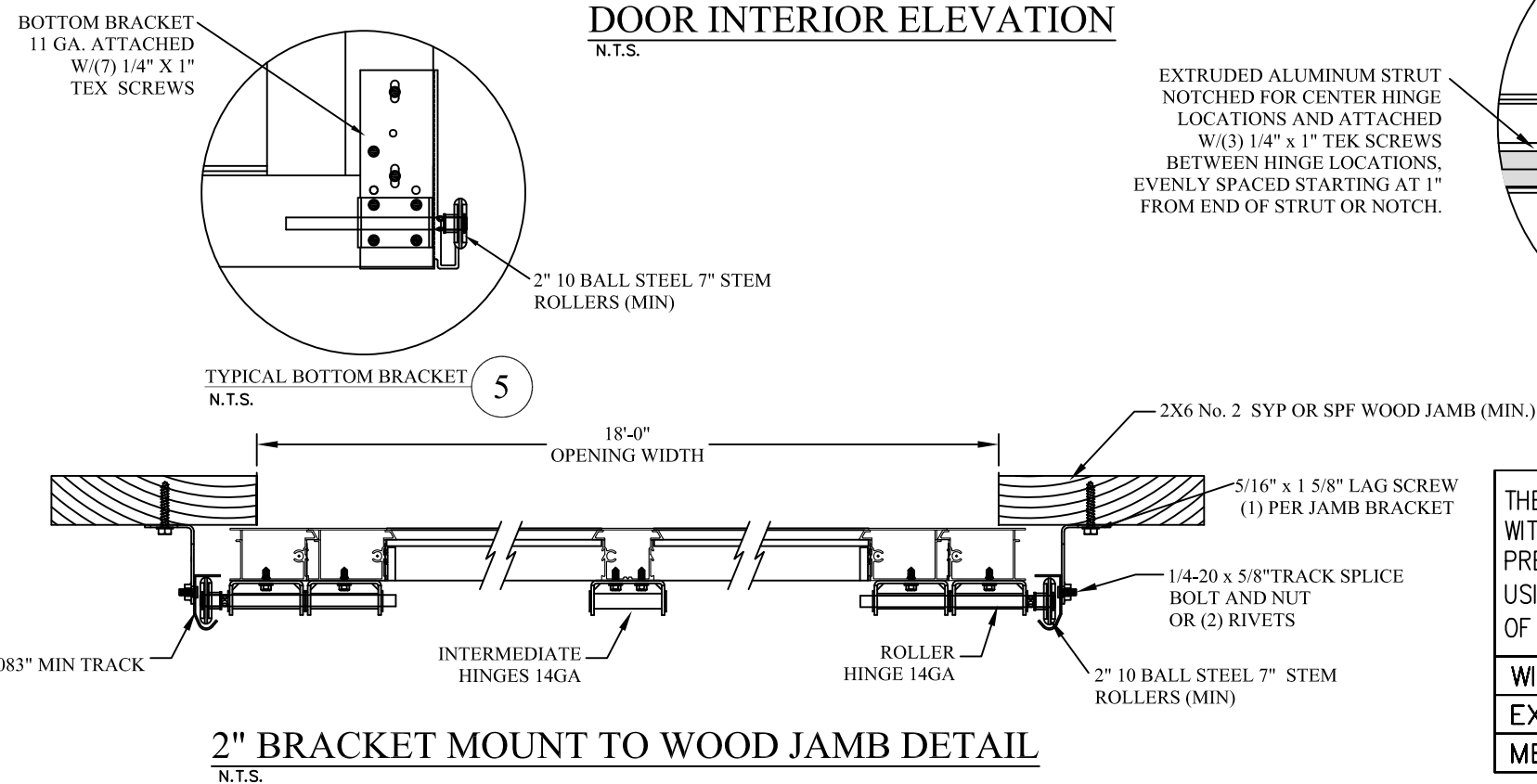




REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE,
18'2 x 24'

DESIGN LOADS
+23.0 PSF
-26.0 PSF

TEST LOADS
+34.5 PSF
-39.0 PSF

THOMAS L. SHELMERDINE

LICENSE

No. 48579

See Digital Signature

STATE OF FLORIDA

PROFESSIONAL ENGINEER

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Thomas L
Shelmerdine

Digitally signed by Thomas L Shelmerdine
DN: cn=US, o=North Carolina, st=NC, email=tsl@shelmerdine.com, c=US
Date: 2023.10.06 13:39:13 -04'00'

Thomas L. Shelmerdine, PE (FL PE #0048579)
Structural Solutions, PA (FL Firm #29412)
dba Structural Solutions of North Carolina, Inc.
5921-G W. Friendly Ave., Greensboro, NC 27410

Amarr

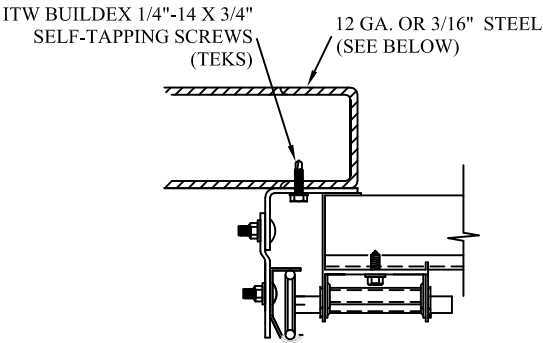
AMARR 3582
AMARR HORIZON

SIZE B	DRAWN BY DLJ	DATE 07/08/20	DRAWING NUMBER IBC-3818-130-63
	CHECKED BY RLR	DATE 10/4/17	

AMARR COMPANY
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105

SHEET 1 OF 4

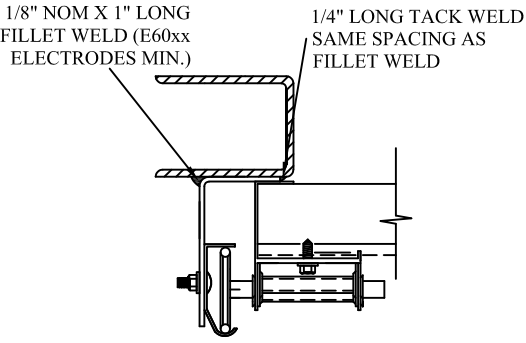
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

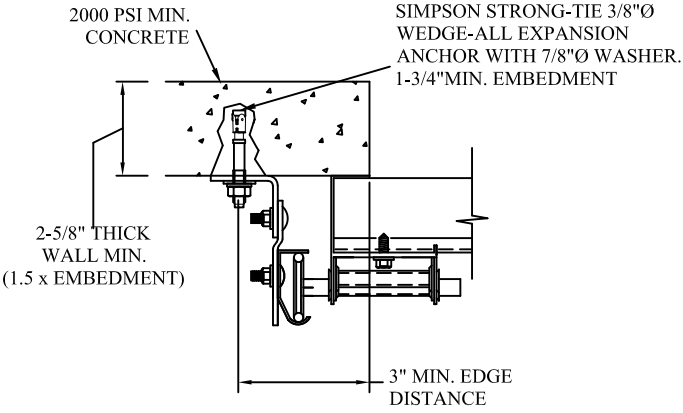
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6" FROM ENDS
AND 12" O.C.
REFER TO NOTES: 1, 2 AND 5

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



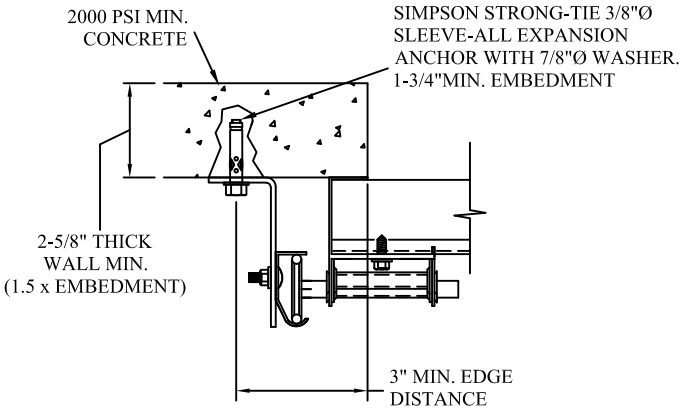
REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED
ANGLE MOUNT AVAILABLE

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 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

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 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 20" 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)

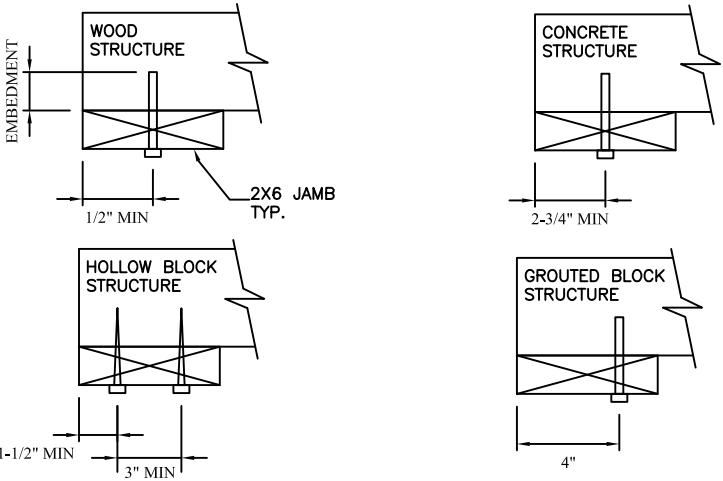
2 X 6 VERTICAL JAMB ATTACHMENT TO HOLLOW C-90 BLOCK

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

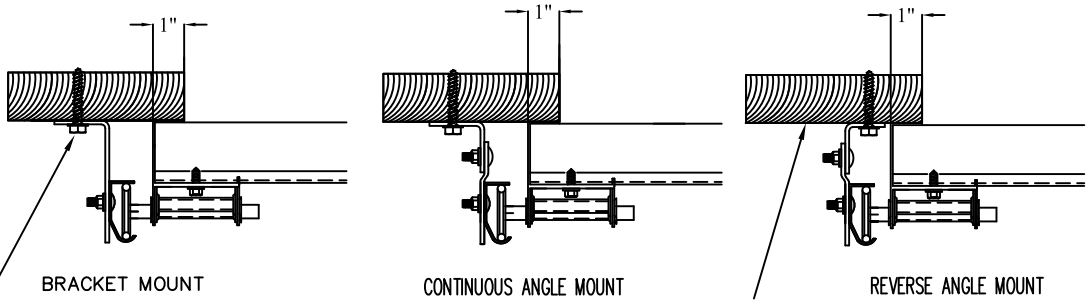


NOTES:

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. EGDE 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 3 FOR TRACK CONFIGURATION DETAIL



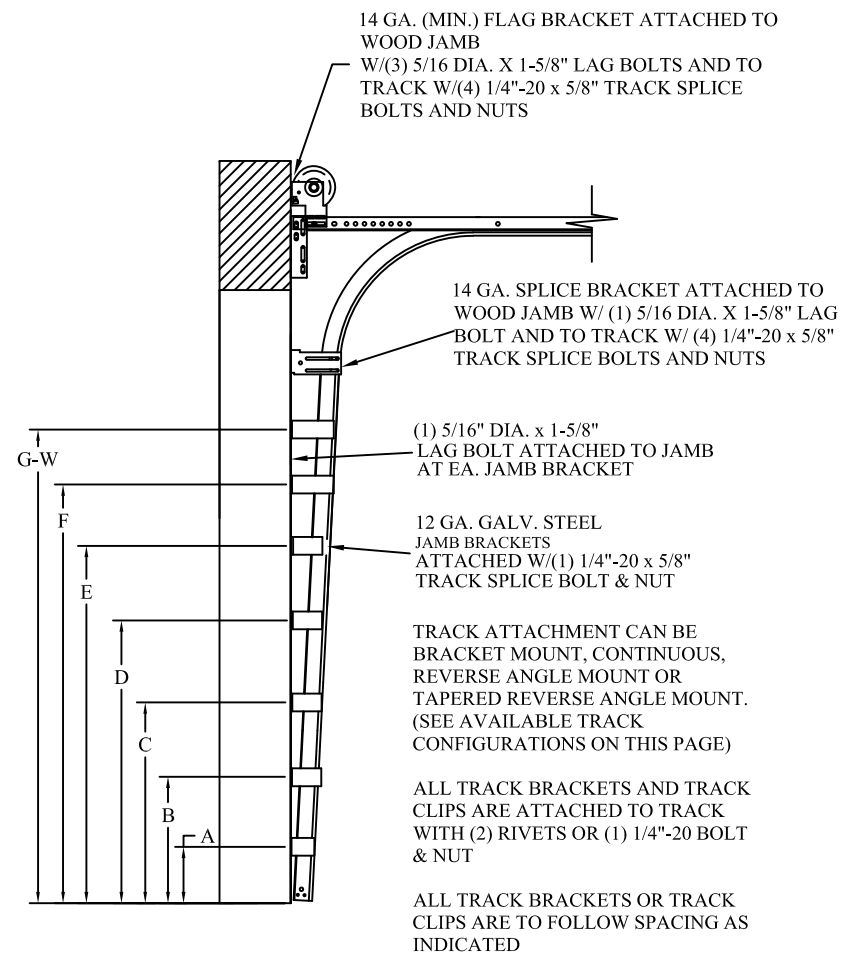
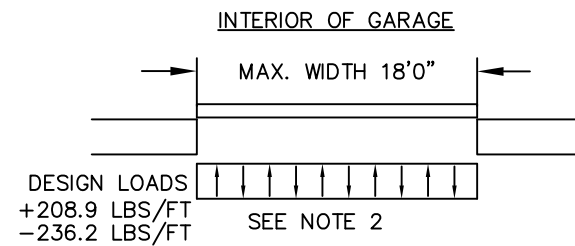
5/16" x 1 5/8" LAG SCREW (1) PER
JAMB BRACKET (1-1/2" EMBEDMENT
MINIMUM) (TYP.)

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

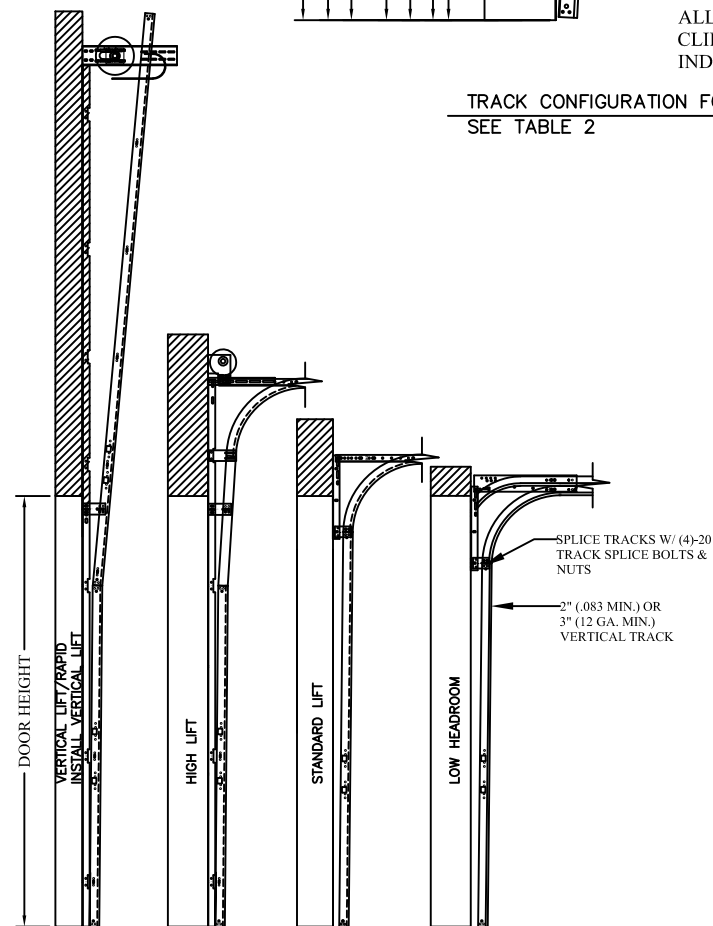
REV	DESCRIPTION OF REVISIONS	DATE	BY		
MAX SIZE 18'2 x 24' DESIGN LOADS +23.0 PSF -26.0 PSF TEST LOADS +34.5 PSF -39.0 PSF		THOMAS L. SHELMERDINE LICENSE No. 48579 ★ See Digital Signature ★ STATE OF FLORIDA PROFESSIONAL ENGINEER Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412) dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410 FL			
Amarr					
AMARR 3582 AMARR HORIZON					
SIZE	DRAWN BY	DLJ	DATE	07/08/20	DRAWING NUMBER IBC-3818-130-63
B	CHECKED BY	RLR	DATE	10/4/17	
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 2 OF 4



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: +208.9 LBS/FT & -236.2 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 6063 T6 ALUMINUM .050" WALL THICKNESS (TYP.) ANODIZED OR POWDER COAT FINISH
6. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.
6. REFER TO TABLE 2 ON PAGE 3 FOR STRUT SCHEDULE



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



AVAILABLE TRACK CONFIGURATIONS
N.T.S.

REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE, 18'2 x 24' DESIGN LOADS +23.0 PSF -26.0 PSF TEST LOADS +34.5 PSF -39.0 PSF	 This document has been digitally signed & sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered signed & sealed, and the signature must be verified on any electronic copies. Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412) dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410 FL		
			
AMARR 3582 AMARR HORIZON			
SIZE	DRAWN BY	DLJ	DATE 07/08/20
B	CHECKED BY	RLR	DATE 10/4/17
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			DRAWING NUMBER IBC-3818-130-63
SHEET 3 OF 4			

TABLE 1

Section Width		Center Hinge Locations (Measured from Left Edge)				Tested Door Ht.		Other Common Door Heights Contact Engineering for Additional Heights													
						8'		10'		12'		14'		16'		18'		9'		7'	
						MAX SEC.HT		MAX SEC.HT		MAX SEC.HT		MAX SEC.HT		MAX SEC.HT		MAX SEC.HT		MAX SEC.HT		MAX SEC.HT	
						25		25.188		25.313		25.438		25.5		25.563		28		28.625	
						Max Design Loads Allowed		Max Design Loads Allowed		Max Design Loads Allowed		Max Design Loads Allowed		Max Design Loads Allowed		Max Design Loads Allowed		Max Design Loads Allowed		Max Design Loads Allowed	
(ft)	(in)	1st (in)	2nd (in)	3rd (in)	4th (in)	Positive (PSF)	Negative (PSF)	Positive (PSF)	Negative (PSF)	Positive (PSF)	Negative (PSF)	Positive (PSF)	Negative (PSF)	Positive (PSF)	Negative (PSF)	Positive (PSF)	Negative (PSF)	Positive (PSF)	Negative (PSF)	Positive (PSF)	Negative (PSF)
16'	4	35.0	77.0	119.0	161.0	23.9	27.0	23.7	26.7	23.6	26.6	23.4	26.5	23.4	26.4	23.3	26.4	21.3	24.1	20.8	23.5
16'	6	36.0	78.0	120.0	162.0	23.9	27.0	23.7	26.7	23.6	26.6	23.4	26.5	23.4	26.4	23.3	26.4	21.3	24.1	20.8	23.5
16'	8	37.0	79.0	121.0	163.0	23.9	27.0	23.7	26.7	23.6	26.6	23.4	26.5	23.4	26.4	23.3	26.4	21.3	24.1	20.8	23.5
16'	10	38.0	80.0	122.0	164.0	23.9	27.0	23.7	26.7	23.6	26.6	23.4	26.5	23.4	26.4	23.3	26.4	21.3	24.1	20.8	23.5
17'	0	39.0	81.0	123.0	165.0	23.9	27.0	23.7	26.7	23.6	26.6	23.4	26.5	23.4	26.4	23.3	26.4	21.3	24.1	20.8	23.5
17'	2	40.0	82.0	124.0	166.0	23.9	27.0	23.7	26.7	23.6	26.6	23.4	26.5	23.4	26.4	23.3	26.4	21.3	24.1	20.8	23.5
17'	4	41.0	83.0	125.0	167.0	23.9	27.0	23.7	26.7	23.6	26.6	23.4	26.5	23.4	26.4	23.3	26.4	21.3	24.1	20.8	23.5
17'	6	42.0	84.0	126.0	168.0	23.8	26.9	23.6	26.6	23.5	26.5	23.3	26.4	23.3	26.3	23.2	26.3	21.2	24.0	20.7	23.4
17'	8	43.0	85.0	127.0	169.0	23.6	26.7	23.4	26.5	23.3	26.3	23.1	26.2	23.1	26.1	23.0	26.1	21.0	23.8	20.6	23.3
17'	10	44.0	86.0	128.0	170.0	23.4	26.4	23.2	26.2	23.1	26.0	22.9	25.9	22.9	25.8	22.8	25.8	20.8	23.5	20.4	23.0
18'	0	43.5	86.5	129.5	172.5	23.2	26.2	23.0	26.0	22.9	25.8	22.8	25.7	22.7	25.6	22.6	25.6	20.7	23.3	20.2	22.8
18'	2	44.5	87.5	130.5	173.5	23.0	26.0	22.8	25.8	22.7	25.6	22.6	25.5	22.5	25.4	22.4	25.4	20.5	23.2	20.0	22.7

TABLE 2

DOOR HEIGHT		TRACK ATTACHMENT																							TYPICAL SPLICE
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	
7'	0"	10"	22"	34"	46"	58"	70"																		76"
7'	6"	10"	22"	34"	46"	58"	70"	82"																	82"
8'	0"	10"	22"	34"	46"	58"	70"	82"																	88"
9'	0"	10"	22"	34"	46"	58"	70"	82"	94"																100"
9'	6"	10"	22"	34"	46"	58"	70"	82"	94"																106"
10'	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"															112"
11'	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"														124"
12'	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"													136"
13'	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"												148"
14'	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"											160"
15'	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"										172"
16'	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"									184"
17'	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"								196"
18'	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"							208"
19'	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"						220"
20'	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"					232"
21	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"				244"
22	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"	250"			256"
23	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"	250"	262"		268"
24	0"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"	250"	262"	274"	280"

ALL TRACK AND ATTACHMENT SPACING +/-2" ALLOWED WITH SYP OR SPF NO. 2 OR BETTER ONLY

TABLE 3

SECTION	STRUT SIZE
TOP	3 3/8" AL
11TH	3 3/8" AL NOTCHED
	3 3/8" AL
10TH	3 3/8" AL NOTCHED
	3 3/8" AL
9TH	3 3/8" AL NOTCHED
	3 3/8" AL
8TH	3 3/8" AL NOTCHED
	3 3/8" AL
7TH	3 3/8" AL NOTCHED
	3 3/8" AL
6TH	3 3/8" AL NOTCHED
	3 3/8" AL
5TH	3 3/8" AL NOTCHED
	3 3/8" AL
4TH	3 3/8" AL NOTCHED
	3 3/8" AL
3RD	3 3/8" AL NOTCHED
	3 3/8" AL
2ND	3 3/8" AL NOTCHED
	3 3/8" AL
BOTTOM	3 3/8" AL NOTCHED
	3 3/8" AL

REVDESCRIPTION OF REMSIONSDATEBY

MAX SIZE, 18'2 x 24'

DESIGN LOADS +23.0 PSF -26.0 PSF

TEST LOADS +34.5 PSF -39.0 PSF

THOMAS L. SHELDERDINE

LICENSE

No. 48579

See Digital Signature

STATE OF FLORIDA

PROFESSIONAL ENGINEER

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AMARR HORIZON

SIZEB

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DATE07/08/20

DATE10/4/17

DRAWING NUMBERIBC-3818-130-63

SHEET 4 OF 4