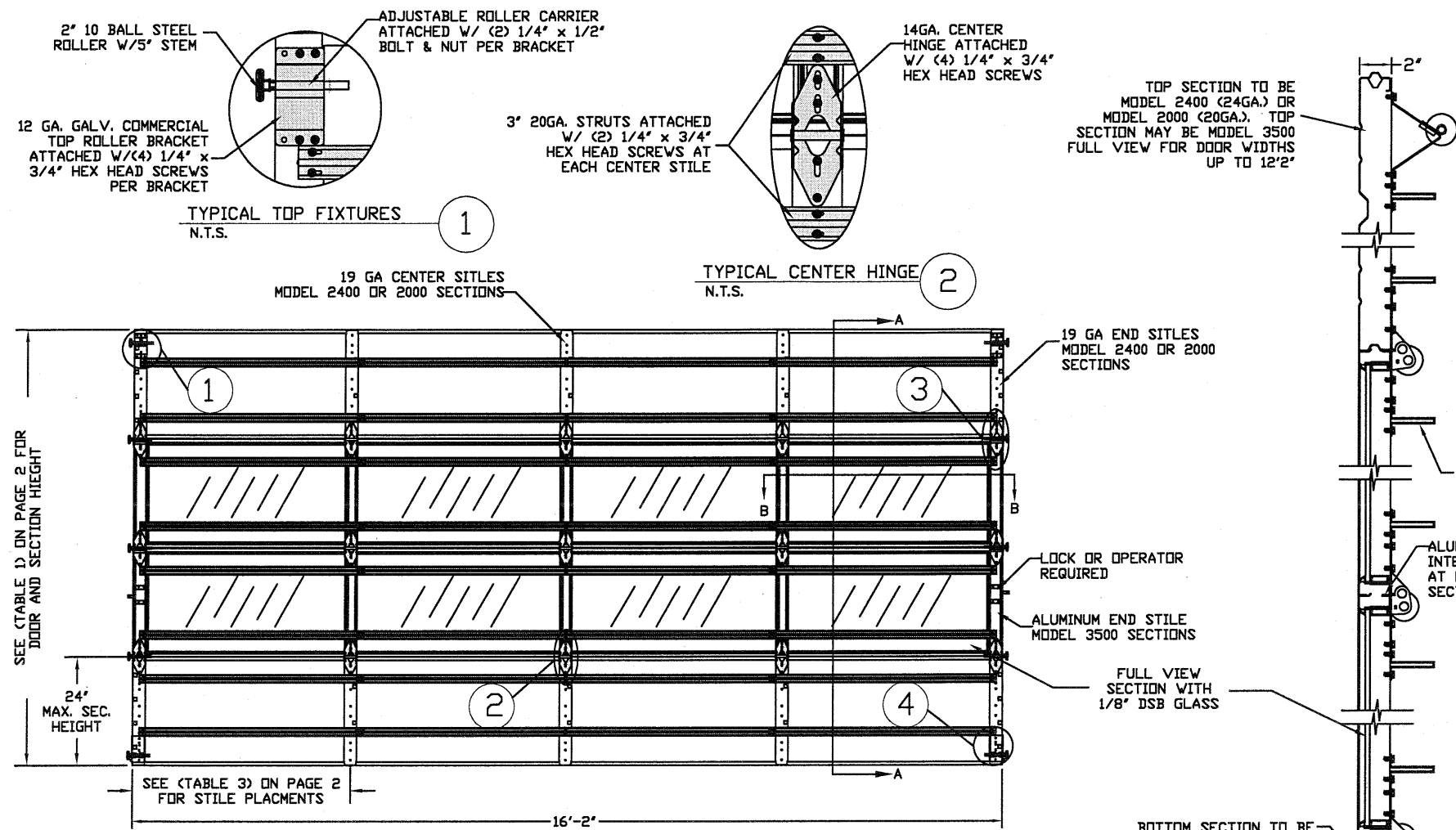
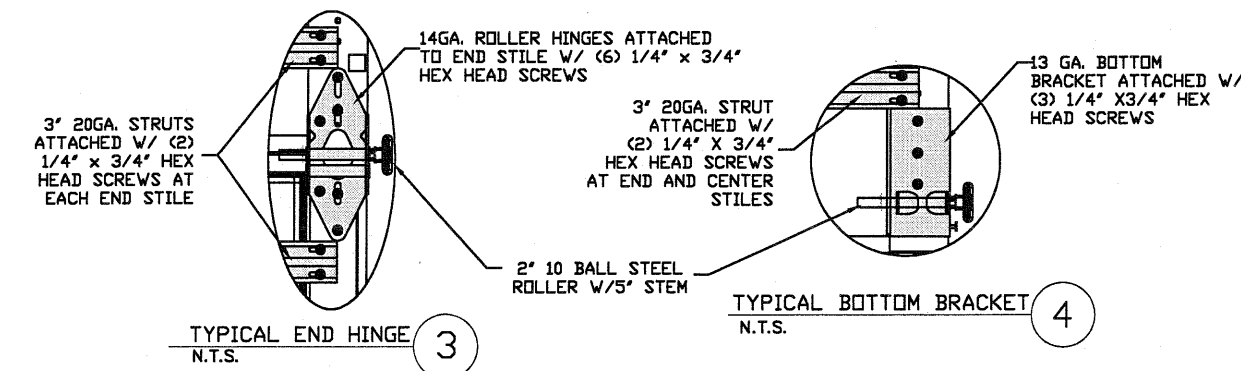


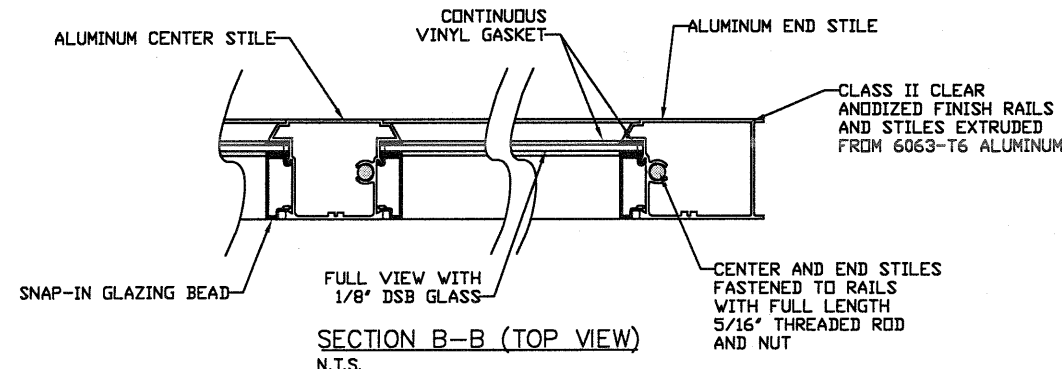


INSIDE ELEVATION
N.T.S.



TYPICAL END HINGE
N.T.S.

TYPICAL BOTTOM BRACKET
N.T.S.



SECTION B-B (TOP VIEW)
N.T.S.

GLAZING NOT AVAILABLE IN WIND-BORNE DEBRIS REGION
DOOR TESTED WITH GLAZING

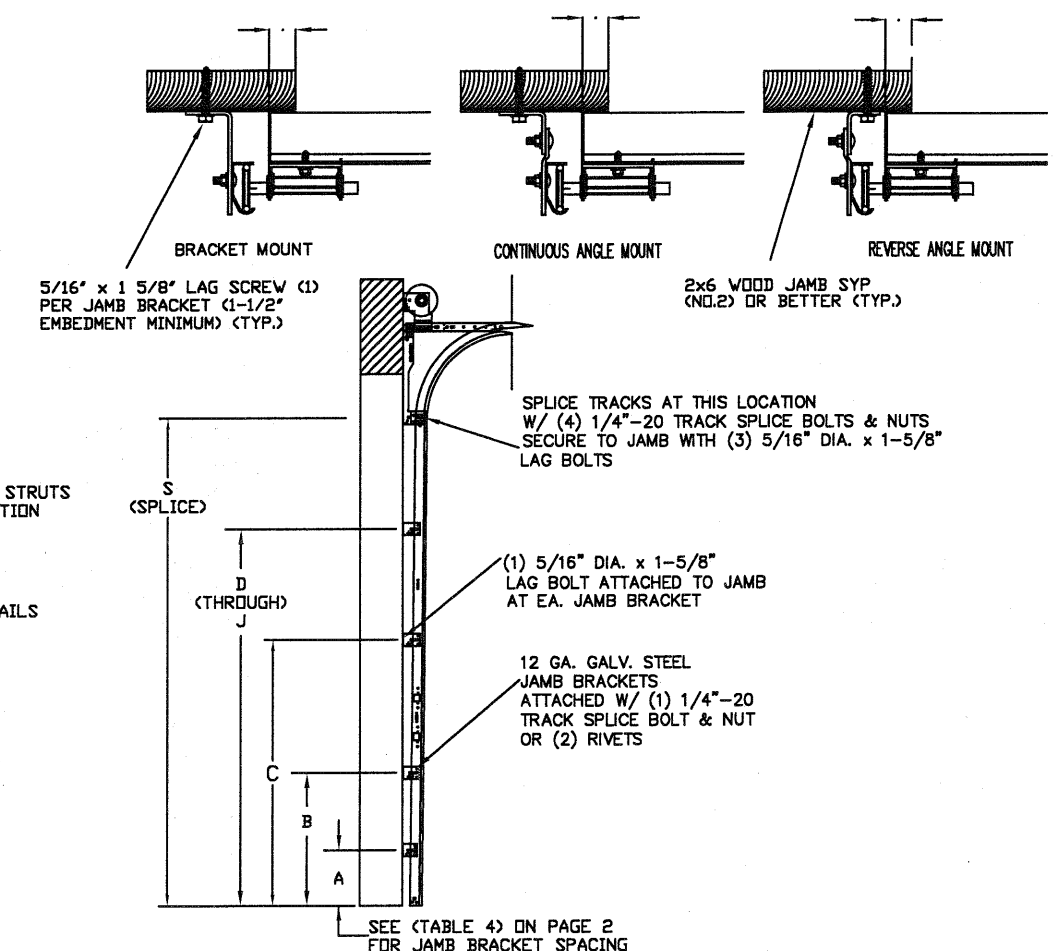
THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN ASTM E330. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-16 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN END ZONE, ROOF SLOPE 10° OR LESS):

WIND SPEED (MPH)	155	140	134	128	122
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

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

TRACK CONNECTION TO WOOD JAMB OPTIONS

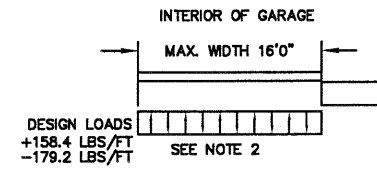
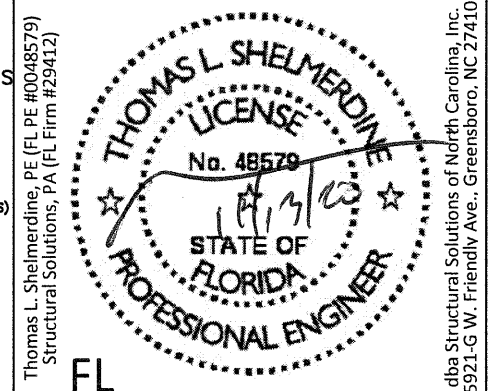
FOR LAG SCREWS & BRACKET SPACING SEE TABLE 1



TRACK CONFIGURATION FOR 6'6" UP TO 20' TALL DOORS

REV	DESCRIPTION OF REVISIONS	DATE	BY
B	REVISED NOTE 6	9-5-08	BHG

MAX SIZE
16'2" x 20'
DESIGN LOADS
+19.8 PSF
-22.4 PSF
TEST LOADS
(1.5 x DESIGN LOADS)
+29.7 PSF
-33.6 PSF



SPECIFICATIONS AND NOTES

- 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.
- EACH VERTICAL JAMB RECEIVES MAXIMUM DESIGN LOADS OF: +158.4 LBS/FT & -179.2 LBS/FT
- DOORS AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASHA.
- SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.
- REFER TO (TABLE 2) ON PAGE 2 FOR ADDITIONAL DOOR WIDTHS AND THEIR DESIGN PRESSURES

Amarr

MODEL 3500 AMARR 3552

SIZE	DRAWN BY	DLJ	DATE	11/16/04	DRAWING NUMBER
B	CHECKED BY	AAE	DATE	11/17/04	IBC-3516-120-15
ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 1 OF 3

TABLE 1

Door Height	21" Bottom	21" Intermediate	24" Bottom	24" Intermediate
7'0"	1	3		
7'3"		3	1	
7'6"		2	1	1
7'9"		1	1	2
8'0"				4
8'3"	Not Available			
8'6"	Not Available			
8'9"	1	4		
9'0"		4	1	
9'3"		3	1	1
9'6"		2	1	2
9'9"		1	1	3
10'0"			1	4
10'3"	Not Available			
10'6"	1	5		
10'9"		5	1	
11'0"		4	1	1
11'3"		3	1	2
11'6"		2	1	3
11'9"		1	1	4
12'0"			1	5
12'3"	1	6		
12'6"		6	1	
12'9"		5	1	1
13'0"		4	1	2
13'3"		3	1	3
13'6"		2	1	4
13'9"		1	1	5
14'0"			1	6
14'0"	1	7		
14'3"		7	1	
14'6"		6	1	1
14'9"		5	1	2
15'0"		4	1	3
15'3"		3	1	4
15'6"		2	1	5
15'9"		1	1	6
15'9"	1	8		
16'0"			1	7
16'0"		8	1	
16'3"		7	1	1
16'6"		6	1	2
16'9"		5	1	3
17'0"		4	1	4
17'3"		2	1	5
17'6"		2	1	6
17'9"		1	1	7
18'0"			1	8
18'3"		7	1	2
18'6"		6	1	3
18'9"		5	1	4
19'0"		4	1	5
19'3"		3	1	6
19'6"		2	1	7
19'9"		1	1	8
20'0"			1	9

*TABLE 2

Section Width (ft)	Max Design Loads Allowed	
	Positive (PSF)	Negative (PSF)
9' 4	25.1	28.4
9' 6	24.8	28.1
9' 8	24.5	27.7
9' 10	24.2	27.4
10' 0	23.9	27.0
10' 2	23.6	26.7
10' 4	23.3	26.4
10' 6	23.0	26.0
10' 8	22.7	25.7
10' 10	22.5	25.4
11' 0	22.2	25.1
11' 2	22.0	24.8
11' 4	21.7	24.6
11' 6	21.5	24.3
12' 0	26.5	30.0
12' 2	26.2	29.6
12' 4	25.8	29.2
12' 6	25.5	28.8
12' 8	25.1	28.4
12' 10	24.8	28.1
13' 0	24.5	27.7
13' 2	24.2	27.4
13' 4	23.9	27.0
13' 6	23.6	26.7
13' 8	23.3	26.4
13' 10	23.0	26.0
14' 0	22.7	25.7
14' 2	22.5	25.4
14' 4	22.2	25.1
14' 6	22.0	24.8
14' 8	21.7	24.6
14' 10	21.5	24.3
15' 0	21.2	24.0
15' 2	21.0	23.8
16' 0	19.9	22.5
16' 2	19.8	22.4

*CONTACT AMARR'S ENGINEERING DEPARTMENT FOR THE FOLLOWING DOOR WIDTHS; 11'8", 11'10", 15'4",15'6",15'8" AND 15'10"

TABLE 3

Section Width (ft)	Center Stile Locations (Measured from Left Edge)		
	1st (in)	2st (in)	3rd (in)
9' 4	36"	76"	
9' 6	37"	77"	
9' 8	38"	78"	
9' 10	39"	79"	
10' 0	40"	80"	
10' 2	41"	81"	
10' 4	42"	82"	
10' 6	43"	83"	
10' 8	44"	84"	
10' 10	45"	85"	
11' 0	46"	86"	
11' 2	47"	87"	
11' 4	48"	88"	
11' 6	49"	89"	
12' 0*	36"	72"	108"
12' 2*	37"	73"	109"
12' 4*	38"	74"	110"
12' 6*	39"	75"	111"
12' 8*	40"	76"	112"
12' 10	41"	77"	113"
13' 0	36"	78"	120"
13' 2	37"	79"	121"
13' 4	38"	80"	122"
13' 6	39"	81"	123"
13' 8	40"	82"	124"
13' 10	41"	83"	125"
14' 0	42"	84"	126"
14' 2	43"	85"	127"
14' 4	44"	86"	128"
14' 6	45"	87"	129"
14' 8	46"	88"	130"
14' 10	47"	89"	131"
15' 0	48"	90"	132"
15' 2	49"	91"	133"
16' 0	48"	96"	144"
16' 2	49"	97"	145"

*SPECIAL STILE PLACEMENT REQUIRED

TABLE 4

DOOR HEIGHT	TRACK ATTACHMENT										*SPLICE
	A	B	C	D	E	F	G	H	I	J	S
6' 6"	10"	38"	58"								70"
7'	10"	38"	58"								76"
7' 6"	4"	28"	52"	76"							82"
8'	10"	34"	58"	82"							88"
8' 6"	4"	28"	52"	76"							94"
9'	10"	34"	58"	82"							100"
9' 6"	4"	28"	52"	76"	100"						106"
10'	10"	34"	58"	82"	106"						112"
10' 6"	4"	28"	52"	76"	100"						118"
11'	10"	34"	58"	82"	106"						124"
11' 6"	4"	28"	52"	76"	100"	124"					130"
12'	10"	34"	58"	82"	106"	130"					136"
12' 6"	4"	28"	52"	76"	100"	124"					142"
13'	10"	34"	58"	82"	106"	130"					148"
13' 6"	4"	28"	52"	76"	100"	124"	148"				154"
14'	10"	34"	58"	82"	106"	130"	154"				160"
14' 6"	4"	28"	52"	76"	100"	124"	148"				166"
15'	10"	34"	58"	82"	106"	130"	154"				172"
15' 6"	4"	28"	52"	76"	100"	124"	148"	172"			178"
16'	10"	34"	58"	82"	106"	130"	154"	178"			184"
16' 6"	4"	28"	52"	76"	100"	124"	148"	172"			190"
17'	10"	34"	58"	82"	106"	130"	154"	178"			196"
17' 6"	4"	28"	52"	76"	100"	124"	148"	172"	196"		202"
18'	10"	34"	58"	82"	106"	130"	154"	178"	202"		208"
18' 6"	4"	28"	52"	76"	100"	124"	148"	172"	196"		214"
19'	10"	34"	58"	82"	106"	130"	154"	178"	202"		220"
19' 6"	4"	28"	52"	76"	100"	124"	148"	172"	196"	220"	226"
20'	10"	34"	58"	82"	106"	130"	154"	178"	202"	226"	232"

*SPLICE LOCATION FOR STANDARD LIFT. WILL VARY FOR OTHER LIFT APPLICATIONS

REV	DESCRIPTION OF REVISIONS	DATE	BY
B	REVISED NOTE 6	9-5-08	BHG

MAX SIZE, 16'2" x 20'

DESIGN LOADS
+19.8 PSF
-22.4 PSF

TEST LOADS
(1.5 x DESIGN LOADS)
+29.7 PSF
-33.6 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

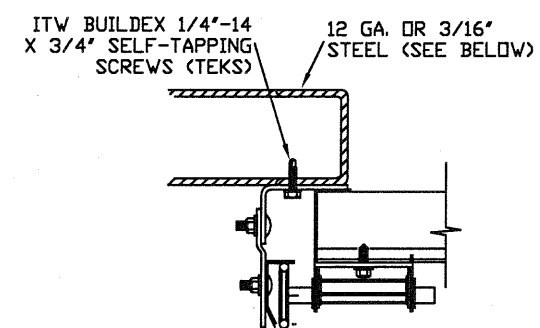
MODEL 3500 AMARR 3552

SIZE	DRAWN BY	DLJ	DATE	11/16/04	DRAWING NUMBER
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ENTREMATIC
165 CARRIAGE COURT WINSTON-SALEM, NC. 27105

SHEET 2 OF 3

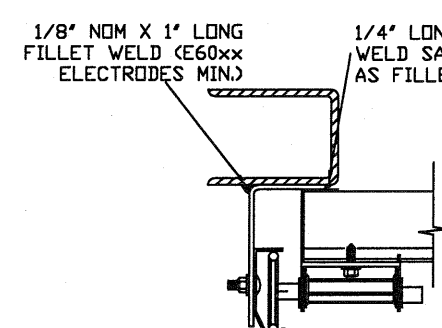
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

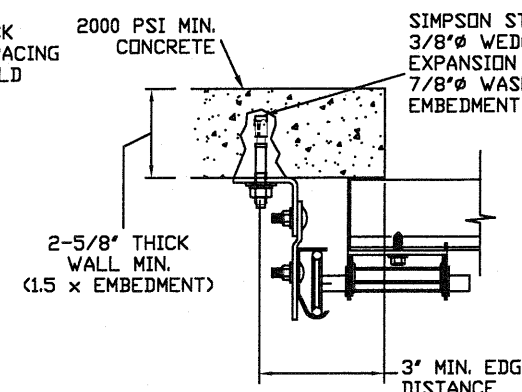
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6'
FROM ENDS AND 16" O.C.
REFER TO NOTES: 1, 2 AND 5

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



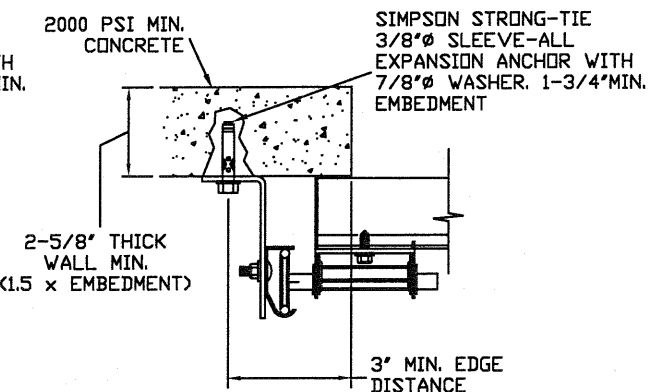
REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND
TAPERED ANGLE MOUNT AVAILABLE

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

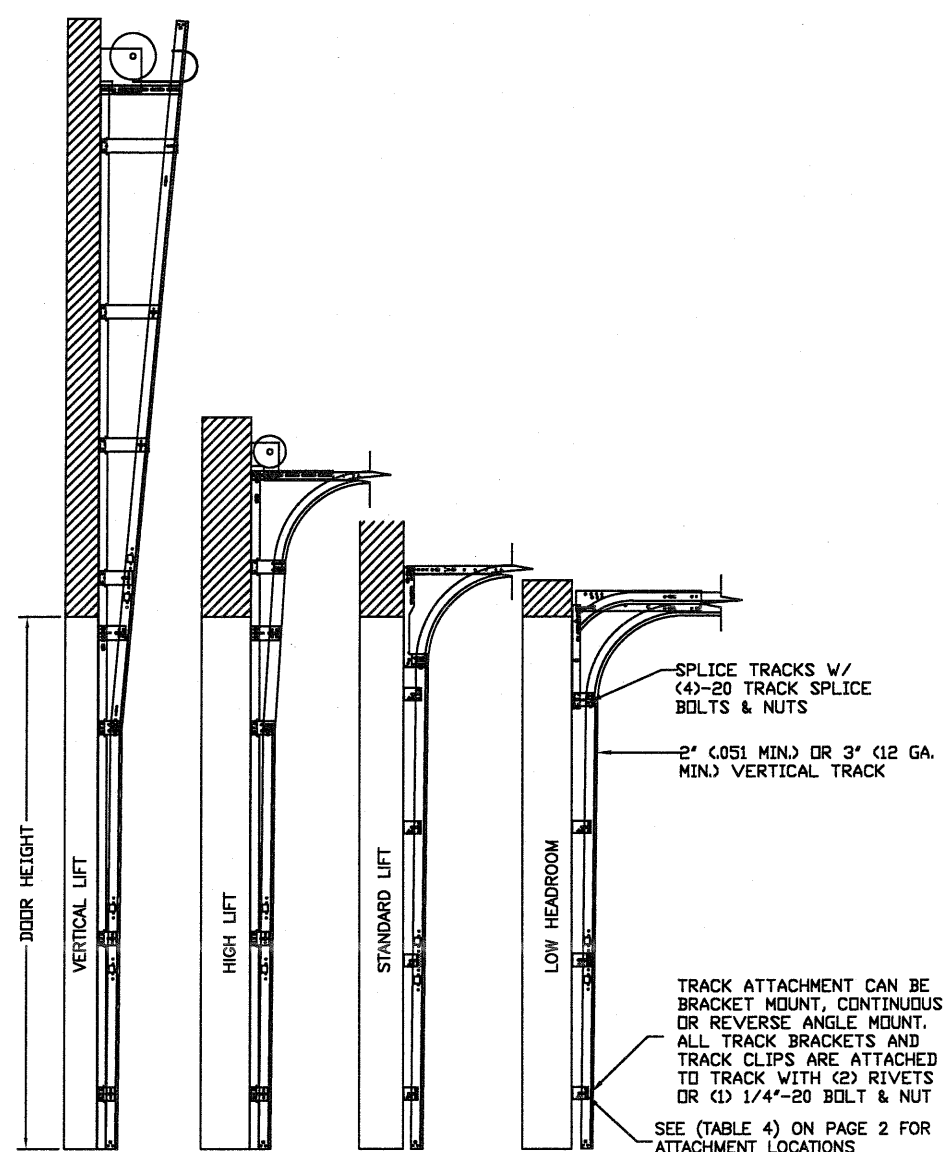


CONTINUOUS ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED ANGLE
MOUNT AVAILABLE

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.



AVAILABLE TRACK CONFIGURATIONS
N.T.S.

WOOD JAMB ATTACHMENT TO STRUCTURE

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 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

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(1.5 x DESIGN LOADS)
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SHEET 3 OF 3