

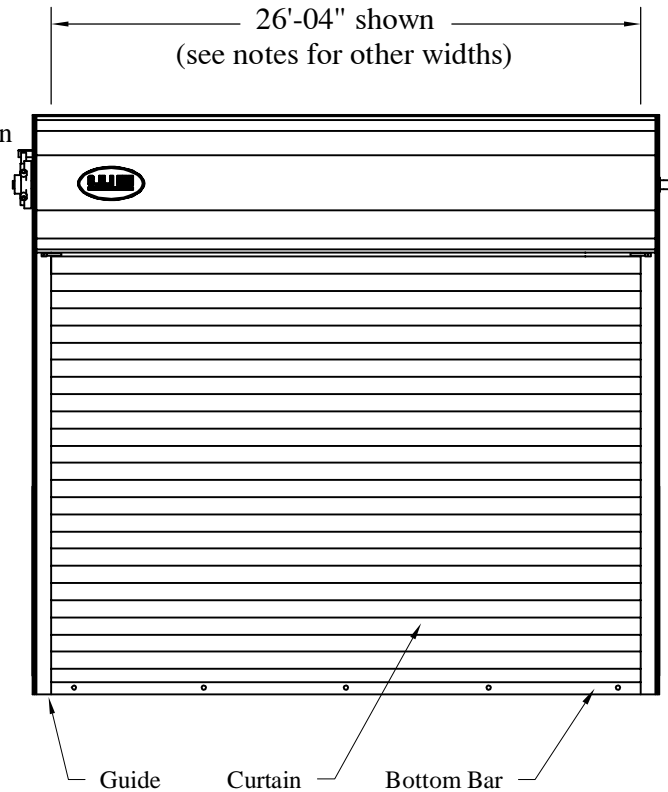
opening width	fastener size	approximately 110mph			approximately 115mph			approximately 120mph or more											
		spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph			
20'-06"	3/8"	16"	18.6/-17.6	108	14"	20.8 / -19.7	115	13"	22.1 / -20.9	118	11"	25.5 / -24.1	127	10"	27.7 / -26.2	132	8"	30.6 / -30.6	143
21'-04"	3/8"	14"	19.3/-18.3	110	13"	20.6 / -19.5	114	12"	22.1 / -20.9	118	9"	28.4 / -27.0	134	8"	30.6 / -30.0	141	7"	30.6 / -30.6	143
22'-04"	3/8"	13"	19.0/-18.0	110	12"	20.4 / -19.3	114	11"	22.0 / -20.9	118	9"	26.3 / -25.0	130	8"	29.3 / -27.8	137	7"	30.6 / -30.6	143
24'-04"	3/8"	11"	19.0/-18.1	111	10"	20.7 / -19.7	115	9"	22.8 / -21.7	121	8"	25.5 / -24.2	128	7"	28.1 / -27.4	136	6"	28.1 / -28.1	138
26'-04"	3/8"	10"	18.2/-17.3	109	9"	20.1 / -19.1	114	8"	22.4 / -21.4	121	7"	25.4 / -24.2	128	6"	26.0 / -26.0	133			
28'-04"	3/8"	9"	17.8/-17.0	108	8"	19.9 / -19.0	114	7"	22.6 / -21.6	122	6"	23.1 / -23.1	126						
30'-04"	3/8"	8"	17.9/-17.1	109	7"	20.3 / -19.4	116	6"	20.8 / -20.8	120									

Install door on 2000psi concrete jambs with spacing as above.

This door has been evaluated in accordance with ASTM E 330-02 and ANSI/DASMA 108-05.

Per ASCE 7-05, design Pressures (DP) as charted on this drawing typically meet or exceed requirements for corresponding wind speeds.

These ASCE 7-05 exposure B wind speeds are for 8' high doors on fully enclosed flat roof buildings with dimensions 60' x 40' x 30'.



Professional Engineer's seal provided only for verification of windload construction details

Use 1/2" fasteners on 2000psi concrete with spacing as shown below.

width	fastener	spacing	psf	Exposure "B"	spacing	psf (+/-)	Exposure "B"
20'-06"	1/2"	18"	23.0/-21.8	121 (mph)	12"	30.6	143 (mph)
21'-04"	1/2"	16"	23.8/-22.5	122 (mph)	11"	30.6	143 (mph)
22'-04"	1/2"	14"	24.7/-23.5	126 (mph)	10"	30.6	143 (mph)
24'-04"	1/2"	13"	23.0/-21.8	121 (mph)	9"	28.1	138 (mph)
26'-04"	1/2"	12"	21.7/-20.7	119 (mph)	9"	26.0	133 (mph)
28'-04"	1/2"	12"	19.3/-18.4	112 (mph)	9"	23.1	126 (mph)
30'-04"	1/2"	11"	18.8/-18.0	111 (mph)	9"	20.8	120 (mph)

width	fastener spacing	psf (+/-)	Exposure "B"
20'-06"	3/8" 20"	30.6	143 (mph)
21'-04"	3/8" 20"	30.6	143 (mph)
22'-04"	3/8" 20"	30.6	143 (mph)
24'-04"	3/8" 20"	28.1	138 (mph)
26'-04"	3/8" 20"	26.0	133 (mph)
28'-04"	3/8" 20"	23.1	126 (mph)
30'-04"	3/8" 20"	20.8	120 (mph)

Use self threading screws or welds with spacing above to install door on structural steel or equivalent. See page 4.


width	fastener spacing	psf (+/-)	Exposure "B"
20'-06"	1/2" 16"	30.6	142 (mph)
21'-04"	1/2" 16"	30.6	142 (mph)
22'-04"	1/2" 16"	30.6	143 (mph)
24'-04"	1/2" 15"	28.1	137 (mph)
26'-04"	1/2" 14"	26.0	133 (mph)
28'-04"	1/2" 14"	23.1	125 (mph)
30'-04"	1/2" 14"	20.8	119 (mph)

Use spacing above to through bolt on concrete, filled CMU, or equivalent. See page 4.

**This page is for 2000psi concrete jamb and steel jamb fastener spacing details.**

See Page 2 for 3000psi concrete jamb fastener spacing details.

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TX P.E. # 56308 F-2203

	Date: 8-31-2015
	Models: 6202, 6222, 6242, 6181, 6201, 6221, 6266
20'-06" through 30'-04"	
C.H.I. Drawing: TZ5w-26-R1002	

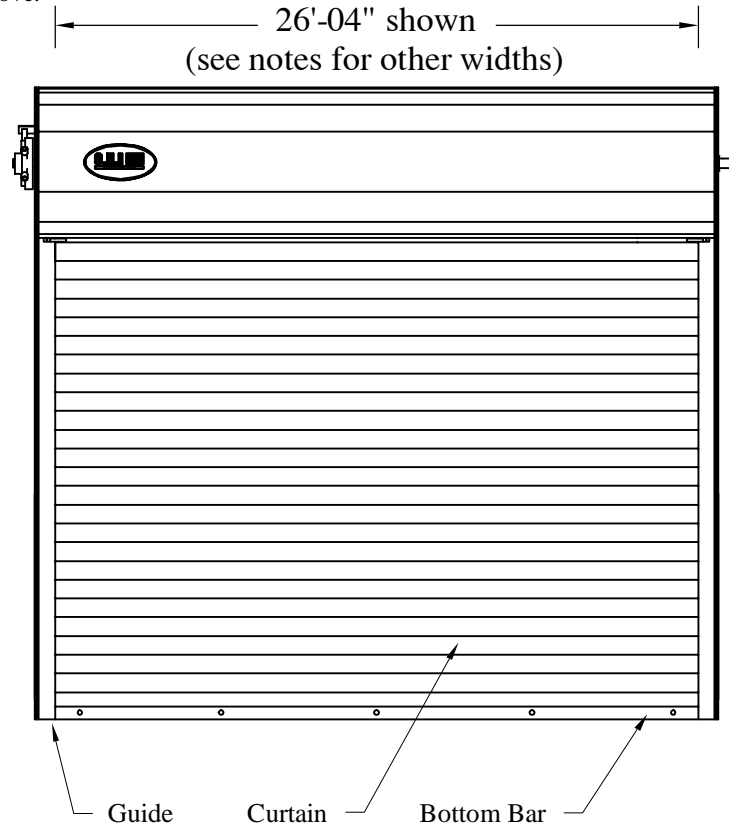
opening width	fastener size	approximately 110mph			approximately 120mph			120mph and higher											
		spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph			
20'-06"	3/8"	17"	20.5/-19.4	114	14"	24.1 / -22.9	124	13"	25.7 / -24.4	128	12"	27.6 / -26.1	132	11"	29.8 / -28.2	137	10"	30.6 / -30.6	143
21'-04"	3/8"	16"	20.1/-19.0	113	13"	24.0 / -22.8	123	11"	27.9 / -26.4	133	10"	30.4 / -28.8	139	9"	30.6 / -30.6	143			
22'-04"	3/8"	14"	20.8/-19.7	115	12"	23.9 / -22.6	123	9"	30.6 / -29.4	141	8"	30.6 / -30.6	143						
24'-04"	3/8"	13"	19.2/-18.3	111	11"	22.4 / -21.3	120	9"	26.9 / -25.6	132	8"	28.1 / -28.1	138						
26'-04"	3/8"	11"	19.7/-18.7	113	9"	23.7 / -22.6	124	8"	26.0 / -25.3	131	7"	26.0 / -26.0	133						
28'-04"	3/8"	10"	19.1/-18.2	112	9"	21.1 / -20.1	117	8"	23.1 / -22.5	124	7"	23.1 / -23.1	126						
30'-04"	3/8"	9"	18.9/-18.1	112	8"	20.8 / -20.3	118	7"	20.8 / -20.8	120									

Install door on 3000psi concrete jambs with spacing as above.

This door has been evaluated in accordance with ASTM E 330-02 and ANSI/DASMA 108-05.

Per ASCE 7-05, design Pressures (DP) as charted on this drawing typically meet or exceed requirements for corresponding wind speeds.

These ASCE 7-05 exposure B wind speeds are for 8' high doors on fully enclosed flat roof buildings with dimensions 60' x 40' x 30'.




Use 1/2" fasteners on 3000psi concrete with spacing as shown below.

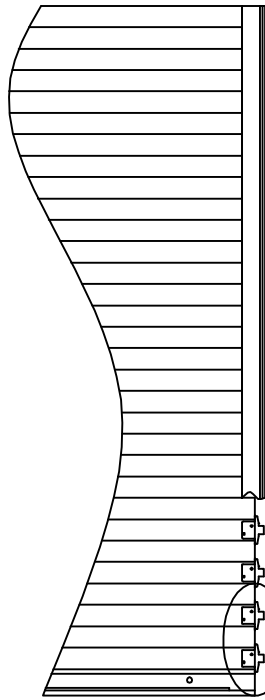
width	fastener	spacing	psf	Exposure "B"	spacing	psf (+/-)	Exposure "B"
20'-06"	1/2"	20"	25.7/-24.3	127 (mph)	14"	30.6	143 (mph)
21'-04"	1/2"	20"	23.9/-22.7	123 (mph)	14"	30.6	143 (mph)
22'-04"	1/2"	18"	24.3/-23.1	125 (mph)	13"	30.6	143 (mph)
24'-04"	1/2"	16"	23.5/-22.3	123 (mph)	12"	28.1	138 (mph)
26'-04"	1/2"	16"	20.6/-19.7	116 (mph)	11"	26.0	133 (mph)
28'-04"	1/2"	14"	20.8/-19.8	116 (mph)	11"	23.1	126 (mph)
30'-04"	1/2"	14"	18.7/-17.8	111 (mph)	11"	20.8	120 (mph)

This page is for 3000psi concrete jamb fastener spacing details.

See Page 1 for 2000psi concrete jamb and steel jamb fastener spacing details.

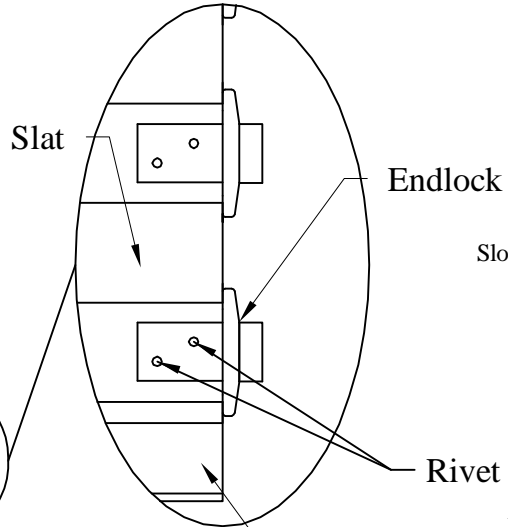
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3121 Fairgate Drive  
Carrollton, Texas 75007  
TX P.E. # 56308 F-2203

 <small>ROLLING STEEL DOORS</small> <small>1485 Sunrise Drive, Arthur, IL 61911</small>	Date: 8-31-2015
	Models: 6202, 6222, 6242, 6181, 6201, 6221, 6266
20'-06" through 30'-04"	
C.H.I. Drawing: TZ5w-26-R1002	



Rivet Diameter: 1/4"  
 Rivet Body: Steel  
 Rivet Mandrel: Steel  
Rivet

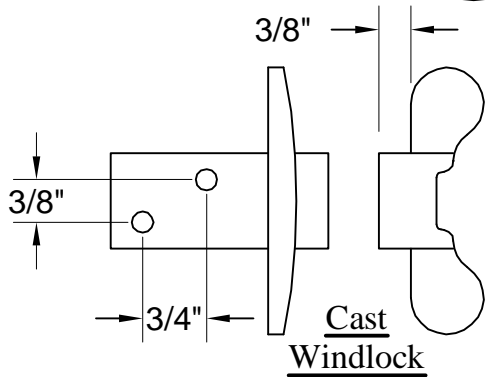
Note:  
 Construction of the door above the header is not part of the windload design and not detailed on this drawing.



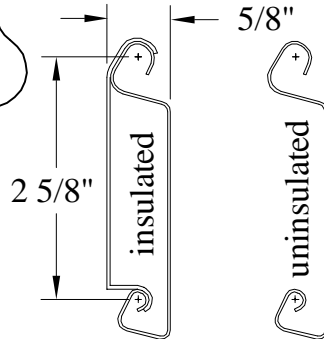
Slot Quantity minus 1

Opening Height + 4"

Run Out  
 Not To Exceed Minimum Spacing

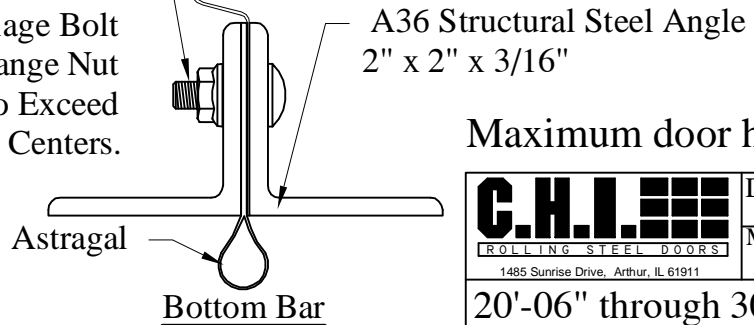


Cast Windlock



Steel Slat Thickness  
 .024/.024 insulated  
 .029 uninsulated

Starter Slat  
 5/16" x 1"  
 Grade 2  
 Carriage Bolt  
 With Flange Nut  
 Not To Exceed  
 43" On Centers.



Bottom Bar

Opening Height	MAXIMUM SPACING												
	6"	7"	8"	9"	10"	11"	12"	13"	14"	16"	17"	18"	20"
08'-00"	17	15	13	12	11	10	9	9	8	7	7	7	6
09'-00"	19	17	15	13	12	11	10	10	9	8	8	7	7
10'-00"	21	19	16	15	13	12	11	11	10	9	9	8	7
11'-00"	23	20	18	16	15	13	12	12	11	10	9	9	8
12'-00"	25	22	19	17	16	15	13	13	12	10	10	9	9
13'-00"	27	24	21	19	17	16	14	13	13	11	11	10	9
14'-00"	29	25	22	20	18	17	15	14	13	12	11	11	10
15'-00"	31	27	24	21	19	18	16	15	14	13	12	11	10
16'-00"	33	29	25	23	21	19	17	16	15	13	13	12	11
17'-00"	35	31	27	24	22	20	18	17	16	14	13	13	12
18'-00"	37	32	28	25	23	21	19	18	17	15	14	13	12
19'-00"	39	34	30	27	24	22	20	19	18	16	15	14	13
20'-00"	41	36	31	28	25	23	21	20	19	16	16	15	13
21'-00"	43	37	33	29	27	24	22	21	19	17	16	15	14
22'-00"	45	39	34	31	28	25	23	22	20	18	17	16	15
23'-00"	47	41	36	32	29	27	24	23	21	19	18	17	15
24'-00"	49	43	37	33	30	28	25	24	22	19	18	17	16
25'-00"	51	44	39	35	31	29	26	25	23	20	19	18	16
26'-00"	53	46	40	36	33	30	27	25	24	21	20	19	17
27'-00"	55	48	42	37	34	31	28	26	25	22	21	19	18
28'-00"	57	49	43	39	35	32	29	27	25	22	21	20	18
29'-00"	59	51	45	40	36	33	30	28	26	23	22	21	19
30'-00"	61	53	46	41	37	34	31	29	27	24	23	21	19
Opening Height	Slot Quantity												

See charts on Pages 1 and 2 for maximum fastener spacing.  
 See Page 4 for fastener descriptions.

Maximum door height: 30'-0"



Date: 8-31-2015  
 Models: 6202, 6222, 6242, 6181, 6201, 6221, 6266

20'-06" through 30'-04"

C.H.I. Drawing: TZ5w-26-R1002

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 TX P.E. # 56308 F-2203

Professional Engineer's seal provided only for verification of windload construction details

**Guide Details**

**1. Jamb Material:**

- a. A500 Structural Steel (3/16" thick, see page 1) or
- b. Concrete (2000psi, see page 1) or (3000psi, see page 2) or
- c. Filled CMU or Concrete: Bolt Through (2000psi, see page 1)

**2. Wall Angle: (A36 Structural Steel Angle)**

- a. 3-1/2" x 3-1/2" x 1/4"  
"E" Guide Configuration for Steel Jamb.
- b. 4" x 3-1/2" x 5/16"  
"Z" Guide Configuration for Concrete Jamb.

**3. Jamb Fastener: (Quantity Shown On Page 3)**

- a. Steel: 3/8"-16 x 1" Self Tapping Bolt (ASME B18.6.3)  
An alternative to self tapping bolts is  
Welding of Guides: 3/16" Fillet Weld  
Along Perimeter of Slots Utilizing an E60 Electrode.  
Slot Quantity and Spacing Same as Steel Fasteners (see page 3).
- b. Concrete: Simpson Strong-Tie  
Titen HD 3/8" x 4" or Titen HD 1/2" x 6"
- c. Filled CMU or Concrete: Bolt Through  
1/2"-13 Bolt or Rod (minimum 115,000 psi), Nut, 1"OD flat washers,  
with Square crush plate: 3.5"x3.5"x0.25" thick (A36 steel or better)

**4. Guide to Guide Fastener :**

1/2"-13 x 1-1/4" Grade 5 Carriage Bolt  
with Steel Serrated-Flange Hex Locknut 1/2"-13  
not to exceed 24" on centers.

**5. Back Angle: (A36 Structural Steel Angle)**

2" x 3" x 3/16"

**6. Face Angle: (A36 Structural Steel Angle)**

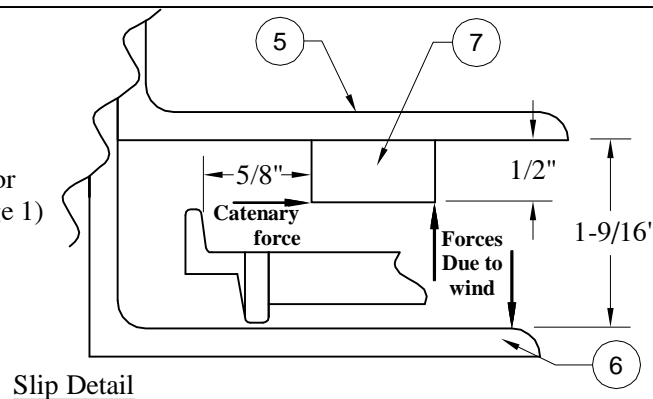
3-1/2" x 3-1/2" x 1/4"

**7. Windlock Bar:**

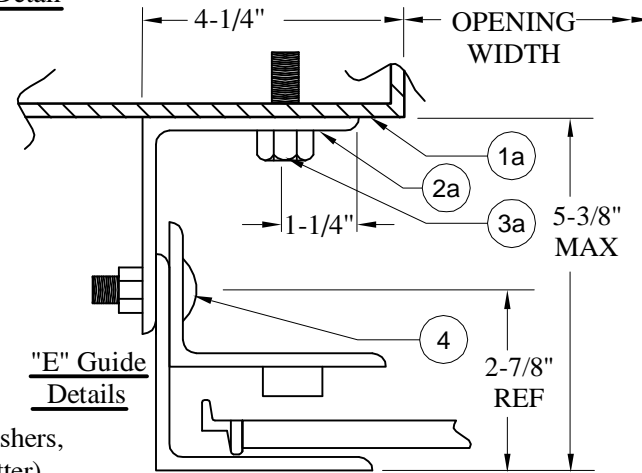
1/2" x 1" Hot Rolled Steel  
1/2" Diameter Plug Welds  
every 16" maximum or  
3/16" Fillet x 3/8" Long Welds  
every 16" maximum on  
Alternating Sides of Windlock Bar

**8. Slat Cut-Length:**

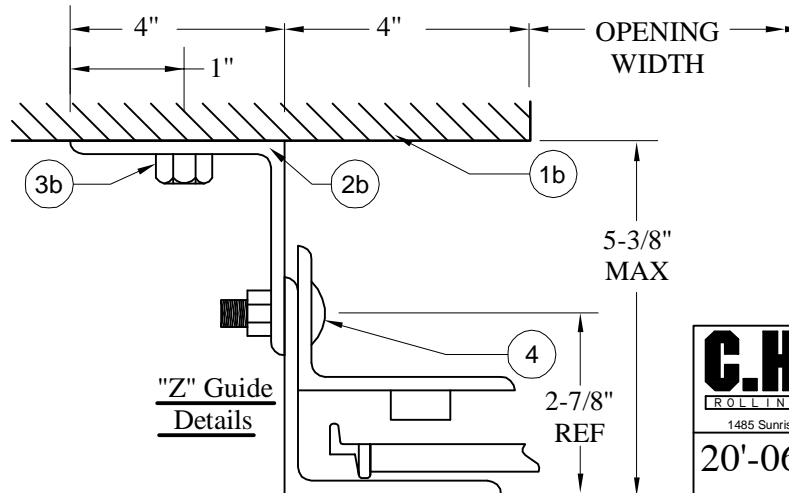
Slat Length = Opening Width plus 4-3/4"



**Slip Detail**



**"E" Guide Details**



**"Z" Guide Details**

The jambs must be designed (by others) to withstand direct forces due to wind (width x psf/2) and catenary forces created by this door. Forces are in units of "pounds per foot tall". Catenary is always in the direction shown. Direct forces due to wind occur in both (+) and (-) directions. Theoretical catenary forces are tabulated below. While lower psf may generate lesser forces, these doors are capable of enduring at least 150% of design pressure resulting in higher theoretical catenary forces.

width	dp max	catenary force
20'-06"	30.6(psf)	1700 (lbs/ft)
21'-04"	30.6(psf)	1900 (lbs/ft)
22'-04"	30.6(psf)	2000 (lbs/ft)
24'-04"	28.1(psf)	2100 (lbs/ft)
26'-04"	26.0(psf)	2200 (lbs/ft)
28'-04"	23.1(psf)	2200 (lbs/ft)
30'-04"	20.8(psf)	2200 (lbs/ft)

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ROLLING STEEL DOORS  
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