

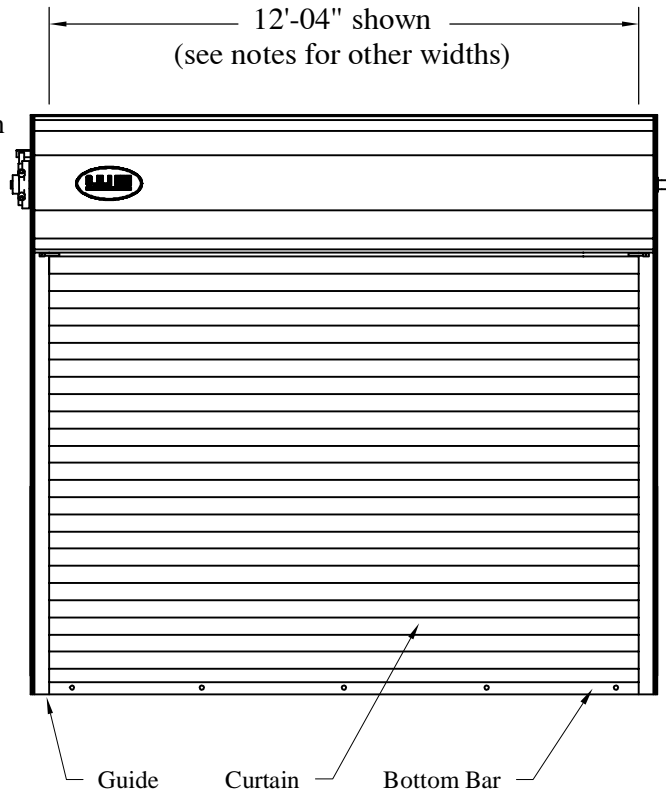
open width	fastener size	20" spacing		17" spacing		13" spacing		11" spacing or less			spacing			spacing			spacing			spacing			
		psf	mph	psf	mph	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	
08'-04"	3/8"	110.8/-93.2	239	116.9/-98.3	245	129.3/-108.7	258	11"	136.1/-116.8	267	9"	136.1/-128.4	280	8"	136.1/-136.1	289							
09'-04"	3/8"	81.3/-68.9	207	86.5 / -73.3	213	97.0 / -82.2	226	11"	105.1/-89.1	235	9"	116.9/-99.1	248	8"	121.5/-105.9	256	7"	121.5/-114.7	267	6"	121.5/-121.5	274	
10'-04"	3/8"	62.1/-53.0	182	66.5 / -56.8	189	75.6 / -64.5	201	11"	82.6 / -70.5	210	9"	92.8 / -79.2	223	8"	99.7 / -85.1	231	7"	108.7/-92.8	241	6"	109.8/-103.0	254	
11'-04"	3/8"	48.9/-42.0	163	52.8 / -45.3	169	60.8 / -52.2	182	11"	66.9 / -57.4	190	9"	75.7 / -65.0	203	8"	81.8 / -70.3	211	7"	89.7 / -77.0	221	6"	100.1/-86.0	233	
12'-04"	3/8"	39.6/-34.2	148	43.0 / -37.1	154	50.0 / -43.2	166	11"	55.5 / -47.9	175	9"	63.3 / -54.6	187	8"	68.7 / -59.3	194	7"	75.6 / -65.3	204	6"	84.8 / -73.2	216	
14'-04"	3/8"	27.6/-24.1	125	30.4 / -26.4	131	36.0 / -31.3	142	10"	43.2 / -37.6	156	9"	46.6 / -40.6	162	8"	50.9 / -44.4	169	7"	56.5 / -49.2	178	6"	63.9 / -55.7	190	
16'-04"	3/8"	20.5/-18.0	108	22.8 / -20.0	114	27.4 / -24.1	126	9"	36.2 / -31.8	144	8"	39.7 / -34.9	151	7"	44.3 / -38.9	159	6"	50.4 / -44.3	170				

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'.



width	fastener spacing	psf (+/-)	Exposure "B"
08'-04"	3/8"	20"	136.1 289 (mph)
09'-04"	3/8"	20"	121.5 274 (mph)
10'-04"	3/8"	20"	109.8 262 (mph)
11'-04"	3/8"	20"	100.1 252 (mph)
12'-04"	3/8"	20"	92.0 242 (mph)
14'-04"	3/8"	20"	70.4 213 (mph)
16'-04"	3/8"	20"	56.2 192 (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 (+/-)	Exp "B"
08'-04"	1/2"	18"	136.1 289 (mph)
09'-04"	1/2"	14"	121.5 274 (mph)
10'-04"	1/2"	12"	109.8 262 (mph)
11'-04"	1/2"	11"	100.1 252 (mph)
12'-04"	1/2"	10"	92.0 242 (mph)
14'-04"	1/2"	10"	70.4 213 (mph)
16'-04"	1/2"	10"	56.2 192 (mph)
09'-04"	1/2"	16"	121.5/-114.9 267 (mph)
10'-04"	1/2"	16"	108.8/-92.9 241 (mph)
11'-04"	1/2"	16"	89.8/-77.1 221 (mph)
12'-04"	1/2"	16"	75.7/-65.4 204 (mph)
14'-04"	1/2"	16"	56.6/-49.3 178 (mph)
16'-04"	1/2"	16"	44.4/-39.0 160 (mph)

Use 1/2" fasteners on 2000psi concrete to achieve pressures as shown below.

width	fastener	spacing	psf	Exposure "B"	spacing	psf	Exposure "B"
08'-04"	1/2"	20"	126.3/-106.2	255 (mph)	11"	136.1/-136.1	289 (mph)
09'-04"	1/2"	20"	94.5/-80.1	223 (mph)	9"	121.5/-121.5	274 (mph)
10'-04"	1/2"	20"	73.4/-62.7	198 (mph)	8"	109.8/-109.3	262 (mph)
11'-04"	1/2"	20"	58.9/-50.5	179 (mph)	8"	100.1/-91.6	241 (mph)
12'-04"	1/2"	20"	48.4/-41.8	163 (mph)	8"	90.6/-78.2	223 (mph)
14'-04"	1/2"	20"	34.6/-30.2	140 (mph)	8"	68.5/-59.7	196 (mph)
16'-04"	1/2"	20"	26.3/-23.1	123 (mph)	8"	54.2/-47.6	176 (mph)

Use this chart when through bolting on concrete, filled CMU, or equivalent. See page 4.

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Date: 8-31-2015

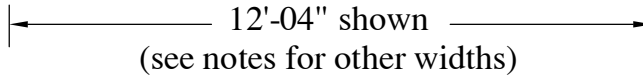
Models: 6202, 6222, 6242, 6181, 6201, 6221, 6266

08'-04" through 16'-04"

C.H.I. Drawing: TZ12w-12-R1002

opening width	fastener size	20" spacing		17" spacing		13" spacing		11" spacing or less			spacing			spacing			spacing			spacing			
		psf	mph	psf	mph	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	
08'-04"	3/8"	117.5/-98.8	246	124.7/-104.9	253	136.1/-117.4	268	11"	136.1/-127.0	279	9"	136.1/-136.1	289										
09'-04"	3/8"	87.0/-73.7	214	93.1/-78.9	221	105.7/-89.6	236	11"	115.4/-97.8	246	9"	121.5/-109.7	261	8"	121.5/-117.9	270	7"	121.5/-121.5	274				
10'-04"	3/8"	67.0/-57.2	189	72.3 / -61.7	197	83.1 / -70.9	211	11"	91.5 / -78.1	221	9"	103.6/-88.4	235	8"	109.8/-95.5	245	7"	109.8/-104.7	256	6"	109.8/-109.8	262	
11'-04"	3/8"	53.2/-45.7	170	57.8 / -49.7	177	67.3 / -57.8	191	11"	74.7 / -64.1	201	9"	85.3 / -73.2	215	8"	92.5 / -79.4	224	7"	100.1/-87.5	235	6"	100.1/-98.2	249	
12'-04"	3/8"	43.4/-37.5	155	47.5 / -41.0	162	55.9 / -48.2	175	11"	62.3 / -53.8	185	9"	71.7 / -61.9	199	8"	78.1 / -67.4	207	7"	86.4 / -74.6	218	6"	92.0 / -84.1	232	
14'-04"	3/8"	30.6/-26.7	131	33.9 / -29.6	138	40.6 / -35.4	151	10"	49.2 / -42.9	167	9"	53.3 / -46.5	173	8"	58.5 / -51.0	182	7"	65.1 / -56.7	191	6"	70.4 / -64.5	204	
16'-04"	3/8"	23.0/-20.2	115	25.7 / -22.6	122	31.2 / -27.4	134	9"	41.7 / -36.6	155	8"	46.0 / -40.4	163	7"	51.4 / -45.2	172	6"	56.2 / -51.6	184				

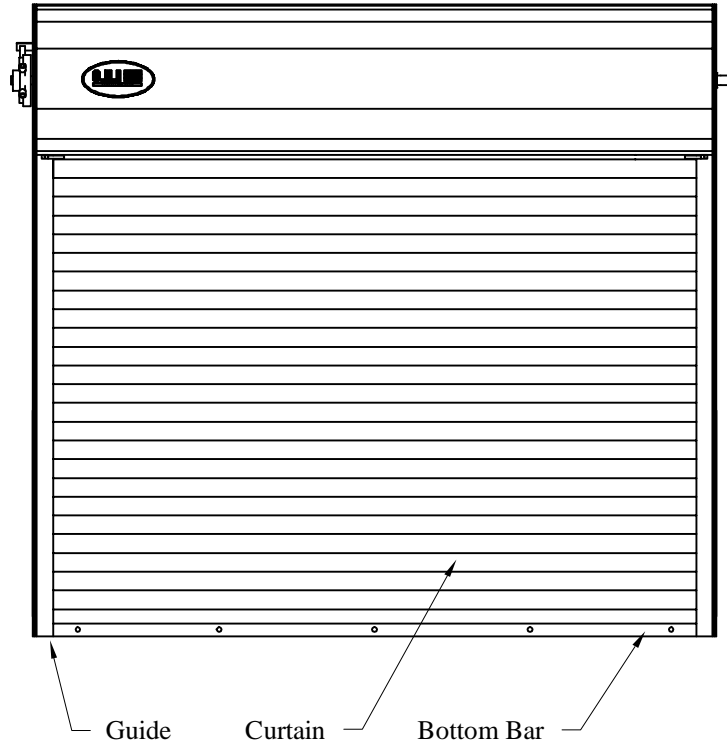
Install door on 3000psi concrete jambs with spacing as above.



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 to achieve pressures as shown below.

width	fastener	spacing	psf	Exposure "B"	spacing	psf (+/-)	Exposure "B"
08'-04"	1/2"	20"	136.1/-117.1	268 (mph)	14"	136.1	289 (mph)
09'-04"	1/2"	20"	105.5/-89.4	235 (mph)	11"	121.5	274 (mph)
10'-04"	1/2"	20"	82.9/-70.8	211 (mph)	10"	109.8	262 (mph)
11'-04"	1/2"	20"	67.2/-57.7	191 (mph)	8"	100.1	252 (mph)
12'-04"	1/2"	20"	55.7/-48.1	175 (mph)	8"	92.0	242 (mph)
14'-04"	1/2"	20"	40.5/-35.3	151 (mph)	8"	70.4	213 (mph)
16'-04"	1/2"	20"	31.1/-27.3	134 (mph)	8"	56.2	192 (mph)

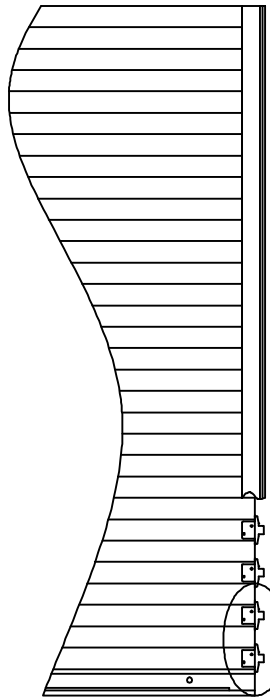
This page is for 3000psi concrete jamb fastener spacing details.

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

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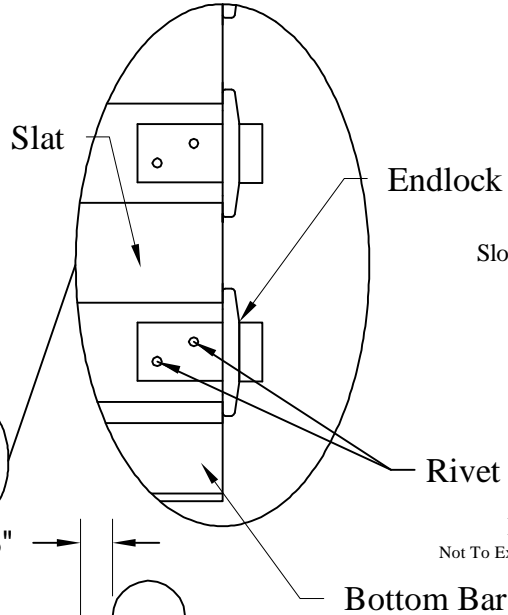
 <small>ROLLING STEEL DOORS</small> <small>1485 Sunrise Drive, Arthur, IL 61911</small>	Date: 8-31-2015
	Models: 6202, 6222, 6242, 6181, 6201, 6221, 6266
08'-04" through 16'-04"	
C.H.I. Drawing: TZ12w-12-R1002	

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



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

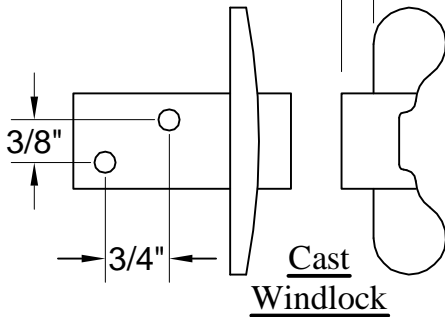
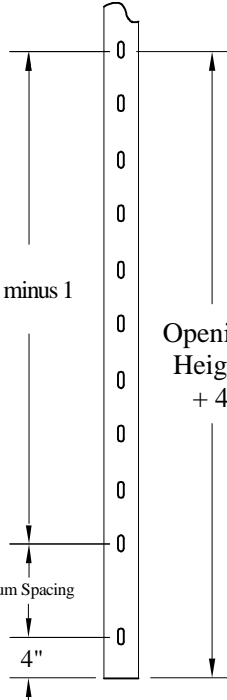
Note:
 Construction of the door above the header is not part of the windload design and not detailed on this drawing.



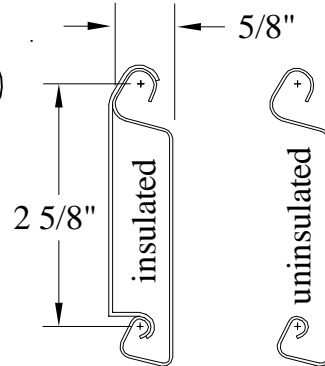
Slot Quantity minus 1

Opening Height + 4"

Run Out
 Not To Exceed Minimum Spacing

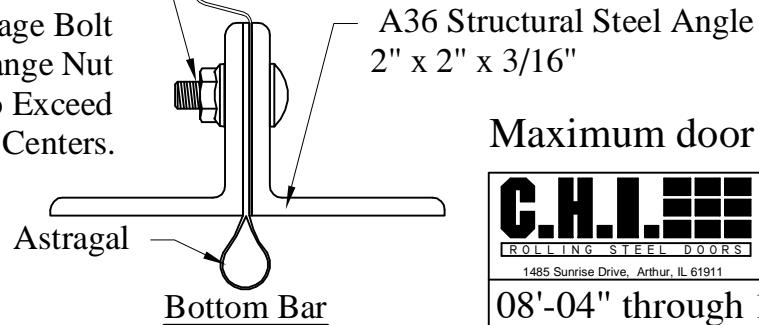


Cast Windlock



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

Starter Slat
 5/16" x 1"
 Grade 2
 Carriage Bolt
 With Flange Nut
 Not To Exceed
 45" 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

08'-04" through 16'-04"

C.H.I. Drawing: TZ12w-12-R1002

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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. 3-1/2" x 3-1/2" x 1/4"
"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: 4"x4"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"

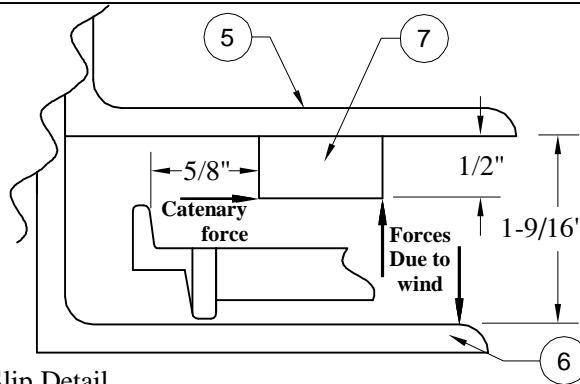
6. Face Angle: (A36 Structural Steel Angle)
3-1/2" x 3-1/2" x 1/4"

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

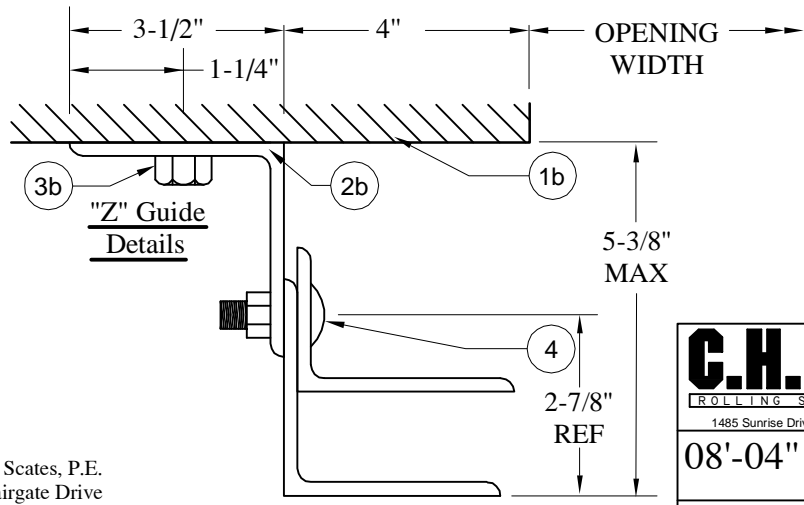
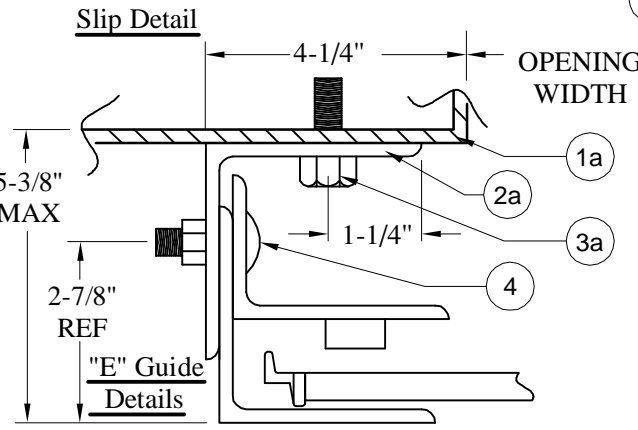
8. Slat Cut-Length:

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




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
08'-04"	136.1(psf)	1200 (lbs/ft)
09'-04"	121.5(psf)	1500 (lbs/ft)
10'-04"	109.8(psf)	1800 (lbs/ft)
11'-04"	100.1(psf)	2000 (lbs/ft)
12'-04"	92.0(psf)	2200 (lbs/ft)
14'-04"	70.4(psf)	2200 (lbs/ft)
16'-04"	56.2(psf)	2200 (lbs/ft)



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08'-04" through 16'-04"

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