Strut Locations					
8'		10'		12'	
3"	52.5"	3"	67.5"	3"	76.5"
19.5"	67.5"	19.5"	76.5"	19.5"	91.5"
28.5"	76.5"	28.5"	91.5"	28.5"	100.5"
43.5"	94"	43.5"	100.5"	43.5"	115.5"
		52.5"	118"	52.5"	124.5"
				67.5"	142"

Note: Maximum door height is 24'. Consult Strut and Section Location Chart or manufacturer for details on door heights not listed.

Note: Detail views are shown on sheets 2 & 3.

Track Brackets		
8'	10'	12'
4	5	6
Angle Mount Track Clips		
8'	10'	12'
3	4	5

REVISIONS			
REV	DESCRIPTION	DRAWN	APPROVED

STATE OF TEXAS
JOSEPH H. DIXON, JR.
18627
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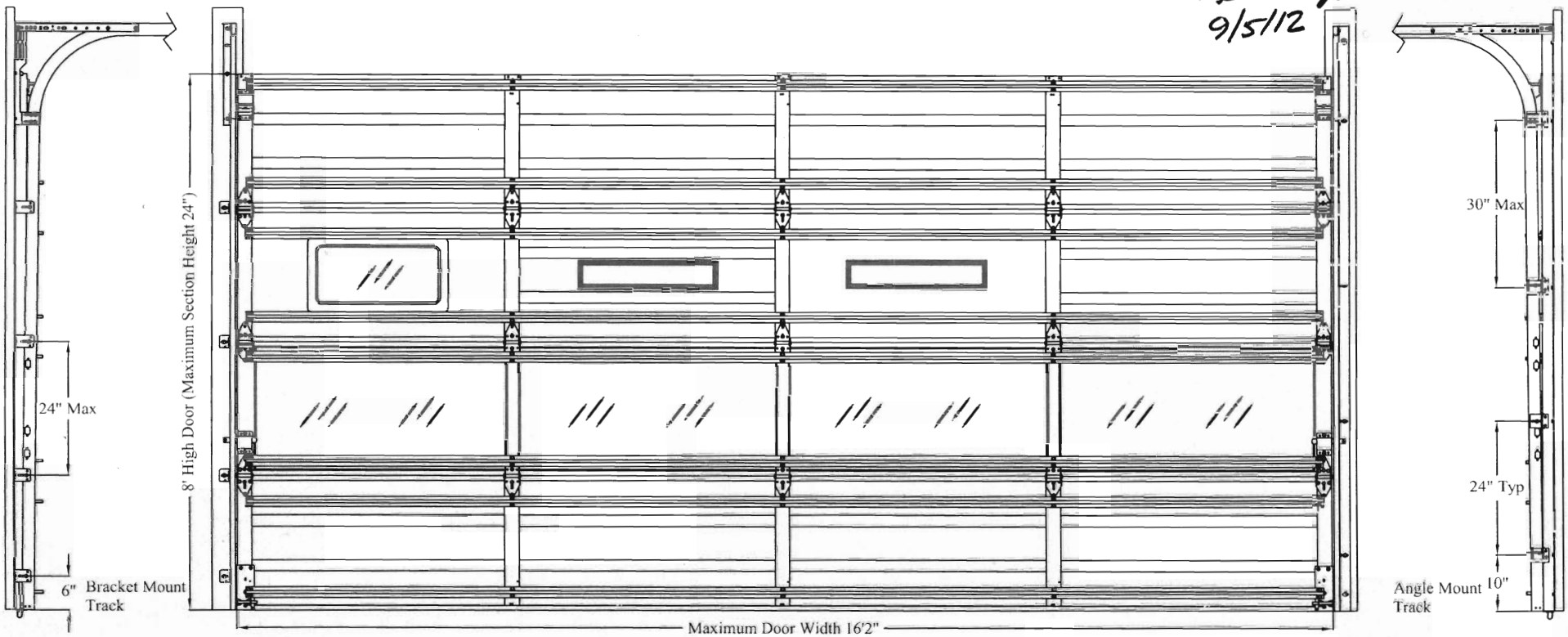
PROFESSIONAL ENGINEER

9/5/12



Design pressures meet or exceed those required by ASCE 7-02 and 7-05 for the following conditions:

V = 110 MPH exposure category B and mean roof height of 40' or less
V = 100 MPH exposure category C and mean roof height of 23' or less

The use of the wind speeds shown is limited to those cases meeting all of the following additional conditions:

1. **Building category II**
2. **Roof pitch of 10 degrees or less**
3. **2 ft or less of the door width in the end zone of the building (zone 5)**
4. **Importance factor = 1.0**
5. **Topographic factor = 1.0**
6. **Directional factor = .85**
7. **Doors with glazings not qualified for use in windborne debris regions**

Description: 4000 series 2" open back steel garage door with optional polystyrene insulation (.019" min. pan)

Design Pressure: +18.7/-20.4
Test Pressure +28.1/-30.6

Tested per the applicable requirements of ANSI/DASMA 108-2005

DRAWN BY: John M. Stroede 9/5/12

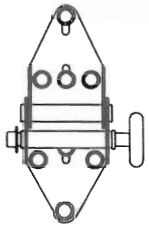
APPROVED BY: John M. Stroede 9/5/12

doorLink Manufacturing, Inc.
1501 Taney St.
North Kansas City, MO 64116

TITLE
Windload Rated Commercial Garage Door
Models 4500, 4400

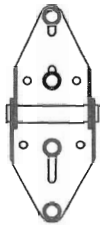
DRAWING NUMBER		REVISION
CO16A-110		A
SIZE A	SCALE N/A	SHEET 1 of 3

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



End Hinge
14 gauge galvanized steel end hinges attached with four 1/4" x 3/4" screws and four 1/4" x 5/8" self tapping screws each.

Roller
10 ball steel or nylon roller with 4" stem and push nuts on all hinge rollers.



Center Hinge
14 gauge galvanized steel wide body hinge attached with four 1/4" x 3/4" screws.

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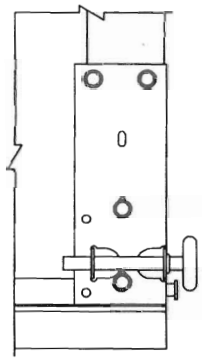
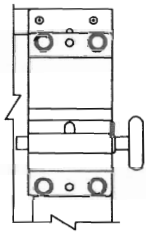
9/5/12



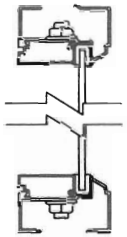
End and Center Stiles
18 gauge galvanized steel stiles attached to section with two rivets on each end.

Bottom Bracket
13 gauge galvanized steel bottom bracket attached with four 1/4" x 5/8" self-tapping screws (push nut not required on roller).

Bottom Weatherstrip
Aluminum extrusion with vinyl insert.



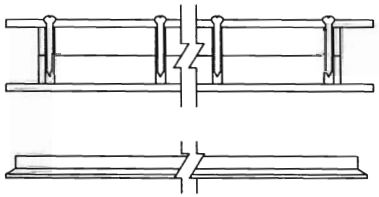
Top Fixture
12 gauge galvanized steel top fixtures attached to door with four 1/4" x 5/8" self-tapping screws each (push nut not required on roller).



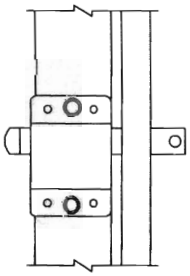
Full Vision Section (optional)
Section made up of .050" wall extruded aluminum rails and .062" wall extruded aluminum stiles and assembled with 5/16" all-thread.

DSB glass, 1/2" insulated glass, or 1/8" tempered glass is held in place on all four sides with gasket and snap in aluminum clip.

Section shall be reinforced similar to the standard sections per location within the door with the strut(s) located over the hinges for strength and concealment.



Windows (optional)
Plastic screw together window frame for 1" insulated glass with a maximum opening size of 21 3/4" x 9 3/4" or plastic snap together window frame for .100" acrylic with a maximum opening size of 23 1/2" x 3 1/2".



Locking Mechanism
Doors must have either an electronic operator or locking device(s) installed (inside slide lock shown, other lock types permitted) that engage(s) both vertical tracks.

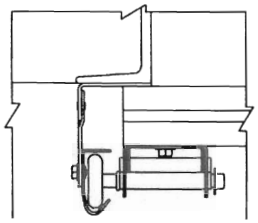
Struts
3" x 1 7/8" 20 gauge 80 ksi hat strut attached with two 1/4" x 5/8" self-tapping screws per stile (minimum length is door width minus 3").

doorLink Manufacturing, Inc.
1501 Taney St.
North Kansas City, MO 64116

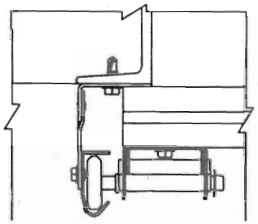
TITLE
Windload Rated Commercial Garage Door
Models 4500, 4400

DRAWN BY: John M. Stroede 9/5/12	DRAWING NUMBER CO16A-110		REVISION A
APPROVED BY: John M. Stroede 9/5/12	SIZE A	SCALE N/A	SHEET 2 of 3

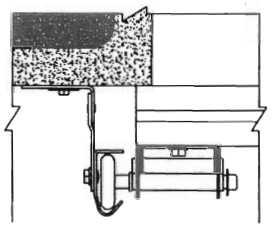
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



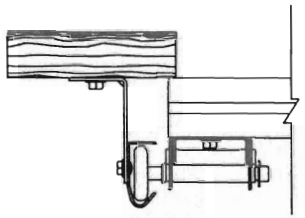
Steel Jambs
Vertical jambs are to be 3/16" minimum steel (may be back-filled with concrete but not required) with angle mounted track secured to jamb with minimum 3/8" diameter and 60000 psi tensile strength plug weld.



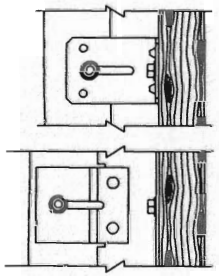
Steel Jambs
Vertical jambs are to be 3/16" minimum steel (may be back-filled with concrete but not required) with angle mounted track secured to jamb with 5/16" x 1" self-tapping screws.



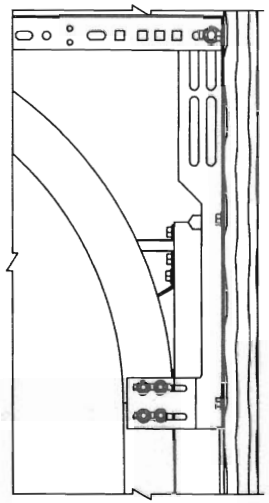
Concrete Jambs
Vertical jambs are to be 2000 psi minimum concrete or 8x8x16 filled concrete block (concrete block shown) with bracket or angle mounted track secured to jamb with 1/4" x 1 3/4" Tapcon fasteners and 1" diameter washers. The minimum edge distance required is 3".



Wood Jambs
Vertical jambs are to be 2x6 Southern Yellow Pine (SYP) or equivalent depeding on regional availability with bracket or angle mounted track attached to jamb with 5/16" x 1 5/8" wood lag screws.



Track Clips and Brackets
2 1/4" wide x 12 gauge galvanized steel track bracket attached to wood jamb with one 5/16" x 1 5/8" wood lag screw and to vertical track with one 1/4" x 3/4" track bolt and nut or 2 1/2" x 12 gauge galvanized steel track clip riveted to vertical angle and attached to vertical track with one 1/4" x 3/4" track bolt and nut

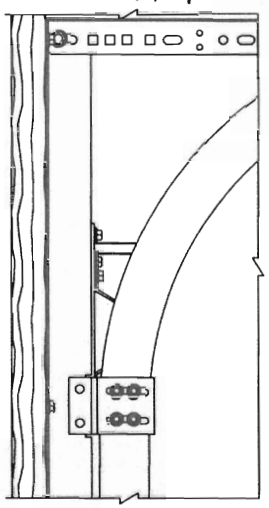


Bracket Mount Track

Flag Bracket
12 gauge galvanized steel flag bracket attached to jamb with three appropriate fasteners according to the jamb material and to the horizontal and vertical tracks with two 1/4" x 3/4" track bolts and nuts each.

Horizontal Track and Angle
Horizontal track and angle to suit with suitable back hang. Standard lift is shown, vertical lift and high lift are acceptable.

Vertical Track
2" galvanized steel track with a minimum thickness of .056" or 3" galvanized steel track with a minimum thickness of .096".



Angle Mount Track

Vertical Angle
12 gauge galvanized steel angle attached to jamb with appropriate fasteners according to the jamb material at each track clip location as well as one 3" down from the top of the angle and one 3" up from the floor.

Horizontal Track and Angle
Horizontal track and angle to suit with suitable back hang. Standard lift is shown, vertical lift and high lift are acceptable.

Vertical Track
2" galvanized steel track with a minimum thickness of .056" or 3" galvanized steel track with a minimum thickness of .096".

STATE OF TEXAS
JOSEPH H. DIXON, JR.
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Note: Preparation of jambs by others, and supporting structural elements must be capable of withstanding the rated windload. Contact the building architect or engineer of record for more details.

doorLink Manufacturing, Inc.
1501 Taney St.
North Kansas City, MO 64116

TITLE
Windload Rated Commercial Garage Door
Models 4500, 4400

DRAWN BY: John M. Stroede 9/5/12	DRAWING NUMBER CO16A-110		REVISION A
APPROVED BY: John M. Stroede 9/5/12	SIZE A	SCALE N/A	SHEET 3 of 3

Joseph H. Dixon, Jr. P.E.
FL 7768, MO 6185, TX 18627
09/05/12

STATE OF TEXAS
JOSEPH H. DIXON, JR.
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9/5/12

Strut and Section Locations

CO16A-110 16'2" 4500, 4400 Series Windload Door +18.7/-20.4 psf

Door Height	Section Heights	Strut Locations	Track Bkts/Clips
7 - 0	21 21 21 21	3 16.5 25.5 37.5 46.5 58.5 67.5 82	4/3
7 - 3	24 21 21 21	3 19.5 28.5 40.5 49.5 61.5 70.5 85	4/3
7 - 6	24 24 21 21	3 19.5 28.5 43.5 52.5 64.5 73.5 88	4/3
7 - 9	24 24 24 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91	4/3
8 - 0	24 24 24 24	3 19.5 28.5 43.5 52.5 67.5 76.5 94	4/3
8 - 9	21 21 21 21 21	3 16.5 25.5 37.5 46.5 58.5 67.5 79.5 88.5 103	5/4
9 - 0	24 21 21 21 21	3 19.5 28.5 40.5 49.5 61.5 70.5 82.5 91.5 106	5/4
9 - 3	24 24 21 21 21	3 19.5 28.5 43.5 52.5 64.5 73.5 85.5 94.5 109	5/4
9 - 6	24 24 24 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 88.5 97.5 112	5/4
9 - 9	24 24 24 24 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115	5/4
10 - 0	24 24 24 24 24	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 118	5/4
10 - 6	21 21 21 21 21 21	3 16.5 25.5 37.5 46.5 58.5 67.5 79.5 88.5 100.5 109.5 124	6/5
10 - 9	24 21 21 21 21 21	3 19.5 28.5 40.5 49.5 61.5 70.5 82.5 91.5 103.5 112.5 127	6/5
11 - 0	24 24 21 21 21 21	3 19.5 28.5 43.5 52.5 64.5 73.5 85.5 94.5 106.5 115.5 130	6/5
11 - 3	24 24 24 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 88.5 97.5 109.5 118.5 133	6/5
11 - 6	24 24 24 24 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 112.5 121.5 136	6/5
11 - 9	24 24 24 24 24 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139	6/5
12 - 0	24 24 24 24 24 24	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 142	6/5
12 - 3	21 21 21 21 21 21 21	3 16.5 25.5 37.5 46.5 58.5 67.5 79.5 88.5 100.5 109.5 121.5 130.5 145	7/6
12 - 6	24 21 21 21 21 21 21	3 19.5 28.5 40.5 49.5 61.5 70.5 82.5 91.5 103.5 112.5 124.5 133.5 148	7/6
12 - 9	24 24 21 21 21 21 21	3 19.5 28.5 43.5 52.5 64.5 73.5 85.5 94.5 106.5 115.5 127.5 136.5 151	7/6
13 - 0	24 24 24 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 88.5 97.5 109.5 118.5 130.5 139.5 154	7/6
13 - 3	24 24 24 24 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 112.5 121.5 133.5 142.5 157	7/6
13 - 6	24 24 24 24 24 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 136.5 145.5 160	7/6
13 - 9	24 24 24 24 24 24 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163	7/6
14 - 0	24 24 24 24 24 24 24	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 166	7/6
14 - 3	24 21 21 21 21 21 21 21	3 19.5 28.5 40.5 49.5 61.5 70.5 82.5 91.5 103.5 112.5 124.5 133.5 145.5 154.5 169	8/7
14 - 6	24 24 21 21 21 21 21 21	3 19.5 28.5 43.5 52.5 64.5 73.5 85.5 94.5 106.5 115.5 127.5 136.5 148.5 157.5 172	8/7
14 - 9	24 24 24 21 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 88.5 97.5 109.5 118.5 130.5 139.5 151.5 160.5 175	8/7
15 - 0	24 24 24 24 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 112.5 121.5 133.5 142.5 154.5 163.5 178	8/7
15 - 3	24 24 24 24 24 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 136.5 145.5 157.5 166.5 181	8/7
15 - 6	24 24 24 24 24 24 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 160.5 169.5 184	8/7
15 - 9	24 24 24 24 24 24 24 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187	8/7
16 - 0	24 24 24 24 24 24 24 24	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 190	8/7
16 - 3	24 24 21 21 21 21 21 21 21	3 19.5 28.5 43.5 52.5 64.5 73.5 85.5 94.5 106.5 115.5 127.5 136.5 148.5 157.5 169.5 178.5 193	9/8
16 - 6	24 24 24 21 21 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 88.5 97.5 109.5 118.5 130.5 139.5 151.5 160.5 172.5 181.5 196	9/8
16 - 9	24 24 24 24 21 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 112.5 121.5 133.5 142.5 154.5 163.5 175.5 184.5 199	9/8
17 - 0	24 24 24 24 24 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 136.5 145.5 157.5 166.5 178.5 187.5 202	9/8
17 - 3	24 24 24 24 24 24 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 160.5 169.5 181.5 190.5 205	9/8
17 - 6	24 24 24 24 24 24 24 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 184.5 193.5 208	9/8
17 - 9	24 24 24 24 24 24 24 24 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 211	9/8
18 - 0	24 24 24 24 24 24 24 24 24	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 214	9/8
18 - 3	24 24 24 21 21 21 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 88.5 97.5 109.5 118.5 130.5 139.5 151.5 160.5 172.5 181.5 193.5 202.5 219	10/9
18 - 6	24 24 24 24 21 21 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 112.5 121.5 133.5 142.5 154.5 163.5 175.5 184.5 196.5 205.5 222	10/9
18 - 9	24 24 24 24 24 21 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 136.5 145.5 157.5 166.5 178.5 187.5 199.5 208.5 225	10/9
19 - 0	24 24 24 24 24 24 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 160.5 169.5 181.5 190.5 202.5 211.5 228	10/9
19 - 3	24 24 24 24 24 24 24 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 184.5 193.5 205.5 214.5 231	10/9
19 - 6	24 24 24 24 24 24 24 24 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 208.5 217.5 234	10/9
19 - 9	24 24 24 24 24 24 24 24 24 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 211.5 220.5 237	10/9
20 - 0	24 24 24 24 24 24 24 24 24 24	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 211.5 220.5 240	10/9
20 - 3	24 24 24 24 21 21 21 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 112.5 121.5 133.5 142.5 154.5 163.5 175.5 184.5 196.5 205.5 217.5 226.5 241	11/10
20 - 6	24 24 24 24 24 21 21 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 136.5 145.5 157.5 166.5 178.5 187.5 199.5 208.5 220.5 229.5 244	11/10
20 - 9	24 24 24 24 24 24 21 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 160.5 169.5 181.5 190.5 202.5 211.5 223.5 232.5 247	11/10
21 - 0	24 24 24 24 24 24 24 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 184.5 193.5 205.5 214.5 226.5 235.5 250	11/10
21 - 3	24 24 24 24 24 24 24 24 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 208.5 217.5 229.5 238.5 253	11/10
21 - 6	24 24 24 24 24 24 24 24 24 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 211.5 220.5 232.5 241.5 256	11/10
21 - 9	24 24 24 24 24 24 24 24 24 24 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 211.5 220.5 235.5 244.5 259	11/10
22 - 0	24 24 24 24 24 24 24 24 24 24 24	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 211.5 220.5 235.5 244.5 262	11/10
22 - 3	24 24 24 24 24 21 21 21 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 136.5 145.5 157.5 166.5 178.5 187.5 199.5 208.5 220.5 229.5 241.5 250.5 265	12/11
22 - 6	24 24 24 24 24 24 21 21 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 160.5 169.5 181.5 190.5 202.5 211.5 223.5 232.5 244.5 253.5 268	12/11
22 - 9	24 24 24 24 24 24 24 24 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 184.5 193.5 205.5 214.5 226.5 235.5 247.5 256.5 271	12/11
23 - 0	24 24 24 24 24 24 24 24 21 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 208.5 217.5 229.5 238.5 250.5 259.5 274	12/11
23 - 3	24 24 24 24 24 24 24 24 24 21 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 211.5 220.5 232.5 241.5 253.5 262.5 277	12/11
23 - 6	24 24 24 24 24 24 24 24 24 24 21 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 211.5 220.5 235.5 244.5 256.5 265.5 280	12/11
23 - 9	24 24 24 24 24 24 24 24 24 24 24 21	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 211.5 220.5 235.5 244.5 259.5 268.5 283	12/11
24 - 0	24 24 24 24 24 24 24 24 24 24 24 24	3 19.5 28.5 43.5 52.5 67.5 76.5 91.5 100.5 115.5 124.5 139.5 148.5 163.5 172.5 187.5 196.5 211.5 220.5 235.5 244.5 259.5 268.5 286	12/11

Notes: (1) Sequential sections left to right, in inches from bottom of door
(2) Individual strut locations in inches from bottom of door
(3) Section stacking order may be changed to accommodate window section placement or other factors. Strut locations shall be adjusted accordingly.
(4) 18" tall sections may be used in some instances.