Strut Locations		
8'	10'	12'
12"	12"	12"
36"	36"	36"
60"	60"	60"
84"	84"	84"
	108"	108"
		132"

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

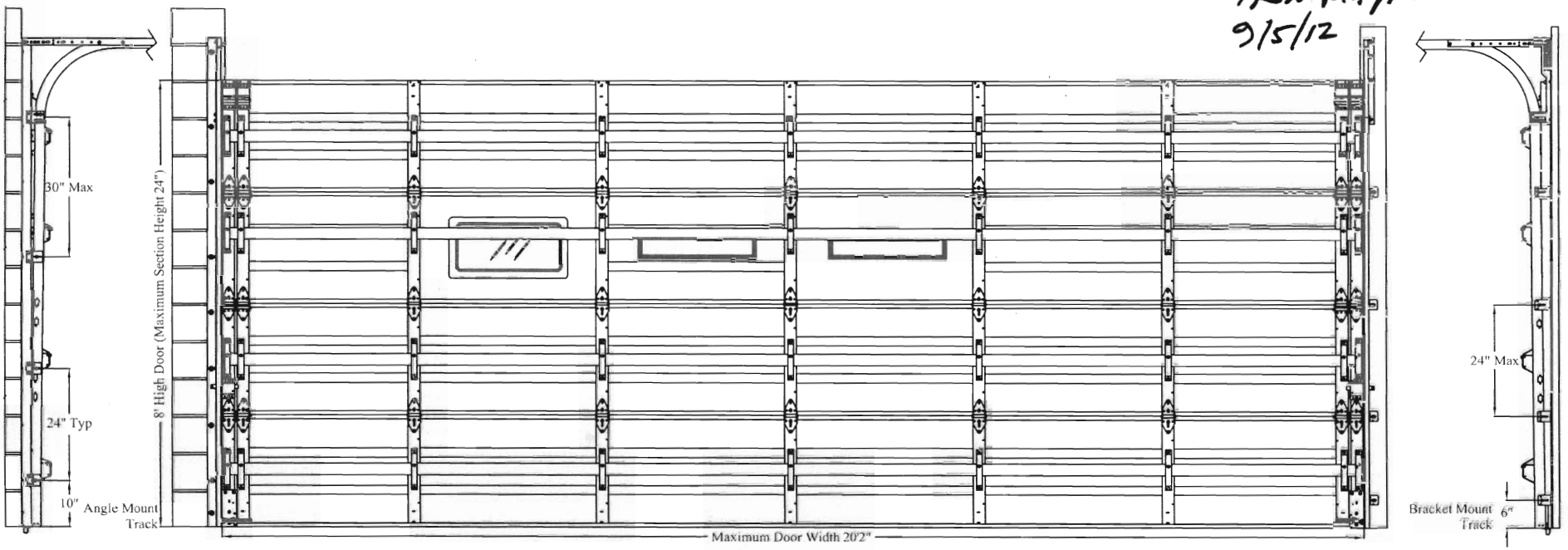
Track Brackets		
8'	10'	12'
4	5	6
Angle Mount Track Clips		
8'	10'	12'
3	4	5

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

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

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

9/5/12



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

V = 120 MPH exposure category B and mean roof height of 34' or less
V = 110 MPH exposure category C and mean roof height of 16' 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: +20.2/-22.8
Test Pressure +30.3/-34.2

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

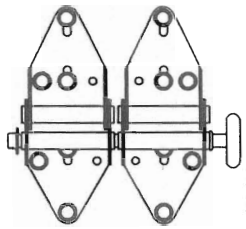
TITLE
Windload Rated Commercial Garage Door
Models 4500, 4400

DRAWING NUMBER CO20A-120

REVISION A

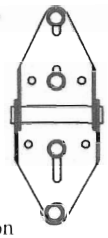
SIZE A | **SCALE** N/A | **SHEET** 1 of 3

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

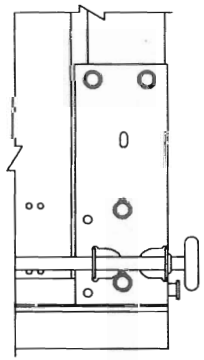


End Hinge
14 gauge galvanized steel double end hinges attached with four 1/4" x 3/4" screws and two 1/4" x 5/8" self tapping screws each

Roller
10 ball steel or nylon roller with 7" stem and push nuts on all hinge rollers



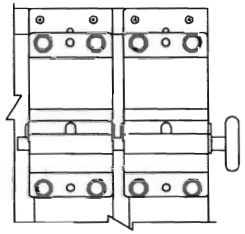
Center Hinge
14 gauge galvanized steel wide body hinge attached with four 1/4" x 3/4" screws



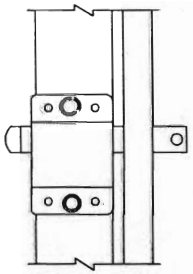
End and Center Stiles
18 gauge galvanized steel stiles attached to section with two rivets on each end

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

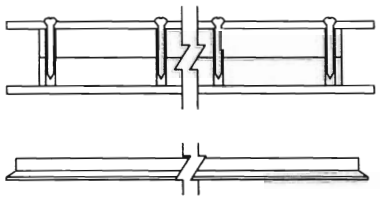


Top Fixture
12 gauge galvanized steel double top fixtures attached to door with four 1/4" x 5/8" self-tapping screws each (push nut not required on roller)



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.

C Channels
4" x 2 1/2" 16 gauge 50 ksi C channel attached with one 1 1/4" wide 16 gauge strap and four 1/4" x 5/8" self-tapping screws per stile (minimum length is door width minus 2")



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".

STATE OF TEXAS
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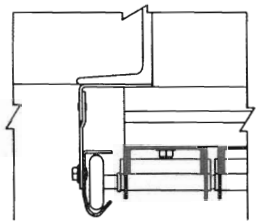
9/5/12

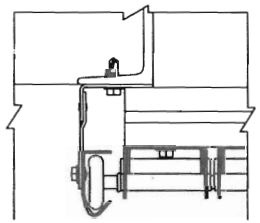
doorLink Manufacturing, Inc.
1501 Taney St.
North Kansas City, MO 64116

TITLE
Windload Rated Commercial Garage Door Models 4500, 4400

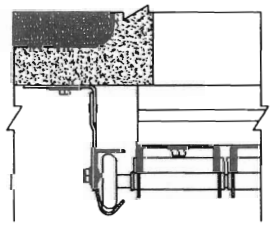
DRAWN BY: John M. Stroede 9/5/12	DRAWING NUMBER CO20A-120		REVISION A
APPROVED BY: John M. Stroede 9/5/12	SIZE A	SCALE N/A	SHEET 2 of 3



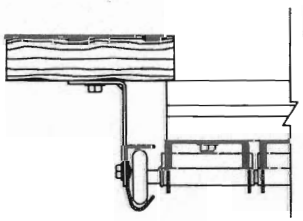
Steel Jambs
Vertical jambs are to be 3/16" minimum steel (may be back-filled with concrete but not required) with angle mounted track secured to jamb with minimum 3/8" diameter and 60000 psi tensile strength plug weld.



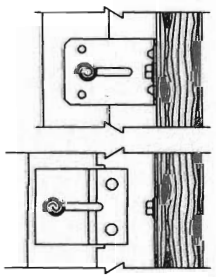
Steel Jambs
Vertical jambs are to be 3/16" minimum steel (may be back-filled with concrete but not required) with angle mounted track secured to jamb with 5/16" x 1" self-tapping screws.



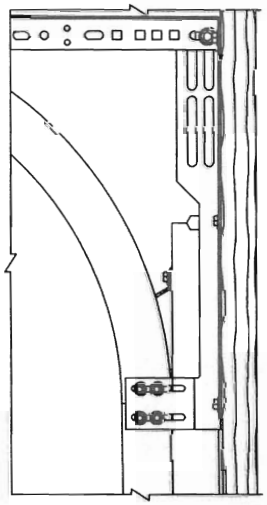
Concrete Jambs
Vertical jambs are to be 2000 psi minimum concrete or 8x8x16 filled concrete block (concrete block shown) with angle mounted track secured to jamb with 1/4" x 1 3/4" Tapcon fasteners and 1" diameter washers. The minimum edge distance required is 3".



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

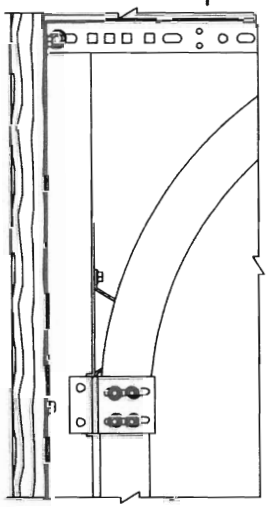


Bracket Mount Track

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 (plus one in between each clip for concrete jambs) 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".

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.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

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

9/5/12

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

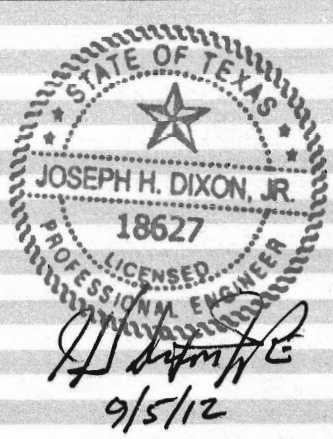
TITLE
Windload Rated Commercial Garage Door Models 4500, 4400

DRAWN BY: John M. Stroede 9/9/10	DRAWING NUMBER CO20A-120		REVISION A
APPROVED BY: John M. Stroede 9/9/10	SIZE A	SCALE N/A	SHEET 3 of 3

Strut and Section Locations

CO20A-120 20'2" 4500, 4400 Series Windload Door +20.2/-22.8 psf

Door Height	Section Heights	Strut Locations	Track Bkts/Clips
7 - 0	21 21 21 21	10.5 31.5 52.5 73.5	4/3
7 - 3	24 21 21 21	12 34.5 55.5 76.5	4/3
7 - 6	24 24 21 21	12 36 58.5 79.5	4/3
7 - 9	24 24 24 21	12 36 60 82.5	4/3
8 - 0	24 24 24 24	12 36 60 84	4/3
8 - 9	21 21 21 21 21	10.5 31.5 52.5 73.5 94.5	5/4
9 - 0	24 21 21 21 21	12 34.5 55.5 76.5 97.5	5/4
9 - 3	24 24 21 21 21	12 36 58.5 79.5 100.5	5/4
9 - 6	24 24 24 21 21	12 36 60 82.5 103.5	5/4
9 - 9	24 24 24 24 21	12 36 60 84 106.5	5/4
10 - 0	24 24 24 24 24	12 36 60 84 108	5/4
10 - 6	21 21 21 21 21 21	10.5 31.5 52.5 73.5 94.5 115.5	6/5
10 - 9	24 21 21 21 21 21	12 34.5 55.5 76.5 97.5 118.5	6/5
11 - 0	24 24 21 21 21 21	12 36 58.5 79.5 100.5 121.5	6/5
11 - 3	24 24 24 21 21 21	12 36 60 82.5 103.5 124.5	6/5
11 - 6	24 24 24 24 21 21	12 36 60 84 106.5 127.5	6/5
11 - 9	24 24 24 24 24 21	12 36 60 84 108 130.5	6/5
12 - 0	24 24 24 24 24 24	12 36 60 84 108 132	6/5
12 - 3	21 21 21 21 21 21 21	10.5 31.5 52.5 73.5 94.5 115.5 136.5	7/6
12 - 6	24 21 21 21 21 21 21	12 34.5 55.5 76.5 97.5 118.5 139.5	7/6
12 - 9	24 24 21 21 21 21 21	12 36 58.5 79.5 100.5 121.5 142.5	7/6
13 - 0	24 24 24 21 21 21 21	12 36 60 82.5 103.5 124.5 145.5	7/6
13 - 3	24 24 24 24 21 21 21	12 36 60 84 106.5 127.5 148.5	7/6
13 - 6	24 24 24 24 24 21 21	12 36 60 84 108 130.5 151.5	7/6
13 - 9	24 24 24 24 24 24 21	12 36 60 84 108 132 154.5	7/6
14 - 0	24 24 24 24 24 24 24	12 36 60 84 108 132 156	7/6
14 - 3	24 21 21 21 21 21 21 21	12 34.5 55.5 76.5 97.5 118.5 139.5 160.5	8/7
14 - 6	24 24 21 21 21 21 21 21	12 36 58.5 79.5 100.5 121.5 142.5 163.5	8/7
14 - 9	24 24 24 21 21 21 21 21	12 36 60 82.5 103.5 124.5 145.5 166.5	8/7
15 - 0	24 24 24 24 21 21 21 21	12 36 60 84 106.5 127.5 148.5 169.5	8/7
15 - 3	24 24 24 24 24 21 21 21	12 36 60 84 108 130.5 151.5 172.5	8/7
15 - 6	24 24 24 24 24 24 21 21	12 36 60 84 108 132 154.5 175.5	8/7
15 - 9	24 24 24 24 24 24 24 21	12 36 60 84 108 132 156 178.5	8/7
16 - 0	24 24 24 24 24 24 24 24	12 36 60 84 108 132 156 180	8/7
16 - 3	24 24 21 21 21 21 21 21 21	12 36 58.5 79.5 100.5 121.5 142.5 163.5 184.5	9/8
16 - 6	24 24 24 21 21 21 21 21 21	12 36 60 82.5 103.5 124.5 145.5 166.5 187.5	9/8
16 - 9	24 24 24 24 21 21 21 21 21	12 36 60 84 106.5 127.5 148.5 169.5 190.5	9/8
17 - 0	24 24 24 24 24 21 21 21 21	12 36 60 84 108 130.5 151.5 172.5 193.5	9/8
17 - 3	24 24 24 24 24 24 21 21 21	12 36 60 84 108 132 154.5 175.5 196.5	9/8
17 - 6	24 24 24 24 24 24 24 21 21	12 36 60 84 108 132 156 178.5 199.5	9/8
17 - 9	24 24 24 24 24 24 24 24 21	12 36 60 84 108 132 156 180 202.5	9/8
18 - 0	24 24 24 24 24 24 24 24 24	12 36 60 84 108 132 156 180 204	9/8
18 - 3	24 24 24 21 21 21 21 21 21 21	12 36 60 82.5 103.5 124.5 145.5 166.5 187.5 208.5	10/9
18 - 6	24 24 24 24 21 21 21 21 21 21	12 36 60 84 106.5 127.5 148.5 169.5 190.5 211.5	10/9
18 - 9	24 24 24 24 24 21 21 21 21 21	12 36 60 84 108 130.5 151.5 172.5 193.5 214.5	10/9
19 - 0	24 24 24 24 24 24 21 21 21 21	12 36 60 84 108 132 154.5 175.5 196.5 217.5	10/9
19 - 3	24 24 24 24 24 24 24 21 21 21	12 36 60 84 108 132 156 178.5 199.5 220.5	10/9
19 - 6	24 24 24 24 24 24 24 24 21 21	12 36 60 84 108 132 156 180 202.5 223.5	10/9
19 - 9	24 24 24 24 24 24 24 24 24 21	12 36 60 84 108 132 156 180 204 226.5	10/9
20 - 0	24 24 24 24 24 24 24 24 24 24	12 36 60 84 108 132 156 180 204 228	10/9
20 - 3	24 24 24 24 21 21 21 21 21 21 21	12 36 60 84 106.5 127.5 148.5 169.5 190.5 211.5 232.5	11/10
20 - 6	24 24 24 24 24 21 21 21 21 21 21	12 36 60 84 108 130.5 151.5 172.5 193.5 214.5 235.5	11/10
20 - 9	24 24 24 24 24 24 21 21 21 21 21	12 36 60 84 108 132 154.5 175.5 196.5 217.5 238.5	11/10
21 - 0	24 24 24 24 24 24 24 21 21 21 21	12 36 60 84 108 132 156 178.5 199.5 220.5 241.5	11/10
21 - 3	24 24 24 24 24 24 24 24 21 21 21	12 36 60 84 108 132 156 180 202.5 223.5 244.5	11/10
21 - 6	24 24 24 24 24 24 24 24 24 21 21	12 36 60 84 108 132 156 180 204 226.5 247.5	11/10
21 - 9	24 24 24 24 24 24 24 24 24 24 21	12 36 60 84 108 132 156 180 204 228 250.5	11/10
22 - 0	24 24 24 24 24 24 24 24 24 24 24	12 36 60 84 108 132 156 180 204 228 252	11/10
22 - 3	24 24 24 24 24 21 21 21 21 21 21 21	12 36 60 84 108 130.5 151.5 172.5 193.5 214.5 235.5 256.5	12/11
22 - 6	24 24 24 24 24 24 21 21 21 21 21 21	12 36 60 84 108 132 154.5 175.5 196.5 217.5 238.5 259.5	12/11
22 - 9	24 24 24 24 24 24 24 21 21 21 21 21	12 36 60 84 108 132 156 178.5 199.5 220.5 241.5 262.5	12/11
23 - 0	24 24 24 24 24 24 24 24 21 21 21 21	12 36 60 84 108 132 156 180 202.5 223.5 244.5 265.5	12/11
23 - 3	24 24 24 24 24 24 24 24 24 21 21 21	12 36 60 84 108 132 156 180 204 226.5 247.5 268.5	12/11
23 - 6	24 24 24 24 24 24 24 24 24 24 21 21	12 36 60 84 108 132 156 180 204 228 250.5 271.5	12/11
23 - 9	24 24 24 24 24 24 24 24 24 24 24 21	12 36 60 84 108 132 156 180 204 228 252 274.5	12/11
24 - 0	24 24 24 24 24 24 24 24 24 24 24 24	12 36 60 84 108 132 156 180 204 228 252 276	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.