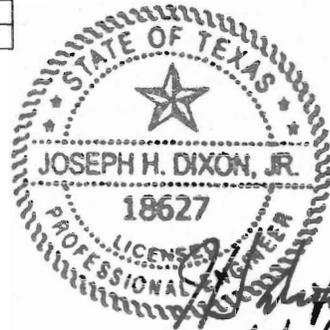


Strut Locations	
7'	8'
9.75"	9.75"
30.75"	29.25"
51.75"	47.25"
72.75"	65.25"
	84.75"

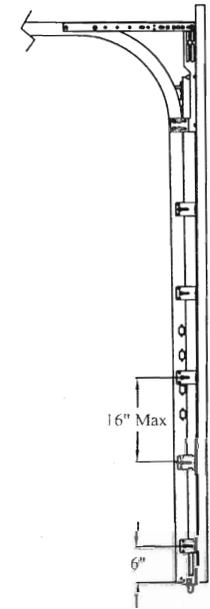
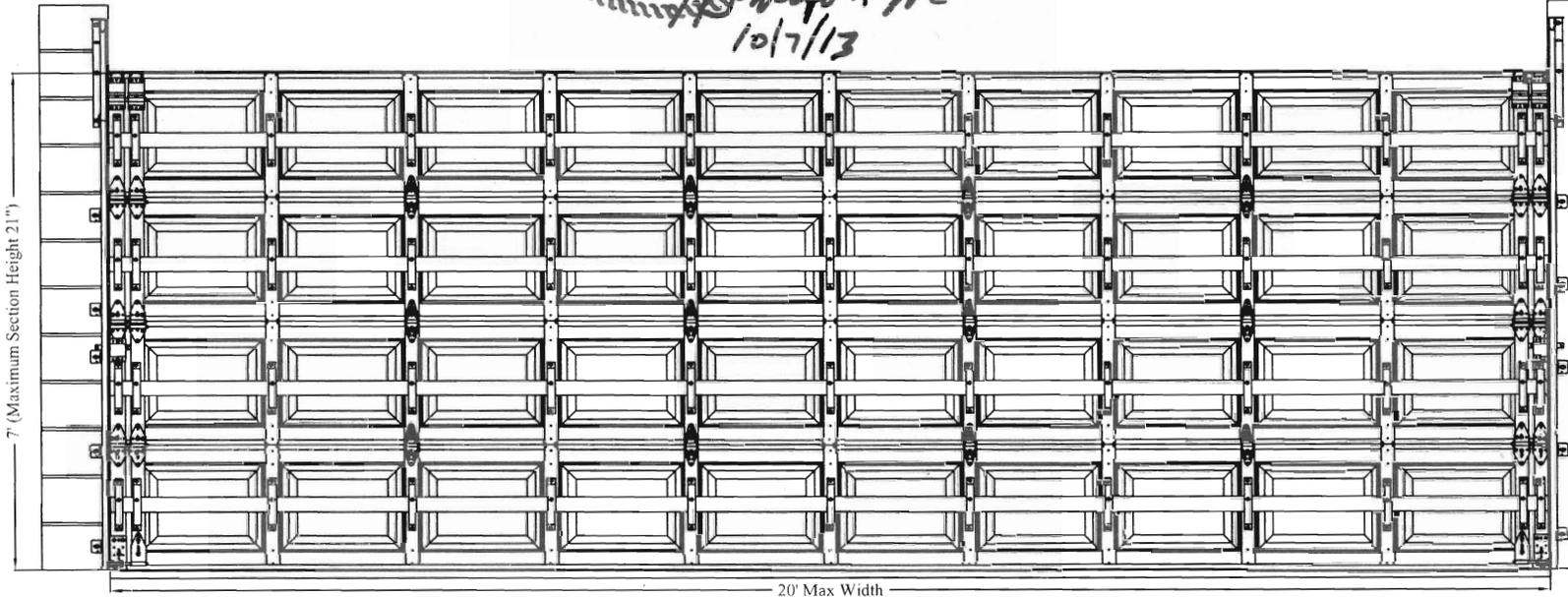
Note: Maximum door height is 14'. Consult Strut and Section Location Chart or manufacturer for details on door heights not listed.

Track Brackets	
7'	8'
5	6

Note: Detail views are shown on sheet 2.



John M. Stroede
10/7/13



REVISIONS

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

- V = 130 MPH exposure category B and mean roof height of 32' or less
- V = 110 MPH exposure category C and mean roof height of 32' 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. 2 ft or less of the clear width in the end zone of the building (zone 5)
3. Importance factor = 1.0
4. Topographic factor = 1.0
5. Directional factor = .85
6. Doors with glazed sections are not qualified for use in windborne debris regions

Description: 400 series 2" open back steel garage door with optional polystyrene insulation (.019 min. gap)

Design Pressure: +28.4/-28.4
Test Pressure: +42.6/-42.6

Tested per the applicable requirements of ANSI/DASMA 108-02, 108-05, and ASTM E330-02

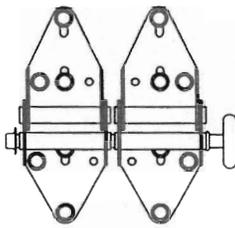
DRAWN BY:
John M. Stroede 10/7/13

APPROVED BY:
John M. Stroede 10/7/13

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

TITLE
Windload Rated Residential Garage Door
Models 410, 430, 450, 470

DRAWING NUMBER		REVISION	
RO20A-130		A	
SIZE	A	SCALE	N/A
SHEET		1 of 2	



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



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

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

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

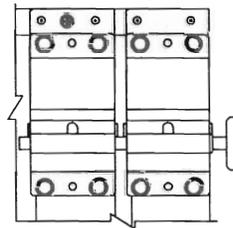
Bottom Bracket
13 gauge galvanized steel bottom bracket attached with four 1/4" x 5/8" self-tapping screws and 12 gauge galvanized steel double end stile bracket attached with two 1/4" x 5/8" self-tapping screws (push nut not required on roller)

Bottom Weatherstrip
Aluminum extrusion with vinyl insert

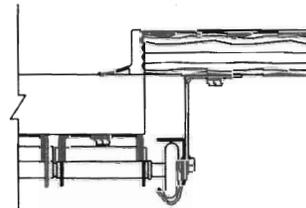
Flag Bracket
12 gauge galvanized steel flag bracket attached to wood jamb with three 5/16" x 1 5/8" wood lag screws (shown) or to concrete jamb with three 3/8" x 1 3/4" Large Diameter Tapcons and to the horizontal and vertical tracks with two 1/4" x 3/4" track bolts and nuts each

Horizontal Track and Angle
Horizontal track and angle to suit with suitable back hang

Vertical Track
2" galvanized steel track with a minimum thickness of .060"



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)

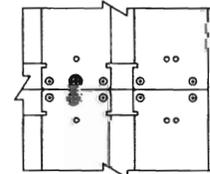
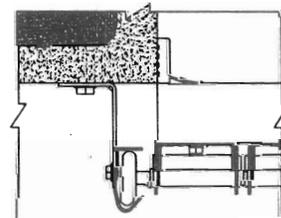


Jambs
Vertical jambs are to be 2x6 #2 Southern Yellow Pine (SYP) lumber or equivalent depending on regional availability, 2000 psi minimum concrete, or filled 8x8x16 concrete masonry unit (CMU) (minimum edge distance for concrete is 2 1/4")

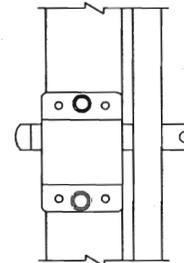
Note: Preparation of jambs by others, and supporting structural elements must be capable of withstanding the rated windload

Stop Molding
Stop molding is required, or door must overlap jambs by 1/4"

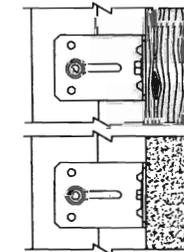
End Stile Reinforcement
Each double end stile requires a total of two #8 x 1/2" pan head screws located as shown between the pop rivets at the top and bottom of the stile



C Channels
6" 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
Note: Screws must not attach to stiles at punched knockout locations, and reinforcement on lock section may be moved down to accommodate keyed lock

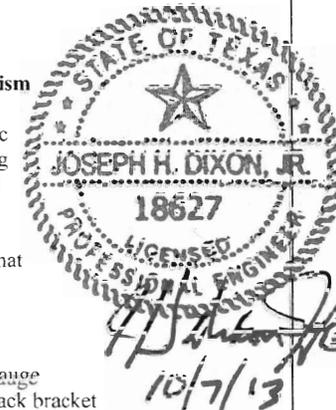


Locking Mechanism
Doors must have either an electronic operator or locking device(s) installed (inside slide lock shown, other lock types permitted) that engage(s) both vertical tracks



Track 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 or to concrete jamb with 3/8" x 1 3/4" Large Diameter Tapcon and to vertical track with one 1/4" x 3/4" track bolt and nut
Note: Center distance between track brackets not to exceed 16"

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



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

TITLE Windload Rated Residential Garage Door Models 410, 430, 450, 470			
DRAWING NUMBER RO20A-130		REVISION A	
SIZE A	SCALE N/A	SHEET 2 of 2	

DRAWN BY: John M. Stroede 10/7/13
APPROVED BY: John M. Stroede 10/7/13

Strut and Section Locations

RO20A-130 18' 400 Series Windload Door +28.4/-28.4 psf																	
Door Height	Section Heights				Strut Locations					Track Brackets							
6-0	18	18	18	18	8.25	26.25	44.25	62.25					5				
6-3	21	18	18	18	9.75	29.25	47.25	65.25					5				
6-6	21	18	18	21	9.75	29.25	47.25	66.75					5				
6-9	21	21	18	21	9.75	30.75	50.25	69.75					5				
7-0	21	21	21	21	9.75	30.75	51.75	72.75					5				
7-6	18	18	18	18	18	8.25	26.25	44.25	62.25	80.25			6				
7-9	21	18	18	18	18	9.75	29.25	47.25	65.25	83.25			6				
8-0	21	18	18	18	21	9.75	29.25	47.25	65.25	84.75			6				
8-3	21	21	18	18	21	9.75	30.75	50.25	68.25	87.75			6				
8-6	21	21	18	21	21	9.75	30.75	50.25	69.75	90.75			7				
8-9	21	21	21	21	21	9.75	30.75	51.75	72.75	93.75			7				
9-0	18	18	18	18	18	18	8.25	26.25	44.25	62.25	80.25	98.25	7				
9-3	21	18	18	18	18	18	9.75	29.25	47.25	65.25	83.25	101.25	7				
9-6	21	21	18	18	18	18	9.75	30.75	50.25	68.25	86.25	104.25	7				
9-9	21	21	21	18	18	18	9.75	30.75	51.75	71.25	89.25	107.25	7				
10-0	21	21	21	21	18	18	9.75	30.75	51.75	72.75	92.25	110.25	8				
10-3	21	21	21	21	21	18	9.75	30.75	51.75	72.75	93.75	113.25	8				
10-6	21	21	21	21	21	21	9.75	30.75	51.75	72.75	93.75	114.75	8				
10-9	21	18	18	18	18	18	18	9.75	29.25	47.25	65.25	83.25	101.25	119.25	8		
11-0	21	21	18	18	18	18	18	9.75	30.75	50.25	68.25	86.25	104.25	122.25	8		
11-3	21	21	21	18	18	18	18	9.75	30.75	51.75	71.25	89.25	107.25	125.25	9		
11-6	21	21	21	21	18	18	18	9.75	30.75	51.75	72.75	92.25	110.25	128.25	9		
11-9	21	21	21	21	21	18	18	9.75	30.75	51.75	72.75	93.75	113.25	131.25	9		
12-0	21	21	21	21	21	21	18	9.75	30.75	51.75	72.75	93.75	114.75	134.25	9		
12-3	21	21	21	21	21	21	21	9.75	30.75	51.75	72.75	93.75	114.75	135.75	9		
12-6	21	21	18	18	18	18	18	18	9.75	30.75	50.25	68.25	86.25	104.25	122.25	140.25	9
12-9	21	21	21	18	18	18	18	18	9.75	30.75	51.75	71.25	89.25	107.25	125.25	143.25	10
13-0	21	21	21	21	18	18	18	18	9.75	30.75	51.75	72.75	92.25	110.25	128.25	146.25	10
13-3	21	21	21	21	21	18	18	18	9.75	30.75	51.75	72.75	93.75	113.25	131.25	149.25	10
13-6	21	21	21	21	21	21	18	18	9.75	30.75	51.75	72.75	93.75	114.75	134.25	152.25	10
13-9	21	21	21	21	21	21	21	18	9.75	30.75	51.75	72.75	93.75	114.75	135.75	155.25	10
14-0	21	21	21	21	21	21	21	21	9.75	30.75	51.75	72.75	93.75	114.75	135.75	156.75	10

- 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 various installation factors.
 Strut locations shall be adjusted accordingly.

