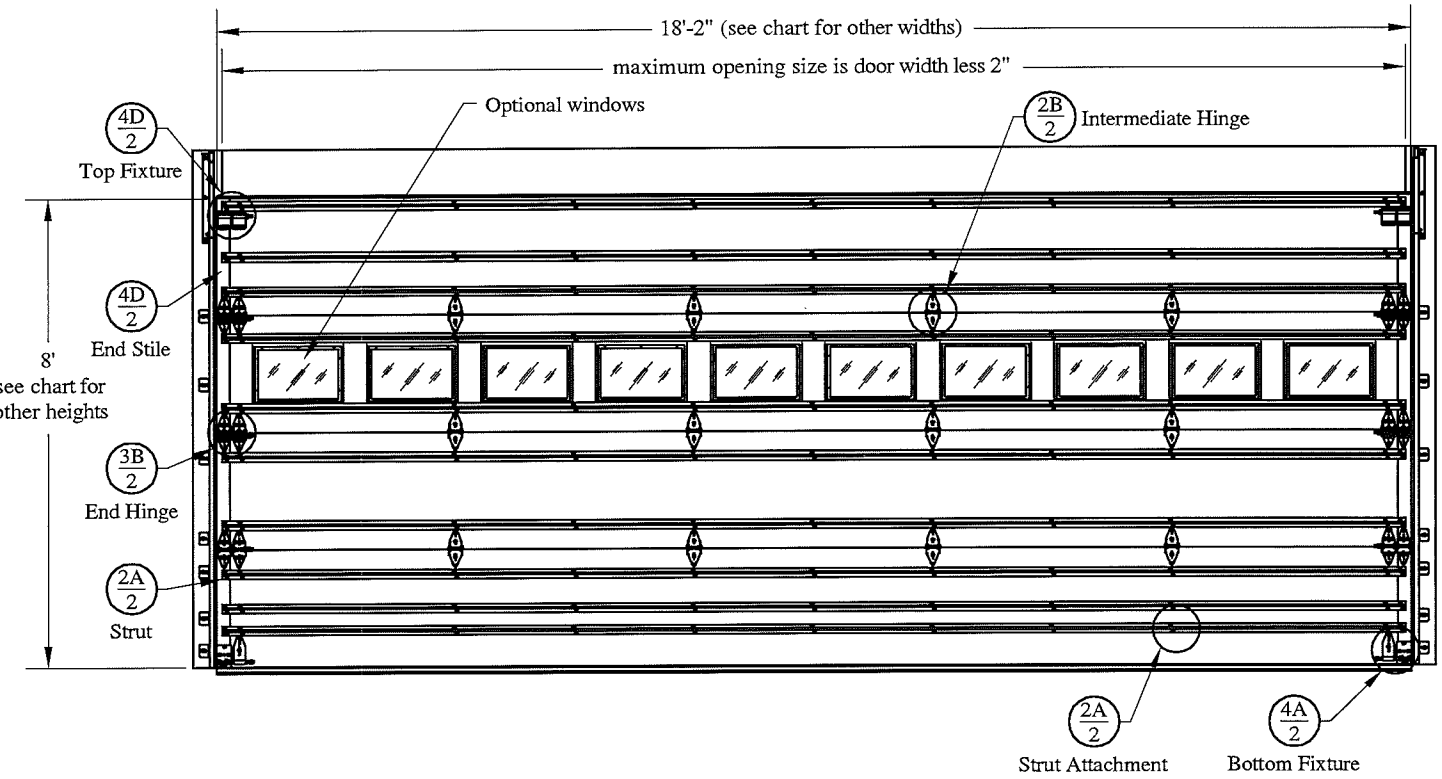
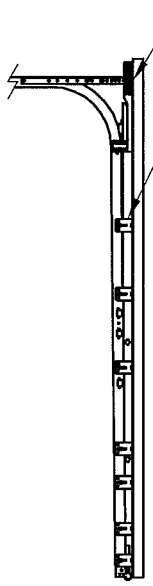




Window Options:
1/4" Lexan with Aluminum Frame
max daylight opening 16-3/4" x 9-1/2"

Door Height	Section Quantity	Strut Quantity	Trk Brkt Per Side
6'-0" to 8'-0"	4	10	7
8'-3" to 10'-0"	5	13	10
10'-3" to 12'-0"	6	15	12
12'-3" to 14'-0"	7	18	14
14'-3" to 16'-0"	8	20	15
16'-3" to 18'-0"	9	23	16
18'-3" to 20'-0"	10	25	18
20'-3" to 22'-0"	11	28	20
22'-3" to 24'-0"	12	30	23

Track bracket quantities shown are for use with grade 2 or better southern pine jambs. When using softer wood species like spruce-pine-fir (SPF) use the quantity of track brackets specified in the chart plus three track brackets per side or seven track brackets per side for doors taller than 14 feet.

This door has been evaluated per ASCE 7-02 & 7-05 as referenced by 2006 IBC 1609 & 2006 IRC 301, in accordance with ASTM E330-02 & ANSI/DASMA 108-02, 108-05 and for windborne debris in accordance with ASTM E1886-05/E1996-09 & ANSI/DASMA 115-05 (9 pound missile)
Design Pressures (DP) typically meet requirements for the following exposure B wind speeds.
These wind speeds are for 8' high doors on buildings with mean roof height less than 30 feet.

Door	With windows		No windows		Backer
Width	Design Pressure	Exp B	Design Pressure	Exp B	plates
20'-02"	31.6 / - 35.7 (psf)	153 (mph)	31.6 / - 35.7 (psf)	153 (mph)	9
19'-02"	35.0 / - 39.5 (psf)	160 (mph)	35.0 / - 39.5 (psf)	160 (mph)	9
18'-06"	37.6 / - 42.4 (psf)	166 (mph)	37.6 / - 42.4 (psf)	166 (mph)	7
18'-02"	39.0 / - 44.0 (psf)	169 (mph)	39.0 / - 44.0 (psf)	169 (mph)	7
17'-02"	39.0 / - 44.0 (psf)	168 (mph)	41.3 / - 46.6 (psf)	173 (mph)	7
16'-06"	39.0 / - 44.0 (psf)	168 (mph)	42.9 / - 48.3 (psf)	176 (mph)	7
16'-02"	39.0 / - 44.0 (psf)	168 (mph)	43.0 / - 48.3 (psf)	176 (mph)	7
15'-02"	39.0 / - 44.0 (psf)	168 (mph)	43.0 / - 48.3 (psf)	176 (mph)	7
14'-08"	39.0 / - 44.0 (psf)	167 (mph)	43.0 / - 48.3 (psf)	176 (mph)	7

Backer plate quantity is minimum per section.

Supporting structural elements to be designed by registered professional engineer for specified wind loads. If door is not electrically operated, a lock must be installed.
Door height: 24'-0" max
Section height: 24" max

STATE OF TEXAS
JOHN E. SCATES
56308
PROFESSIONAL ENGINEER

John E. Scates
2/27/13

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

John E. Scates, P.E.
3121 Fairgate Drive
Carrollton, Texas 75007
TXPE 56308, F-2203

C.H.I. OVERHEAD DOORS

SCALE: nts
DATE: 2-25-2013

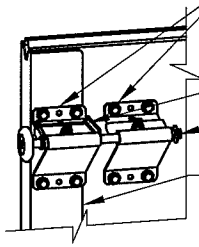
Models: 3212, 3216, 3285

43.0 (psf) / - 48.3 (psf) at 14'-08" through
31.6 (psf) / - 35.7 (psf) at 20'-02"

C.H.I. Drawing: TZ9i-18-63513
page 1_of_2

Strut (if applicable) not shown for clarity.

Details on some views may have been omitted for clarity.



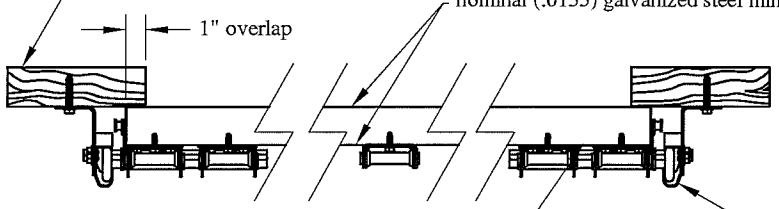
(.097) galvanized steel top fixture. Each fixture attached with four 1/4" x 3/4" screws.

carrier and carrier support

push nut

(.066) end stile w/ double wide backer plate (not shown) manufactured by C.H.I.

The vertical wood jamb fasteners may be counter sunk to provide a flat mounting surface. See jamb attachment details for more information about attaching jambs to structure.

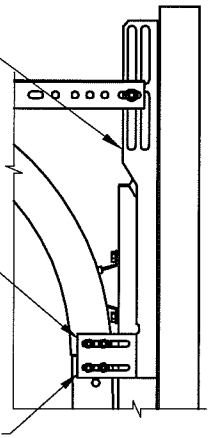


1" overlap

nominal (.0155) galvanized steel minimum

(.023) backer plate at hinges & mid-point between hinges.

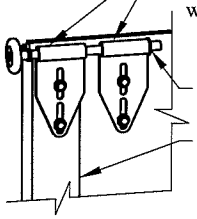
2" (min) x .069 (min) galvanized steel track



(.086) galvanized steel flag bracket fastened to wood jamb with three 5/16" x 1-5/8" wood lag screws.

Flag bracket attached to horizontal track with two 1/4" x 5/8" track bolts and nuts.

Flag bracket attached to vertical track with two 1/4" x 5/8" track bolts and nuts. Or two 1/4" x 11/32" rivets.

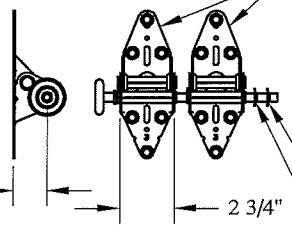


(.109) galvanized steel top fixture. Each fixture attached with two 1/4" x 3/4" screws.

push nut

(.066) end stile w/ double wide backer plate (not shown) manufactured by C.H.I.

Optional low head room top bracket



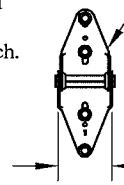
End Hinge
galvanized steel fastened to section with six 1/4" x 3/4" screws each.

push nut

additional push nut (on all hinge rollers)

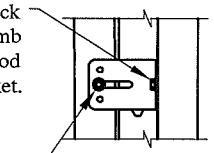
2" (max. for .069 thick)
4" (max. for .109 thick)

2 3/4"



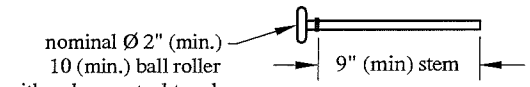
Intermediate Hinge
(.058) galvanized steel fastened to section with four 1/4" x 3/4" screws.

2 3/4"



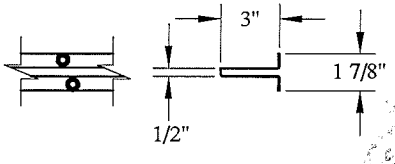
(.102) galvanized steel track bracket fastened to wood jamb with one 5/16" x 1-5/8" wood lag screw per bracket.

Each track bracket attached with one 1/4" x 5/8" track bolt and nut. Or two 1/4" x 11/32" rivets.



nominal Ø 2" (min.) 10 (min.) ball roller with nylon or steel tread.

9" (min) stem

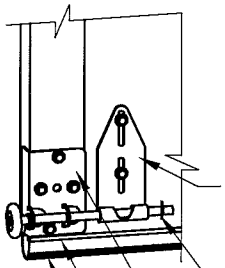


3"

1 7/8"

1/2"

(.051) 50 ksi galvanized steel 3" strut attached with two 1/4" x 3/4" screws per stile or hinge plate.



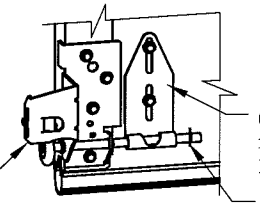
(.109) galvanized steel auxiliary roller carrier attached with two 1/4" x 3/4" screws.

push nut

(.102) galvanized steel bottom bracket manufactured by C.H.I. Each bracket attached with four red 1/4" x 3/4" screws.

Vinyl weatherstrip

Aluminum extrusion



(.109) galvanized steel auxiliary roller carrier attached with two 1/4" x 3/4" screws.

push nut

(.109) galvanized steel bottom bracket manufactured by C.H.I. Each bracket attached with four red 1/4" x 3/4" screws.

Optional low head room bottom bracket

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

STATE OF TEXAS
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