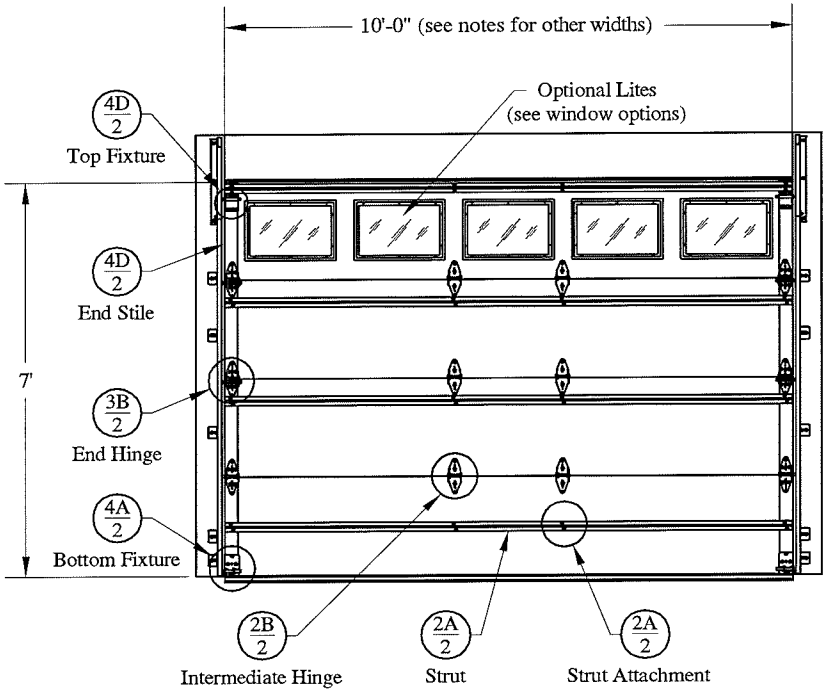
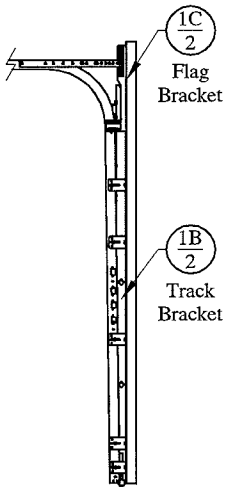
Window Options:
1/4" Lexan with Aluminum Frame
max DLO 16-3/4" x 10-1/4"





Door Height	Section Quantity	Strut Quantity	Trk Brkt Per Side
6'-6" to 7'-0"	4	4	5
7'-6" to 8'-0"	5	5	6
8'-3" to 8'-9"	5	5	7
9'-0" to 10'-6"	6	6	8
10'-9" to 12'-3"	7	7	9
12'-6" to 14'-0"	8	8	10
14'-3" to 15'-9"	9	9	12
16'-0" to 17'-6"	10	10	13
17'-9" to 19'-3"	11	11	14
19'-6" to 20'-0"	12	12	15

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 one track bracket per side.

Supplemental Instructions contain details for doors up to 20'-0" high. These are required in addition to this drawing for installation. Always use supplemental instructions in addition to this drawing during door installation.

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 exposure B wind speeds are for 7' high doors on buildings with mean roof height less than 30 feet.

Door Width	With and Without Windows Design Pressure	Exp B	Backer Plates
10'-00"	44.7 / - 51.5 (psf)	168 (mph)	2
09'-06"	47.1 / - 54.2 (psf)	172 (mph)	1
09'-00"	49.9 / - 56.7 (psf)	177 (mph)	1
08'-00"	49.9 / - 56.7 (psf)	176 (mph)	1
07'-00"	49.9 / - 56.7 (psf)	175 (mph)	1
06'-00"	49.9 / - 56.7 (psf)	173 (mph)	1

Backer plate quantity is minimum per section, not including backer plates at each end of sections.

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: 20'-0" max
Section height: 21" max

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

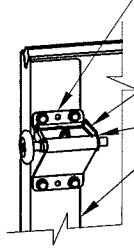
C.H.I. OVERHEAD DOORS
SCALE nts
DATE 3-18-2013

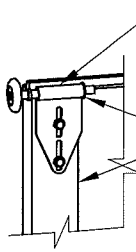
Models: 221X, 228X, 421X, 428X, 521X, 528X, 591X, 598X

49.9 (psf) / - 56.7 (psf) at 06'-00" through
44.7 (psf) / - 51.5 (psf) at 10'-00"

C.H.I. Drawing: TZ7i-10-02513
page 1_of_2

Strut (if applicable) not shown for clarity.





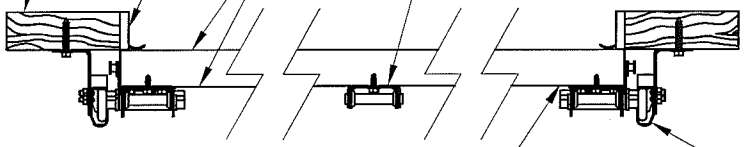
Optional low head room top bracket

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.

2" x 7/16" (nominal) stop molding to be secured with minimum 8d nail or 2-1/2" long screw on 5" spacing. Stop molding not required when door is more than 1" wider than opening.

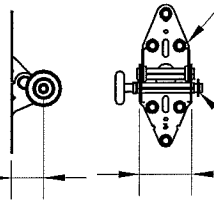
nominal (.0155) galvanized steel minimum

(.023) backer plate at each hinge location & mid-point between hinges (if required) included in quantity in chart on page 1



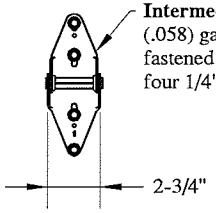
(.023) backer plate at each end of section not included in quantity in chart on page 1.

2" (min) x .058 (min) galvanized steel track

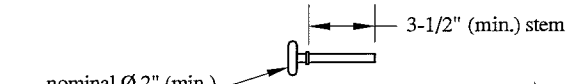


End Hinge
galvanized steel fastened to section with six 1/4" x 3/4" screws.

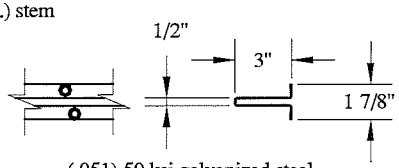
push nut



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

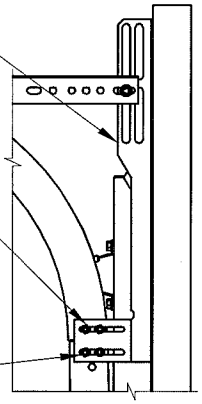


nominal Ø 2" (min.) 10 (min.) ball roller with nylon or steel tread.



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

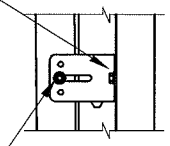
Details on some views may have been omitted for clarity.



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

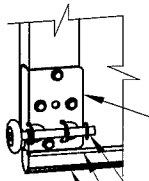
Flag bracket attached to horizontal track with two 1/4" x 5/8" track bolts and nuts.

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.



(.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.

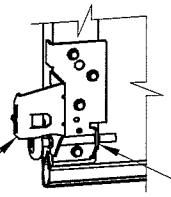


(.102) galvanized steel bottom bracket manufactured by C.H.I. Each bracket attached with four red 1/4" x 3/4" screws.

push nut

Vinyl weatherstrip

Aluminum extrusion



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

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