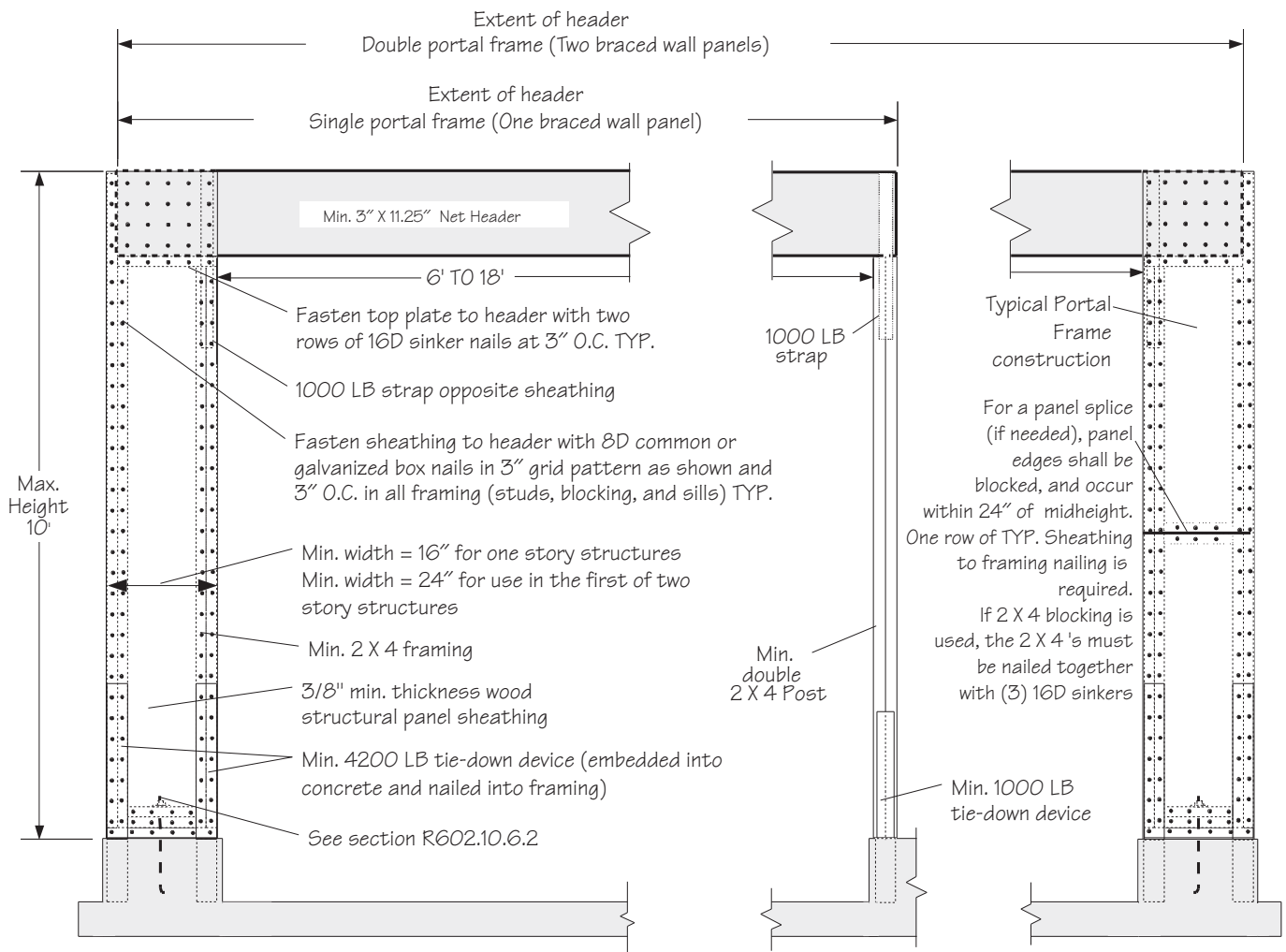


# CONNECTORS FOR USE WITH APA'S PORTAL FRAME

The International Residential Code (IRC) and the prescriptive portion of the International Building Code (IBC) allow a builder to construct wood frame buildings without an engineer by following the code. Lateral wall bracing requirements of the code prescribe bracing of each exterior wall using braced wall panels at or near the corners and at prescribed intervals throughout the structure. The construction options of these braced wall panels are outlined in IBC 2308.9.3 and IRC 602.10.3. The most commonly used of those options are 4 foot wood structural panels with prescribed fastening. A common issue when following the code requirements is proper bracing around garage doors. These return walls or side panels are typically narrower than 4 feet.

## Narrow Wall Bracing Option (Added in 2004)

There is a newer bracing option which allows a narrower section of braced wall. This alternative is described in the 2006 IBC Section 2308.9.3.2 and the 2006 IRC Section R602.10.6.2. This system is used by following the prescriptive provisions and engineered plans are not required. However, there are design limitations when using prescriptive provisions. These limitations are called out in the 2006 IBC 2308.2 and the 2006 IRC R301. Check with a local building official if you are unsure which provisions apply to your area.



### Portal Frame

Reprinted courtesy of the APA

ALTERNATE BRACED WALL PANEL ADJACENT TO A DOOR OR WINDOW OPENING  
(IRC Figure R602.10.6.2)

Hardware options for the specified connectors and connection details are given on the back side of this document.



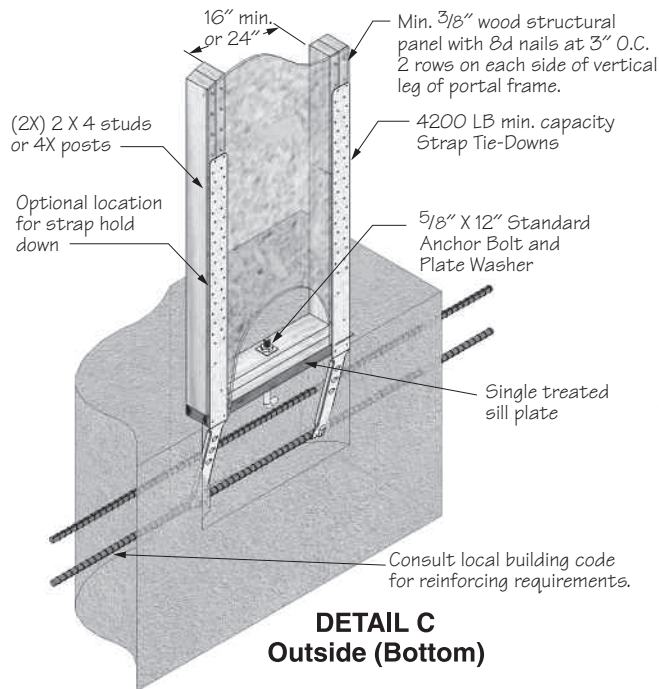
A GIBRALTAR INDUSTRIES COMPANY

© Copyright 2008 United Steel Products Company

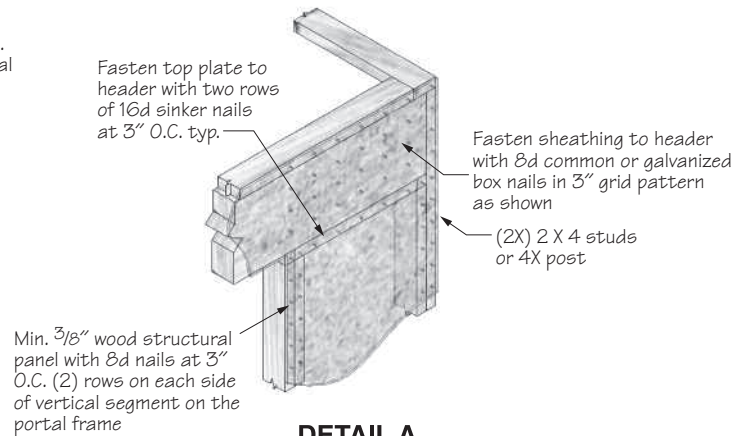
USP2112-081  
Information valid until December 31, 2010.

# CONNECTORS FOR USE WITH APA'S PORTAL FRAME CONT.

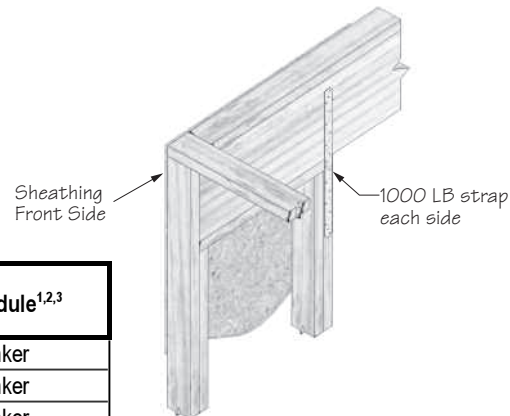
## EMBEDDED STRAP INSTALLATION



## HEADER CONNECTION DETAILS



**DETAIL A  
Outside**



**DETAIL B  
Inside**

### Portal Frame Connection Options

Connector as Called Out in Portal Frame Drawing	USP Stock No.	Fastener Schedule <sup>1,2,3</sup>
4200 LB Tie-Down Device	STAD14	(38) 16d Sinker
	HPAHD22	(23) 16d Sinker
1000 LB Tie-Down Device for APA Single Portal Frame	LSTAD8	(24) 16d Sinker
	STAD10	(28) 16d Sinker
1000 LB Strap	RS150	(18) 10d
	LSTA21	(16) 10d
	ST18	(14) 16d
	RS100	(14) 10d
	LSTA18	(14) 10d
3 ga. 3"x 3" Plate Washer	BP583	-- --
	HBPS58	-- --
8d Common	8d Common	-- --
16d Sinker	16d Sinker	-- --

- 1) Minimum nail embedment shall be 1-5/8" for 16d nails and 1-1/2" for 10d nails.
- 2) Minimum quantity of fasteners to be installed with equal fasteners at each end of the connection.
- 3) 10d x 1-1/2" nails are 9 gauge (0.148" diameter) by 1-1/2" long.

USP supplies quality products to build Stronger Safer Structures



Customer Service:  
Burnsville, MN  
Phone: 1-800-328-5934  
Fax: 1-507-364-8762

Manufacturing:  
Montgomery, MN • Livermore, CA  
Largo, FL • Thornhill, Ontario

Warehouses:  
Houston, TX  
Lumberton, NJ

[www.USPconnectors.com](http://www.USPconnectors.com)

A GIBALTAR INDUSTRIES COMPANY

Information valid until December 31, 2010.

USP2112-081