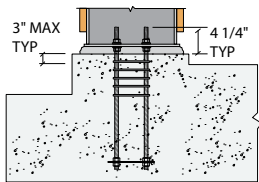
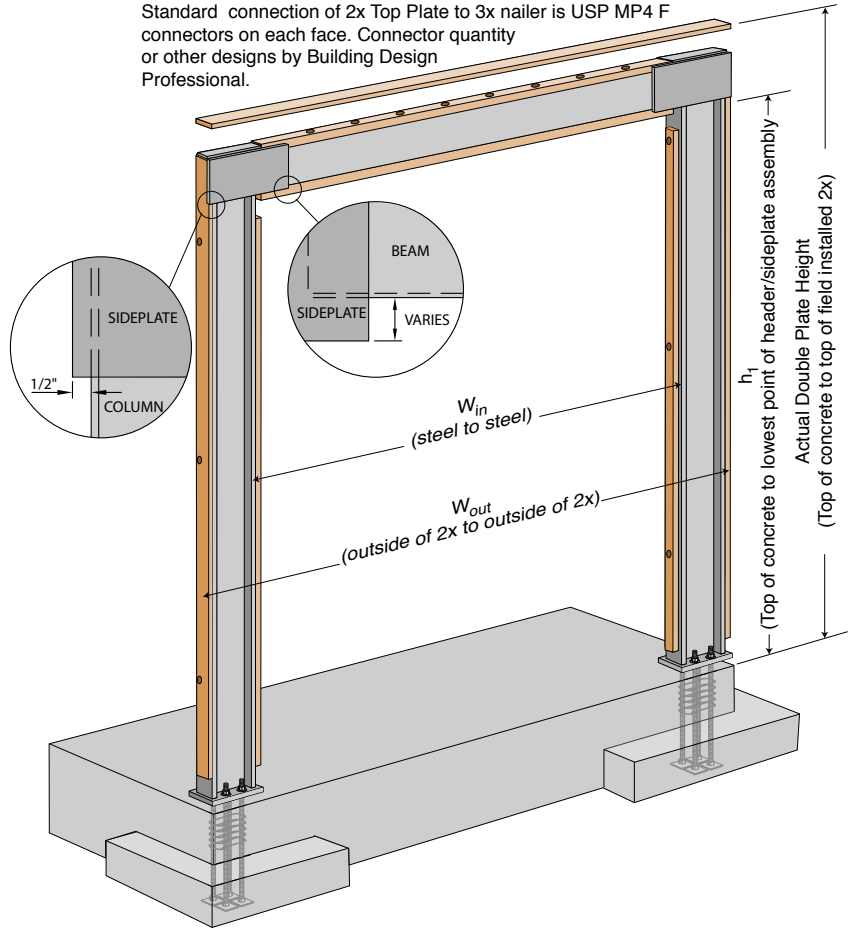
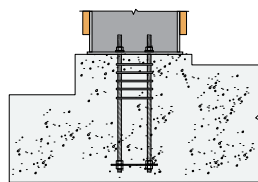


Standard connection of 2x Top Plate to 3x nailer is USP MP4 F connectors on each face. Connector quantity or other designs by Building Design Professional.



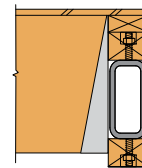
**Pinned Base on Nuts & Washer** (Requires high strength non-shrink grout. Check with Building Jurisdiction for third party inspection requirements)



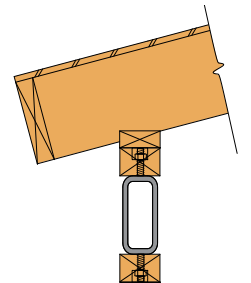
**Pinned base on Concrete**



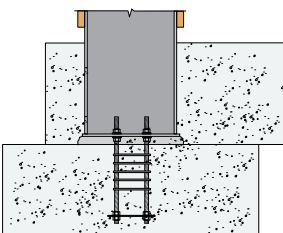
**Section of Header with Nailers and Plate**



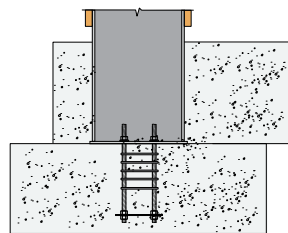
**Section at Joist - Hanging Condition**



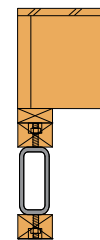
**Section at Roof Framing**



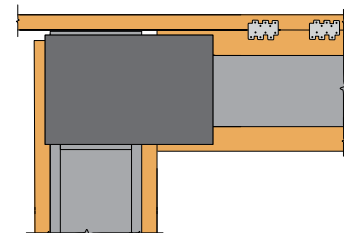
**Fixed Base on Nuts & Washer** (Requires high strength non-shrink grout. Check with Building Jurisdiction for third party inspection requirements)



**Fixed base on Concrete**



**Section at Joist - Bottom Cord Bearing**



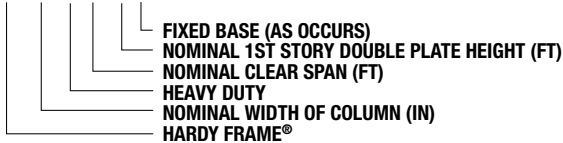
**Elevation at header USP MP4-F** (or equal) connectors on each face for shear transfer. Minimum quantity by Building Design Professional.

See the Hardy Frame® Moment Frame Catalog for more complete product listing

Col Type & Nom Opening Width	W <sub>in</sub> (ft-in)	Wout (ft-in)	Wall Height					
			8' 0-3/4"		9' 0-3/4"		10' 0-3/4"	
			h <sup>1</sup> Opening Height (ft-in)	Weight (lbs)	h <sup>1</sup> Opening Height (ft-in)	Weight (lbs)	h <sup>1</sup> Opening Height (ft-in)	Weight (lbs)
HF-D9 6x	6' 7"	8' 4"	7' 0-1/4"	987	8' 0-1/4"	1,064	9' 0-1/4"	1,141
HF-D9 8x				1,051		1,128		1,205
HF-D9H 8x		10' 4"	6' 11-1/4"	1,102	7' 11-1/4"	1,179	8' 11-1/4"	1,256
HF-D12 8x				890		938		987
HF-D18 8x	8' 7"	10' 10-1/2"	7' 0-1/4"	1,412	7' 11-3/4"	1,490	8' 11-3/4"	1,567
HF-D9 10x				1,173		1,250		1,327
HF-D12 10x		12' 4"	6' 11-1/4"	954	8' 0-1/4"	1,002	9' 0-1/4"	1,051
HF-D18 10x				1,650		1,728		1,805
HF-D9 12x	10' 7"	14' 4"	6' 11-1/4"	1,244	7' 11-1/4"	1,321	8' 11-1/4"	1,398
HF-D12 12x				1,018		1,067		1,115
HF-D18 12x		15' 9-1/2"	6' 9-1/4"	1,746	7' 9-1/4"	1,824	8' 9-1/4"	1,901
HF-D9 14x				1,315		1,392		1,469
HF-D12 14x	12' 7"	16' 10-1/2"	7' 0-1/4"	1,083	8' 0-1/4"	1,131	9' 0-1/4"	1,180
HF-D18 14x				1,842		1,919		1,997
HF-D18H 14x		17' 9-1/2"	6' 9-1/4"	2,372	7' 5-3/4"	2,471	8' 5-3/4"	2,570
HF-D9 16x				1,462		1,539		1,616
HF-D18 16x	14' 7"	18' 4"	6' 10-1/4"	1,938	7' 10-1/4"	2,015	8' 10-1/4"	2,093
HF-D18H 16x				2,502		2,601		2,701
HF-D18H 18x		19' 10"	6' 5-3/4"	2,633	7' 5-3/4"	2,732	8' 5-3/4"	2,831
HF-D18H 20x				2,763		2,862		2,962

### MOMENT FRAME NOMENCLATURE

HF-D18 H 8 X 9 FB



- For a complete list of standard sizes see the Hardy Frame® Moment Frame Catalog
- Two Story Frames available
- All model numbers shown ship pre-assembled; over-sized frames ship as "knock-down" units that require field welding and special inspection by others

### Moment Frame Template Kits

Column Type	HFT Model	Hold Down Rods		
		Grade	Diameter(in)	Length (in)
D9 & D9H	HFTK-D9	STD	3/4	32
D12	HFTK-D12			
D18 & D18H	HFTK-D18	HS		36

STD (Standard) rods are ASTM F1554 Grade 36

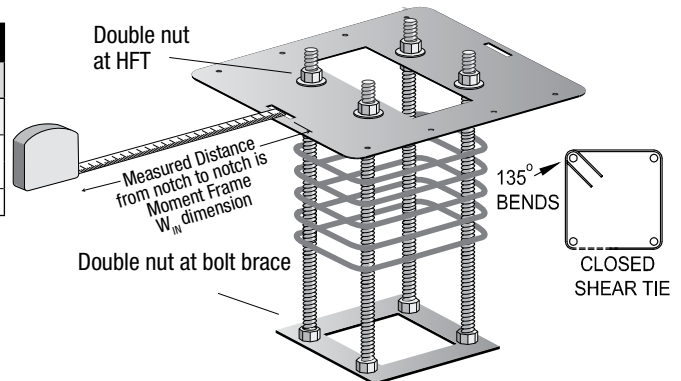
HS (High Strength) rods are ASTM A 193 Grade B7

All Template Kits include: 2-Templates (HFT)

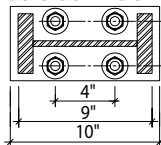
2-Bolt Braces (HFBB)

8-Threaded Rods with 2 washers & 4 nuts for each rod

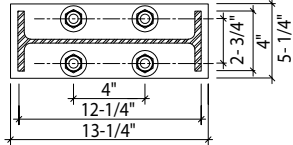
#3 Grade 40 rebar Shear Ties per the Anchorage Schedule



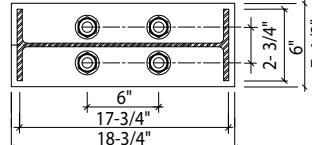
### D9 & D9H = BUILT UP COLUMN



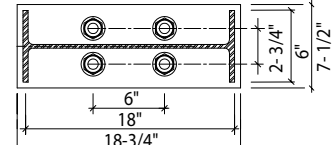
### D12=W12 x 22



### D18 = W18 x 35



### D18H = W18x46



### Hardy Frame Moment Frame: Anchorage Schedule<sup>1,2</sup>

Column Type	Anchorage Designation	Embed From Top of Footing l <sub>e</sub> (in)	Min Edge & End Dist at Footing (in)	Min Edge Dist at T.O. Conc (IN)	Min End Dist at T.O. Conc (IN)	Anchor QTY DIA & Grade Per Column (IN)	Closed Shear Tie Min QTY, Size & Spacing
D9	D9-Pinned	12	19	2 3/8	4	4 EA 3/4-STD	4 EA #3 @ 3" OC
D9H	D9H-Pinned						
D12	D12-Pinned	18	27	2 3/8	7 3/8	4 EA 3/4 - HS	5 EA #3 @ 3" OC
D18	D18-Pinned						
D18H	D18H-Pinned						

FOUNDATION DESIGN, FOOTINGS AND STEM WALLS SHALL BE DESIGNED BY THE ENGINEER OF RECORD

Notes: 1. Anchors are designed per AISC 341-10 and ACI 318 Appendix D based on f<sub>c</sub>=2500 psi, f<sub>u</sub>=60,000 psi and f<sub>y</sub>=40,000 psi (min) 2. For alternate shear transfers or pull-out resistance, calculations shall be supplied by the Engineer of Record

**Refer to the Hardy Frame Moment Frame Catalog and Installation Details for more specific information**