

Hardy Frame Installation

Step 1: Concrete Preparation

A) Concrete contractor shall use **Hardy Frame** HFX-Series Templates to accurately place embed bolts for spacing and alignment in the wall.

B) Attach the HFX-Series Template to a formboard at the location specified on plans and install bolts. Install 1/2x3x3 plate washers with nuts above and below at hold downs.

C) At interior footings Templates may be secured in place using stakes.

D) Footing design, embed depths and anchor edge/end distances are per the Building Design Professional.

E) Determine if the **Hardy Frame** will be installed on concrete or a mudsill. For installation directly on concrete the recommended bolt height above finished concrete is 2 3/4" and for installation on a 2x mudsill it is 4 1/4".

Step 2: First Floor installation on concrete

A) Installation of a moisture barrier such as Moistop or 15# felt is recommended under the Frame.

B) Set the **Hardy Frame** over the embed bolts and install (1) Hardened Round, (2) Round-Flat, or (2) SAE washers and a Grade 8 hex nut.

C) Tighten nuts until snug tight.

D) After framing and plumb & line are complete, place a 2x filler above the Frame to make up the height difference created by eliminating the sill plate, and connect with 1/4" x 4 1/2" screws through the top of the Frame, through the filler and into the double top plates or header above. For fillers larger than 1 1/2" net, refer to detail 3/HFX5

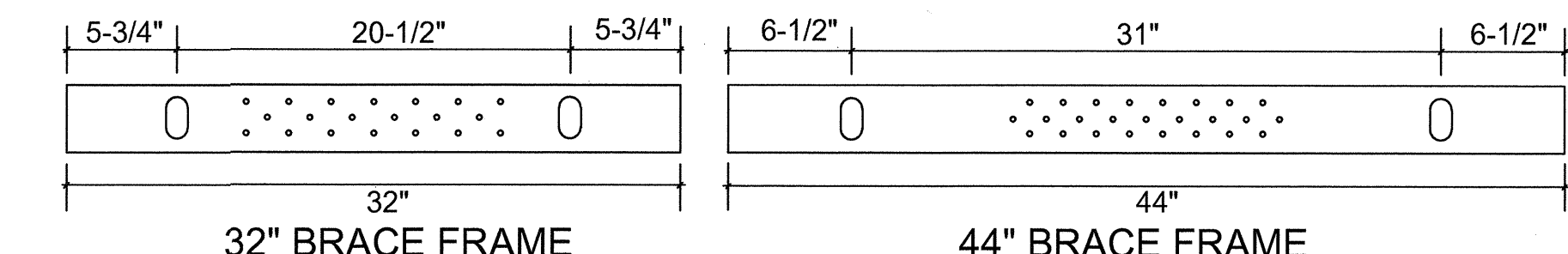
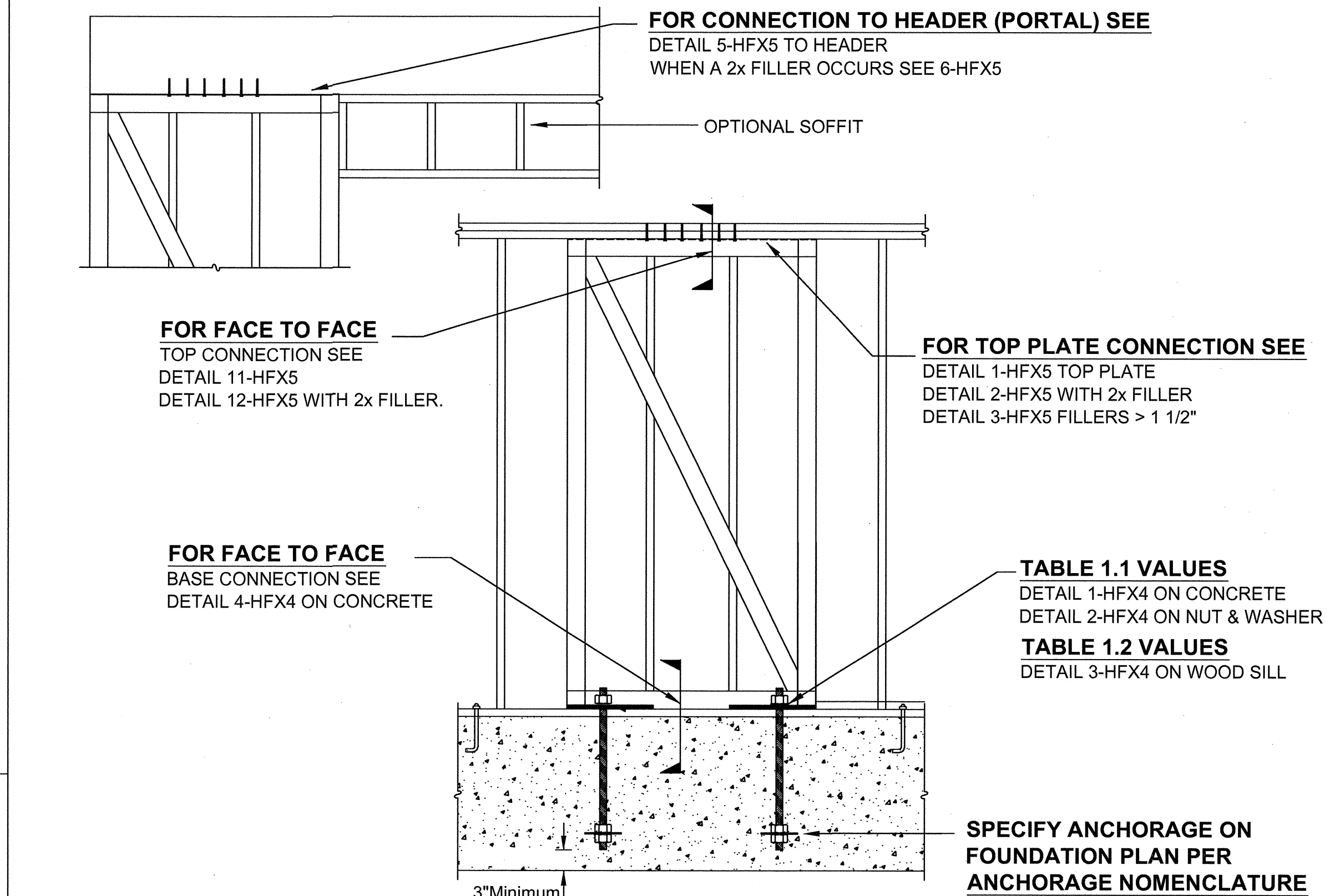
Step 2: First Floor installation on a Sill Plate

A) If the **Hardy Frame** is to be installed on a mudsill, plot the bottom plate and cut the length to match the width of the Frame. If located next to a door opening, allow the plate to run into the opening.

B) Set the **Hardy Frame** over the embed bolts and install (1) Hardened Round, (2) Round-Flat, or (2) SAE washers and a Grade 8 hex nut.

C) Tighten nuts until snug tight.

D) After framing and plumb & line are complete, install 1/4"x 3" screws through the top of the Frame into the double top plates or header above. Top plates must be continuous or have a minimum 8' lap at splices.



Product Width (in)	Max. Height (ft)	Anchorage (See Nomenclature for Description)		Shear Tie Quantity		Length L ₁ (in)
		STD	HS	STD	HS	
32	13	7/8 STD 11-16	7/8 HS 13-20	1	1	22 1/2
44	13				2	33

- 1) Applies to 2500 psi compressive strength concrete, both seismic and wind loading.
- 2) STD indicates rods complying with ASTM F1554 Grade 36 with a 1/2x3x3 plate washer double nutted on the embed end.
- 3) HS indicates rods complying with ASTM A 193 Grade B7 (or equal) with a 1/2x3x3 plate washer double nutted on the embed end.
- 4) Concrete edge distance must comply with ACI-318-08 D8.2..
- 5) Installation on curbs or stemwalls must be 6 inch width minimum, and require supplemental shear reinforcement per ACI-318-08, f_c=2500 psi.
- 6) Shear Ties #3 rebar, grade 60 (min).
- 7) Shear Ties are not required for installations away from Foundation Edge, for installation on wood framing or for Braced Wall Panel applications.
- 8) Foundation Design is by others
- 9) The Building Design Professional is permitted to modify these details to accommodate a specific condition.

HARDY FRAME 2009 IBC HOLD DOWN ANCHORAGE TABLE