"Brick, Block & Beers" is a quarterly structural masonry Q&A hosted by Masonry Association of Florida's Don Beers, PE, GC.

BRICK, BLOCK & BEERS

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How do you make a residential bond beam?

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What is a typical Florida bond beam and how is it built?

Florida masonry bond beams are usually 1 or two courses of bond beam block grouted solid. Bond beam block differs from regular block in that the center webs are cut down to receive horizontal steel. One course bond beams must be tied down at a closer spacing than 2 course bond beams because they don't have as much strength. The masonry industry recommends the two course bond beam for several reasons: Larger allowable spacing between vertical tie downs and a longer embedment length for vertical tie down bars are the main structural reasons.

Cost wise there is not much difference between the one and two course bond beams, especially when bars are only called for in the top course. The mason can lay his block all the way to the top of the wall without stopping. He simply puts in his grout stop under the second course then finishes laying his wall up and places his steel in the top. The second course can be built out of regular block so the only additional cost is about a cubic yard for grout for a typical 2000 sf home.

The steel is more effective in the top of the bond beam because of the uplift forces on the roof from wind.

To summarize, the most common bond beam used in Florida and the bond beam recommended by the masonry industry is a 2 course solid grouted bond beam with a single bar in the top course. The top course would be bond beam block and the second course would by regular block. Vertical wall steel should hook into the top of the bond beam. The spacing of vertical wall steel will vary

depending on your height of wall, span of roof and wind speed.

ICC 600 gives specific instruction all of these issues and is accepted by the current 6th Ed, 2017 Florida Building Code, Residential.

Additional Resources

Florida Building Code Online
https://www.floridabuilding.org/bc/bc_default.aspx

Use of Integral Water Proofing with a Direct Applied Stucco Finish

The architect is specifying the product DRY-BLOCK by gcp applied technologies as an integral waterproofing admix to be added to the block that are to be covered with a direct applied stucco. Is this what the industry would recommend?

The masonry industry and the stucco manufactures in Florida clearly DO NOT recommend the use of an integral waterproofing agent in masonry to be covered with direct applied stucco. This is not specific to the DRY-BLOCK product but applies to ANY integral waterproofing agent added to the block during the manufacturing process.

The reason is simple - integral waterproofing agents negatively affect the bond between the block unit and the stucco coating. This bond is one of the most important aspects direct applied stucco coatings. The problem is that good stucco bond depends on absorption of cement and water, out of the stucco, into the pores

of the block. The integral waterproofing agents are an excellent product for preventing exactly this type of water movement.

Integral waterproofing in the masonry is highly recommended for single-wythe masonry walls which are not covered with direct applied stucco. They would also be appropriate for masonry covered with stucco attached to lath that is then mechanically attached to the block.

In the case of direct applied stucco, the stucco itself is the primary waterproofing barrier protecting the wall. Stucco has proven itself an effective waterproofing barrier by both experience and testing.

Additional Resources

Florida Lath & Plaster Bureau
www.flapb.com

Masonry Association of Florida, Inc. | www.floridamasonry.com

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