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BPA INTERNATIONAL

JLC's

Letters

Structural Concerns?

To the Editor:

I was looking forward to reading the foundation repair article in the current issue ("Quick Foundation Repair," 8/98), as my firm designs repairs to many masonry basement walls. However, my anticipation turned to concern when I read the article — in particular the statement that the bulging may not be a structural concern. If the wall is bulging, it is overloaded. If the wall has horizontal cracks in the joints on the interior, it has failed in flexure and can no longer resist the lateral soil pressure that will be applied against it.

Of even greater concern was that no mention was made of bracing the interior of the wall during the concrete pour. Wet concrete can exert lateral pressures as great as two times that of the soil it is replacing. If the masonry foundation wall has already failed, the results can be catastrophic. In addition, if the wall is nonbearing, it could fail in shear at the base due to these high construction loads.

Robert Johnson, S.E.
R.I. Johnson & Assoc., Ltd.
Wheaton, Ill.

Carl Hagstrom responds: I tried to cover this ground in the article by stating: "If an old wall is too far gone, it may not be up to the task of functioning as a form for a new concrete wall. If you attempt a repair like this and have any doubts, be sure to get a second opinion from a qualified structural designer."

In this case, I was confident that the existing wall was stable enough to serve as a form. The repair was done because the wall was leaking, not because it was in danger of falling in.

As for the concern about the force exerted by wet concrete, I used the driest possible mix. As stated in the article, the concrete easily held its own form in the portion of the wall that extended above grade. I'm guessing, but I'll bet I could have piled up that concrete 2 feet high and a foot wide without a form on either side.

I used this technique mainly to save time. The other approach I considered would have been to clean the existing block wall, mechanically fasten wire lath to the wall, and put two or three parging coats followed by waterproofing (maybe) and the same amount of gravel (after the last coat hardened) — a time frame of days, not hours. The concrete was a time saver, and at $300, a bargain.

Another Fast Foundation Fix

To the Editor:

As I was reading the article "Quick Foundation Repair" (8/98), I thought to myself, "Been there, done that." My situation had the same basic problems; clogged drains, less-than-adequate waterproofing, and trees and shrubs too close to the foundation. As a one-man crew, I had to approach the problem from another direction. Instead of a slip form, I used a concrete block wall. After waterproofing, new drains, gravel backfill and reinforcing steel, I poured the block wall and the space behind with concrete. The wall was kept just below grade and after adding mulch, nobody was the wiser as to what had taken place.

Roger Staggs
Keyser, Wis.

No Appreciation

To the Editor:

I was tickled reading the letters from whining architects (*Letters*, 9/98), complaining about advertisers poking fun at them. It reminds me of lawyers trying to pass laws banning lawyer jokes. The truth is, we have all saved the architect's butt many times.

I have long contended that one of

the prerequisites to obtaining an architect's license should be a mandatory two-year stint in construction, say one year as a carpenter apprentice and three months each as plumber, sheet-metal worker, electrician, and contractor. Maybe this would give them an idea of how things really go together.

I agree that we form a partnership to serve the client, but if the architect hasn't put enough thought into the project to take care of all the little details, then he hasn't done his job. The little details are what make good projects and satisfied customers.

Common sense seems to prevail among craftsmen more so than architects, so I guess we'll just keep saving their butts (even though they don't seem to appreciate it).

Bruce Busboom
Dewey, Ill.

Foam Sheathing Has Its Place

To the Editor:

I am writing in response to a letter from Robert Randall, P.E., regarding the use of foam sheathing in place of plywood, as noted in the *Notebook* section of the June '98 issue of *JLC*. Upon moving to Las Vegas four years ago, I too was shocked at first to see foam sheathing on the walls of homes under construction, especially after building with fully-sheathed walls in New Jersey. I learned as much as I could about the system, and found that the foam is not a substitute for the plywood, but rather a replacement for the excess plywood that is not required for shear resistance.

Having built dozens of homes ranging from starters to $750,000 customs using this system, I can tell you that the homes are structurally sound, and are designed by structural engineers (as required by local codes) with enough plywood or OSB shear panels, hold-downs, and anchors to resist the code-imposed wind and seismic Zone 2B loads for this area.

In addition, the 1-inch foam sheathing/stucco-base adds approximately an R-4 rating to the wall system. Personally, the only thing I find "ludicrous" is that someone would dismiss it as structurally unsound without doing some research on the subject first.

Robert Kovacs, President
Home One Construction Consulting
Las Vegas, Nev.

Stronger Engineered Rim Board

To the Editor:

The *Practical Engineering* article titled "Shear Nonsense" (7/98) was very informative. However, I would like to clarify the broad statement regarding the use of engineered lumber in shear wall construction.

The author states that an "engineered rim board is not strong enough to handle the kind of compression forces that may be exerted by the posts…." Engineered rim boards vary in thickness and strength. While thinner rim boards will certainly have problems transferring the post loads, thicker rim boards, such as Trus Joist MacMillan's 1.25-inch TimberStrand LSL rim board, can transfer up to 4,250 pounds of vertical load.

4,250 pounds was established based on a buckling control of a 16-inch-deep member. The cross grain modulus of elasticity (MOE) of TimberStrand LSL is significantly higher than that of dimension lumber, which enables TimberStrand LSL to achieve a greater vertical load transfer capacity than solid-sawn.

Renee Wright Strand, P.E.
Sierra Pacific Regional Engineer
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