

Editorial

It's All Your Fault

"Why does a house cost so much to build? Why can this great nation not build enough good housing for its citizens? The answer is simple. Productivity has not kept up with wages, and no one is even seeking new ways to build housing at much less cost. Not industry. Not the federal government. Not the professionals. No one."

— Robert Halle, Research Architect from *Nation's Building News*

Take last Thursday...please. We were having problems getting material from a supplier, one client was grumbling about a bill, four sales reps couldn't wait to tell us that their respective companies had just made available the greatest product improvements since sliced bread, and the checkbook wouldn't balance. Two "subs" failed to make the schedule, one "crew chief" was in revolt, the week's cash flow wasn't enough to buy three bolts from a defense contractor, and we had to be in nine places at once. Just like the old days when we were building, remodeling and dreaming about, instead of writing about, housing.

There is only one solution at such times—we put a hold on all our calls, and took ourselves into a meeting.

After a hour or two of perusing old seed catalogues, reading the warranties on our desk lamp and peeling unused stamps off envelopes, we felt sufficiently guilty to begin thumbing through the backlog of trade publications mold-

ing away on the corner of our desk. That was how, in the pages of *Nation's Building News* (the semimonthly newspaper of the National Association of Home Builders), we came to make our acquaintance with the wisdom of Robert Halle.

Mr. Halle states emphatically that there is a desperate need for housing in this country. While projections for

The high cost of housing doesn't have a damn thing to do with the productivity of builders.

housing starts this year are in the range of 1.6 million to 1.7 million, he suggests that perhaps twice that number are required to address the true extent of the need—and that the only way to provide these units at a price people can afford is for builders to improve their productivity.

Halle concedes that the efficiency of builders over the past 40 years has improved through such techniques as "buying and cutting materials in large quantities...gang nailing and other devices—big machines [that] move earth around more efficiently...and so forth." But the simple fact of the matter, he says, is that "still, housing costs too much to build."

What is needed, according to Halle, is a complete rethinking of the entire

process; the "systems revolution needs to be brought to the building industry," as he puts it. This would consist of creating "adult Erector Sets," which he describes as "highly integrated component building systems...to be mass produced...transported to sites and readily assembled, without cutting or fitting, to produce housing at a cost most persons could afford."

But it isn't just the builders who have failed to bring the forces of innovation to bear on the productivity problem. As Halle goes on to demonstrate, the feds aren't interested in new ideas, the manufacturers are concerned with "mere improvements" of their products, and the architectural profession is "absorbed in the individual, hand-tailored building and in the superficial fashion-of-the-moment."

We will concede that there is no defense for the actions—and the lack

C. Smith, the current president of the NAHB. Mr. Smith tells us that now is a good time to buy a house because, basically, the price of a \$112,500 house has dropped \$75,000 in the past year.

Have builders magically become more productive over the past year? Has some "highly integrated component building systems" plant begun to churn out trainloads of adult Erector Sets? Has some horticultural genius figured out a way to make houses grow on trees? No. The cost of money simply has dropped three percentage points since last year.

What Mr. Halle (and so many others) conveniently ignores is that the true cost of housing is the total cost that the buyer pays, and that the bulk of that cost is the cost of borrowed money. But add to that the cost of land, the cost of the basic materials, the visible and hidden costs imposed by the various levels of government, the cost of energy and services, the cost of maintenance, and the fees of the other possible and probable players (architects, designers, lawyers, real-estate agents, appraisers and insurers). By the time all of these other elements are added up, the percentage of housing costs attributable to builders—the labor, overhead and maybe even some profit—has about as much impact on the cost of housing as the price of a spare tire has on the cost of an automobile.

Mr. Halle's message, of course, is that all of those other costs can't be tampered with—that they are immutable elements of nature and can't be changed by the only possible method for reducing the cost of housing—the systems revolution.

So the next time you're sitting at your desk until midnight shaving a bid, and your profit margin, to the bone, think about Mr. Halle's message and take heart—until the systems revolution arrives, you're doing the only thing that can be done to bring down the cost of housing.—M.R. ■

An Author's Reply

To the Editor:

I was pleased to see a review by Paul Hanke of my recent book, *Practical Pole Building Construction*, in your April issue. Several of his statements deserve a reply.

Paul felt that a lot of the information in the book could be found in other references; this is certainly true. My goal was to write a book for the owner-builder that would bring all these pieces together in one place for easy reference. There is no reason a home owner should have to wade through three different books, a stack of government publications and five years of magazine articles to erect a sturdy and economical pole building.

Paul also objects to the inclusion of "peripheral" details. Site selection, lumber grades and insulation techniques might be "old hat" to professionals, but they are essential details for a good owner-built structure. In addition, I show how many standard details must be modified for pole construction.

Paul calls the plans and examples "rather lackluster." I will admit that they are not the million-dollar architectural pole houses of Hawaii and California featured in other books. They are the stuff of everyday building: barns, cabins and houses that are inexpensive to build, heat and maintain.

On a technical note, Paul questions the use of a concrete necklace around a pole rather than using a footing under it for bearing strength. I can only quote my

source, Donald Patterson, P.E., author of *Pole Building Design*: "Concrete placed as backfilling around the pole is a more effective method of increasing bearing capacity." It came as a surprise to me, too.

Leigh Seddon
Montpelier, Vt.

Oxygen-Diffusion Queries

To the Editor:

In regard to "The Oxygen-Diffusion Debate" by Paul Hanke in your March issue, this excellent article leaves unclear two issues:

1. Whether the referenced investigations of diffusion included plastic piping in concrete radiant slabs. The text implies otherwise (e.g., "radiators," "140 F," etc.).

2. If not, whether a concrete slab can

diffuse oxygen at a sufficient rate to the diffusion-susceptible plastic to make its use in concrete slabs a concern.

Kenneth Kruger, AIA
Cambridge, Mass.

In reply to Ken Kruger's inquiry, according to Tomas Lenman of Wirsbo, research by both his firm and outside testing institutes showed that "burying the plastic pipes in concrete did not influence the oxygen permeability. It was the same as if the pipes were in free air."

The temperature of the circulating fluid definitely influences the rate of corrosion (doubling for every temperature rise of 18 F); hence, the desirability of mixing valves to reduce the temperature from normal boiler-output levels of about 140 F.

From my research, I found that the oxygen

diffusion rate is determined by two things: the difference in partial gas pressure between both sides of the pipe, and the permeability of the piping material.

Does fluid temperature influence the partial pressure of dissolved gases in the fluid? I consulted an engineer about this question, but he could not give a definite answer (and neither can I).

As to whether oxygen can diffuse through the slab and pipe at a rate sufficient to cause corrosion, the process depends on so many factors that it is impossible to give a definite answer. As a designer and specifier, however, I would err on the conservative side. On the other hand, I suppose it ultimately might be relatively easy and inexpensive to repair or replace a few steel or iron parts damaged by corrosion in a radiant system that contains plastic piping. This question remains something of a judgment call.—Paul Hanke

Getting the Shaft?

To the Editor:

I read your January '86 article regarding T-111 plywood. We ran into the same problem on a job in Rhode Island in September 1985. About 24 panels (pine instead of fir) delaminated and/or de-foiled. There also was a lot of buckling.

I feel we are getting the shaft. There must be a lot of people out there who are having the same problem, and I'd like to hear from them as to the outcome. Thanks.

Jack Opdyke
Zellwood, Fla.

Letters