EIGHT-PENNY NEWS

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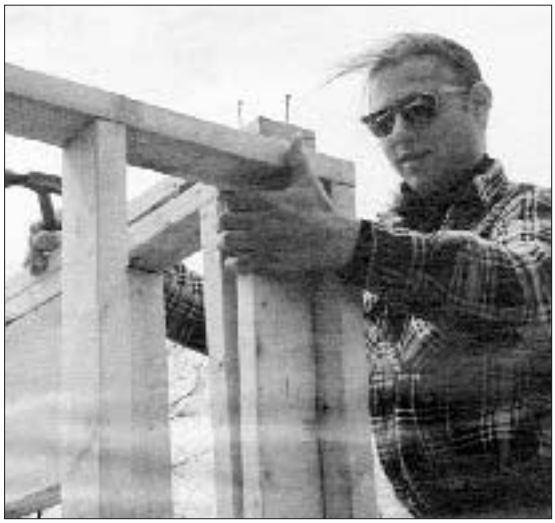
Good Help: Harder to Find Than Ever

Builders struggle to recruit and train new workers amid a nationwide loss of vocational programs

by Don Best



Student framer Patrick Young gets on-the-job training on an IEA "scholarship house" built with support from product manufacturers and local builders.

Faced with a chronic shortage of skilled workers, home builders are joining arms with educators, trade associations, and lawmakers to find new ways of recruiting and training workers.

The painful dimensions of the shortage were documented recently in a study by the National Association of Home Builders, which found that two out of three builders are now forced to employ workers who have skill levels *below* those expected for their jobs. As a result, the number of errors and injuries on the job is increasing.

The shortage of skilled framers, masons, roofers, and other workers can be traced in part to the powerful demographic changes that are reshaping the United States. Now that the "baby boomers" have slipped into middle age, the pool of younger workers on which the industry so heavily depends is shrinking.

"The average mason is now 50 years old," notes Nelson Cooney, president of the Brick Institute of America. "There's real concern here, and in the other trades as well, about the number and quality of new recruits."

Image problem. Part of the industry's problem is in its image. Many high school students — reflecting the prejudices of their parents and counselors — view construction work as a dead end, where one does dangerous, low-paid work with no career ladder to climb. Even students who have a natural talent and disposition for the trades are sometimes pushed down the

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Midwest Rains Leave Builders Backed Up

It's drying out, but the pain lingers in the saturated Midwest. The near-continuous rain of last spring and summer has set a lot of builders back, said Dean Humziker of Humziker and Furman, a builder and developer in Ames, Iowa. "Our biggest problem is that we haven't been able to subdivide any ground. Rather than be able to put in four or five foundations in a week, we've only been able to put in one or two," explained Humziker.

Saturated subsoil is also a problem, noted Humziker. "As we're grading now, we're getting water running out of the side of the ditch. We can't get compaction to come up so we can pave," he said.

This year, Humziker and Furman's production was down by about a third; with winter approaching, next year is a concern. "If we get a real wet spring," Humziker said, "we're in serious trouble."

The Kansas City, Mo., metro area is 13% behind in permits due to the rain, according to Gail Redmond of the Kansas City, Mo., Home Builders Assoc. "There were only three days in the month of July when it did not rain," she noted. Some framing and foundation contractors and workers took other jobs to feed their families during the slow spring and summer, she said; now there is a shortage of labor and a backlog of work.

"Foundation companies are backed up four to six weeks. Framing companies are backed up three months," said Redmond, adding that the Kansas City area was already short of framers the year before the rains came. "Right now we can definitely use carpenters. Anyone who can stick-build a house is definitely welcome in this town."

Material shortages have also been a problem. The poor condition of some flood-drenched lumber that has shown up on construction sites has raised doubts as to whether the lumber is still usable. In response, Western Wood Products Association Midwest District Manager Dave Utterback toured several sites with building officials and a builder. While some of the lumber inspected was marked by dirt, mud, and mold or mildew, Utterback said that the lumber was still structurally sound and could be used, and code officials agreed to allow framing to continue.

But Redmond said that most lumber companies did not resell any wet lumber to builders. "They took the loss," she said. "If you're not familiar with flood water, it's filthy stuff. Not only is the wood dampened and warped but it also has a stench to it."

Repair contractors will find that wood in existing homes also suffered extensive damage. The American Plywood Association (APA) stated in a press release that although the appearance of flood-soaked panels will suffer, APA-rated plywood and OSB are made with a waterproof glue and will still be structurally sound.

However, once the water recedes, decay is an immediate threat and steps should be taken right away to speed up the drying process. The APA recommends removing all drywall, carpeting, and wet insulation from around framing and sheathing. Wall cavities and areas around joists should be hosed out to prevent odors, then the building should be heated and dehumidified, or at least ventilated as well as possible.

To deal with buckled floor panels, the APA says you can kerf out the joints between panels with a rotary saw, block between joists under buckled areas, and nail through the panels into the blocking to pull the panels flat. Tongue-and-groove joints that get kerfed out should be supported with blocking. Badly delaminated sections of plywood will have to be replaced.

An APA special packet, "Flood of 1993," is available free from the APA at P.O. Box 11700, Publications Dept., Tacoma, WA 98411 (or call 206/565-6600, ext. #189). The packet contains seven technical notes addressing problems such as buckling, decay, and mildew discoloration of panels. □

STATE BY STATE

Connecticut. Builders and other employers here can expect to save an average of 17.5% on their workers comp premiums for the latter half of 1993. The rate adjustment stems from $200 million in workers comp premium reductions approved by the Conn. Insurance Commissioner retroactive to July 1.

Rhode Island. Subcontractors here won a prompt payment bill for public work. The new law requires general contractors to pay their subs within ten days of receipt of payment from the state.

New York. The New York State Builders Assoc. successfully opposed a bill that would have licensed lead abatement contractors in the state. They said the bill defined a lead project so broadly as to include many routine maintenance, house painting, and renovation tasks. All such jobs would have become the monopoly of licensed lead contractors. The bill followed a model similar to the asbestos abatement, with extensive training, high insurance costs, and high fees.

Massachusetts. New England's venerable energy-efficiency association NESEA (New England Sustainable Energy Assoc.) is about to put theory into practice by designing and building a new headquarters that will incorporate state-of-the-art approaches to resource-efficient construction. Anyone who would like to participate in the design or construction of the space should contact NESEA at 413/774-6051 for more information.

Vermont. The Green Mountain state is in deep trouble, according to The National Trust for Historic Preservation, which has placed the entire state of Vermont on its 1993 list of the nation's "Most Endangered Historic Places." The threats, say supporters of the designation, include commercial sprawl in several communities as well as two proposed Wal-Marts and a 500,000-square-foot mall. □

Shiny Roofs Cut Cooling Costs

Reflective roof coverings can significantly lower home cooling costs in hot, sunny climates, according to a study released by the Florida Solar Energy Center, a state research group. Cooling costs dropped 25% and 43% in two Florida houses whose roofs were painted with the white elastomeric roof coating containing highly reflective titanium-dioxide pigment. The house that saved 43% had a flat roof that could not be insulated, according to the research center's Danny Parker; the other house had R-11 ceiling insulation. Effective insulation is usually the cheapest way to lower cooling costs, Parker emphasizes.

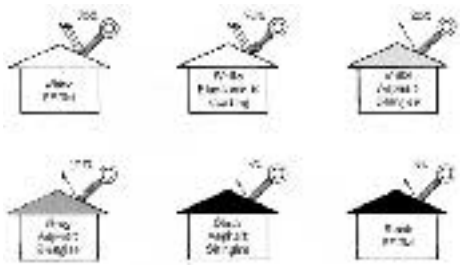
White EPDM contains the same titanium pigment as the widely available roof coating polymer used in the Florida study, explains Parker, and also will reduce cooling costs when compared with a highly absorptive roof covering such as black asphalt shingles. White metal roofing is another good choice for a reflective roof, he notes. Surprisingly, white asphalt shingles do *not* save much on cooling, according to Parker, because a lot of black asphalt shows through the white granule top of the shingle.

The acrylic-based elastomeric coating used in the study is widely available in many colors, says Parker, though only the white kind is highly reflective. Coating a roof is not cheap. The material has to be applied in two 20-mil coats, using around 125 gallons and costing about $3,000 for a typical roof, including labor.

But if you're planning to recoat a roof anyway, using the white-pigmented variety is a way to reap some cooling savings. Annual savings for the typical home would be about $40 to $80, says Parker.

For information, contact Danny Parker at the Building Design Assistance Center, FSEC, 300 State Rd. 401, Cape Canaveral, FL 32920 (407/783-0300). □

Which Roofs Reflect the Most Sunlight?



SOURCE: FSEC/ENVIRONMENTAL BUILDING NEWS

TAX TALK

New Tax Law Hurts in Many Ways… Helps in a Few

by Irving L. Blackman

On August 10, 1993, President Clinton signed the new tax law: The Revenue Reconciliation Act of 1993 (the Act). Nine days later, while I was speaking at a seminar sponsored by a national trade association, a family business owner asked me, "Irv, what do you think of the new law?" My response: "It's something like moving the deck chairs around on the *Titanic*."

Except for the huge increase in tax rates — a real disaster — the rest of the Act is a complicated maze of do-nothing political compromise. A bad law!

Let's begin by examining the tax-rate situation under the Act.

Individual Tax Rates. For starters, the Act adds a 36% tax rate to the existing 15%, 28%, and 31% rates. The new 36% rate is retroactive to January 1, 1993, and applies to taxable income greater than:

- $140,000 for couples filing jointly,
- $127,000 for heads of household,
- $115,000 for single filers, and
- $70,000 for married persons filing separately.

Next, the Act, in a soak-the-rich frenzy, adds a 3.6% surtax onto the top of the tax pile starting on income in excess of $250,000 for married couples filing jointly and heads of household, and starting at $125,000 for any single filer. That's a top rate of 39.6%. But wait. We ain't done yet.

Corporate tax rates. Effective January 1, 1993, the Act inches up the top corporate rate — from 34% to 35% — on taxable income over $10 million.

Capital gains. Good news. The rate is being held at 28%.

Expenses. Next let's take a look at the important changes that affect your business.

These rules make me and millions of my fellow taxpayers see red. These are the three nightmarish rules that affect travel and entertainment deductions:

- Meals and entertainment — only 50% is deductible (down from 80%).
- Club dues — zero is deductible (this means all clubs: golf, lunch, tennis, whatever).
- Business travel deductions for spouses and dependents are virtually eliminated. (Just try telling your spouse that he/she can't go to the convention in Hawaii because of the new tax law.)

Expense election. The amount of qualifying business assets (for example, equipment) eligible for expensing is increased from $10,000 to $17,500 per year effective for property placed in service in tax years beginning after December 31, 1992.

Depreciation. More bad law. The depreciation period for business real estate is increased from 31.5 years to 39 years.

"C" Corporation v. "S" Corporation. Hands down, the most commonly asked question by owners of closely held businesses since the Act became law is, "Irv, should I stay an S corporation or switch to a C corporation?" Unfortunately, the right answer varies depending on many factors and will be the subject of an in-depth future article. In the meantime, we have developed a comprehensive computer model in our office that clearly shows staying an S corporation is almost always your best bet.

In summary. As you can see, except for the increase in tax rates, the old tax law is still solidly in place. For more information on how to reduce taxable income, write for one or more of the following special reports: (1) *How to Take Money Out of Your Closely Held Corporation*; (2) *A New Tax Superstar… S Corporation*; or (3) *Your Business… America's Best Tax Shelter* ($27 each, $41 for any two, $49 for all three). Send to Book Division, c/o Blackman Kallick Bartelstein, 300 S. Riverside Plaza, Chicago, IL 60606. □

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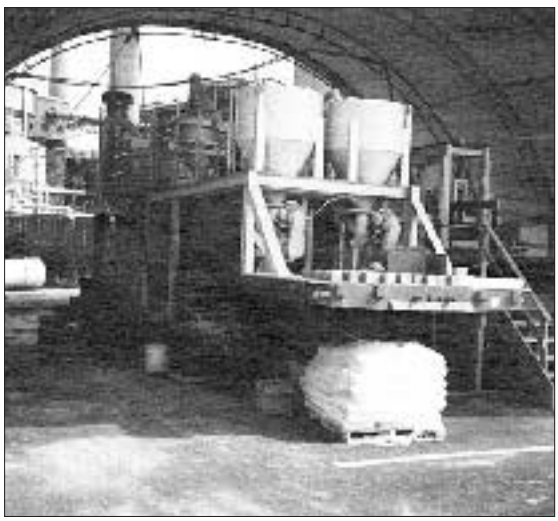
Fly-Ash Concrete: Turning Waste into Walls



Hauled around the U.S. on a flatbed trailer, this portable ACC plant produces 90 blocks a day.

About 70 million tons of fly ash is produced as waste in the U.S. each year by coal-burning electric utilities, and ends up in landfills. A much better use would be to mix it with cement and make autoclaved cellular concrete (ACC), a material that has been popular in Europe for several decades.

The technology for making ACC has now arrived in this country. With funding help from the Electric Power Research Institute and a group of utilities, the Providence, R.I.-based North American Cellular Concrete (NACC) has assembled a miniature ACC plant that it is hauling around the country. The aim of the plant, which can produce about ninety 24-inch-square blocks a day, is to create a market for ACC by introducing the material to builders, architects, and the media.

ACC is a blend of 70% fly ash, 15% cement, and 15% lime. The ingredients are mixed with water, left to set until they reach the consistency of hard butter, then cut with piano wire into blocks or prefabricated wall panels. The blocks or panels are then put into an autoclave — a type of kiln that bakes them under heat and pressure — until they reach their final hardness.

A small amount of aluminum powder is added to the mix to create air bubbles. These lower ACC's weight to between one-third and one-fourth that of concrete, and give it an R-value of 1.25 per inch, more than ten times better than regular concrete. In addition, the finished product can be cut and worked with traditional carpenter's tools.

NACC managing director Bob Sauber says that the material's 300- to 700-psi compressive strength makes it suitable for foundations on single-family homes, but his company has a wider use in mind.

The eventual goal is to market ACC as an alternative to wood-based framing. "The rest of world uses almost anything for construction," he says, "but we've built our industry around wood." Given the growing interest in recycling and the rising price of lumber, Sauber thinks that the time is right for alternatives.

The plant has made stops in Connecticut and Massachusetts. It is now parked outside of Atlanta, Ga., where it's scheduled to remain through January. After that it's on to Paducah, Tenn., Valma, Nev., and upstate New York. For more information, call NACC at 401/621-8108. □

From What We Gather

What goes up must come down, and California real estate is no exception. After prices increased at nearly twice the national average during the '80s, they are now tumbling. The median home price in Los Angeles, for instance, has dropped 25% in three years, while top markets have dropped even more: 40% to 50% in Newport Beach and Beverly Hills. Statewide, prices have dropped a more modest 10% on average from their 1991 peak.

Japan's workers are famous for their high productivity, but the building trades may be an exception. Japanese officials want to import thousands of U.S. kit homes over the next seven years, but are concerned that they will cost two to three times more to assemble in Japan than they do here. Why? Because of the lower efficiency of Japan's home building industry, according to a report in Japan's *Nikkei Weekly*.

Want dry wood? Just pop it in the microwave. That's essentially what forest industry researchers in Vancouver, B.C., have done with a new electromagnetic kiln. In what has been called "the most important lumber technology breakthrough in years," the process leaves wood uniformly dry in less time and uses half the energy of conventional kilns. Also, because the moisture turns to steam in the process, researchers expect the process will kill the pinewood nematode, a microscopic organism recently banned by the European Community in all imported lumber.

The thermal mass in log homes can cut your heating bills, but not much, according to a study just completed for the Washington State Energy Office. The group monitored six log homes in Idaho and ran computer simulations. The results: Homes built from R-11 logs performed the same as conventional homes built with R-11.4 insulation.

Expensive designer bath fixtures reached a new "high" last month when federal agents in Kansas City, Mo., confiscated a bathtub from Bolivia worth a quarter-million dollars. The tub was made largely of high-grade cocaine, blended with a little fiberglass and plastic into an odorless resin. Once through customs, a distilling process retrieves the cocaine. Capping a three-year investigation, undercover agents bought the tub from a Bolivian manufacturer who boasted he could disguise cocaine as just about anything. □

OSHA Targets Haz-Com Violations

Is there a Haz-Com on your job site? If not, you run a good risk of being cited by OSHA when the inspectors drop by. Lack of a Hazard Communication was the most frequently cited violation nationwide in 1991, according to the recent OSHA publication, "The 100 Most Frequently Cited OSHA Construction Standards in 1991."

Haz-Com violations accounted for 8.9% of the citations issued that year, holding the number one spot for the third year in a row. In fact, similar procedural violations, including failure to display an OSHA poster, held the top six spots on the list and accounted for over a quarter of the citations issued by federal OSHA inspectors. (Failure to display an OSHA poster was fourth at 2.7%).

The most common physical hazard cited, lack of guardrails around platforms, accounted for only 1.7% of cited violations. Physical hazards as a group, however, made up about 80 of the top 100 list, and together

OSHA INSTITUTE

Unsafe scaffolding is a frequent OSHA target. Falls cause one-third of construction deaths.

accounted for the majority of citations. Perhaps the most useful part of the new OSHA pamphlet, which is intended as a guide for both employers and OSHA inspectors, is the section that discusses each of the top 25 physical standards violated. Pictures of unsafe situations and case studies of fatal accidents serve to drive home OSHA's point.

Mike Marshall, the author of the report, says that the number of Haz-Com violations is high because the requirement is relatively new. "For a small employer, it's probably because they haven't gotten around to it yet," he said. But it is a high priority for inspectors; "We tell our compliance officers through directives… when you go in, that's one of the first things you look for."

As for the OSHA poster, Marshall said this is an "informational vehicle to tell employees that they have certain rights to a safe workplace." The poster is available free from any OSHA office. "The poster is a good example of why I wrote this report — just to tell people, hey, this is an easy one to take care of, it's free, let's do it." Lack of an OSHA poster doesn't usually carry a penalty, Marshall added, unless it's part of a pattern of serious or repeated violations. □

track toward college.

The industry's "image problem" goes hand in hand with the decline of vocational training in the United States, notes Neil Pennywitt, director for Industry-Education Alliances (IEA) at the Home Builders Institute (HBI), the educational arm of the National Association of Home Builders. "Poor image led to declining enrollment, which eventually killed a lot of high school and community college vocational programs," he says.

Few vocational programs. But image alone isn't to blame. Three other powerful influences have cut the legs out from under vocational training over the last decade. One was the publication of *A Nation at Risk*, a 1983 Department of Education document that bemoaned the decline of academic standards among high school students. In response to that report, school administrators scrambled to raise the science, math, and English requirements for their students, but often sacrificed vocational education programs in the process.

Meanwhile, the U.S. Congress, during the Reagan years, saw fit to redefine the goals of the Carl D. Perkins Vocational Education Act so that minority, handicapped, and economically disadvantaged kids would be especially encouraged to take vocational education courses. While the motives for that change may have been good, it left many high school students — and their parents — with the impression that vocational courses were a dumping ground for "problem" or "special" students.

Finally, the long decline of the labor unions — especially in residential construction — led to fewer and fewer slots for talented apprentices, which in turn produced fewer journeymen for the industry.

Public-private partnerships. Virtually everyone agrees that the key to developing new recruiting and training programs that work is to form tight alliances between educators and builders, who have often failed to communicate with one another, let alone cooperate.

One of the most promising new models to employ this idea is the Industry-Education Alliance program that was launched in 1991 by the Home Builders Institute.

IEA programs, which are up and running now in seven cities, depend on a close working alliance between a local community college or voc-tech school and a group of local builders. A small number of promising students — typically 30 to 40 per program — are given scholarships that cover their tuition and provide a $10 daily stipend for food and transportation. The students, typically in their mid-20s with some college credits under their belts, are organized into work crews and given 26 weeks of intensive, full-time training — 80% of it at the building site.

"You can teach construction theory forever and get nowhere," explains HBI's Fred Day. "We've found that if you give a sharp young person real-world training — that's full-time, hands-on training for 26 weeks — you end up with a skilled worker who's able to pursue a career in construction."

Responding to the industry's most pressing shortage, all seven IEA programs exclusively teach framing. With seed money from the U.S. Department of Labor, the first three programs were launched in Charlotte, N.C., Ft. Pierce, Fla., and Columbus, Ohio. Spurred by those successes, HBI has since launched four more, in Richmond, Va., Frederick, Md., Cincinnati, Ohio, and Greenville, N.C.

Each program counts on a local association of builders to start a "scholarship house," which is framed by the students and then sold on the open market, with profits plowed back into the program to fund more scholarships. Dozens of local and national companies are supporting these scholarship houses (and promoting their brand names in the process) by providing free construction materials and appliances. By the time the students have finished the scholarship house and other area projects, they've each framed the equivalent of four and one-half houses. HBI says that the "certified framers" who graduate from these courses are finding quick and well-paid employment with local builders.

"The free and widespread publicity we're getting from these programs is also helping to reshape the industry's image," says Neil Pennywitt. He adds that HBI may eventually budget advertising money for an image campaign aimed directly at parents, teachers, and counselors.

Pennywitt says that three additional framing programs — in Phoenix, Atlanta, and Houston — will be started early in 1994. "After that, we'd like to expand the program to include masonry and plumbing."

What lies ahead. Other such partnerships between business leaders and educators could become commonplace in the years ahead. The School-to-Work Opportunities Act of 1993, which is on a fast track through Congress, could provide as much as $300 million in its first year to help forge alliances between school-based education and the workplace. President Clinton is promoting these funds as "venture capital" to get programs like HBI's started, with self-funding mechanisms, such as the scholarship house and corporate support, to kick in later.

"I think we're starting to see the Departments of Labor and Education working together in some really unprecedented ways," says Jesse L. Hudson, president of the American Vocational Association, which represents 35,000 vocational educators. "Instead of just throwing money at the problem, they're trying to address the structural problems that have undercut the country's vocational education system. I think we might see real improvements ahead." □

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