

NOTEBOOK

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Temporary Workers Fill Niche in Tight Labor Market

Some builders converting temps to employees

It's no secret that builders today are facing the tightest labor market in years. In many areas, the unemployment rate is near zero, and help-wanted ads go unanswered for weeks or months. But some builders have found that hiring temporary workers from an employment contractor can provide a partial solution to the problem.

Although many employment contractors focus on clerical and industrial workers, a number of large national agencies — including Contractors Labor Pool of Reno, Nevada, Labor Ready of Tacoma, Washington, Labor Finders International of Palm Beach Gardens, Florida, and Tandem (formerly Labor World) of Deerfield Beach, Florida — also supply skilled tradespeople, such as framers, drywallers, and finish carpenters. The employment contractor pays the workers' wages and all associated costs, such as worker's compensation, FICA, and other state and federal taxes. Rates vary from place to place but, in general, a builder who needs a temporary employee can expect to pay the agency about twice the wage the worker would make if hired directly.

Paul Winans is a residential remodeling contractor in Oakland, California, who has used temporary workers successfully for years. "Three of our five full-time field employees are lead carpenters," he says. "We bring in temps as we need them for demo work, rough carpentry, and some finish carpentry. It's a way to have a core of permanent employees that you can expand during busy periods, without having to lay people off when there's less work."

Like permanent employees, of course, temp workers vary in quality and ability. Temp agencies are constantly hiring (Contractors Labor Pool spends a million dollars a year for classified ads alone), and while new employees pass through a screening process, unqualified people do slip through the mesh. Most agencies allow for a trial period of two to four hours, during which time an unsatisfactory temp can be sent back without charge.

But as Winans notes, sending an unsatisfactory worker away doesn't get the job done. The key, he says, is developing the same sort of long-term relationship with the labor contractor that you have with any regular supplier.

"You call them two weeks before you need a guy," he says. "You say 'look, this is an important job, we need someone reliable, can you come through for us?' If you're a steady customer, they'll want to keep you happy. That's one of the advantages of using some temp labor all the time, not just to fill in during a crisis."

Berkeley, California, builder Michael McCutcheon also finds it helpful to
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Fixing Up After Floyd's Floodwaters

In mid-September 1999, eastern North Carolina was devastated by floods in the wake of hurricane Floyd. Most of the thousands of flooded homes were located in scattered communities of low- and middle-income rural residents.

As the waters receded, the vista was daunting. "The water was considered sewage by the Dept. of Public Health," says Dan McFarland, a building science specialist from Advanced Energy Corp., a non-profit company in Raleigh. "The



After the floodwaters receded in North Carolina, the first step in the cleanup operation was to remove and dispose of all saturated materials, including drywall and insulation. To speed up drying, the vinyl siding was removed from this house.

water was mixed with effluent from wastewater treatment plants, septic systems, and agricultural waste lagoons. There were hundreds and hundreds of dead animals — cattle, hogs and horses. Carcass removal was an issue."

Cleanup crews have been working continuously for months, removing debris and drying out the buildings worth saving. The workers include contractors, homeowners, volunteers, and workers from non-profit groups. Advanced
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Temporary Workers

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work closely with the labor supplier. “You have to know what you want, and be willing to pay for it,” he says. If the builder simply requests a temporary laborer to haul materials around, for example, the agency may send out “a pretty rough character.”

“That might be fine on a commercial job,” McCutcheon says. “Maybe it sounds harsh, but if you’re doing a high-end residential remodeling where the homeowner is living in the house, you might want someone a little more presentable. You can explain that to the dispatcher, and say you’re willing to pay an extra three or four bucks an hour for someone a little better than average.”

Even the most highly skilled temp worker, Paul Winans says, requires close supervision. “In our company, the lead carpenter is the one who actually deals with the temp agency. He decides what people he needs, and he has to know that you can’t just throw people at the job and expect it to get done. I’d never leave a temp in charge of a job, no matter how good he was, because

he’s never going to be as committed as your own employees, who identify their own interests with the success of your company.”

That said, both Winans and McCutcheon note that hiring temps can also be an excellent way to shop around for workers to fill permanent positions. (It actually works both ways, because tradespeople who are new to an area often use temp-agency work as a way to earn wages while checking out opportunities with local builders.)

Many builders also have horror stories of employees who interviewed well or came highly recommended, but failed miserably on the job site. Working with temps can be a way to evaluate potential employees for days or weeks before making a commitment, without any hard feelings on either side if the arrangement doesn’t work out.

Moving a worker from temp status to full-time employee can present complications, though. Many temp agencies—particularly those that provide mostly unskilled and semi-skilled workers — don’t discourage clients from hiring temps on a permanent basis.

Other agencies, however, seek to protect their own supply of skilled workers by charging a “buyout fee” — often amounting to several thousand dollars — to those wanting to make a permanent hire from their ranks.

Contractors Labor Pool, for example, charges a buyout fee that is based on the worker’s skill level, but is reduced over time. Once the worker has put in a certain number of hours with the same client, the fee is waived.

“Sometimes you’ll keep working with an agency guy you’re thinking of hiring even when you don’t have much work for him,” Mike McCutcheon says. “You know that if you send him back, someone else might get him. It’s almost like a TV game show.”

In such cases, it can be tempting to make an end run around the agency by making the hire under the table, but Paul Winans warns against doing so. “If you steal people from the agency,” he says, “the word will get around. In the long run, you stand to gain more from keeping a good relationship with the agency than you do from picking up any one employee.”

Floyd’s Floodwaters

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Energy Corp., in partnership with a state agency, the North Carolina Energy Division, has been providing technical assistance and training to many of the workers.

If a flooded building is worth saving, the first step is demolition. “Workers need to wear rubber gloves, a Tyvek protective suit, and a NIOSH N95 mask,” says McFarland. “You have to pull out the carpeting and sheetrock to at least 18 inches above the high-water mark. In some cases,

you have to remove the subfloor. Anything that could have been holding moisture needs to be torn out. If the HVAC system was in the crawlspace, it has to go.” Any electrical components that were submerged, including receptacles and wiring, need to be removed and discarded.

The next step is to wash off the silt and mud from the framing members. “You need to go into the house with a power-washer,” says McFarland. “Once the dirt is off, you come back with a sprayer filled with bleach-and-water solution, and spray everything.”

After decontamination, the house has to be left to dry out, which can take several weeks. “The OSB and plywood are slower to dry than the 2x4s,” says McFarland. In order to hasten drying, workers have been using fans and portable heaters. Often the homeowners are eager to put up new drywall, but walls that are closed in before they have dried thoroughly will develop mold and mildew problems.

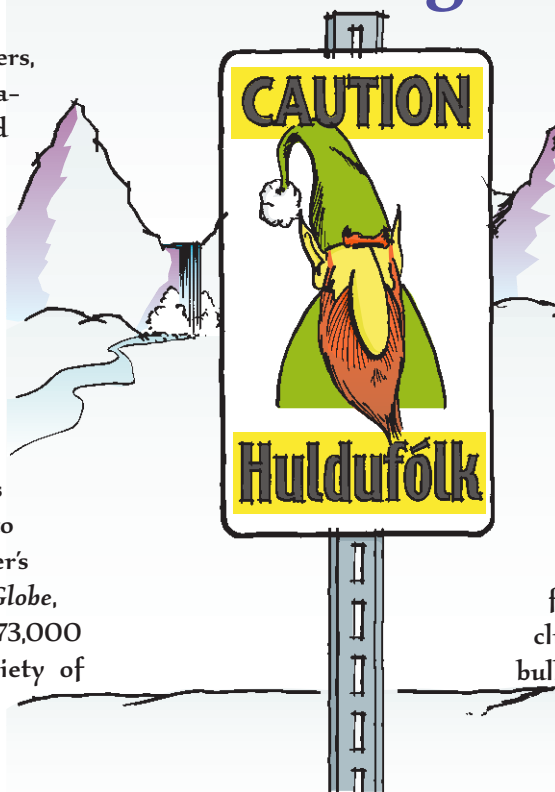
One unanswered question is whether there will be any lingering odor problems in the rebuilt homes. “It’s a little too soon to tell,” says McFarland. “In some entire neighborhoods, you can still smell a musty mildew odor. You can just smell it in the air.”

In flooded homes, the drywall is removed to at least 18 inches above the flood line. A worker checks the framing with a moisture meter to assess how drying is progressing.



Elf Habitat: No Building Permitted

Iceland is known for its geysers, glaciers, waterfalls, and volcanoes. Many homes are heated with geothermal systems that take advantage of naturally hot groundwater. Crime and poverty are almost unknown, and the literacy rate is 100 percent. But in addition to its natural advantages, the North Atlantic island also has some supernatural liabilities that complicate life for builders and engineers. According to recent news reports by Reuter's news service and the *Boston Globe*, more than half of the island's 273,000 inhabitants believe in a variety of



supernatural beings, including elves, fairies, gnomes, lovelings, and huldufolk, or "hidden people." It's not unusual for builders to consult with experts in the field before committing to a project, and modifying the plans if elves or other beings are detected in an area. One such expert, schoolteacher Magnus Skarphednisson, observed that harming the elves could cause problems ranging from cost overruns to fatal accidents.

But the elves have their good points as well, according to Arni Bjornsson of the National Museum of Iceland. "Hidden folk have provided a wonderful excuse for clumsy workers," he said. "I didn't wreck that bulldozer, boss, an elf did it!"

Cross-Bridging Proves Its Worth in I-Joist Stiffness Tests

Published span tables for wood I-joists assume that they will be installed without bridging or blocking, and that's how most builders install them. A recent study undertaken for the Canadian Mortgage and Housing Corporation, however, suggests that adding cross bridging (or "X-bracing") to I-joist floor framing may improve the performance of the finished floor. Researchers at the Wood Science and Technology Center at the University of New Brunswick constructed eight floor systems based on 11⁷/₈-inch I-joists with identical spans, spaced at 406 and 610 millimeters on center — the metric equivalent of 16 and 24 inches. One or more rows of 2x2 wood cross bridging was secured with threaded nails, and each floor was tested for deflection under

load, resistance to vibration, and failure strength.

Not surprisingly, the tests confirmed that the addition of cross bridging caused more joists to share point loads, reducing deflection at the loaded joist. Other findings, however, were somewhat surprising. Among them:

- All other things being equal, a floor with closer joist spacing benefits more from the addition of cross bridging than a floor with more widely-spaced joists.
- In addition to reducing deflection, bridging between joists also significantly reduces vibration in the completed floor. Adding an additional row of bridging reduces deflection even more, but con-

tributes little in terms of further reduction of vibration.

- Adding a course of strapping directly beneath the bridging reduces deflection and vibration still further. In the case of strapping, however, the added benefit is most evident in floors with wider joist spacing. In either case, the addition of strapping was found to compensate for some problems associated with improper installation of the cross bridging.
- If the bridging is installed correctly, it was found that two 2¹/₄ inch spiral nails at each end of the bridging members adequately transferred loads between joists until the failure of a joist itself.

Non-Groundbreaking Development in Foundations

Is it possible to build a secure, permanent residential foundation without so much as scratching the surface of the ground? According to Pin Foundations of Gig Harbor, Washington, the answer is yes. The company manufactures the FootPrint foundation system, which can be used on building sites where concerns about erosion, stream runoff, or damage to existing vegetation make excavation work impractical.

of the crawlspace cripple wall — a level floor is laid and construction continues as for any wood-framed building.

According to company owner Richard Gagliano, who lives in a 2,300-square-foot house he built on a pin foundation in 1998, a conventional foundation would have been about 10% cheaper in his case. "But I had a good site with pretty good soil," he says. "On difficult



Designed for sites where excavation is impractical, this innovative foundation system uses site-formed grade beams to provide a base for framing (above). Steel pins, driven with a jackhammer, provide bearing (left).

The patented system consists of a steel-reinforced perimeter grade beam, which is poured in reusable concrete forms placed on a thin gravel bedding. A jackhammer is used to drive heavy steel pins through channels in the beam and from 5 to 9 feet into the underlying soil, and a mud sill is bolted to the grade beam. Once the slope of the ground has been taken into account — a task accomplished by adjusting the framing

sites, conventional foundations can get expensive in a hurry. There are situations where the pin foundation would be much faster and cheaper than excavating." Although the pin foundation is not code approved, Gagliano claims that it can be designed to meet the specific characteristics of an individual building site, with the plans submitted to the local building departments as an engineered solution.

OFFCUTS

Manufactured housing continues to suffer from slumping sales, according to the *Business Journal of Charlotte*, N.C. Because dealers can't move their existing inventories, at least 13 U.S. manufactured housing plants, most in the Southeast, have closed their doors. Proponents of manufactured housing, however, still hope for a brighter future. "It is ridiculous to assume that the American public will continue to buy homes scrambled together in uncontrolled locations at job sites, any more than they will assemble their own furniture, cell phones, TV sets or automobiles from loose pieces dumped in their driveways," writes Don Carlson in the Nov. 1999 issue of *Automated Builder*.

The Washington Monument is built on the rain-screen principle, according to *U.S. News and World Report*. The monument was built with weepholes to allow for drainage of any water that penetrated the mortar. The weepholes, which were deliberately plugged up years ago by uninformed repair workers, are being unclogged as part of the current restoration of the monument.

Construction activities are responsible for 64% of the "fugitive dust" in Las Vegas, according to the *Nevada Home Builders Journal*. Because airborne dust is associated with respiratory illness, regulations in Clark County, Nevada, now require construction crews to water down disturbed soil and to clean up the job-site "track-out" dirt that falls from vehicle tires onto the street. Since Las Vegas dust levels still exceed EPA standards, the federal agency is now pressuring county officials to implement further dust-control regulations.

Not Much Percentage in Low-e Paint

A company called ChemRex has recently been promoting a product called Radiance paint, touted as an “energy-saving low-e interior paint.” The company claims that if the interior walls and ceiling of a room are painted with their product, the emissivity (or e-value) of the surfaces will be lowered, allowing the surfaces to reflect some of the radiant energy hitting them. Their literature uses examples that seem to show energy savings of 15% to 30%.

Does it work? Since most builders assume that you need thick insulation to reduce heat loss, the typical reaction to these claims is, “Can you really save energy with a layer of paint?” The answer, briefly, is no.

According to the paint company, use of their product will lower the emissivity of a wall or ceiling to 0.65, compared to a typical wall surface having an emissivity of 0.95. What the company fails to tell you:

- ✦ The value of 0.65 is not really low-e. For example, most low-e windows have emissivity ratings in the range of 0.04 to 0.1.
- ✦ Almost all winter heat loss from a home occurs not through radiation, but through convection (air leakage) and conduction (which is slowed by insulation).
- ✦ The paint will have no effect on portions of a wall that are covered by a bookshelf, cabinet, or picture.
- ✦ The effectiveness of the paint will be reduced by dust.
- ✦ Although it is true, as the company notes, that a person can feel differences in the rate that heat radiates from their body to a cold surface, the effect is most significant if one is naked, and becomes less significant if one is dressed.
- ✦ A significant benefit from a lowering of the emissivity of walls would only be measurable if the interior wall surface were quite cold. If a house has insulated walls, the wallboard will be warm, and there will be almost no effect from this paint.

Paul Moquist, a manager at Radiance paint, admitted that the vaunted 30% energy savings assume that a building is uninsulated. “In an energy efficient house, your savings may be only 2% or 3%,” Moquist said, noting that even such low savings would depend upon turning down the thermostat a few degrees.

According to Vermont energy consultant Andy Shapiro, “Basically, if a wall is cold enough in winter or hot enough in summer that emissivity is going to make a difference, the wall must be uninsulated. In that case, you should insulate the wall, because that’s where you’ll achieve your savings.”

OFFCUTS

The Chicago City Council is considering an ordinance banning the use of EIFS for all residential construction in Chicago. The proposed ban comes in response to reports of moisture damage in wood-framed buildings sided with EIFS, a type of artificial stucco.

In Bedford, N.Y., a 22,000-square-foot mansion burned to the ground while undergoing renovations. According to the *New York Times*, the destruction of the \$20 million house was the most expensive residential fire in the country in 1999. In 1997, the previous owner, singer Mariah Carey, sold the mansion to Nelson and Claudia Peltz, who were engaged in extensive remodeling at the time of the fire.

When it comes to predicting housing starts, the crystal ball has been cloudy, according to *Random Lengths*. The newsletter reports that housing analysts looking ahead one year predicted a 4% decline in housing starts for both 1998 and 1999. In fact, housing starts were up about 10% in 1998, and up about 3% in 1999.

British Prime Minister Tony Blair intervened to change the specs on the roof of London’s Millennium Dome, according to *ENR* magazine. Because Blair insisted on a product more durable than the proposed PVC-treated polyester fabric, the roofing was changed to Teflon-coated fiberglass. Britain’s appeal court ruled that the owner of the dome, New Millennium Experience Co., would have to compensate the roofing company that lost the contract to install polyester fabric on the dome.

FLAKY FLEX DUCT

In the late 1980s, manufacturers of insulated flex duct started to get reports of failures in the outer layer of some of their ducts. "I've probably run across 20 cases of flex duct failure in the last 10 years," says Virginia Beach home inspector Ken Zenzel. "The jacket falls off, exposing the inner layer."

The culprit turned out to be sunshine. In some attics, enough sunlight was entering through decorative windows, louvered vents, or roof turbines to degrade the gray polyethylene duct covers. "What happens is the UV light just bakes the plasticizers out of the plastic and it becomes embrittled," says Keith Thomas, technical director at Casco, a flex duct manufacturer. "Part of the problem was the industry kept using thinner and thinner jackets."

About ten years ago, manufacturers responded by replacing the older gray polyethylene with UV-resistant black polyethylene or metalized polyester. Manufacturers also began including installation instructions that warned, "Do not use outdoors or use where duct is exposed to direct or indirect sunlight or fluorescent light." These warnings make it clear that duct manufacturers do not claim that the new polyethylene jackets are immune to UV degradation.



The gray polyethylene jackets on some older flex ducts can deteriorate from exposure to ultraviolet light.

Solutions include blocking out any attic sunlight, if possible, or avoiding the use of flex duct with a polyethylene jacket. For use in areas with some ambient light, Lunt recommends mobile home duct, which has a thicker jacket than standard flex duct. Zenzel prefers to use flex duct with a jacket of metalized polyester, which looks like aluminum foil with visible reinforcement fibers. Although such duct is more expensive than polyethylene-jacketed flex duct, it has not been associated with any reports of UV degradation.

David Lunt, product specialist at Hart & Colley, a flex duct manufacturer, advises installers to be wary of using polyethylene flex duct in a sunlight-dappled attic. "A contractor should be concerned if he sees an attic with turbine ventilators or a gable window," says Lunt. "Even though the newer jackets are more inhibitive to UV degradation, they are not UV-proof." Inspector Zenzel agrees. "It doesn't take very much light for this to happen," says Zenzel. "I've found the problem in attics that seem to be dark."

OFFCUTS

Construction work is rated near the bottom of a list of desirable jobs. According to *Jobs Rated Almanac* by Les Krantz (St. Martin's Press, 1999), which rates 250 jobs according to such factors as salary, stress, benefits, outlook, and security, construction work ranks 247th out of 250 jobs.

Calculate accurate R-values for walls online by visiting www.ornl.gov/roofs+walls/whole_wall/wallsys.html. A calculation tool called the "Whole-Wall Thermal Performance Calculator" has been posted by the Oak Ridge National Laboratory website.

Single-family housing starts will be down 7% in 2000, according to construction consultants at FMI Corp. Unsatisfied housing demand is getting sated, since six new homes have been built for every five new households formed during the last five years.

Straw Coffins

A California manufacturer of alternative building materials is marketing an environmentally-friendly coffin made of rice straw. Will Maertens, the owner of BioFab, Inc., of Redding, CA, began manufacturing the coffins as a sideline to his main business, the production of 2¹/₄-inch thick rice-straw panels for interior partitions.

"Our rice-straw panels come 4 feet by 8 feet, and they can be used as an alternative to sheetrock and studs," says Maertens. "We make the coffin out of the same boards." Because rice straw is a waste product that is usually burned, it is considered a green building material. BioFab sells the Basic Straw Coffin for \$375, plus shipping.

"This is a great coffin for the environmentalists," says Maertens. "It's biodegradable. But for some reason, some of these people still prefer cremation. They'd rather use 60 gallons of fuel to burn themselves."

