

NOTEBOOK

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EDITED BY MARTIN HOLLADAY & JON VARA

Managing the Multilingual Job Site

The construction business has always depended heavily on immigrant labor. In the mid-1800s, wheelbarrows were often referred to as "Irish buggies," and a few decades later, Italian carpenters, masons, and laborers were the backbone of the industry. That tradition continues today, with immigrants from countries as diverse as China, Brazil, Bosnia, and Vietnam contributing to the labor market.

But the most common foreign language on construction sites today is, of course, Spanish. Latino workers now make up about 15% of the construction labor force nationally, according to figures compiled by the NAHB. That's good news for builders struggling with a long-running labor shortage, but it can complicate job-site communications, and many builders are scrambling to get a handle on the issue.

Room for error. The most efficient solution, several contractors say, is to hire a fully bilingual foreman or project manager to act as an intermediary between Spanish-speaking employees and subs. More often, though, builders find themselves resorting to gesturing or sketching diagrams. "You lead them over and show them, or find someone who speaks a little bit of English to translate," says Wayne Kyelberg, a project supervisor with Sunshine Master Builders, in Denver, Colo. "It works, but it leaves a lot of room for error."

Oakland contractor Deva Rajan tries to run an informal "buddy system," in which workers with little or no English are paired with those who are more fluent. Even so, he says, confusion is inevitable at times. He tells of one encounter between the plastering sub on a remodeling job and an unhappy homeowner, in which the problem hinged on the sub's apparent inability to provide the

Spanish on the Job Site

air hose — manguera de aire
auger — la barrena
be careful! — ¡tenga cuidado!
beer — la cerveza
boots, steel toe — botas con punta de hierro
bulldozer — la niveladora
chalk — la creta, la tiza
compactor, jumping jack — el compactador saltador
dangerous — peligroso
ditch — la zanja
door casing — el marco de la puerta
exactly — exactamente
faucet — la llave de agua
foreman (the boss) — el jefe
front-end loader — el cargador delantero
glue — la goma
hammer — el martillo
help me! — ¡ayúdame!
to hose off [or] water this — regar este
insulation — aislamiento
joint compound — la macia
junk — el junco, la basura

desired surface texture. "It wasn't a lack of skill, which is what the customer thought," Rajan says. "It was the language breaking down. We calmed him down and brought over another guy to translate, but it was a potentially bitter situation."

You could look it up.

Some builders have had good results with English-Spanish phrase books. "I use a book for looking up key words," says Santa Fe contractor Greg Pringle. "It's very handy at times." Conventional tourist phrase books, however, are useless on the job site.

Fortunately, at least

three inexpensive pocket-sized books targeted specifically at the construction industry are now available. They are *Construction Spanish* (Investment Group Services, Ltd. 3761 E. Lincolnway #232, Cheyenne, WY 82001; 970/568-3184; www.constructionspanish.com), *Easy Spanish for Construction* (Sunbelt Publications, 1250 Fayette St., El Cajon, CA 92020; 619/258-4911; www.sunbeltpub.com), and *Constructionary/Construccionario* (ICBO, 5360 Workman Mill Rd., Whittier, CA 90601; 562/699-0540; www.icbo.org). The publishing division of NAHB is reportedly working on a Spanish-English dictionary of its own.

Continuing education. Another approach is for contractors to take Spanish language classes. Again, generalized Spanish may not be particularly useful, but a number of schools and organizations offer classes geared to the specific needs of the building trades.

Greenville Technical College in Greenville, S.C., has offered a 20-hour course entitled "Spanish for the

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Multilingual Job Site

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Construction Industry" for several years. While it's ordinarily offered as an on-campus evening class, larger companies have arranged to have the class taught in their own facilities. The Home Builders Association of Metropolitan Denver began offering a similar class last fall and has recently added a more advanced class. The Denver classes are held from 11:30 a.m. to 1:30 p.m., so attendees can return to the job site after lunch and put their new skills to work immediately. Wayne Kyelberg took the Denver HBA course last year and found it worthwhile. "They didn't teach us how to order pizza, but it covered everything else," he says.

The Greater Atlanta Home Builders Association has offered a class in builder's Spanish twice a year for the past three years. "The goal is to enable them to keep on learning once the class is over," says instructor Linnea Olson Myshrall. She notes that even a few words of Spanish can be enough to prevent a fiasco. "We start with what we call one-liners like 'Stop,' and 'That's not square,' " she says. Builders are provided with vocabulary cards that can be used in the

field, along with cassette study tapes for review on the drive to and from work. "Builders may learn Spanish more easily than people in an academic setting, because they have a chance to use it every day," Myshrall says.

Walking the walk. Many builders who have made the effort to learn at least some Spanish find that it improves communications in other respects as well. Wayne Kyelberg notes that the Mexican members of his crew were delighted when he began returning from his lunch-hour language class with workable Spanish phrases. "They thought it was great that I was learning their language rather than insisting that they learn mine," he says.

But as Deva Rajan notes, employers should be prepared to show respect in other, more tangible ways as well. "I find there's a stronger level of dedication and loyalty on the part of Latino workers," he says. "We'd be lost without them. Real respect means paying them as well as anyone else on the job."



Corrugated Housing



An innovative new kit house fabricated from corrugated cardboard panels and vinyl extrusions may soon be approved by building codes in the U.S. and Canada.

Ask any kid: There's nothing like a big cardboard box for playing house. Now a Canadian company has gone a step further and introduced the world's first real-life cardboard house, designed for use as a remote home, vacation cottage, or disaster-relief housing. DuraKit Shelters, of Bond Head, Ont., bases its kit houses on specially water-proofed, three-layer corrugated cardboard panels, which snap into heavy-duty vinyl extrusions. Insulation cavities provide for insulation values of up to R-20 in the walls and R-40 in the roof. Both the interior and exterior walls come prefinished with a stucco-like cementitious coating. Each structure is guaranteed for five years, although the company believes that with routine maintenance, the cardboard shelters may have a useful life of up to 30 years.

According to DuraKit vice president Tim Wimsatt, the company's most popular model so far has been the 192-square-foot Tourist 200, although 400- and 600-square-foot kits are also available. Because all parts are pre-cut and held together with slotted vinyl connectors, the only tool needed for assembly is a caulking gun. A basic DuraKit shell — including one window and one exterior door, but without insulation, foundation, or mechanicals — costs about \$15 per square foot in U.S. funds.

Because the cardboard shelters aren't yet code approved, most kits manufactured so far have been shipped overseas. (A standard shipping container will hold about 15 of the 12x16-foot units.) A number of units were recently shipped to Spain, where they will be assembled as vacation cabins at a campground.

The company hopes to earn code approval in Canada by late this year, with U.S. code approval to follow. "The shelters are designed for a 69-psf snow load," Wimsatt says, "and they can withstand 140 mile-per-hour winds if they're properly anchored. They should work well just about anywhere on earth."

Sting Operations Trap Unlicensed Contractors

Every week in California, 20 or 30 contractors are surprised to discover that the cheerful suburban couple who has called them for a bid are actually undercover operatives working for the Contractors State Licensing Board (CSLB). After the contractors bid on remodeling work, the investigators identify themselves and ask to see the contractor's "pocket card," which the CSLB issues to licensed contractors. If the contractor is unlicensed, he'll be served an administrative citation or a notice to appear in court.

"We conduct several sting operations each month targeting suspected unlicensed contractors," says Greg Armstrong, a supervising investigator for the Statewide Investigation and Fraud Team, an arm of the CSLB. "We gather the names and phone numbers of contractors from bulletin boards and classified ads. Our investigators will call and invite them out to a rented house. We ask them to give us estimates for work — concrete work, painting, electrical, or a reroof job."

Although many homeowners complain that it can take a long time to get a contractor to show up to look at a job, the CSLB investigators have developed ways to pique the contractors' interest. "We'll tell them, 'We just got a home loan and we have to have the work done right away,'" says Armstrong. "We'll say, 'We have the cash, and we're not too concerned about the price.' They usually come the next day."

The CSLB investigators run their sting operations with factory-like efficiency, scheduling a new appointment every half hour. "We get 15 people to come to the sting house in



a typical day," says Armstrong. "Usually, only 1 out of 15 has a license." Since California requires a contractor's ad to include a license number, some unlicensed contractors are tempted to make up a number. "I see fake license numbers all the time," says Armstrong. "That can be a felony." A staff of 22 employees in the Statewide Investigation and Fraud Team manages to snare a total of about 1,500 unlicensed contractors every year.

The typical fine for first-time offenders is \$500, and the fine can be as high as \$15,000 for repeat offenders.

"There was one gentleman that we caught in three different stings in a month and a half," says Armstrong. "He just didn't get it. Ultimately, he decided to get licensed."

An applicant for a California contractor's license must have at least four years of experience as a journeyman or better and must pass a two-part comprehensive written test. The fee for a license, which is valid for two years, is \$200. Armstrong reports that most legitimate contractors support their sting operations. "We're leveling the playing field for the licensed contractors," he says.

OSB Swells Unendingly, Researchers Find

How do plywood and OSB differ in their response to water and water vapor? Many builders may think that they already know the answer, but a recent study by researchers at the National Research Council Canada yielded some hard information on the subject.

In the realm of the obvious, the research team took careful measurements that confirmed that OSB swells significantly when wet, and that swelling occurs most rapidly at unsealed cut edges. But they were somewhat surprised at its reaction to repeated wetting and drying.

"I thought at the start that the thickness would increase for a few cycles of wetting and drying and then level off," says study co-author Mostafa Nofal. In fact, it did not. The thickness of the OSB samples continued to increase with each cycle of wetting and drying for as long as the process was repeated, or about 15 cycles. Each cycle up to the tenth was also found to increase the material's readiness to absorb water. During the first cycle, 24 hours of exposure to water was needed to bring the samples to a 15% moisture content. By the third cycle, the time had been reduced to 30 minutes, and to 15 minutes by the fifth.

Despite OSB's readiness to absorb liquid water, the National Research Council Canada team determined that it is about 100 times less permeable to water vapor than plywood. When laboratory dishes partially filled with water were set upright and sealed at the mouth with samples of the two panel materials, the water evaporated from the dishes capped with plywood. The OSB-covered dishes, by contrast, still held water eight months later. Interestingly, the undersides of all of the OSB samples in the vapor permeability test developed mold growth, while fewer of the plywood samples were affected.

Nofal speculates that OSB's impermeability and apparent attractiveness to mold may be a factor in building envelope failures associated with EIFS. Although such failures have also occurred with plywood, Nofal observed that OSB failures tend to be more severe. "If you get liquid water inside the wall," he says, "plywood will buy you some time as it dries out. OSB grows mold within a week."

OFFCUTS

Homeowners seeking mortgages for alternative homes should consider using "artful terminology," according to a recent article in *Natural Home* magazine. One veteran in the field has learned to list the construction style of straw-bale houses as "post and beam," and the insulation type as "agricultural cellulose." "You have to figure out the wording to get stuff through," he said. "Mortgage people want to hear that this is a traditional-type house. They don't want the only strange bird in the neighborhood."

A California developer has begun work on a "gun friendly" community in the Nevada desert. On completion, the 522-home community called "Front Sight" will feature a private K-12 school; its own road, water, power, and sewer systems, and other amenities, including ten training ranges, a five-story SWAT training tower, eight 360-degree live-fire training simulators, a 7,200-square-foot gunsmith facility and armory, and a luxury restaurant.

Large builders are using less solid-sawn lumber, according to a survey conducted by the Center for the International Trade in Forest Products. Among the largest builders in the U.S., only 42% used softwood lumber for floor framing in 1998, compared to 59% in 1995. Wood I-joist use during the same period increased from 23% of large builders to 39%. More information on the survey, "Material Substitution Trends in Residential Construction," is available online at www.cintrafor.org/WP73.htm.

The governor of Arkansas has moved into a manufactured home. "This is not a trailer," said Janet Huckabee, the first lady of Arkansas, according to the *New York Times*. She and her husband, Governor Mike Huckabee, moved into a triple-wide in August that has been installed in the backyard of the governor's mansion, which will be undergoing renovations. Apparently, Arkansas's first family needed a zoning variance, since their Little Rock neighborhood does not allow manufactured housing.

The NFPA has declined to cooperate with the International Code Council to bring about a unified set of national building codes. ICC and NFPA leaders met in Chicago on May 2 in a failed attempt to reach agreement, according to *Energy Design Update*. The ICC's group of codes includes the *International Building Code* and the *International Residential Code*, while the NFPA's codes include the *Fire Prevention Code*, the *Life Safety Code*, and the *National Electrical Code*.

OFFCUTS

Five EIFS manufacturers have settled a class-action lawsuit in North Carolina.

Continental Stucco, Dryvit, Parex, Sto, and W.R. Bonsal agreed to the March 24 settlement, valued at several million dollars. Plaintiffs will be eligible for payments if an inspector can detect moisture levels above 25% in their EIFS-sided walls. For more information, visit www.ncstucco.com.

June housing starts of apartments and single-family homes fell to the lowest annualized rate in more than two years,

according to the U.S. Department of Commerce. "The slowdown has been going on long enough to conclude that housing is over the hill at least," economist David Orr told Reuters news service. "The frenzy is clearly over."

A carpenter and tenant were killed in Philadelphia when a row house collapsed.

According to the *Miami Herald*, the residential building, which was undergoing renovations, collapsed on July 24 when workers were digging under a bearing wall in the basement. The carpenter, Bob Scherer, 39, was one of two who died when the brick building suddenly collapsed.

Willamette Industries will pay an \$11.2 million fine for air pollution

produced by 13 plywood and OSB plants in Arkansas, Oregon, Louisiana, and South Carolina. Willamette will spend an additional \$74 million to install pollution-control devices at the facilities, and will contribute \$8 million more to environmental projects.

Palo Alto, Calif., is the nation's most expensive housing market, according to the recent Coldwell Banker Real Estate 2000 Home Price Comparison Index. The average home in the affluent Silicon Valley town went for \$974,237. The most affordable community was Mt. Pleasant, Mich., where the cost of the average home was \$103,640. Comparisons were based on a 2,200-square-foot, four-bedroom house with 2.5 bathrooms and a garage.

Lead Paint Contamination Lands Contractor in Jail

A Baltimore contractor recently received a \$10,000 fine and a six-month jail term, of which all but two weeks were suspended, for allowing lead-laden wastewater from a renovation project to flow into city storm drains and ultimately into Chesapeake Bay. The contractor, Frederick "Dean" Cichorz of New Faces Masonry, had been using a pressure washer to remove exterior paint from a brick row house after it had been loosened with a chemical stripper. Under state law, Cichorz was required to set up



A Baltimore masonry contractor's failure to contain lead-laden wastewater led to a stiff fine and a two-week stay in jail.

containment dikes to retain the paint-laden runoff from the pressure washer, vacuum the water into containers, and have it removed by a licensed waste hauler. Although the required dikes were in place, they were improperly constructed and allowed much of the runoff to escape. The Maryland attorney general's office investigated the case after neighbors complained that Cichorz's employees were washing paint debris directly into a storm drain.

Assistant Attorney General John R. Lilly II, who successfully prosecuted the case for the state's environmental crimes unit, pointed out that Cichorz had been convicted of the same offense twice before, in 1994 and 1998. "We sought jail time because he was a repeat offender," Lilly said. "He was not singled out." Lilly noted that in cases where the conduct was intentional, the attorney general's office "could potentially seek executed jail time in the case of a first-time offender."

"Environmental crimes usually involve people trying to save money," Lilly said. "People who don't do the job right are able to charge less. Our goal is to level the playing field by increasing the cost to people who are not doing it correctly."

Florida Insurers Offer Discounts for Wind-Resistant Construction

Builders in South Florida may be about to experience a surge of consumer interest in wind-resistant construction, including retrofit projects on existing homes, such as the addition of shutters, roof tie-down straps, and supplementary gable-end bracing. The driving force is a new insurance pricing system from the Florida Windstorm Underwriting Association (FWUA), which took effect on July 1. Under the new system, homeowners who make such high-wind mitigations will pay lower insurance rates than those in similar but unmitigated homes. The FWUA is the state's insurer of last resort, providing hurricane insurance to hundreds of thousands of Floridians who are unable to obtain coverage from private insurers. Under a provision of the recently passed Florida Unified Building Code, other insurers will be required to offer similar discounts to coastal dwellers by July of 2001. "Homeowners who take full advantage of the mitigation credits could save in excess of 50% on their premiums," says FWUA spokesman Ron Natherson.

But because the FWUA will also be phasing in sharply higher rates over the next few years, critics claim that the modest allowances granted for mitigation measures will scarcely be felt. Lisa Maxwell, executive officer of the Builders Association of South Florida, is among the skeptics. She notes that the mitigation discounts will be offered only in a narrow band along the coast, while the vast majority of new residential construction in coastal regions takes place somewhat inland. "They can pat themselves on the back, but have they really done anything?" she asks. "I would say no. They haven't really provided any meaningful incentives for homeowners to strengthen existing homes, and they haven't provided incentives for builders to build more wind-resistant new houses."

Standing TALL in High Point

Furnitureland South, a High Point, N.C., furniture merchant, was looking for a way to attract customers to its showroom in a city with at least 60 other furniture retailers. The effort cost half a million dollars, but it seems to have succeeded: The company's 85-foot chest of drawers — a steel-framed replica that is sheathed with gypsum board and finished with painted EIFS — is clearly identifiable by airline passengers passing overhead and has become a tourist attraction in its own right. And while not every EIFS installation in the state has



As this photo clearly shows, EIFS is an ideal material for crafting eight-story furniture replicas.

proven trouble free (a group of five EIFS manufacturers recently agreed to a multimillion dollar settlement that will enable hundreds of North Carolina homeowners to repair or replace damaged EIFS systems), the High Point highboy has reportedly stood up well since its completion two years ago. No word yet on whether the giant clothes in the drawers are beginning to mildew.