NEW ENGLAND

U P D A T E

JLC LIVE COMES TO TOWN

Providence hosts innovative expo and conference

The Construction Business & Technology Conference and Expo, now in its third year, is coming to the new Rhode Island Convention Center this February. The Expo — dubbed CBTC '97 — features live workshops demonstrating the latest tools and techniques, a hands-on exhibit of award-winning new tools, a construction software classroom, and hundreds of innovative building products and services on display.

The hands-on workshops and demonstrations, says CEO Mike Reitz, "make this a truly unique construction event. These are live versions of our two magazines, *The Journal of Light Construction* and *Tools of the Trade,* and fulfill our mission of bringing quality education to the building trades."

The workshops feature nationally acclaimed building experts including West Coast production framer Will Holladay, master carpenter Don Zepp, and master tile setter Michael Byrne. Holladay will teach the essentials of laying out and cutting complex roofs, Zepp will demonstrate stair layout and construction, and Byrne will offer hands-on training in ceramic tile installation. Both Holladay and Byrne have written best-selling books about their respective trades.

Other workshops will focus on two key construction innovations: engineered lumber and rigid foam formwork. The engineered lumber demonstration is hosted by Truss Joist MacMillan, which has pioneered much of this new technology. Participants will get a chance to cut, nail, and handle the latest materials and get their questions answered by technical reps.

The foam formwork demos will feature a variety of new systems for building fast foundations or entire buildings out of foam panels or blocks filled with concrete.

Expo attendees will also get ringside seats to watch the finalists compete in the national cabinetmaking competition hosted by VICA on the trade show floor. The winner will represent the U.S. at the world finals in Switzerland.

Accompanying the CBTC expo is a full conference that features more than 50 educational sessions with top speakers from around the country as well as an interactive software lab. Both the conference and expo run from February 28 through March 2.

Expo passes are free through February 14, and $25 afterwards. Registration to the full conference costs $225. To register or get additional info, call 800/375-5981.

Hanging Tough in the Yard

Independent lumberyards and tool houses face the superstores

In the late 1980s, as the chain of Home Depot superstores became the Wal-Mart of the lumberyard industry, some observers predicted the chain's expansion would decimate independent lumberyards and tool dealers. This concerned not only lumberyard owners, but contractors and industry analysts who feared that contractors would lose access to the suppliers on which they had long depended for contractor-oriented service and high-quality materials. It is only in the last five years that Home Depot has penetrated New England and New York heavily. Its arrival has proven the prophets about half right. Home Depot has opened dozens of stores in the region and

This month in New England Update:

Hanging Tough in the Yard,

almost instantly commands double-digit shares of local markets when it moves in. And small stores are closing in the wake.

Jim Steenbeke, who with his brother Ray owns seven lumberyards in southern New Hampshire, says close to 50 independent lumberyards and tool houses have closed in New Hampshire since Home Depot started moving in. The loss of such stores, as well as the experience of the survivors like Steenbeke, confirms that the expansion of the superstores has put tremendous pressures on independent suppliers. As Steenbeke puts it, "The whole independent lumberyard and hardware store industry has had to change its way of doing business."

Yet as Steenbeke's survival attests, many independents have hung on and even prospered. The result has been not only a realignment of the tool and lumberyard industry, but an encouraging confirmation of the link between contractors and the lumberyards that serve them.

Targeting the contractor. Conversations with owners of several independent lumberyard and tool supply houses around New England suggest that contractor-oriented stores have fared better after the superstore invasion than those that cater to consumers.

"What used to be a 60/40 or a 75/25 mix of contractors to consumers is becoming now more like 90 and 10," says Steenbeke. "The consumers tend to shop more on price, and you can't beat the big stores on price. So what you do instead is take care of your core customers, the contractors. We take care of these guys by giving knowledgeable service, giving seminars, getting salespeople to the job sites, sending out boom trucks, delivering on time. We even have a loan program where we help the contractor and the homeowner obtain financing or even buy a lot. And we've got better lumber. These are the ways we add value to our products to make our materials worth a few dollars extra to our contractors."

What Steenbeke is doing, of course, is fulfilling the prescription that business analysts have developed for stores facing competition from superstores: Identify your niche, then serve it better than the big stores can by providing personalized, top-level service. "It's like when I go buy a jacket," says Steenbeke. "I could go to Wal-Mart and save $25. But I'd much rather go down the street to the guy who knows me and knows what I like and if it doesn't fit just right will alter it so it does. Why pay $25 to give up all that? Contractors are the same way. They don't want to go to one of these places where you need an Indian guide to find your way across the store. They come here, and we take care of them."

Steenbeke has weathered the worst of the superstore onslaught. Dave Carroll, who along with his two brothers owns Rice Lumber of Shelburne, Vt., is just meeting it, as a Home Depot is opening in early 1997 in neighboring Williston. Carroll hopes his contractor orientation can help him weather the giant's arrival. "We expect to feel it when they come in," says Carroll. "But we should be okay. I can't quite envision my contractor customers going down to Home Depot and walking out of there with a door in a shopping cart. I mean, it really comes down to the old retailing triangle of price, quality, and service. You've got to offer at least two. So we give them high quality and great service and trust that a modest difference in price will be secondary. It's worked for us so far."

It's tougher with tools. Tool houses face particularly heavy pressure from superstores, because superstores emphasize power tool prices so heavily.

In order to compete, many tool houses have stopped carrying the more popular tools carried by superstores — the cordless drills, circular saws, and other staples of the tool trade. Mike Langton, co-owner of Danow Corp. of Binghamton, N.Y., quit carrying drills a couple of years ago and now sells only fastening, nailing, and stapling equipment — a loss for the contractor, he says, who can no longer rely on him for service on those items, and may have to make an extra trip elsewhere to pick up a drill. "But I couldn't sell enough, even at a low margin, to make it worth carrying them. "

Instead, Langton says, he emphasizes the knowledge his staff can offer contractors regarding the tools he does sell. "A customer who is having trouble with a nailer can call me, describe the tool, and I can troubleshoot it over the phone and maybe save him a trip. The big stores can't do that."

All of this, of course, makes a big difference to the contractor, who may prove the biggest winner from the realignment the superstores' arrival has brought to New England's lumber and tool supply industry. Because contractors have rewarded them for doing so, lumberyards, hardware stores, and tool specialty houses have increased their services to contractors and put an even higher emphasis on quality — while keeping a sharper eye on their prices. And that seems to be a formula with which both the surviving independents and contractors can live and even prosper. ■

Ice Dams: Curing the Curse of Midwinter

April may seem the cruelest month to poets, but for roofs in snow country, it's midwinter that deals the meanest punch, bringing snow and ice out of the gray sky to create ice dams, the beasts that tear off gutters and trim, lift shingles, and send melting water into soffits and walls.

Ice dams form when a warm attic melts snow on the roof deck, sending water trickling down to the house's eaves, where it freezes. The underlying problem — a temperature difference between the warm roof deck and the cold eaves — is aggravated as snow thickens and temperatures drop: Accumulating snow traps more heat beneath the roof deck, while falling temperatures leave the eaves, which don't receive the heat rising into and out of the attic, ever colder. Thus ice dams grow biggest when a cold snap follows a big snow.

In theory, avoiding these problems is simple: Insulate and seal the attic to keep warm air from reaching the roof, and use a ridge-and-soffit vent system to move air along the underside of the roof deck so that it maintains a uniform, cool temperature from soffit to ridge.

In reality, says Paul Fisette, a builder, consultant, and professor of building materials and wood technology at the University of Massachusetts, achieving these objectives can be difficult. Fisette, who has examined scores of ice-dammed houses, says your options in preventing or curing ice dams will be determined largely by a house's framing.

Brand-new houses are easy: Leave enough room at the eaves for at least R-38 of attic insulation and an inch of ventilation space over the exterior wall plate; then carefully install the insulation, a continuous air barrier separating the living space from the underside of the roof, and a ridge-and-soffit vent system. The resulting energy-efficient house shouldn't get ice dams.

Older houses are tougher. With diligence you can usually plug most of the numerous leaks into the attic. But older roof framing often leaves too little room in the eaves to fit both adequate insulation and a space above for a ventilation path above the exterior wall plate. In such situations, Fisette recommends using high-R-value foam insulation (R-6 per inch) to insulate between the top plate and the roof deck, leaving an inch or so above for ventilation. Seal any possible leak sites there or elsewhere with caulk or expanding foam, and you've probably done the best you can do. (Some contractors prefer installing ventilation baffles and a vertical block in the plane of the outer wall, then spraying the space inside the blocking full of insulating foam such as Icynene. For eaves spaces hidden behind kneewalls, some contractors insert baffles and blocks and then blow the entire space full of cellulose.)

If those steps don't solve the problem, says Fisette, you're left with "solutions" that may eliminate the ice dams but leave the underlying heat-loss problem. These include:

- Installing sheet-metal ice belts along the bottom of the roof. This can prevent ice dams if you've done a good job of insulating the eaves space and attic.
- Building a double roof, with vertically running sleepers supporting a a second deck atop the first. The space between the roof decks then serves as the ventilation space — an expensive solution, but one that works well and lets you completely fill the eaves space with insulation.
- Installing a metal roof. This will solve the ice dam problem but not the heat-loss problem.
- Installing self-sticking rubberized sheets beneath the roof shingles. This will not prevent ice dams, but may prevent damaging infiltration of water from them.

For more on ice dam prevention, check out Paul Fisette's home page at www.umass.bmatwt/index.html. ■

Ice can destroy gutters and trim and send harmful moisture into eaves and wall cavities. Though it's tricky to do in older homes, the solution is to install an air barrier between the attic and living space, insulate well above the top plates, and provide soffit-to-ridge ventilation.

Restoring The King's Inn

Faith — and a church — a nail at a time

When pastor Alan Kipp of Dresden Mills, Maine, says his is a "restoration ministry," he's not talking just souls. Kipp, who worked in the building business for 16 years before attending Bible school and moving to Maine 16 years ago to take the ministry at the Dresden Community Church, recently combined his two careers in the service of converting a vacant inn into what he calls a "restoration church." The work kept Kipp, his wife and co-pastor Carol, and members of the congregation thumping nails for a while instead of bibles. They turned the old inn, built in the 1970s and vacant through most of the 1990s, into a church that would provide a warmer, roomier place for Sunday services and classes as well as rooms for the counseling that is a big part of the Kipps' ministry.

"You look for a thread in your ministry," says Kipp, "and ours has been restoration. It makes sense that we've worked to restore this inn, for we've spent much of our time trying to restore the lives and spirits of the people who live here."

Kipp's 100-member congregation is composed, he says, of "wood cutters, worm diggers, ship builders, and Navy people" from surrounding towns. "Good people," he says, "but some have had their lives destroyed by one thing or another, or never learned basic family and community skills. We help them with those things, counseling people, teaching parents how to be parents and citizens to be citizens, as well as helping with more serious problems, like drugs or Vietnam vets who need their lives restored."

Pastor Alan Kipp, an ex-builder, directed his congregation in turning a vacant inn into a church.

Many of these people helped the Kipps patch together the old inn, which they have since named "The King's Inn." They reroofed the place, upgraded plumbing and electrical systems, and repaired plaster and ceilings. They also changed the carpet in the former dining room and lounge area, says Kipp, "so it didn't smell like a bar when you walked in." Area contractors helped with some of the work, donating a backhoe for trenching work and an insulation blower so Kipp could blow cellulose into the attic.

As for Kipp, he found the work "almost fun" after 16 years of just ministering. "But I wasn't too crazy about being up on a roof again," he adds. ■

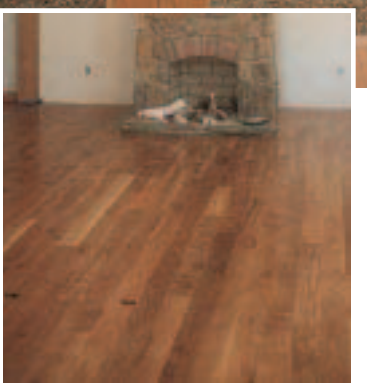
Putting a Warm Floor in a Cold House

When builder/architect Lindsay Suter had to install a radiant floor in a timber-frame, stressed-skin panel home he built recently in Rhode Island, he faced some unusual job conditions: It was winter; the schedule was tight; the house had neither running water nor heat; and the stressed-skin floors provided no installation access from below.

"Being both architect and contractor," he says, "I was a little freer than perhaps some might be to adapt to these conditions and develop a solution in the field." Suter was leery of pouring concrete over the radiant tubing without running water or heat around to keep the place warm, and he didn't want to wait several days for the concrete to cure anyway. So he came up with a design that, while unusual, worked well for him — and which he feels will work for others in similar situations.

From the stressed-skin floor panel up, Suter first laid a reflective barrier, then sleepers at 16 inches on-center (top photo). This space gave him a wiring chase while the radiant barrier would further cut heat loss through the floor.

Atop the first layer of sleepers he laid 1/2-inch plywood, then another layer of sleepers, between which he ran the radiant tubing, fixed into place with aluminum straps stapled to the plywood. Then instead of pouring concrete on the tubes, he carted in pea gravel, shoveled it between the sleepers, and then screeded it level (middle photo). Laying rosin paper atop the sleepers to reduce squeaks, he then laid the 3/4-inch white oak finish flooring.



Pressed for time and without heat or hot water, architect/builder Lindsay Suter installed a unique radiant floor heating system in a recent Rhode Island job. After laying radiant barrier and a layer of sleepers to provide a reflective space (top), Suter added plywood and another layer of sleepers, ran the heating tubes in between, and covered them with gravel. After screeding the gravel level (above), he covered the floor with 3/4-inch white oak flooring (left).

While he came up with this floor heating system mainly to speed the schedule by avoiding concrete, Suter says he ended up liking it for performance reasons as well. Construction went quickly and smoothy because the gravel, he says, took less time and was less trouble to put in than concrete, and it required no curing time. It also let him forego a subfloor, saving money and time and allowing more efficient heat conduction into the room. Rather than seeming flimsy, says Suter, the resulting floor has a nice subtle "spring" to it that makes it very comfortable to walk on.

The clients liked it too, both for the cost savings, the speed with which the job moved along, and the performance. After a year in the house, says Suter, the floor has performed well, and the clients are thrilled with it. ■

"All-in-One" Loans Gain Momentum

In today's tough building economy, most builders look for every tool they can get to help them serve customers. One tool many small builders are finding useful is the "construction-permanent loan" — a loan from a bank or mortgage company to a homebuyer that serves as a construction loan until the house is done, then rolls over into a regular mortgage. Once considered mainly the tool of larger develpers or builders of expensive custom homes, construction-permanent loans are increasingly used by small builders, and in fact are actually used more often now by small builders than by large ones. A recent National Association of Home Builders survey found that 46% of small builders used these "all-in-one" loans, while 37% of all builders did.

The loans work like this: Steered to a participating lender by a builder, the customer applies for the loan. The terms for the entire package are set up front. Usually it's a 90- or 120-day construction loan that becomes a long-term mortgage when the house is done. The buyer typically pays a variable interest rate (a certain percentage over prime) on the construction loan until the house is completed, at which time the loan converts to either a fixed or adjustable-rate mortgage with terms up to 30 years.

These loans offer several advantages to both customer and builder. The builder, of course, doesn't have to borrow to build the house, has a guaranteed buyer, and saves his or her credit for other jobs. Meanwhile, the interest the buyer pays during construction (as well as all closing costs) is tax-deductible. In addition, banks will usually lend up to 90% or even 95% of the purchase price instead of the lower percentages they're willing to lend builders in a conventional construction loan.

Different lenders have different guidelines, of course, and some programs give buyers more control over the construction process than standard presale contracts do. Yet these loans can often ease the way through the custom-building process for both customer and builder. For more information on sources and terms, contact your local lenders, your state housing authority, or the NAHB's mortgage finance department at 800/368-5242, ext. 555. ■

Worth Noting: Events and Resources

• The Northeast Sustainable Energy Association's "Building Energy '97: Insuring a Sustainable Future," from March 12 to March 15 in Cromwell, Conn., will provide its usual outstanding lineup of seminars, workshops, and people worth knowing, as well as a special focus this year on sustainable development and design tips for staying within budget. Contact: NESEA, 50 Miles St., Greenfield, MA 01301; 413/774-6051 (voice), 413/774-6053 (fax).

• The University of Massachusetts Building Materials and Wood-Technology program has created one of the more useful Web sites for New England contractors. The main page (*www.umass.edu/bmatwt/index.html*) gives you the opportunity to ask questions of experts in the department (including *JLC* contributor Paul Fisette); to check out the department's excellent set of links to other sites; and to click your way to almost two dozen excellent articles by Fisette, Stephen Smulski, and others. It's probably one of the most practical, information-rich building sites on the Net, and since it's written by New Englanders, it's much more regionally relevant than most.

• A 20-minute U.S. Department of Energy video could help you pass that insulation or energy inspection — and perhaps build more energy-efficient houses as well. "*Inspecting Houses for Model Energy Code Compliance*" walks you through each stage of a typical MEC inspection, showing what to look for at the construction site. Inspectors, supers, and builders have snatched several hundred copies of the video since it was introduced last April, according to Kathryn Lang of DOE's building standards and guidelines program. "It seems to be popular not only with inspectors, but also with builders, who want to know what the inspector may be looking for," Lang says. The video, shot on location at a job site in Kennewick, Wash., costs $15. To order a copy, call 800/270-CODE. ■

***If you have events or other resources you'd like listed here, please send notice to New England Update, JLC, RR 2, Box 146, Richmond, VT 05477; fax to 802/223-2512; or e-mail to* ddobbs@plainfield.bypass.com.**

The Odd Lot

Strange building news from around the region

Million-dollar fine okay; a thousand, no way. A former vice-chairman of Bob Dole's presidential campaign, who will be paying a $1 million fine to the federal government for making illegal campaign contributions, apparently found a $1000 fine for a zoning violation too much to bear. Simon Fireman had been denied a permit to build a patio outside his $500,000 summer home on Cape Cod, which sits next to a wetland. When he built the patio anyway, the Barnstable Conservation Commission fined him $1,000. But rather than pay, he appealed the commission's decision to the state Department of Environmental Protection in December. No word yet on whether he'll have to add the grand for the wetlands violation to the million for the election-law violation.

Accidents will happen. A worker at a lawn furniture manufacturer in Epping, N.H., suffered what had to be one of the scarier construction accidents we've heard about in a while. According to an Associated Press wire story, 19-year-old Kevin Martin was stacking wood when a 5-inch nail accidentally fired from a coworker's air gun across the room and lodged in his neck. The nail buried itself 3 inches deep just below Martin's right ear. Incredibly, Martin, who was taken to a local hospital and then airlifted to Boston's Beth Israel Hospital, was treated and released the same day, with no apparent lasting damage.

"Think about moving." According to another Associated Press story, that's what the U.S. Army Corps of Engineers told the owner of a riverside home in Walpole, N.H., recently at a meeting held to discuss what to do about heavy bank erosion caused by a recent change in the course of the Connecticut River. The river has been chewing away at its eastern bank in Walpole since an ice jam altered its channel last winter. So far it has torn away 40 feet of the bank, moving closer to several riverside homes and businesses and a road. As of this fall it was unclear whether measures taken to curb the erosion would be effective, leading officials to utter their rather frank but grim advice. ■

Short Cuts

Building news from around the region

Vermont builders build tight. Most houses built in Vermont since 1993 are built snugly enough to earn the Energy Rated Homes "4-Star" rating, according to a major utility study. "This speaks well of Vermont's home builders," says Richard Faesy of Energy Rated Homes of Vermont, which compiled data on 200 randomly selected new homes as part of the survey. "Even without strong incentives or statewide regulations in place, Vermont builders apparently recognize the value of energy efficiency to home buyers." The study found that most new construction in the state earns 72 points on the Energy Rated Homes rating scale, just over the 68 points needed for a four-star rating. The highest possible rating is five stars.

Moths like Audubon's model green building. Moths have taken a real liking to the National Audubon Society's New York City headquarters, a 100-year-old building that the organization remodeled in 1993 to serve as a model of "green" construction, according to a recent report in the *Environmental Building News*. As part of the attempt to reduce use of toxic or synthetic materials, the building's designers specified the use of undyed wool carpet throughout the building. Unfortunately, the "webbing clothes moth," a common insect, has taken to eating the wool carpet and has infested the building in numbers rarely seen, to the consternation of Audubon Society officials and the building's designers, who are trying to figure out the lowest impact way to get rid of the bugs. ■

Latest on the Law: Trenching, Bait-and-Switch Violations Draw Big Fines; Tax Anxiety in N.H.; Energy Plans in Vermont

OSHA slams trenching violation. In a clear signal that it means business when it comes to trench-collapse safety, the Occupational Safety and Health Administration recommended levying a $48,000 fine against a Brookfield, Conn., contractor for allegedly failing to take adequate cave-in precautions at a job in Waterbury, Conn., even though no accident occurred. OSHA charged that the company's makeshift protections at the site (an elementary school) were improperly designed and left workers in the trench in as much danger as they would be with no protection system at all. At press time the company was trying to decide whether to appeal the recommended fine.

R/E broker swatted for bait-and-switch. Massachusetts attorney general Scott Harshberger popped real estate broker Randolph White, of Southboro, with $482,000 in fines and restitution payments for offering "low-interest loans" that turned out to have high interest rates, according to a report from the Associated Press. White was ordered to pay $382,000 to consumers and a $100,000 fine for offering low-interest mortgage loans to low- and moderate-income consumers without revealing that his company would charge up to 10% as a broker's fee. White was also found to have promised low rates to make the mortgage s ales while actually arranging mortgages with high rates and high monthly payments. White will also be barred from acting as a broker or lender in Massachusetts for ten years.

Power restructuring may hit N.H. tax base. New Hampshire towns that count on property tax income from power utility facilities may lose some of that income under a draft plan to restructure the utility industry in the state in 1998. The state is presently considering ordering electric monopolies to sell their generating plants, and possibly shut them down, under the plan to decentralize the industry. But the New Hampshire Municipal Association estimates that if those forced sales bring low prices on the facilities and land, the towns in which they are sited might lose as much as $60 million in property tax revenues because of the lowered valuations. Some towns derive as much as 70% of their revenues from such plants.

Vermont ponders "Demand Side Management." Vermont's Department of Public Service (DPS) has proposed a statewide "Demand Side Management" program that would require builders to meet various energy-efficiency standards prior to electricity hookup to a new home. While the plan was still in flux at press time, requirements that have received consideration include an energy audit of plans and finished construction and establishment of minimum performance standards for insulation and heating equipment. The Vermont Home Builders Association has opposed the plan because of concerns over cost and the lack of input builders might have in creating it. ■