

NOTEBOOK

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NAHB Pulls Out of NFPA Code Process

Builder's group questions need for another model code

by Ted Cushman

The National Association of Home Builders (NAHB) has decided to withdraw from the development process for NFPA 5000, the National Fire Protection Association's newly written model code. NFPA, which writes and maintains such widely referenced standards as the *National Fuel Gas Code* and the *National Electrical Code*, began work on its first-ever general building code after failing to resolve a dispute with the International Code Council (ICC) over how the two organizations could cooperate in developing the International Codes, a single national code collection created by

ICC to replace the nation's three regional model building codes.

The NFPA membership voted to approve the completed NFPA 5000 code in May. NFPA's Standards Council will vote on issuing the code in July; if issued, it will then be available for adoption by states and municipalities. NAHB representatives served on several NFPA technical committees that worked on the NFPA 5000 code, but NAHB staffer Ed Sutton says, "We basically decided in the end that we weren't going to be able to recommend to our members that they support the adoption of these NFPA codes in their current form."

In a letter to NFPA president George Miller, NAHB executive V.P. Gerald Howard wrote, "NAHB can no longer bear the financial burden of participating in this effort. Further, we question the benefit of developing a second set of national building codes [in addition to the International Codes]." Howard's letter is posted on the ICC's website at www.intlcode.org.

"We're sorry to see NAHB go, and we're a little puzzled by it," says NFPA spokesperson Julie Reynolds. "From our perspective their decision really penalizes their members." Reynolds defends the creation of a

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New Device Gets Basements Bone Dry

Contractors dealing with wet basements have a new tool in the bag: a low-voltage electrical device that keeps basements dry enough to live in, even if they're below the water table and aren't waterproofed. Developed by Madison, Wisc., firm Drytronic, Inc. (www.drytronicinc.com), in cooperation with the

U.S. Army Corps of Engineers Construction Engineering Research Laboratory (CERL), the system recently won the Construction Innovation Forum's prestigious NOVA award. (For details, go to www.cif.org/nom2002/prewin02.htm#electro-osmoticpulse.) Drytronic is now offering the system commercially to qualified contractors.

Based on "electro-osmotic pulse" (EOP) technology, the new technique not only can drive moisture out of a foundation into saturated soil below grade, but actually reduces the surface relative humidity of the concrete wall and slab below the 55% level — so dry that mold and mildew will not grow. "If the basement air is humid," says Corps scientist Vincent Hock, "this device actually wicks humidity out of the air. We compared this to a conventional dehumidifier in below-grade tests at Fort Bragg, and we were as good as or better than a conventional dehumidifier at controlling the room relative humidity."

The EOP technology works by applying a weak electrical field to the concrete wall and its surrounding soil and groundwater. A

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U.S. ARMY CORPS OF ENGINEERS

This photo depicts a wet test basement before treatment with a newly developed electronic moisture-control system.

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second model code, saying, "There's only one code that's being developed through an ANSI-accredited consensus process, and that's the NFPA building code. We heard from our members, from our constituents, that there needed to be a building code that had been developed through the same process that produces documents such as the *Life Safety Code* and the *National Electrical Code*. We believe that that makes ours a better document."

ANSI, the American National Standards Institute, certifies standard-setting bodies based on their adherence to ANSI procedural requirements that call for an open, balanced, and democratic process, with formal evidence of consensus and formal procedures to assure due process. The International Code Council does have formal democratic voting and appeals processes, but its membership is open only to building officials employed by states

and localities; industry representatives and other "stakeholders" can serve on International Code committees that create code language, but they are not allowed to vote on actual code changes. But NAHB's Ed Sutton says, "I've participated in both in the past, and that's a lot of rhetoric, in my opinion. In fact, I think there's room for more abuse in the ANSI process than there is in some of ICC's processes."

At bottom, NAHB has a philosophical difference with NFPA about the scope of any model building code. "After we got into the process, we realized that NFPA had strayed far from what we would consider reasonable building code development," says Ed Sutton. "They've decided that property protection is a significant issue that needs to be addressed by building codes. We fundamentally disagree with that. We think the building code should be a life safety code only. And they were accepting requirements without much even in the way of economic justification."

Consensus or no, NAHB has not found much to like in the final version, says Sutton. "NFPA 5000 really isn't a stand-alone, prescriptive code like the *International Residential Code*. You have to hunt through the NFPA document to even find what you would build residential construction to, and you won't find a lot there. It looks to me like you'd have to do mostly engineered construction for residential, and we have a problem with that also."

NFPA spokesperson Reynolds says losing NAHB will not detract from NFPA's ability to create consensus. "I think that their members will participate in it as individuals. I would assume that many people within the home building industry will want to participate because they'll want their voices heard. And NAHB is welcome, and we hope that they would change their mind and come back into the process at any time. We certainly have not closed the door. Our process will always remain open, and it is open to anyone who wants to participate in it."

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basement repair contractor saw-cuts a shallow groove into the wall of the wet basement and grouts titanium ceramic anodes (positive terminals) into the walls. Next, the cathodes (negative terminals) are pushed into the wet soil or backfill through holes cored in the basement wall and slab. Anodes and cathodes are then hooked up to the Drytronic controller, a low-voltage micro-circuitry device that regulates the electrical pulses.

When a milli-ampere current at 24 volts is applied to the terminals, dissolved mineral ions (charged particles) in the water are gradually forced toward the cathodes in the soil, pulling all the moisture along with them. The wetter the wall and soil, the stronger the current. As the basement dries out, the current flow slows to a tiny trickle, just enough to maintain the dry condition. A flooded basement will be bone dry in just a few days or weeks.



The dry basement after electronic treatment, with no additional drainage.

Installing the system costs less than a conventional wet basement solution with excavation and drainage, says Drytronic, and once installed, the operating costs are negligible. Corps scientists metering an installation at Fort Jackson, S.C., said the electricity cost came to just \$3 to \$4 a year.

OFFCUTS

The Brick Industry Association has revised its tech notes for detailing cavity walls. The revised guidelines include information in many areas, including metal drip-edges, end dams, flashing, and seismic detailing. Revised Tech Notes 21B is available online at www.brickinfo.org or may be ordered from the BIA at 11490 Commerce Park Dr., Reston, VA 20191; 703/620-0010.

Authorities in northeastern India are demolishing illegally built houses with elephants, according to Reuters news service. Five elephants are being used to break up about 1,000 two-room thatched houses in a protected forest area in the state of Assam. Guided by their trainer, the elephants first use their trunks to tear off the roofs, before pushing over the bamboo walls and crushing them underfoot.

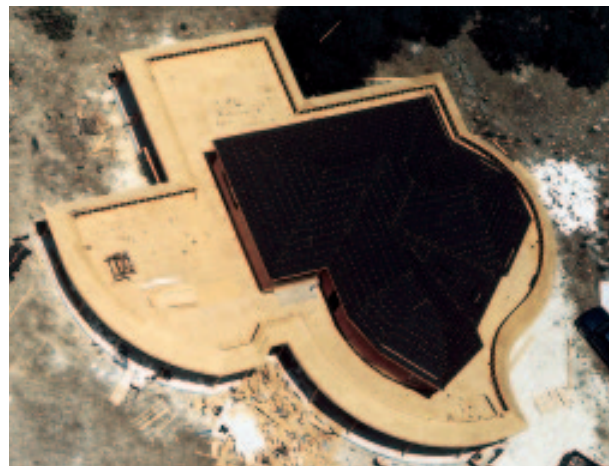
Government agencies can impose temporary moratoria on land development without compensating affected landowners, according to a recent ruling by the U.S. Supreme Court. By a vote of 6-3, the court rejected the claims of a group of California and Nevada property owners who were prevented from building on land near Lake Tahoe because of concerns that the new homes would contribute to pollution of the lake's famously clear water. The ruling is widely seen as a setback for the property rights movement.

Chinese immigrants have higher rates of home ownership than other groups, according to a recent study performed by the Lusk Center for Real Estate at the University of Southern California. The study found that when Chinese immigrants were compared to whites with similar incomes, home ownership among Chinese was 18% higher in New York, 20% higher in Los Angeles, and 23% higher in San Francisco. Gary Painter, the study's author, noted that developers and real estate agents should be able to benefit from that high demand by producing housing that is sensitive to the needs of Chinese home buyers.

A recent change in the Energy Star program could mean design changes in some popular types of entry doors, according to the Window and Door Manufacturers Association. Under the new Energy Star rules, which took effect in January of 2002, any exterior door that meets the energy-efficiency standards for windows is eligible for an Energy Star rating, regardless of the amount of glass area it contains. The new rules are expected to encourage manufacturers of all-wood entry doors to introduce new doors incorporating larger amounts of low-e glass, which has better insulating value than wood.

State-of-the-Art Design

The Lone Star State has a long, proud tradition of Texas-shaped objects, from fruit baskets, ice cubes, and cutting boards to swimming pools and golf greens. But this year marked the completion of what is thought to be the state's first Texas-shaped home. The 4,328-square-foot poured-concrete structure is located about 20 miles north of San Antonio and takes its distinctive shape from an



additional 10,200 square feet of porches and balconies. According to builder Jeffrey Cummings of San Antonio-based Cummings Homes, the most challenging part of the job was ensuring that the huge second-story balcony would withstand the region's heavy seasonal rains.

The owners are reportedly very happy with their new home, which among other things permits them to identify rooms geographically. The main entry, for example, is Brownsville, while the kitchen is in the Panhandle. As you would expect, the bar is located in East Texas — the state's wettest region.

BUSINESS TUNE-UP

Boost Productivity by Eliminating Bottlenecks

by Melanie Hodgdon

Most of the companies I work with aren't operating at peak efficiency — that's why they've called me. Frequently, inefficiency stems from bottlenecks of one kind or another: The estimator is sitting around unable to finish a proposal because she's waiting for word of some vital decision that has already been made. The draftsman in a design-build company is stuck with an unfinished drawing, waiting for the final electrical decisions that were made last week. The bookkeeper may be waiting for a stack of week-old invoices to be reviewed before being sent. Payables may be missing discount dates while waiting for the owner to review the accounts to see which ones actually get paid. (There's no money to pay everybody on time, because invoices went out late last month, as usual.) The production manager may be unable to schedule tightly because information on recently sold jobs hasn't arrived yet. If you think none of this sounds familiar, check with your employees!

Occasional glitches are inevitable, but when people are consistently left waiting for a decision to be made by someone else, there's a real problem. It may be that the owner, supervisor, or manager has a legitimate need

to review or decide, but in my experience this sort of situation usually occurs when the key individual is unable to give up his or her role as decision maker.

A successful manager must know how to set priorities, delegate where needed, and communicate effectively. If you must review invoices before they're sent, for example, make that a high priority. That may improve your cash flow to the point that deciding which subs and suppliers you can afford to pay will cease to be an issue. If you can't trust your field crew or bookkeeper to make good decisions, hire somebody you can trust and then keep your nose out of it. If you're working as a designer, remember to keep your draftsmen, estimator, and relevant subs in the loop to avoid later errors and omissions. Develop a system for relaying information to them: If nothing else, photocopy your site notes when decisions are made. You should be sending copies to the client anyway, to keep everybody on the same page.

If you can't give up control just because you can't give up control, then either accept the inefficiencies that will result, or downsize until you can once again do it all yourself.

California Stifles Nonunion Apprenticeship Training Programs, Federal Government Says

by Kathy Price-Robinson

California's state apprenticeship agency may find its power yanked by the U.S. Department of Labor, which claims that the California Department of Industrial Relations (CDIR) makes it too difficult for nonunion apprenticeship programs to be approved and expanded.

At issue, the federal agency said, is a 1999 law restricting state approval of new apprenticeship programs to geographic areas where they are needed. This "needs test" often precludes approval of nonunion programs where union programs already exist.

But according to Sue McNiel, presi-

dent of the Southern California chapter of the Associated Builders and Contractors, 80% of the construction work force is nonunion. "It would make sense that we train those people in apprenticeship programs."

However, getting nonunion apprenticeship programs certified by the state agency, McNiel says, often happens only after a legal challenge. "It shouldn't take two, three, four years of court to get an apprenticeship program approved," she says.

The challenge by the federal agency was spearheaded by Rep. Gary Miller, a Diamond Bar, Calif., Republican

senator and a former builder. Some see it as a political move against Democratic Governor Gray Davis, who has wide union support.

"I'm stunned," Stephen Smith, director of CDIR, told the *Sacramento Bee*. "This feels like politics to me, which is really too bad because this is a serious issue. I'd be pretty surprised if we did not appeal."

The federal action was welcomed by ABC president and CEO Kirk Pickerel, who says that it "sends a strong message to the state of California and to other states attempting to discriminate against open shop apprenticeship training programs. Such actions will not stand."

The CDIR was given a 30-day window in which to take corrective actions.

Naperville Drops No-Step Entry Requirement

In February of 2002, the Chicago suburb of Naperville, Ill., passed a local “visitability” ordinance meant to improve wheelchair access to new single-family private homes. The ordinance, vigorously promoted by advocates for the disabled, mandated wider first-floor doorways, the installation of grab-bar blocking in bathrooms, and accessible light switches and electrical outlets (see “Builders Wary of ‘Visitability’ Regulations,” *Notebook*, 3/02).

One key provision not included in the original ordinance — a requirement for a no-step entrance ramp — was shelved for further study, although it was widely expected to be phased in later.

But at a city council meeting in May, the no-step entrance provision was thrown out altogether after the city’s Fair Housing Advisory Commission concluded that it would be too difficult and costly to implement.

“It played itself out the way it should have,” says Bruce Deason, senior director for government affairs for the Attainable Housing Alliance, which represents 12 Chicago-area home builders’ associations. The Naperville city council, Deason explains, had an architect affiliated with the city’s Fair Housing Advisory Commission evaluate the last ten residential building permits granted by the city

to determine whether it would have been practical to include the type of entrance ramps under consideration.

“What they found was that it would have been not just expensive, but impossible in some of those cases,” Deason says. Narrow setbacks, sloping lots, and an existing requirement that foundations stand 18 inches clear of the finished grade were found to make the accessible entries unworkable. According to Deason, the Attainable Housing Alliance plans to share its experience with the NAHB, which continues to oppose legislation that would require more demanding residential access standards.

Daylight May Improve Learning, Study Finds

Can an increased daylight in the classroom produce brighter children? A recent study of 20,000 elementary school students in three U.S. school districts suggests that it can. The study, reported on in the June 2001 issue of *ASHRAE Journal*, correlated the reading and math test scores of students in Seattle; Fort Collins, Colo.; and San Juan Capistrano, Calif., to the level of daylight in the classroom.

After allowing for other possible influences on test scores — including teacher skill, student demographics, and neighborhood effects — the authors of the study found that daylight seems to have a pronounced effect. In the San Juan Capistrano district, for example, students in classrooms with the most daylight scored 26% higher in reading and 20% higher in math than those in classrooms with the least daylight.

Uncontrolled daylight, however, was found to lower test scores: Students in classrooms with a skylight that allowed sun to shine into the space directly, with no means of controlling or reducing the light level, scored 21% lower in math than students in rooms without a skylight.

The authors propose several possible causes for the study findings, including improved visibility, improved mental stimulation, and improved mood, behavior, and well-being. And although the study doesn’t address the effects of daylight in residential structures, it’s reasonable to think that controlled natural daylight might have an effect in that setting as well. 