NOTEBOOK

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Online Permit Services: Promising But Still Limited

by Joe Stoddard

It's a frustrating equation: The more work a builder has lined up, the less time he or she can afford to spend chasing down building permits. The problem is compounded if combined with an overall peak in demand, which can overtax permitting agencies and lead to weeks or months of delay. During the current long-running boom, building departments nationwide have resorted to moratoriums on new permits, sending project overhead through the roof.

The Internet to the Rescue?

Internet "e-permit" services promise to streamline the permit process and provide around-the-clock access to city hall. They paint an appealing picture of contractors updating drawings or documents on file at the building department with a few clicks from their office PCs, as well-trained armies of building inspectors submit progress reports in real time with their wireless hand-held computers.

In reality, that probably won't be happening any time soon. Of the more than 25,000 permit-issuing agencies in the United States, fewer than 3,000 use any kind of automation. The dot-com permit services can't do it alone, and the vast majority of local governments are still using paper-based systems. But in a limited way, the Internet is already helping some builders to apply for and file permits.

Simple projects, simple permits. For simple "over-the-counter" permits such as those required for a re-roofing or a backyard fence, e-permits can be as straightforward as your city hall making a few forms available on a website that contractors can download, print, and fax back. PermitPlace (www.permitplace.com) provides exactly this type of service for a handful of communities in California, Oregon, and Washington State. PermitPlace works with local government to convert paper forms into electronic documents that can be filled out online, and provides a simple credit-card interface so contractors can pay for the permit online.

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Sunroom Code Changes

PATIO ENCLOSURES

Until two recent code changes were adopted, the *International Energy Conservation Code (IECC)* required sunroom additions to comply with the strict energy provisions used for homes. Since sunrooms consist mostly of glazing, achieving compliance was difficult.

The *IECC,* which is the successor to the *Model Energy Code,* is part of the family of codes administered by the International Code Council (ICC). The sunroom code changes were proposed by the National Sunroom Association, a trade association, and were approved at the ICC code hearings last fall. The changes permit less stringent energy requirements for glazing used in sunroom additions, as long as the sunroom is thermally isolated from the rest of the building, and as long as the sunroom has its own heating and cooling zone. In most cases, the new relaxed code allows the use of sunroom glazing with a U-factor of 0.5.

The new code defines a "sunroom addition" as "a one-story structure added to an existing dwelling with a glazing area in excess of 40 percent of the gross area of the structure's exterior walls and roof."

For more information, contact the International Code Council (5203 Leesburg Pike, Suite 600, Falls Church, VA 22041; 703/931-4533; www.intlcode.org).

Online Permit Services

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Limitations and benefits. With larger jobs, of course, the permitting process is much more complicated. New construction and major remodeling typically require the builder to submit survey maps, construction drawings, written specifications, and an assortment of separate sub-trade permits, each with its own application, inspection schedule, and enforcement officer. For electronic permitting to work for these sorts of projects, there has to be a way for the contractor to track the progress of all the pieces as the permits move through the system or are kicked back for revision. The current crop of e-permit services address only limited pieces of this puzzle.

Still, if you're working in an area where online permitting is available in any form, consider taking advantage of it. Even the simplest automated system will nearly eliminate clerical errors, such as incorrect license numbers, which hold up 20% to 25% of conventional permit applications. Electronic filing also eliminates standing in line at city hall. Even though the contractor nearly always bears the cost of e-permitting, that cost is low — typically $20 or less per application.

Even the simplest automated permitting system will nearly eliminate clerical errors

The Players

Four services — PermitsNow, Permits.com, NetClerk, and Accela.com — have emerged as the e-permit frontrunners, but they are not the only solutions available to government agencies. In fact, many municipalities have elected to build their own systems completely from scratch. For example, Valdosta, Ga., spent a year building its own system using its in-house data processing department and outside consultants.

PermitsNow (www.permitsnow.com) offers a limited online permit service which looks completely automated from the contractors' point of view … but isn't. Actually, PermitsNow has been able to tie in to few, if any, computer systems of the over 50 jurisdictions it serves in the Washington, D.C., Virginia, and Maryland tri-state area. Once the contractor submits a permit application online, it's still manually processed by PermitsNow, which sends a staffer to actually stand in line at the building department in your place. PermitsNow limits its service to mechanical, electrical, plumbing, gas, and fire sub-permits; it doesn't process general building or land development permits.

Permits.com (www.permits.com) says "submit your permits online, not in line." The electronic filing service is somewhat more ambitious than that of PermitsNow, since it provides general building permits as well as sub-trade permits, but it currently offers few tracking or revision features for subscribers. Bob Weber, director of the Clark County, Nev., Building Department, says his staff is excited but cautious about the move to e-permitting using Permits.com. "It will be a while before we can do this on a broad scale, but most importantly, it will allow us to give better customer service," he said. "We won't have as many people waiting in lines and that benefits everyone." Weber also pointed out that the move to electronic permitting would decrease the amount of paperwork his office handles and make it easier for his staff to access project information. It will also decrease the county's physical storage needs.

Besides the test project in Las Vegas, Permits.com currently services Boston, Cincinnati, Houston, New York City, New Jersey Metro, Tampa, and most of Connecticut. It will soon be available in Atlanta, Baltimore, Buffalo, Chicago, Cleveland, Columbus, Dallas, Denver, Detroit, Los Angeles, Miami, Philadelphia, Phoenix, Pittsburgh, and San Francisco/Oakland.

NetClerk (www.netclerk.com) provides several web-based business services: PermitCentral is an online permit processing center, LicenseCentral enables contractors to obtain and renew business licenses, while GovCentral is a "middleware" application designed to help building departments get on board with the NetClerk way of doing things. Contractors can utilize NetClerk's technology to complete, submit, store, and retrieve permit applications electronically in over 1,200 cities.

Unfortunately, like PermitsNow, the NetClerk online system is limited to managing simple single-trade over-the-counter permits. According to the company, future NetClerk service offerings will be driven by the needs of contractors and building professionals and will probably include a more "end-to-end" automation of the permit cycle.

Accela.com (www.accela.com), like its competitors, provides real-time e-permitting for contractors and the general public. But unlike the others, the company doesn't market its services directly to builders. Instead, it works with building departments that want to launch and manage their own e-permit websites. Its clients — which include several hundred counties and municipalities in at least four states — build their system around the company's proprietary software. In addition to allowing users to apply for permits online, the system also lets them track permit status and schedule inspections online.

Joe Stoddard *is a contributing editor to* The Journal of Light Construction.

OFFCUTS

Maryland has become the 39th state to require home builder licensing/registration, according to the NAHB. The new law, which took effect in January, requires all home builders doing business in Maryland to register every two years with the newly formed Home Builder Registration Unit.

Home improvement contractors led the nation in consumer complaints in 1999, according to a recent survey by the Consumer Federation of America and the National Association of Consumer Agency Administrators. In both 1997 and 1998, the number-one spot had been held by auto sales, which slipped to second this year. Household Goods, Auto Repair, and Credit/Lending finished third, fourth, and fifth, respectively.

"Toy vineyards" are emerging as a hot new trend in California. According to a report by Inman News Features, growing numbers of well-heeled homeowners are using grape vines for landscaping. A quoted vineyard service contractor noted that the plantings are easy to maintain and that birds eat any leftovers.

A Seattle-area home has been struck and destroyed by a passenger train. The mishap occurred late last December, when the home — which had been placed on a flatbed truck for a 30-mile move to a new site — arrived at a grade crossing at the same time as a chartered trainload of Seattle Seahawks fans. The Seattle Times reports that the collision scattered lumber, bricks, and insulation along a 300-foot stretch of track but caused no serious injuries.

Utah Builders Can Be Sued for Injuries to Children

The Utah Supreme court has reversed a 28-year-old precedent and ruled that the state's residential builders can be sued for injuries suffered by children who venture onto job sites. At issue was the legal principle known as the attractive nuisance doctrine, which holds that although a property holder ordinarily is not liable for accidental injuries to a trespassing adult, the property holder may be liable for injuries to children, who are often attracted to settings that they lack the experience to recognize as hazardous (see "Kids and Job Sites: Who's Liable?," *Notebook*, 1/01).

The Utah ruling came in the case of Erick Kessler, a 6-year-old boy who suffered a concussion and other injuries when he fell through a stairway opening while playing hide-and-go-seek at a house under construction in a residential area. Until the December ruling, state courts had held that the attractive nuisance doctrine did not apply to residential builders. With the suit now cleared to proceed, another court will determine whether the contractor, CRM Construction, and developer Stephen Sheffield had reasonably secured the site from trespassing children.

DeWalt Announces Tool Recall

DeWalt has issued a voluntary recall of two miter saws, which may contain potentially hazardous defects.

The recall centers on a pair of 12-inch miter saws — models DW 704 TY1 and DW 705 TY1. The company has received seven reports of injuries that occurred from saw blades detaching while in use as a result of loosened bolts. About 112,000 of the saws were sold at home centers and hardware stores from January 1992 through December 1993. The recalled saws also have date codes from 9201 through 9304, which are stamped into the end caps or backs of the tools. For a free replacement bolt to repair either of the affected saws, call DeWalt at 888/771-4540.

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Valve Manufacturers Reconsider Lead-Containing Brass

Although lead-containing solder is no longer used for water supply pipes, lead-containing brass is still a common material for plumbing valves and some faucet parts. Lead has been added to brass for centuries. "Lead adds machinability and helps the pressure-tightness of brass," says Wayne Rasmussen, vice president of technology at the American Foundry Society. Whether the lead content in brass is high enough to cause health problems is a matter of debate. But in response to health concerns, regulatory changes, and lawsuits, manufacturers are gradually reducing the amount of lead in plumbing brass.

The brass alloys used to manufacture most of the ball valves and stop-and-waste valves used in residential construction contain between 5% and 7% lead.

The Safe Drinking Water Act requires that brass used to make plumbing fittings, valves, and faucets contain no more than 8% lead. It also requires that valves and faucets comply with NSF Standard 61, which limits the permissible amount of lead that most faucets may leach into drinking water to no more than 11 parts per billion (ppb). California has a more stringent standard of 5 ppb for all kitchen faucets, except those sold with a lead-danger warning tag.

In recent years, faucet manufacturers have reduced their use of lead-containing brass, albeit reluctantly. "The industry approach was to try to fight the EPA, and that didn't work," says Rasmussen. In 1992, the state of California sued 14 faucet manufacturers, alleging that the brass components of their faucets leached dangerous amounts of lead into drinking water. Between 1994 and 1996, individual manufacturers reached agreements with the Attorney General's office, agreeing to pay penalties and gradually introduce lead-free faucets.

Lead-free brass. Some faucet manufacturers, including Chicago Faucets and Starline Manufacturing, have switched to new brass alloys that substitute a bismuth-selenium alloy for the lead in brass. Other faucet manufacturers still use some lead-containing brass, but replace as many faucet parts as possible with plastic.

Valve manufacturers, however, have not yet switched to lead-free brass, mainly because of the higher cost of the lead-free substitutes. The standard brass alloy used for ball valves and stop-and-waste valves used in residential construction is 85-5-5-5 brass, containing 5% lead. Some manufacturers, including NIBCO, use a bronze alloy containing 7% lead.

"In the ball-valve business, people are working on using alternative materials — engineered plastic, coatings, and simple plastic inserts," says Stan Hazan, general manager of the drinking water additives certification program at the National Sanitation Foundation. "The industry has seen what the settlements have been in California, and they don't want to go there. I think they are slowly but surely moving away from the 85-5-5-5 brass."

OFFCUTS

A Maryland couple whose home was built atop a graveyard is expected to bring suit against the estate of their late builder, according to a report in the Baltimore Sun. The attorney for the builder's estate denies that anyone is buried in the lot, although the homeowner has reported unearthing bones and a casket handle a foot and a half below the surface.

The NIMBY syndrome has been upgraded to BANANA, according to Newsweek magazine. The newer term is an acronym for Build Absolutely Nothing Anywhere Near Anything.

Million-dollar houses aren't what they used to be, according to the real-estate information service DataQuick. The service reported that although 8,494 California homes sold for over $1 million during the first nine months of 2000 — up from 7,553 in all of 1999 — the buyers ended up with fewer square feet than might have been expected. Statewide, the median-sized million-dollar home contained a relatively modest 2,910 square feet, with four bedrooms and three baths.

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Sinking Foundations in Texas

In most areas of the country, builders take special precautions to keep their foundations as dry as possible. But in the Dallas area, where clay soils predominate, dry soil can wreak havoc with a foundation. That's why many Dallas homeowners go to great lengths to water their foundations every summer.

The clay soils of northern Texas expand when wet and shrink when dry. "We have some of the worst soils in the world," says Randy Mobley, owner of American Foundation & Drainage, a foundation repair contractor in Dallas. "There are probably 150 to 155 foundation repair companies in the Dallas area."

Roger Schreiber, quality assurance manager at Ram Jack Foundation Repair in Garland, Texas, says, "Well over 50 percent of the homes in Dallas have problems like sheetrock cracking, brick cracking, and doors binding."

In the summer, as soils dry out, many houses in Dallas begin to sink or tilt. "Around about late July, the phones just start ringing," says Schreiber. The summer of 2000 was unusually hot and dry in Texas, leading to an epidemic of foundation problems. "Last summer, we had 77 days with no rain," says Schreiber. "We set sales records. We've been tremendously busy, and we aren't caught up yet."

Foundation contractors repair and level settling slabs by installing concrete or steel piers to support the slab's perimeter beam. Completely supporting the perimeter of a slab can require a series of 12-foot deep piers, 8 feet on-center.

Foundation watering. The standard advice to homeowners who want to avoid foundation settlement problems is to keep the soil moist during the summer months with a soaker hose installed about two feet out from the foundation. While regular foundation watering is effective, it isn't cheap; many Dallas homeowners have summer water bills that run between $200 and $300 a month.

Because of the increasing homeowner concern about clay soils, conscientious Dallas builders are beginning to favor engineered pier-and-beam foundations. "Pier-and-beam foundations are terribly expensive to build, but they far outperform a slab," says Schreiber.

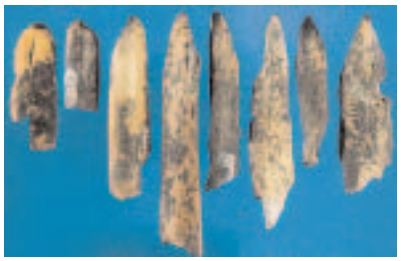
AMERICAN FOUNDATION & DRAINAGE

RAM JACK OF TEXAS

During dry summers in North Texas, unstable clay soils dry out and shrink, allowing some foundations to sink. Homeowners alarmed at spreading drywall cracks (top) keep the phones ringing at dozens of foundation repair contractors in the Dallas area. To stabilize sinking concrete slabs, contractors install new steel or concrete piers under perimeter beams (above).

Revenge of the Termites

FRANCESCO D'ERRICO



An anthropologist at a South African archaeological site demonstrates how early humans used bone tools to dig for termites. The insects were an important food source for early humans.

Termites have few friends in the modern world, but a team of scientists researching a stone-age site in South Africa has found that our ancestors liked them very much. In a recent paper published in the *Proceedings of the National Academy of Sciences,* anthropologists Lucinda Backwell and Francesco d'Errico reported that 2 million-year-old bone tools found at the site were not used for digging edible tubers or other plant material, as previously thought. Based on microscopic analysis of wear patterns on the tools — which were compared to modern replicas experimentally used for several types of digging — the authors concluded that they were used for puncturing the hard outer crust of termite mounds.

"That makes the termites rush to the surface to repair the damage," says Penn State anthropologist Pat Shipman. "Then the early hominids could pick them up and eat them." From a nutritional standpoint, termites are hard to beat: The authors report that they provide 560 calories per 100 grams, or half again as much food energy as rump steak, and are rich in protein, fat, and essential amino acids. Backwell and d'Errico believe that they may have been a vital part of the early human diet.

Today, of course, the positions are reversed, with termites making holes in our houses as we rush to the scene to repair the damage. But maybe we shouldn't complain. Without the nutritional boost their ancestors provided — and the related experience in making and using tools — we might still be living in caves.

California Plumbing Code Grants Limited Approval to CPVC Plumbing

BF GOODRICH

Last November, the *California Plumbing Code* adopted a new standard that will permit limited use of CPVC pipe and fittings in residential plumbing systems. The new standard is intended to provide homeowners with an alternative to copper plumbing, which can corrode and prematurely fail in aggressive water areas (see "When Copper Goes Bad," *Notebook,* 12/99).

Because such failures occur primarily in areas serv ground wells, the change is expected to affect relativel Before going with CPVC, a contractor must obtain from a local building official who has determined tha will be a premature failure of metallic pipe due to wat conditions." Contractors who install CPVC plumbin are subject to penalties.