



# Second life

Portola a trend

By David

ook through the Yellow Pages and you won't find a heading for the word "deconstruction." Enter it in Google and you'll see pages of links explaining how a critical reading of the canon of Western literature can expose its hidden assumptions and subtexts.

But mention the word to anyone in Portola

Valley's public works department or Town Council and you're likely to hear a description of what just happened to the complex of one-story

1950s-era school buildings at Town Center.

The buildings were deconstructed — taken down in pieces over five weeks in order to extract trusses, rafters and beams. With a little refinishing, the wood will be put to use again in a new \$20 million com-

plex that includes a new Town Hall, library, community hall and activity rooms.

Each old rafter should yield three or four boards for paneling and ceilings in the new buildings, said Woodside resident Jim Steinmetz, the owner of Reusable Lumber Co. and the contractor who led the deconstruction. Other pieces of the recovered lumber will go

into benches and picnic tables.

In all, the town recovered about 14,000 linear feet, about a third of it old-growth Douglas fir, Mr. Steinmetz

said, adding: "That lumber was around when Christ walked the Earth."

cover story

The recycling did not end with the wood. The concrete in the old foundations won't be going anywhere either. It will be ground up — noisily — and reused as base

rock for the new complex.

To accomplish all this, the town spent \$200,000 on deconstruction and another \$105,000 to demolish what was left and grind the concrete, said Assistant Town Administrator Steve Willis. The town, he said, saved about \$250,000 in not taking the traditional route — spending \$500,000 to \$600,000 to turn whole buildings into rubble and bring in virgin wood and base rock.

The trade-off was time. The new complex is about two and one-half months behind the original schedule, said Mayor Ted Driscoll. Town staff say they have

Photos by Marjan Sadoughi
ALMANAC STAFF PHOTOGRAPHER

adjusted the schedule to accommodate the unforeseen delay, but Mayor Driscoll was not displeased in any case.

"We're very happy to be two and a half months behind schedule because we'll be under budget," he said. "I'm very interested in getting the town well-informed on what's happening here and how frugal we're trying to be."

A desire for frugality is understandable, given the vigorous three-year debate among the project's supporters and opponents over how to pay for a new complex and whether it was really necessary. The critics may have given up in the face of serious seismic and liability risks at the old site.

The donors have not been frugal. A major fundraising effort to raise \$17 million stands, as of December, at \$13 million,



including \$3 million in public money and \$10 million in gifts and pledges. If the remaining \$4 million is not raised, the Town Council has said, it might consider a general obligation bond.

If Portola Valley manages to be frugal, that is but one objective. The new complex — expected to receive a gold or possibly a platinum rating from the U.S. Green Building Council — is also meant to showcase green building practices and advertise the town's environmental awareness.

"We're trying to be sustainable and to be an example to other people and towns on how to do it right: 'If you do it green, it's efficient and cheaper,'" Mayor Driscoll said. "This is an opportunity to show some leadership."

San Mateo County may be right behind Portola Valley. Mr. Steinmetz said he's been talking with the county about deconstructing the old 130,000-square-foot juvenile hall, which was recently rebuilt on another site.

### **Deconstructing deconstruction**

"The average stick of (new) lumber, from its source in the forest to its end user, travels 1,500 miles," said Mr. Steinmetz.

At Town Center, the amount of fossil fuel used for lumber transport is significantly lower. Most of it traveled about 140 miles — back and forth to Richmond — where the wood was scanned for nails with a metal detector, trimmed to remove paint and rough edges, run through a milling machine to create new smooth surfaces, and cut to the dimensions specified by the Town Center project architects.

Local reuse should be happening much

more often, Mr. Steinmetz said. Old wood tends to be quality wood, and while quality wood is rare in forests, it is not hard to find in buildings being demolished every day, he said. "The highest grades of lumber are being tossed and you can't get them back."

"I want to blow Portola Valley's horn for doing (deconstruction)," he said. "They haven't slapped themselves on the back enough."

"(Local reuse) is the best reuse there is. It's the greenest thing you can do," said Bob Falk, a research engineer at the U.S. Forest Products Laboratory in Madison, Wisconsin, and the co-author of the forthcoming book, "Unbuilding: Salvaging Architectural Treasures from Unwanted Houses."

Deconstruction, Mr. Falk said, could be

done on 90 percent of U.S. housing and many commercial buildings, but it's still rare because of labor costs when compared to demolition, and because it still has an image of "hippies in pickup trucks" doing the work.

Mr. Steinmetz drives a pickup and was for seven years a co-director of the environmental group Bay Area Action, now Palo Alto-based Acterra, before starting his business in 1998.

He said he wants mainstream attention for deconstruction and has no scruples about becoming a wealthy capitalist: "I would love to be and I intend to be, but not by sacrificing my values." People, he said, need to raise a ruckus about the greenness

See **REUSE**, next page





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#### **REUSE**

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of deconstruction.

Activists "need to be making a big stink every time they see someone smash a building," he said. "They're basically turning a blind eye to the negative implications (such as global warming) of that kind of industry. ... When speed overtakes quality, I think that society loses over all. Do it slow and do it right."

Smashing buildings is bread and butter for demolition practitioner Ken Vickers, the owner/operator of KVT Services of Redwood City. The labor costs over the weeks of a deconstruction project are too high for how much wood is recovered, he said. Demolition is a "necessary evil" until those economics change, he added.

It's a time-sensitive business, said Debbie Mendelson, a spokes-woman for Mountain View-based demolition company Ferma Corp., which transformed the old Stanford stadium to a mere hole in the ground in nine days. An operator with an excavator can scrape a 3,000-square-foot home in a day, she said, and many

homes that Ferma demolishes are termite- or mold-ridden and not eligible for reuse.

Such wood is turned to rubble by demolition, and much of it is processed at the Zanker Road Landfill in San Jose, where it may become fuel for furnaces or sawdust or ground cover for weed control along freeways, said Michael Gross, the landfill's marketing manager.

Maybe the landfill should not be processing so much wood: "There's so much wood out there that can be reused," he said.

All of those processes generate carbon dioxide, but it may be a while before it turns around, Mr. Steinmetz noted. Deconstruction, he said, will need another 10 years before there is a large used-lumber market and plenty of workers



**Long years** show in the checks and cracks on these boards from the roof of the former Portola Valley School, but their useful life is hardly over. They'll be cleaned up, resized and used to panel walls and ceilings in the new Town Hall, library and community hall.

trained to take down buildings.

If time is not pressing, it can be economical today, as was apparent in the Portola Valley example. A homeowner can donate the used wood and can get a tax deduction worth \$30 to \$60 per square foot, said Marcan Enterprises owner Dave Marcan, who deconstructs houses in the Peninsula and South Bay.

He said he and his crew deconstructed a 4,000square-foot home in Monte Sereno

for \$50,000. The homeowner, after having the wood appraised, received a deduction of \$160,000 — in a 30 percent tax bracket, a cash value of \$48,000.

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What can be done with that lumber? Seasoned wood is unpopular for construction, said engineer and Woodside resident Tim Hilleary. Nails from nail guns, which are driven by gunpowder, can ricochet bullet-like off such wood, he said. "It makes people feel good to be using it, but it's really dangerous to the workers."

Ted Reiff, president of nonprofit The ReUse People of America Inc. in Oakland, will take it off your hands. Seasoned wood is popular with homeowners who do their own remodeling and people who want the wooden elements of their homes to show the fine grains of old wood, Mr. Reiff said.

An aged piece of Douglas fir has about the same hardness as a piece of oak, he said. Most of the used wood he sees — and his company is chronically short of it — is milled down for non-construction uses such as furniture, cabinets, moldings and fireplaces, he said.

"It's great to be able to see this stuff go someplace where there is a market for it," said Mr. Marcan, who contracts with Mr. Reiff.

#### The future

Will deconstruction lead to wood-frame homes being built to be taken apart to make it easier to reuse the wood?

A lot more effort needs to be made in that direction, Mr. Steinmetz said. In a typical home built today, given the proliferation of glue, nail guns and green wood that can warp as it dries, "the idea is to make it bulletproof, and you can't tear it apart if you tried," he said.

Mr. Falk of the U.S. Forest Products Lab used the word "academic" to describe the current state of affairs in designing homes for deconstruction.

## Learning more about deconstruction

Deconstruction — the careful dismantling of homes and other buildings — can yield large tax deductions, interior fixtures and decorations that may be dated but still useful, and lots of fine old wood from behind ceilings and under floors.

Deconstruction is also considered benign to the environment since it opens up opportunities to reuse materials in ways that reduce greenhouse gas outputs when compared with using virgin and even recycled materials.

For more information, contact:

- Jim Steinmetz at Reusable Lumber Co. in Woodside: 529-9122 or info@reusablelumber.com.
- Lillian Clark at RecycleWorks, the resource conservation programs manager for San Mateo County: 599-1447 or Iclark@co.sanmateo.ca.us.

- Dave Marcan at Marcan Enterprises in Moss Beach: 580-2922 or dave@marcanenterprise.com.
- Ted Reiff at The ReUse People of America Inc. in Oakland: 510-383-1983 or tedreiff@TheReusePeople.org.
- Zanker Road Landfill in San Jose: 408-263-2384.
- Whole House Building Supply & Salvage in East Palo Alto: 328-8731.
- Sims I Hugo Neu metal recycling in Redwood City: 369-4161.
- Raisch Products concrete recycling in San Jose: 408-227-9222.
- **Deconstruction Institute** in Sarasota, Florida: deconstructioninstitute.com.
- Building Materials Reuse Association in State College, Pennsylvania: buildingreuse.org.