

Special ♦ Reprint ♦ Edition



As seen in



News

July 27, 2006

Building 'green' reaches a new level

Portland leads the way as 'eco-friendly' construction has gone mainstream

By John Ritter
USA TODAY

PORTLAND, Ore. — Michelle Walsh looks out a wall of windows in her airy new condo high above the Willamette River. Across hills and forests loom snow-capped Mount Hood and, when it's clear, Mount St. Helens. Below? Construction chaos all around.

Walsh revels in it. She and her husband, Edward, proudly wear "urban pioneer" buttons the builder handed out to early move-ins at the nation's first large-scale re-development to go 100% "green."

Call it "eco-friendly." Call it "sustainable." Portland's \$2.2 billion South Waterfront project, rising on a decaying industrial site south of downtown, signals a watershed in the green-building boom.

A trend that has taken hold across the USA in the past few years is evolving to a new level. What has been a patchwork of green buildings in many cities is expanding to whole communities, whole neighborhoods. Portland, well known as an urban-design innovator, particularly for its transit-oriented developments, is leading the way again.

The green ethic — energy-efficient, water-stingy buildings full

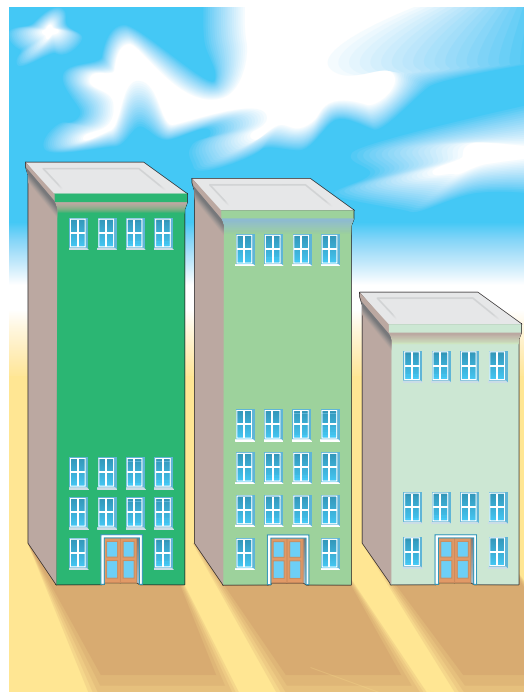
of features that stress the natural over the chemical, the recycled over the new and the renewable over the finite — is firmly mainstream.

"The big developers, the people who build America, are slow to move," says Charles Lockwood, an environmental and real estate consultant based in Southern California. "They still see a hint of tie-dye and wind chimes in green building. That's changing quickly. There's critical mass."

Even in suburbia, home of large-production builders of single-family homes.

"There's a lot more consumer interest. It's starting to be a groundswell," says Calli Schmidt, a spokeswoman for the National Association of Home Builders in Washington. A McGraw-Hill Construction survey in March predicted that green building would reach a "tipping point" next year and that two-thirds of builders would be building green homes.

Common features now found in green buildings include: non-toxic paint and finishes, wheatboard cabinetry, low-flow showerheads and toilets, wood floors of Brazilian cherry, Caribbean walnut and other plantation-grown varieties, high-efficiency heating and cooling systems, recycled and locally obtained building materials, rain and wastewater captured for toilets



AS SEEN IN USA TODAY'S MONEY SECTION, JULY 27, 2006

and landscaping, and panels that double as sunshades and solar power generators.

The Walshes went green house hunting after they sold a home in Arlington, Va., that they'd owned for 30 years and came to Oregon. They bought a condo knowing it was temporary until the Meriwether, twin South Waterfront high-rises, opened. Both towers sold out during construction, except three penthouses.

"Eco-friendly was very important to us," says Michelle Walsh, 63. "We knew seven years ago this project was happening, and we watched it. We wanted this place." The couple paid \$790,000 for a 10th-floor, two-bedroom, three-bathroom unit with a den — plus those killer views.

Developers and builders aren't joining the green revolution purely out of a sense that it's the right thing to do. They can't afford to be left behind. By year's end, at least 6% of the nation's non-residential construction, a \$15 billion chunk of the industry, will be green, says Greg Kats, a green-building consultant in Washington, D.C. Six years ago it was less than 1%.

"If you're not embracing green, you won't be at the table," says Homer Williams, one of South Waterfront's developers. "We do a lot of public-private work around the country, and it's the first question that comes up now."

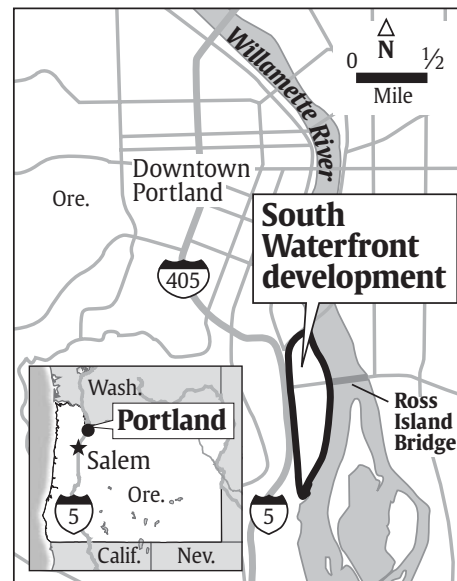
The federal government, 15 states and 46 cities require new public buildings to meet the U.S. Green Building Council's LEED standards (Leadership in Energy and Environmental Design), which require non-toxic building materials, among other things.

Four states and 17 cities offer incentives for LEED-rated private

buildings. Chicago, Pasadena, Calif., and other cities now fast-track permit procedures for builders who commit to green standards.

Raising the bar

Developers find that green technologies and construction materials add no more than 1%-2% to costs, a premium quickly recaptured by energy savings.



By Adrienne Lewis, USA TODAY

"Critics will say, 'Why should we pay upfront for these things?'" says Ethan Seltzer, director of the Toulon School of Urban Studies at Portland State University. "They'd also like to believe global warming doesn't exist."

Green building, he says, "is no longer confined to capital-intensive office towers. Green technology is to the point where these are valid questions for Home Depot shoppers."

The Green Building Council has certified nearly 550 buildings across the country since 2002. Developers only

recently have sought to stamp as green larger, multistructure projects such as South Waterfront. Same with single-family homes. The council is working on LEED versions for both.

Cities interested in LEED for large ventures include Pasadena, Milwaukee, Austin, Des Moines, Boise and Spokane, Wash.

Multibillion-dollar redevelopments on the Camden, N.J., waterfront and in New York City's Meadowlands are going green. Seattle's High Point neighborhood has the nation's first green public-housing project, 600 apartments and town houses surrounded by green houses selling at market rates. At least 5,000 units of green low-income housing in 25 states have gone up in the past 18 months.

Corporate America was the first to see the value of green beyond energy savings.

Companies noticed less absenteeism, less time lost to asthma, allergies and other illnesses aggravated by mold, stale air and chemicals found in many conventional buildings. But to Ford, Bank of America, Target, Toyota, Honda, Genzyme, Starbucks and Adobe, green also was about image.

"In the 1980s it might have been acceptable to do a trophy building and say, 'Oh, look at us, we're green,'" says Rick Fedrizzi, president of the Green Building Council.

No more. "The products you make should be green," he says. "The manufacturing process should be green. The factory should be green. Employees should work in a green building. You live this message all the way through and then someday you can call yourself a green company. Until then, it's just green-washing."

The city and developers are

AS SEEN IN USA TODAY'S MONEY SECTION, JULY 27, 2006

committed to top-to-bottom green at South Waterfront.

That means winning high LEED ratings on every building. It means streetcar and light-rail connections to downtown that cut auto travel. It means a mile-long, 150-foot-wide greenway between the Willamette and tall building clusters – not plain grass but restored natural habitat for birds and wildlife, bike and pedestrian paths included.

"It sets a much higher standard than what we've seen in many cities across North America," says Bob Sallinger, urban conservation director at the Audubon Society of Portland.

Condo and office towers will have smaller footprints to preserve views of the river and downtown in the neighborhood behind South Waterfront. The skinny, or pencil, high-rise design was pioneered on the Vancouver, British Columbia, skyline, and San Francisco, Sacramento, Las Vegas and other cities are copying it.

"We can do a much more elegant building by making it feel very tall and very vertical," architect Phillip Beyl says.

South Waterfront will be the densest neighborhood in Portland, already a transit-friendly city of small blocks and compact urban districts.

Developers calculate, for instance, that if condo owners in a 31-story, oval-shaped tower now going up were put in single-family homes, they'd consume 55 acres of land. South Waterfront's first phase will house 3,000 people and provide 5,000 jobs on 38 acres.

Many South Waterfront streets will be narrow to invite walking and generously landscaped, with "bioswales" – grassy trenches that catch and absorb storm runoff.

"Eco-roofs" of soil and native plants slow runoff and curb the "heat island"

effect of sunshine beating down on conventional roofs. The skin on most buildings will be glazed glass to maximize energy saving and interior light.

Finding value in 'green'

South Waterfront's anchor, an Oregon Health & Science University bioscience center opening in November, is the nation's first large building to use chilled "beams" instead of conventional air conditioning. Picture a car radiator on its side on the ceiling. Chilled water passes through and cool air falls into the room, requiring no power to run fans or blowers.

The university aims for the top LEED rating – platinum – which would be another first.

Medical buildings that combine research labs, surgery and a lot of daily traffic to doctors' offices aren't easy to make green. The 16-story, \$145 million building will produce a third of its electricity and treat its own water.

A two-story trombe – a narrow glazed-glass atrium that soaks up the sun – will make heat for the building's hot water. Heat pumps that use water instead of chemical refrigerants are costlier than standard units, but quieter. Therefore, the builder could spend less on soundproofing insulation.

"Not only will they have bragging rights on the first and largest platinum building of its type, they'll also get a very high-performance building that saves money over the long haul," says Dennis Wilde, a partner in Gerding/Edlen, a principal developer at South Waterfront.

Cost premiums on green building have shrunk "but were never as significant as people were afraid," Wilde says.

The university's outgrown main campus atop Marquam Hill is 30 minutes by car for doctors traveling back and forth to the new facility. Williams suggested a tram to cut the ride to 3 minutes. It will open in December.

Criticism of South Waterfront has been muted. Developers took heat when tram costs ballooned to \$57 million from \$15 million, but they say pre-design estimates were unrealistic. Taxpayers' share will be 15% of what some think is a landmark-to-be on a par with Seattle's Space Needle.

Condos range from one-bedroom, 700-square-foot units for less than \$200,000 to two- and three-bedroom spaces for up to \$1 million and a few penthouses at \$3 million-plus.

The buyer demographic is diverse – empty-nesters, single professionals, well-to-do retirees, young couples looking for urban starter homes and guys such as Venice Tunnitisupawong.

An analyst at Intel west of Portland, Tunnitisupawong, 28, wanted out of the suburbs, even if it meant a longer commute.

"I'm a single guy and that lifestyle doesn't really fit me right now," he says. He'll move into a third-floor, one-bedroom when a third tower, the John Ross, is finished in May.

Early South Waterfront buyers have seen their condos spike in value already.

Miles Morgan, a United Airlines captain, bought a one-bedroom with an alcove for \$404,000 in December 2004, when the Meriwether was nothing but a hole in the ground. He estimates it's worth as much as \$550,000 today.

"This is poised to be the premier neighborhood in Portland," Morgan, 36, says. "It will appreciate faster than any property in Oregon or Washington."



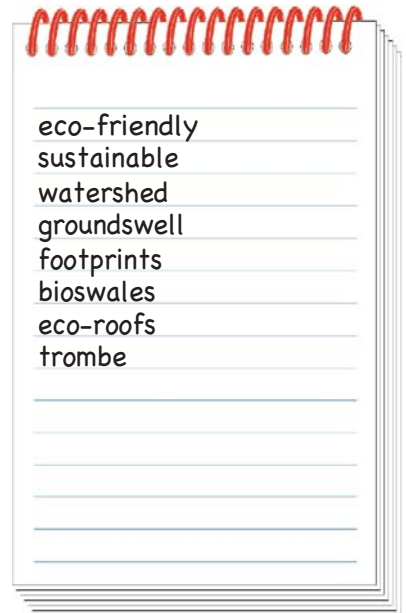
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APPLICATIONS: *geography: human-environment interaction, analysis*

DISCUSSION: What is significant about Oregon's South Waterfront project? Explain "the green ethic." How is the perception of green building changing? How have state and federal regulators reacted to the movement? Beyond energy savings, what positive effects does green housing have? What are examples of "top-to-bottom" green? How are inside spaces transformed by green building? What is unique about Oregon's Health & Science University? Is green housing affordable for everyone? Would you want to live green?

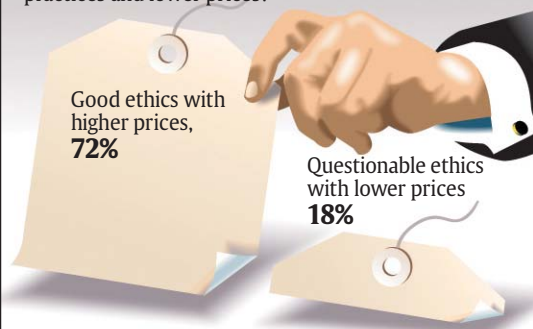
ACTIVITY: South Waterfront's developers are restoring the natural habitat of a greenway that stretches between the Willamette River and the new buildings. Identify an area in your community that you would like to restore to its natural state. Explore and map the location, and decide how your community could make it a place that benefits people and wildlife. Finally, create a detailed sketch of your idea, and explain it to peers. If possible, share your proposal with the local governing board.



USA TODAY Snapshots®

Ethics vs. price

Would you prefer to purchase products and services from a company with ethical business practices and higher prices or from one with questionable business practices and lower prices?



Source: Caravan survey from Opinion Research developed by LRN of 2,037 adults 18 and older. Margin of error ±2 percentage points.

By Jae Yang and Bob Laird, USA TODAY

What exactly are ethics? Why is it important for individuals, businesses and governments to adhere to ethical standards? What do the survey results listed

in the Snapshot say about Americans' priorities?

Ethics are the rules or standards of conduct that govern members of a profession. For example, the preceding article on green building describes the "green" ethic as "energy-efficient, water-stingy buildings full of features that stress the natural over the chemical, the recycled over the new and the renewable over the finite." In short, these standards are the ones builders must meet if they want to earn the label, "green."

The term ethics, however, also refers to the study of human conduct and moral codes. Preserving the environ-

ment, whether through organic farming, green building or other practices, is an ethical question. Some people believe that humans need to take dramatic steps to prevent the planet's decline; others think that fulfilling current needs, such as increasing our domestic oil supply, is more urgent. Consider your green ethic. Do you recycle, conserve water, turn off lights, etc.? Could your standards be more ambitious? Then, think about your stance on environmental issues (e.g., drilling for oil in U.S. wildlife preserves). Finally, decide how "green" a citizen you are, and explain your answer in writing.