



# OZONE

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creating more sustainable communities on every level

ARCHITECTURE • ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING • ENVIRONMENTAL • SURVEY

OZone is a monthly newsletter published by Otak, Inc.

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Multifamily Housing  
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Neighborhood Planning  
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Parks  
Playgrounds  
Public Involvement Charrettes  
Regulatory Compliance  
Resort Planning  
Retail Spaces  
Roadways  
Single-Family  
Site Development  
Stormwater  
Stream Restoration  
Sustainability  
Surface Water Management  
Surveying and Mapping  
Transit-Oriented Development  
Transportation  
Urban Planning  
Visitors' Centers  
Water Quality  
Watershed Planning  
Wetlands

## Happy New Year!

### PROJECTS

#### INDUSTRIAL BUILDING RESUCITATED INTO CORPORATE OFFICES



Employees at ODS Health Care in Milwaukie, OR, needed new space for corporate offices, but they were not excited about moving into a dilapidated, graffiti-peppered, 1956 industrial building with broken windows. The 50,000 SF facility had little natural light, was seen by most to be an eyesore in the community, and had been vacant for about two years. Fast forward a couple of years: the employees love it, it became a LEED for Existing Buildings pilot project and now provides an appealing, more appropriate gateway building for the community. Formerly a production facility for Pendleton Woolen Mills, its narrow slit windows around the building perimeter did not permit light to penetrate deep enough to work spaces inside. Otak architects created large light wells to get light into the center of the building, creating a daylighting street inside. Other green features include sustainably harvested hardwood flooring that replaced existing hardwood floors, which were salvaged and used mostly in local residential projects, the exposed, heavy timber roof was kept and refurbished, and an interpretive display celebrates the building's wooly past. Even the outside got a facelift as a nearby wetland was carefully restored amid the seven and a half acres located within the Willamette River Greenway. The project has won awards for adaptive reuse, livability, tenant improvements, and lighting design.

## AFFORDABLE HOUSING IS ENERGY EFFICIENT



*Mature trees were preserved to enhance the neighborhood*

When the Fruit Valley Elementary School was slated for demolition with the threat of the kids being sent to another school, parents and neighbors gathered community stakeholders to help save their school. Instead they got a new school plus some new energy efficient housing. The Vancouver Housing Authority (VHA) purchased nearby land upon which the new school was built, and then built 162 affordable housing cottages, apartments, homes, and a community building on the old school site now known as Plum Meadows. Otak worked closely with VHA and the residents to preserve mature Douglas fir trees and complement the feel of the existing historic neighborhood. Plum Meadows is also certified to meet the standards for Portland's Earth Advantage green homes program. All units feature insulation that is superior to code coupled with ventilation systems that pull outside air through specially designed window vents. Energy efficient gas water heaters, ranges, and compact fluorescent lighting are expected to save residents up to 25 percent on electricity costs. The project is located adjacent to public transit, with pedestrian access to retail and other conveniences within a mile of the homes. All units are hard-wired for high-speed internet services. For more information about how Otak can help your green housing project, email us at [ozone@otak.com](mailto:ozone@otak.com).

### WHAT MAKES IT GREEN?

#### ENERGY SAVING LIGHT BULBS

One of the simplest fixtures to make greener is the light bulb. For each incandescent bulb replaced with a



compact fluorescent (CFL), two-thirds less energy is consumed to provide the same amount of light, and it lasts up to ten times longer. The compact fluorescents

generate 70 percent less heat, which means they require less cooling energy than incandescents. Improvements in fluorescents now include warm color ranges, lights that turn on instantly, and quiet operation. A brief life cycle cost analysis calculation on one incandescent versus one compact fluorescent reveals:

- Incandescent costs \$22 per year; fluorescent costs \$6 per year
- Incandescent life span is 167 days; fluorescent life span is 4.5 years or 1,670 days
- Incandescent has lower first cost of about 50 cents; fluorescent is about \$14
- Total cost: incandescent = \$103; fluorescent = \$40

By using less energy, pollution is reduced as greenhouse gas emissions in our atmosphere are reduced; every CFL can prevent more than 450 pounds of emissions from a power plant over its lifetime. While both light bulbs contain some hazardous materials such as tungsten or mercury, the fluorescents last so much longer that their contribution to landfills are greatly reduced.

### NEWS

#### LIVING BUILDING CHALLENGE



The Cascadia Region chapter of the U.S. Green Building

Council recently launched **The Living Building Challenge**. The premise of the program rests with 16 Simple and Profound Prerequisites leading to a building that:

- Generates all of its own energy with renewable resources
- Captures and treats all of its water on site
- Uses resources efficiently for maximum beauty

## GREEN BEACH HOME IN SNOHOMISH COUNTY, WA



For the first time, a green home demonstration project is in the works in Snohomish County, WA. The residence is expected to seek several green certifications including Energy Star, American Lung Association's Health House, Built Green, and Environments for Living. Project manager Pam Worner of Green Dog Enterprises says that the 100 year old waterfront residence will be 'reinvented' as a 'deep green' demonstration home, with owners Dave and Anna Porter incorporating as many sustainable materials as possible. Otak is a sponsor of this project, providing landscape architecture designs for the narrow lot and educational expertise.

## SEATTLE'S BALLARD AREA SELECTED IN TOP TEN ECO-NEIGHBORHOODS

Seattle's Ballard neighborhood was selected as one of Natural Home Magazine's top ten environmentally-friendly neighborhoods.



*The Chittenden Locks on the south side of the Ballard neighborhood*

## ENVIRONMENTAL ASSESSMENTS

Otak's Carbondale, CO, office is working on an environmental assessment for a ten-mile stretch of I-70 known as West Vail Pass, plus the design of the 1.5 mile "Narrows." As part of the highway's larger Programmatic Environmental Impact Statement conducted by CDOT and the FHWA, Otak is responsible for landscape architecture, visual resource mitigation, wetlands, wildlife support, aesthetics, and recreation opportunities. We're also creating an environmental assessment for 120 new wellpads proposed by ExxonMobil in the Piceance Creek Basin of Rio Blanco County. For environmental assessments anywhere in

the U.S., email us or contact one of our 12 offices.

## GREEN BUILDING CONFERENCE IN EVERETT, WA, MARCH 13



The 2007 Built Green Conference & Expo will be held at the Everett Events Center 13 March 2007.

### READING

## BELLY UP TO THE OXYGEN BAR, BRONTO

Out of Thin Air: Dinosaurs, Birds, and Earth's Ancient Atmosphere



Never mind the giant asteroid, exactly how did the dinosaurs survive for about 165 million years before it hit? Turns out that the earth had become a sort of gigantic oxygen

bar for the then tiny dinosaurs in the late Triassic period; pumped up on rising oxygen levels in the atmosphere, the air-sac respiratory system of dinosaurs was well-suited to adapt to the higher levels, promoting unprecedented growth to gargantuan sizes of these ancient creatures. At least that is the theory proposed by University of Washington paleontologist Peter Ward in his new book, where he writes that, "Changing atmospheric oxygen levels over the last 600 million years have caused significant evolutionary change in animals." And with global warming a hot topic these days, Ward's book provides a glimpse into how life—or extinctions—looked in the prehistoric world with decreased oxygen levels caused by higher levels of CO<sub>2</sub> and methane.

### FROM THE EDITOR

## GREEN GLOBES GREEN BUILDING RATING SYSTEM IS WEB-BASED

Competition is generally perceived as a positive force in the economy because it drives quality up and costs down. The good news for green building is that there are several options for verifying



green buildings, partly because green building and certifications have gained so much traction in the design and construction industries recently.

The Green Globes green building rating system is a relative newcomer to the U.S. Offered by the non-profit Green Building Initiative (GBI), here since 2004, it was used for several years prior to that in Canada. It is a green management tool that includes an assessment protocol, rating system, and guide for integrating environmentally friendly design into commercial buildings.

Green Globes is an interactive web-based tool that can be used throughout the design and planning process for both new construction and continual improvement of existing buildings. GBI has made available the Draft Standard for Trial Use so that anyone can test it and provide feedback. The program also offers optional third party verifications that include a site visit and building walk-through by trained verifiers who are professional architects, engineers, or contractors with experience in building diagnostics and evaluation. The system allows many commercial buildings types to certify, including unconventional buildings such as unconditioned warehouse space.

GBI was accepted as an American National Standards Institute (ANSI) standards developer in 2005, and has been working towards developing a green building standard based on the Green Globes system. A technical committee was established under ANSI protocols to develop Green Globes as an ANSI standard. It operates separately from the GBI board of directors and staff and represents a balance of users, producers, and interested third-parties. The technical committee members formed appropriate subcommittees to develop the standard. I am pleased and excited to represent Otak on the committee developing the standard, as well as two subcommittees. Read more about the process.

Looking for a comparison of Green Globes versus LEED? The University of Minnesota performed a side-by-side study comparing content and processes.

Best of luck in your building pursuits in the following year!

Robin Rogers

### Otak is a member of



Parting Shot by Marilou Davis — Sunrise over Mt. Hood, Oregon as seen from inside Otak's Vancouver office.

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