



# OZONE

may 2006

creating more sustainable communities on every level

ARCHITECTURE • ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING • SURVEY

OZone is a monthly newsletter published by Otak, Inc.

[www.otak.com](http://www.otak.com)

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## PROJECTS

### GREENING OUR NEW SEATTLE OFFICES



Otak recently designed its own green office renovation in the historic Seattle Tower at Third and University in downtown Seattle. By moving a few blocks north of our old Pioneer Square offices, we were able to reuse an existing space in a beautiful old landmark that is more convenient to most of our clients and projects. The open office plan celebrates abundant daylighting with large operable windows on three sides, overlooking Puget Sound to the west. Other green features include:

- retained marble flooring
- replaced incandescent lights with energy-saving fluorescents
- installed FSC-certified, formaldehyde-free Europly for most countertops and benches
- applied low-VOC finishes and adhesives for wood
- designed a reception desk using formaldehyde-free medium density fiberboard
- painted all wall surfaces with low-voc wall paint
- installed natural marmoleum flooring and rapidly renewable bamboo flooring
- reused doors and frames, most ceiling tiles, existing light fixtures, modular wall and desk systems, chairs and conference room table, all glazing and wood inlaid relites, and wooden window blinds
- continue to employ energy saving measures such as video conferencing among our nine offices, participation in FlexCar and providing Metro bus FlexPass to staff

Materials, products and expertise were provided by Environmental Home Center and Greener Lifestyles both of Seattle. Email us at [ozone@otak.com](mailto:ozone@otak.com) to find out how Otak can help with your sustainable interior architecture project.

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### OHSU'S LEED PLATINUM BUILDING

One of the world's greenest modern buildings is Oregon Health & Science University's (OHSU) Center for Health and Healing in the South Waterfront area of Portland, OR. The development team included Otak as the civil engineer and landscape architect, and was led by Gerding Edlen Development with Interface Engineering as the mechanical/electrical engineers. The building is expected to

## NO-PAPER GRAPHICS



One way of reducing paper use by designers is by creating images on the computer. This also saves time, energy and potentially other resources because it allows our clients to see a design before it's built. For example, our visualization team is currently exploring new ways to develop and render interior scenes (left), which they point out is entirely different than rendering an exterior view. Otak team leader John Gonzales ([john.gonzales@otak.com](mailto:john.gonzales@otak.com)) and Matt Griffey created the 3d objects of the apartment scene, and Josh Harvey worked on the lighting. In the scene below, Scott Eman edited the computer model and



created lighting and animation of a train pulling into a station for Sound Transit in Seattle.



join the elite ranks of only 14 other LEED Platinum-rated buildings in the world. This extraordinary structure uses integrated design

to achieve 60 percent more energy efficiency than required by Oregon energy code. It is designed to harness the sun's energy with photovoltaics that also act as shading devices, to capture rainwater and groundwater to be used for irrigation, to save 15,000 gallons of water per day with a 56 percent reduction in potable water use, and to treat 100 percent of its wastewater with an on-site sewage treatment system. Otak worked closely with Interface and the project team to develop the sanitary sewer bioreactor system that treats the waste from the building and either reuses the treated water for flushing toilets in the building or to make up water for the cooling towers. The excess treated water that is not reused is piped to a surface vegetated swale and then enters a storm piping system where it eventually discharges to the Willamette River. According to Otak civil engineer Scott Schumaker, this is one of the first uses of this technology within an urban medical building in the United States. Otak's role also included the excavation and shoring plans for the underground garage, including major street encroachment design since the garage is built underneath two city streets and encompasses two city blocks. Otak also provided grading and utility plans, street frontage designs, coordination with geotechnical engineers for the design and construction of temporary and permanent groundwater pumping system, as well as seeking permitting approvals for the dewatering systems. Email to find out how Otak can help with innovative civil engineering on your site.

Interface produced a free, 48-page book describing the project details, as a public service.

## BUILT GREEN HOME AT SUNCADIA



Otak has been part of a special project to bring more awareness of green products, materials, methods and technologies to both the home

building industry and the residential buying market. Working with the builder, CMI Homes, and the Built Green™ program of King and Snohomish Counties in the Seattle area, we helped plan a demonstration home that will open to the public in June and July for educational tours. The Built Green Home at Suncadia sets an engaging example for the highest Five-Star level of Built Green homes and is one of only a few 5-star Built Green homes. Otak worked with Cubelink Systems and CMI Homes to design and populate an informative website about the project.

Email us at [ozone@otak.com](mailto:ozone@otak.com) to find out how Otak can help with your sustainable residential project.

## NEWS

### KING COUNTY STAFF AWARDED GREEN HONORS

Otak's Seattle office is located within the very progressive King County, Washington -- a recognized leader in government sustainability efforts. As such, the county has honored two dozen of its employees for actively applying green-building techniques to projects, such as using recycled materials, salvaging construction materials and designing projects to minimize environmental impacts. The Excellence in Building Green Award winners were honored for projects such as the LEED certification efforts for the Marymoor maintenance facility, the Department of Development and Environmental Services' efforts for raising awareness and starting programs that promote sustainable development practices, and the deconstruction of two wooden warehouses slated for

demolition that recycled or reused more than 90 percent of the wood. Congratulations to Katie Spataro, Kinley Deller, Cynthia Moffet and the others for earning these special awards made of recycled glass!

## DOES RECYCLING SAVE ENERGY?

The U. S. Environmental Protection Agency (EPA) says yes, based on a recent study that found that recycling and source reduction conserve large amounts of energy. EPA calculated the energy benefits of improved material management using data from an existing greenhouse gas (GHG) life-cycle analysis because specific products' waste management practices accrue energy throughout the life-cycle. Using life-cycle data from the GHG emissions research effort, the study analyzed for different management options: source reduction (a.k.a. waste prevention), recycling combustion and landfilling. It also shows that energy savings associated with recycling various materials are driven by whether or not the material was manufactured using virgin inputs or made using recycled inputs. The study shows that recycling results in some energy savings for all of the materials, and demonstrates that recycling is not the only materials management practice that saves energy. In fact, waste reduction efforts such as source reduction can result in significant energy savings, in nearly every case exceeding the energy benefits of recycling.

## PARKS AND COMMUNITY SPACES

Does your neighborhood in Seattle or King County have a park that needs help? Up to \$100,000 in matching funds is available for neighborhood-initiated improvement, organizing or planning projects that include contribution by residents of volunteer labor, materials, professional services, or cash. Email [ozone@otak.com](mailto:ozone@otak.com) to find out how Otak can help plan or design your neighborhood park



*Award-winning Shoreline Interurban Trail*

## SEATTLE'S ECOLOGICAL FOOTPRINT



A recent report by Redefining Progress (RP) on Seattle's "ecological footprint" shows that the average Seattlite needs about 54.8 acres to live – slightly lower than the average American who needs about 59.3. According to RP, the planet offers us about 4.7 acres of land and water to support each human resident of the globe. There is somewhat good news, though; those segments of the Footprint that contribute the most, such as energy, transportation, and goods & services, can be reduced through creative programs developed by local governments. For example it points out that in Seattle's case, the impacts of Sound Transit's 14-mile light rail line could be reflected as changes in gasoline usage and used to project a change in the municipality's transportation footprint. In addition, improved public transportation could change the types of housing that are built near the light rail stations, so smaller footprints could be projected based on reductions in housing size. Email us at [ozone@otak.com](mailto:ozone@otak.com) to find out about Otak's work with light rail, transit-oriented development and sustainable multifamily housing.

## FROM THE EDITOR

### GREEN DENSIFICATION OF URBAN CORES

As one of the organizers of the 2006 Built Green Conference and Expo in Seattle, I'm pleased to report it was a huge success. More than 500 attendees crowded into parts of the

## AWARDS



*Built Green Pioneer Award*

**Robin Rogers** received a Built Green Pioneer Award last month during the Built Green Conference in Seattle. The Pioneer Awards "honor those who have played an

integral role in building the Built Green program and making it the success it is today." The award itself is a fine sculpture made of glass and olivine from a quarry outside of Bellingham, WA, created by local artist Stephen Hirt of Ballard.

## PEOPLE



**Megan Kim** is our most recent LEED Accredited Professional. She says that she was inspired to sit for the

LEED AP exam recently after working on the design for our new Seattle office. She says she learned how important it is to incorporate sustainability early in the schematic design phase and persistently carry it through to the end. Megan studied architecture as an undergraduate at the University of Washington.

Washington State Convention Center to hear nationally celebrated authors Sarah Susanka, David Johnston, and Rick Fields, as well as a host of other green building experts. Attendance was double last year's event plus there were about 50 vendors displaying products and technologies to save energy, forests, air, water and health! Commenting on the conference, Patti Southard, who manages King County's residential green building program, points out that "this region is a national leader. I believe we have the best residential green-building program in the nation because it covers every gamut... from remodels to whole communities." Of particular interest to me as the moderator was the session on greening multifamily housing that drew an audience of 60 to hear how several building designers and developers address the hottest topics in every urban area: how do we squeeze more people into a smaller but more livable space and provide viable transport?

During this session, two Otak architects focused on transit-oriented developments that provide housing options, retail spaces, and pedestrian and transportation access. Otak

architect Gary Hartnett spoke about sustainable transportation such as the Phoenix Light Rail with innovative vegetated screens to naturally cool bus stop platforms in the desert, and the Tempe Transportation Center that will feature photovoltaics to help power the building. Otak architect Dennis Haden focused on urban housing and accessibility to public transportation on projects such as The Yards at Union Station where a brownfield was redeveloped as a mixed-use development adjacent to Union Station in downtown Portland, and Center Commons which exemplifies urban revitalization with mixed-use and mixed income housing in Portland.

Jim Potter of Kauri Investments spoke about modifying municipal codes to make them simple, user-friendly, adaptable, flexible and predictable for implementing sustainable goals. As a developer in the Puget Sound region familiar with bureaucratic obstacles, Potter showed ways that municipalities could facilitate green building, and in particular higher-density housing, in the urban core areas by proposing new guidelines for more effective use of parking and recognizing height as a

sensitive issue, for example, providing illustrations from his own projects in Redmond and Lake City.

Dayna Dealy of Lorig Development provided a case study of Lorig's development, Nordheim Court, a LEED-certified rental housing project in Seattle. Nordheim features an alternative vehicle refueling station along with energy efficient fixtures, low-flow fixtures to save water, and proximity to public transit. Her message on cost savings resonated with the audience: this project's green budget was a mere one percent of the construction costs, and she estimates that the increased value to this 227,000 sq. ft. development will be more than a million dollars based partly on utility costs.

To request a pdf copy of any of the four presentations, please send me an email.

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Otak is a member of



*The Yards at Union Station*



Parting Shot by Cliff Vancura — *Mt. Rainier with Mt. St. Helens in the background*

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- Lake Oswego, OR (corporate)
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