

ate student in 2007. In the course of exploring the idea further, Muench met and established a partnership with Bevan, who works out of CH2M HILL's Seattle office and had himself been exploring the application of sustainability principles to roadways and motor vehicle transportation.

From a technical standpoint, nothing should stand in the way of designing roadways to Greenroads standards, says Muench. "The requirements don't involve any new technology, whether it's putting exhaust control retrofits on construction equipment or using recycling materials. The biggest challenge is deciding to do it, and the biggest impediment is the normal way of thinking."

Implementation of Greenroads would mean establishing a neutral certification body, and here, says Bevan, LEED is again the model. "Ultimately, it would be a third-party entity"—not a government agency, most likely, but perhaps an organization like the American Consulting Engineers Council (ACEC) or an entirely new entity. Abyssal Husseini, transportation department manager at civil engineering, land surveying, transportation engineering, and planning firm **Nitsch Engineering** (Boston, MA), remarks that "I can foresee a partnership between ACEC and all of the DOTs."

As with any professional certification system, the overriding issue is, who would pursue Greenroads certification, and why? At the very least, the Greenroads metrics can provide clarity in the planning and design process for those developers who are already on board.

"It's a great start, because it does address the primary issues in transportation infrastructure," says Husseini. Codifying such principles for government agencies will improve the process of defining and achieving sustainability goals, he notes. "Agencies tended to include these principles when they couldn't define them, and people were going all over the place. The Greenroads definition will help define and shape demand that already exists."

LEED certification made gains in popularity as building owners increasingly saw data showing increased occupancy

rates and improved operating efficiencies in terms of energy and water management. CH2M HILL's Bevan sees comparable economic benefits through Greenroads.

Bevan also sees state DOTs as leading the way in the pursuit of certification. The New York DOT is already applying the metrics, and the Oregon and Colorado DOTs have inquired about them, he reports. In addition, some funding agencies have begun asking developers to assess the Greenroads metrics, score projects, and identify the benefits, Bevan says.

As part of the process of rolling out the Greenroads system, CH2M HILL and the University of Washington are undertaking a series of pilot projects with the Oregon DOT and several federal agencies, looking at roadway designs in both rural and urban settings. "We're testing the metrics out on existing projects that are generally at some level of design, looking at how they may score and seeing if the goals we're aiming for are realistic," says Muench.

Those goals may be on the ambitious side, some highway designers observe. "The system is much more demanding and more inclusive than the LEED program," says Jerry Blumenthal, a senior project manager at Nitsch Engineering. "There are many more requirements and much more documentation. LEED has one prerequisite, while Greenroads has 11, which are very costly. That's possibly a barrier to implementation."

Greenroads is not the only effort to define sustainability for roadway design. In fact, Michael Baker's Ryan says his firm became aware of the Greenroads project through the New York DOT, which has launched the GreenLites Initiative. For the last 18 months or so, "we've been applying the GreenLites principles on a few pilot projects, and we've scored ourselves on four different projects."

In addition to Greenroads, GreenLites, and Baker's initiatives, other entities, like the Illinois DOT, are launching their own efforts to bring sustainability roadway design and construction, Ryan notes. "This effort needs a national champion. I'm hopeful that the U.S. DOT might be able to provide that coordination." ■

## FOR WALLACE ROBERTS TODD, IT'S LESS A MATTER OF SELLING "GREEN" THAN ENGAGING CLIENT VALUES

Selling planning services with a sustainability flavor doesn't necessarily mean using the words "green" or "sustainability." Different municipalities, economic development corporations, and developers have different preconceptions regarding these terms, ranging from suspicion to acceptance and even a fair to solid understanding. Quite often, however, they have values or goals that amount to the same thing, at least to some degree.

That's why \$35-million **Wallace Roberts & Todd LLC** (WRT; Philadelphia, PA), an architecture, landscape, urban design, and city and regional planning firm with six offices spanning the country, focuses less on selling the concept of "green" up front, in so many words, and more on assessing a potential client's goals. To the extent that those goals align with sustainability principles, so much the better.

That's not to say that WRT engages in green planning as a convenience. Claiming a legacy of sustainable planning and design going back to its co-founder Ian McHarg, author of *Design with Nature*, the nearly 50-year-old firm was "perhaps the first of its time to espouse green planning, which it called 'ecological planning,'" says WRT Principal David Rouse.

What's gratifying now is that "planning has rapidly moved in this direction across all practice areas, as public awareness of green issues has increased exponentially over the last several years," Rouse comments. "It is difficult to reverse entrenched attitudes and ways of doing things overnight, so I would be hard-pressed to say that green planning has become the dominant paradigm. Nevertheless, the Urban Land Institute's rapid movement to embrace sustainability as a key direction for real estate development, and the way sustainability policies and reg-

ulations are popping up in unlikely places, such as a rural county in Mississippi, are evidence of the rate of change.”

The drivers are there but still, a certain circumspection with respect to the way the client base has assessed those drivers is warranted, according to Rouse. He identifies climate change awareness as a leading driver for green planning—a lot of municipalities are conducting carbon footprint analysis—but points to the 2009 survey *Six Americas* by Yale and George Mason universities as demonstrating some ambivalence in that awareness. The survey “found that Americans lack consensus on global warming, falling into six distinct groups regarding their climate change beliefs, attitudes, and behaviors,” says Rouse. “The poll found support among all groups, however, for energy efficiency and conservation.”

In addition, municipalities and other clients vary in their receptiveness to sustainability concepts based on political and other considerations, underscoring the importance of tailoring issues and solutions to each individual circumstance, Rouse explains. “Funding constraints for governmental action and the perceived cost differential between green and conventional building practices for development projects are other challenges, although studies show that the gap is closing, and that the investment is recovered over time through lower energy and other operating costs.”

In this kind of environment, “we attempt in our practice to frame sustainability issues in the terms that resonate with each community. Even if we don’t explicitly use terms such as “green” or “sustainability,” we find strong support virtually everywhere we go for ideas such as multi-modal transportation—bicycle, pedestrian, transit—and preservation of open space and natural resources.”

“So the receptiveness and the values seem to be there. It’s a matter of going through the process and framing the issues to fit the readiness of the community and where they are in the cycle.” Rouse refers to this process as “values-driven planning.”

Rouse identifies Union County, Pennsylvania, as an example, both of the values-

driven process and of the fact that green planning isn’t just for urban areas. “We had a polling firm do a statistically valid random survey of citizens who don’t normally come to public meetings. They indicated that energy conservation was a big issue—not just in things like renewables and weatherizing, but in terms of how you address land-use patterns to be energy efficient, to promote walking, etc.

“The other key issue for the county, like everywhere else, was maintaining low taxes. One of the downsides of sprawl is that it is expensive, so we made that connection, as a sustainability principle. It’s not just about environmental issues; it’s about fiscal and social sustainability.”

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*“Even if we don’t explicitly use terms such as ‘green’ or ‘sustainability,’ we find strong support virtually everywhere we go for ideas such as multi-modal transportation and preservation of open space and natural resources.”*

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State and federal legislation and funding programs constitute another key driver for green planning, says Rouse. At the federal level, the Obama administration is promoting green jobs, clean energy, and the integration of transportation, housing, environmental quality, and economic development. Examples include the Energy Efficiency and Conservation Block Grant Program, which is funding preparation of municipal and county energy strategies, and the Sustainable Communities Initiative, which will fund regional plans for sustainable development.

At the state level, “legislative requirements enacted recently in states such as California and Florida are leading to preparation of climate action plans and general, comprehensive plans that address energy and other sustainability issues.” At the more local level, more than 1,000 mayors have signed onto the U.S. Conference of Mayors’ Climate Protection Agreement,

which has launched numerous activities that affect planning programs.

Planning and urban design account for approximately 34% of WRT’s revenues, which totaled \$35.5 million in 2008. The firm’s projects range from large-scale community planning efforts—e.g., comprehensive plans for counties and cities—to neighborhood plans, site plans, and buildings. A typical planning contract, says Rouse, might take from 6 to 18 months to complete, with fees typically ranging from about \$100,000 to \$500,000.

In terms of leveraging planning assignments to follow-on work or for cementing client relationships, “we view green, or sustainable, planning and design as a concept that cuts across and integrates our different disciplines and scales of practice. Typically, the clients that retain our services are those that are predisposed to green planning, making it an important part of our client relationships.”

Green or not, the planning and design business has unquestionably taken a hit in the current economic climate, Rouse says. “The difficult funding climate for planning services due to severe budget problems at the state and municipal levels, along with the credit crunch that continues to impact the private development market, is the major current issue for our practice. The Commonwealth of Pennsylvania, for example, has virtually discontinued its planning grant assistance program for local municipalities, which are struggling to overcome budget shortfalls. As a result, federal funding programs will be of paramount importance until this situation reverses itself. To the extent to which these programs reflect administration priorities—green jobs, clean energy, etc.—green planning will continue to increase in importance.”

Over the longer term, he concludes, “I believe that the inevitable rise in fossil fuel costs due to increasing demand in China, India, and the rest of the developed world, combined with declining oil production will drive planners and policy-makers towards sustainable planning solutions such as compact development patterns, transit-oriented development, and urban agriculture.” ■