

Small Changes, Big Rewards

WHETHER BUILDING A NEW COMMUNITY FROM SCRATCH OR JUST STARTING OUT BY RECYCLING, FACILITIES CAN SAVE BOTH COSTS AND THE ENVIRONMENT BY ‘going green.’

KATHLEEN LOURDE

“Going green” has gained a prominent place in the nation’s collective consciousness, and health care facilities are increasingly implementing environmentally friendly practices and systems.

What may be more surprising is that environmental concerns are not just on the minds of the 20- and 30-somethings, or even of the baby boomers, but of the generations that came before. Between having experienced the Great Depression and the rationing and recycling of World War II, not to mention seeing the birth of the Environmental Protection Agency (EPA) and the current consensus that global warming does, in fact, exist, cost efficiency and environmental concerns are nothing new to today’s seniors.

In fact, 92 percent of 5,000 surveyed older households

said that an environmentally sustainable community was very or somewhat important, even if it costs more, according to Gerontological Services (GSI), a Santa Monica, Calif.-based organization that assesses consumer demand and positions product lines, in 2007 data presented to an American Association of Housing and Services for the Aging symposium.

People Want A Cleaner Space

According to GSI, the new market demands clean, fresh air; natural light; healthy food; controlled operational costs; quality construction and materials; and aesthetically pleasing and operationally efficient design.

Life Care Services (LCS), Des Moines, Iowa, conducts focus groups and other discussions with potential seniors

prior to designing one of its continuing care retirement communities (CCRCs).

“One of the things that continued to come up,” says Scott Doherty, executive director of LCS’ new and environmentally sustainable Timber Ridge at Talus, “was ‘I would like to see a building that’s environmentally friendly with

a recycling program.’” Long term care communities, whether existing or in development, have many opportunities for being environmentally friendly and potentially reducing operating costs in the process. And more and more facilities are looking into the possibilities.

“Virtually everything they do—

building, food, patient care, clinical, pharmaceutical—we do see a growing movement and momentum in just asking the questions” of how to become more environmentally friendly, says Mary Larsen, manager of sustainable operations for Practice Greenhealth, a new nonprofit organization that works

FACILITY FLOORING GOES GREEN

Whether a facility is remodeling, considering new construction, or remedying a damaged area, carefully choosing flooring options is a great step toward creating an environmentally friendly facility. There are four critical components to consider when taking this approach: capital costs, life-cycle cost savings, healthy productive environments for staff and residents, and sustainable design and delivery.

Some key questions to consider when selecting a flooring product include:

- Does the potential floor product contain no or a low level of volatile organic compounds (VOCs) to provide maximum air quality after installation?
- Were sustainable materials used to produce the flooring product?
- Is the product made locally to reduce resources required for shipping?
- Will the materials be durable enough to last?
- Does the surface contribute to the health and safety of residents and staff?

New Products Available

Flooring options for nursing facilities and other long term care settings are abundant, depending upon the clientele served and the purpose of the new floors. For example, ceramic tiles do not typically emit VOCs, so air quality associated with tiles is positive. A greener ceramic tile that recently became available is made in part from recycled glass.

Many assisted living residences appreciate ceramic for its low maintenance and the ease of mobility for walkers, scooters, and wheelchairs.

The carpet industry has also responded to the movement due to studies that linked poor indoor air quality to health issues. Many manufacturers are now producing alternative and healthier adhesives and backing materials. Some carpets can also be recycled.

Another option is to install carpet in earth-friendly tiles. They come in a variety of sizes and can easily be

replaced when damaged or stained.

Wood Floor Options

Finding environmentally favorable wood flooring is easier than ever. Plantation-grown timber, reclaimed wood from demolition, and salvaged wood from land clearing and forest fires are all good sources for real-wood floors.

Reclaimed hardwood comes from a variety of old structures, such as libraries, barns, and schools. It is feasible to have a new hardwood floor without any new trees being cut down.

Linoleum is one of the most environmentally responsible flooring materials available, thanks in part to its low toxicity and biodegradability. It is made from cork flour, derived from sustainable cork tree bark; rosin, tree sap; linseed oil, pressed from flax plants; and wood flour, reclaimed from lumber mills.

Bamboo flooring, considered green because it is fast growing and thus easily replenished, is sturdy and lasts as long as wood. It is also stronger than some popular hardwoods and naturally resistant to water, mildew, and insects. Though there aren’t as many varieties of bamboo as there are wood choices, different finishes can create designer looks. The downside to bamboo is the shipping distance, energy usage, and cost.

Selecting the right product is not the only option available for providers seeking sustainable flooring. Installing flooring products without chemical-based glues is also possible. Additionally, the former flooring product may be easily recycled. Carpetrecovery.org is a Web site that provides information on how and where to recycle old carpets.

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with health care entities to become more earth friendly.

WHY GO GREEN?

Businesses, including long term care facilities, have many good reasons to go green. The market is increasingly asking for it, for one; it's cost effective in the longer term; and tax and other incentives are making it increasingly attractive.

In addition, environmental issues related to long term care are gaining national attention. EPA is about to embark on research into one aspect of environmental concern: the issue of how unused medication is disposed of.

EPA plans to send out a questionnaire in 2009 to about 3,500 long term care facilities and hospitals to find out how they dispose of their medications. They are concerned that these medications, which are routinely flushed, affect the environment.

Green design can earn tax breaks and rebates, lower construction costs, reduce the need for heating and air-conditioning equipment, cut energy and water bills by as much as half, and protect budgets from energy rate increases, according to an article in the *Journal of Accountancy*.

It can be easier to get permit approvals for a green project. Timber Ridge saved time and money during what was an expedited permit process in terms of the positive reception in neighborhood meetings and design review, says Lea Duffy, principal at Rice Fergus Miller Architecture and Planning, with offices in Bremerton, Wash., and Minneapolis, who was co-designer and project manager of Timber Ridge.

Duffy is a LEED-accredited professional (see box, page 26). LEED stands for Leadership in Energy and Environmental Design.

Many Reasons To Go Green

Studies show that fresh air and daylight improve the health of residents (especially those with respiratory issues)

GREEN FOOD MANAGEMENT

Long term care facilities that handle food production have several ways to make their operations more environmentally friendly, including the "introduction of composting, buying locally grown food [for freshness and also to save on shipping costs], and looking at organically grown produce because it's more pesticide free

and less harmful to the environment and to ourselves," says Mary Larsen of Practice Greenhealth.

"There are many kitchens that are even looking at collecting oil and recycling it for biodiesel purposes. Some facilities have reduced Styro-foam use. Donation of excess food is another thing," she says.

and staff. Going green can also be good for staff recruitment and retention, says Larsen.

Recruitment is "so much higher" in sustainable facilities, she says, "especially with new graduates."

Other studies show that natural light

and fresh air improve employee productivity.

Energy- and water-efficient systems save money. Retrofitted buildings can save an average of 90 cents a square foot annually in energy and other costs and earn back their investments in two to two-and-a-half years, according to the U.S. Green Building Council (USGBC).

Local governments are rewriting zoning and regulatory codes to provide incentives for green construction. Some local utility companies offer rebates to customers who lower their electricity use.

According to the Department of Energy, the Energy Policy Act of 2005 established a tax deduction for energy-efficient commercial buildings. The deduction has been extended through 2013. The tax deduction is \$1.80 per square foot and is available to owners of new or existing buildings who install systems that reduce the building's total energy and power cost by 50 percent.

(To find out what tax and other incentives are offered for green construction in a particular state, visit the database of State Initiatives for Renewables and Efficiency at www.dsireusa.org.)

Sustainable buildings outperform non-green buildings in key areas such as occupancy, sale price, and rental rates, according to a recent study of 1,300 LEED and Energy Star buildings conducted by CoStar Group, a provider of real estate information

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STARTING-UP TIPS

Dave Durfee, director of housekeeping for Timber Ridge, a CCRC, recommends facilities start their process toward going green by “taking a good, hard look at the chemicals they use to clean their place,” he says. “A lot of the things we’ve used in the past are actually pretty harmful to the skin, eyes, and the environment, and they don’t really go away with gallons and gallons of water.”

After that, Durfee recommends looking at the facility’s appliances, whether in resident units or elsewhere, to make sure that they comply with Energy Star-type recommendations. “It’s really easy to replace faucets to water-efficient faucets,” he

notes. “And just small things, like having walk-off mats at the main entries where you don’t have to worry about dirt being tracked all through your community because it’s wet outside.

“Grow native plants that don’t require heavy watering. Put your main lighting on timers. Change out the old magnetic-type ballast in the old fluorescent lighting, and instead use the newer fluorescent lights that give off a lot less emissions,” he says.

Other experts recommend that facilities replace single-pane with dual-pane, low-emission windows.

based in Bethesda, Md. LEED buildings have rent premiums of \$11.24 per square foot over their non-LEED peers, according to the study, and have 3.8 percent higher occupancy. Rental rates in Energy Star buildings have a \$2.38-per-square-foot premium over comparable non-Energy Star buildings and have 3.6 percent higher occupancy, the study found.

LEED buildings are selling for an average \$171 more per square foot than comparable non-LEED buildings, and Energy Star buildings are selling for an average of \$61 per square foot more.

These findings are a “strong economic case for developing green buildings,” says Andrew Florance, president and chief executive officer of CoStar. “The information we’ve discovered is very compelling. Green buildings are clearly achieving higher rents and higher occupancy, they have lower operating costs, and they’re achieving higher sale prices.”

Not Always An Easy Road

But there are obstacles to going green, and the most common one is “a lack of

executive level support or awareness” of the benefits and importance of being more environmentally conscious, Larsen says. “I think that this is a cultural shift for organizations.”

For large multifacility chains that want to go green, administrators must be educated. LCS, for example, had Duffy give a talk to a symposium of LCS administrators on “greening” existing communities.

Educating staff is a way to avoid another obstacle: that of frontline staff not following through with new ways of doing things. Key, Larsen says, is getting staff buy-in. “Getting to the staff-level habits, changing those habits—such as the way we sort our waste—it’s something that requires change in behavior of everyone who works there,” she says. “It takes time to bring awareness to visitors and staff.”

Another obstacle is the cost of “green,” or, as Larsen terms it, “sustainable” products.

For example, Practice Greenhealth’s members have found it difficult to buy recycled copy and print paper because until the market demand grows enough

to allow more recyclers to get into the business, the cost of those products is higher than non-recycled paper, she says.

CASE STUDY: TIMBER RIDGE

Timber Ridge at Talus, a CCRC in Issaquah, Wash., and very close to Seattle, is special for many reasons. Timber Ridge, completed in January 2008 and providing the full continuum of care, was built in a mountain community called Talus, which is an “urban village mountain retreat,” according to Talus’ Web site, and features a broad network of walking trails and other outdoor amenities.

But not only is Timber Ridge built on a mountainside facing the Cascades, a major mountain range extending from Canada down through Washington and Oregon to Northern California, but it is the nation’s first CCRC with silver certification from LEED, according to the company.

USGBC, which administers LEED, had no way to confirm or deny the allegation, as they don’t keep track of whether a project is a CCRC.

Once the community of independent and assisted living units, a nursing facility, and a host of amenities is fully built out, it will cover almost 8,000 square feet, “so it’s a huge opportunity for a big impact” in terms of being environmentally friendly, says Duffy.

Timber Ridge was designed to be green “from the very beginning,” says Doherty. “Picking the site, choosing the materials to use, and the overall design all played a part.”

Timber Ridge was designed with the environment—both exterior and interior—in mind. Its windows are large, allowing abundant natural light, and the facility offers terraces where residents can dine or interact in the fresh air. Activity gardens are located throughout.

Every unit features a balcony or patio, and a network of walking trails

CERTIFICATION AND SIMILAR PROGRAMS

Developed in 2000, LEED, or Leadership in Energy and Environmental Design, is a third-party, impartial measure of the real sustainability of the building administered by the U.S. Green Building Council (www.usgbc.org). LEED certification offers third-party validation of a project's green features and verifies that the building is operating as it was designed.

Certification can make it easier to qualify for utility and government incentives and insurance discounts.

LEED awards points for a wide range of sustainable features in six categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation in design. Depending on the number of points earned, LEED awards different tiers of certification: Basic, Silver, Gold, or Platinum. LEED operates programs tailored for new buildings, existing buildings, and a soon-to-be-rolled-out program specific to health care facilities, under which long term care facilities would fall.

The certification fees vary by project size, but the average certification cost is \$2,000.

LEED is a guarantee that the "environmentally friendly" claims of the community are not just "greenwash"—the "whitewash" equivalent of claiming to be green "when you're actually not." Consumers are more likely to be impressed with such claims when they are backed up by a certifying organization that is known to hold rigorous criteria. LEED, even more than other similar certification groups such as Green Globes [www.thegbi.org], has gained prominence in the green community.

With the aging of the population,

building of long term care facilities will increase. Now is the time for green construction, says Mary Larsen of Practice Greenhealth, but facilities don't have to go the route of certification, although that is a strong marketing point. They can just use the guidelines issued by the "Green Guide for HealthCare," a part of Practice Greenhealth, she says.

"We even have an awards program that can help get recognition for the work that's done," says Larsen. Practice Greenhealth offers awards for every level of development toward becoming a leader in the movement toward green health care facilities.

A related anti-greenwash program is Energy Star (www.energystar.gov), administered by the EPA. It is an energy benchmarking tool that focuses primarily on such things as energy-efficient windows, turning off computers at night, and adding motion sensors to control lighting. Energy Star also certifies appliances and other products. Energy Star buildings use an average of almost 40 percent less energy than average buildings and emit 35 percent less carbon, according to CoStar Group, a provider of real estate information.

About 4,100 commercial buildings have earned the Energy Star label. Energy Star and LEED are complementary programs, each having its own focus, and buildings are increasingly seeking the approval of both, according to CoStar.

connects with those of the larger Talus community. Timber Ridge also has thorough systems in place to create energy efficiency, low water usage, responsible cleaning and waste management, and educational programs for staff and residents alike.

GREEN DESIGN

When LCS decided to build green and go for LEED certification, it decided to use a team of LEED-accredited professional architects. This isn't a requirement for getting LEED certification, but "the benefit of working with a LEED-accredited professional" in the areas of mechanical, electrical, structural, and landscape design is that "you have a team that understands how one part affects another," says Duffy.

In addition, research has shown that, in LEED projects, starting from the beginning with LEED-accredited professionals means the project "only costs between 1 and 1.5 percent more" than a non-green building, Duffy says. And that doesn't account for operational savings realized from using more energy- and water-efficient systems once the community is up and running.

As an example of the kind of savings that can accrue when one hand really understands what the other hand is doing is the case of using a green roof. This is a roof that has a top layer of soil and shallow root plantings that absorb rain and reduce run-off.

"The actual system will cost more than a typical roof," says Duffy. "However, you may save on your storm water system because you can downsize it because there's less water going into it."

The plants and soil also provide "enhanced insulation value," reducing energy costs, and downsizing the heating and air conditioning system requirements.

"In the end, the goal is not just environmental but really to save money and have it be economically environmental," says Duffy.

GREEN CONSTRUCTION

“We tried to use local materials, and we used recycled products,” says Duffy. Local materials use less energy to transport. “Being a concrete and steel building helps because there’s a lot of recycled content in both those products,” she says.

The interior of the building also got the green treatment. Timber Ridge used a fair amount of bamboo flooring—bamboo is a resource that replenishes itself rapidly. The cabinetry was all from Spokane, which reduced transportation costs. In choosing materials for the indoors, it’s important to keep air contaminants in mind and use environmentally friendly sealants, adhesives, paints, carpet, and composite wood products, say experts.

Open spaces, non-glare lights, and especially operable windows make the community more appealing to potential residents.

As far as landscaping goes, Timber Ridge was designed with most of the parking under the building, so that there’s a “higher percentage of open area for little resident gardens, croquet lawns, and a trail system,” says Duffy. Further, using indigenous plants for landscaping reduces the need for extra watering and, once the plants take root, is low maintenance, thereby saving labor costs.

Operable windows are “one of the biggest marketing items,” says Duffy. Not only are they appealing to consumers and staff, but they meet LEED ventilation and daylight requirements and offer views for most of the offices. “Staff are often put into the closets,” says Duffy, “and in this case as much as possible that was not done.”

ENERGY-EFFICIENT TRANSPORTATION

How staff get to work can have a big impact on emissions, so providing convenient public transpor-

tation and rewards for using other energy-saving means of transportation are on the LEED checklist. Timber Ridge takes this seriously.

■ *Public transportation.* “We are working with the city and county for public transportation so we’ll be on the bus route,” says Doherty.

■ *Carpooling.* Timber Ridge has a sign-up sheet for carpooling in the break room, and anyone who does carpool gets a premium parking spot.

■ *Hybrid and electric cars.* People who drive hybrid and electric cars also get a premium parking space.

■ *Bike storage and showers.* Timber Ridge has bike storage and changing

rooms with showers for employees who ride their bikes to work.

WASTE MANAGEMENT

Assessing waste streams is a great way to start the effort to go green, says Larsen. “How do we affect our environment? [Long term care facilities] could start by assessing how many pounds of waste they have,” she says, noting that this information can be obtained from a facility’s waste vendors. From there, facilities should “get a handle on how much waste is recycled, infectious, or hazardous,” says Larsen. “Some goes to incinerators still, and that isn’t good because they could be burning toxic waste.”

Waste management may also involve purchasing such things as reusable sharps containers, so that sending more plastics to the landfills can be minimized, Larsen says.

Ninety-five percent of Timber Ridge’s waste is recycled, according to Duffy.

On every floor of the nine-story residential tower is a trash chute and a recycling chute, says Doherty. “Residents can drop their recyclables down into large trash bins, and then we can wheel them into an area where all the trash and recycling materials are collected.” Timber Ridge has contracted with a company that separates all the glass, paper, plastic, and other recyclables.

Further, Timber Ridge kitchens have special buckets that all food scraps go into, and they’re collected by a company that uses them for compost.

Dave Durfee, director of housekeeping for Timber Ridge, acknowledges that the new, spiral-shaped compact fluorescent light bulbs (CFLs) save energy, “but the problem I’m having is where do I put them when they burn out?” CFLs contain mercury, which can’t go into landfills, and companies that recycle them are few and far between.

“The incandescent light bulbs, you can just recycle the whole thing,” Dur-

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FINDING GREEN CLEANSERS

Several companies make green cleansers, but Dave Durfee, director of housekeeping for Timber Ridge, a CCRC, likes to go with one called Ecolab (www.ecolab.com). “Not to degrade other companies, but the service that I get from Ecolab makes it very easy [to get and use the products], and the products are very good; they don’t leave streaks on the windows, for example,” says Durfee.

Other companies include:

- All-Green Janitorial Products (www.all-greenjanitorialproducts.com/)
- Coastwide Laboratories (www.coastwidelabs.com/)
- Healthy Clean Buildings (store.cleaningpro.com/)
- The EPA Web site contains a page that gives information on how to make good green-cleaner decisions (www.epa.gov/epp/pubs/products/cleaning.htm).

fee says. “It’s like batteries. AA batteries you’re not supposed to throw in the garbage because they leak in a landfill. So what do you do with batteries?” he says. “So we pay a company to have containers onsite” where residents can deposit their batteries, and a company picks the containers up to dispose of them properly.

GREEN HOUSEKEEPING

Most of Timber Ridge’s cleaning products are certified by Green Seal, an independent nonprofit organization that certifies whether a product is as environmentally friendly as it claims.

“That would be our all-purpose cleaner, our floor cleaner, our bathroom and window cleaners,” says Durfee. However, “in the health center, the disinfectants aren’t green to keep infection from spreading.”

Making sure that cleansers are being used and mixed correctly is an important part of Durfee’s job. “Being an environmental services director, I do a lot more than look at how clean the building is, it’s what we use and how we use it,” Durfee says. “Even though you might have a green product, if you’re not getting the metering system correct” you’re negating what you’re

trying to do, he says. “I have little pH papers that I take around to all my dispensing units, and I check my parts per million to make sure” that it’s all being mixed correctly (*see box, above*).

ENERGY EFFICIENCY

Energy efficiency efforts took many forms at Timber Ridge:

■ *High-efficiency windows.* “We used high-efficiency Euroline, low-E windows, a tilt-and-turn European window-type system,” says Duffy. Low-E windows refers to a glazing that reflects radiant heat, thereby reducing air conditioning requirements. The tilt and turn has an awning function, allowing in air but not rain. They are also easier to clean, Duffy notes. “High-efficiency windows help lower energy costs in winter and summer.”

■ *Water-loop heat pump.* Each resident unit has something called an Innkeeper installed in it. This is a low-temperature, water-loop heat pump. The water loops throughout the building at 80 degrees and is heated by a high-efficiency gas boiler. Each unit has an individual temperature control. When extra heat is needed, a booster is given at the Innkeeper.

■ *Energy-Star appliances.* The appliances in each unit—washer/dryer

combo, dishwasher, refrigerator, and microwave—are all Energy-Star appliances. Because of that, Timber Ridge sees “substantial savings from an electricity and water standpoint,” says Doherty.

■ *Washer/dryer combos.* Machines that both wash and dry clothes in one continuous cycle operate on less electricity—110 circuit rather than the usual 220—and use less water. They use less electricity primarily during the drying cycle, where the clothes are dried through radiant heat (the water evaporates) rather than blowing hot air, Durfee says.

These washer-dryer combinations have been controversial. Residents like the convenience of tossing their clothes into the machine, going off and doing something else, and coming back to find their clothes dried. However, the machines take longer (three-and-a-half hours) to operate due to the method of drying, which can be inconvenient for those in dire need of clean clothes. In addition, residents find that the clothes come out tangled because of the much stronger spin cycle. It’s a good case for trying out energy-efficient machines prior to buying them.

“The combo washer-dryer has been a challenge,” admits Duffy, indicating that LCS likely won’t use them in their next development. “The concept was great, but in reality it was a little different.”

■ *Fluorescent lighting and automatic light sensors.* Timber Ridge used as much fluorescent lighting as possible for energy savings, says Duffy. In addition, in all the non-regularly used spaces, such as the public restrooms, sensors turn lights on and off so energy isn’t wasted. In addition, all of the natural daylight reduces the need for lighting.

WATER MANAGEMENT

Timber Ridge focused on well water and low-water usage techniques:

■ *Dual-flush toilets.* LCS put in dual-flush toilets, which the company hadn't done before, according to Duffy. "They were more expensive toilets," she says, explaining that they provide the option of a full flush of 1.6 gallons and a half flush of 0.8 gallons. Most of the time, people only need the half flush. "The water savings is tremendous," says Duffy. "They really work well." To test it out, RFM actually had one installed in its offices, and it went over gang-busters with the architects.

■ *Water-efficient boilers.* "Some of these things cost a bit more up front, but [carry] operational savings and a LEED point," says Duffy.

■ *Water-efficient showers and faucets.* A plumbing engineer working on the Timber Ridge project tested showers of all different kinds on his teenage daughter and found one that was satisfying to her and had low water usage. Duffy figures that a teenage daughter is the ultimate shower critic. "That was a huge savings" in water use, Duffy says. They also put in low-water-usage faucets.

■ *Auto-flush toilets, automatic hand faucets.* Because of the potential for "forgetful" residents, toilets that flush automatically and hand faucets that turn on and off automatically were incorporated into the design of the restrooms.

EDUCATING RESIDENTS

Not only does educating residents receive a LEED point, but it is key to making the waste management and other programs work.

Problems residents encounter with the programs and further ways the community can be more environmentally friendly are brought up in feedback to the administration.

To foster ideas and encourage resident buy-in to the various green measures, Timber Ridge's activities director has put together a 12-month schedule. Each month residents visit a place that's relevant to environmental issues.

WEB SITES WITH GOING-GREEN INFO

For more information on taking a facility green, try these sites:

■ **Zero Waste Alliance** (www.zerowaste.org). This nonprofit partnership of businesses, governments, and other organizations works to help businesses become more sustainable and improve their profitability and competitiveness.

■ **American Institute of Architects** (www.aia.org/susn_rc_cl_default). This Web page provides information on sustainable design.

■ **BuildingGreen.com.** This site offers the latest news on green building.

■ **GreenBiz.com.** The site provides the latest news on what other businesses are doing to go green, from operations to marketing.

■ **Health Care Without Harm** (www.noharm.org). This is an international coalition working to make health care more friendly to both people and the environment. Visit this site for such information as how to find PVC-free health care products.

■ **iGreenBuild.com.** This site provides information that enables one to

design, build, or maintain an environmentally friendly building.

■ **Rocky Mountain Institute** (rmi.org). This nonprofit works with businesses and others to learn how to use resources more efficiently.

■ **Solar Design Associates** (www.solardesign.com). This interesting site shows how to design carbon-neutral, zero-energy buildings through the use of photovoltaic, solar thermal, and wind energy, using no fossil fuels.

■ **Sustainable Sources** (www.greenbuilder.com/general/BuildingSources.html). This page gives information on green building, including a directory of various "green" contractors and a "sustainable building materials exchange," where people can connect with others doing demolition to find materials to recycle in their own building project (available in a limited number of areas).

■ **Water—Use It Wisely** (wateruseitwisely.com). This site gives guidance on how to landscape using little water, including a section on water-saving technologies.

"They've gone to the watershed where all the water for the Seattle area is collected," says Doherty; "they've gone to Seattle to see a video on helping to save your environment. It's a popular program with the residents."

Timber Ridge makes sure that residents are educated on how to recycle and where to take which items (such as batteries). It also provides a package of green cleaning materials.

ENVIRONMENTAL SUSTAINABILITY

LCS has made a commitment to go green from now on. "We are looking at [going green] at all of our new projects," says Joel Bleeker, director of design for LCS, "and trying

to do at least a LEED-certified building. It's important for a lot of reasons. There's a lot of energy efficiency within the LEED [system] and responsible use of resources, and those are all very attractive not only for us as a corporation but to our customers in our LifeCare products, a high interest that plays into our marketing program."

Duffy is at work on a second project with LCS that will be another LEED-certified building. "It's pretty exciting, the impact they can have if they can get all of their buildings thinking this way," Duffy says. ■

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