

You can't afford to be color blind...

Becoming an expert on 'green' is good for the bottom line

BY KRIS ALDERSON,
contributing writer

Water is becoming a scarce commodity in many parts of the country. Energy costs are rising at an astonishing rate causing commercial facilities and homeowners alike to reevaluate their energy consumption. All while we are becoming more educated about indoor air quality and the importance of building better to reduce life-cycle costs.

These are some of the factors driving the green building movement. If you have been taking a "wait and see" approach to green until now, it is time to stop waiting and start getting educated. According to the U.S. Green Building Council, or USGBC, the green building industry is growing by 30% a



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year, and is projected to increase seven-fold over the next five years. There is money to be made in the business of green — particularly in hot areas such as government build-

Using 1.0 gpf/4.0 lpf flushing system for water closets and waterless urinals can make an enormous difference in water consumption for a building.

ings, hospitals and schools.

"We see more hospitals and other facilities fitting environmental solutions into the master plans of both their exterior construction and interior design," said Dick Pearson, principal of Pearson Engineering in Madison, Wis. "The bottom line is that going green does produce long-term cost savings."

How green is green?

Essentially, green buildings are those that are good stewards of the environment. Green buildings deliver higher performance inside and out by using less water and power, and limiting waste. The USGBC has established standards as part of its Leadership in Energy and Environmental Design

(LEED) program that helps define what it means for a building to be "environmentally friendly." Building projects must earn enough points in key areas, such as water reduction and indoor air quality, to earn LEED certification.

To achieve LEED certification, a facility must meet minimum standards in six areas of building design: sustainable sites, water efficiency, energy and atmosphere, material and resources, indoor environmental quality and innovation and design process. A minimum of 26 out of a possible 69 points across these categories must be met for LEED certification. Additional points add up to a higher level of certification.

A total of five possible "water points" can be earned toward a reduction in water use, and innovative water technologies. Although other areas of the building may earn more points, water-saving strategies are often easy to incorporate. Here are the five possible water points — each of these items represents one point:

- Water efficient landscaping (reduce by 50%);
- Water efficient landscaping (no potable use or no irrigation);
- Innovative wastewater technologies;
- Water use reduction (20% reduction); and



Proximity-sensing faucets, light-operated by photovoltaic cells, reduce water consumption and electricity use, as well as help keep batteries out of landfills.

- Water use reduction (up to 30%).

The value of green products

Specifying more efficient plumbing fixtures is the easiest way to achieve LEED water use reduction credits. In addition to LEED, life cycle assessment is another hot topic when it comes to product selection. LCA measures the environmental impact of a product throughout its life span. Green building products can help lower the LCA and provide greater value for customers.

In fact, a recent study assessing the operational life cycle of four different building types (an apartment, a college dormitory, a motel and an office building), the environmental impact was reduced by 23 to 49% when efficient fixtures and appliances were specified over conventional fixtures and appliances.

The \$1 million question that frequently comes up is "which products are LEED certified?" The answer is "none." There are no LEED-approved plumbing products or any other products for that matter. However, there are products that can be helpful in achieving LEED certification because they use less water and contribute to meeting LEED credits.

As a contractor, you may be asked to gather information on the products being specified for a job. This could entail talking with manufacturers to get information on recycled content, finding out where the products are manufactured, etc. Whoever is in charge of the LEED certification process — the architect, building owner or engineering group — should provide templates or forms to make gathering this information easier.

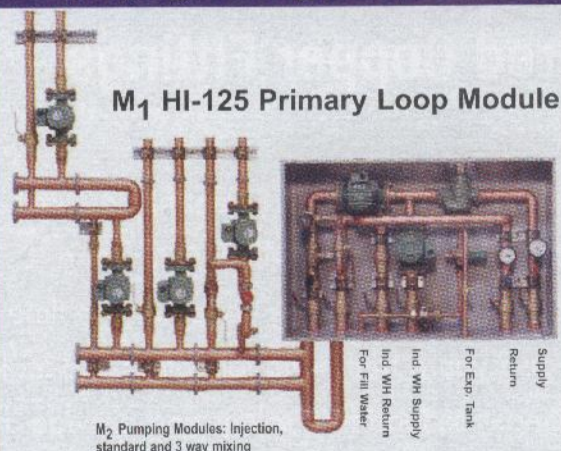
New green technologies

Manufacturers are continually developing new technologies to pro- (Turn to Being 'green'... page 38.)

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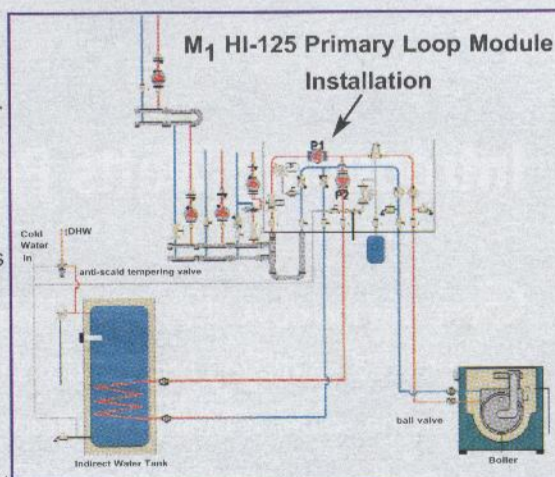
**"Mechanical Rooms
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Concept drawing only, details may be omitted for clarity. M₁ modules are available in different configurations than shown.

HI-Series M₁ Module shown with transition adapter and M₂ secondary component modules systematically installed.

US Patent #6345770 and multiple patents pending.



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going green

Being 'green' can earn extra green for your business

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vide architects and designers with innovative solutions to common performance challenges. These are often easy to implement, even on a smaller scale project that is not up for LEED certification.

In public washrooms, there are a number of new environmentally-friendly technologies to consider. Light-powered lavatory systems, for example, use photovoltaic cells integrated into the top of the fixture to capture and convert restroom lighting into energy. Using light-activated fixtures instead of typical battery power, helps reduce the 2.5 billion pounds of batteries that are sent to landfills each year.

Facilities are also choosing environmentally-friendly auto flush valves, low flow aeration faucets as well as touch-free faucets, which have

infrared sensors to ensure that the water is not left running long after users have washed their hands. Using 1.0 gpf/4.0 lpf flushing system for water closets and waterless urinals can make an enormous difference in water consumption for a building. Manufacturers have been working aggressively to refine and push the performance levels of tank-type toilets through the use of pressure-assist technology. Incorporating these types of high-efficiency fixtures may help organizations earn Green Guide and LEED points by reducing water usage to 20% or even 30% below the baseline calculated for the building.

As building owners explore all these options, one major question they face is how they will afford the overall cost of going green. In some cases, incorporating environmentally-sound design may cost more initially, most are find-

ing that the small initial investment is a good one as the durability, higher quality, lower maintenance and reduced operating costs (energy, water, etc.) over the life of the building do pay off.

Flooring is a good example. Using a polymer and linoleum combination is more expensive than vinyl tile, but these products don't require regular waxing and stripping, so year in and out these materials have a lower cost per square foot to maintain. And using light-powered hand washing fixtures in public restrooms eliminates the cost of diagnosing and replacing dead batteries which can cost upwards of \$400, even up to \$1,600 per fixture annually for some systems.

Specifying electric hand dryers over paper towel dispensers is another simple way to conserve resources. Giving users information about the technolo-

gies being used in restrooms or locker rooms and the amount of energy that is being saved can be extremely helpful — especially in educational apps.

There's a huge opportunity for plumbing engineers and contractors to make an impact on green building. Establishing yourself as a leader in green building design and techniques will solidify your role in new construction and major renovation projects. If you are responsible for installation and not the plumbing design, you can verify that the job was installed as designed. Learn more about LEED, and become informed about green building initiatives in your area...and watch the green grow in your business. ■

Kris Alderson is the brand marketing and LEED manager for Menomonee Falls, Wisconsin-based Bradley Corporation, a USGBC member and manufacturer of locker room products, plumbing fixtures, wash-room accessories, partitions and emergency fixtures.