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DESIGN

Green Is the New Black

Solar panels. Green roofs. Everyone is talking about the innovative extremes of green design – the features that make great stories but are tough to rationalize on a typical construction budget. So, what does this recent trend mean for traditional building projects? The building industry has begun to acknowledge the impact that design and construction have on the environment and people's daily lives. Green design is a growing and evolving approach to lessen this impact.

Large office and residential buildings typically create massive amounts of waste during construction, which often ends up at local landfills. Heating, cooling and lighting a building are responsible for 40 percent of U.S. energy consumption. Additionally, various chemicals used in interior materials and finishes, such as flooring adhesives and vinyl tiles, can be detrimental to the public health.

When it comes to building the places where people live and work every day, there must be a better approach. Also known as sustainable design, the changing philosophies about creating healthier and more efficiently built environments provide a significant opportunity for improvement.

Upcoming building or renovation projects can incorporate many aspects of green design easily, quickly and often for little or no cost. In the past several years, green building materials have come



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down in price a great deal.

The General Services Administration (GSA) has done studies showing the typical green office building running only 2 percent more costly than a conventional one. Our firm has found it to be even less than that.

In addition, the California Green Council and the U.S. Conference of Mayors recently determined that for every \$4 spent per square foot on green, sustainable design measures, a building can realize savings of \$48 to \$60 per square foot over 20 years.

The decision to go green should be made at the beginning of a project. It's not something that can be easily added in at the end; to be successful and minimally intrusive, it should be a guiding principal from the outset of a project.

Once the decision has been made

to approach a building project from a green perspective, the consideration can be made whether to strive for Leadership in Energy and Environmental Design (LEED) certification.

LEED is a program offered by the United States Green Building Council (USGBC) that documents adherence to particular green standards in six categories. It requires rigorous documentation, which is subsequently reviewed in great detail prior to a building receiving a level of certification.

There are four levels of "greenness" in the program: certified, silver, gold and platinum. Currently, there are 29 published projects in Massachusetts that have a LEED certification (two are platinum). California, however, currently has 75 buildings with LEED certification, of which nine are platinum. We have some catching up to do.

It is important to note, though, that LEED certification is not a requirement for green design. It is a simply a method of verifying and documenting your adherence to green standards. A building can be equally green without following the documentation process.

In addition, building and design professionals can become LEED accredited by passing an exam sponsored by the USGBC. If you see "LEED AP" after someone's name, it means that he or she is a LEED accredited professional. This accreditation ensures a baseline of familiarity with green design in

DESIGN

general, and the LEED design standards specifically.

There are nearly limitless basic and creative ways to make a construction or renovation project more efficient and environmentally friendly, with minimal cost. Some of these include:

- Locate new building sites near public transportation and encourage employees to leave their cars at home;
- Recycling any demolition construction waste to the extent possible, rather than send it to a landfill;
- Select construction materials that are made of recycled products. Carpet tiles, drywall and ceiling tiles are available with high recycled contents for the same cost;
- Select construction materials that can be recycled after they are used. Many carpet and ceiling tile manufacturers have reclamation programs for their products;
- Select materials with low or no volatile organic compounds (VOCs). These products "off-gas" and smell after installation, reducing the indoor air quality of a building. VOCs are frequently found in paints, carpets and adhesives; all of these products are also available with little or no VOCs;

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- Recycle items in your office. This includes white paper, toner cartridges, even soda cans. Although this may seem simple, many companies don't recycle.

Other green design opportunities may require some cost, but provide significant payback:

- Replace plumbing fixtures with water saving fixtures and automatic faucets;
- Replace conventional light switches with occupancy sensors,

which automatically turn off the lights in an empty room;

- Invest in daylight controls, which dim office lights in response to bright sunlight;
- For exterior landscaping, request drought-resistant plant species that require little or no irrigation, in addition to available rainwater.

Whether a project is designed to be LEED-certified or simply incorporates more green considerations, the results are a healthier, more environmentally friendly building for its inhabitants. Results can include reduced sick time, improved productivity and raised morale overall.

In addition, green buildings are often more cost- and energy-efficient for the owner and provide lower operating costs, increased resale values and positive public relations. Green buildings truly can be a win-win for everyone.

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