SUSTAINABLE CERTIFICATIONS
Learn how green certifications are influencing the building, construction, and product industries.

GREEN RATING SYSTEMS 101
By Sara Teaster, LEED BD+C, Sustainability Manager, VMDO Architects

Colleges and universities are diverse and complex organizations. Given the dynamics of our institutions, how can you both encourage sustainability and measure its successful implementation? The answer may lie in one of several green rating systems. Rating systems give measured goals, directions for achievement, and rewards these accomplishments. They give opportunities and strategies for energy savings, water savings, and land protection while recognizing the 3 P’s of sustainability- People, Planet, and Profit.

LEED
http://www.usgbc.org/leed

The most well known and widely used building certification platform is the LEED rating system. LEED stands for Leadership in Energy and Environmental Design and was established in 2000 as a green building rating system by the US Green Building Council. The USGBC’s mission is “To transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life.” This mission has created a movement of more than 60,000 buildings participating in the LEED process, at close to 11 billion square footage globally.

The LEED rating system has a series of credits, some required, some optional, that a project can build up points to achieve certified, silver, gold, or platinum ratings. Project teams start at the beginning of the design process to ensure that all members from owners to architects to contractors all are working toward the same sustainable building goals and working out issues that may arise early in the design process.
Specific LEED certification systems are available for distinct project types including Building Design and Construction, Interior Design and Construction, Operations and Maintenance, Neighborhood Development, and Homes. Most college and university capital projects - including major renovations - would use the LEED Building Design and Construction's New Construction system. However, the LEED Existing Building Operations and Maintenance system is designed to encourage improved efficiency, waste reduction and on-going practices that “maintain a responsible and sustainable building” (http://www.usgbc.org/discoverleed/certification/o-m-existing-buildings/). With annual reporting requirements, this system certifies a building’s systems and its long-term operations.

Some have questioned the rating system recently, and there is a feeling of “LEED fatigue” among some in the field. Arguments against the system include a lack of follow up post-certification, the administrative and financial costs of implementation, and concerns that connections to overall sustainability may not be immediately recognizable.

While some may be just going through the motions of the current LEED framework, the newest version, LEED version 4 (LEED v4), includes new areas of focus and increased rigor. These changes will help individual buildings minimize their environmental impact and push change within the industry for more transparency and disclosure. New credits in LEED v4 have also expanded the measurement of water savings, reflecting the importance of protecting this finite resource. New ways of thinking about energy, such as demand response, will help reduce peak loads of energy use encourage building users to be more aware of how they are interacting with and responsible for energy reduction. LEED v4 will also verify actual energy use of LEED certified buildings, with a 5 year owner commitment to sharing energy data.

**Living Building Challenge**
http://living-future.org/lbc

Started by the Cascadia Chapter of the USGBC, The Living Building Challenge is the certification platform of the International Living Future Institute. The Living Building Challenge tout itself as the most rigorous of all certification standards, including categories of Place, Water, Energy, Health and Happiness, Materials, Equity and Beauty, which are divided into “petals” each with specific imperatives. Projects can reach for a full Living Building Challenge certification, a smaller petal Certification or pursue a Net Zero Energy Certification. A testament to the rigors of this certification program, since the launch of this program in 2006, only 6 projects have achieved full Living Building certification, while a handful more have earned Challenge Petal certification.

One important petal in the Living Building challenge program is its attention to building materials. In an effort to try to improve occupant health and equity, LBC buildings cannot use any materials that are on the Red List. This list was culled by the International Living Building Institute and recognizes materials and chemicals as harmful for human contact, even though they are not necessarily banned for use. This progressive idea has proven difficult for many project teams to achieve, even more challenging than the LBC requirement for net zero energy use or net zero water use. The Declare products labeling facet of the Living Futures Institute has helped to develop a “nutrition label” for products to assist projects teams in choosing those building materials that do not contain red list items.
While the LEED and LBC rating systems are designed to work on any type of permanent occupied structure, the AASHE STARS rating system is set up specifically for analyzing sustainability performance for colleges and universities. AASHE, or the Association for the Advancement of Sustainability in Higher Education was founded in 2005 to “inspire and catalyze higher education to lead the global sustainability transformation.” The STARS program, which stands for Sustainability Tracking, Assessment & Rating System, began in 2010 and recognizes Bronze, Silver, Gold, and Platinum levels of achievement. The STARS program, takes into account several areas of Higher Ed life such as Academics, Engagement, Operations, Planning and Administration. Academics, for example, would rate how courses and research reflect the teaching and study of sustainability related topics. STARS measures how sustainable actions engage student life and the public in participation. STARS also measures more typical rating system issues like energy and water use, carbon reduction, indoor air quality, and procurement practices. One unique category to this rating system is that STARS takes into consideration the equity and availability of programs and money to its student body and staff, which includes compensation and wellness. Once all schools submit their information, and are awarded certifications, AASHE compiles an annual review to help the greater higher education community share in what was learned from the assessments.

American College and University Presidents’ Climate Commitment
http://www.presidentsclimatecommitment.org/

While not a certification system, many Higher Education Institutions have signed on to the American College and University Presidents’ Climate Commitment, which does hold these institutions to a high standard of reducing their greenhouse gas emissions. Close to 700 schools have now become signatories in this effort which includes creating institutional structures to guide implementation, taking inventory of greenhouse gas emissions, and creating target goals for reduction. By signing on to the commitment, schools must use a variety of measures to achieve their climate action goals, such as developing a LEED Silver certification baseline for all future projects or participation in waste reduction programs.

The text of the commitment states that;
“Colleges and universities must exercise leadership in their communities and throughout society by modeling ways to minimize global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality.” “We further believe that colleges and universities that exert leadership in addressing climate change will stabilize and reduce their long-term energy costs, attract excellent students and faculty, attract new sources of funding, and increase the support of alumni and local communities.”

This type of statement includes many of the ideals represented in all of the certification standards. Higher education intuitions do, however have an additional responsibility- to shepherd the next generation of stewards who will inherit the environmental problems from their predecessors, and the knowledge of how to transform them into solutions for a sustainable future.
SUSTAINABILITY SHORTS

By Frances Lengowski, AIA, LEED BD+C, Associate at VMDO Architects

ARTICLES

“Sustainability – Higher Education’s New Fundamentalism”
“The sustainability movement has become a major force in American life that has largely escaped serious critical scrutiny. The goal of this report is to change that by examining for the first time the movement’s ideological, economic, and practical effects on institutions of higher education.”

National Association of Scholars has recently released a report questioning the sustainability movement in higher education. Comparing the rise of concern for the environment with religious fundamentalism, the report makes the argument that the sustainability movement has “distorted higher education,” harmed college curricula, and imposed limits “on the freedom of students to inquire and to make their own decisions.” The report criticizes the $3.4 billion that colleges and universities spend on sustainability initiatives per year and critically examines advocacy “that colleges and universities divest their holdings in carbon-based energy companies without regard to forgone income or growth in their endowments.” It further questions the sustainability movement's position on climate change, which it considers to be “at odds with intellectual freedom and is why the campus sustainability movement should be examined skeptically.”

This provocative report is getting considerable attention nationally and will be the topic of our next conference call. Our intent during the call will be to reflect on the report, consider its criticisms to the sustainability movement and think about how we can use healthy intellectual debate to better understand and articulate our own thoughts and positions on sustainability.

Please join the conversation on Friday, May 8 at 11:00 am EST. Call-in Information: Dial +1 (626) 521-0014, Access Code: 499-128-231.

If you're not up for the full 262 pages, here's the NAS's brief, Executive Summary, Press Release and Sustainability FAQs:
http://www.nas.org/articles/sustainability_higher_educations_new_fundamentalism

“Leveraging Campus Facilities to Advance Sustainability in Academics”.
The Association of Higher Education Facilities Officers (APPA) focused its March / April edition of Facilities Manager Magazine to Advancing Sustainability. The publication included an article “Leveraging Campus Facilities to Advance Sustainability in Academics” by Daniel Aragon, Bill Elvey, P.E., FMP, APPA Fellow, and Alfonso Morales, Ph.D. The article outlines a framework for collaboration between the work of facilities departments and the academic mission of colleges and universities. It uses a case study example of the University of Wisconsin - Madison to demonstrate how a university's organizational structure and campus culture can encourage collaboration across its operations, academics and research components, tackling the complexities of sustainability with a multi-disciplinary and collaborative approach.

ANNOUNCEMENTS

AASHE Issues a Call for Applications for Sustainability Awards

http://www.aashe.org/about/aashe-awards
The Association for the Advancement of Sustainability in Higher Education (AASHE) has issued a call for applications for its Tenth Annual AASHE Sustainability Awards. AASHE recognizes excellence in three categories:
   - Campus Sustainability Case Study (4 awards)
   - Student Sustainability Leadership (2 awards)
   - Student Research on Campus Sustainability (2 awards)

To be considered, submit your application by June 11, 2015. Email awards@aashe.org with questions about the AASHE awards.
PRODUCT LABELING: A STARTING POINT
By Tony Triner, Housing Operations Coordinator Rutgers University – Camden

The complexity of sustainability is at once its greatest joy and greatest challenge. The other side of that complex, systems-based thinking associated with sustainability is that trade-offs are rarely as simple as they seem on the surface. When it comes to purchasing, colleges and universities may have a strong institutional desire to purchase products that are sensitive to the triple bottom line of people, planet and profit. However, college administrations and facilities managers have constraints on time and effort. The reality is that if every institution considers each new product independently and thoroughly, progress would grind to a halt.

One option available to administrators is to find product labels they trust. From paper goods to cleaners to paint, there are entities that will verify, audit, and review producers’ claims. There are many third-party organizations that will vet a wide range of products, saving us the time needed for that research.

I am not advocating one label system over another, and I am not advocating letting anyone think for you. I am advocating that we as professionals read and know the fine print. We must know what the standards mean, not just what they look like on the cut sheet. At first that will involve a little more “reading the back of the box,” but when you have researched and seen certified products in action, you can make better choices for projects. You will be able to tell the difference between standard products and outstanding products. I hope this primer is a starting point for your journey in understanding these labeling programs.

The Green Seal Check
http://www.greenseal.org/

One of the most recognized symbols is the Green Seal Check. Green Seal’s mission is “to use science-based programs to empower consumers, purchasers, and companies to create a more sustainable world.” They do this by verifying the full life cycle of the products and services they certify. Their standards frequently reference compliance with ISO standards, which means that Green Seal relies on third party verification and testing to ensure product quality and performance. Green Seal is a non-profit and is compensated through fees related to certifying products.

Green Seal develops specific standards for a wide variety of products and services. For example the Green Seal Standard for Cleaning Products for Industrial & Institutional Use (GS-37) evaluates institutional grade cleaning products for “water and air quality, human health, and the environment by requiring products to be sold in concentrated form“, prohibiting harmful chemicals, specifying sustainable packaging, and limiting VOC content.” According to the Green Seal standard summary for this category, “these criteria are intended to protect the health of building occupants and those using the product, as well as lower the impact of the product on the environment.” Specifically, the requirements in this particular standard cover Product Performance, Human Health Protection, Environmental Protection, Packaging, Training, and Labeling.

Product Label: Green Seal Check
Certifying Organization: Green Seal, Inc.
Type of Product Certified: Green Seal certifies a variety of products. The organization maintains 35 Active Standards for products and services including cleaning and janitorial products, paper products, personal care products and cosmetics, paints, varnishes and stains, cleaning services, and hotels and restaurants.

UL Environment
http://productguide.ulenvironment.com/

UL Laboratories is a “global independent safety science company.” UL has a long history of testing products for safety and reliability. Known worldwide, the company provides testing, certification, and product standards for all kinds of features related to safety including air, water and structural features, chemical emissions, and flammability. With the acquisition of Ecologo; they started evaluating the complete life-cycle of over 200 products. ECOLOGO certification is an indication of a proven reduction in environmental impact through scientific testing or auditing some or all of the following categories: materials, energy, manufacturing and operations, health and environment, product performance and use, and product stewardship and innovation. Similarly, UL’s GREENGUARD and GREENGUARD Gold Certification reviews products specifically for their impact on the indoor environment. UL states that products that are GREENGUARD certified are “scientifically proven to meet some of the world’s most rigorous, third-party chemical emissions standards—helping reduce indoor air pollution and the risk of chemical exposure while aiding in the creation of healthier indoor environments” (http://industries.ul.com/environment/certificationvalidation-marks/greenguard-certification-program).

The Global Ecolabeling network audited Ecologo and says Ecologo is a Type 1 label under an ISO standard. Type 1 labels, like Ecologo and Green Seal, are comprehensive in their scope, and honor consensus based decision making in standards creation and alteration. In keeping with UL’s tradition as an evaluator of electrical standards Ecologo is a system for maintaining the safety of the planet through the life of a product.

Product Label: UL ECOLOGO, GREENGUARD, and GREENGUARD Gold
Certifying Organization: UL Environment (part of UL - Underwriters Laboratories)
Type of Product Certified: UL ECOLOGO certifies Building Materials, Flooring, Chemicals and Plastics; Cleaning Products and Personal Care; Office Products; Electronics; and other products including Renewable Energy.
GREENGUARD certifies that products meet specific thresholds for emissions of: “formaldehyde, total aldehydes, total volatile organic compounds (TVOCs), and one-tenth of the threshold limit value (TLV)—a regulatory standard—for many other compounds” (“Behind the Logos,” EBN).
GREENGUARD Gold Certification, similar to GREENGUARD, applies more rigorous standards and monitors a wider variety of chemicals including phthalate emissions.
Recycling. We recycle paper, bottles and even pallets. We have recycling containers in the trash rooms, recycling containers in student rooms and recycling trash chutes. What is the largest item housing systems should be recycling? How about mattresses?

When faced with a renovation of 7 buildings and having to dispose of all the furniture as well as 755 mattresses, the University of North Carolina at Greensboro Housing and Residence Life looked at recycling even deeper than the everyday items. I’m sure by now everyone knows that a mattress will not decompose, will not compact, and they are a problem for landfill operators. As luck would have it, there is a local company that handles the mattresses. BedEx takes our mattresses and either recycles them or repurposes them.

This relatively new company was formed in Greensboro, North Carolina and UNCG has been a customer since their inception. They will either come to campus and collect the old mattresses or we can drop them at their shop. BedEx will then strip the mattress springs of their comfort materials, recycle those components and sanitize and test the inner spring to see if it still meets the original specification. If the mattress cannot be recovered with new comfort materials, they will cut the old spring, bale them together, and sell the steel to a recycler located in town.

UNCG has recycled in excess of 3000 mattresses to date and we are still going. Each time we either change out the mattresses in a building or close the building for renovations we divert the mattresses from the waste stream. This not only helps the environment, landfill operators, and our local business base but helps us as well. At UNCG we try and look at, not just recycling, but at sustainability as a whole and how we are impacting the environment in all regards.

Sources:
http://bedex.net/us/