

GREEN HARDWARE

It's hard to imagine door hardware being green. Obviously, I'm not talking about ANSI/ BHMA A156.16, Materials and Finishes. I'm talking about how manufacturers and distributors can help contribute to LEED certification on the projects they are supplying. First, let's explore what constitutes a sustainable product and explain LEED.

Sustainable products provide environmental, social and economic benefits while protecting public health, welfare and environment over their full commercial cycle, from the extraction of raw materials to final disposition.

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System evaluates the environmental performance of all buildings over their life, providing the definitive standard for what constitutes a "green" building. It is largely responsible for persuading the consumer and building industry to embrace products that are more environmentally and economically viable. LEED is a third-party certification program and the nationally accepted benchmark for the design, construction and operation of high-performance green buildings. It promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, material selection, and indoor environmental quality.

The Problem

Many of our great schools were built during the period from the 1920s into the 1950s. As a result, we have aging and outdated schools throughout

America, and with our current economic times, finding the estimated \$322 billion necessary for repairs is proving difficult— sometimes impossible. This has resulted in more than 14 million American children spending their days in schools that are substandard or dangerous. More than 300,000 unhealthy, unsafe, trailer-like temporary portables are currently serving as classrooms, some more than 40 years old. Classrooms are cramped, and the environment is musty, dirty, dingy, and not at all conducive to learning.



The Solution

The Green Schoolhouse series in Phoenix, Arizona, is a unique collaboration bringing together corporations, foundations, school districts, communities, municipalities, media outlets and volunteers to build high-performance, environmentally sustainable, LEED Platinum-designed green schoolhouses at Title 1, low-income

by John Cohrs, AHC/CDC, CCPR

public schools. The schools will encourage community involvement, support the school district, and teach sustainability.

Six green schoolhouses are slated for construction through 2013. The inaugural schoolhouse, a safari-themed schoolhouse built for Roadrunner Elementary in Phoenix, Arizona, is on track to be the first ever LEED Platinum-designed K-12 school in the world built entirely by volunteers.

There are three different green schoolhouse models: one each for elementary, middle and high school. The schoolhouses range in size from 6,000 to 15,000 square feet, and each replaces four to 10 portables with a permanent education facility.

The green schoolhouses will be constructed using donated, top-of-the-line, innovative products, including green hardware items. Hinges, cylindrical locks, deadbolts, narrow stile exit devices, surface door closers, protective trim, flush bolts, door stops, silencers, and threshold and weatherstripping products are all being utilized to achieve the schools' green certifications and the goals of net zero energy use, zero water use, a non-toxic interior environment and healthier students.

The projected results: healthier students, a green curriculum, a 5% increase in attendance, and a 9% decrease in asthma-related absences (currently responsible for 14 million missed school days each year). The project is also expected to translate into improved learning: 26% faster progression in math and 20% faster progression in reading. And

the total cost savings will be significant: a 33% reduction in energy use and a 30% reduction in water use.

Our Industry’s Role

The two most important facilities to build sustainably are healthcare and childcare. Several door hardware products can help architects and specifiers achieve LEED D certification in facilities like these and others. Reference the LEED D Green Building Rating System for New Construction and Major Renovations (LEED – NC) as published by the United States Green Building Council (USGBC). Figure 1 gives examples of credits that can apply to green hardware items. Check your suppliers for their specific credit percentages.

As the rate of green construction continues to increase, so will demand for both green hardware and professionals who are knowledgeable about the role they can play in decreasing a building’s carbon footprint while maintaining the balance between access and security. Contributing to LEED certification on the projects you are supplying and helping design professionals or owners with LEED credits can prove very rewarding, both for you and the environment.

JOHN COHRS, AHC/CDC, CCPR, is a specification manager with Hager Companies. He can be reached at jcohrs@hagerco.com.

Product	Post-Consumer (PoC)	Pre-Consumer (PrC)	PoC=½ PrC
Push/Pull Plates, Stainless Steel	55%	12%	61%
Flushbolts	5%	45%	27%
Floor/Wall Stops	5%	70%	40%
Steel Butt Hinges	23%	8%	27%
Brass & Stainless Steel Butt Hinges	55%	12%	61%
Protection Plates, Stainless Steel	55%	12%	61%
Protection Plates, Brass	25%	8%	29%
Protection Plates, Aluminum	0%	0%	0%
Sliding Door Track, Aluminum	0%	40%	20%
Sliding Door Track, Steel	23%	8%	27%
Screw-On Weatherstrip, Aluminum	0%	40%	20%
Thresholds, Aluminum	0%	40%	20%
Roton Cont. Hinges	0%	0%	0%
Stainless Steel Cont. Hinges	55%	12%	61%
Locksets	11%	0%	11%
Exit Devices	1%	0%	1%
Door Closers	1%	1%	1.5%

LEED Category: Material and Resources (MR)

MR Credit(s) 4.1 Recycled Content: Combined Post-Consumer Plus ½ Pre-Consumer > 10%
 Product contains pre-consumer content as defined by ISO 14021, *Environmental labels and declarations – Self-declared environmental claims (Type II environmental labeling)*, and therefore qualifies for this credit.

MR Credit(s) 4.2 Recycled Content: Combined Post-Consumer Plus ½ Pre-Consumer > 20%
 Product contains post-consumer content as defined by ISO 14021, *Environmental labels and declarations – Self-declared environmental claims (Type II environmental labeling)*, and therefore qualifies for this credit.

MR Credit 5.1 Regional Materials: Extracted and Manufactured Regionally
 If the manufacturing facility is less than 500 miles from the project site, it qualifies for this credit.

Many of the materials that door hardware manufacturers use in the production of products are both pre- and post-consumer materials. In addition, product packaging can use recycled content.

