

# GRUNAU COMPANY ACHIEVES “GOLD” LEED CERTIFICATION FOR HEADQUARTERS BUILDING



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## PROJECT OVERVIEW

According to the U.S. Green Building Council (USGBC), the annual U.S. market in green building products and services was more than \$7 billion in 2007 and is projected to increase to \$60 billion by 2010. The USGBC established the LEED® (Leadership in Energy and Environmental Design) Green Building Rating System™, a voluntary, consensus-based national rating system for developing high-performance, sustainable buildings. LEED certification provides independent, third-party verification that a building project is environmentally responsible, profitable and a healthy place to live and work.

In Wisconsin, there currently are 53 LEED projects according to the USGBC. Grunau Company has participated, or currently is participating, in 12 LEED projects for customers. After going through a remodel at the company headquarters, Grunau personnel thought it made sense to practice what they preached to customers and decided to pursue LEED-Existing Building (EB) status.

## SITUATION

LEED for Existing Buildings addresses all aspects of building operation from cleaning to energy use monitoring. Eighty-five credits are available across six categories, including sustainable sites, water efficiency, energy & atmosphere, materials & resources, indoor environmental quality and innovation & design. Grunau team members went to work deciding which credits to pursue and began by making the simplest changes first. For example, being a mechanical services provider, Grunau personnel could easily make changes to the building’s mechanical systems. The HVAC system was found to be operating in good condition overall, providing proper comfort to occupants and requiring only minor improvements. Team members replaced the old-technology inlet vanes with a variable frequency drive (VFD) on the building’s air handling unit to reduce energy usage. This change earned Grunau an \$800 incentive from Focus on Energy in recognition of its improved efficiency. Focus on Energy works with Wisconsin businesses to encourage cost effective and renewable energy. In addition, Grunau personnel replaced the old air filters with more efficient models that capture smaller particles.



*Grunau set aside three parking spaces for carpoolers to make its building site more sustainable.*

One of Grunau’s biggest changes came in its plumbing system. Personnel replaced the bathroom water faucet aerators with more efficient ones. Instead of using 2 gallons of water per minute, the new aerators used only 0.5 gal/min. The team also installed dual flush toilets which allow the user to alter the amount of water used per flush depending on the type of waste. Compared to a typical office building, Grunau Company uses 50 percent less water.

The company made another radical change by reducing the amount of water used for landscaping by 95 percent. The Grunau team implemented a zone watering system for bushes, plants and flowers, and stopped watering the grass. All of the existing flowers and bushes were semi-drought resistant, and in the future the company may consider replacing much of the grass with these types of plants as well.

Grunau team members made multiple small improvements to reduce the company’s overall energy usage, from installing occupancy sensors in the bathrooms, to upgrading the HVAC data collection hardware and software. The new bathroom faucet aerators came with another benefit too — they use less energy to keep the water hot since there’s less water to heat.

### PROJECT SNAPSHOT:



**Description:**  
LEED certification at headquarters building

**Owner:**  
Grunau Company

**Completed:**  
March 2009



*“Grunau is showing its leadership in and commitment to LEED by putting forward its own resources to dedicate the space they work in on a daily basis to LEED certification.”*

— John Gilroy,  
Project Executive, Gilbane

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In addition, the company began purchasing renewable energy from WE Energies. Thirty percent of Grunau’s energy usage is now being offset by renewable sources such as wind farms, photovoltaic sources or gas from landfills or farms.

Grunau personnel conducted a “waste stream audit,” to determine the company’s greatest type of waste. They discovered that the majority of waste was office paper, much of which was used for large drawings which are a necessity in the construction business. Therefore, Grunau switched to printer paper made with 30 percent recycled content. The Grunau team used the waste stream audit to establish how much employees were recycling, a program already in place. The audit showed that the company already was recycling about 70 percent of its waste! Grunau expanded the recycling program to include fluorescent light bulbs, batteries and old IT equipment, such as computers. The company is also in the process of converting its accounting filing system to an electronic data-management system to further reduce paper use and waste.

Some of Grunau’s simplest changes included swapping out janitorial and cleaning products. In almost every instance, there was an environmentally friendly replacement for the same price as the “non green” product. The company began buying hand towels made from recycled materials to match the recycled materials toilet paper it already bought. Grunau also began using cleaning chemicals that meet Green Seal standards, and even swapped out its antibacterial hand soap since the chemical found in antibacterial soap is both harmful to the environment and isn’t found to be effective in preventing diseases. In addition, the company purchased new vacuum cleaners that meet the standards of the Carpet and Rug Institute. The new machines are more efficient in capturing small particles and are quieter — meeting the LEED requirement that cleaning personnel aren’t exposed to excessive noise.

Grunau Company took steps to make its building site more sustainable. Team members added a bike rack to the site to encourage more people to ride bikes to work. Three parking spaces were set aside in the company parking lot for hybrid or alternative fuel vehicles, and three were reserved for carpoolers. Furthermore, Grunau is doing research to determine the costs and benefits of purchasing hybrid vehicles for their fleet.



*Grunau team members added a bike rack to its company headquarters site to encourage employees to ride their bikes to work.*

## RESULTS

The LEED for Existing Buildings rating system helps building owners and operators measure operations, improvements and maintenance on a consistent scale, with the goal of maximizing operational efficiency while minimizing environmental impacts. There are four categories of LEED certification for existing buildings, from “Certified” to “Platinum.” Grunau Company achieved “Gold” certification for its headquarters building. Not only have Grunau team members reduced their environmental impact and produced a healthier workplace, the LEED improvements are saving the company more than \$3,500 per year.



*Grunau Company uses 50 percent less water than a typical office building thanks to new dual flush toilets.*

More importantly, the LEED certification process is in tune with Grunau’s philosophy of lean construction — business practices that seek to minimize waste and maximize value. In addition, Grunau now has first-hand experience with LEED certification, something that is translating into helping customers.

“Going through the LEED process has given us direct experience and a much broader understanding of not only the construction side of LEED buildings, but the operational aspects of LEED-certified projects as well,” said Jeff Kuhnke, P.E., LEED AP, project executive, Grunau Company. “We now are in a much stronger position to offer better solutions to our customers who are pursuing LEED certification for both their new building projects as well as in their existing buildings.”

“Grunau was the design/build HVAC contractor on Manpower’s corporate headquarters building in downtown Milwaukee which achieved LEED Gold status,” said John Gilroy, project executive, Gilbane. “It definitely was an advantage to have a design/build contractor like Grunau on the job because the team knew all of the parameters and requirements that go into designing and constructing a LEED project. It’s important because it’s not something that you talk about once and deal with sporadically — you need to vigilantly be thinking about it throughout the entire course of the project.”