



# The Advanced Engineered Wood Composites Center



Bangor, Maine and Sarasota, Florida  
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*The University of Maine's first LEED Certified Building*



**Sheridan**  
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## LEED® Facts

The Advanced Engineered Wood Composites Center  
University of Maine  
Orono, ME

LEED Certification awarded October 2006

**36%** more energy efficient

**41%** water use reduction

**40%** local/regional materials

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[www.wbrcae.com](http://www.wbrcae.com)

[www.aewc.umaine.edu](http://www.aewc.umaine.edu)

*The AEW Center is The University of Maine's first LEED® Certified Building*

# Project Profile

## THE ADVANCED ENGINEERED WOOD COMPOSITES CENTER

# The Making of UMaine's First LEED® Certified Building

### PROJECT BACKGROUND

The Advanced Engineered Wood Composite Center (AEWC) is dedicated to research, education and economic development and focused on the material science and structural application of hybrid composites. The facility design team incorporated the use of many different manufactured wood structural component types, representing the latest in wood engineering technology. Many of the materials used in construction were researched and tested by AEWC.

### FROM GREEN TO LEED

In 2003, Governor Baldacci proclaimed that all public buildings including the university should be built in the spirit of the LEED process. UMaine's Trustees already encouraged environmental responsibility and promoted sustainability. WBRC Architects•Engineers guided the University of Maine thru the LEED process to receive the first certification on the Orono campus.

### STRATEGIES AND RESULTS

Increased water and energy efficiency will help lower operational costs. Strategies include water use reduction with waterless urinals and low flow lavatories, water efficient landscaping design, CFC reduction in HVAC&R equipment, and highly reflective, high emissivity roofing.

The construction also features the use of low-emitting materials like adhesives, sealants and carpets that meet or exceed the recognized standards of VOC levels. Materials were chosen based on recycled content durability, and adjustability to space changes.

A waste reduction program includes separation and storage areas for collecting and recycling paper, corrugated cardboard, glass, plastics, and metals.

Using Local / Regional Materials led to significantly lower building costs and lower use of fuel to truck the materials to the site. Over 40% of materials were manufactured regionally (with-in 500 miles) and 15.8% were extracted regionally, examples of products include masonry veneer, precast concrete, steel, wood trusses, laminated wood beams and columns, interior woodwork, aluminum storefront, sheet metal ductwork, gypsum wallboard, batt insulation, roof & floor sheathing, and asphalt paving.

### A PRODUCTIVE WORKPLACE AND LEARNING SPACE

A healthy indoor environment is paramount to having productive employees and students while reducing absenteeism and improving retention. The AEWC office expansion provides additional space for the center's growing population of graduate students, research engineers, visiting faculty and staff. The design team organized the facility layout so that 90% of the foot print and 100% of regularly occupied office space have direct exterior views.

### Project Highlights

- The Office Expansion and the Laboratory facility expansion were both funded by the 2003 State of Maine Jobs Bond.
- Both the AEWC Office and Lab Expansion construction were completed ahead of schedule and with-in budget.
- The building was designed to have a 36% lower energy cost than the energy cost budgets defined by code.
- These construction projects brought together the AEWC staff with Maine architects, engineers, interior designers, contractors, and material suppliers.
- The AEWC Office Expansion building is the first University of Maine project to receive LEED Certification in Orono.
- Operable windows and lighting control sensors are provided at all office spaces.
- CFC refrigerants were eliminated from the building systems.



**Owner:** University of Maine  
**Architect:** WBRC Architects•Engineers  
**Contractor:** Sheridan Corporation

### ABOUT LEED

The LEED® (Leadership in Energy and Environmental Design) Green Building Rating System™ is a national standard for developing high-performance, sustainable buildings. The program was established under the U.S. Green Building Council (USGBC).

LEED was created to:

- Define "green building" by establishing a common standard of measurement
- Promote integrated, whole-building design practices
- Recognize environmental leadership in the building industry
- Stimulate green competition
- Raise consumer awareness of green building benefits
- Transform the building market

LEED provides a complete framework for assessing building performance and meeting sustainability goals. LEED emphasizes strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. The program recognizes achievements and promotes expertise in green building through a comprehensive system of training, professional accreditation, and project certification.

To learn more about how you can make LEED work for you, visit the U.S. Green Building Council's web site at [www.usgbc.org](http://www.usgbc.org).

