



Sheridan

PROJECT PROFILE

Advanced Engineering Wood Composite Center

University of Maine

Orono, Maine



Project:

AEWC

Architect:

WBRC Architects & Engineers

Use:

Research and Development Laboratory

Services:

General Contractor

Completion:

Fall, 2005

LEED, A New Age In Construction

Overview

The AEW Center, located on the Orono campus of the University of Maine, is dedicated to research, education, and economic development focused on the material science and structural application of hybrid composites. The office expansion for the Advanced Engineered Wood Composites Center (AEWC) was constructed out of necessity to support the increased staff and growth of the wood composites laboratory and its mission.

One of the unique features about this new building is that it was the first project on the Orono campus to be designed and constructed to meet the efficiency standards and sustainability goals set forth by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program. The LEED program emphasizes sustainable site development, water conservation, energy efficiency, materials selection and indoor air quality. A point system, based on earning credits in each of these areas, establishes varying levels of certification. This was the first LEED project to be designed and constructed by all members of the team and was a learning process for all parties.



In keeping with the mission of the lab, the entire structural system was constructed of wood framing with an emphasis on engineered wood products. The common areas, exposed to view, were constructed of heavy timber framing with tongue and groove planking.

The exterior of the building is clad in brick veneer and steel siding to complement the existing structure. The entry canopy constructed of laminated wood arches was removed from the existing entrance and reused in its entirety.

Challenges

Since the building was an addition to the existing structure, there were renovations required to interface with the existing building. Any time there are additions and renovations to an occupied facility, special care must be taken to minimize disruptions and the safety of the public.

Some of the features designed into the project to achieve the LEED standards included:

- Operable windows with daylight views in regularly occupied spaces.
- Regionally manufactured and extracted materials.
- Low VOC emitting materials in sealants, adhesives, carpets and paints.
- High efficiency heating and air conditioning systems with carbon dioxide monitoring and systems commissioning.
- Room to collect and store recyclables.

Due to the LEED certification process, meticulous detail was taken in documentation of all aspects of submittals and construction to ensure compliance. The final result of the teams collaborative effort was the LEED certification of the project in October 2006.



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