



WHOLE BARRACKS RENEWAL JOINT BASE LEWIS-MCCHORD (JBLM), WASHINGTON

15.0% reduction in energy costs
(LEED)

33.6% reduction in water use

89.5% of construction waste
diverted from the landfill

LEED Facts

Whole Barracks Renewal
JBLM, WA

LEED for New Construction Version 2.1
Certification awarded August 26, 2008

Silver **37**

Sustainable Sites 10/14

Water Efficiency 3/5

Energy & Atmosphere 5/17

Materials & Resources 6/13

Indoor Environmental Quality 8/15

Innovation & Design 5/5

*Out of a possible 69 points

WHOLE BARRACKS RENEWAL

Fort Lewis Earns LEED Silver for UEPH

JOINT BASE LEWIS-MCCHORD (JBLM) SUSTAINABILITY GOALS

JBLM leads the Department of Defense by aggressively looking for ways to improve the economic, social, and environmental components of all current missions in an effort to achieve true sustainability. As part of this commitment, JBLM has set an aggressive goal to construct new facilities with a LEED rating. The Army and Air Force strongly believe that the design and construction of their facilities should be done so in a manner consistent with their mission. JBLM's sustainability vision statement includes a commitment to conserving natural resources for tomorrow's generations, while seeking choices that enhance neighboring communities' abilities to have a productive future.

PROJECT BACKGROUND

The FY04 Whole Barracks Renewal Project (just one of a series of similar projects) included the construction of a 300 person barracks to house Soldiers. The Barracks has 150 units each with two occupants; each unit includes a bathroom and kitchen. Common areas, including a lobby and mailroom, are on the first floor. An open courtyard in the center of the building provides an outdoor communal space.

Fort Lewis has a strong commitment to the incorporation of sustainable design strategies and practices into all facilities and operations on the installation. The FY04 Barracks was the first project to be submitted for LEED certification. Fort Lewis is dedicated to sustainable building and taking forward the lessons learned for future projects.

STRATEGIES AND RESULTS

The project design took into careful consideration the impacts that construction would have on the site. A 359,274 gallon rainwater harvesting system was installed to both manage stormwater on site as well as provide irrigation during the summer months, which accounts for a significant reduction in potable water use. Additionally, native and drought resistant plants were selected for the landscaping to further reduce potable water needs. The typical landscape at Fort Lewis includes large areas of turf with very little shrubbery. At the FY04 Barracks project this standard practice has been reversed in order to save on irrigation requirements and to provide a more varied landscape.

Within the building, water efficient fixtures have been installed allowing the project to demonstrate a 36% water savings. Waterless urinals were installed on the main floor and low flow showerheads were installed within the living units. The building is primarily naturally ventilated and does not have any air conditioning. Mild conditions combined with an integrated design allowed for the elimination of air conditioning and instead operable windows will provide cooling and ventilation in the summer months. Committed to providing quality indoor air, low emitting paint, adhesives, sealants and carpets were used throughout the building. Fort Lewis decided to make the Barracks a non-smoking facility to further protect the health of those in the building.

Construction waste was closely monitored throughout construction in order to achieve close to a 90% diversion rate. Products with a high-recycled content that were manufactured locally were given preference as is shown by achievement of credits MRc4 and MRc5.

ABOUT JOINT BASE LEWIS-MCCHORD

On Oct. 1, 2010, a process that began five years ago culminated when Joint Base Lewis-McChord reached its final operational capability and was formally established as one of 12 joint bases worldwide. Merging Fort Lewis and McChord Air Force Base, the creation of JBLM was directed as part of a 2005 Base Realignment and Closure action. With the establishment of the joint base, all installation support functions are provided by the Army-led Joint Base Garrison to all the services on the base - Army, Air Force, Navy and Marines.



U.S. Army Engineer District, Seattle

Architect: WJA Design Collaborative
Design /Build Contractor: Absher Construction
Civil Engineer: WJA Design Collaborative
Commissioning Agent: Green Building Services
Energy Modeling: Green Building Services
Environmental Advisor: Green Building Services
Electrical Engineer: Ault Electric Co
HVAC Engineer: Hermanson Company
Interior Designer: WJA Design Collaborative
Landscape Architect: WJA Design Collaborative
Lighting Consultant: Ault Electric Co
Owner: United States Army Corps of Engineers
Structural Engineer: WJA Design Collaborative
Sustainable Design Consultant: Green Building Services

Project Size: 109,770 square feet
Total Project Cost: \$19,425,245
Cost per square foot: \$177

Photography Courtesy of: Green Building Services

ABOUT LEED

The LEED green building certification program is the national benchmark for the design, construction, and operations of green buildings. Visit the U.S. Green Building Council's Web site at www.usgbc.org to learn more about LEED and green buildings.

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JBLM

