



WINDER FAMILY MEDICAL & FULTON DENTAL CLINICS, JOINT BASE LEWIS-MCCHORD, WA

25.5% reduction in energy costs (LEED)

31.1% reduction in water use

96.8% of construction waste diverted from the landfill

LEED Facts

Winder Family Medical & Fulton Dental Clinics, Joint Base Lewis-McChord, WA

LEED for New Construction Version 2.2
Certification awarded June 19, 2011

Gold 39

Sustainable Sites	8/14
Water Efficiency	4/5
Energy & Atmosphere	8/17
Materials & Resources	4/13
Indoor Environmental Quality	10/15
Innovation & Design	5/5

*Out of a possible 69 points

Photography Courtesy of: The Korte Company

WINDER FAMILY MEDICAL & FULTON DENTAL CLINICS, JBLM, WA

First Army Medical/Dental clinic to receive Gold

PROJECT BACKGROUND

To support the growing population of active duty soldiers and their family members arriving at Joint Base Lewis-McChord through 2016, the U.S. Army Health Facility Planning Agency (HFPA) and the U.S. Army Corps of Engineers Medical Center of Expertise, in conjunction with U.S. Army Corps of Engineers Seattle District, determined that a new medical/dental clinic would be needed to replace the existing temporary facilities.

The FY08 project represents the first phase of a two-phase plan. The 42,000 sq ft clinic, completed in the spring of 2010, was programmed to house outpatient medical and dental functions: sports medicine, physical therapy, dental clinic, outpatient pharmacy, specimen collection laboratory, and basic diagnostic radiology departments, as well as space for general physical examinations.

The design-build team, anticipating the second-phase expansion, optimized the site layout by placing parking at higher elevations, allowing a single-story facility to be built at lower elevations that were relatively flat and uniform. Continuation of the grid-based patient-provider corridor system, repetition of diffused natural light through light wells, and location of critical building system components in areas that wouldn't be impacted by future construction were also key. These cost-effective solutions created an opportunity for horizontal expansion while maintaining required AT/FP setbacks. The FY10 addition to the clinic by this same design team in partnership with Vet Industrial as prime contractor also received a LEED Gold rating and provided renewable site-generated energy for 9% of the total energy cost.

STRATEGIES AND RESULTS

The main building achieved LEED Gold certification through the use of natural gas-fired condensing boilers, economizer cooling, variable air volume boxes, variable speed drives, CO₂ monitoring and control in high density areas, enhanced commissioning, and utility monitoring. Additional sustainable features include water efficient fixtures, environmentally friendly refrigerant, high efficiency filtration, increased ventilation, a high efficiency chiller, improved lighting and envelope (through the use of sun shades), and UVC-emitting germicidal lights in the air handling units for improved indoor air quality. These highly efficient mechanical and electrical systems save enough energy to power ten homes on base. The amount of water saved through the use of low-flow showers, sinks, and urinals is over 100,000 gallons per year. Energy savings for the building are 34.6%. Many of these sustainable elements require less maintenance and, therefore, provide long-term energy savings to the Army and taxpayers.

Additionally, careful design of the space has impacted the day-to-day operations of the facility. The layout of the functional spaces is developed around a grid-based corridor system, allowing patients and providers to move and interact freely. This grid system improves the efficiency of circulation over a longitudinal or radial system by reducing walking time between spaces. At the ends of many of the corridors, translucent wall panels were added to allow natural light in, thus warming the space and providing a sustainable design solution. Patient wait times have been reduced by the incorporation of electronic sign-in kiosks which enable a more efficient registration process. The efficiency of the healthcare providers was increased through the design of same-handed equipped rooms for repetitive spaces. The clinic was designed to allow natural expansion of the horizontal circulation system, as evidenced by the successful design and construction of the second-phase expansion as an integral part of the overall clinic.

NOTABLE LEED FEATURES FOR WINDER FAMILY MEDICAL AND FULTON DENTAL CLINICS:

- 9% Renewable Energy Generated onsite
- 34% Energy Savings from baseline
- 90% Stormwater captured and treated onsite
- 88% Low-emitting Roof materials
- 100% Water Use Reduction (Landscaping)
- 31% Building Potable Water Reduction
- Full Building Commissioning (all energy/water consumptive systems, Acoustics, Life Safety)
- Enhanced Refrigerant Management
- 96% Diversion of Construction Waste
- Enhanced Indoor Air Quality during Construction Full Building Flushout prior to occupancy
- Outdoor Air Delivery Monitoring
- Low Mercury Lighting
- Germicidal Irradiation Strategy

"It is an honor and a privilege to be able to create health care facilities for our service men and women. We see sustainability as a key point in the development of these facilities. The Winder-Fulton Clinic was no exception to this. Our team took great care to evaluate every aspect of the building to assure its contribution to the greater sustainability without compromising its true mission: Patients First."

Todd Korte, President and CEO, The Korte Company



U.S. Army Engineer District, Seattle

Owner: Joint Base Lewis-McChord
Architects: Korte Design, Inc.
Structural Engineers: KPFF Consulting Engineers
HVAC Engineer: Notkin Mechanical Engineers
Energy Modeling: Notkin Mechanical Engineers
Civil Engineer: KPFF Consulting Engineers
Landscape Architect: Charles Anderson-Atelier PS
Interior Designer: 3B Designs
Contractors: The Korte Company, Vet Industrial
Commissioning Agent: Wilson Jones Consulting, Inc.
Electrical Engineer: Abossein Engineering
Plumbing Engineer: Notkin Mechanical Engineers
Geotechnical: Hart Crowser, Inc.

Project Size: 58,598 square feet
Total Project Cost: \$22,500,000
Cost Per Square Foot: \$384

Photograph Courtesy of: The Korte Company

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.

Public Affairs Office
 206.764.3750
 Seattle District
 253.967.0152
 Joint Base Lewis-McChord



U.S. ARMY