



CHILD DEVELOPMENT CENTER UNDER 6, FORT DRUM, NY

21.8% reduction in energy costs
(LEED)

24.5% reduction in water use

95.9% of construction waste
diverted from the landfill

LEED Facts

Child Development Center under 6,
Fort Drum, NY

LEED for New Construction Version 2.2
Certification awarded November 2, 2011

Gold 39

Sustainable Sites	7/14
Water Efficiency	3/5
Energy & Atmosphere	6/17
Materials & Resources	6/13
Indoor Environmental Quality	14/15
Innovation & Design	3/5

*Out of a possible 69 points

FORT DRUM CHILD DEVELOPMENT CENTER, NEW YORK

Child Development Center Receives LEED Gold

PROJECT BACKGROUND

The Army's Force Modernization Program resulted in an extensive expansion of the 10th Mountain Division. The additional missions and soldiers in turn increased the need to provide modern and safe facilities on Fort Drum. Among the many types and variety of facilities needed were Child Development Centers to provide professional care for the children of the families of the Division.

One of many of the unique features of Fort Drum is the extreme cold climate; matching or exceeding extreme cold conditions found just about anywhere else in the lower 48 contiguous states. Besides the weather, child development centers have numerous special criteria which ensure the needs and safety of their young clientele are met; and in turn restrict the use of some cost and energy saving considerations that may be applied to facilities with an older population. On top of these challenges, the contract required the facility to obtain a Gold certification from the US Green Building Council (USGBC). These were a few of the challenges faced by Black Horse Construction LLC, a local small business; and the design-build agent of Fort Drum's newest Child Development Center for children 6 weeks to 5 years.

STRATEGIES AND RESULTS

The Riva Ridge Child Development Center was certified "Gold" by the USGBC in Sep 2011. Black Horse achieved this goal in a variety of means to include; installing a geothermal HVAC system, significantly increasing the insulation and by incorporating the Enhanced Commissioning process during both the design and construction phases. In conjunction with vastly improved insulation which included R-values reaching 60 in the roof, overall air tightness was significantly improved while maintaining excellent air quality. In-floor radiant heating system - supported by the geothermal system, the enhanced commissioning process, and use of local construction materials were some of the key green features that make this one of the finest and greenest Child Development Centers in the Army.

NOTABLE LEED FEATURES

One of the several unique features of the building is the in-floor radiant heat, tied to the geothermal heating systems installed in the children's home rooms and in the facility's in-door play areas. The system is only designed to meet 100% cooling and 75% heating load, and has a traditional boiler system to make up the difference on high demand days. This dual system has proven to be more reliable and efficient, and by not attempting to achieve a geothermal system which achieves 100% of the heating needs the payback occurs much sooner.



U.S. Army Engineer District, New York

Owner/Operator: Child Development Service, Fort Drum, NY
Prime Contractor: Black Horse LLC, Watertown, NY
Architects: QPK Design, Syracuse, NY
Corps of Engineers, Design District: New York District
Corps of Engineers, Center of Standardization: Huntsville Center, Huntsville, AL

Project Size: 14,756 square feet
Total Project Cost: \$5,077,560
Cost Per Square Foot: \$344

Photographs Courtesy of: Fort Drum, PPMD Office

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
917.790.8007
New York District
315.772.5461
Fort Drum



U.S. ARMY