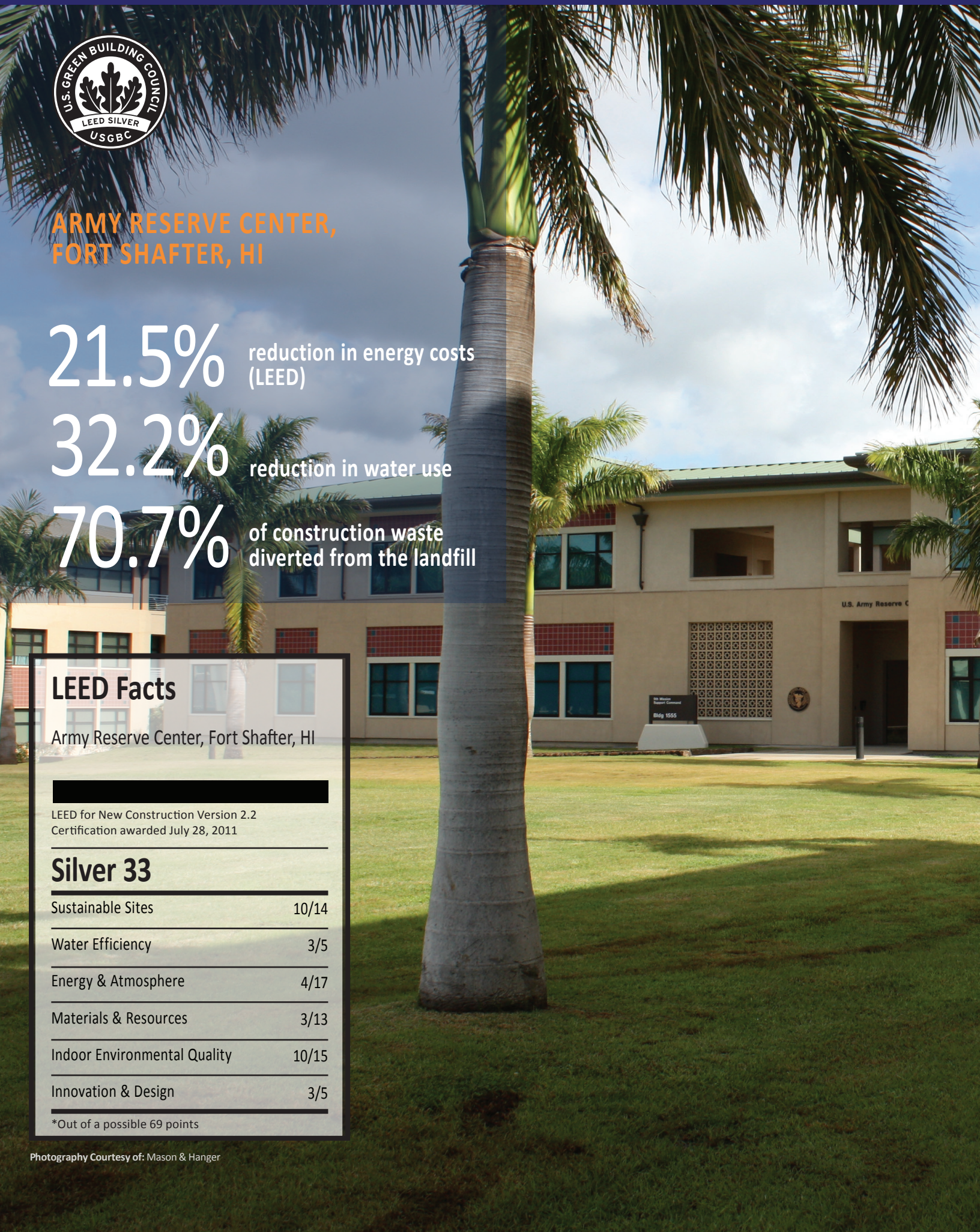
PROJECT PROFILE



ARMY RESERVE CENTER, FORT SHAFTER, HI

21.5% reduction in energy costs (LEED)

32.2% reduction in water use

70.7% of construction waste diverted from the landfill

LEED Facts

Army Reserve Center, Fort Shafter, HI

[redacted]

LEED for New Construction Version 2.2
Certification awarded July 28, 2011

Silver 33

Sustainable Sites	10/14
Water Efficiency	3/5
Energy & Atmosphere	4/17
Materials & Resources	3/13
Indoor Environmental Quality	10/15
Innovation & Design	3/5

*Out of a possible 69 points

Photography Courtesy of: Mason & Hanger

ARMY RESERVE CENTER, FORT SHAFTER, HI

Army Reserve Training Center Earns LEED Silver

PROJECT BACKGROUND

The project is a new Army Reserve Training Center building for the 9th Mission Support Command at Fort Shafter Flats, Hawaii and is slated to accommodate hundreds of U.S. Army Reserve Soldiers to include members of the 1984th U.S. Army Reserve Hospital and the 303rd Maneuver Enhancement Brigade. The building will primarily house administrative personnel and the full complement of support functions.

The energy-efficient facility is designed to provide administrative, training, classroom, supply and storage support areas to include 188 new parking stalls for the use of its tenants. The Training Center building is two stories and is located on the northeast side of Palm Square. This building houses the classrooms, learning center, break room, retention office, family support offices, and unit storage on first floor. The second floor houses private offices, admin support, restrooms, and mechanical room. The centered exterior courtyard serves as the building's lobby and includes two trophy display cases and direct access to the retention and family support offices.

STRATEGIES AND RESULTS

The project achieved Silver LEED® certification for new construction from the U.S. Green Building Council. The design reduced potable water use by 32.2% from a calculated baseline design through the installation of low-flow fixtures including water closets, urinals, lavatories, and kitchen sinks. Potable water consumption for irrigation was reduced by 50.3% through the methods of eliminating permanent irrigation for Site B and using plant materials requiring minimal irrigation need, reducing materials requiring irrigation and using high-efficiency irrigation materials for Site A.

Through energy modeling, this design achieved energy cost savings of 21.5% using the ASHRAE 90.1-2004 Appendix G methodology. Energy efficiency measures include an improved thermal envelope, high efficiency glazing, reduced interior lighting power density, occupancy sensors, demand control ventilation, airside economizer control and VAV air handing units.

LEED credits were also awarded in terms of materials used and recycled. Twenty percent of the total building materials content manufactured using recycled materials. During construction, approximately seventy percent (558.13 tons) of on-site generated construction waste was diverted from landfill.

FEATURED INNOVATION

This project was awarded with an Innovation and Design Process credit for demonstrating exemplary performance in reducing indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and wellbeing of installers and occupants and reduce resource impacts associated with furnishings. Greenguard Environmental Institute (GEI) testing program for systems furniture and classroom uses performance-based standards complying with LEED requirements which include the calculation of concentrations of contaminants that each product will add to the environment. To achieve this credit, GEI Certified systems furniture was purchased in order to reduce the indoor air contaminants that impact the comfort of the occupants.

NOTABLE LEED FEATURES

- 90% of the average annual rainfall is captured or treated such that at least 80% of the average annual post-development Total Suspended Solids (TSS) are removed
- 50.3% reduced potable water consumption with installed irrigation systems
- 21.5% energy cost savings based on ASHRAE 90.1-2004
- 70.7% (558.13 tons) of on-site generated construction waste diverted from landfill

"The high, energy-efficient standards emphasize our desire to be good stewards of our tax dollars and the environment."

Col. Michael A. Phipps, the commander of the U.S. Army Reserve Theater Support Group

U.S. Army Engineer District, Honolulu

Owner: Army Reserve Installation Management Directorate (ARIM-D)
Owner's Representative: U.S. Army Engineer District, Louisville & U.S. Army Engineer District, Honolulu
Project Manager: U.S. Army Engineer District, Louisville
Project Engineer: U.S. Army Engineer District, Louisville
Construction: U.S. Army Engineer District, Louisville
Contracting: U.S. Army Engineer District, Louisville
Construction Area Engineer: U.S. Army Engineer District, Honolulu
Construction Resident Engineer: U.S. Army Engineer District, Honolulu
Construction Project Engineer: U.S. Army Engineer District, Honolulu
Construction Civil Engineer: U.S. Army Engineer District, Honolulu
Project Manager: RSP Architects
Lead Architect: RSP Architects
Lead Civil: EVS
Lead Mechanical: Gausman & Moore
Lead Electrical: Gausman & Moore
Lead Structural: Van Sickle Allan

Project Size: 29, 936 square feet
Total Project Cost: $17,062,522
Cost Per Square Foot: $570

Photographs Courtesy of: Mason & Hanger

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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U.S.ARMY