

Clean Home, Green Home

Sustainable foundation for the Army's future

Installations are the Army's home. Their quality touches the safety, well-being and effectiveness of every Soldier, Family Member and civilian. As multiple, simultaneous changes spur a military construction boom, new buildings must meet high standards for energy efficiency, water conservation, materials selection, health and comfort. Sustainable construction is one way the Army strives to provide Soldiers a quality of life measuring up to the quality of their service.

LEED: Leadership in Energy and Environmental Design

Set forth by the U.S. Green Building Council, Leadership in Energy and Environmental Design (LEED) gives points for sustainable features in the design, construction and management of structures, and awards a rating – Certified, Silver, Gold and Platinum. Beginning in fiscal 2008, the Army required new military construction projects to be able to meet LEED Silver.

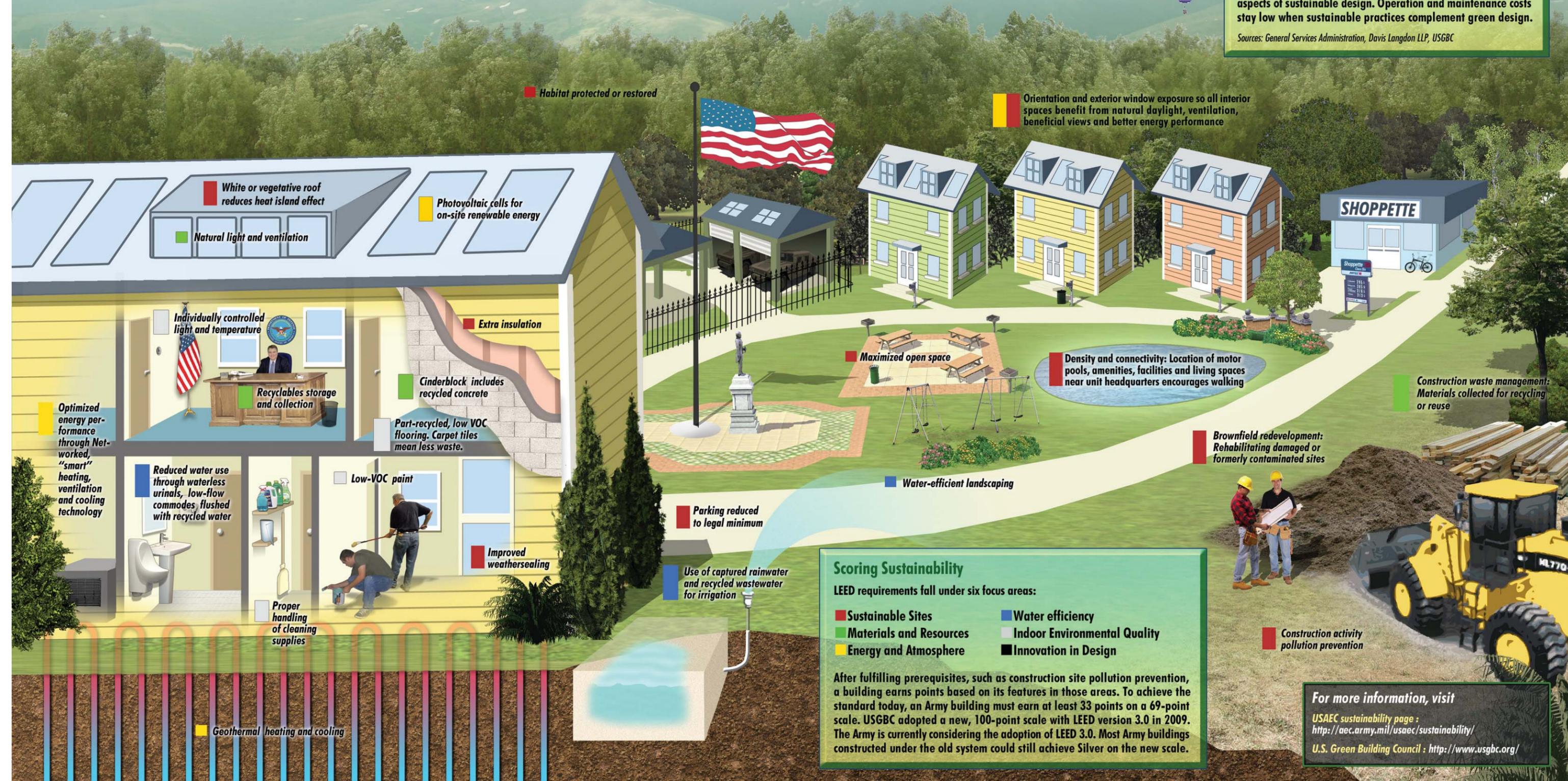
Adding Up

Sustainable buildings cost slightly more to construct but demonstrate savings throughout their life cycles. The improvements pay for themselves quickly. Putting in features in pursuit of LEED certification can add two to five percent to the cost of an individual project.

- Compared to national averages, federal green buildings report:
 - 26 percent less energy use
 - 13 percent lower aggregate maintenance costs
 - 27 percent higher occupant satisfaction
 - 33 percent fewer CO2 emissions

The best performing buildings take an integrated approach to all aspects of sustainable design. Operation and maintenance costs stay low when sustainable practices complement green design.

Sources: General Services Administration, Davis Langdon LLP, USGBC



Habitat protected or restored

Orientation and exterior window exposure so all interior spaces benefit from natural daylight, ventilation, beneficial views and better energy performance

White or vegetative roof reduces heat island effect

Photovoltaic cells for on-site renewable energy

Natural light and ventilation

Individually controlled light and temperature

Recyclables storage and collection

Extra insulation

Cinderblock includes recycled concrete

Part-recycled, low VOC flooring. Carpet tiles mean less waste.

Optimized energy performance through Networked, "smart" heating, ventilation and cooling technology

Reduced water use through waterless urinals, low-flow commodes flushed with recycled water

Low-VOC paint

Proper handling of cleaning supplies

Improved weathersealing

Geothermal heating and cooling

Maximized open space

Density and connectivity: Location of motor pools, amenities, facilities and living spaces near unit headquarters encourages walking

Construction waste management: Materials collected for recycling or reuse

Brownfield redevelopment: Rehabilitating damaged or formerly contaminated sites

Water-efficient landscaping

Parking reduced to legal minimum

Use of captured rainwater and recycled wastewater for irrigation

Scoring Sustainability

LEED requirements fall under six focus areas:

- Sustainable Sites
- Materials and Resources
- Energy and Atmosphere
- Water efficiency
- Indoor Environmental Quality
- Innovation in Design

After fulfilling prerequisites, such as construction site pollution prevention, a building earns points based on its features in those areas. To achieve the standard today, an Army building must earn at least 33 points on a 69-point scale. USGBC adopted a new, 100-point scale with LEED version 3.0 in 2009. The Army is currently considering the adoption of LEED 3.0. Most Army buildings constructed under the old system could still achieve Silver on the new scale.

For more information, visit

USAEC sustainability page : <http://aec.army.mil/usaec/sustainability/>

U.S. Green Building Council : <http://www.usgbc.org/>