

Greening White Tank

✦ Mortenson Construction is part of the design/build team for a new library and nature center in Maricopa County White Tank Mountain Regional Park. *By Staci Davidson*

Mortenson Construction - White Tank Branch Library
 www.mortenson.com
 Construction budget: \$8 million
 Location: Maricopa County, Ariz.
 Scope: Design/build construction of a library and nature center

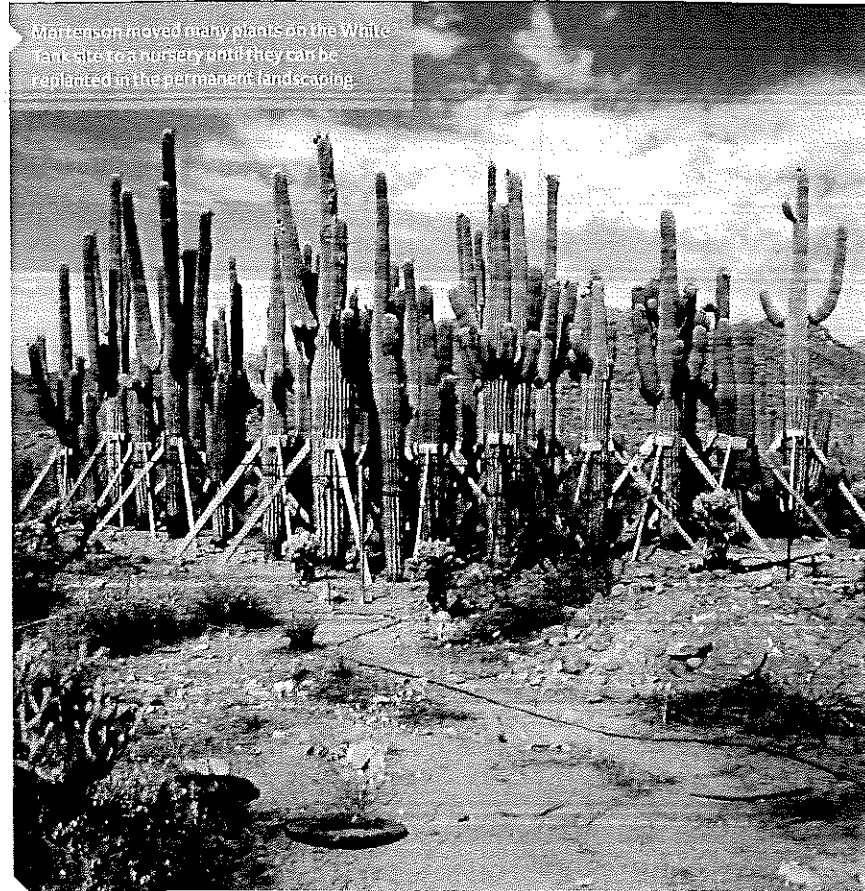
Covering approximately 30,000 acres in west-central Arizona, the White Tank Mountain Regional Park is the largest regional park in the United States and features both a desert landscape and the rugged environment of the White Tank Mountains. In the fall of 2010, the park's visitors will have access to a new attraction - a public library and nature center.

In September 2009, Mortenson Construction's Phoenix Operating Group broke ground on the \$8 million White Tank Branch Library for Maricopa County. Mortenson is working with DWL Architects + Planners, Paragon Structural Design, Energy Systems Design, Graef Engineers and Ameresco Solar on this design/build project.

It involves the construction of the library, cafe, nature center, animal habitat and an outdoor assembly area. The 29,000 square feet of space allows room for a collection of up to 41,000 items, seating for 137 children in a story-time room, a dedicated space for teens, 50 public computers, four public study rooms, study table seating for 40 and an automated book return sorting machine.

"It was a very competitive qualifications-based process," says Ron Wilson, general manager for Mortenson Phoenix. "We were short-listed and awarded the project against numerous other qualified design/build teams. Our design/build team has completed five other projects together, the

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most recent being the Polly Rosenbaum State Archives and History Building [in Phoenix]. Our expertise was demonstrated through the successful completion [by both firms] of several library, LEED and renewable energy projects."

Substantial Savings
 The original plan for the library and nature center project called for it to be built on a property near the White Tank Park, but not on actual park property. When the Library District's purchasing officials began negotiations with the sell-

er of the property, the Maricopa County Library District Board of Directors realized it would be more cost effective to locate the structure just inside the entrance of the park.

The board estimated this change has saved taxpayers more than \$1 million. By building inside the park, the county didn't have to buy land for the project or pay for excessive site preparation activities such as civil engineering, septic system build-out, excavation for a well and road construction.

The majority of White Tank Mountain Regional Park is undeveloped land, and

motorized vehicles and hikers are required to stay on existing roads and marked trails. As a result, it is critical that the construction activities include careful protection and restoration of the park site. Additionally, the structure is being built with a number of sustainable features, and the library plans to pursue LEED Gold certification.

Going Green in the Desert

The building will draw approximately 30 percent of its electricity from roof-mounted solar collectors and the rest will be purchased with renewable energy credits. Other energy-efficient design elements include bicycle storage, water-efficient landscaping, low-flow fixtures, on-site wastewater collection, daylight views and a permeable parking lot.

"The first activity for the project was to

salvage all existing plant life, including 50 saguaro cacti, barrel cacti, desert ironwoods and Palo Verdes," says Adam Hardy, project manager for Mortenson. "All of these plants have been moved into a temporary nursery until they can be replanted into the permanent landscaping."

To provide the best solar design possible on the roof space, the design/build team partnered with renewable energy consultant Ameresco. Hardy explains Ameresco brings "vast expertise, knowledge and experience with renewable energy projects." The Ameresco team provided a preliminary analysis of design concepts, energy production validation analysis and an understanding of the investment necessary to build this aspect of the project.

"It was so important to make this building fit its desert surrounding that

we developed a pattern abstracting the rock formations in the nearby mountains," says Adam Sprenger, associate for DWL. "Painters will be staining facets of the tilt-up concrete walls in three shades of green to match surrounding trees and cacti. We are all working together to create a building that just seems to have risen out of the desert rocks, plants and historic imagery."

The architect adds that the library was designed and situated on the site to ensure it can take advantage of mountain views and adjacent park activities while meeting the population's needs.

"The White Tank Library has been designed with the environment in mind, for people rather than just for materials; and to provide the community with a means to expand their horizons through reading and learning," Wilson says. ☉

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