

Sustaining the Environment at Gettysburg National Military Park

The Gettysburg Foundation's commitment to sound stewardship of the environment has, from the beginning, informed decisions about the new Museum and Visitor Center at Gettysburg National Military Park.

The Foundation's goal for the new facilities is "Leadership in Energy and Environmental Design" (LEED) certification at the silver level by the U.S. Green Building Council. The council sets voluntary standards for high performance, sustainable buildings. Its LEED certification program recognizes environmental leadership in the building industry. Emphasis is on state-of-the-art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

The new Museum and Visitor Center is designed not only to accommodate the nearly two million visitors who come to Gettysburg each year, but also to preserve and protect the park's extensive collection of Civil War-era archives, artifacts and objects. Special climate controls for heat and humidity are necessary to preserve the Cyclorama painting and the collections.

These preservation and presentation objectives have made more challenging the Foundation's planning for an environmentally sustainable building and site. The "green" elements also have increased the costs for the project. Nevertheless, the Foundation considers this as important an investment for future generations as the preservation of the collection, and the exhibits and programs that will excite and inspire. It anticipates that its experience developing an environmentally sustainable facility will serve as an example for other museums.

The cornerstone of the energy efficiency strategy is a geothermal heat pump system for the new Museum and Visitor Center. The system consists of about 200 wells, at an average depth of 400 feet and 6 inches in diameter, located under one of the parking lots. Piping ties the wells together in a closed loop system. These 92,000 lineal feet of wells form a thermal shield to leverage the earth's constant 55-degree temperature to provide most of the building's heating and cooling requirements, without burning fossil fuels.

The geothermal system is more costly, but it also is much more energy efficient, and will reduce significantly the amount of greenhouse gases released into the atmosphere.

The overall design of the building supports a number of key environmental goals, beginning with the attainment of LEED performance levels for energy efficiency, ozone protection, indoor air quality, site development protection and support for occupant and visitor recycling programs.

While these efforts will, for the most part, be invisible to visitors, some conservation efforts outside of the building will be more apparent. The new facilities are located adjacent to the battlefield, on land that saw no major battle action. The site is not visible

from major points on the battlefield, with the structure itself designed to blend into the rural Pennsylvania countryside.

Other environmental considerations that have contributed to Foundation decisions about the project's exterior features include an ongoing land acquisition program to create a buffer and remove from potential development as much land as possible around the site of the new facilities. To date, the Foundation has acquired many (the one across the street is not protected) significant parcels of property that surround the entrance to the new Museum and Visitor Center.

Also, preservation of as many wetland areas on the site as possible — for the 0.682 acres of wetlands that have been disturbed by the new facilities, the Foundation has restored almost three times that amount — 1.912 acres. This includes creation of new wetlands as part of the restoration of the portion of the Guinn Run stream bed corridor that runs near the new Museum and Visitor Center.

Automobile parking lots are interspersed throughout the 100-acre site to blend into the landscape and break up potential “seas of concrete,” and to minimize run-off from storms. These lots have been tiered to follow the landscape and shaded with existing or newly planted trees. The landscape design calls for native, adaptive, drought-resistant plants that will require no irrigation once they have been established. No public water will be used for landscaping plants; one large permanent planter on the food service terrace will be watered using a drain system that will bring rainwater from the roof.