

Zoo Atlanta - Grand New View

Atlanta, Georgia

Zoo Atlanta first opened in 1889 and has undergone several renovations. Keller provided support of excavation as part of the zoo's newest renovation, the "Grand New View".



The project

As the first phase of the Grand New View project, Zoo Atlanta opened the African Savanna exhibit. The new exhibit included renovating the historic Cyclorama building, extensive habitat expansion, and a new parking garage. All components of the exhibit renovation required earth retention.

The challenge

Renovations in the historic Cyclorama building required caution to maintain the existing façade and structure within tight access locations. Working in an open zoo required heightened safety awareness for visitors and animals and close coordination between all parties.

The solution

Keller worked with the owner and project engineers to create an economical support of excavation design that met all project requirements using soil nails.

Before excavation, existing building columns in the Cyclorama were underpinned using jacked piers to depths of 30 ft. Four levels of soil nails, ranging in length from 15 to 25 feet, supported the 18 ft deep excavation. Additional temporary soil nails were installed for an elevator pit and stairwell.

A 10 ft to 15 ft excavation was required to create an overlook into the exhibits and offset the animal habitats from visitors. In six areas, Keller installed one to two levels of permanent soil nails, ranging in length from 15 ft to 20 ft. After installation, a separate specialty contractor constructed a sculpted shotcrete face to create a natural cliff appearance.

To allow the construction of the parking garage below the road level, a permanent soil nail wall with eight levels of soil nails, ranging from 15 ft to 40 ft in length, was constructed.

A park was constructed atop the garage, requiring a walkway from the adjacent roadway. To support the walkway, 46 micropiles were installed at varying lengths. Finally, the parking garage was supported with aggregate piers.

Project facts

Owner(s)

City of Atlanta

Keller business unit(s)

Keller

Main contractor(s)

Winter Construction

Engineer(s)

Uzun & Case

Solutions

Support of excavation
Deep foundations
Underpinning

Markets

Institutional
Sports and entertainment

Techniques

Jacked in piles
Soil nailing
Micropiles
Vibro (aggregate) piers®

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