



Above left: Site photo taken mid-February 2002 showing the concrete slurry wall under construction. The ceremonial elm trees being protected are outside the slurry wall. Lower left: Site work photo taken 7/16/02. Above right: Artist's rendering is an aerial view of the completed Memorial.

The National World War II Memorial

Washington, DC

Mueser Rutledge Consulting Engineers (MRCE) was the geotechnical and structural engineer for the World War II Memorial design team. The Memorial was constructed on the National Mall in Washington, DC, at a location occupied previously by the Rainbow Pool. The Memorial consists of a plaza approximately 115 by 120 meters, about two meters deep, with a new lowered Rainbow Pool constructed within. Geotechnical issues addressed by MRCE include:

- A high groundwater table.
- Protection of the historic Reflecting Pool
- Protection of a collection of ceremonial elm trees which ring the Rainbow Pool.
- Poor soil conditions beneath the site.
- The site's location within a flood zone.

MRCE designed the concrete slurry wall (cutoff wall) to minimize the effects of the memorial on the local groundwater, Reflecting Pool and elm trees; foundation piles to support the Memorial; and an underdrainage system to maintain the water level within the cutoff below the plaza of the Memorial. Vaults and utility shafts extend below the concrete deck. They contain equipment to recirculate water to the fountains, to drain and pump away surface water and groundwater and to control the Memorial lighting and control systems. Construction began in late 2001 and was completed in Spring 2004. The memorial was dedicated on Memorial Day, 2004.

This project won numerous awards including the 2005 ACEC New York Engineering Excellence Gold Award for the foundation systems, and the 2005 ASCE National Capital Section Award for Outstanding Civil Engineering Project.