



Left: Drilled piers during construction. Right: Aerial photo of the location for the Ramadi Bridge.

Ramadi Bridge

Ramadi, Iraq

The U.S. Government is constructing two new bridges in Iraq, including the Ramadi Bridge spanning the Al Warriar River. Mueser Rutledge Consulting Engineers (MRCE) provided geotechnical engineering services and, using a local drilling contractor, obtained borings to provide design recommendations for drilled shaft foundations. In addition, seismic soil-structure interaction issues were important in the design, including site response and evaluation of the lateral response of the pile foundations.

The proposed bridge will be approximately 218 meters long and will have with an out-to-out width of approximately 17 meters. The structure will have eight spans, five of which will be AASHTO Type III precast concrete girders, and three will be steel girders. Span lengths range from 20.5 m to 24.5 meters for the concrete girders and from 28 meters to 44 meters for the steel girders. The piers consist of a concrete cap beam and three concrete columns extending to the foundation level. Foundations will consist of a concrete pile cap and drilled shaft foundations. This project includes 22 meters of embankment on the west approach and 34.5 meters of embankment on the east approach. Under a separate project, a proposed roadway will be constructed to meet the approach embankments. The approach embankments include fills of approximately 5 meters above existing ground. The west embankment will meet an existing access road at the top of the levee. It will also include concrete slope protection to guard against scour.