



*Above: Overhead view of the tunnel during construction.
Above right: Sheet piling excavation support for the covered roadway tunnel.
Lower right: Detail of wale and high capacity tieback system.*



Atlantic City/Brigantine Connector to the Atlantic City Expressway

Atlantic City, NJ

Mueser Rutledge Consulting Engineers (MRCE) was retained to provide geotechnical and foundation engineering services for the design of the excavation support structure used in the construction of a 2200 foot long cut and cover tunnel segment. The excavation ranged between 10 and 35 feet deep and extended into loose silty sands, 30 feet below the water table. The work included the design of the sheeting, high capacity tiebacks, and a jet grout wale and strut system to support the sheeting at subgrade. MRCE additionally designed the excavation support for a 45 foot deep pump station.

A paper, "Superjet Grouting: A New Technology for In-situ Soil Improvement," Transportation Research Record No. 1721, 2000, by George K. Burke, Kenneth Chadwick, and David M. Cacoilo, a partner at MRCE, is about this project and the new SuperJet grouting technology used. The project won the *New York Construction News'* Best of 2000 Award as the Heavy Construction Project of the Year.