



The current project involves the construction of a 1,700 ft tunnel, and a full-length straight platform for two 10-car subway trains that will provide better access and additional station entrances (ADA compliant), direct transfers, sufficient overrun track, state of the art switches, and increased capacity.

New South Ferry Station

New York, NY

MRCE's Services:

- Design of underpinning systems for existing 1/9 and 4/S Subway tunnels
- Design of excavation support system
- Geotechnical engineering and dewatering analysis
- Instrumentation and monitoring

The Metropolitan Transportation Authority and MTA New York City Transit are improving the South Ferry Terminal for the 1 & 9 subway lines. The expanded station is to be located underneath Peter Minuit Plaza in Lower Manhattan, adjacent to Battery Park and the Staten Island Ferry Terminal. The \$400 million design/build project will make improvements to the station, reduce travel times, and provide additional station entrances with ADA accessibility.

Mueser Rutledge Consulting Engineers (MRCE) is providing professional foundation engineering services to the Design-Build Joint Venture of Schiavone/Granite Halmar. MRCE has designed the temporary excavation support and underpinning systems in the areas where the new tunnel will cross under three existing NYCT tunnels built in the early 1900s. As geotechnical consultant, MRCE has also performed geotechnical investigations and dewatering analyses for the project, including evaluation of the impact of construction on surrounding structures. For the underpinning work, about 150 minipiles have been installed to provide temporary vertical support of the existing tunnels during excavation beneath. The new structure will eventually replace the existing 1&9 tunnel to South Ferry Station, and form the permanent foundation for the 4&5 tunnel south of Bowling Green Station. In addition, MRCE designed and implemented a comprehensive real-time instrumentation and construction monitoring program. Deformation monitoring of the three existing subway lines (1&9 and 4&5 lines) commenced in March 2005 with seismographs, piezometers, inclinometers and automated total stations reading hundreds of reflective prisms mounted along the walls of the existing subway tunnels and surrounding structures.