



Above: The completed bridge structure is under the NYCTA transit trestle.

Below left: Caisson drilling rig is on a platform over water set up over a new bridge pier.

Ninth Street Bridge over the Gowanus Canal

Brooklyn, NY

The New York City Department of Transportation's Ninth Street Bridge is a new bridge over the Gowanus Canal. The new lift bridge, completed in 2000, replaces a bascule span that was in an advanced state of deterioration. The new structure provides an improved wider channel in the canal for unobstructed vessel passage. The bridge has state-of-the-art electronically controlled lifting machinery that should provide 50 years of reliable service. The bridge carries 3 lanes of traffic; 2 lanes westbound and 1 eastbound. It is supported on 3 ft. diameter drilled piers socketed into bedrock at a depth of 150 ft. During the replacement, Mueser Rutledge Consulting Engineers (MRCE) served as a consultant to the bridge engineers for the design of these piers installed from a temporary piled platform over the water. Extra care was necessary to protect the foundations for a transit trestle which is above the Ninth Street Bridge. MRCE also assisted in inspection of the drilling and concreting of the deep rock sockets.

MRCE planned, designed and prepared contract documents for an elaborate lifting scheme using multiple hydraulic jacks to maintain a New York City Transit (NYCT) Subway Station and related track work elevated more 100 feet above street level to rigid horizontal and vertical tolerances during construction of the bridge. MRCE supervised and summarized numerous field efforts where multiple NYCT Columns were both raised vertically and shifted laterally.