



Left: Artist's rendering of the office tower, completed in 2002.

Above: Foundation construction in summer of 2000. View is on East 7th to South 41st. Corner of the historical New Amsterdam Theatre is in the far right corner.

5 Times Square -Ernst and Young National Headquarters Building

New York, NY

Foundation Engineering Project Highlights

- Site was part of Geotechnical site investigation in Times Square for four highrise towers & subway enhancement program
- Design and monitoring of protection and support for NYCT subways and stations
- Development of Historic Preservation Plan for adjacent theatre
- Design of innovative foundations for two level deep basement

5 Times Square is on the corner of Seventh Avenue and 42nd Street in New York City. It is a 37-story, 1.1 million square foot building with two basements founded on bedrock. The structure borders subways along 41st Street and on Seventh Avenue and is immediately adjacent to the New Amsterdam Theatre, built in the 1890s.

The two level deep basement, and protection of the subway and the historical theatre were prime challenges for Mueser Rutledge Consulting Engineers (MRCE), foundation engineers on this project. MRCE prepared a geotechnical investigation, evaluated alternative foundation schemes including rock socketed caissons and piers, prepared a historic preservation protection plan for the adjacent New Amsterdam Theatre, reviewed subway excavation support schemes for submittal to New York City Transit Authority (NYCT), and reviewed design schemes for foundations adjacent to subways and the design of subway excavation support drawings, and prepared specifications for foundations. For the New Amsterdam Theater's Historical Preservation Plan, MRCE evaluated the construction impacts of the new Ernst & Young building, assessing the New Amsterdam Theatre's sensitivity, prepared underpinning requirements, and set criteria for vibrations and building movements. Construction support services included Resident Engineering to implement the Historical Preservation Plan and perform seismic monitoring, and inspection services for caissons and rock subgrades.