



Merck & Company, Inc. Headquarters Complex

Whitehouse Station, NJ

Mueser Rutledge Consulting Engineers (MRCE) performed a subsurface investigation for site improvements of the new international headquarters of Merck & Co., Inc. The hexagonal shaped, five story building has a footprint area of about 400,000 square feet. Site improvements included a new highway interchange and access roads, bridges, retaining walls, and evaluation of an existing small dam. The headquarters structure was constructed on sloping ground, necessitating a 50 foot deep cut, which extended 30 feet into the underlying Newark Formation shale. Rock quality, ranging from soft, weathered and highly fractured shale to hard sound shale, typically improves with depth. Approximately 95 borings were made for the investigation.

MRCE prepared a summary report including recommendations for support of the headquarters and accessory buildings and constructability, including evaluation of re-use of the excavated shale as backfill. MRCE was also requested to provide criteria for design of permanent retaining walls and design of the building underdrain system. During construction, MRCE provided Resident Engineering services including review of shop drawings, inspection of access and site road construction, building excavation, footing subgrades, utility installation and backfill against walls.

A key feature of this development was to preserve surrounding trees and natural woodlands to the greatest extent possible. The final structure incorporates a stream flowing through the building.