



EXCAVATION SUPPORT | SECANT PILES | TIEBACKS

BRIGHAM GREEN PATIENT PARKING GARAGE BOSTON, MASSACHUSETTS

Secant piles were used as a permanent water cutoff wall and foundation wall for the proposed underground parking garage at the Brigham Green Hospital in Boston, Massachusetts. Temporary tiebacks were installed for lateral support during construction. Once the garage slabs were placed the temporary tiebacks were detensioned and the slabs served as the permanent lateral support. Schnabel installed the 880mm diameter secant shafts through 20 to 40 feet of dense sand and glacial till and 2 to 12 feet into bedrock, which was highly variable in elevation. Multiple Bauer drill rigs were utilized as well as a 30-inch cluster drill to penetrate the 15,000+ psi rock. A temporary concrete guidewall was used to assure that the proper overlap between shafts was achieved. Vibrations were carefully monitored during construction due to the close proximity of the site to an active hospital.

Owner: **Partners Health Care/Brigham & Womens Hospital**

General Contractor: **Walsh Brothers**

Design/Build Specialty Contractor:

Schnabel Geotechnical Design & Construction

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