

Construction Engineering – Tunnel & Underground

SERVICES / TUNNEL AND UNDERGROUND



Quarry Conversion to Citizens Reservoir



Greensferry Sewer Tunnel

DAM AND LEVEE
GEOPROFESSIONAL
STRUCTURES AND FACILITIES
TUNNEL AND UNDERGROUND
WATER SUPPLY, CONVEYANCE,
AND DISTRIBUTION
CONSTRUCTION PHASE SERVICES
ENVIRONMENTAL
INFRASTRUCTURE MONITORING
SERVICES (IMS)
RISK

Schnabel specializes in design and construction management services for tunneling and other heavy civil construction projects in the areas of transportation, water and wastewater infrastructure, and hydroelectric power. Our goal is to meet the needs of clients by providing fully integrated management and technical services that are objective, thorough, and effective.

Our staff provides a diversified blend of skills under one corporate roof. We combine our expertise in the design and construction of underground structures with a keen understanding of nuances and the interrelationship of geology, hydrogeology, and geotechnics.

Schnabel Engineering DC, Inc. is an affiliate of Schnabel Engineering, Inc.

Engineering services in the following states are performed by Schnabel's respective affiliated entity: Michigan: Schnabel Engineering of Michigan, Inc.; New York/Connecticut: Schnabel Engineering of New York; North Carolina: Schnabel Engineering South, P.C.

Design Services During Construction

- Shafts: initial support and final lining design
- Excavation staging and support: shoring and temporary support design, analysis of staging using numerical methods
- Tunnels: initial support design for rock and soft ground tunnels
- Structural geology evaluation: identify critical joint set orientations, intersections, and wedge failure patterns
- Microtunneling: geotechnical evaluation; jacking pit design including reaction walls, pit entrance and exit walls

Pre-Bid Evaluation

- Review contract documents including specifications, drawings, and the Geotechnical Baseline Report and Geotechnical Data Report

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- Provide a report to address geological and geotechnical conditions that may affect the bid, describe soil/rock response to construction, and assess constructability

Field Services During Construction

- Geotechnical instrumentation: design, installation, and monitoring
- Geologic mapping: full periphery mapping and ground characterization
- Ground improvement and grouting consultation Value engineering and cost estimating
- Develop and prepare design alternatives for cost estimation by the contractor
- Bid or bid-check estimates for contractors on tunneling projects Claims analysis and support
- Analyze documents and records to assess contractor entitlement
- Assist in claims presentation regarding site conditions or shaft construction issues