

Soft Ground Tunneling

Applying advanced tunneling technologies
to enhance our infrastructure

Tunneling solutions that meet today's infrastructure demands

The toll of rapidly growing populations on our existing transportation, utility and water systems is driving the need for tunneling in variable ground conditions.

Our team understands the sensitivity of tunneling in densely populated urban environments and we know the potential risk to nearby communities and infrastructure. Our skilled tunneling professionals apply advanced tunneling technologies to build safe and effective underground facilities that were at one time inconceivable.

Services for all types of tunnels

- Program management
- Construction management
- Alternative delivery
- Planning and feasibility studies
- Geotechnical site investigation
- Geophysical investigation
- Environmental site assessments and spoil disposal evaluation
- Geotechnical baseline and data reports
- Tunnel risk registers
- Soft ground and mixed-face ground characterization
- Tunnel and shaft initial support design
- Tunnel and shaft permanent support design
- Tunnel lining
- Condition assessments and rehabilitation design
- NATM / SEM
- Microtunneling design
- Tunnel boring machine (TBM) selection and performance evaluation
- Grouting design
- Ground water control including freezing
- Underground construction impact assessments
- Ground improvement
- Engineering cost estimates for construction
- Tunnel inspection and resident engineering
- Dispute avoidance and resolution
- Instrumentation and monitoring



500 tunneling professionals
1000 geotechnical engineers
Over 2,000 miles of tunnel projects worldwide

Left, from top:

Tuen Mun – Chek Lap Kok Link, Hong Kong, Macau, Zhuhai, China–Highways Department. At 17.6 meters (57.75 feet), this is the world's largest TBM Tunnel

Toronto York Spadina Subway Extension (TYSSE), Toronto, Ontario, Canada – Toronto Transit Commission (TTC)

Cover:

Regional Connector Transit Corridor, Los Angeles, California, U.S. – Los Angeles County Metropolitan Transportation Authority



- 1 **Confederation Line**, Ottawa Light Rail Transit, Ottawa, Ontario, Canada
- 2 **North Shore Connector Light Rail Transit System**, Pittsburgh, Pennsylvania, U.S. – Allegheny County Port Authority
- 3 **Big Walnut Tunnel System Projects**, Columbus, Ohio, U.S. - City of Columbus
- 4 **East Side Access, Queens Tunnels**, New York, New York, U.S. – Metropolitan Transportation Authority, Long Island Rail Road

- 5 **Blue Plains Wastewater Treatment Plant Tunnel Dewatering Pump Station and Enhanced Clarification Facility**, Washington, D.C., U.S. – DC Water
- 6 **Norris Cut Tunnel**, Miami, Florida, U.S. – Miami-Dade Water and Sewer Department
- 7 **Blacklick Creek Interceptor Sewer Tunnel**, Columbus, Ohio, U.S. – Columbus Division of Sewerage & Drainage
- 8 **Riyadh Metro**, Riyadh, Saudi Arabia – Arriyadh Development Authority

About AECOM

AECOM is the global infrastructure leader, committed to delivering a better world. As a trusted professional services firm powered by deep technical abilities, we solve our clients' complex challenges in water, environment, energy, transportation and buildings. Our teams partner with public- and private-sector clients to create innovative, sustainable and resilient solutions throughout the project lifecycle — from advisory, planning, design and engineering to program and construction management. AECOM is a Fortune 500 firm that had revenue of \$16.1 billion in fiscal year 2025. Learn more at [aecom.com](https://www.aecom.com).

