

Geotechnical Engineering

CEC offers comprehensive geotechnical engineering services to planners, public agencies, industry, architects, developers, and contractors.

CEC supports the client's geotechnical needs throughout a project – from assistance with site selection through construction. As a full-service consulting firm, CEC geotechnical engineers work in-house with other disciplines during projects. This results in a more comprehensive approach to project planning and early identification of geotechnical-related issues. It also results in a more cost-effective approach to site development.

During the site selection or the planning phase of a project, CEC offers the following services:

- Geotechnical Desktop Survey
- Site Reconnaissance
- Geo-Hazard Assessment

As a project progresses, CEC geotechnical engineers support conceptual designs and conduct investigations to assess development and construction issues.

Projects include:

- Commercial and Residential Buildings
- Industrial Facilities
- Industrial and Office Park Developments
- Dams

During the design phase, CEC geotechnical engineers perform analyses, prepare reports, and support the preparation of drawings and specifications. Analyses and designs performed include:

- Earthwork Design and Recommendations
- Foundation Analysis and Design
- Grouting and Ground Improvement Design
- Landslide Investigation and Stabilization
- Mine Subsidence Investigations, Risk Assessments, and Stabilization
- Pavement Analysis and Design
- Seepage Analyses
- Soil and Bedrock Stabilization
- Slope Stability and Retaining Structure Design
- Subsurface Investigation, Sampling, and Testing

Prior to and during construction, CEC can support project bidding and contractor selection, as well as provide construction oversight and inspection services.

CEC's skilled field engineers and technicians have experience inspecting:

- Fill Placement and Earthwork Operations
- Deep and Shallow Foundation Construction
- Landslide and Deep Mine Stabilization
- Pavement Installation
- Retaining Wall Construction
- Concrete Construction
- Building Materials

Additionally, CEC engineers and technicians often provide construction management services and/or design-build services. Additional professional consulting services provided by CEC include forensic analyses, as well as litigation support on projects such as mine subsidence, retaining wall failures, landslides, and groundwater issues.

