



GEOTECHNICAL CONSULTING SERVICES

FIRM PROFILE

Founded in 1997 and employee-owned, GeoDesign helps our clients meet geotechnical and environmental challenges on a wide range of projects in the public and private sectors. Our dedicated team of engineers, geologists, environmental scientists, technical personnel, and support staff look forward to partnering with you on your next project. And, with seven office locations, we're able to serve clients from southern California to the Pacific Northwest.

From design through construction, we offer:

- Geotechnical engineering services
- Environmental services
- Geological and hydrogeological services
- Specialty pile load testing
- Geophysics
- Pavement design services
- Mining services

More than 85 percent of our business comes from repeat clients and referrals, and that's no surprise. We focus on technical excellence, practical design, and long-term relationships as we work hard to meet your needs. As we strive to improve client experience, we also actively seek and embrace feedback.

GEOTECHNICAL SERVICES

GeoDesign specializes in providing geotechnical services throughout the design process—from preliminary studies that assist in site selection and facility layout to comprehensive investigations that provide the geotechnical information necessary for permitting, design, and construction.

Our projects involve:

- Essential facilities, such as hospitals, fire, and police stations
- Commercial, residential, educational, and industrial developments
- Utility infrastructure, including wastewater facilities, pipelines, and outfalls
- Transportation, such as commuter rail, roadway and bridge projects, and park and ride facilities

Our geotechnical services include:

- Geotechnical investigations
- Site selection studies
- Utility alignment studies
- Geotechnical baseline and data reports
- Soil improvement methods
- Ground stabilization design
- Pavement design
- Foundation and shoring design
- Slope stability analyses
- Landslide evaluation, stabilization, and monitoring
- Seismic evaluations and upgrades
- Geotechnical instrumentation
- Geophysics
- Construction observation
- Peer reviews and forensic investigations

Geological Capabilities

Our geologists and engineers collaborate to complete site investigations, evaluate seismic hazards, and develop remediation plans. We offer slope stability analysis and landslide characterization and remediation for projects ranging from roadway slope instability to deep-seated landslides. Our geological services also include mine reclamation and aggregate resource evaluation, as well as seismic refraction and ground penetrating radar (GPR) capabilities.

We use geographic information system (GIS) technology to support a variety of geological and geotechnical projects, including landslide evaluations and regional land-use and hazard mitigation



PROJECT ASSESSMENTS

Our recommendations are based on communication with our clients, an understanding of project objectives, and an evaluation of site conditions and alternative approaches that consider cost and technical feasibility.

planning. Our holistic approach considers permitting issues, environmental impacts, longevity, and reliability in developing effective and cost saving solutions.

Pavement Design

Our engineers blend experience with the latest pavement theory to provide solutions for the design, maintenance, rehabilitation, and reconstruction of roadways, airfields, bridges, and parking lots. Our Falling Weight Deflectometer (FWD) provides non-destructive deflection testing to assess pavement strength and longevity. The system also includes a GPR unit, which can probe layers up to 18 inches thick at highway speeds. Coupled with GPS, this data can be efficiently linked to CAD, GIS, and Google Earth.



PDA TESTING

With the PDA, the capacity of several piles can be tested in one day for typically one-tenth the cost of a single conventional static test.

Construction Observation and Testing Services

GeoDesign also provides a range of construction observation and testing services. These timely, quality-based services are aimed at generating cost saving solutions to construction challenges:

- Observation and testing of compacted fills and (site) earthworks
 - Observation and logging of drilled shaft excavations and construction
 - Coordination and implementation of full-scale shaft load testing
 - Crosshole Sonic Logging (CSL) testing
- Observation of pile foundation systems
 - Pile Driving Analyzer® (PDA) testing
 - Observation of shoring and tieback installations and performance testing on tiebacks
 - Vibration monitoring

Geotechnical Laboratory

GeoDesign maintains state-of-the-art geotechnical and materials testing laboratories. As a result, we can deliver prompt, efficient service and high quality assurance.

In addition to standard geotechnical tests, our laboratory offers:

- Consolidation testing
- Direct shear testing
- Triaxial testing
- Permeability testing
- Resilient modulus testing



IN-HOUSE LABORATORY TESTING

GeoDesign's soil testing laboratories in Portland, Seattle, and Anaheim allow us to deliver quick, efficient service, balanced with a high level of quality assurance and control.

Our laboratory accreditations and certifications include:

- AASHTO Material Reference Laboratories (AMRL)
- City of Los Angeles Department of Building & Safety (LA-DBS)
- Oregon Department of Transportation (ODOT)

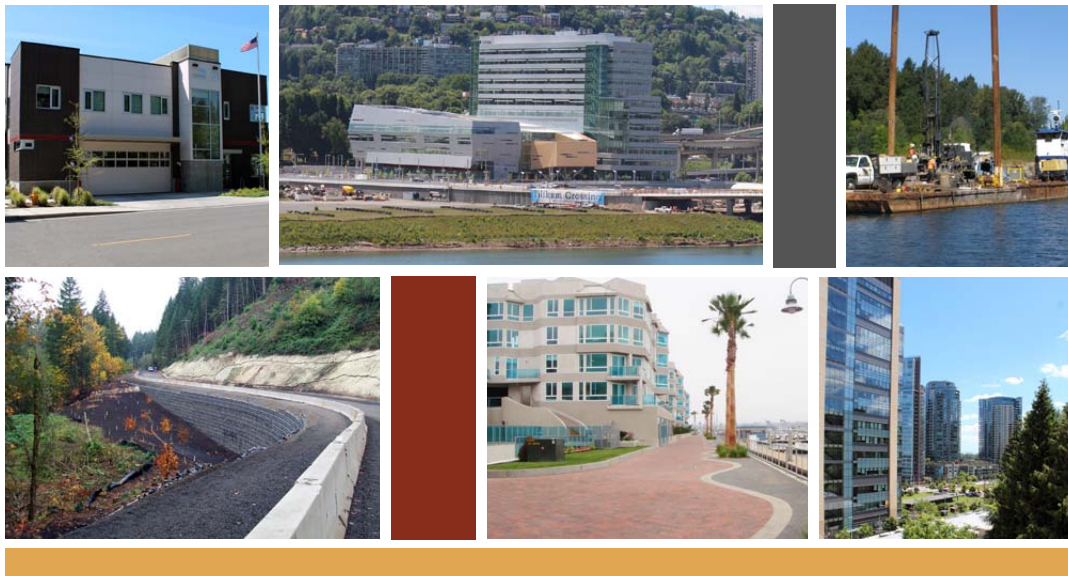
Software and Equipment

GeoDesign uses GIS software to manage geological, geotechnical, and environmental data. Our computer network links all of our offices, and we maintain a wide range of analytical software used in embankment and retaining wall design, including SlopeW, XSTABL, Plaxis, GoldNail, CT Shoring, and ProShake. We use both ArcGIS and AutoCAD to manage and visualize data and engineering plans. We can import site data from AutoCAD into our GIS system for use in project analysis, or we can export GIS data to AutoCAD for integration with engineering plans.

INTEGRATED SERVICES

Our integrated geotechnical and environmental services consistently result in added value and savings. We've helped our clients reduce costs in a variety of ways, including:

- Using historical research from environmental site assessments to identify potential hazards, such as buried structures or slabs.
- Combining environmental and geotechnical field investigations into one mobilization.
- Using explorations for both environmental and geotechnical sampling.
- Investing in our field staff so that our geotechnical personnel are also trained to recognize potential environmental contaminants.
- Providing geotechnical and environmental specifications that address the impacts of contaminated soil remediation on geotechnical-related construction elements, and offering recommendations on minimizing these impacts.



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