



2024

EDITION

BUILDING & CONSTRUCTION

# Geotechnical Engineering & Drilling Services Brochure



# Engineering Quality, Safety and Stability from the Ground Up.

Geotechnical engineering is the cornerstone of every construction project, focusing on the behavior of soil and rock and their interaction with engineered structures. This expertise is crucial for designing and constructing foundations, roadways, tunnels, retaining walls, slopes, embankments, levees, landfills, dams and more. By understanding complex subsurface conditions and soil characteristics, we can assess the critical interaction between structures and the earth beneath them, ensuring safety, efficiency, and cost-effectiveness in every project.

Intertek-PSI's geotechnical engineering and drilling services bridge the gap between raw site materials and resilient finished structures, providing advanced analyses that can uncover potential engineering constraints, identify safety hazards, and offer solutions that mitigate their impact on both cost and schedule.

Intertek-PSI's national presence and in-house capabilities set us apart as a premier geotechnical engineering provider. We employ a diverse team of licensed professionals, including geotechnical engineers, geologists, geophysicists, and certified field and lab technicians. All our staff are trained in accordance with state regulations, industry standards, and OSHA requirements for environmental, health and safety, and hazardous materials handling.

Under the guidance of rigorous internal quality assurance and safety programs, Intertek-PSI operates over 40 fully equipped geotechnical drill rigs across various land and marine environments. Our geotechnical engineering teams are intimately familiar with their local terrain and regulations and their efforts are supported by a nationwide network of over 70 accredited testing laboratories, a deep bench of seasoned professionals, and regionally-based Chief Engineers for technical oversight.

This all-encompassing approach and advanced capability ensures that every project benefits from both localized expertise and the extensive resources of a national leader in geotechnical engineering.



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and **drilling services** that  
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## Comprehensive Service Offerings

Our suite of geotechnical and drilling solutions allows us to help our clients mitigate risk, enhance project safety, optimize designs for cost-effectiveness and long-term stability and avoid unforeseen conditions and costly delays during construction.

### Field Exploration, Drilling Services, and In-Situ Testing

- Borings, Sampling, and Standard Penetration Testing (SPT)
- Cone Penetration Testing (CPT)
- Rock Coring
- Test Pits Excavation
- Pressuremeter Testing (PMT)
- Groundwater Sampling
- Geotechnical Instrumentation Installation
- Monitoring Well Installation
- Mineral and Aggregate Exploration

### Foundation and Specialty Analysis

- Shallow Foundation and Settlement Analysis
- Driven and Drilled Pile/Shaft Static Capacity Analysis
- Evaluation of Static Pile Load Tests
- Wave Equation Analysis for Driven Piles
- Pile Driving Analyzer (PDA) and Dynamic Capacity Testing
- Drilled Pile/Shaft Integrity Testing (PIT)
- Drilled Shaft Cross-Hole Sonic Logging
- Lateral Loading Analysis on Piles and Piers/Shafts

### Geophysical Services

- Refraction Microtremor (ReMi) Survey
- Electrical Resistivity Testing (1 & 2 Dimensional)
- Seismic Refraction Surveys
- Ground Penetrating Radar (GPR) Surveys
- Crosshole and Downhole Seismic Testing

### Geotechnical Studies

- Construction Recommendations
- Dewatering Recommendations
- Excavation Recommendations
- Foundation Recommendations
- Site Selections & Site Prep Recommendations

- Desktop Preliminary Studies
- Geotechnical Risk Assessment
- Soil and Rock Property Characterization

### Laboratory Services

- Soil Classification
- Compaction Characteristics Testing
- California Bearing Ratio (CBR) Tests
- Permeability Testing
- Consolidation Testing
- Collapse/Swell Tests
- Shear Strength Testing of Soil and Rock
- Thermal Resistivity Testing
- Electrical Resistivity Testing

### Roadway and Transportation Studies

- Bridge Foundation Analysis
- Partners in Corridor Studies
- Embankment Analysis
- Pavement Design and Evaluation
- Soil Stabilization Techniques
- Embankment and Abutment Slope Stability Analysis

### Seismic Services

- Site Seismic Classification
- Site Specific Seismic Studies
- Seismic Hazard Analysis
- Ground Motion Studies
- Soil-Structure Interaction Analysis

### Slope Stability Analysis

- Embankment Stability Analysis
- Slope Stability Evaluation
- Landslide Risk Assessment
- Mitigation Recommendations

### Geotechnical Instrumentation

- Settlement Monument Installation
- Slope Indicator Deployment
- Piezometer Installation
- Monitoring Well Installation
- Inclinometer Setup and Monitoring

### Vibration Monitoring

- Vibration Assessment (PCCA)
- Crack Monitoring
- Pre-Construction Condition Surveys
- Post-Construction Condition Surveys

### Other Geotechnical Services

- Lateral Spread Evaluation and Mitigation Recommendations
- Liquefaction Hazard
- Liquefaction Potential
- Slurry Walls
- Soil/Rock Dynamics
- Soil Stabilization
- Subsidence Studies





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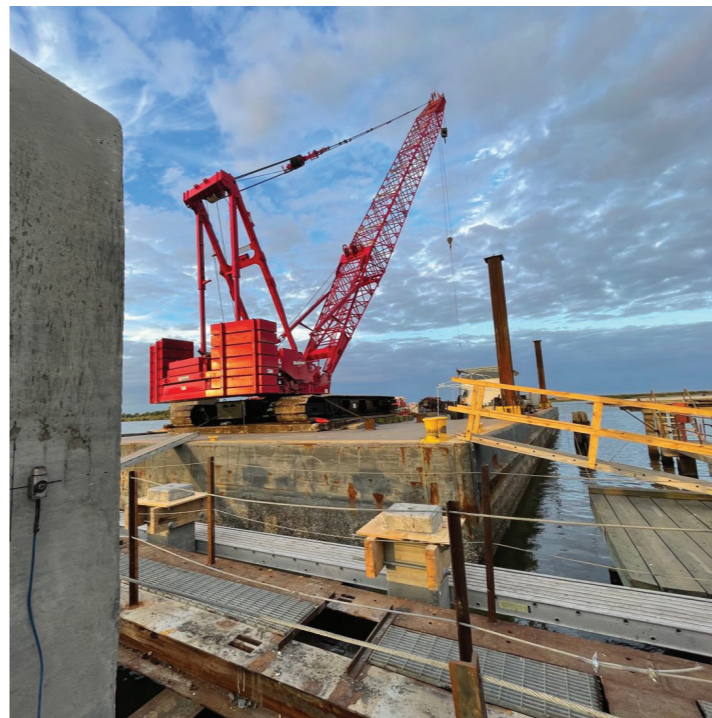
**About Intertek-PSI**

Professional Service Industries, Inc. (Intertek-PSI) is a nationally recognized consulting, testing and engineering firm with a broad service offering includes construction materials testing, geotechnical engineering and drilling, environmental consulting, industrial hygiene, and specialty testing.

We deliver over 30,000 projects and over 2 million individual tests per year from over 70 offices and on-site laboratories and the efforts of our 2,000 plus employees. Through our staff of experienced professional engineers and certified technicians, we ensure that your projects remain on time, on budget, and meet the highest standards of quality and safety.

This unique combination of local, independent offices and the ability to mobilize resources nationwide means our project managers have the capacity and knowledge to manage your projects, and the resources to handle the most challenging and complex projects. We believe that no other firm offers the diversity of services, depth of resources, and geographic coverage of Intertek-PSI.

Intertek-PSI is a member of Intertek's Building and Construction division, a suite of Intertek brands that are industry leaders across multiple architecture, engineering, and construction disciplines, providing the most innovative product and project quality assurance solutions.



**BUILDING & CONSTRUCTION CORE SERVICES**

- Construction Materials Testing
- Environmental Consulting
- Industrial Hygiene
- Geotechnical Engineering
- Building Science Solutions

 **TOTAL QUALITY. ASSURED.**

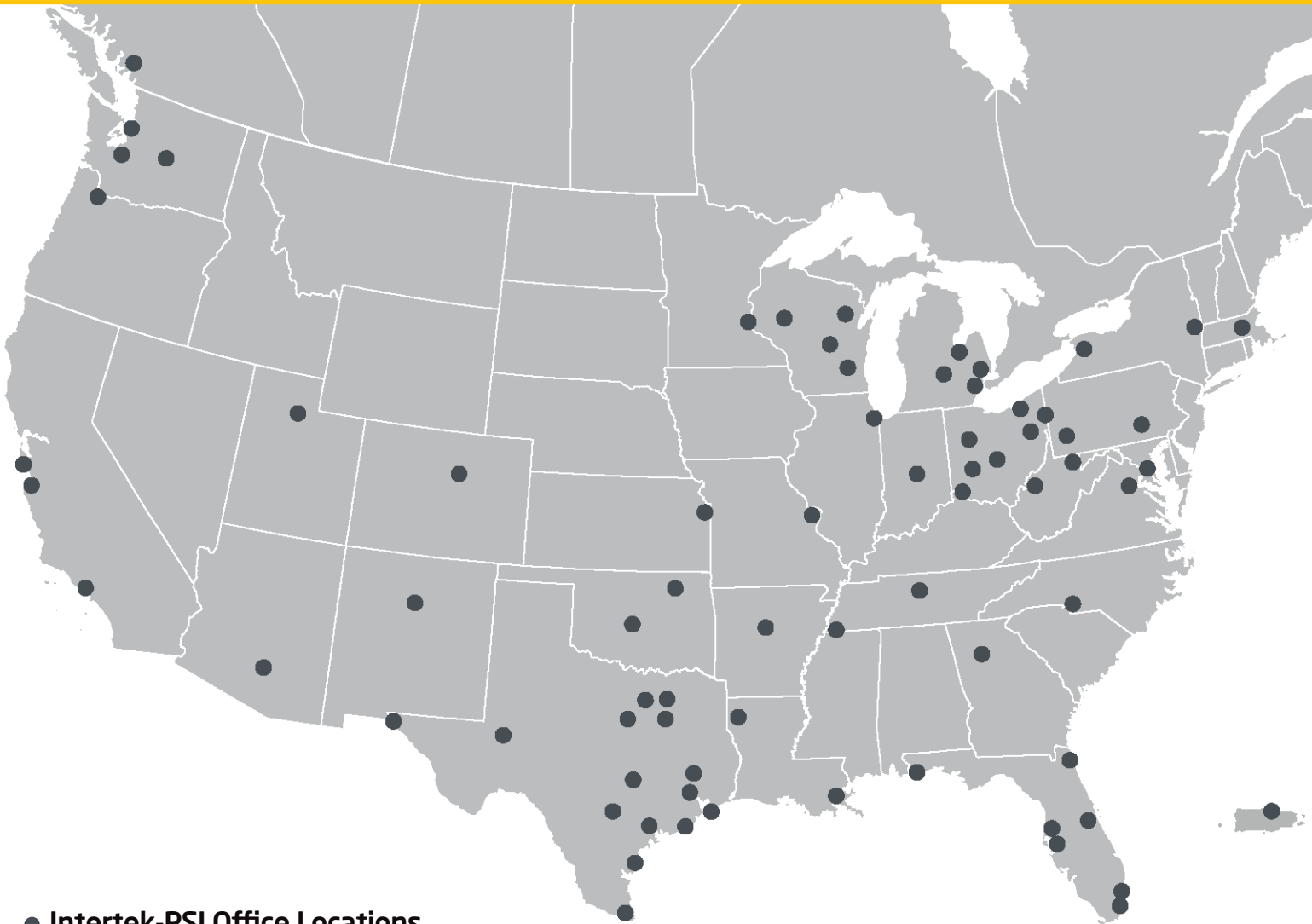


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● Intertek-PSI Office Locations

From on-site to in-lab, we offer complete construction services all across the United States.

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