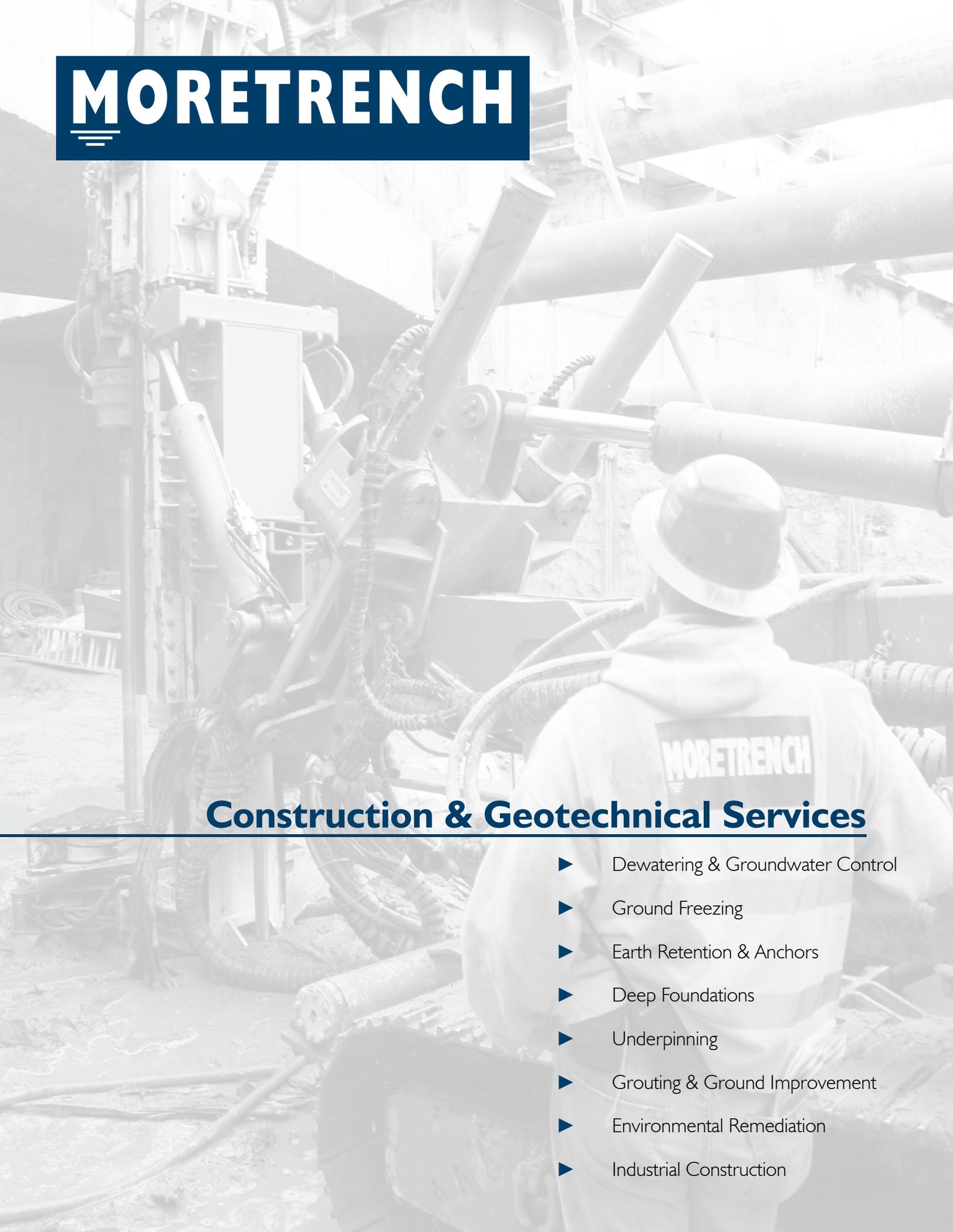


# MORETRENCH



## Construction & Geotechnical Services

- ▶ Dewatering & Groundwater Control
- ▶ Ground Freezing
- ▶ Earth Retention & Anchors
- ▶ Deep Foundations
- ▶ Underpinning
- ▶ Grouting & Ground Improvement
- ▶ Environmental Remediation
- ▶ Industrial Construction

# SERVICES

Moretrench's wide range of specialized services allows our skilled and experienced engineering teams to customize the solution to the geotechnical problem at hand. Sometimes, that solution is a single technique. For complex projects, a multi-faceted approach may be required. No matter how large or how small the job, Moretrench has the technical capability and the resources to deliver the right solution.

## Dewatering & Groundwater Control



Moretrench pioneered the first practical wellpoint in 1924, transforming construction excavation below the water table. Since that time, the company has become recognized as an industry leader, successfully completing numerous challenging dewatering and temporary or permanent groundwater cut-off projects.

**Wellpoints • Deep Wells • Ejectors • Artificial Recharge  
Vertical Barriers • Ground Freezing • Slurry Trenches • Grouting**

## Ground Freezing



Ground freezing provides both excavation support and groundwater control. While the use of ground freezing for the construction of deep shafts through water-bearing soils is the most common application, the technique is also appropriate for mining of cross passages and connector tunnels, stabilization of mixed-face tunnels, frozen-arch canopies, and containment of contamination.

**Calcium Chloride (Brine) Freezing  
Liquid Nitrogen Freezing**

## Earth Retention & Anchors



With temporary or permanent earth retention a feature of many construction sites, Moretrench's wide range of techniques allows us to offer the optimum solution tailored to project requirements and subsurface conditions and restraints. And where more than one geotechnical approach is required, we have the in-house resources to develop economical turnkey solutions.

**Sheetpiling • Soldier Piles and Lagging • Soil Nailing • VNAILs  
Secant Piles • Rock Bolts • Anchors & Tiebacks • Ground Freezing  
Jet Grouting • Permeation Grouting**

## Deep Foundations



Deep foundations are required for new, heavily loaded structures to be located where poor bearing soils are present, where existing shallow foundations are to be subject to increased loading due to structural upgrade or heavy machinery installation, and for structures subject to uplift forces or seismic loading.

**Micropiles • Drilled Shafts (Caissons)  
Auger Cast Piles • Helical Piles • Mini-caissons**

## Underpinning



Underpinning may be required to provide the additional foundation support needed to withstand increased loading, halt ongoing settlement, prevent structural settlement during adjacent excavation below footing level, and for seismic retrofit. Selection of the most appropriate underpinning method is a function of subsurface condition and project requirements and constraints.

**Micropiles • Helical & Bracket Piles • Soil Nailing  
Conventional Concrete Pit Method  
Jet & Permeation Grouting • Ground Freezing**

## We Thrive On Challenge

*When the problem calls for a specialized approach,  
call MORETRENCH first.*

*We can customize the solution – and fabricate the equipment – to meet  
even the most difficult site conditions or unusual project needs.*

## Grouting



The most versatile of all specialty geotechnical disciplines, the field of grouting encompasses a diverse range of treatment methodology and an equally diverse range of applications, including sinkhole remediation, settlement control, water cut-off, ground improvement, utility and footing support, soil stabilization, and containment of contamination.

**Compaction • Permeation • Jet • Fracture • Compensation  
Structural Seepage • Rock Curtain • Void • Hot Bitumen**

# What Sets Moretrench Apart?

*It's not just that we've been in business since the turn of the 20th century. It's not just that we have the engineering capability and resources to tackle almost any problem from groundwater control to industrial maintenance and repair. And it's not just that we consistently deliver our design/build solutions on time and within budget. It's all of these things together—and more. What sets us apart is our focus on the best interests of our clients. Moretrench has proven its ability to provide "the complete package" to meet our clients' needs.*

*Arthur B. Corwin, P.E., President and CEO*



## Ground Improvement



Ground improvement to increase bearing capacity and reduce settlement potential can often be a viable alternative to removal and replacement or a deep foundation system. Other candidates for ground improvement include slopes, liquefiable soils, and soils loosened by underlying sinkhole activity or construction operations.

**Vibro-Compaction • Vibro-Replacement  
Compaction Grouting • Consolidation Grouting**

## Environmental Remediation



The presence of man-made and naturally occurring contaminants in soil and groundwater continues to pose a significant challenge on industrial, municipal, landfill and civil sites across the country. Moretrench's full range of remediation services allows us to customize temporary and permanent systems for your project needs.

**In situ Treatment • Recovery and Treatment  
Containment • Subsurface Barriers • Excavation & Removal  
Treatment System Equipment Rental**

## Industrial Construction



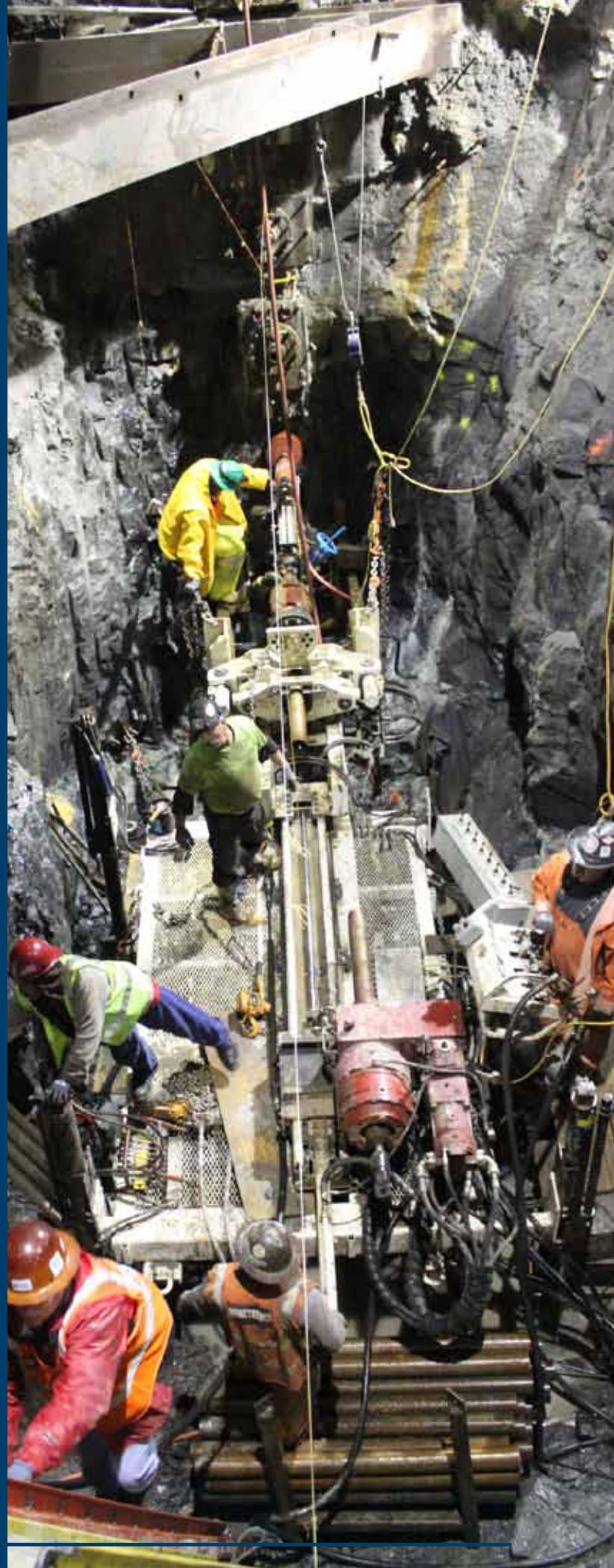
Moretrench also serves the specialized earthwork, concrete construction, and facility maintenance needs of the Southeast's power, mining and manufacturing industries. Projects range from phosphogypsum stack closure to holding pond construction to design, installation and fabrication of processing plant structures.

**Earthwork & Excavation • Industrial Piping  
Concrete Work • Mechanical Services**

*There is no such thing as the perfect construction site. The subsurface soils may be loose, soft, bouldery, or highly stratified. Groundwater, sometimes contaminated, may be present. Industrial or urban sites may be constrained by underground utilities, sensitive structures, or noise and vibration limitations. Deep excavation or the need for complete groundwater cut-off may severely limit ground improvement options. And because there's no such thing as the perfect construction site, there's Moretrench.*

*At Moretrench, we specialize in design/build solutions for challenging construction requirements and subsurface conditions. Often, those conditions present two or more distinct problems. But because Moretrench can marshal diverse engineering, technology and equipment resources from within its own organization, the complete solution can be delivered under one, carefully scheduled contract. This translates to savings in both time and money.*

*Whether it's a matter of a single technology or a multi-faceted approach, Moretrench has the resources, the experience, and the expertise to provide the optimum solution. Our reputation has been earned through quality and service. That's a reputation you can build on.*



*As a geotechnical contractor, Moretrench specializes in a field unique among engineering disciplines. The results of our work rarely see the light of day, yet it is this work that paves the way for much of today's new construction.*

*With the weight of the project sometimes literally bearing on what we do, experience is paramount. From engineers and project managers to shop personnel and field crews, Moretrench has the experience, and the expertise, that our clients not only need but have come to expect from us. And we meet those expectations on every jobsite—technically, safely and economically.*

*Moretrench is founded on a history of sustained growth, reliable performance, and product quality. Our full-service offices have access to a breadth of resources unparalleled in geotechnical construction. We promote a corporate philosophy that emphasizes safety as much as service. And we share a commitment to the future grounded on the values of the past.*

*Whatever, or wherever, the challenge may be, Moretrench has the technology and the people to deliver the optimum solution. Our reputation has been earned through quality and service. That's a reputation you can build on.*

**Corporate Headquarters**

**100 Stickle Avenue**

**Rockaway, NJ 07866**

**Tel: (973) 627-2100**

**Fax: (973) 627-3950**

**800-394-MORE**

**[www.moretrench.com](http://www.moretrench.com)**