

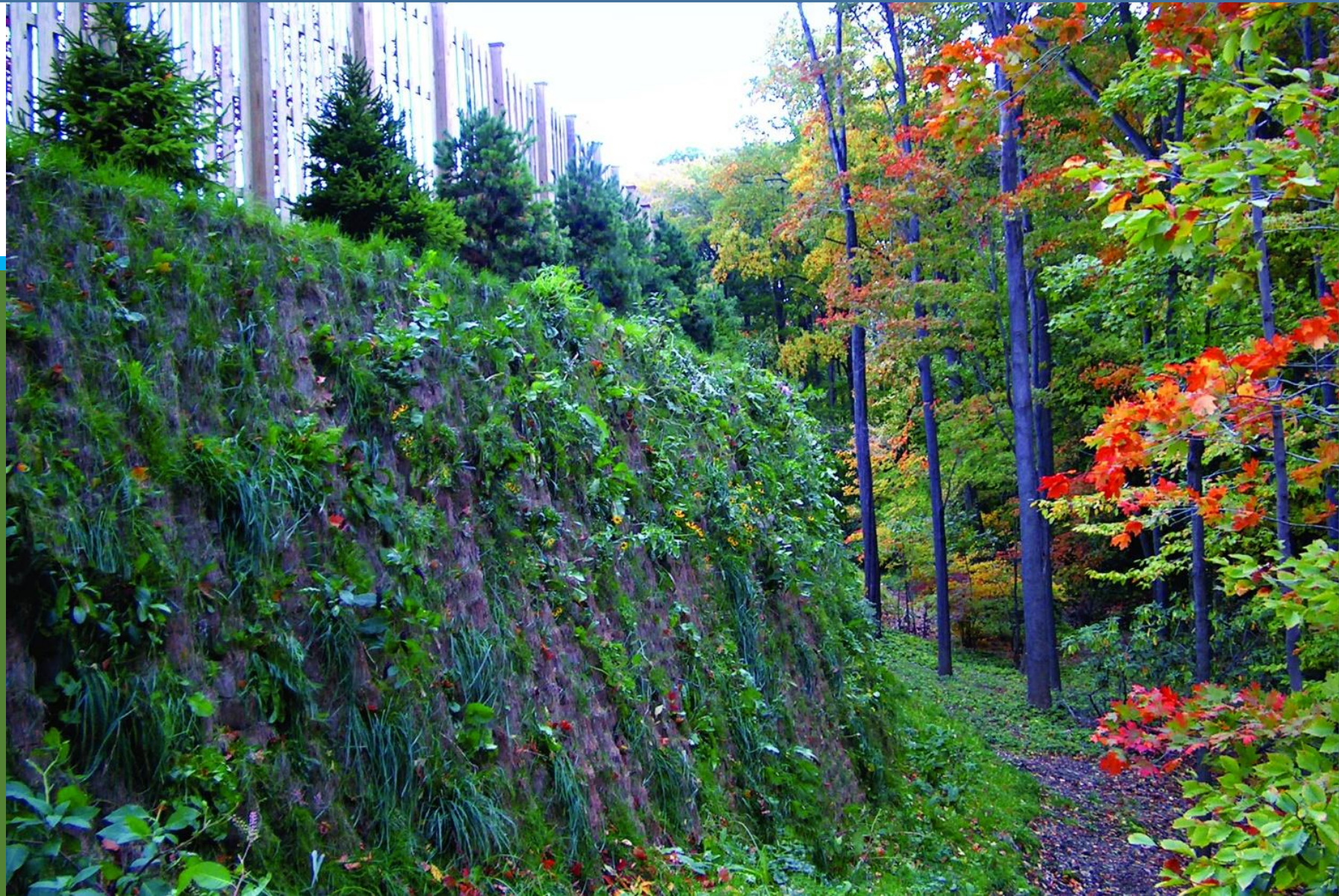
PRESTO



GEOWEB®

Retaining Wall System

Design
Engineering
Resource
Package



RETAINING WALLS



PRESTO



GEOSYSTEMS®

Design Resources

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GEOWEB®

Retaining Wall System

DESIGNING LOW IMPACT, NATURALLY-VEGETATED WALLS

Design structural stable living walls for natural green aesthetics and practical stormwater benefits. Build to tolerate moderate differential settlement in soft soil areas. Promote infiltration of water through the open fascia to reduce runoff. Design a variety of wall types for landscapes and channels.

This engineering design package will equip you with tools & resources to design sustainable green walls.

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Design Resources
for your project



Learn About GEOWEB Retaining Walls

See how the System Works

Learn how the GEOWEB 3D Stabilization System works—and how it can work for your project.

- [Overview Brochure](#)
- [Visit our Photo Gallery](#)
- [See Project Case Studies](#)



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Wall Types



STEEPENED SLOPE



REINFORCED WALL



GRAVITY WALL

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COMPARE

[Compare GEOWEB walls to MSE concrete walls >>](#)



GEOWEB MSE



Concrete MSE

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GEOWEB® projects for vegetated walls offer lower environmental impact than alternative solutions.

Environmental Benefits

[Download the Green Sheet >>](#)



Energy Use



Resource Savings



Land Use



Water Benefit

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View recorded webcast and earn PDH credits.

WEBCAST

[Earth Retention Gravity & MSE Walls>>](#)

Walls vs. Steep Slopes



Development of 3D Geocells

Presto developed 3D geocells nearly 4 decades ago with the US Army Corps of Engineers. The original application was to provide fast access roads across dry sand beaches.

Since then, Presto has catapulted the geocellular technology into new landscapes, applications and markets.

The GEOWEB® system is the original—and most advanced geocell on the market.

- [Learn about development of geocells >>](#)



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Create a Specification

Fast & Easy Specification Tools

Create your own custom specification or use industry-standard specifications from ARCAT.com and CADdetails.com

SPECMaker® Tool

[Create a Custom CSI Spec in Minutes](#)

[CSI Specification \(Word doc\)](#)

[Specification Summary](#)

Industry Specifications

[ARCAT](#)

[CADDetails](#)



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CAD Detail Drawings

Cross-Section Drawings

Find all the drawing details you need to include in your contract documents.

SPECMaker® Tool

[CAD Drawings](#)

Industry CAD Details

[ARCAI](#)

[CADDetails](#)



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Watch Videos

See Product in Action



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Cross-Section Animations

[How Reinforced Walls Work>>](#)

[How Gravity Walls Work>>](#)

Simple Installation Animations

[How to Install Reinforced Walls >>](#)

[How to Install Gravity Walls >>](#)



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Free Project Evaluation

Assistance with Your Design

We can provide design support for your project. Take advantage of our technology experience and let us perform a free evaluation for your GEOWEB® project.

[Request Free Project Evaluation >>](#)
(online form)

[Download the Request Form >>](#)
(Word fill form)



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Free Licensed Design Software

Design Vegetated MSE Walls

Create vegetated MSE designs based on the specific GEOWEB® system inputs for reinforced slopes, gravity and geogrid-reinforced walls.

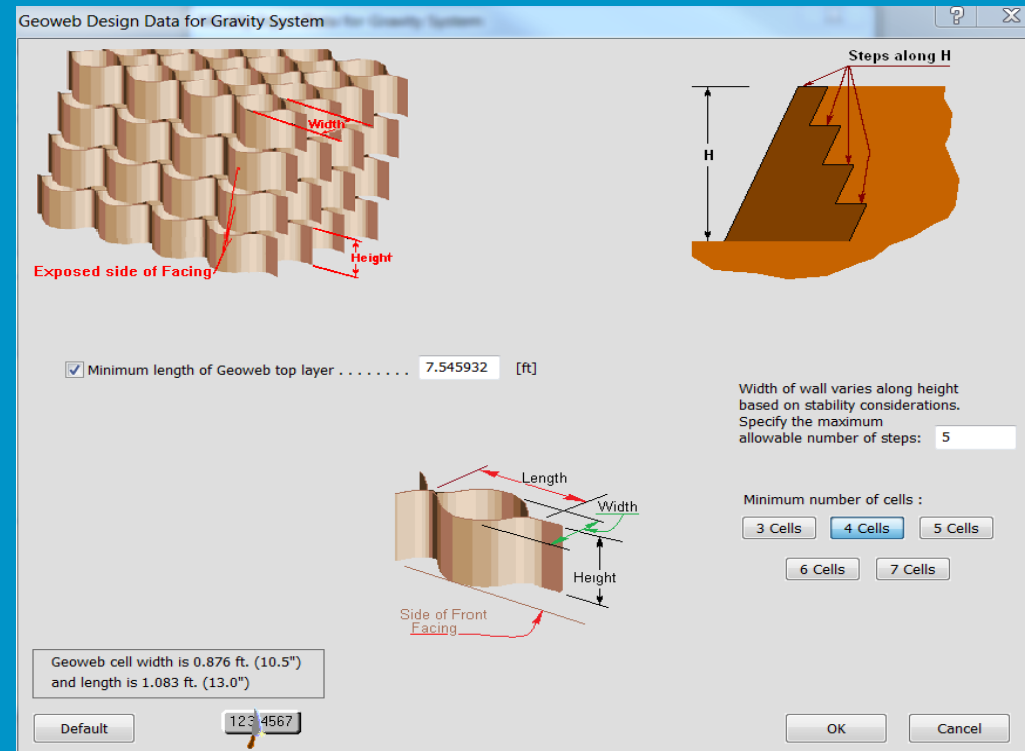
The design software is based on industry standard design methods and contains specific algorithms that capture the unique interaction between the GEOWEB® system, infill and backfill soil—as well geogrid reinforcement and specific factors of safety.

[Watch Short Video: How the Design Software Works >>](#)

REQUEST LICENSE



GEOWEB® MSE REINFORCED SLOPE & WALL SOFTWARE

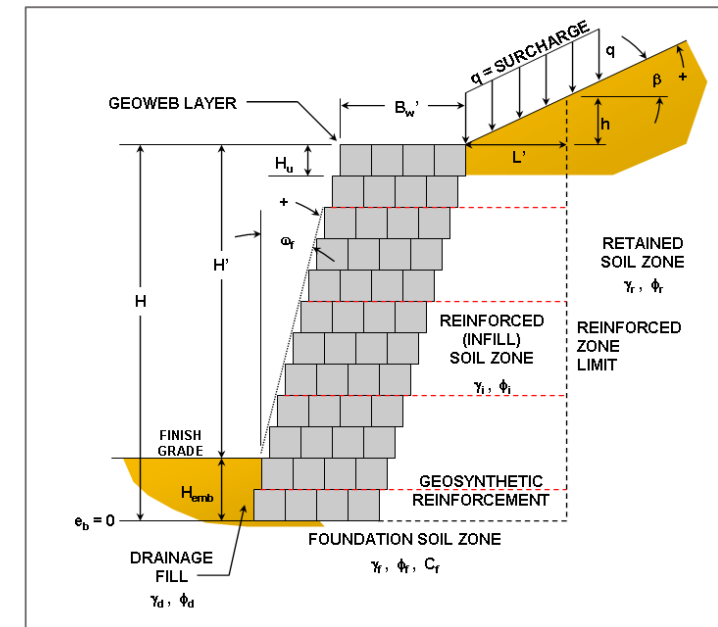
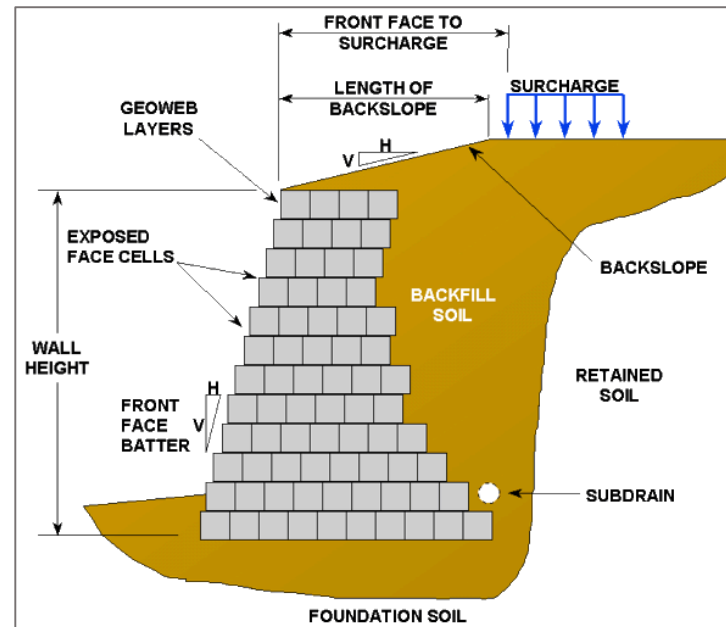




Evaluate how the 3D Confinement Technology Works

Learn about the technical details, and design considerations and methods of GEOWEB confinement.

Read Comprehensive
Technical Overview>>



Wall designs are determined by the site soil conditions, space accessibility/restrictions, availability of suitable backfill materials, project budget and the desired completed wall aesthetics.

Transforming Markets & Industries

Learn how the GEOWEB® 3D soil confinement system's versatility and capabilities will benefit your project's performance in a wide range of applications and industries.



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Green Infrastructure Design

Natural Living Walls

- Design naturally vegetated walls to infiltrate water at its source to minimize runoff.
- Incorporate GEOWEB walls for Green Infrastructure (GI) and Low Impact Development (LID) projects.
- Build green walls at commercial & industrial sites as well as parks & nature preserves to capture the integrity of the natural environment.

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Steepened Slopes

MSE Slope Cover

- Design steepened slopes for simple fascia protection over structurally stable soil embankments.
- Build without additional earth reinforcement.
- Plant select or indigenous vegetation to blend with the natural landscape—or allow volunteer vegetation to thrive.

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Space Constraints

Gravity Walls

- Design GEOWEB gravity walls where space constraints prevent the use of earth reinforcement materials (e.g. geogrid).
- The flexible system resists lateral pressures and maintains structural integrity even with moderate subgrade deformation.



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Landscape Conformance

Road Embankments

- Design roadside and access way walls to conform naturally with landscape curves and contours.
- Flexible GEOWEB wall system offers steep embankment protection without the need for reinforcement.
- Design as green alternatives to MSE block walls.

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Benching-Terracing

Road Embankments

- Design GEOWEB walls with varied wall batter, benching or terracing to suit landscape grade and safety.
- Design with varied infill: topsoil for vegetation –or– aggregate or concrete grout for a low maintenance non-vegetated solution.



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Steepened Slope Veneer

Rockfall Protection

- Design near vertical slope veneers without earth reinforcement for rockface protection and rockfall control.
- Create natural barriers to protect vulnerable embankments from erosion and potential rock fall along roadways.



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Flood Protection

Dikes & Levees

- Design near-vertical dike & levee earthen barrier walls to stabilize reservoir embankments and prevent flooding onto adjoining land.
- Replace rip rap and concrete structures with naturally-vegetated earthen structures.

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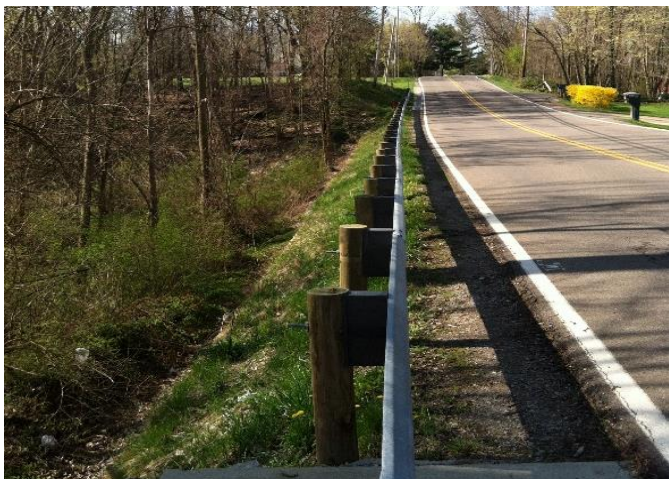
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Shoulder Change-in-Grade

Road Shoulders

- Design natural earth retention structures for steep roadway change-in-grade elevation drops.
- Build GEOWEB walls to resist soft subgrades and tolerate reasonable differential settlement.
- Create a natural environment for sheet flow runoff to permeate and minimize entering waterways.



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Replacement for Pilings

Soft Soil Areas

- Design GEOWEB walls to tolerate reasonable differential settlement performing better than rigid wall systems for soft soil environments and seismic zones.
- Replace expensive pile walls and concrete structures with green walls in soft soil areas.



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Greening Urban Areas

Hardscape Alternative

- Design living walls to replace hard concrete MSE walls for greening of urban areas.
- Vegetate with decorative plantings or indigenous grass species.
- Create a cooler environment to reduce the urban heat island effect.



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Steep Grade Transitions

Change-in-Grade

- Design near-vertical living walls for steep change-in-grade landscapes.
- Create natural aesthetics in urban areas with green infrastructure.



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Corrosion Resistance

Shoreline Revetments

- Protect coastal embankments from erosive forces caused by wind and sheet flow runoff.
- GEOWEB wall system made from HDPE to resist corrosion and environmental degradation.



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Stormwater Drainage-Flood Control

Multi-Layered Channels

- Design multi-layered channels for low to moderate flows and stormwater capacity.
- Replace wire-framed gabions & concrete systems with green channels.
- Flexible system with concrete grout in lower cells for greater resistance to flows, wave action and shear stresses.

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Embankment Erosion Control

Streambanks Natural Vegetation

- Design streambank embankments to resist erosive forces caused by water fluctuations and storm events.
- Flexible GEOWEB channel system conforms along the contours of the natural streambank.



Bank Erosion Before Repair

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GEOWEB Embankments
with Early Vegetation



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Replace Hardscape Headwalls

Culvert Headwall

- Design vegetated culvert headwalls to replace concrete MSE block walls.
- Flexible GEOWEB material easily cut to fit sonotubes, pipe contours & obstructions without damaging system integrity.



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Pipe Discharge

Culvert Outfall Protection

- Design culvert outfall areas with robust vegetated system to resist short-term, high-velocity flows & turbulence.
- Flexible system allows integration of coir fabric wrapped around the channel face to resist infill loss.



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Your Project is Important. See How We Can Help.

THE PRESTO ADVANTAGE

See how our advanced, adaptable geocells, porous pavers and mats put your project on track for success, and keeps your projects on time and on budget.

[WATCH THE VIDEO](#)



Customized Technical Presentations

Learn more about how the
GEOWEB® 3D technology can
work on your upcoming
projects.

Learn & Earn PDH
Credits.

[SCHEDULE a Lunch & Learn Presentation >>](#)



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GEOSYSTEMS®

GGEOWEB®

Retaining Wall System

Design with Certainty.

Get answers to your questions and help with your design. Our solution will be tailored for your unique project and site challenges. You can rely on our experience, tools & resources to help you create a quality design package



**Certainty and Peace of Mind—
from project start to finish.**

Contact Us 1-800-548-3424 | www.prestogeo.com