PRESTO

GEOSYSTEMS®

STRENGTH. FROM THE GROUND UP.

Since 1979

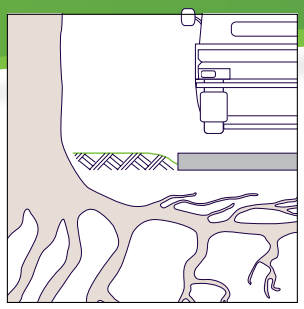


GEOWEB®

TREE ROOT PROTECTION (TRP) SYSTEM







defining **green** in cellular confinement

THE PROBLEM

CONSTRUCTION-RELATED TREE DAMAGE



Critical Root Zone/Tree Protection Zone is the minimum area beneath a tree that must remain undisturbed to preserve a sufficient amount of root mass in order to give a tree a chance of survival.

When construction equipment and vehicles intrude on a tree's Critical Root Zone, they can cause negative impacts to the soil environment, including compaction of the soil and damage to near-surface roots, and ultimately endanger the structural integrity of the tree. The majority of a tree's root system is contained within the top three feet of the surface, and construction excavation and compaction can damage or even destroy roots to the point where trees may not survive.



Tree Root Protection (TRP) systems should be environmentally sympathetic as well as comply with local and national standards and regulations.



THE GEOWEB® SOLUTION

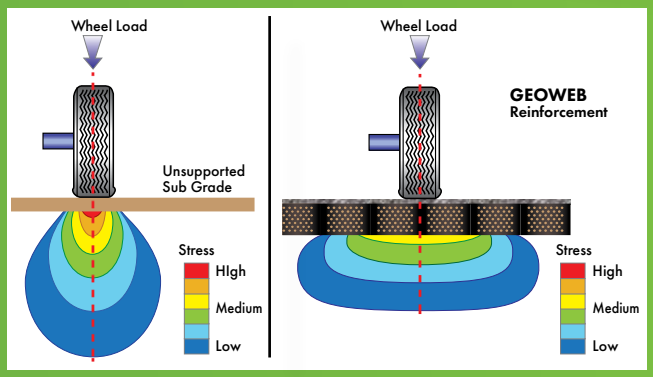
TREE ROOT PROTECTION (TRP) SYSTEM



Developed by Presto Products Company and the U.S. Army Corps of Engineers, GEOWEB is the original HDPE three-dimensional Cellular Confinement System for providing protection to existing trees on development sites.

Benefits of the GEOWEB TRP System:

- Provides a load-bearing platform
- Reduces sub-base thickness
- Distributes vertical loads laterally across the system
- Prevents compaction of subsoils
- Provides confinement of clean stone infill, which allows water and air to reach the root structure
- Can be designed to take any vehicular or static loading
- Can be surfaced with any type of pavement construction including: porous asphalt, porous and standard block paving, loose or resin-bound gravel, grass or gravel pavers, concrete, standard asphalt, or tree bark and other soft materials depending upon the application.
- Reduced site costs



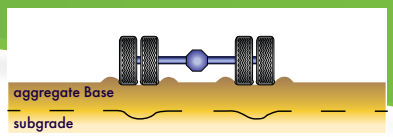
LOAD DISTRIBUTION

By distributing and bridging applied loads, the GEOWEB TRP system reduces vertical stresses that are typically applied to the underlying soil and root zone.

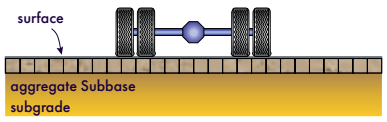
The GEOWEB system is ideally suited for tree root protection applications where weak subsoil or no-dig restrictions exist.

Manufactured from high quality, high-strength polyethylene with a textured surface and perforated walls, GEOWEB cells with selected infill control shearing, lateral and vertical movement, and reduce subbase depth requirements.

The GEOWEB system is a low impact development (LID) solution with exceptional load-bearing capabilities and environmental benefits. The system has a long history of solving heavy load support problems for roadways, road base support, parking lots, road shoulders, ports, trucking/intermodal terminals and railroads.



Unconfined Granular Pavement System



The GEOWEB Granular Pavement System

COST BENEFITS

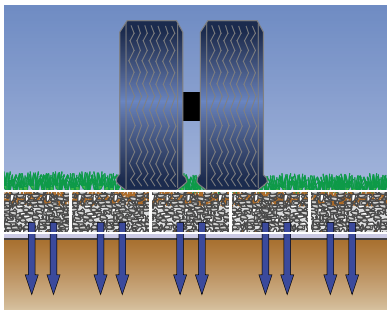
The GEOWEB TRP system is an economical solution for reducing construction vehicle impact to the tree root zone compared with other methods. Once installed, the system has minimal-to-no visibility.

ENVIRONMENTAL BENEFITS

With permeable infill (topsoil/vegetation, aggregate, sand), perforated GEOWEB cell walls offer environmental benefits:

- water infiltration
- lateral movement of air and water
- water and nutrient migration
- promotes root development

The tree root protection system can be a temporary or permanent solution.



Water and air flow to the root structure

GEOWEB®

TRP SYSTEM INSTALLATION

Step 1: Remove the upper grass and soft soils by hand or by machine if acceptable.

Step 2: Install TRP 4000 high-strength non-woven geotextile allowing adequate drainage as a separation layer between soft subgrade and GEOWEB infill material.

Step 3: Expand GEOWEB sections over the area to be protected and use temporary stakes or weights to hold sections open to prevent movement during infilling.

Step 4: Connect adjacent sections using ATRA® Keys. Position the sections so the slots are aligned, insert the key and turn 90 degrees locking the panels together. ATRA Keys provide a long-term connection that is safer, quicker and stronger than staples or cable ties. In environmentally protected areas, ATRA Keys can be used without the requirement for diesel-fueled compressors.

Step 5: For permeability, infill the fully connected GEOWEB system with a well-graded, 4/20 mm granular, non-frost-susceptible quarried rock with no fines. Overfill by up to 50mm to allow for compaction.

Step 6: Fill material should be maintained above the GEOWEB system by a minimum of 10 mm at all times. Final surfacing materials may then be placed in line with our recommendations in our installation method statement.

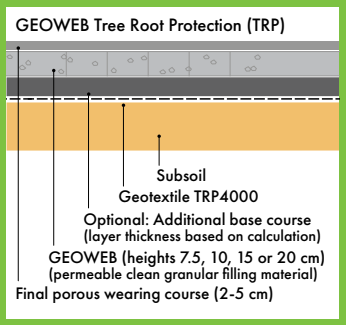


DESIGN CONSIDERATIONS



It is important to ensure the correct GEOWEB cell size and cell depth are specified and installed based on the anticipated pavement loads. These are calculated based on the following criteria:

- traffic type and loading
- frequency of traffic
- subgrade strength (typically CBR, Ev2, Cu or SPT values)
- infill type
- final surfacing and permanent or temporary application



Presto provides site-specific design advice including CAD and PDF drawings. We also offer site evaluation at the planning stage, and on-site supervision of the GEOWEB installation at the construction phase, ensuring our clients receive the best fit for purpose solution.

PRESTO GEOSYSTEMS COMMITMENT — To provide the highest quality products and solutions.

Presto GEOSYSTEMS® is committed to helping you apply the best solutions for your tree root protection needs. Our solutions-focused approach to solving problems adds value to every project. Rely on the leaders in the industry when you need a solution that is right for your application. Contact Presto GEOSYSTEMS or our worldwide network of knowledgeable distributors/representatives for assistance.

PRESTO | GEOSYSTEMS®
STRENGTH. FROM THE GROUND UP.
Since 1979

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We are a global business with accessibility through a worldwide distribution network.

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