



# ENGINEERED SOILS

Rain garden to rooftop,  
we've got your mix.



Plaiasted  
Companies  
INCORPORATED





## ROOFTOP GARDEN MIXES

Green roofs are part of the healthy city movement, absorbing noise pollution and creating a peaceful meditative environment with aesthetic appeal on building rooftops. Plus, they're helping to increase property values.

Plaisted Rooftop Garden Mixes are designed for extensive and intensive growing environments. They create a stormwater management system, improved energy efficiency of the building, and increase usable space for tenants.

We blend 3 types of rooftop materials comprised of washed sand, compost and lightweight aggregate. These blends are engineered to retain a high percentage of a typical rainfall. Depths vary depending on what types of plant materials are going to be used and what the roof weight load is designed to handle:

- Extensive mixes are generally used at a 3" to 6" depth
- Intensive mixes are generally 6" to 12" or more in depth
- Turf mixes are 6" to 12"
- Custom blends are per your specifications

## RAIN GARDEN MIXES

Architects have been able to increase square footage in parking lots and building space, while also creating a more inviting environment.

Plaisted garden mixes effectively collect water from pervious and impervious surfaces while filtering out sediment and pollutants. Garden mixes also store water for the short term to be used by plants and permits clean water to infiltrate the soil and subsoil slowly, thus recharging the groundwater.

### • Plaisted Rain Garden Peat Mix

Offers excellent drainage properties and meets MPCA Stormwater Manual Guidelines. It's comprised of a homogeneous blend of washed construction sand (70 to 90%) and Minnesota-harvested sphagnum peat moss (10 to 30%). Peat moss can acidify its surroundings and is also used to absorb phosphorus.

### • Plaisted Rain Garden Compost Mix

A homogeneous blend of washed construction sand (70 to 90%) and organic leaf compost (10 to 30%).

INSTALLATION NOTE: Rain garden soil depths range up to 3 feet. Compaction decreases porosity—keep construction vehicles off the mix and use rubber tracked equipment when being installed.



*University of Minnesota, Riverbend Commons underground parking rooftop garden.*



*Lino Lakes city offices project used both Plaisted Rain Garden Mix and CU-Structural Soil.*





## CU-STRUCTURAL SOIL®

Plaisted Companies is the 5-state area's licensed supplier of CU-Structural Soil. Developed by Cornell University, this patented (#5,849,069) soil blend provides tree roots a better environment, encouraging growth with an improved soil porosity matrix.

- Use where soil compaction is imminent such as under sidewalks, parking lots, medians, plazas and low-access roads
- Excellent for growing trees in an urban concrete environment
- Installation depth of 24 to 36 inches for proper tree pit growth
- Designed with a CBR value of 50 or greater
- Properly compacted to 95 to 100% Proctor Density or Modified Proctor Density

This engineered soil is created through the blending of uniformly graded 3/4" to 1-1/2" angular crushed stone, clay, Minnesota-harvested peat, and Gelscape® hydrogel. Any contractor with five years experience in excavating or paving can assist with installation.

**New**

## IRON-ENHANCED SAND & MIXES

A more cost effective way to clean up stormwater runoff. This innovation in runoff treatment is centered on the reduction of phosphorus through the use of elemental iron mixed with sand.

Testing revealed that sand mixed with 5% iron filings captures an average of 88% phosphate for at least 200m of treated depth, significantly greater than a sand filter without iron filings.

Iron-sand filtration works through a chemical process in which phosphorus molecules in water bind to iron particles within the sand filter as water passes through.

- Suitable to conditions with minimal groundwater intrusion or tailwater effects; cold climates.
- High pollutant removal rates; good for nutrient impaired water.
- Use in a treatment sequence, as a stand-alone BMP, or as a retrofit for existing areas.
- Little maintenance is required after initial installation. The natural flow of groundwater does all the work.

*Information on how to use iron-enhanced sand is available at [www.pca.state.mn.us](http://www.pca.state.mn.us). This product, designed to meet standards developed using EnviroMetal Technologies, Inc. (ETI) patented technology, has been proven effective in laboratory testing and in over 100 full-scale systems.*



*Nicollet Commons, Burnsville.*

## Plaisted MN DOT Soil Mixes

Computerized blended and tested to meet project requirements:

### **Common Topsoil Borrow**

MN DOT 3877-1A; general use, turf growing medium.

### **Loam Topsoil Borrow**

MN DOT 3877-2B; plant growing medium for landscape beds.

### **Sandy Clay Topsoil Borrow**

MN DOT 3877-3C; plant growing medium and topdressing erosion stabilization mat.

### **Rooting Topsoil Borrow**

MN DOT 3877-E; for vegetative plant restoration and preservation.

### **Boulevard Topsoil Borrow**

MN DOT 3877-F; structural soil for streetscape boulevards.

### **Filter Topsoil Borrow**

MN DOT 3877-G; plant growing medium and filtration medium.

### **Organic Topsoil Borrow**

MN DOT 3877-H; enhances existing soils for plant growth.



## PLAISTED ACCUBLENDER™

It's all about precise measurement and blending. With our creation of the Accublender in 1995, customers' requests for a consistent quality soil was answered. Select from one of our standard mixes, or have us custom blend a mix by specifying the percentage of each product wanted in the mix.

Each ingredient is put into a separate bin then ingredients are precisely fed onto the Accublender belt, layering one on top of the other. As they fall through special screens and paddles, the ingredients are blended together creating a consistent product, load after load.

**The Accublender™ 4** can blend up to four components and has an optional fertilizer bin. It precisely blends up to 2,500 tons of material a day.



**The Accublender™ 2** is a portable two-bin blender capable of blending up to 2,000 tons of material a day on your site. This is ideal for locations where acceptable materials are available to blend and there is sufficient space.

## Quality materials, readily available.

In addition to owning two mining operations, Plaisted owns peat farms in McGregor and Cromwell, MN and hosts compost operations on our Elk River property. Both these business are a vital source of components for our specialty blends.

*Accublender is a trademark of Plaisted Companies Inc.*

## Consistent quality. Reliable delivery.

Ongoing research and development, and our team of market specialists are behind our continued growth. They can help you determine the best blends for your application.

Our experienced drivers, fleet of 45 trucks, and our GPS locator help set the standard for the most responsive delivery system in the 5-state area.

## Our Guarantee

We deliver on our promise, or make it right.

## Ordering Information 763.441.1100

To obtain more technical information or for a price quote contact dispatch.



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THE SOIL EXPERTS.