Section 02795

PERMEABLE FLEXIBLE and PLANTABLE PAVEMENT SYSTEM

PART 1: GENERAL

1.01 Description

A. Work shall consist of furnishing all material, labor, services and related items to complete the installation of Drivable Grass Permeable, Plantable, and Flexible Pavement System or equal in accordance with these specifications.
B. Work includes installing the materials in reasonably close conformity with the lines, grades, design, and dimensions shown in the construction drawings.

1.02 Related Sections

A. Section 02200 - Site Preparation
B. Section 02300 – Earthwork
C. Section 02780 – Unit Pavers
D. Section 02920 – Soil Preparation
E. Section 02937 – Sod Turf Grass
F. Section _____ - Lawns and Grasses

1.03 Reference Documents

A. ASTM D-422 - Particle Size Analysis
B. ASTM D-698 - Laboratory Compaction Characteristics of Soil - Standard Proctor
C. ASTM D-1557 - Laboratory Compaction Characteristics of Soil – Modified Proctor
D. ASTM C-140 - Std. Spec. for Sampling and Testing Concrete Masonry Units.
E. ASTM C-145 - Std. Spec. for Solid Load Bearing Concrete Masonry Units.
F. ASTM C-39/39M – Std. Test Method for Compressive Strength of Cylindrical Concrete Specimens

1.04 Submittals/Certification

A. Procedures: Comply with Section 01330 – Submittal Procedures.
B. Product Data: Submit manufacturer's product data, including installation instructions.
C. Samples: submit manufacturer's sample of permeable flexible plantable pavement system.
D. Warranty: Submit manufacturer's standard warranty.

1.05 Quality Assurance

A. Installer Qualifications: An experienced installer who has successfully completed installations of pavers or other pavement systems on projects of similar or larger scope and magnitude.
B. Single Source Responsibility: Obtain one color, type and variety of permeable, plantable, flexible pavement system mats from a single lot manufactured by a single source. Materials shall be available and be consistent in quality, appearance and physical properties without delaying progress of work.
C. Prior to commencing the work of this Section, verify the accuracy of layout and grading. Verify that all sub-grades and base course aggregate conditions are as specified. Notify the Engineer of any discrepancies and coordinate the correction of those discrepancies with other trades as necessary.

1.06 Delivery, Storage and Handling

A. Deliver materials to site in manufacturer's original palletized configuration with labels clearly identifying product style number, color, name and manufacturer.
B. Check all materials upon delivery to assure that the proper type, grade, color, and certification have been received.
C. Store materials in clean, dry area in accordance with manufacturer's instructions.
D. Protect all materials from damage due to jobsite conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

PART 2: PRODUCTS

2.01 Manufacturer

A. Soil Retention Products, Inc., 2501 State Street, Carlsbad, CA 92008. Phone: 760-966-6090 and 800-346-7995, fax: 760-966-6099, website: www.soilretention.com, e-mail: sales@soilretention.com.

2.02 Permeable, Flexible, Plantable Pavement System

A. Permeable, Flexible, Plantable Pavement System: Drivable Grass

a.	Nominal Dimensions in inches (l x w x h)	24 x 24 x 1.5
b.	Gross Area of Each Mat in square feet	4
c.	Weight of Each Mat in pounds	45
d.	Plantable Area in percent	61 or 100 (for sod)
e.	Mats per pallet (each)	60
f.	Area Covered per Pallet in square feet	240
g.	Color	Buff/tan*
h.	Flexibility (minimum radius of curvature in inches)	12
i.	Concrete Compressive Strength in psi	4000
j.	Polymer of internal polymeric reinforcement	LLDPE**

*Other colors available for special order
**Linear Low Density Polyethylene

B. Filter Fabric – Appropriate Filter Weave fabric by Mirafi Inc., if required by engineer.
C. Base Aggregate – Class II permeable, Crushed miscellaneous base (CMB) or similar structural material normally used as a base course for pavement systems and meeting the gradation requirements shown on the drawings
D. Sand Layer – Approximately 1" thick well graded sand.
E. Soil Infill – Soil material as required by the specifications and included on the drawings. Soil in which grasses will be planted will have a moderate percentage of organic or other plant nutrients. Soil infill not intended to support vegetation is likely to consist of decorative stone of varying color and quality, depending on application and aesthetic needs.

PART 3: EXECUTION

3.01 Subgrade Preparation

A. Excavate to the lines and grades shown on the construction drawings.
B. Proof roll foundation area as directed to determine if remedial work is required.
C. Owner's representative shall inspect the excavation and approve prior to placement of base material or fill soils.

D. Over-excavation and replacement of unsuitable subgrade soils and replace with approved compacted fill will be compensated as agreed upon with the Owner.

3.02 Installation of Aggregate Base and Sand Setting Bed

A. Install and compact base as required by the contract drawings.
B. Install, level and compact a thin (approximate 1 inch thickness) sand setting bed upon which porous, flexible and plantable pavement system will be installed. Sand may be amended with a small amount of organics or fertilizer to facilitate grass growth.

3.03 Install Porous, Flexible and Plantable Pavement System

A. Install porous, flexible, and plantable pavement system in accordance with the manufacturer's guidelines.
B. Install system to the line, grades and locations required by the contract documents.
C. Butt mats against each other leaving no significant gaps.

3.04 Fill System with Soil Infill

A. Fill porous, flexible and plantable pavement system with soil infill in accordance with the manufactures installation instructions.
B. For systems without vegetation, mats may be filled with DG, sand, crushed rock or other decorative stone as required by the specifications.
C. Spread soil infill uniformly across the mats by sweeping or other method of distributing soil.

3.05 Vegetate Mat System

A. Install planting materials as specified in the construction drawings. Both, seeding and sodding, may be acceptable provided that planting is conducted in accordance with the project documents.

3.06 Erosion Control

A. Provide dust and erosion control protection plan in accordance with the contract documents.

3.07 Field Quality Control

A. The Owner shall engage inspection and testing services, including independent laboratories, to provide quality assurance and testing services during construction. This does not relieve the Contractor from securing the necessary construction control testing during construction when required by the contract documents
B. Qualified and experienced technicians and engineers shall perform testing and inspections services.
C. As a minimum, quality assurance testing should include subgrade soil inspection, aggregate base quality, thickness, and compaction, and observation of construction for general compliance with design drawings and specifications.