



## SECTION 1

### STALOK FIBER FOR TURF PARKING / EVENT STAGING AND FIRE LANES

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. This Section includes material and labor requirements for construction with StaLok Fiber for the following items:
  - 1. Stabilized Sand Base with StaLok Fiber for Turf Parking, Fire lane, Event Staging areas etc.
- B. Related Sections:
  - 1. Section 02100 – Site Preparation
  - 2. Section 02200 – Earthwork
  - 3. Section 02230 – Granular Materials

##### 1.2 SUBMITTALS

- A. Shop Drawings: Show details of installation, including plans and sections.

##### 1.3 PROJECT/SITE CONDITIONS

- A. Field Measurements: Each bidder is required to visit the site of the Work to verify the existing conditions. No adjustments will be made to the Contract Sum for variations in the existing conditions.
  - 1. Where surfacing is indicated to fit with other construction, verify dimensions of other construction by field measurements before proceeding with the work.
- B. Environmental Limitations: Do not install StaLok Fiber during rainy or windy conditions.

##### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Installer to provide evidence to indicate successful experience in installing StaLok Fiber.
- B. Mock-ups: Install 4 ft. wide x 10 ft. long mock-up of sand mix stabilized with StaLok Fiber at location as directed by owner's representative.
- C. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be

in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.

- D. Special Warranty: Submit a written warranty executed by the installer agreeing to repair or replace components of stabilized surfacing that fail in materials or workmanship within the specified warranty period. Failures include, but are not limited to, the following:
  - 1. Premature wear and tear, provide the material is maintained in accordance with manufacturer's written maintenance instructions.
  - 2. Failure of system to meet performance requirements.
- E. Warranty Period: Contractor shall provide warranty for performance of product. Contractor shall warranty installation of product for the time of one year from completion.
- F. Contractor shall provide, for a period of sixty days, unconditional maintenance and repairs as required.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. StaLok Fiber is provided by the following manufacturer:
  - 1. Stabilizer Solutions, Inc. 33 South 28<sup>th</sup> St., Phoenix, AZ 85034; phone (602) 225-5900, (800) 336-2468; fax (602) 225-5902; website [stabilizersolutions.com](http://stabilizersolutions.com); email [info@stabilizersolutions.com](mailto:info@stabilizersolutions.com)

### 2.2 MATERIALS

- A. StaLok Fiber G-400
  - 1. Acceptable local supplier list to be provided by Stabilizer Solutions, Inc.
- B. Soil Mix
  - 1. Sand must meet the particle size and physical performance criteria as shown in Section C below. Recommended tests include: grain size analysis, percentage of sand, silt and clay constituents, saturated hydraulic conductivity and porosity (including total, air-filled, and capillary pore space), and bulk density. Calculate values for fineness modulus and uniformity coefficient. An approved construction materials testing laboratory should test representative samples from the material source. In addition, samples should be tested for pH. Recommendations should include the need for organic amendments to meet performance criteria. Sand tested should be available in sufficient quantities for project.
  - 2. Quality control testing should be performed for every 500-tons of soil delivered to site. Cost is contractor's responsibility. Soils not meeting requirements must be removed and replaced at contractor's expense.

3. No truck traffic permitted over installation area until final placement and compaction is completed.

C. Soil Mix for Stabilized Rootzone (Sand / Peat Blend)

1. Particle Size Criteria for Sand

| USDA PARTICLE NAME | US STANDARD SIEVE NUMBER | DIAMETER OF PARTICLE IN MILLIMETERS | ALLOWABLE RANGE % RETAINED |
|--------------------|--------------------------|-------------------------------------|----------------------------|
| GRAVEL             | 6                        | 3.35                                | 0                          |
| FINE GRAVEL        | 10                       | 2.000 – 3.35                        | 0 No More                  |
| VERY COARSE SAND   | 18                       | 1.000 – 2.00                        | <5% than 10 combined       |
| COARSE SAND        | 35                       | 0.500 – 1.00                        | <25%                       |
| MEDIUM SAND        | 60                       | 0.250 – 0.50*                       | 50% - 90%                  |
| FINE SAND          | 100                      | 0.100 – 0.25                        | <15%                       |
| VERY FINE SAND     | 270                      | 0.050 – 0.10                        | <5%                        |
| SILT               |                          | 0.002 – 0.05                        | <5%                        |
| CLAY               |                          | <0.002                              | <3%                        |

\* In addition, not more than 20% below 0.25 mm

2. Physical Performance Criteria

|                         |                 |                                   |                   |
|-------------------------|-----------------|-----------------------------------|-------------------|
| Fineness Modulus:       | 1.4 – 2.0       | Total Porosity:                   | 35% - 55%         |
| Uniformity Coefficient: | < 4 (2.5 – 3.5) | Air Filled Porosity:              | 20% - 30%         |
| Capillary Porosity:     | 15% - 25%       | Saturated Hydraulic Conductivity: | 5" – 15" per hour |

3. Blended rootzone mix should have a pH between 5.5 and 7.0. Recommended blend for rootzone soil mix and sod topping is 90% sand and 10% peat by volume. Peat should have a pH not less than 5, be of medium grade, and have organic content of not less than 90% (L.O.I.).
4. With proper sub-base StaLok Fiber test results have shown support of a 60,000lb load per square foot.

D. Equipment

1. Approved rototiller, reverse tiller is preferred (Incorporator, Rotodairon, Blecavator, or equivalent).

2.3 EXCESS MATERIALS

- A. Provide owner's authorized rep. With the following excess materials for use in future: 40 to 50 lb. Bags of the sand mix blended with proper amount of StaLok Fiber.

PART 3 - EXECUTION

3.1 SUB-BASE INSTALLATION

- A. Grade and compact sub-base to 95% compaction (ASTM D698). Surface must be smooth, no wheel ruts.
- B. Install 3-inch (7.6-cm) minimum gravel drainage layer over sub-base and incorporate approved drainage system as determined by site specifications.

### 3.2 ROOTZONE MEDIUM

- A. Install a 10-inch (25.4-cm) minimum of approved rootzone medium with loader or dozer. Avoid leaving ruts in the gravel base.
- B. Rootzone medium should be water-settled and fine graded.
- C. Rootzone medium should be consolidated with roller to dry density, between 87-lbs and 100-lbs per cubic foot. Maintain moisture content between 8% and 10% during install.
- D. Spread soil amendments and fertilizer before spreading fibers.

### 3.3 FIBER INSTALLATION

- A. Place bags of fibers approximately 15-ft by 15-ft grid.
- B. Spread fibers by hand or with a modified straw blower at a rate of approximately or 1-lb per 10-sqft for turf paving. (See section 1.2)
- C. Mix fiber into rootzone to specified depth (generally 4-inches (12.7-cm) for turf paving using approved rototiller, a reverse tiller is highly recommended. (See section 2.2 MATERIALS). When using Rotodairon or Blecavator, 3 passes in different directions are generally sufficient. Other tillers may require up to 5 passes. Do not exceed 5 passes.
- D. Check rate of fibers per square foot during application by placing 1-square yard sheets of plastic at random locations over the area. After spreading, remove sheets and weigh retained fibers to make sure proper weight is achieved. Continuous monitoring should be done to verify spreading rate matches design rate.
- E. Strong winds may require wetting area of soil and fibers to reduce fiber displacement.

### 3.4 WATERING / CONSOLIDATION

- A. Thoroughly soak surface after tilling. Soil should be moistened to minimum depth of 9-inches (23cm) and kept moist.
- B. Consolidate with vibratory roller to dry density between 87 and 100-lbs per cubic foot. For high or low areas, or irregularities hand-rake to final grade and re-roll.
- C. Surface is ready for planting with seed, stolons, or sod. If using sod, match soil type with soil medium.

### 3.5 MAINTENANCE

- A. Maintain same as normally for un-stabilized grass areas.

### 3.6 REPAIRS

- A. If sand mix with StaLok Fiber is removed and discarded, replace with excess material (see 2.3).
- B. Repair grass area same as normally for un-stabilized grass areas.

END OF SECTION 1