



## SECTION 32 15 43

### STABILIZER® FOR STABILIZED AGGREGATE PATHWAY: PEDESTRIAN ACCESS

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. This Section includes material and labor requirements for construction with decomposed granite or crushed 3/8" or 1/4" minus aggregate pathway with Stabilizer® binder additive for the following items:
  - 1. Stabilized Aggregate pathway and patios
- B. Related Sections:
  - 1. Section 31 00 00 – Earthwork
  - 2. Section 32 11 00 – Stabilizer® for Stabilized Aggregate Pavement: Firelanes, Driveways and Parking Lots.

##### 1.2 PERFORMANCE REQUIREMENTS

- A. Perform gradation of decomposed granite material or 3/8" or 1/4" minus crushed aggregate in accordance with ASTM C 136 – Method for Sieve Analysis for Fine and Course Aggregates.

##### 1.3 SUBMITTALS

- A. Products Data: For each product specified. Submit a 5 lb. sample and sieve analysis for grading of decomposed granite or crushed 3/8" or 1/4" minus aggregate to be sent to Stabilizer Solutions, Inc. prior to any construction – (allow 2 week turn around). Must be approved by Landscape Architect and Owner.
- B. Shop Drawings: Show details of installation, including plans and sections.
- C. LEED Submittals:
  - 1. Credit MR 4 – Recycled Content: Attach product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.
  - 2. Credit MR 5 – Regional Materials: Attach product data for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
  - 3. Credit MR 6 – Rapidly Renewable Materials: Attach product data and certification letter indicating percentages by weight of rapidly renewable materials for each product. Include statement indicating costs for each product having rapidly renewable material.
- D. Maintenance Instructions: Submit copy(ies) of manufacturer's written maintenance instructions in accordance with 01 73 23 – Operation and Maintenance Data.

## **1.4 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 Stabilized Aggregate pathway during rainy conditions or below 40 degrees Fahrenheit and falling.

## **1.5 QUALITY ASSURANCE**

- A. Installer Qualifications: Installer to provide evidence to indicate successful experience in providing Stabilized Aggregate surface or ability to follow installation instructions.
- B. Mock-ups: Install 4 ft. wide x 10 ft. long mock-up of decomposed granite or 3/8" or 1/4" minus crushed aggregate surfacing with Stabilizer® additive at location specified by owner's representative.
- C. Compaction testing to be provided by contractor, one test per 2,000 square feet of base course.
- D. Manufacturer's technical representative shall visit the site at the start of an installation to ensure the installer understands the correct installation methods to use.

## **1.6 WARRANTY**

- A. 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.
- B. Special Warranty: Submit a written warranty executed by the installer agreeing to repair or replace components of Stabilized Aggregate that fail in materials or workmanship within the specified warranty period. Stabilizer Solutions, Inc. does not warranty "Stabilizer®" purchased from a non-approved Stabilizer Solutions, Inc. licensee. Failures include, but are not limited to, the following:
  - 1. Premature wear and tear, provided the material is maintained in accordance with manufacturer's written maintenance instructions.
  - 2. Failure of system to meet performance requirements.
- C. Warranty Period: Contractor shall provide warranty for performance of product. Contractor shall warranty installation of product for the time of one year from completion.
- D. Contractor shall provide, for a period of sixty days, unconditional maintenance and repairs as required.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Stabilizer® for Stabilized Aggregate surfaces 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; email info@stabilizersolutions.com

**2.2 MATERIALS**

- A. Decomposed Granite or 3/8" or 1/4" crushed aggregate screenings
  - 1. Sand and crushed stone shall consist of inert materials that are hard and durable, with stone free from surface coatings and deleterious materials. Gradation requirements shall be as follows:
  - 2. Crushed Stone Sieve Analysis Percentage of Weight Passing a Square Mesh Sieve AASHTO T11-82 and T2782

1/4" MINUS AGGREGATE GRADATION

U.S. Sieve No.	Percent Passing by Weight
# 3/8"	100
# 4	90 – 100
# 8	75 – 80
# 16	55 – 65
# 30	40 – 50
# 50	25 – 35
# 100	15 – 20
# 200 to	10 – 15

- 3. Acceptable local supplier list to be provided by Architect
- B. Stabilizer® Binder
  - 1. Patented, non-toxic, organic binder that is a colorless and odorless concentrated powder that binds decomposed granite or crushed 3/8" or 1/4" minus aggregate.
  - 2. Product to have 64% pre-consumer recycled content.
  - 3. Product shall have 25 years experience at same formulation.

**2.3 EXCESS MATERIALS**

- A. Provide owner's authorized rep. with the following excess materials for use in future Stabilized Aggregate repair: 40 to 50 lb. Bags of the Stabilized Aggregate blended with proper amount of Stabilizer®.

**PART 3 - EXECUTION**

**3.1 PREPARATION**

- A. Base shall be 3" compacted layer of your state's DOT recommended crushed granular road base. Make any corrections necessary to base furnished and installed to bring gravel to the elevations shown on the drawing.
- B. Pre-soak base material with water and compact to 95% determined by Test Method ASTM D 1557 prior to installing Stabilized Aggregate. Compaction testing to be provided by project owner, one test per 2,000 square feet of base.
- C. Although porous, it is recommended to have proper drainage available to ensure no standing water on surface or adjacent to Stabilized Aggregate, including downspouts when placed under roof overhang and surface drains.

- D. Before proceeding with installation, notify Owner's Representative in writing of unsuitable site/base conditions.

### **3.2 BLENDING STABILIZER**

- A. Stabilizer® shall be thoroughly pre-mixed with aggregate at the rate of 15-lbs of Stabilizer® per 1-ton of aggregate. Verify with manufacturer correct Stabilizer® rate for your project and climate. Drop spreading of Stabilizer® over pre-placed aggregate or mixing by rototilling is not acceptable. Stabilizer shall be mechanically pre-mixed per manufacturer's recommendations using an approved mechanical blending unit to adequately blend Stabilizer® with aggregate (Bucket blending is not an approved blending apparatus). Always blend Stabilizer® and aggregate DRY.

### **3.3 PLACEMENT**

- A. After pre-blending, place Stabilized Aggregate directly on prepared sub-grade. Level to desired grade and cross section. Depth of pathways shall be 3" for heavy foot traffic and light vehicles. DO NOT place on filter fabric. Contact Stabilizer Solutions, Inc. for installation on slopes greater than 8%.

### **3.4 WATERING**

- A. Water heavily for full-depth moisture penetration of profile. Water activates Stabilizer®. Apply 25 to 45-gallons of water per 1-ton to achieve saturation. Randomly test for depth using a probing device, which reaches full depth.
- B. Contractor shall wait a minimum of 6 – 72 hours or until such time that the Stabilized Aggregate is able to accept compaction from a 1 to 5 ton roller without separation, plowing or any other physical compromise of the aggregate.
- C. If surface aggregate dries significantly quicker than subsurface material, lightly mist surface before compaction.

### **3.5 COMPACTION**

- A. Compact Stabilized Aggregate to 85% relative compaction by equipment such as; a 2 to 5-ton double drum roller making 3 to 4 passes. Do not begin compaction for 6 hours after placement and up to 72 hours. DO NOT use a vibratory plate compactor or vibration feature on roller, as vibration separates large aggregate particles. If pumping or pancaking of surface occurs, surface is still too wet to roll.
- B. Take care in compacting surface when adjacent to planting and irrigation systems, use 8" or 10" hand tamp. Installation of Stabilized Aggregate more than 3" thick shall be installed in lifts. If 4" thick compacted (2) 2" lifts. If 5" thick compacted (2) 2.5" lifts. If Stabilized Aggregate is pre-moistened before installation entire 4" or 5" lift may be installed.
- C. Lightly spray surface area following compaction. Do not disturb aggregate surface with spray action.

### **3.6 INSPECTION**

- A. Finished surface shall be smooth, uniform and solid with no evidence of chipping or cracking. Cured and compacted pathway shall be firm throughout profile with no spongy areas. Loose material shall not be present on surface after installation, but may appear after use and according to environmental conditions. Pathway shall remain stable underneath loose granite on top with a "natural" look. Any significant irregularities in path surface shall be repaired to the uniformity of entire installation.

### **3.7 PROTECTION**

- A. Contractor shall furnish and install construction fence around new surface to prevent public access. Fencing shall be maintained in place for a minimum of 12 - 72 hours after completion of installation, or as directed by the Owner' Representative. Drying period may take longer due to weather conditions.
- B. Contractor shall notify Owner's Representative that landscape irrigation shall be restricted near Stabilized Aggregate surface until drying period is complete. Standing water on surface and adjacent to path shall be restricted at all times.

### **3.8 MAINTENANCE**

- A. Remove debris, such as paper, grass clippings, or organic material by mechanically blowing or hand raking as needed. When plowing snow, use rubber baffle on plow blade or wheels on plow to lift blade 1/4" off the surface.
- B. During first year, minor amounts of loose aggregate may appear on surface (1/16 to 1/4"). If material exceeds a 1/4", redistribute over entire surface. Water to 1" depth and compact with power roller of no less than 1000-lbs. Repeat as needed. If cracking occurs, sweep fines into cracks, water thoroughly and hand tamp with an 8" – 10" hand tamp.

### **3.9 REPAIRS**

- A. Excavate damaged area to the depth of the Stabilized Aggregate and square off sidewalls.
- B. If area is dry, moisten damaged portion lightly.
- C. Pre-blend the dry required amount of Stabilizer® with the proper amount of aggregate in a concrete mixer.
- D. Add water to the pre-blended Stabilized Aggregate. Thoroughly moisten mix with 25 to 45 gallons per 1-ton of pre-blended material or to approximately 10% moisture content.
- E. Apply moistened pre-blended Stabilized Aggregate to excavated area to finish grade.
- F. Compact with an 8" to 10" hand tamp or 250 to 300 pound roller. Keep traffic off areas for 12 to 48 hours after repair has been completed.

END OF SECTION