



Stabilizer Solutions, Inc.
33 S. 28th St.
Phoenix, AZ 85034
800-336-2468 (Fax) 602-225-5902
Website: stabilizersolutions.com
E-Mail: info@stabilizersolutions.com

SECTION 2
STABILIZER FOR AGGREGATE SURFACES:
FIRELANES, DRIVEWAYS AND PARKING LOTS

PART 1 - GENERAL

1.1 SUMMARY

- A. The work of this Section consists of all paving work and related items as indicated on the drawings and or as specified herein and includes, but is not limited to, the following items:
 - 1. Stabilized aggregate firelane, driveway, and parking lot surfacing.
- B. Related Sections:
 - 1. Section 02100 – Site Preparation
 - 2. Section 02200 – Earthwork
 - 3. Section 02230 – Granular Materials
- C. General Provisions
 - 1. All of the contract documents, including General and Supplementary Conditions and Division I General Requirements, apply to the work of this Section.
 - 2. Examine all drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.
 - 3. Coordinate work with that of all those affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.2 PERFORMANCE REQUIREMENTS

- A. The following standards and definitions are applicable to the work of this Section to the extent referenced herein:
 - 1. Standard Specifications: Highway Department, Standard Specifications for Highways and Bridges, latest edition.
 - 2. ASTM: American Society for Testing and Materials.
 - 3. AASHTO: American Association of State Highway and Transportation Officials.

1.3 SAMPLES AND SUBMITTALS

- A. 1. Sieve analysis of aggregate for firelanes, driveways, and parking lots.
- B. 2. Samples and or shop drawings for the following: Aggregate for strength and color– firelanes, driveways, and parking lots.
- C. Construction Samples:
 - 1. Stabilized aggregate firelane, driveway, and parking lot surfacing: Construct a 12' x 24' sample of finished path as directed by the Owner's Representative on site.
 - 2. General:
 - a. Schedule mock-up construction so that mock-up can be accepted a minimum of 30 days prior to the application of paving surfaces represented by the mock-up.
 - b. Locate mock-up panel(s) in areas as directed by the Owner's Representative.
 - c. Continue to construct mock-ups until acceptable mock-up is produced (at no cost to the Owner). Acceptable mock-up shall be standard for texture, color and workmanship.

- d. Use same setting bed and joint mixes used in accepted mock-up in final work unless otherwise directed by Owner's Representative.
- e. Protect accepted mock-ups from damage until completion and acceptance of the work represented by the mock-up.
- f. Remove mock-up panel(s) from the site at completion of the project, unless otherwise instructed by Owner's Representative.

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/granite 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 installation of Stabilized aggregate surfacing or ability to follow installation instructions.

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 surfacing that fail in materials or workmanship within the specified warranty period. Stabilizer Solutions, Inc. does not warranty imitation "Stabilizer" purchased from a non-approved Stabilizer Solutions, Inc. licensee. 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.
- 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 aggregate surfaces provided by the following manufacturer:
 - 1. Stabilizer Solutions, Inc. 33 South 28th 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. Aggregate binder shall be a natural, non-toxic, non-staining, odorless, environmentally safe powder. The powder binder shall be "Stabilizer" as manufactured and patented by Stabilizer Solutions, Inc.
- B. 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:

U.S. Sieve No.	Percent Passing by Weight
# 1/2"	95 – 100
# 3/8"	90 – 100
# 4	65 – 80
# 8	48 – 63
# 16	40 – 49
# 30	30 – 40
# 50	20 – 27
# 100	10 – 18
# 200	10 - 12

- C. The sand equivalent shall be in the range of 35-55. The R-value shall be a minimum of 71. ASTM testing shall be used for the sand equivalent and R-value determination.
- D. Dense graded crushed stone base shall be furnished and installed as required and specified to a 6” compaction depth.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Base shall be 6” 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% prior to installing Stabilized aggregate material.
- 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.

3.2 BLENDING

- A. Stabilizer shall be thoroughly pre-mixed with crushed stone/sand mix at the rate from 15-lbs of Stabilizer per 1-ton of aggregate. Check with Stabilizer Solutions, Inc. for correct Stabilizer rate for your project and climate conditions. Drop spreading of Stabilizer over pre-placed aggregate or mixing by rototilling is not acceptable for vehicular access. Stabilizer shall be mechanically pre-mixed per manufacturer’s recommendations using an approved mechanical blending unit that will adequately mix and blend Stabilizer with aggregate (Bucket blending is not an approved blending apparatus). Always blend the material DRY.

3.3 PLACEMENT

- A. Place the aggregate and Stabilizer mixture on a prepared base, and rake smooth to desired grade and cross section. Place material to sufficient depth to allow 4” for residential or 5” for commercial after compaction.

3.4 WATERING

- A. Water heavily for full-depth moisture penetration of the Stabilized profile. Water activates Stabilizer, so it is important to saturate through total depth. To achieve saturation of Stabilized pathway profile, 25 to 45-gallons of water per 1-ton must be applied. During water application test moisture using a probing device reaching full depth.
- B. Contractor shall wait a minimum of 6 – 48 hours or until such time that the paving material 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.
- D. Compact the material with a compactor as specified below making 3 to 4 passes (do not use a vibratory unit). Upon thorough moisture penetration, compact aggregate screenings to 85% relative compaction by equipment such as; a 2

to 4-ton double drum roller or a 1,000-lb. single drum roller. Do not begin compaction for 6 hours after placement and up to 48 hours. DO NOT use a vibratory plate compactor or vibration feature on roller, as vibration separates large aggregate particles.

3.5 COMPACTION

- A. Take care in compacting decomposed granite or crushed 3/8" or 1/4" minus aggregate screenings when adjacent to planting and irrigation systems. Hand tamping with 8" or 10" hand tamp recommended
 - 1. Installation of Stabilized aggregate more than 3" must 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.
- B. Water the surface area with a light spray following compaction. Contractor shall take care as to not disturb the aggregate surface with the spray action.

3.6 INSPECTION

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

3.7 PROTECTING

- A. Contractor shall furnish and install construction fence around new paving to prevent public access to the area. Fencing shall be maintained in place for a minimum of 12 - 72 hours after completion of the aggregate installation, or as directed by the Owner' Representative.

3.8 MAINTENANCE

- A. Remove debris, such as paper, grass clippings, leaves or other organic material by mechanically blowing or hand raking the surface as needed. Any plowing program required during winter months shall involve the use of a rubber baffle on the plow blade or wheels on the plow that lifts the blade 1/4" off the paving surface.
- B. During the first year, a minor amount of loose aggregate will appear on the surface (1/16 to 1/4"). If this material exceeds a 1/4 of an inch, redistribute the material over the entire surface. Water material thoroughly to the depth of 1", and compact with power roller of no less than 1000-lbs. This process should be repeated as needed.
- C. If cracking occurs, simply sweep fines into the cracks, water thoroughly and hand tamp with an 8" to 10" hand tamp plate.

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-bend the dry required amount of Stabilizer powder with the proper amount of aggregate in a concrete mixer.
- D. Add water to the pre-blended aggregate and Stabilizer. Thoroughly moisten mix with 25 to 45 gallons per ton of pre-blended material or to approximately 10% moisture content.
- E. Apply moistened pre-blended aggregate to excavated area to finish grade.
- F. Compact with an 8" to 10" hand tamp or use a larger 1000 lb. roller. Keep traffic off areas for 12 to 48 hours after repair has been completed.

END OF SECTION 2