



SECTION 32 15 41

STABILIZED CRUSHER FINES SURFACING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. The WORK to be performed includes the preparation of the StaLok paving material or approved equal; and the production, stockpiling, hauling, placing, and compacting of StaLok material or approved equal as indicated on the DRAWINGS and specified herein.

1.02 RELATED SECTIONS

- A. The following is a list of SPECIFICATIONS, which may be related to this section:

1. Section 01 25 00, Substitution Procedures
2. Section 01 57 19, Temporary Environmental Controls
3. Section 31 23 00, Excavation and Fill.
4. Section 31 25 00, Erosion and Sedimentation Controls
5. Section 32 11 23, Aggregate Base Course

1.03 REFERENCES

- A. The following is a list of standards, which may be referenced in this section:

1. American Association of State Highway and Transportation Officials (AASHTO):
 - a. M147, Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, Base, and Surface Courses.
 - b. T11, Standard Method of Test for Materials Finer Than 75 μ m (No. 200) Sieve in Mineral Aggregates by Washing.
 - c. T27, Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates.
 - d. T89, Standard Specification for Determining the Liquid Limit of Soils.
 - e. T90, Standard Specification for Determining the Plastic Limit and Plasticity Index of Soils.
 - f. T96, Standard Specification for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.



- g. T99, Standard Specification for the Moisture-Density Relations of Soils Using a 2.5 kg (5.5 pound) Rammer and a 305 mm (12 in) Drop.
 - h. T180, Standard Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18-in) Drop.
 - i. T190, Standard Specification for Resistance R-Value and Expansion Pressure of Compacted Soils.
 - j. T265, Standard Method of Test for Laboratory Determination of Moisture Content of Soils.
 - k. T310, Standard Specification for In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
2. ASTM International (ASTM):
- a. C136, Standard Test Method for Sieve Analysis of fine and Coarse Aggregates
 - b. D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft³ (600 kN-m/m³)).
 - c. D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³(2,700 kN-m/m³)).
 - d. C88, Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
 - e. D1883, Test Method for CBR (California Bearing Ratio) of Laboratory Compacted Soils.
 - f. D2419, Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
 - g. D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)
 - h. D4791, Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate

1.04 SUBMITTALS

- A. CONTRACTOR shall cooperate with ENGINEER in obtaining and providing samples of all specified materials.
- B. CONTRACTOR shall submit sieve analysis of crusher fines aggregate.



C. CONTRACTOR shall submit certified laboratory test certificates for all items required in this section.

D. CONTRACTOR shall submit samples and or shop drawings for the following

1. Aggregate strength.
2. Aggregate color.

E. CONTRACTOR shall submit the following manufacturers information

1. Literature that explains color, performance and previous applications.
2. Specifications for paving material.
3. Installation specifications, instructions and directions
4. Performance specifications for material
5. Written Warranty
6. Written maintenance instructions

F. Construction Samples

1. CONTRACTOR shall construct mock-up panels or areas for each different type of paving system as specified herein to demonstrate ability to achieve types of setting bed, joints, pattern, color and texture required herein, unless mock-up panel construction is waived by the OWNER or OWNERS Representative.
2. CONTRACTOR shall construct a 12' x 24' sample of finished path, using StaLok Paving material or approved equivalent for approval by OWNER or OWNERS representative.
 - a. Schedule mock up construction for acceptance by OWNER or OWNERS Representative at least 30-days prior to application of paving surfaces represented by the mock up.
 - b. Locate mock – up panel(s) in areas as directed by OWNER or OWNERS representative.
 - c. Mock-ups will continue to be constructed at no cost to owner until mock up is accepted by OWNER or OWNERS representative.
 - d. Accepted mock – up will become standard for inspection and acceptance of future work based on:
 - 1) Texture
 - 2) Color
 - 3) Workmanship



- e. The same setting bed and joint mixes used in the accepted mock-up will be used in the final work unless otherwise directed by OWNER or OWNERs representative.
- f. Protect accepted mock-up form damage until the completion and acceptance of the WORK by the OWNER or OWNERs representative.
- g. Mock-up panel(s) will be removed from site at the completion of the project, unless otherwise directed by OWNER or OWNERs representative.

1.05 QUALITY ASSURANCE

- A. INSTALLER Qualifications: INSTALLER must provide evidence to indicate successful experience in installation of StaLok Paving Material or approved equal or approval of the manufacturer.
- B. INSTALLERs shall be pre-approved for installation and execution of this WORK by the OWNER or OWNERs Representative prior to installation.

1.06 QUALITY ASSURANCE

- 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
- B. Special Warranty: Submit a written warranty executed by INSTALLER agreeing to repair or replace components of StaLok Paving Material, or approved equal, 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, provided the material is maintained in accordance with the manufacturer's written maintenance instructions.
 - 2. Failure of system to meet performance requirements.
- C. Warranty Period: CONTRACTOR shall provide warranty for the performance of the product. CONTRACTOR shall warranty installation of product for the time of one year from completion and acceptance of the WORK by the OWNER or OWNERs representative.
- D. CONTRACTOR shall provide, for a period of sixty days, unconditional maintenance and repairs as required by the OWNER or OWNER's representative after acceptance of the WORK by the OWNER or OWNERs Representative, provided the material is not damaged through the negligence of the OWNER and OWNER's Representatives.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. StaLok Paving Material is provided by the following manufacturer:



1. Stabilizer Solutions, Inc. 33 South 28th Street, Phoenix, AZ 85304; Phone: (602) 225-5900, 1(800) 336-2468; Fax: (602) 225-5902; Website: www.stabilizersolutions.com; Email: info@stabilizersolutions.com.

- B. Alternative manufactures shall be approved by OWNER or OWNERs Representative.

2.02 STALOK AGGREGATE

- A. **Aggregates:** Crushed stone shall consist of inert materials that are hard, durable, with stone free from surface coatings and deleterious materials.

B. **Gradations:**

U.S. Standard Sieve Size	Percentage Passing by Weight
½ inch	98-100
¾ inch	90-100
No. 4	65-80
No. 8	48-63
No. 16	40-49
No. 30	30-40
No. 50	20-27
No. 100	10-18
No. 200	10-12

- C. R-value minimum of 70 determined by ASTM D 2488 Methodology (R-value is a measure of wear resistance).

- D. Sand equivalent: - an engineering measurement of the proportion of sand to silt and clay, will stay at a range of 30-55, as determined by ASTM d 2419 methodology.

2.03 AGGREGATE BASE COURSE

- A. Dense graded crushed stone base shall be furnished and installed as required and specified under Section 31 23 00, Earthwork and Trenching and Section 32 11 23 Aggregate Base Course to a minimum 6” compacted depth.

2.04 HERBICIDE

- A. Herbicide shall be Casoron 4G granular weed and grass killer or approved equal.

PART 3 EXECUTION

3.01 GENERAL

- A. **Equipment:**



1. Equipment shall be capable of performing the WORK as described in this SPECIFICATION. Equipment that is inadequate to obtain the results specified shall be replaced or supplemented as required to meet the requirements of this SPECIFICATION. Any equipment that is used in an improper manner may be cause for rejection of the WORK if in the opinion of ENGINEER the WORK fails to meet the requirements of this SPECIFICATION.
2. Equipment used for compaction shall be the rolling type, vibratory type, or combination of both types, and shall be of sufficient capacity to meet the compaction requirements herein.

3.02 LAYOUT OF WORK

- A. The Contractor shall stake or otherwise delineate the proposed alignment of the path according to the drawings. Obtain approval of the OWNER prior to proceeding with excavation and subgrade preparation.
- B. Cut/fill bench for the stabilized crusher fines as shown on the drawings.
- C. Cut existing grade to a minimum of nine (9) inches deep or as shown on the drawings within limits of paving. Wet and roll subgrade to obtain a firm, uniform, compacted subgrade. Keep cut sides vertical and true to line horizontally with a uniform width.

3.03 WEED CONTROL

A. Herbicide/Chemical Applications

1. Apply Casoron 4G granular weed and grass killer or approved equal to prepared subgrade per manufacturer's recommendations. Contractor shall contact stabilized crusher fines manufacturer prior to placing herbicide to ensure compatibility of proposed herbicide with the StaLok or approved equal stabilized crusher fines material.
2. Apply Casoron 4G granular weed and grass killer at a rate of 250 - 300 pounds per acre. Apply approved equal at manufacturers recommended rate.
3. Herbicides or other chemicals shall be applied using well-maintained equipment by individuals working for CONTRACTOR who are properly licensed by any State and/or Federal Agency having jurisdiction over such applications. It shall be the responsibility of the CONTRACTOR to be knowledgeable of any and all current laws and regulations pertaining to herbicide and other chemical applications, and to notify OWNER or OWNERS Representative immediately if any request for herbicide or chemical applications by OWNER or OWNERS Representative is inappropriate as they pertain to these laws and regulations.
4. Herbicides or other chemicals shall not be applied during periods when wind or other physical conditions cause the herbicides or chemicals to be transported a distance of more than five (5) feet from the immediate area where they are being placed. It shall be the responsibility of the CONTRACTOR to stop WORK immediately and notify the OWNER or



OWNERs Representative if any weather or other physical condition exists, which would make the application of herbicides or other chemicals inappropriate.

5. All herbicides or other chemicals used shall be applied at a rate and strength, and by the method recommended by the manufacturer of the product being used.
6. CONTRACTOR shall submit to ENGINEER the manufacturers, Material Safety Data Sheets (MSDS), Name, Trade Name , trademark, and conformance to state law of all herbicides or other chemicals.

3.04 SUB-GRADE PREPARATION

- A. Base shall be a minimum of 6” thick compacted Class 6 Base Course as Specified in Section 32 11 23, installed at 95% standard compaction on top of subgrade.
- B. Make any corrections necessary to base furnished and installed under Section 31 23 00, Earthwork and Trenching and Section 32 11 23 Aggregate Base Course to bring Class 6 Aggregate Base Course to the sections and elevations shown on the DRAWINGS.
- C. Pre-soak Class 6 Aggregate Base Course with water prior to installing StaLok Paving Material or approved equal as need to compact Class 6 aggregate base course.
- D. Make Sure Proper Drainage is available to ensure no standing water on the surface or adjacent to StaLok Paving Material or approved equal, including downspouts, when placed under roof overhang.

3.05 BLENDING

- A. StaLok Paving Material is a solely owned patented process.
- B. Blending Procedures for StaLok Paving Material are performed only by a licensed StaLok Paving Material blender and can only be sold through Licensed StaLok Paving Material dealers. It is a pre-blended bulk material.
- C. Approved equal material shall be obtained from manufacturer pre-blended or blended on site per manufacturer’s recommendations.

3.06 PLACEMENT AND COMPACTION

- A. Consult manufacturer if installing on a slope.
- B. Do not install pavement material during rain or snow. Do not install pavement on sub-grade that has standing water.
- C. Do not place StaLok Pavement Material or approved equal at temperatures below 30° F unless directed by OWNER or Owners representative with approval from manufacturer
- D. StaLok Paver Material may form clods at temperatures less than 60° F. Break up clods with machinery. Clods will break apart on their own if left in sun to warm.



E. Place StaLok Paving Material at a minimum 2", maximum 3" compacted depth. Using a Paver Box, Paver, Crawler Paver, Asphalt Paver, Drag Box Paver, Pavement Profiler, Slip Form Paver, Pav-Saver Place Spreader or approved equal, Compact StaLok Paving Material.

1. Compaction can be achieved by a 5-ton double drum roller
2. Compact material making 8 – 10 passes
3. Use plate compactor on edges and hard to get areas.
4. Loose material shall not be present on final surface.

F. Approved equal pavement material shall be placed and compacted per the manufacturers recommendations.

3.07 WATERING

A. Water the area with a light spray following compaction. CONTRACTOR shall take care not to disturb the aggregate surface with the spray action.

3.08 INSPECTION

- A. Finished surface shall be uniform and solid, with no evidence of chipping or cracking.
- B. Compacted paving material shall be firm to the full depth of pavement with no soft areas.
- C. Loose material shall not be present on the surface
- D. No ruts shall be visible on the surface of the pavement.
- E. Approved equal material shall be inspected by ENGINEER per the manufactures specifications.
- F. Pavement sections that do not meet this specification, manufactures application methods, instructions, installation guidance, or specifications shall be repaired or replaced at the CONTRACTOR's expense.

3.09 MAINTENANCE

- A. Remove debris, such as paper, grass clippings, leaves, dirt or other deleterious material by mechanically blowing or hand raking the surfaces needed.
- B. Plowing programs required during winter months shall involve the use of a rubber baffle on the plow blade or wheels on the plow that maintain a 1/4" gap between the blade and the paving surface.

3.10 REPAIRS

A. Excavate damaged area to depth of StaLok Paving Material, or approved equal, and square off sidewalls.

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- B. If area is dry, moisten damaged portion lightly and scarify.
- C. Apply pre-blended StaLok Pavement Material, or approved equal, to excavated area to finished grade.
- D. Compact with an 8" to 10" hand tamp or 1000 lb. roller.

END OF SECTION



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