SECTION 321516
CRUSHED STONE SURFACING
(DECOMPOSED GRANITE PAVING)

PART 1 - GENERAL

1.1 SUMMARY

A. General: This Section includes the Crushed Stone Surfacing (Decomposed Granite), in accordance with Contract Documents.

B. Summary of Work: Provide all labor, equipment and materials required to procure and install the crushed stone surfacing (decomposed granite), complete, as indicated on Drawings and as specified herein.

C. Related Documents:
   1. Specification Section 033000 – Cast-in-Place Concrete.
   2. Specification Section 320190 – Landscape Maintenance.

1.2 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed crushed stone surfacing (decomposed granite) work similar in material, design, and extent to that indicated on Drawings for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Design Intent: Finished crushed stone surfacing (decomposed granite) shall be accessible by wheelchair, firm, stable, and slip resistant. It shall not show signs or tracks of pedestrian foot prints or significant vehicle tracks when used. Surface movement of crushed stone surfacing (decomposed granite) shall be minimal.

1.3 SUBMITTALS

A. Sample: Provide current sieve analysis and 1/4 cubic foot sample of crushed stone surfacing (decomposed granite) material for approval.

B. Mock-Up: Provide a 5-foot by 5-foot minimum on-site mock-up of the approved crushed stone surfacing (decomposed granite) material. The mock-up is to be reviewed and approved by Landscape Architect prior to installation of work. Approved mock-up shall be protected and remain on site until crushed stone surfacing (decomposed granite) work is complete and approved. Approved mock-up that adheres to the size and location as indicated on Drawings may be kept as a portion of the final site work with approval of Landscape Architect.

C. Provide Manufacturer’s data on D.G. Stabilizer.
PART 2 - MATERIALS

2.1 SOIL STERILANT
   A. Treflan Emulsifiable Concentrate.

2.2 BASE COURSE
   A. 3/4-inch minus compacted crushed rock.

2.3 CRUSHED STONE SURFACING (DECOMPOSED GRANITE)
   A. Clean 1/4-inch minus crushed stone surfacing (decomposed granite) with fines.
      1. Available from:
         a. Southwest Boulder and Stone (760) 451-3333
         b. KRC Rock (760) 744-1036
         c. Or approved equal.
   2. Color: See Drawings.
   B. Crushed stone surfacing (decomposed granite) shall meet the following sieve analysis:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>% Retained</th>
<th>% Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.5 mm (3/8&quot;)</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>6.3 mm (1/4&quot;)</td>
<td>5 - 20</td>
<td>80 - 95</td>
</tr>
<tr>
<td>4.75 mm (#4)</td>
<td>10 - 20</td>
<td>60 - 80</td>
</tr>
<tr>
<td>2.36 mm (#8)</td>
<td>20 - 35</td>
<td>35 - 60</td>
</tr>
<tr>
<td>600 microns (#30)</td>
<td>20 - 35</td>
<td>15 - 35</td>
</tr>
<tr>
<td>0.075 microns (#200)</td>
<td>5 - 20</td>
<td>8 - 12</td>
</tr>
<tr>
<td>Pan</td>
<td></td>
<td>8 - 14</td>
</tr>
</tbody>
</table>

2.4 MULTI PURPOSE GRAVEL
   A. Clean 3/4-inch crushed gravel.
      1. Available from:
         a. Southwest Boulder and Stone (760) 451-3333
         b. KRC Rock (760) 744-1036
         c. Or approved equal.

2.5 PEBBLES
   A. Clean 1-2-inch Mojave Gold.
      1. Available from:
2.6 WATER

A. Water: Clean and potable water.

2.7 DECOMPOSED GRANITE STABILIZER


B. Approved equal shall be a non-toxic, colorless, odorless and organic binder that binds crushed stone surfacing (decomposed granite) together to produce a firm texture as approved by Landscape Architect.

1. Installation shall match Landscape Architect-approved sample and mock-up.

2.8 GEOTEXTILE FABRIC

A. 100% polypropylene needle-punched engineering fabric, non-woven, by Grace, Mirafi or approved equal. Physical properties as recommended by product manufacturer.

PART 3 - EXECUTION

3.1 INSPECTION

A. Prior to starting all work of this section, carefully inspect work installed by other trades and verify that all such work is complete to the point where this installation may properly commence. Start of work denotes acceptance of existing conditions.

3.2 PREPARATION

A. Make all necessary measurements in the field to ensure conformance to dimensions and finish elevations as indicated on Drawings.

B. Soil Sterilant:
1. Mix soil sterilant in sprayer tank with clean water according to manufacturer's latest printed specifications. Use sprayer that will apply the solution uniformly, without disturbing the soil.

2. Apply solution to dry soil surface at a rate of 3.5 gallons per 1000 square feet.
   a. Do not apply when wind velocity exceeds 10 mph or during or after rain.

3. Shake or stir the spray solution prior to each application.

4. Avoid spraying on walls or over-spraying into areas to receive planting.

5. Immediately after application of spray solution, thoroughly incorporate the solution into the soil to a depth of 2 to 4 inches per manufacturer's recommendations.

6. Do not use sterilant within 4 feet of tree planting locations or within the drip lines of existing trees.

C. Do not install during rainy conditions.

3.3 BASE COURSE

A. Verify that all related work is completed before starting placement of base course.

1. Using a flat plate compactor, re-compact disturbed subgrade to a firm condition as approved by Landscape Architect.

2. Depth of Base Course:
   a. 6-inch depth for pedestrian path.
   b. 12-inch for vehicular path.

3. Verify compaction of base aggregate and replace any unacceptable areas. Place and compact to 90% compaction as specified. Provide compaction certification.

4. Confirm that base has been properly placed and compacted. Repair any areas that are of improper width or thickness and any areas that fail to achieve required compaction.

3.4 CRUSHED STONE SURFACING (DECOMPOSED GRANITE)

A. Verify that all related work is completed before starting placement of crushed stone surfacing (decomposed granite) including concrete or metal edging.

B. Mixing crushed stone surfacing (decomposed granite): The material shall be thoroughly blended with a cement mixer, paddle type blades, not screw type blades.

1. It is essential that the Stabilizer be mixed thoroughly and uniformly with crushed stone surfacing (decomposed granite).

2. Blend the 12 - 16 lbs. of Stabilizer per ton of crushed stone surfacing (decomposed granite) or per manufacturer's written instructions.

C. Place crushed stone surfacing (decomposed granite) roughly into position. Place sufficient
material to allow for compaction.

D. Level surface. Do not compact crushed stone surfacing (decomposed granite) for 6 hours after placement and up to 48 hours or as directed by manufacturer’s written recommendations.

E. A 1-ton to 5-ton roller shall be used for compaction to achieve a minimum of 90 percent relative compaction as determined by standard Proctor maximum dry density.

1. Do not use a vibratory or flat plate compactor for compaction.

F. Place additional crushed stone surfacing (decomposed granite) mixed with Stabilizer to meet required finished grades and re-compact after required waiting period.

G. Keep people, bicycles and vehicles off of the compacted crushed stone surfacing (decomposed granite) until it dries to stable moisture content.

3.5 MULTI PURPOSE GRAVEL

A. Verify that all related work is completed before starting placement of crushed gravel including concrete or metal edging.

B. Place gravel roughly into position. Place sufficient material to allow for compaction.

3.6 PEBBLES

A. Verify that all related work is completed before starting placement of pebbles including concrete or metal edging.

B. Place pebbles roughly into position. Place sufficient material to allow for compaction.

3.7 PROTECTION

A. Protect all adjacent work by others, reference points, monuments and markers. Replace or repair damaged items at no cost to Owner and as acceptable to Landscape Architect.

3.8 CLEANING

A. Remove from site and legally dispose of surplus construction materials and waste material including excavated soil, trash and debris off of Owner’s property.

END OF SECTION 321516