

CRUSHED AGGREGATE BLENDED WITH GRANITECRETE **ADMIXTURE SURFACING**

COORDINATE WITH DRAWINGS: Show location and extent of stabilized aggregate surfacing. Show details required at adjoining materials and special conditions. The depth of base course and the thickness of stabilized aggregate surfacing can be either shown on the drawings or described in the specifications; edit this section carefully to avoid conflicting requirements.

FOR MORE INFORMATION: Contact GraniteCrete Incorporated, www.granitecrete.com or call (800) 670-0849.

PART 1 – General

1.1 SUMMARY

- A. Section Includes: Crushed aggregate blended with GraniteCrete admixture surfacing. B. Related Work:
1. Section – Earth Moving [fill in here]: Grading.
 2. Section – Base Courses [type]: Base Course.

1.2 REFERENCES

- A. ASTM C136-Sieve Analysis of Fine and Coarse Aggregates.
- B. ASTM D2419- Sand Equivalent Value of Soils and Fine Aggregates.
- C. “Greenbook” Standard Specifications for Public Works Construction.
- D. RIS-Redwood Inspection Services Grades of California Redwood.

1.3 SEQUENCING

- A. Do not install work specified in this Section prior to acceptance of earth moving. Coordinate work specified in this Section with work specified in other Sections to minimize cutting of and operation of heavy equipment over newly installed surfacing.

1.4 SUBMITTALS

- A. Submit in accordance with Section []--Submittal Procedures

- a. Manufacturer's product data sheet and installation instructions indicating that product complies with specifications for:
 - i. Crushed aggregate blended with GraniteCrete admixture surfacing.
 - ii. Edging []
- b. Submit quart [] sample[s] of crushed aggregate with admixture in color[s] specified. [in manufacturer's standard colors for selection.]
- c. Redwood Edging: Submit evidence of chain-of-custody in accordance with Forest Stewardship Council.

1.5 QUALITY ASSURANCE / FIELD QUALITY CONTROL

- A. Installer qualifications: installer to provide evidence to indicate successful installations of 25,000 square feet or more with an additional 6,000 square feet per year in providing decomposed granite surfacing containing GraniteCrete admixture and / or ability to follow installation instructions. GraniteCrete Certified Installers: **McGuire and Hester**, Matthew Dale-Landscape Group Manager, (510)632-7676. **Ghilotti Bros.**, Miguel Rangel, (415)760-0023. **Juan Ontiveros**, (831)200-5544. **Use of GraniteCrete Certified Installers is highly recommended.**
 - a. Materials shall comply with manufactures specifications.
 - b. For projects being installed by other than a GraniteCrete Certified Installer, GraniteCrete strongly recommends the use of GraniteCrete personnel onsite to oversee the installation process. Warranty is void otherwise.

1.6 MOCK-UP

- A. Construct mockup of [20] [] square feet minimum of crushed aggregate blended with GraniteCrete admixture surfacing, including [base course and] edging, at location approved by [Architect] [Engineer] [Owners Representative]. Build mockup [] days prior to installation. Intent of the mockup is to demonstrate surface finish, texture, color and standard of workmanship
- B. Notify [Architect] [Engineer] [Owners Representative] [] days in advance of mockup construction.
- C. Allow [Architect] [Engineer] [Owners Representative] to view and obtain approval of mock-up before proceeding with rest of crushed aggregate blended with GraniteCrete admixture surfacing.
- D. [Approved mock-up may remain as first in place construction] [Remove mock-up after acceptance of work specified in this Section.]

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver all GraniteCrete Admixture [bags] [bulk] materials in original, unopened packaging. Protect materials / aggregate from contamination with foreign matter. Store under waterproof cover and protect from dampness.

1.8 FIELD CONDITIONS

- A. Do not install crushed aggregate blended with GraniteCrete admixture surfacing when sub-base is wet at saturated field capacity.
- B. Do not install GraniteCrete materials during rainy conditions or below 40 degrees Fahrenheit.

PART 2 – PRODUCTS

2.1 CRUSHED AGGREGATE BLENDED WITH GRANITECRETE ADMIXTURE SURFACING MATERIALS.

A. Acceptance Manufacturer:

1. Specification is based on products by GraniteCrete, Inc., P.O. Box 1574 Carmel Ca. 93921; phone (800) 670-0849, fax (800) 670-0849, www.granitecrete.com. GraniteCrete admixture is an all-natural product and does not contain oils, polymers, resins, or enzymes.
2. Substitutions: [Not allowed.] [Products by other manufacturers that comply with specifications will be considered in accordance with Section []-Instructions to Bidders. [] –Substitution Procedures.

B. Decomposed Granite (DG), crushed aggregate.

1. DG shall have a 3/8” maximum gradation, produced from naturally friable rock / granite with enough fines to produce a smooth walking surface. Materials should be free from clay lumps, organic matter and deleterious material. Blends of coarse sand and rock dust are not acceptable.
2. Use a single supply source for the entire quantity required.
3. Gradation, in accordance with ASTM C136:

Sieve Sizes	% (Percent) Passing
3/8”	100
#4	85-100%
#8	70-80%
#16	50-65%
#30	40-50%
#50	25-35%
#100	15-25%
#200	10-15%

4. Color: [Equal to Enz Vineyard Rock Quarry]. To be selected by [Architect] [Engineer] from manufacturer’s standard colors.
 5. Supplier: Enz Vineyard Rock Quarry, Hollister CA.; phone 831.638.3807. [Or equal].
- C. Aggregate binder: Provide GraniteCrete Admixture. Color: [Natural] [Adobe] [Sand] [Ash Gray]

2.2 BASE COURSE MATERIAL

- A. Class II Permeable Base Rock.

2.3 ACCESSORIES

- A. Water: Free from contaminants that would discolor or be deleterious to crushed aggregate blended with GraniteCrete admixture surfacing.
- B. [Steel [Edging]]:
 - 1. Dimensions: [3/16"] [1/4"] [] thick by [4-inch] [] deep, with overlapping joints.
 - 2. Stakes: 3/16" x 1-3/4" wide at top tapering to point at bottom; located 36" o.c. maximum.
 - 3. Finish: [Basked-on [green] [brown] [black] paint.] [Hot dipped galvanized.]
- C. [Redwood [Edging]]:
 - 1. Material: RIS Merchantable Heart Grade [from sustainability managed forests as certified by the Forest Stewardship Council.]
 - 2. Dimensions: Nominal [2x6] [] inches
 - 3. Stakes: Steel, 3/16" x 16" long x 1-3/4" wide at top tapering to point at bottom; located 36" o.c. maximum.
 - 4. Finish: Provide in color to be selected by [Architect] [Engineer] from manufacturer's standards.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine grading and subsoil conditions. Do not proceed until conditions are acceptable.

3.2 PREPARATION

- A. Excavation: Excavate to depth required so edges of crushed aggregate blended with GraniteCrete admixture surfacing will match adjacent grades and have a maximum cross slope of 1 percent. [Remove excavated soil from site.]
- B. Sub-grade Preparation: Comply with Greenbook Section 301-1 – "Sub-grade Preparation."
- C. Base Course Installation: Class II permeable base rock at 90% compaction.
- D. [Edging]: Install flush with crushed aggregate blended with GraniteCrete admixture. Provide sufficient stakes to secure in place.]

3.3 INSTALLATION.

- A. Prior to installation, dampen surface on which installation is to occur. Install GraniteCrete surfacing as per [specified] [manufacturer's] depth. GraniteCrete must be mixed on site. The use of a portable fiberglass concrete mixer for smaller jobs and the use of a volumetric concrete truck (a virtual portable batching plant) for larger jobs are specified.

Do not allow GraniteCrete blended aggregate to dry during installation.

Mist as necessary to maintain optimum moisture content prior to compaction.

- B. Grade and smooth to required elevation. Smooth out any final irregularities prior to substantial compaction. Smooth by using the straight edge of an asphalt rake or a medium bristle broom over entire paving surface.
- C. Compact: After optimum moisture content is achieved for compaction, thus achieving an 88% to 92% compaction. Hand-tamp around benches, sign posts, corners, boulders, etc. Initially use a vibratory plate and/or a 36" smooth drum roller in static position. Compact with the vibratory plate vertically and then horizontally at half speed. Follow with final compaction using a heavy lawn roller to obtain the final desired dense, smooth, uniform finish.
- D. Take care compacting adjacent to planting and irrigation systems.
- E. Minimum Compacted Thickness: Install to depth shown on Drawings.
- F. Saw cut/trowel/install expansion joints every 5' in narrower paths, every 12' in wider paths, and at every engineered stress areas.
- G. Cover finished surface, when practical, to achieve maximum curing period. See Section 3.5.
- H. Minimum Compacted Thickness (See Section Details):
 - 1. [Residential / Pedestrian Paths] []: [3] inches.
 - 2. [Commercial / Light Vehicular Drives] []: [4] inches.
- I. Surface shall follow overall contours of landscape. Flat areas shall be [sloped] [crowned] for drainage. Slope [2.0%] [] percent minimum to drain away from structures.
- J. Completed, finished surface shall be of consistent quality and free of deleterious materials such as organic materials, nails, stones, and loose material. Surface shall not have depressions or humps greater than [1/4] [] inch in ten feet.
- K. **Cold Joints:** "Between pours", **stop at an area that makes them look intentional.** Snap line just back from loose GraniteCrete into compacted area. With a square nose shovel cut a straight line and then continue with installation. Place newly mixed GraniteCrete into area, **being careful not to overlap existing compacted material.** With a concrete trowel or similar tool, tamp new material at a 45 degree angle 1" above existing grade and compact. If necessary, "feather" in with a medium bristled broom. At end of day's installation, place a 2"X4" or 2"X6" piece of wood and compact. The following day carefully lift the wood and continue, compact and feather.

3.4 CURING PERIOD / PROTECTION

- A. Do not allow traffic on crushed aggregate blended with GraniteCrete admixture surfacing for 5 days after placement or until compacted crushed aggregate blended with GraniteCrete admixture surfacing has fully cured. [Cover for extended curing period].
- B. Protect crushed aggregate blended with GraniteCrete admixture surfacing from damage until project completion. [Repair damaged areas to match specified requirements].

3.5 MAINTENANCE & REPAIRS

- A. Maintenance: Depending on the end users desired finish surface, maintenance may require occasional blowing off or brooming of paved surface. Depending on quality of compaction at time of installation, a thin veneer of loose aggregate material is typical after the full 28

days cure period. If cracking appears in a GraniteCrete surface broom loose aggregate “fines” into cracks and compact with a rubber mallet.

B. Repair: When repairing GraniteCrete it is important to use the original aggregate/decomposed granite and the original GraniteCrete Admixture color to match previously installed materials. If the paved surface has large areas of raveled material (loose aggregate/decomposed granite) the initial installation may not have been properly compacted or blended materials did not have proper compaction or optimum moisture content during installation. **GraniteCrete cannot be allowed to dry prior to final compaction.** The following are suggestions for repair of raveled materials:

1. For the large loose areas, a minimum of a 3 inch of GraniteCrete can be installed. The repair areas need to be saw-cut at agreed length, removed, and re- installed. A portable concrete mixer or wheelbarrow can be used. Batch proportions are 33 shovelfuls of aggregate/decomposed granite to 3 shovelfuls of GraniteCrete Admixture (11 to 1 ratio). The mixture must be **thoroughly** dry mixed and moistened to specifications.
2. In areas that collapse/fail due to equipment weight, reform and re-install with original materials as per specifications.
3. Cracks: repair by brooming existing surface fines into the cracks of filling with dry, pre-mixed materials, or both. The onsite aggregate/decomposed granite should be sieved to 1/8” minus material for better application and in-fill of cracks. Materials should be mixed as per ratio described above. Broom or fill the crack, moisten, compact (with rubber mallet or hand compaction plate) and “feather” material into the final finish.

Please refer to the GraniteCrete Installation Instructions for additional installation details.

C. END OF SECTION