

## **CONSTRUCTION SPECIFICATION**

### **GRAVEL PARKING SURFACING**

#### **1. SCOPE**

The work shall consist of furnishing, transporting, and placing mineral aggregates for parking surfacing at Tripler Army Medical Center near Building 160 in Honolulu HI. Work area is approximately 21,639 ft<sup>2</sup>.

#### **2. MATERIALS**

Aggregate shall conform to the applicable requirements of ASTM D 1241 or, if so specified, shall be obtained from designated sources. The aggregate material shall be free from vegetable matter and other deleterious substances. After the contractor has determined that the aggregate meets the specification and at least 20 days prior to delivery to the site, the contractor shall notify the contracting officer in writing of the source of the material. Test data and other certification information for the aggregate shall be furnished 20 days prior to the use of the material.

#### **3. BASE PREPARATION**

The area to be surface shall be compacted as specified to the lines and grades shown on the drawings. The surface shall be inspected and approved by the Engineer before any aggregate surfacing material is placed.

#### **4. PLACEMENT**

The aggregate shall be deposited, spread, processed, and compacted on the prepared subgrade to the required thickness as shown on the drawings. In the event segregation occurs, the material shall be bladed until the various sizes of aggregate are uniformly and satisfactorily blended. After being spread, the material shall be watered, mixed, shaped to the required section, and compacted as specified in Section 6. The completed course shall be smooth, true to grade and cross-section, and free from ruts, humps, depressions, and irregularities.

#### **5. MEASUREMENT AND PAYMENT**

For items of work, for which specific unit prices are established in the contract, the volume of aggregate will be measured to the nearest cubic yard within the neat lines shown on the drawings. Payment for the quantity of aggregate will be made at the contract unit price for each type of aggregate, complete in place. Such payment will be full compensation for furnishing, delivery, placing and compacting the aggregate, and for all other items necessary and incidental to the performance of the work.

Compensation for any item of work described in the contract but not listed in the bid schedule will be included in the payment for the item of work to which it is made subsidiary. Such items and the items to which they are made subsidiary are identified in Section 6 of this specification.

## 6. ITEMS OF WORK AND CONSTRUCTION DETAILS

Items of work to be performed in conformance with this specification and the construction details are:

### a. Bid Item CLIN 0006 Gravel Parking

- (1) This item shall consist of furnishing, placing, treating with moisture and soil stabilization additives, shaping and compacting the gravel surface coarse material for the parking lots and spurs as shown on the drawings. Parking Angle 45 deg, Space Width 9', Space Length 19' 10"

- (2) In Section 2, MATERIALS, the following shall also apply:

- (a) The gravel surface course shall be meet the requirement of ASTM D 1241 for Type I with the Gradation C or any other gradation which will grade within the followings limits:

<u>Sieve Size</u>	<u>Percent Passing by Weight</u>
3/4"	100
No. 4	38 - 65
No. 8	25 - 60
No. 30	10 - 40
No. 200	3 - 12

- (b) The gravel surface coarse shall meet the following requirements:

- [1] Percentage of Wear: When tested in accordance with ASTM C 131, the percentage of wear shall not exceed 40 percent after 500 revolutions.
- [2] Plasticity Index : When tested in accordance with ASTM D 4318, the plasticity index shall not be more than five (5).
- [3] Liquid Limit: When tested in accordance with ASTM D 4318, the liquid limit shall not be more than 25 percent.

- (2) The moisture content of the gravel mix material shall be maintained within the limits required to:

- (a) The moisture content of the fill matrix at the time of compaction shall be neither less than one (1) percent below optimum moisture content nor one (1) percent above optimum moisture content.
- (b) Meet mixing rates with the soil stabilizer and earth sealant additives as specified on Construction Specification 400, Soil Stabilizer Additives.

- (3) In Section 3, BASE PREPARATION, the following shall also apply: Parking and spurs bases to be surfaced shall be scarified minimally to the top 3 inches and treated with soil stabilization additives mixed with water to within  $\pm 1$  % of optimum moisture and compacted as

necessary to provide density of parking and spur bases' matrix not less than 95% maximum Proctor density (ASTM-698).

- (4) In Section 4, PLACEMENT, the following shall also apply. The parking gravel surface coarse material shall be compacted as necessary to provide density of the gravel surface coarse matrix not less than 95% maximum Proctor density (ASTM-698).
- (5) Section 5, MEASUREMENT AND PAYMENT, shall not apply. Payment for this work shall be measured to the nearest square foot area within the neat lines shown on the drawings. Such payment shall be full compensation for furnishing, delivery, placing and compacting the aggregate, and for all other items necessary and incidental to the performance of the work. Compensation for this item shall also included payment for the following Subsidiary Items: Clearing and Grubbing, Pollution Control, Traffic Control, Water for Construction, Soil Stabilization Additives, Structure Concrete, Earthfill and Excavation.

**a. Bid Item CLIN 0007, Restore Gravel Parking to Original Turf Grass**

- (1) This item shall consist of furnishing, placing, treating with moisture, soil, shaping, grading, compacting and grow or supply turf. Restoring the area with same surrounding grass species and restore the parking lot to original turf grass state as shown in the drawings
- (2) Care After Establishment Water newly planted turf areas regularly. Water lightly and frequently to prevent the surface from drying. As the young seedlings develop or as the sprigs or sod begin to take root and spread, reduce the frequency of watering and increase the amount of water applied per watering. This permits the development of a deep root system and ultimately reduces the amount of water needed. The time to mow will depend on the species planted. Mow newly planted areas as soon as the grass is 1" to 2 inches high. Mow frequently enough to prevent removing more than half of the growth at any one mowing. Fertilize newly seeded or sprigged turf grasses once a month with a complete fertilizer at a rate equivalent to 1 pound of nitrogen per 1,000 sq. ft. Follow soil test recommendations, but in the absence of this information a complete fertilizer should be used. On sandy textured soils, supplement the complete fertilizer with an additional pound of nitrogen between applications of the complete fertilizer. Water after each application of fertilizer.