

## **Statement of Need**

### **Purchase of Materials used for Burials and Grounds Maintenance**

Fort Sam Houston National Cemetery has a need for the following materials for burials and grounds maintenance:

1. **Screened Fill Sand (priced per yard)**

- a. The screened fill sand shall be composed of fragments of durable rock screened free from undesirable quantities of soft or flaky particles, loam, and organic or other deleterious material.

2. **Screened Planting Topsoil**

- a. The planting topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, and/or loamy sand conforming to ASTM D 5268 Topsoil, with pH range of 5.5 to 8.5, a minimum of 4 percent organic material content and a maximum of 20% organic material content; free of weed seeds, noxious weeds, invasive plants, stones 1 inch or larger in any dimension, foreign matter and other extraneous materials harmful to plant growth, including, but not limited to roots, plants, sod, stones, and clay lumps.
- b. Topsoil shall not be infested with nematodes, grubs, other pests, pest eggs, or other undesirable organisms and disease-causing plant pathogens.
- c. Topsoil shall be friable and with sufficient structure to give good tilth and aeration. Continuous, air-filled, pore-space content on a volume/volume basis shall be at least 15 percent when moisture is present at field capacity. Soil shall have a field capacity of at least 15 percent on a dry weight basis.

**Crushed Rock, General:**

- a. Crushed Rock shall be composed of limestone, granite, dolomite, or any other hard, sound rock that is produced by blasting and then crushing.
- b. Crushed Rock shall be clean, hard, tough, and durable fragments (excluding schist, shale or slate) of uniform quality throughout and free of any detrimental quantities of soft, friable, thin, elongated or laminated pieces, disintegrated material, dirt, organic matter, oil, alkali, or other deleterious substance.
- c. Crushed Rock shall consist of hard durable fragments of particles of rock, free of stripping dirt, vegetation, and other foreign substances. Hardness: Resistant to breaking, crushing or crumbling
- d. Shape: Sharp and angular (Do not use rounded pea gravel.)
- e. Gravel or Crushed Gravel mixed with filler, sand, crushed rock, or crushed stone is **NOT** an acceptable substitutes
- f. The gradation of crushed rock shall comply with ASTM D-448. Sampling and sieve analysis shall be performed in accordance with ASTM D-75 and ASTM C-136.

3. **1/2" Crushed Rock Base**

- a. In addition to the specifications for Crushed Rock listed above in a. through e., this 1/2" crushed rock shall consist of the product obtained by crushing rock or stone so that it meets the following gradation requirements:

Sieve Size	% of Passing
1/2 inch	100
3/8 inch	70 – 90
No. 4	50 – 72
No. 8	35 – 55
No. 40	14 – 32
No. 200	4 – 10

4. **3/4" to Dust Crushed Limestone Base (TXDOT Item #247, Grade 3, Type A Flexible Base)**

- a. In addition to the specifications for Crushed Rock listed in para 3a. through e., this flexible base shall consist of the product obtained by crushing rock or stone so that it meets the following gradation requirements:

Sieve Size	% Retained, Cumulative
1-3/4 inch	0
3/4 inch	1 – 5
1/2 inch	5 – 20
3/8 inch	20 – 40
No. 4	45 – 75
No. 40	50 – 85

- b. The portion of any component or of the completed course passing the No. 40 sieve shall be either non-plastic or have a liquid limit not greater than 40 and a plasticity index not greater than 12.
- c. The material type shall be Type A: Crushed stone produced and graded from oversize quarried aggregate that originates from a single, naturally occurring source. Do not use gravel or multiple sources.

5. **Mulch** – Texas Native Hardwood Mulch

- a. Color
- b. Particle size and consistency: ground and screened (medium coarseness)
- c. No contamination with plastic; glass; metal; rock nor paper (none visible; less than 0.5 percent by weight or volume)

**IMPORTANT: Due to bridge height and tunnel span restrictions, all deliveries shall be made using a 10-CY dump truck or smaller. A single tandem trailer could be used in conjunction with the 10-CY dump truck.**