

# Special Specification 5126

## Natural Stone Veneer



### 1. DESCRIPTION

Collect or furnish and construct natural stone veneer for various types of culvert wingwalls.

### 2. MATERIALS

- 2.1. **Stone.** Collector furnish natural Bastrop County red sandstone. The type of stone must be gathered at designated locations in Bastrop and Buescher State Parks, or quarried in Bastrop, Texas, as approved.
- On-Site:** Collect existing red sandstone within the limits of Bastrop and Buescher State Parks, and modify it to use as veneer on headwalls as shown on the plans or as directed.
- Furnished:** Furnish red sandstone from a source outside Bastrop and Buescher State Parks for veneer on headwalls as shown in the plans or as directed.
- 2.1.1. **Color.** Stone quarried outside Bastrop and Buescher State Parks must match other existing sandstone in the parks as approved.
- 2.1.2. **Dimensions.** 2 in. to 3 in. nominal bed thickness, 3 in. to 6 in. nominal height, random lengths between 1 ft. 0 in. and 1 ft. 6 in. (except as allowed at corners).
- 2.1.3. **Finish.** Provide finished stone that consists of the following.
- Exposed Faces: Roughly chopped or split face.
  - Bed and Joint Surfaces: Cut or sawn square and level.
  - Back Face: Roughly chopped or sawn smooth.
- 2.1.4. **Arrangement.** Provide stones in a natural ledge running bond with fixed course heights and random lengths. Provide a minimum bond lapping of 4 in. Bond and interlock each course at pier corners. Do not use stones with less than nominal 10 in. primary face at corners.
- 2.1.5. **Samples.** Submit 1 sample of a representative size mix, at least 5-sq. ft. for approval. The sample will be typical of the grade, color, and finish specified.
- 2.2. **Mortar.** Provide mortar consisting of lime, sand, mud, and cement.
- 2.2.1. **Proportion Requirements.** The mortar will be mixed 1 part lime to 6 parts of sand, then 6 parts of mud to 1 part of cement.
- 2.2.2. **Cementitious Materials for Mortar.** Provide cementitious material that conforms to the following.
- Masonry Cement. Conforming to ASTM C91.
  - Mortar Cement. Conforming to ASTM C1329.
  - Lime. Conforming to ASTM to ASTM C207 Type S or ASTM C5.
- 2.2.3. **Color.** Mortar color will be natural color only.
- 2.2.4. **Aggregates.** Sand for mortar will be natural sand or quartz sand only, and comply with ASTM C144.

- 2.2.5. **Water.** Use only clean, potable water.
- 2.3. **Mud.** Use soil from areas adjacent to culvert and wall work, free of all organic materials mixed with water.
- 2.4. **Wall Ties.** Refer to the plans and details.

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### 3. CONSTRUCTION METHODS

- 3.1. Construct with skilled stone masons and fitters able to perform necessary field cutting and fitting as stone veneer is set.
- 3.2. Gather existing sandstone from designated locations within Bastrop and Buescher State Parks for reuse as shown on the plans or as directed.
- 3.3. Do not mix or place mortar when the temperature is 40°F or less and falling. When ambient temperature exceeds 100°F, or 90°F with winds exceeding 8 mph, do not spread mortar beds more than 48 in. in advance of masonry and set masonry within 1 min. of spreading mortar. Otherwise, use mortar within 2 hrs. after initial mixing. Protect unit masonry work with appropriate countermeasures when temperature or humidity conditions cause excessive evaporation from mortar.
- 3.4. Mix mortar in accordance with ASTM C270. Unless otherwise approved, do not use admixtures with mortar. Thoroughly mix ingredients in quantities needed for immediate use.
- 3.5. Clean stones with fiber brushes and clean water before settings. Maintain a saturated surface dry to slightly wet condition for stone immediately before setting.
- 3.6. Provide full mortar setting bed of the specified thickness to fully support stone over bearing surface. Set stone level and at proper alignment. Completely fill beds and joints, and rake the mortar to a depth of 1/2 in. Point beds and joints with a concave tooled joint. Keep exposed faces of stone free from mortar. Mortar must not be visible on the exposed portion of the visible stones.
- 3.7. Provide wall ties or anchors as shown on the plans or as directed.
- 3.8. Cover top surface of veneer and wall cross-section overnight, weekends, and when raining during work hours.
- 3.9. Plastic or other weep tubes, or felt wicks, will be placed in joints where moisture may accumulate within the wall, and as shown on the plans or as directed.
- 3.10. Perform adjustment of natural stone veneer as required until acceptance.
- 3.11. Replace stone which becomes broken, chipped, stained or otherwise damaged. Replace unsatisfactory joints as required to provide a neat, uniform appearance.
- 3.12. Clean stone veneer promptly after installation with fiber brushes and clean water, or a mild cleaning agent. Do not use wire brushes, acidic cleaning agents, or cleaners that contain caustic or harsh fillers or abrasives.
- 3.13. Maintain site conditions to avoid damage, discoloration or deterioration to natural stone veneer during subsequent construction.

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### 4. MEASUREMENT

This Item will be measured by the square foot of surface area of installed Natural Stone Veneer.

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**5. PAYMENT**

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Natural Stone Veneer" by the depth specified in the plans. This price will be full compensation for collecting or furnishing the stone, placing, finishing and cleaning of the Natural Stone Veneer, caststone caps, plaques, and for all materials, tools, labor, equipment and incidentals necessary to complete the work. The preparation of the samples or mock ups described will not be paid for directly and will be considered subsidiary to this bid item.