

**SECTION 02280**  
**SOD SHOULDERS**

**02280.01 GENERAL**

**A. Description**

Constructing sod shoulders shall include, but not necessarily be limited to, the forming and compacting of earth shoulders and the placing and establishing of solid sodding in accordance with the Contract Documents.

**B. Related Work Included Elsewhere**

1. Protection of the environment; Section 01500.
2. General excavation; Section 02210.
3. Structure excavation; Section 02220.
4. Borrow excavation; Section 02240.
5. Trench excavation; Section 02250.
6. Placing salvaged topsoil; Section 02813.
7. Furnishing topsoil; Section 02813.
8. Solid sodding; Section 02830.

**C. Quality Assurance**

1. Materials
  - a. Quality assurance requirements for earth shoulder materials shall be as specified in Section 02260.01.
  - b. Quality assurance requirements for solid sodding shall be as specified in Section 02830.01.
2. Field Tests
  - a. The County will arrange for all in-place moisture/density testing on the Project. The Engineer shall determine the number of samples to be taken and the frequency of tests required to confirm compliance with the Specifications. The Contractor shall assist the Engineer in obtaining samples and shall provide a smooth surface for conducting moisture/density tests. The Contractor will not be entitled to any claim for additional compensation due to the testing requirements specified herein.

- b. At the start of sod shoulders construction, the Contractor shall demonstrate to the Engineer that the compaction density specified in Section 02260.03 can be attained by the compaction equipment and methods the Contractor intends to use. Once the method and equipment has been approved, no substitutions will be permitted without the Engineer's approval.
  - c. Should testing determine that the required density is not being met, or the material is outside the specified moisture range, the Contractor shall, without additional compensation re-excavate, re-work, and/or re-compact the particular layer or section until the required density and moisture are attained.
3. Tolerances

Generally discernible variations in the elevation of shoulders or alignment of the shoulder line from that shown on the Plans will not be permitted. The cross slope of the completed shoulder shall in no instance be less than that shown on the typical cross section nor shall not exceed that amount by more than 20%. Variations in excess of those noted above shall be corrected to within the tolerances indicated in order to preserve a neat and uniform appearance. In order to secure uniformity and to avoid variations, the Engineer may require the Contractor to provide a shoulder template so designed as to indicate the proper pitch or slope of the shoulder surfaces for the full width. When the shoulder template is required, the finishing operations will be checked at intervals as may be necessary.

**D. Submittals**

- 1. Embankment Materials
  - a. Material test results shall be submitted for all embankment materials furnished from other than a licensed commercial operating supplier. The tests shall demonstrate that the material meets all the requirements specified herein.
  - b. Certificates of compliance shall be submitted in accordance with the "General Provisions" for embankment materials furnished from a licensed commercial operating supplier. The certificates shall state that the material meets the requirements specified herein.
- 2. Sod

Quality assurance and submittals for sod shall be as specified in Section 02830.01.

**02280.02 MATERIALS****A. Materials Furnished by the County**

The County will not furnish any materials for sod shoulder construction.

**B. Contractor's Options**

The Contractor may use suitable materials obtained from General, Structure, Borrow, Trench, and other excavations for the construction of shoulders.

**C. Detailed Material Requirements**

Material used for earth shoulders shall meet the requirements of Sections 02260.02 and 02830.02.

**02280.03 EXECUTION****A. Earth Shoulders**

Earth shoulders shall be formed and compacted as soon as possible after the surfacing item is complete but in the case of concrete surfacing, not until permission has been given by the Engineer.

Any damage to the surfacing or pavement by reason of carelessness or negligence on the part of the Contractor shall be repaired to the satisfaction of the Engineer at the sole expense of the Contractor.

The entire shoulder area shall be uniformly and thoroughly compacted by rolling with compaction equipment as described in Section 02260.03.

The areas to be shaped and compacted shall include all shoulder areas constructed to the specified cross slope, except paved surfaces. The construction of the shoulders shall be in accordance with the typical cross section of improvement, which is shown on the Plans or the Standard Details.

**B. Sodding**

After the earth shoulder has been shaped and compacted, the surface shall be solid sodded in accordance with the requirements of Section 02830.03.

**02280.04 METHOD OF MEASUREMENT**

Sod shoulders will not be measured for payment.

**02280.05 BASIS OF PAYMENT**

Sod shoulders will not be paid for as such, but the cost of the work required under this item will be considered as incidental to the appropriate class of Excavation or Borrow. The price bid for those items shall include the construction of shoulders.