

ITEM 130

BORROW

- 130.1 Description. Borrow shall consist of proper utilization of materials secured from sources obtained by the Contractor and approved by the Engineer. Compaction of borrow shall conform to the density control method as outlined in the Item 132, "Embankment".

Borrow shall be used only when there is an insufficient quantity of suitable material obtained on-site as outlined by Item 132, "Embankment" and borrow is shown on the bid form and/or directed by the Engineer and then only from approved sources.

- 130.2 Materials. Borrow material used for embankment shall consist of soil having a plasticity index not less than 12, nor more than 20 when tested in accordance with ASTM Test Method D4318, "Liquid Limit, Plastic Limit and Plasticity Index of Soils" or as directed by the Engineer. The maximum liquid limit allowed is 45, unless otherwise approved by the Engineer. The Contractor is required to inform the County Engineer of the location of the pit or pits out of which the fill material is to be taken and shall provide samples of the material for approval by the Engineer. In the event the material is not acceptable, as determined by the Engineer, the Contractor shall find other pit locations. All fill material shall be free from organic matter and deleterious material.

The use of a blend of cohesive and granular soils to achieve the required plasticity index will not be permitted.

- 130.3 Construction Methods. All suitable material obtained on-site and/or from borrow sources shall be used in the formation of embankments as required by the Item 132, "Embankment", or shall otherwise be utilized as indicated on the plans or as directed, and the completed work shall conform to the established alignment, grades and cross-section. During construction, the borrow sources shall be kept drained, insofar as practicable, to permit final cross-sections to be taken when required.

The borrow source shall be left in a suitable condition, so as to provide proper drainage where practicable.

The Engineer shall be notified sufficiently in advance of opening any approved borrow source to permit necessary testing, prior to the use of the material as borrow.

The borrow site shall not be a water of the United States or environmentally sensitive area. It is the contractor's responsibility to obtain any and all Federal, State or Local permits associated with operation of the borrow site; if it is not an approved commercial borrow site.

130.4 Measurement and Payment. The quantity of borrow to be paid for shall be the number of cubic yards of material computed by theoretical cross-sections, obtained from the drawings and material ground lines, using the method of average end areas. Field cross-sections will not be performed after construction has begun.

After bidding, if the successful contractor feels there is an error in the estimated quantities for borrow as shown on the bid sheet, he shall provide, at no expense to Harris County, sufficient documentation in the form of recoverable cross-sections and supporting computations. This documentation shall be provided prior to proceeding with any borrow work. No adjustments to the borrow quantities will be allowed once work has begun.

If the documentation provided by the contractor is deemed by Harris County to be insufficient, additional supporting information may be required, at no expense to Harris County.

If the documentation, provided by the contractor, is deemed by Harris County to be correct and is representative of actual field conditions, then the derived quantities shall be the basis of payment for borrow.

Borrow shall only be utilized when the amount of embankment exceeds all useable on-site material and shall then only be used when shown on the bid sheet.

The Contractor must submit all required documentation within fourteen (14) calendar days of the project start, or within fourteen (14) calendar days of horizontal and vertical control information being provided, whichever occurs last. Requests to evaluate borrow quantities will not be considered after this deadline.

All work performed as required herein and measured as provided above, will be paid for at the unit price bid for "Borrow", which price shall be full compensation for furnishing all labor, for all materials, for all royalties and freight involved, for all hauling, delivery and spreading on the road and compacting complete and in place and for all tools, equipment and incidentals necessary to complete the work.

Borrow quantities where shown in the proposal as Extra Work Item shall be measured as loose truckload in cubic yards as delivered to the jobsite.

There are line code(s), description(s), and unit(s) for this item.

NOTE: This specification requires other Standard Specifications

Item 132, Embankment

Item 205, Subgrade

END OF ITEM 130

SUMMARY SHEET

ITEM 130 - BORROW

Other Specifications Required

Item 132, Embankment
Item 205, Subgrade

Reference Standards

1. ASTM D4318, “Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils”

Description

Described the method of removal and the requirements for borrow material. Specifies a P.I. requirement of 12-20. The maximum liquid limit allowed for the material is 45.

Payment

By the contract unit price per cubic yard based on in-place measurements, taken at the borrow site, by the method of average end areas.

DO NOT INCLUDE THIS SHEET IN THE CONTRACT DOCUMENTS