
**SECTION 02110
BORROW**

PART I: GENERAL

1.1 GENERAL REQUIREMENTS

- A. Soil materials for embankment.

1.2 MEASUREMENT AND PAYMENT

A. Unit Prices:

1. Payment for borrow shall be on a cubic yard basis calculated by theoretical quantities using average end area method based on the Drawings.
2. Refer to Section 01270 – Measurement and Payment for unit price procedures.

B. Stipulated Price (Lump Sum):

1. If Contract is Stipulated Price Contract, payment for work in this Section shall be included in Total Stipulated Price.

1.3 REFERENCES

A. ASTM – American Society for Testing and Materials

1. ASTM D2216 – Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock and Soil Aggregate Mixtures.
2. ASTM D4318 – Standard Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils.

B. CFTS – City of Friendswood Technical Specifications.

1.4 SUBMITTALS

- A. Conform to requirements of Section 01330 – Submittal Procedures.
- B. Submit location and description of proposed borrow area for approval.
- C. Submit material samples for testing.

PART II: PRODUCTS

2.1 SOIL MATERIAL

- A. Borrow material to be used for embankment shall be free of lumps greater than six inches (6 In), rocks larger than three inches (3 In), organic material, chemical waste or other contamination and debris. Take borrow material from sources approved by the Project Manager.

- B. Material shall have a plasticity index not less than twelve (12), nor more than twenty (20) when tested in accordance with ASTM D4318. Maximum liquid limit shall be forty-five (45), unless approved by the Project Manager. Blending of cohesive and granular soils to achieve required plasticity index is not allowed.

PART III: EXECUTION

3.1 PREPARATION

- A. Notify the Project Manager and testing laboratory five days (5 D) in advance of opening borrow source to permit obtaining samples for qualification testing. If material does not meet specification requirements, locate another source of borrow.
- B. Clear approved source area of trees, stumps, brush, roots, vegetation organic matter and other unacceptable material before excavation.

3.2 TESTS

- A. Test and analyze soil materials in accordance with ASTM D4318 and ASTM D2216 under provisions of Sections 01470 – Testing Laboratory Services and 01475 – Quality Control Testing Procedures.

3.3 EXCAVATION

- A. Provide adequate drainage of surface water so that surface water run off does not enter borrow pit excavation.

3.4 HAULING

- A. Use covered trucks to transport material to site of embankment construction. Conform to requirements of Section 01555 – Traffic Control and Regulation.

END OF SECTION