

Section 02319

**BORROW**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Soil materials for embankment.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

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

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ASTM D 2216 - Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil Aggregate Mixtures.
- B. ASTM D 4318 - Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.04 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 2 PRODUCTS

2.01 SOIL MATERIAL

- A. Grade borrow material used for embankment free of lumps greater than 6 inches, rocks larger than 3 inches, organic material, chemical waste or other contamination, and debris. Take borrow material from sources approved by City Engineer.
- B. Use material with plasticity index not less than 12, nor more than 20 when tested in accordance with ASTM D 4318. Maximum liquid limit shall be 45, unless approved by City Engineer. Do not use blend of cohesive and granular soils to achieve required plasticity index.

### PART 3 EXECUTION

#### 3.01 PREPARATION

- A. Notify City Engineer and testing laboratory 5 days in advance of opening borrow source to permit obtaining samples for qualification testing. When 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.

#### 3.02 TESTS

- A. Test and analyze soil materials in accordance with ASTM D 4318 and ASTM D 2216 under provisions of Section 01454 - Testing Laboratory Services.

#### 3.03 EXCAVATION

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

#### 3.04 HAULING

- A. Use covered trucks. Conform to requirements of Section 01555 - Traffic Control and Regulation.

#### 3.05 EMBANKMENT

- A. Conform to requirements of Section 02330 - Embankment.

END OF SECTION