

## SECTION 2600

### SUBGRADE PREPARATION

#### PART 1 - GENERAL

##### 1.1 Description

###### A. Description of the Work

The work to be performed in accordance with this section includes the preparation of native or excavated soils prior to the placement of subbase, base course, pavement, curb, gutter, driveways, sidewalks or other structures.

The work shall include the furnishing of all labor, tools, equipment, materials and performing all required operations to provide a complete item in accordance with the project plans and these specifications.

###### B. Related Work Specified Elsewhere

Clearing and Grubbing	Section 2100
Earthwork	Section 2200
Trench Excavation and Backfill	Section 2300

##### 1.2 Quality Assurance

###### A. Reference Test Standards and Specifications

ASTM D1556, Density of Soil in Place by the Sand-Cone Method.

ASTM 1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.

ASTM D6938-08a, Density of Soil and Soil-Aggregate in Place by Nuclear Methods.

ASTM D6938-08a, Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods.

Rock Correction Procedure for Maximum Density Determination, ARIZ 227.

## **B. Frequency of Testing**

### **1. Maximum Dry Density and Optimum Moisture Content, ASTM D1557.**

- a.** One test for each different class or type of material shall be provided by the prior to beginning construction.
- b.** **CONTRACTOR** shall provide additional test when previous test is suspect, due to subtle changes in the material, as determined by the **OWNER**.

### **2. Density of In-Place Soil by the Sand Cone or by Nuclear Methods, ASTM D1556 or D6938-08a**

- a.** **CONTRACTOR** will perform a minimum of one test per lift per 2,000 square yard per type of material.
- b.** **CONTRACTOR** will perform additional test as required to ensure proper compaction.

## **C. Testing Tolerances**

### **1. Percent Relative Compaction**

Not less than as specified on plans or in these specifications.

### **2. In-Place Moisture Content**

As required to achieve minimum relative compaction.

### **3. Soft or Yielding Surfaces**

Regardless of the percent compaction obtained by test, areas which are soft and yield under the load of construction equipment are to be removed and replaced at no additional cost.

## **1.3 Submittals**

### **A. Materials Test Report**

1. Report on maximum dry density and optimum moisture content prior to beginning of construction.

#### **1.4 Job Conditions**

##### **A. Soils Report**

This section does not apply to this project.

### **PART 2 - MATERIALS**

#### **2.1 General**

##### **A. Unsuitable materials not to be incorporated in the work.**

1. Organic matter such as peat, mulch, organic silt or sod
2. Soil containing expansive clays
3. Material containing excessive moisture
4. Poorly graded coarse material
5. Material with particle sizes in excess of 6 inches
6. Material which will not achieve density and/or bearing requirements

#### **2.2 Earthwork Balance**

No attempt has been made to estimate cut and fill earthwork quantities. The **CONTRACTOR** is solely responsible for an estimation of quantities of earthwork materials to construct the project as shown.

### **PART 3 - EXECUTION**

#### **3.1 Preliminary Investigation of the Work**

The **CONTRACTOR** is to satisfy himself that all preliminary work including clearing, grubbing and staking has been performed in accordance with these specifications prior to subgrade preparation.

### 3.2 Subgrade Preparation

#### A. Scarification

Scarify and loosen to a minimum depth of 6 inches. Remove any particles larger than 6 inches.

#### B. Moisture Conditioning

Condition the soil by aerating or wetting to the moisture content required to obtain the minimum compaction requirements. Mix the soil such that the moisture content is uniform throughout the lift. No payment will be made for conditioning of the soil, wetting, or drying.

#### C. Compaction

Construct subgrade cut and fill areas to achieve a uniform soil structure. Compact the subgrade to the percent relative compaction indicated on the plans. When not shown on the plan, compact as indicated herein.

<b>Major streets, other streets and traffic ways</b>	95%
Curbs, gutters and sidewalks	95%
Area to receive Engineered fill	95%

#### D. Subgrade Tolerances

<b>Below pavement, sidewalk, curb and gutter</b>	$\pm 1/4$ inch
Below base course	$\pm 3/4$ inch

Variations from the plan grade and cross section shall be compensating so that the average grade and cross section are obtained.

## **PART 4 - MEASUREMENT AND PAYMENT**

### 4.1 Measurement

No measurement will be made for this item.

#### **4.2 Payment**

No payment will be made for subgrade preparation. This item shall be considered incidental to Section 2630, Asphalt Concrete Pavement.