

ITEM 613. 06 11 M – ROADWAY SHOULDER SOIL MIX

DESCRIPTION:

The work shall consist of furnishing, mixing and placing a load bearing mixture of topsoil and soil amendments in conformance with the lines, grades and thicknesses shown in the contract documents or as designated by the Engineer.

MATERIALS:

- A. Topsoil Portion: All the requirements of §713-01 Topsoil shall apply except as follows:
1. Gradation:

Sieve Size	Percent Passing by Weight
50mm	100
2.0mm	90-100
0.425 (#40)	60-70
0.05mm	35-45
0.002mm	15-20
 2. Soluble Salts (electrical conductivity) shall not exceed 4 mmhos/cubic centimeter.
 3. Levels of the following nutrients, analyzed from a portion of the samples used for testing under 713-01, shall fall within the following:

Nitrate	1 to 2.5 ppm
Phosphorus	0.1 to 0.3 ppm
Potassium	6 to 14 ppm
Magnesium	50 to 70 ppm
Manganese	2 to 5 ppm
Iron	0.5 to 2.0 ppm
Zinc	0.004 to 0.1 ppm
Calcium	400 to 800 ppm

If the soil is deficient in any nutrient, supplementary fertilizer shall be added to meet these requirements.

- B. Soil Amendment - Shall be Lassenite Pozzolan (a naturally-occurring volcanic material), coarse size, as supplied by Western Pozzolan Corporation, 417-355 Scott Road, Doyle, CA 96109 (telephone: 530-827-2549) or approved equal.

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CONSTRUCTION DETAILS:

1. **Alternative testing procedure:** The EIC may allow the Contractor to process soil tests at no additional cost to the State at a certified, independent soil testing laboratory if the NYSDOT Geotechnical Bureau indicates that they are unable to perform one or more of the tests within the time constraints of the project or for any other reason. Any such tests shall follow the Soil Testing Procedures for the Northeastern United States, 2nd Edition, Northeast Regional Publication, Agricultural Experiment Station, University of Delaware, Bulletin # 493, 12/95.
2. The topsoil portion and Lassenite Pozzolan soil amendment, and any fertilizer or limestone necessary to meet the requirements of this specification, shall be mixed prior to placement.
 - A. Thoroughly mix the topsoil and Lassenite Pozzolan, by percent volume, as follows:

Topsoil	80%
Lassenite Pozzolan	20%
 - B. The topsoil and Lassenite Pozzolan soil amendment shall be mixed in a manner that assures the resulting mix is uniformly blended and free of clods.
3. The Contractor shall remove the existing grass, soil, and foreign objects to a depth, unless otherwise specified, of 300 mm below the top of the existing curb and proposed finish grade, and to the dimensions indicated on the Plans.
4. Roadway Shoulder Soil Mix shall be placed in the excavated locations indicated on the Plans in 150 mm lifts. Each lift shall be compacted to a bulk density of 1.75 grams/cubic centimeter. When the Engineer determines density tests are necessary, the contractor shall provide any assistance required to facilitate such tests. Such assistance shall include, but will not be limited to, excavation and backfill of test holes. This work shall be considered to be incidental to construction.

METHOD OF MEASUREMENT:

Roadway Shoulder Soil Mix shall be measured per cubic meter measured in place.

BASIS OF PAYMENT:

The unit price bid per cubic meter shall include the cost of all labor, materials and equipment required to complete the work in accordance with the plans and specifications and as directed by the Engineer.