

**ITEM 613.01----01 WETLAND TOPSOIL**

**DESCRIPTION:**

This work shall consist of furnishing, stockpiling and placing wetland topsoil at the locations shown in the plans and in conformance with the lines, grades and thicknesses shown in the Contract Documents or as directed by the Engineer.

**MATERIALS:**

Wetland topsoil shall be obtained from either:

- existing impacted delineated wetlands shown on the plans
- existing impacted upland areas
- or manufactured from a commercial source

Prior approval must be obtained from the Engineer, in consultation with the Regional Landscape Architect, prior to excavating topsoil for stockpiling and eventual use as wetland topsoil. Any existing topsoil, whether in place prior to excavation or while stockpiled, which exhibits the presence of invasive species (such as common reed and purple loosestrife), as determined by the Engineer in consultation with the Regional Landscape Architect, shall not be used in the wetland mitigation areas.

Wetland topsoil shall comply with Subsection 713-01, Topsoil, of the Standard Specifications, except as noted herein:

Organic Granular Soil: The organic granular soil material shall be free from refuse, foreign materials, roots, hard dirt, stiff clay, cobbles, materials deleterious to plant growth, or others which will prevent the formulation of a uniform mixture when blended with pulverized, well composted leaf mulch or rotted manure meeting NYSDOT specification 713-15. The pH of the blended material shall not be less than 6.0 and not greater than 7.0. Any blended material that is stockpiled on site shall be located high and dry, outside of the stream channel and pond basin, protected from precipitation, and prevented from mingling with storm water runoff.

- A) Granular soil shall be guaranteed clean fill material obtained from a commercial sand and gravel pit, not originating from reconstituted or recycled pavement materials. The granular soil portion shall constitute 80 to 85 percent of the mixture, and shall have the following gradation:

<u>Sieve Size</u>	<u>Percentage Passing by Weight</u>
No. 16	100%
No. 40	85-100%
No. 60	40-100%
No. 200	5-10%

- B) The organic portion shall constitute 15-20% of the mixture, and be comprised of well pulverized and composted leaf mulch or rotted manure.

- C) The Contractor shall blend the organic portion with the granular portion under dry conditions to produce a homogenous mixture. A one kilogram representative sample of the blend, for each 500 cubic meters of stockpiled material shall be submitted to the Engineer for approval prior to use. Any required testing of the soil materials shall be conducted at the Contractor's expense.

Sampling and testing shall be performed in accordance with section 713-01. The existing impacted delineated

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wetland topsoil excavated for the wetland mitigation site(s) shall be exempt from the Sampling & Testing requirements of Section 713-01 – Topsoil.

If the existing impacted upland soil or the manufactured wetland soil mix fails the testing requirements of Section 713-01 - Topsoil, the Contractor shall amend the soil as necessary, by methods approved by the Engineer, to meet the above requirements.

### **CONSTRUCTION DETAILS:**

1. **Site Layout and Work Plan.** The Contractor shall stake out the limits of the areas proposed for stripping and use as wetland topsoil. The Engineer, in consultation with the Regional Landscape Architect, will review the areas to determine suitability of soil and identify if invasive/non-desirable species are present. If the area is determined to be unacceptable, the contractor shall stakeout additional areas for review and use as wetland topsoil.

Access routes and a work plan shall be submitted to the Engineer describing the methodology and equipment that will be utilized to complete this work and the stripping of the wetland topsoil.

No work shall commence in the designated areas until the Engineer has reviewed and provided the Contractor with written acceptance of the stake out and work plan.

2. **Stripping of Topsoil.** Topsoil and existing wetland topsoil shall be stripped from the approved staked out areas to the designated depths prior to starting the general excavation in an area. After stripping, the wetland topsoil shall be immediately placed or stockpiled in a location approved by the Engineer.
3. **Preparation of Areas to Receive Wetland Topsoil.** The subsoil within the areas to be covered by wetland topsoil shall be graded so that the completed work after the wetland topsoil is placed shall conform to the specified lines and grades. The contractor shall scarify or till the surface of the subsoil to a depth of 150 mm before the wetland topsoil is placed to permit bonding the wetland topsoil with the subsoil. Tillage by disking, harrowing, raking or other approved methods shall be accomplished in such a manner that depressions and ridges formed by tillage shall be parallel to the contours.
4. **Placing and Spreading of Wetland Topsoil.** The placement of wetland topsoil shall occur such that the wetland plantings can be installed immediately thereafter, as practicable, as approved by the Engineer.

Wetland topsoil in an unworkable condition due to excessive moisture, frost or other conditions shall not be placed until it is suitable for spreading. Wetland topsoil shall be placed on the designated area and spread to the specified thickness. After the wetland topsoil is spread all large stiff clods, rocks, roots and other foreign matter shall be cleared and disposed of by the Contractor so that the finished surface will be acceptable for subsequent work such as seeding, mulching or planting.

5. **Restoration.** The sites of all stockpiles and areas adjacent thereto which have been disturbed by the Contractor shall be graded if required and put into a condition acceptable for seeding. Surplus wetland topsoil shall be used to flatten embankment slopes or placed in other locations approved by the Engineer.

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**METHOD OF MEASUREMENT:**

Wetland topsoil quantities will be measured as the number of cubic meters of in-place wetland topsoil within the wetland creation areas which meet the material requirements noted above. Quantities shall be computed based upon the area of the wetland creation sites at a depth as shown in the Construction Documents except where revised payment lines are established by the Engineer.

**BASIS OF PAYMENT:**

The unit price bid shall include the cost of furnishing all equipment, labor and materials necessary to complete the work to the satisfaction of the engineer, including the handling, stockpiling, placement, testing and soil amendments. Stripping (excavation) of the wetland topsoil shall be paid for under the appropriate excavation item as noted in the Contract Documents.

DISAPPROVED BY EI 12001