SECTION 32 94 33
PLANTERS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Construction/Installation of Cedar Planters as indicated on the drawings as well at the Construction/Installation of Recycled HDPE (plastic) Planters as indicated on the drawings.

B. Soil Requirements

C. Associated requirements

1.02 CEDAR PLANTERS

A. GENERAL
   1. All work shall include everything necessary for a complete and functioning installation.

1.03 SUBMITTALS

A. See Section 01 33 00 – Submittal Procedures, for submittal procedures.

B. Product Data: Provide manufacturer's specifications and descriptive literature, installation instructions, and maintenance information.

C. Shop Drawings: Indicate plans for each unit or groups of units, elevations with model number, overall dimensions; construction, and anchorage details.

PART 2 PRODUCTS

2.01 CEDAR PLANTERS

A. The Contractor shall furnish and install where indicated on Contract Drawings, cedar planters and appurtenances.

B. Cedar planters shall be 8'-6" long by 4'-6" or 6-'6" wide by 2'-4" above finished adjacent grade (materials vary, see plans).
   1. The planters shall be constructed of 6' x 6" Western Red Cedar timbers (Construction Grade or better), with two (2) 1" by 5" cedar board spacers between each timber. The timbers shall be nailed together using 10" hot dipped galvanized spikes, installed 24" o.c. or a minimum of 3 per each side of the planter. Pre-drill holes for spikes 7" deep.
   2. Drainage stone shall be installed in the bottom of the planter as indicated on the drawings and topped with Mirafi 500X geotextile fabric or equal, with a 6" turn-up on all sides.
   3. The soil shall be a mix of 33% topsoil (see topsoil requirements below), 33% peat moss and 33% vermiculite.

2.02 RECYCLED HDPE PLANTERS

A. The Contractor shall furnish and install where indicated on Contract Drawings, recycled HDPE planters and appurtenances.

B. Recycled HDPE planters shall be 8' long by 4' wide or 8' long by 12' wide. (dimensions vary, see plans). All planters shall be above finished adjacent grade, see plans and details.
   1. The planters shall be constructed of 6" x 8" x 8' recycled HDPE timbers (Construction Grade or better), manufacturer shall be Mark Staar, www.markstaar.com, model SKU 6896, color shall be TO BE DETERMINED, with two (2) 3/8" bored holes and one (1) ½" bored hole in each timber as per the detail. The timbers shall be secured together using #3 and #4 carbon steel reinforcement bars respectively. Each #4 bar shall penetrate the underlying concrete curb to a depth of 8" and Permabond TA4610 structural acrylic adhesive or approved equal shall be used to cement rebars in place. Bored holes for rebar shall be 4" deep for all rebar in the top course of plastic timbers and for #3 bars in the bottom course.
   2. Drainage stone shall be installed in the bottom of the planter as indicated on the drawings and topped with Mirafi 500X geotextile fabric or equal, with a 6" turn-up on all sides.

3. The soil shall be a mix of 33% topsoil (see topsoil requirements below), 33% peat moss and 33% vermiculite.

2.03 TOPSOIL REQUIREMENTS

A. Topsoil shall be one grade only. It shall consist of natural loam topsoil free from subsoil, stones, sticks, roots, and debris of any kind. It shall be obtained from an area which has never been stripped and shall also be of uniform quality. It shall be removed to a depth of one (1) foot, or less if subsoil is encountered. If a truckload of topsoil is considered by the Authority to contain too much undesirable material to be corrected on site, the entire truck load shall be rejected. No topsoil shall be delivered in a frozen or muddy condition. Topsoil shall comply with the following requirements:

B. Acidity range - pH value 5.0 to 7.0

C. Organic content - 5% minimum not to exceed 14% as determined by weight loss on ignition of moisture free samples dried at 100 to 230 degrees Fahrenheit.

D. Sieve Analysis - ASTM designation C 117:
   1. Passing 2" sieve 100%
   2. Passing 1" sieve 95% to 100%
   3. Passing #4 sieve 90% to 100%
   4. Passing #l00 sieve 30% to 60%
   5. Passing #200 sieve 10% to 30%

E. The Housing Authority Inspector reserves the right to reject topsoil in which more than sixty-five percent (65%) of the material passing #l00 sieve consists of clay as determined by the Buoyoucous Hydrometer or decantation method. All percentages are to be based on dry weight of sample. Electrical Conductivity shall be less than 1500 mhos/cm. A higher level indicates excessive salt content. The testing method shall be the saturated paste method.

F. The Housing Authority Inspector may permit incorporation into the topsoil of additional humus to correct a deficiency of not more than one (1) percent in organic matter provided the topsoil otherwise complies with the requirements of the Specifications.

G. Representative samples of the topsoil shall be taken by the Contractor at the source and delivered to a recognized testing laboratory. Samples and certified analysis shall be submitted by the Contractor at his own expense for approval by the Authority. The chemical and mechanical analysis shall show the acidity range, organic content, clay content, sieve analysis and electrical conductivity. A statement shall accompany the certified report giving the location where the topsoil is obtained, the name and address of the owner of the topsoil and the approximate quantity of the topsoil.
   1. Approval of the tested sample shall not be construed as final acceptance of the topsoil. The Housing Authority Inspector reserves the right to take samples of the topsoil delivered to the site of the work and analyze them for comparison with the Specifications at ANY time during the contract period. The cost of this test will be borne by the Authority. Should the test show non-compliance with the Specifications, the Authority will charge the cost of any such tests to the Contractor. Topsoil delivered which does not comply with the Specifications will be rejected and shall be removed from the Development by the Contractor at no cost to the Authority.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field measurements are as shown on the drawings.

B. Verify that planters are installed in proper locations.

C. Verify that conditions are satisfactory for installation of planters prior to starting work.

3.02 PREPARATION

A. Remove debris, and other foreign materials from area under and adjacent to planters prior to installation.

3.03 INSTALLATION

A. Install planters according to drawings.

3.04 FIELD QUALITY CONTROL

A. Inspect each planter for damage and defects. If damaged or defective, replace.

B. Inspect each planter for proper soil and amendments.

3.05 CLEANING

A. Clean surfaces according to manufacturer's instructions to remove dirt, fingerprints, paint, or other foreign material and restore finishes to match original factory finish.

3.06 PROTECTION

A. Protect installed planters from subsequent construction operations.

END OF SECTION 32 94 33