

ITEM 010670

Item 0106701 - ACER REBRUM "RED SUNSET"

Item 0106702 - ACER RUBRUM COLUMNWARE "ARMSTRONG"

Item 0106703 - GLEDITSIA TRIACANTHOS INERMIS "SKYLINE"

Item 0106704 - PYRUS CALLERY PEAR "TRINITY"

Item 0106705 - PLATANUS ACERIFOLIA "LONDON PLANE TREE"

Item 0106706 - CELTIS OCCIDENTALIS "HACKBERRY"

Item 0106707 - ULMUS CARPINIFOLIA "HOMESTEAD"

DESCRIPTION

The work under this item shall consist of furnishing, planting and mulching the trees of the type and size as indicated. It shall also include all incidental operations, such as the care of the living trees and the replacement of dead or unsatisfactory trees.

REFERENCED ITEMS

None

REQUIRED SUBMITTALS

Material Certificate of Compliance:

Submit 5 copies of material certificate of compliance for trees in accordance with the contract general requirements.

Certified Test Report:

Submit 5 copies of certified test reports for soil backfill and fertilizer in accordance with the contract general requirements.

MATERIALS

Soil material to be used for pit backfill may originate from the "A" or "B" horizon as defined on the soil profile of the Soil Science of America.

Planting soil shall be made loose and friable, shall be free from refuse, stumps, roots, brush, weeds, rocks and stones 2" in overall dimensions.

The acceptable textural classes for planting soil shall be:

- * Loamy Sand, with not more than 80% sand

- * Sandy Loam
- * Loam
- * Silt Loam, with not more than 60% silt
- * Clay Loam, with not more than 30% clay
- * Sandy Clay Loam, with not more than 30% clay

Fertilizer shall be commercial grade 5-10-5 fertilizer.

Mulch material shall be wood chips or wood fiber mulch.

All trees shall be nursery-grown, first-class representatives of their normal species or varieties. They shall have well-furnished branch systems together with vigorous fibrous root systems.

Nursery-grown trees shall conform to the requirements as specified in the current edition of "U.S. American Standards for Nursery Stock."

All trees shall be subject to inspection and approval by the City Forester or representative and the Contractor shall be represented during the inspection.

CONSTRUCTION METHODS

1. PLANTING SEASON

Unless otherwise specified or directed by the Forester, the planting seasons shall be those indicated below. No planting shall be done in frozen ground or when snow covers the ground, or the soil is otherwise in an unsuitable condition for planting.

Planting Seasons

Spring: March 21 - May 1

Fall: October 1 - November 1

a. Locations

Trees shall be planted in locations designated by the City Forester. The Contractor shall properly locate trees to carry out the intent of the Forester. Trees near street intersections shall be planted no less than 25' from any street corner for safety in sight at cross streets. In the event that rock or underground construction work or other obstructions are encountered in any tree pit, the Forester shall be

notified immediately and the tree not planted until special instructions are given, or alternative locations are selected by the Forester.

b. Digging, Handling and Protection

Trees shall be handled at all times in accordance with the best horticultural practices and so the roots or balls are adequately protected from sun and drying winds. Balled and burlapped trees shall be dug with firm, natural balls of soil of a sufficient diameter to encompass fibrous and feeding roots.

c. Preparation for Planters

Pits

Reasonable care shall be exercised to have pits dug and so prepared prior to moving trees to their respective locations for planting to ensure that they will not be unnecessarily exposed to drying elements or physical damage.

Pit preparation shall include the excavation to the required depth, removal and disposal of existing unsuitable material and the furnishing of planting soil and peat backfill mixture.

Diameter

Diameter of pits for trees shall be a minimum of 2' greater than the diameter of the root-ball. The depth of pits for trees shall be enough to accommodate the ball when the tree is set to finished grade allowing for 12" of compacted soil in the bottom of tree's pits.

Soil Preparation

Soil used in the pits shall be planting soil as herein before specified, thoroughly mixed equally with a mixture of five parts of peat humus and one part of fertilizer (5-10-5) to twenty parts of acceptable planting soil.

d. Planting Operations

Staking

Stakes shall be equally spaced around each tree and the end treated with wood preservative, and shall be driven vertically into the ground to a depth below the finished grade in such a manner as not to injure the ball or roots. Trees shall be fastened to each stake at a height of approximately 5' by means of two (2) strands of #12 gage galvanized wire and hose as above stakes shall be uniform in height.

When balled and burlapped trees are set, planting soil mixture shall be compacted and watered to fill all voids. All burlap, ropes or wires shall be rolled down one-third of the way from the top of the ball. A shallow basin slightly larger than pit shall be formed to contain water. Backfill for the planting pits shall be with approved planting soil mixture, up to the surrounding elevations.

Wrapping

Promptly after planting, the trunks of all trees shall be spiraled from the ground line to the height of the second branches. All wrapping shall be neat and snug and the material shall be held in place by a suitable cord.

Pruning

All newly planted trees shall be pruned in accordance with American Association of Nurseryman Standards to preserve the nature and character of the plant.

All dead wood, sucker branches, and all broken or badly bruised branches shall be removed. In addition, one-fourth to one-third of the wood shall be removed by thinning-out and shortening branches to balance root loss due to transplanting.

Cuts over 1" in diameter shall be painted with an approved tree paint. Paint shall cover all exposed cambium as well as other exposed living tissue.

Mulching

All trees shall be mulched with a 4" layer of ground pine bark mulch within two days of planting. This mulch shall entirely cover the area of the planting pit.

Mulch

Mulch shall be finely-ground, soft, wood pine bark mulch. Mulch shall be aged a minimum of two years and be free from leaves, twigs, or other foreign material.

Water

Water used in this work will be clean, pure water furnished by the Contractor. Hoses, connections, and other watering equipment required for the work shall also be furnished by the Contractor.

e. **Maintenance**

Maintenance shall begin immediately after each tree is planted and shall continue until acceptance. All trees shall be watered (a minimum of once per month for a minimum of three months), re-mulched, weeded, pruned, sprayed, fertilized, cultivated and otherwise maintained and protected until accepted. Settled trees shall be re-set to proper grade and position, planting saucer restored, and dead material removed. Defective work shall be corrected as soon as possible after it becomes apparent and weather and season permit. Upon completion of planting and prior to acceptance, the Contractor shall remove any excess soil and debris from the site and repair any damage to structures, etc., resulting from the planting operation. Dangerous conditions shall be repaired immediately.

Any damage to lawn areas as the result of planting operations shall be repaired to the satisfaction of the City Forester at no cost to the City by the Contractor.

All replacements shall be trees of the same kind and size as specified in the plant list. They shall be furnished and planted as specified under Planting Operations. The cost shall be replacement resulting from removal, loss, or damage due to vandalism.

f. Warranty

All trees shall be warranted by the Contractor to be true to name and size, and in vigorous growing conditions and shall be warranted by the Contractor for one (1) year after planting.

During the warranty period, the Contractor shall replace, in accordance with the contract, any trees that are dead, or in the opinion of the City Forester, in an unhealthy or unsightly condition due to dead branches, excessive pruning, or other causes.

Replacement shall be made as soon as weather or season conditions permit as directed by the Forester. The Contractor's responsibility for replacing trees shall end with final acceptance by the City.

METHOD OF MEASUREMENT

The quantity of which payment will be made is the number of each size and kind of tree counted in place, planted, and accepted.

BASIS OF PAYMENT

Payment for this work will be made at the contract unit price each for the kind and size of tree completed and accepted in place.

The unit price shall include all materials, equipment, tools, labor, transportation, operations, and all work incidentals thereto.

<u>PAY ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
0106701	Acer Rubrum "Red Sunset"	EA
0106702	Acer Rubrum Columnware "Armstrong"	EA
0106703	Gleditsia Triacanthos Inermis "Skyline"	EA
0106704	Pyrus Callery Pear "Trinity"	EA
0106705	Platanus Acerifolia "London Plane Tree"	EA
0106706	Celtis Occidentalis "Hackberry"	EA
0106707	Ulmus Carpinifolia "Homestead"	EA

All trees shall be in the 2 1/2" to 3" caliper range.