

SECTION 809**NATIVE PLANT SALVAGE****809-1 DESCRIPTION**

The work under this section shall consist of salvaging native trees and shrubs using side-boxing or spading techniques, salvaging cacti using bare-root transplanting techniques, delivery of salvaged plants to an on-site nursery area, maintenance of salvaged plants while in the nursery and replanting of salvaged plants within the project limits.

809-2 MATERIALS**809-2.01 Plants to be Salvaged.**

Native plants to be salvaged shall be as shown on the project plans.

After staking the clearing limits have been identified and accepted by the Engineer of grading and prior to the start of native plant salvage activities, the contractor shall schedule an inspection of the project site with the Engineer. During this inspection, the plants to be salvaged will be identified and approved.

809-2.02 Boxes and Bands.

All box and band material shall be new, of a standard used in the plant salvage industry and suitable for the work being performed.

809-2.03 Fence.

Fence material shall consist of high visibility, heavy duty High Density Polyethylene (HDPE) that is ultraviolet (UV) resistant. Fence material shall be four feet high. Fence posts shall be either wood or metal, a minimum of six feet (6') long and suitable for the work intended.

809-3 CONSTRUCTION DETAILS**809-3.01 Access for Plant Salvage.**

Vehicular access to plants shown as being salvaged shall be from within the approved grading limits. Vehicular access from areas outside the approved grading limits, unless approved by the Engineer, is prohibited.

Plants shown on the plans as not being salvaged may be trimmed or, if within the limits of grading, removed as necessary, to obtain access and safe working conditions around individual plants to be salvaged. Trimming or removal work shall be approved by the Engineer.

809-3.02 Protection of Existing Plants and Areas.

All plants and natural areas outside the limits of grading, or areas designated as being preserved-in-place, shall be protected during all native plant salvage work.

809-3.03 Tree and Shrub Salvage.

Trees and shrubs shall be salvaged using either spading or side-boxing techniques as noted on the plans, in the Special Provisions or as directed by the Engineer.

When side-boxing techniques are to be used and unless otherwise approved by the Engineer, boxing of plants to be salvaged shall conform to the following requirements:

Plants shall be pruned, in accordance with technical bulletin ANSI-A-300, prior to salvage.

The sides of the rootball shall be excavated in a manner that maintains an intact root ball and soil mass.

The side panels of the box shall be installed and secured immediately after excavation of the root ball.

Immediately after installation of side panels, an identification number for each salvaged (boxed) plant shall be clearly and conspicuously painted on two sides of the box. Plant identification numbers painted on the box shall correspond to the plant identification numbers shown on the project plans.

Boxed plants shall be watered, in-place, on a daily schedule, or as otherwise approved by the Engineer, for a period of not less than 28 days. The volume of water applied shall be sufficient to keep all soil within the box continuously wet.

Upon completion of the in-place holding and irrigation period, roots extending below the bottom of the box shall be cut and the bottom box panel installed and secured.

Once the bottom box panel is in place, the plant shall be transported to the ~~on-site~~ nursery. Lifting and transporting equipment shall be of a size, type, and capacity required to prevent damage to the plant, its root ball and box.

While in the nursery, all trees and shrubs shall be irrigated daily or at such other interval approved by the Engineer. The daily application of water shall be sufficient to keep the entire soil volume within the root ball continuously moist. Irrigation applications shall be adjusted based on seasonal or changing weather conditions.

Excavations resulting from the salvage and removal of plants shall be backfilled and compacted on the same day as plant removal. Backfill and compaction in areas where pavement will be placed shall be in accordance with Subsection 203-9.03(B)(1).

809-3.04 Box Sizes.

Unless otherwise approved by the Engineer, the minimum box size for trees shall be as noted in the table below. Minimum box size is based on tree trunk caliper (for single trunk trees) or the combined caliper of the two largest trunks (for multi-trunk trees) as follows:

Trunk Caliper	Minimum Size Box
1.0" - 2.5"	24"
2.0" - 4.0"	30"
3.5" - 5.5"	36"
5.0" - 7.5"	42"
7.0" - 9.5"	48"
9.0" - 11.5"	54"
11.0" - 13.5"	60"
13.0" - 15.5"	66"
15.0" - 17.5"	72"

Box sizes larger than those noted in the table may be used.

NOTE: TAC IS TO PROVIDE INFO REGARDING WHERE ON TRUNK CALIPER IS MEASURED.

809-3.05 Salvage of Cacti, Ocotillo, and Stem Succulents.

Cacti, ocotillo, and stem succulents shall be salvaged using bare-root transplanting techniques.

All salvaged cacti, ocotillo, and stem succulents shall be transported to the ~~on-site~~ nursery and planted in a manner to avoid damage to the root system ~~healed in~~.

809-3.06 Plant Nursery.

The contractor shall establish and maintain a temporary plant holding nursery area for plants salvaged from the site. The contractor shall be responsible for all labor, materials, equipment, tools, and other resources necessary for the establishment and operation of the nursery. The nursery location shall be approved by the Engineer.

Unless otherwise directed by the Engineer, temporary fencing to control access to the nursery shall be furnished, installed, maintained and, upon completion of re-planting work, removed by the contractor.

809-3.07 Water Source and Irrigation System.

The ~~on-site~~ nursery shall have access to a source of potable or reclaimed water and provided with an automatic, drip-type, irrigation system for all boxed trees and shrubs.

The contractor shall be responsible for the design, installation, operation, maintenance and subsequent removal of the irrigation system. The irrigation system shall be approved by the Engineer.

The contractor shall be responsible for all costs and fees associated with providing a source of potable or reclaimed water, including, but not limited to, connections, meters, backflow device(s) and water use.

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809-3.8 Plant Guarantee.

The contractor shall guarantee the survival and health of ~~at~~ a minimum of 80% of the plants salvaged and replanted. The salvaged native plant guarantee period shall extend through the landscaping establishment period specified in Section 807 or the Special Provisions.

Plants which die during the guarantee period, for reasons other than those noted in Subsection 107-20 or vandalism shall be replaced by the contractor with plants of the same size and species.

Replacement plants shall be provided at no additional cost to the Agency.

To satisfy the plant guarantee requirements, the plant shall:

Exhibit healthy growth throughout the plant structure;

Be free from significant die back within branches or portions of the plant;

Be reasonably free from insects or other infestations that would reduce the plant's long-term potential for survival;

Be reasonably free from physical damage to the trunk, branches, or foliage that would reduce the plant's long term potential for survival.

809-4 METHOD OF MEASUREMENT

Salvaged native plants will be measured as a unit for each type and size of plant salvaged and delivered to the nursery.

Establishment and removal of the ~~on-site~~ holding nursery will be measured on a lump sum basis.

Operation and maintenance of the nursery will be measured by the lump sum for all services specified; however, the lump sum payment will be made in monthly increments over the term of its usage. The first monthly increment will begin with the month the nursery is fully operational and salvaged plant material is being stored therein.

No payment will be made for operation and maintenance of the nursery during periods when the nursery does not contain salvaged plants.

Replanting of salvaged plants will be paid for as a unit for each type and size replanted in their final planting locations and connected to the project irrigation system.

809-5 BASIS OF PAYMENT

Salvaged native plants, measured as provided above, will be paid for at the contract unit price for each type and size of salvaged plant designated in the bidding schedule. No payment will be

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made for plants delivered to the nursery which dead, damaged, or in an unhealthy condition, as determined by the Engineer.

The lump sum price for establishment and removal of the ~~on-site~~ holding nursery will be paid incrementally, as follows:

60% of the lump sum amount at the time the nursery and automatic irrigation system is fully established, operational and accepted by the Engineer. Payment will include cost of establishing a potable or reclaimed water source, connection fee(s) and piping to serve the irrigation system at the nursery site.

40% of the lump sum amount upon satisfactory removal and disposal of all nursery facilities, components, dirt, debris and other deleterious material, grading, if required, and, if specified by the Special Provisions, seeded. Satisfactory completion will be determined by the Engineer.

Operation and maintenance of the ~~on-site~~ holding nursery, measured as provided above, will be paid monthly. Payment will include the cost of all nursery water use during the month.

Replanting of salvaged plants, measured as provided above, will be paid for at the contract unit prices for each type and size of salvaged plant designated in the bidding schedule.