

## **580PB LANDSCAPING.**

**(REV 3-26-15) (1-17)**

The following new Section is added at the end of Section 571:

### **SECTION 580 LANDSCAPING**

#### **580-1 Description.**

Furnish, install, establish and maintain landscaping as indicated in the Contract Documents.

The allowable Contract Time is two separate phases called Installation Period and Establishment Period. The Installation Period precedes the Establishment Period and is the allowable Contract Time minus the one year Establishment Period.

Failure to complete the installation and establishment of the landscaping within allowable Contract Time will result in liquidated damages being assessed and withheld in accordance with 8-10.

The one year Establishment Period will begin when plants have been installed and accepted by the Engineer regardless of the duration of the time used for the Installation Period.

#### **580-2 Materials.**

**580-2.1. Grade Standards and Conformity with Type and Species:** Only use nursery grown plant materials purchased from Florida based Nurseryman Stock that comply with all required inspection, grading standards, and plant regulations in accordance with the latest edition of the Florida Department of Agriculture's "Grades and Standards for Nursery Plants."

Unless otherwise specified, minimum grade for all plants is Florida No. 1. All plants must be the specified size and grade at the time of delivery.

Use only plants that are true to type and species, free of fungal infection and disease, and ensure that the plants not specifically covered by Florida Department of Agriculture's "Grades and Standards for Nursery Plants" conform in type and species with the standards and designations in general acceptance by Florida nurseries. Submit a list of nurseries where plants are tagged for the work document including contact information and location. The Engineer and Contractor may visit the nursery sites to inspect representative samples of plant material and lock tag the example plants. Prior to planting, certify to the Engineer that all plant materials have been purchased from Florida based Nurseryman Stock.

A minimum of two plants of each species on each shipment must be shipped with tags stating the botanical nomenclature and common name of the plant. Should discrepancies arise between botanical nomenclature and common name, the botanical name will take precedence.

<b>Root Ball Sizes for Field Grown Palms</b>			
<b>Palm Type</b>	<b>Overall Height</b>	<b>Root Ball Radius from Trunk</b>	<b>Root Ball Depth</b>
Sabal Palm*	N/A	Per Florida Grades & Standards	Per Florida Grades & Standards
Coconut Palm	N/A	Per Florida Grades &	Per Florida Grades &

		Standards	Standards
Queen Palm	N/A	24"	24"
All Other Field Grown Palms	< 15' OA	12"	18"
	15' – 25' OA	16"	24"
	26' – 30' OA	18"	30"
	30'	24"	36"
<p>* Sabal palms (Sabal palmetto) specified as being "Regenerated Palms" as shown on the Plant Schedules shall be minimum Florida no. 1 grade unless noted otherwise. The root ball width shall be, at a minimum, equal to twice the diameter of the trunk as measured at the base. The root balls shall have new, regenerated, round-tipped roots that have emerged from the root initiation zone. Roots shall be whitish-yellow in color, have tapered ends and be present on all sides of the root ball.</p> <p>To qualify as "Regenerate Palms," sabal palms shall have been placed in containers or be contained within "plastic fabric or film material", or approved equal, after field harvesting and during the root regeneration period. They shall have a minimum of three fully expanded new fronds that have not been pruned. Fully expanded new fronds shall meet the minimum requirements to be considered "excellent leaves", as defined by the glossary of terms in the latest edition of the Florida Department of Agriculture and Consumer Services Grades and Standards for Nursery Plants – Palms and Cycads.</p>			

**580-2.2 Inspection and Transporting:** Move nursery stock in accordance with all Federal and State regulations and accompany each shipment with the required inspection certificates. Submit inspection certificates to the Engineer.

**580-2.3 Water:** Meet the requirements of Section 983.

**580-2.4 Mulch:** Use of cypress mulch is prohibited.

### **580-3 Installation.**

**580-3.1 Layout:** The location of plants as shown on the work document, are approximate. At no cost to the Department, the final locations may be adjusted to accommodate unforeseen field conditions or to comply with safety setbacks and requirements.

Mark proposed mowing limits, planting beds and individual locations of trees and palms as shown in the Contract Documents for the Engineer's review, prior to excavation or planting.

Make no changes to the layout, materials or any variations of plant materials from the Contract Documents without the Engineer's written approval.

**580-3.2 Soil Drainage:** All planting holes and beds must drain sufficiently prior to installing any plants. Immediately notify the Engineer of drainage or percolation problems before plant installation.

**580-3.3 Planting:** Meet the requirements of the Contract Documents.

**580-3.4 Repair and Restoration:** Repair and restore existing areas disturbed by installation, establishment or maintenance activities. Where new turf is required to restore and repair disturbed areas, meet the requirements of Section 570.

**580-3.5 Disposal of Debris:** Remove and dispose of all debris generated from the installation of plants at the end of each day's work and in compliance with all Federal, State, and Local Rules and Regulations.

**580-3.6 Installation Completion:** To allow time for scheduling inspection of installation, provide the Engineer with seven calendar days advance notice of completion of installation of all plants. Upon completion of installation of plants, certify on a form provided by the Department, "Contractor Certification of Installation" that the landscaping has been installed and is being established in accordance with the Contract Documents.

#### **580-4 Establishment.**

**580-4.1 Establishment Period:** The establishment period is defined as the entire one year after installation of all plants and incidental landscaping. The establishment period will begin upon acceptance of the complete installation by the Engineer.

During the establishment period:

Keep all plants watered, fertilized, mulched, pruned, and staked and guyed as necessary to assure specified minimum grade of Florida No. 1 throughout the duration of the project construction period and establishment period.

Keep all plants pruned to maintain plant health, clear visibility of signs, traffic signals, safe sight distance at intersections and driveways, safe and operational horizontal and vertical clearance from roadways, sidewalks, utilities, light poles, traffic control signals and devices, toll equipment and facilities, mechanical equipment, fences, walls and drainage structures, and to provide unobstructed access. Pruning shall conform to ANSI A300 Part 1 Standards. Pruning shall be performed by an International Society of Arboriculture (ISA) Certified Arborist or person with documentation of equivalent or greater expertise. Prior to performing pruning activities provide proof of the individual's active arborist certification or other credential to the Engineer for approval.

Keep the individual plant locations and planting beds free of litter and undesirable vegetation.

Keep landscape bed edges correctly located and trimmed, and the mulch groomed and replenished as specified in the Contract Documents.

Operate and maintain all components of any irrigation system as specified in the Contract Documents when installed as part of the Contract.

Remove staking and guying from all fully established plants unless otherwise directed by the Engineer.

Continue any mowing and litter pick up of the turf areas as depicted and specified in the Contract Documents.

**580-4.2 Inspection and Reporting Requirements:** During the establishment period, the Engineer will perform quarterly inspections to verify that the landscaping is being established per the Contract Documents.

#### **580-5 Remedial Work.**

Perform all necessary remedial work at no cost to the Department. Use replacement plants of the same species and planting medium as the plant being replaced and as specified in the Contract Documents. Replacement plant size must match the size of the adjacent grown-in plants of the same species and variety which may be larger than the initially installed size. The establishment time for replacement plants shall be remaining establishment period or 90 days after date of replacement installation acceptance, whichever is greater. Approval of remedial work does not relieve the Contractor from continuing responsibility under the provisions of this Section.

At the end of the contract period when all contract requirements are met, the Engineer will release the Contractor from further remedial work.

#### **580-6 Disposal of Surplus Materials and Debris.**

Remove from the jobsite any surplus material or debris unless otherwise directed by the Engineer. Surplus is defined as material not needed after installation of plants per the Contract Documents.

**580-7 Failure to Perform.**

Should the Contractor fail to timely and satisfactorily perform any remedial work associated with landscaping during the establishment period, the Department will reduce the payments scheduled during the establishment period by a deduction of 0.274% per calendar day of the remaining establishment amount in 580-8.2.

**580-8 Method of Measurement.**

**580-8.1 Installation:** The quantity to be paid will be the quantity of plants or trees installed.

**580-8.2 Establishment:** The quantity to be paid will be in equal quarterly payments for plants or trees maintained during the establishment period.

**580-8 Basis of Payment.**

Price and payment will be full compensation for all work and materials specified in this Section, including all ancillary work and materials necessary to meet the contract requirements.

**580-8.1 Payment during the Installation Period:** Seventy-six percent of the total unit price for each item will be paid during the installation period for work completed and accepted. The Contractor must make a request for payment by submitting an invoice, based on the amount of work completed. The Contractor's invoice must consist of the following:

a. Contract Number, Financial Project Identification Number, Invoice Number, Invoice Date and the period that the invoice represents.

b. The basis for arriving at the amount of the progress invoice including approximate quantities of work completed on each Work Document, less payments previously made and less an amount previously forfeited.

c. Contract Summary showing the percentage of dollar value of completed work based on the present Contract amount and the percentage of days used based on the present Contract Days.

Payment will be made in accordance with the total unit price for each item listed in the Bid Price Proposal.

**580-8.2 Payment during the Establishment Period:** Payment during the establishment period will be made in 12 equal monthly payments, less any deductions assessed in accordance with 580-7.

**580-8.3 Payment:** Payment will be made under:

580- 1- 1	Landscape Complete, Small Plants, lump sum.
580- 1- 2	Landscape Complete, Large Plants, lump sum.