

**Section 002920**
LANDSCAPING**PART 1 - GENERAL**

The following specification is intended for use for the design, selection of materials, and completion of landscaping projects. The landscaping projects shall meet the requirements of Florida Grades and Standards for Nursery Plants.

1.1 SCOPE**1.1.1 General:**

This specification defines the requirements for the typical Charlotte County Utilities (CCU) Type "A" landscaping(*) of lift stations, reclaimed water meters, booster stations, interconnects, deep injection wells, or other projects as directed by CCU in accordance with Charlotte County Ordinance 2003-062.

(*) *Landscape Plan Approved Subject to Compliance with Charlotte County Codes, Date: 10/2/09, By: LDM. Reference: LS/09-29 #2009040220 Master Landscape Permit, available on line at:*

<http://www.charlottecountyfl.com/CCU/Engineering/LandscapingDetails.pdf>

Modifications to the Type "A" landscaping shall be as specified in the Special Provisions.

1.1.2 Work Included

The Contractor shall, unless specified otherwise, furnish all labor, materials, trees and shrubs, equipment, tools and all other associated appurtenances, necessary to do the work required under the contract to include but not limited to installation, maintenance service and warranty.

1.1.3 Location of the Work

The location of this work is as shown on the contract documents.

1.1.4 Coordination of Work

The Contractor shall be responsible for the satisfactory coordination of the installation of the landscaping with other construction and activities in the area. Delays in work resulting from lack of such harmony shall not in any way be a cause for extra compensation by any of the parties.

1.1.5 Working Hours

The work shall be carried out in accordance with local ordinance and not to cause any unreasonable nuisance to affected residents. Under emergency conditions, this limitation may be waived by the consent of Charlotte County Utilities (CCU).

1.2 **METHOD OF MEASUREMENT & PAYMENT**

The work shall be measured and the compensation determined in the following manner:

1.2.1 Landscaping

The landscaping work shall be measured at the acceptance of the completed installation of all landscaping and associated support structures.

The compensation for Type “A” landscaping buffer shall be made on a lump sum basis.

Any additional landscaping shall be paid for as specified in the Special Provisions.

1.2.2 Miscellaneous

All other items required for the completion of the project and not included as a specific bid item shall be considered incidental to the project and no direct compensation will be made therefore.

1.3 **REFERENCED STANDARDS (latest revisions)**

- Florida Grades and Standards for Nursery Plants (to order a copy, call 352.375.3505)
- Florida Friendly Landscaping
- ANSI 260.1 American Standard for Nursery Stock, Standardized Plant Names
- Horticultural Standards published by the American Association of Nurserymen
- Principles and Practice of Planting Trees and Shrubs

1.4 **PARTIAL LISTING OF RELATED SECTIONS**

001570 - Erosion and Sediment Control
001760 - Survey for Record Drawings
001770 - Record Drawings
002530 - Submersible Sewage Pump Lift Station-Package Design
002540 - Submersible Sewage Pump Lift Station- Standard Design
002930 - Grassing

Note: This is only a partial listing of related sections. The Contractor shall be responsible to review the entire contract documents.

1.5 SUBMITTALS

- 1.5.1 The contractor shall submit certificates from the nursery verifying that the individual plants and/or trees meet the requirements as specified in the Contract Documents.

PART 2 – PRODUCTS

2.1 MATERIALS

2.1.1 General

- a. The contractor shall provide healthy, vigorous stock, grown in a recognized nursery in accordance with good horticultural practice and free of disease, insects, eggs, larvae, and defects such as knots, sun-scald, injuries, abrasions, or disfigurement.
- b. The contractor shall provide trees, shrubs, and plants of quantity, size, genus, species, and variety as shown and scheduled for landscape work which shall comply with sizing and grading standards of the latest edition of Florida Grades and Standards for Nursery Plants (to order a copy, call 352.375.3505).
- c. All plant material shall be Florida Fancy or Florida #1.
- d. All other locations shall follow recommendations and requirements of ANSI Z60.1 American Standard for Nursery Stock, Standardized Plant Names, latest edition, as adopted by the American Joint Committee on Horticultural Nomenclature, Principles and Practice of Planting Trees and Shrubs, latest edition.
- e. All trees with double leaders originating in the lower half of the tree shall be rejected.
- f. Plant material shall be grown in the project area zone.

2.1.2 Plants:

Plants shall be of species and sizes called for on the engineering drawings and shall conform to all applicable provisions of the Horticultural Standards published by the American Association of Nurserymen. All plants shall have well developed and vigorous branch and root systems and shall be healthy and free of injury or any form of damage. All plant material are subject to inspection and approval by the County.

2.1.3 Planting Soil:

Planting soil shall be five (5) parts topsoil mixed with one (1) part peat moss. Fertilizer shall be added as required. Topsoil shall be loam or sandy loam with greater than 2% organic matter (not more than 20%) with pH between 6 and 7.

2.1.4 Peat Moss:

Peat moss shall be horticultural grade Class A decomposed plant material and elastic and homogeneous. Peat moss shall be free of decomposed colloidal residue, wood, sulphur, and iron. It shall have a pH value of 5.9 to 7.0, 60% organic matter by weight, moisture content not exceeding 15%, and water absorption capacity of not less than 300% by weight on oven dry basis.

2.1.5 Mulching Material:

Mulching material shall follow the recommendations in Sec. 3-5-400 Florida Friendly Landscaping such as 3 to 4 inch length shredded pine straw installed as intertwined matting. The pine straw shall be free from leaves, twigs, wood shavings, insects, wood, or other deleterious material. Mulching material shall be applied to all plants over the entire backfilled saucer area to a depth of 3 inches. A slight saucer made of soil shall be maintained around each plant for watering.

2.1.6 Fertilizer:

Fertilizer shall be 5-10-10 delivered in standard manufacturer's bags showing the weight, chemical analysis of the contents, and the name of the manufacturer. At least 50% of the nitrogen in the fertilizer shall be from natural organic sources. Fertilizer shall be carefully stored and dry and free-flowing at the time of application.

2.1.7 Bone Meal:

Bone meal shall be commercial steamed bone meal; finely ground with a minimum of 2.0% nitrogen and a minimum of 20% phosphoric acid; and delivered in standard manufacturer packages showing weight, analysis, and name of manufacturer.

2.1.8 Tree wrap:

Tree wrap shall be burlap or special crepe weatherproof tree wrapping tape in 2 to 8 inch width rolls.

2.1.9 Anti-desiccant Emulsion:

Anti-desiccant emulsion for tree spraying shall be an anti-transparent wax or similar concentrate specifically manufactured for horticultural use. It shall be delivered in manufacturer's original containers and mixed and applied according to manufacturer's directions.

2.1.10 Support Stakes:

Support stakes shall be wood.

2.1.11 Cables, Wire, Eye Bolts, and Turnbuckles:

Cables, wire, eye bolts, and turnbuckles shall be non-corrosive and of sufficient strength to withstand wind pressure.

PART 3 – EXECUTION

3.1 QUALITY ASSURANCE

- 3.1.1 The work shall be performed with personnel experienced in the work under direction of a skilled foreman.
- 3.1.2 The contractor shall obtain County approval of the landscaping and all final inspections in addition to Landscaping, Tree and Zoning inspection prior to receiving a Certificate of Completion for the project equipment.

3.2 DELIVERY, STORAGE, AND HANDLING

- 3.2.1 Plant material shall be in “healthy vigorous condition” such as live foliage out to the tips of all branches and stems and having a trunk caliper that is bigger, 12 months after planting, than at planting. Healthy vigorous palms shall have new fronds developing with no necrosis or chlorosis and are green in color. Plant material shall be “nursery-grown” in the nursery from liners or collected and then grown in a nursery not less than 2 years.
- 3.2.2 Plant materials shall be moved with solid root balls wrapped in burlap.
- 3.2.3 Plant materials shall be delivered immediately prior to placement.
- 3.2.4 Plant materials shall be kept moist at all times until planted.
- 3.2.5 Plants shall be rejected when the root ball of earth surrounding roots has been cracked or broken preparatory to or during process of planting.
- 3.2.6 Plants shall be rejected when burlap, staves, and ropes required for transplanting have been displaced prior to acceptance.
- 3.2.7 Plants shall be dug with root balls having minimum sizes as specified in ANSI 260.1.
- 3.2.8 Plants shall be dug, transported, and handled with care to insure against injury and to provide adequate protection against wind and sun. Plants shall be securely covered with tarpaulin, canvas, or other cover to minimize wind whipping and drying. Balled plants shall not be dropped to the ground. A suitable method of handling shall be employed to preclude cracked or mushroomed root balls at the point of delivery. All plant material shall be protected from freezing at all times prior to transplanting.
- 3.2.9 All plants shall have securely attached durable legible labels stating in weather resistant ink the correct botanical plant name.
- 3.2.10 All plants shall be subject to inspection by the County during digging operations and after planting. No plants shall be planted before inspection and approval by the County. Any plants damaged by the contractors’ operations shall be removed from the site and replaced with acceptable plants without additional compensation.

3.3 PREPARATION

- 3.3.1 The contractor shall verify topsoil is ready to receive the work of this Section.
- 3.3.2 The contractor shall prepare topsoil to receive plant materials.

3.4 INSTALLATION

- 3.4.1 The contractor shall place the plant materials for inspection and final orientation by the County prior to installation.
- 3.4.2 Excavations for all plant material shall allow a minimum of 1 foot clearance around the sides of the root ball and 6 inches below the root ball to receive the backfill material.
- 3.4.3 All plants shall stand plumb and after settlement shall be at the same ground level at which they were growing before digging. Burlap and twine shall be cut away from the upper half of all root balls and the remaining burlap adjusted to prevent the formation of air pockets. Exposed and curled roots shall be spread in a natural position.
- 3.4.4 The contractor shall backfill around plant balls with planting soil. The plant ball shall be placed on a compacted planting base of the prepared planting soil with a minimum depth of 6 inches. Bone meal shall be mixed in the compacted base soil mixture at the rate of one cup per diameter inch for trees and one-half cup per shrub. Planting soil shall be backfilled in 6-inch layers and firmly tamped and watered at each layer. Excess topsoil shall be used to form a berm approximately 4 inches high around the pit planting area to provide a saucer for watering.
- 3.4.5 Fertilizer shall be evenly distributed on the surface of the backfilled saucer area at the rate of one (1) pound per tree before mulching.
- 3.4.6 The contractor shall prune with sharp tools to make a clean cut. Care shall be taken to preserve the natural appearance of the plant. Pruning shall consist of removal of selected small branches rather than a general cutting back of all branches and shall be limited to removal of damaged branches and cutting back of longer lateral branches. The central leader shall not be cut.
- 3.4.7 Mulching material shall be applied to all plants over the entire backfilled saucer area to a depth of three (3) inches. A slight saucer shall be maintained around each plant for watering.
- 3.4.8 All stems and leaves of plant materials shall be uniformly covered with an anti-desiccant emulsion using an approved low pressure power sprayer to apply an adequate film over trunks, branches, twigs, and/or foliage. The spray material shall not be applied at temperatures below 32 degrees F. and shall be protected from freezing at all times.
- 3.4.9 All plants shall be carefully and thoroughly watered during planting and as often as necessary thereafter to provide the best growing conditions until acceptance of the work by the County.

3.5 PLANT SUPPORT AND WRAPPING

3.5.1 All stakes or guying shall be done immediately after planting, and stakes and wire shall be maintained. Plants shall stand plumb after staking.

3.5.2 The contractor shall brace plants upright in position by guy wires with turnbuckles or stakes as follows:

Tree Caliper	Tree Support Method
1 inch	1 stake with one tie
1 - 2 inches	2 stakes with two ties
2 - 4 inches	3 guy wires
over 4 inches	4 guy wires

3.5.3 The trunks of all deciduous trees shall be spirally wrapped immediately after planting and inspection starting at the base with burlap or approved tree wrap. The wrap shall overlap half the width of the tape and be securely tied around the tree stem at two foot intervals. The wrapping shall cover the entire surface of the trunk to a height of 6 feet or the first main branches.

3.6 MAINTENANCE SERVICE

3.6.1 The contractor shall begin maintenance of plant materials immediately after planting and continue until the end of the warranty period.

3.6.2 Maintenance shall include measures necessary to establish and maintain plants in a vigorous and healthy growing condition as follows:

- a. The contractor shall cultivate and weed plant beds and tree pits. Herbicides used for weed control shall be applied in accordance with manufacturer's instructions. The contractor shall remedy damage resulting from use of herbicides.
- b. The contractor shall water sufficiently to saturate root system and at a frequency to establish healthy trees and shrubs as specified by the supplying nursery.
- c. The contractor shall prune, including removal of dead or broken branches, and treat pruning wounds.
- d. The contractor shall implement disease and insect control.
- e. The contractor shall maintain wrappings, guys, turnbuckles, and stakes. This includes adjusting turnbuckles to keep guy wires tight and the repair and/or replacement of accessories when required.

3.6.3 The final maintenance inspection shall occur at the end of the warranty period.

3.7 WARRANTY

3.7.1 The warranty shall be ninety (90) days from date of substantial completion.

3.7.2 During the warranty period, the contractor shall replace plant materials found dead or not in a healthy growing condition. Replacement plant materials shall be of same species with the warranty commencing on date of replacement.

END OF SECTION