

revision	DATE	DESCRIPTION
1	3.29.16	SITE PLAN REVIEW COMMENTS
2	5.2.16	DRC COMMENTS

mission: 14-030
principal: THORNBROUGH
project manager: PC

file name: LP-3

date: 02-23-16

title: LANDSCAPE SPECIFICATIONS

LP-3

of: 4 A

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1. GENERAL CONDITIONS

A. SCOPE

- Contractor shall furnish labor, equipment, and materials required to perform all work necessary for the construction of the project as indicated in the drawings. Such work includes but is not limited to the following:
 - Finish grading of planting areas.
 - Planting.
 - Sodding (if required).
- Contractor shall have a competent representative at the site who shall be capable of reading and understanding plans, specifications, and other contract documents. The representative shall be knowledgeable in all areas of landscape construction in Florida.
- Contractor shall be responsible for knowledge of the contents of these specifications and the requirements of any accompanying drawings.

B. DRAWINGS

The drawings and plant lists together with these written specifications shall be considered as one contract document and shall be accordingly read together. The drawings and specifications remain the property of the Landscape Architect and, if required, shall be returned to him upon completion of the work. The contractor shall keep one copy of the drawings and the specifications at the construction site for the use of the Landscape Architect, Owner, and their representatives.

C. REQUIREMENTS OF REGULATORY AGENCIES

- Perform work in accordance with all applicable codes, laws, and regulations required by authorities having jurisdiction over such work and provide for all inspections and permits required by Federal, State, and local authorities in furnishing, transporting and installing materials.
- Certificates of inspection required by law for transportation shall accompany invoice for each shipment of plants. File copies of certificates with Landscape Architect or Owner after acceptance of material. Inspection by Federal or State Governments at place of growth does not preclude rejection of plants at project site.

D. PROTECTION OF WORK AND PROPERTY

- Contractor is responsible for maintaining adequate protection of his work from injury and loss resulting from the execution of this contract. He must make good all repairs and replacements to the satisfaction of the Landscape Architect or the Owner except where caused by the Owner or his agents. He must provide all safety or protective measures required by public authorities or local conditions.
- Existing plant material to remain must be protected by barriers or fences at the drip line surrounding the material. No burning, storage, or parking shall be permitted within these protected areas. Contractor shall notify the Landscape Architect or Owner of any situation he feels may damage the existing plants to remain in the normal execution of this contract. Do not proceed with such work until directed by the Landscape Architect or Owner. Contractor damaged plants shall be replaced with plants of the same species, size, and quality as those damaged at no cost to the Owner. The Landscape Architect shall determine the extent and value of the damaged plants.

E. CHANGES IN THE WORK

- The Owner reserves the right to make changes in the work and thereby changes in the cost of the work within the conditions of the original contract. All changes shall be in written form and once accepted, shall become a part of the contract documents.
- The Contractor shall not begin any work on extras or changes from the contract document before written approval has been given by the Owner or Owner's representative. Any work done prior to such written approval may or may not be paid for, at the discretion of the Owner.

F. OWNER'S RIGHT TO DO WORK

The Owner reserves the right, upon two (2) days written notice to the Contractor, to perform and accept portions of the contract and to deduct the cost of the work or deficiencies from the contract payments.

G. SURFACE AND SUBSURFACE OBSTRUCTIONS

It is the Contractor's responsibility to acquaint himself with the existence and location of all surface and subsurface structures and installations, existing or proposed, before commencing work. Any damage by the Contractor during the execution of this contract shall be made good at the Contractor's own time and expense. If subsurface construction or obstructions are encountered during planting, alternate locations may be selected by the Landscape Architect or Owner.

H. OWNER'S RIGHT TO TERMINATE

Should the Contractor at any time fail, refuse, or neglect to comply with the provisions of this contract, the Owner or his representative shall without prejudice to any other rights or remedy and after having given seven (7) days written notice to the Contractor, terminate the contract and take possession of the premises. The cost of completion will be deducted from the amount of the contract.

I. COORDINATION OF WORK

Coordinate and cooperate with other contractors to enable the work to proceed as rapidly and efficiently as possible.

J. INSPECTION OF SITE

- Contractor shall visit the site and inspect site conditions as they exist prior to submitting bid.
- No additional compensation nor relief from any obligation of the contract will be granted because of lack of knowledge of the site or of the conditions under which the work will be accomplished.

II. PLANTING SPECIFICATIONS

A. PLANT MATERIALS

- Plants shall be nursery grown in accordance with good horticultural practices under climatic conditions similar to those of the project, unless otherwise noted.
- Quantities, sizes, and spacing will be determined by the drawings and specifications. Where discrepancies exist, the Landscape Architect or Owner is to be notified for clarification. Contractor shall be responsible for completing installation as called for in the plans, plant lists, and specifications.

B. ABBREVIATIONS ON PLANT LIST

- B&B - Balled and burlapped. Plants shall be dug with a firm natural ball of earth of sufficient size to encompass the fibrous root system necessary for recovery of the plant. Broken or loose balls will not be accepted.
 - G. - One (1) gallon container.
 - R.C. - Rooted cutting. A cutting which has calloused and produced roots. Applies equally to cuttings rooted in a propagation bed or in individual containers.
 - Cal. - Caliper of trunk measured four (4) feet above the ground.
 - C.T. - Clear trunk. Measurement from top of root ball to first branching.
 - G.W. - Grey wood area on palms between ground level and base of fronds.
 - O.A. HT. - Overall height from ground level to midpoint of current season's growth.
 - SPR. - Spread measured across the average diameter of plant.
 - O.C. - On center. Horizontal spacing of plants center to center.
 - P.P.P.- Plants per pot.
- Container sizes are only a guide. Contractor is responsible for size and quantity of plant material as specified. No container material shall be rootbound. Where B&B material is specified, container material will not be accepted without written consent of Landscape Architect or Owner.

C. QUALITY AND SIZE

Plants shall have a habit of growth which is normal for the species and shall be free from physical damage, insects or pests, and adverse conditions that would prevent thriving growth. Measurements specified in the plant list are the minimum acceptable sizes. All plant materials used shall be true to name and size in conformance with the Grades and Standards for Nursery Plants, State Plant Board of Florida, and shall be graded Florida No. 1 or greater, except where noted in the contract documents. Plants shall be graded before pruning. Any necessary pruning shall be done after planting, and with the consent of the Landscape Architect or Owner. Plants which do not meet the requirements will not be accepted.

D. SUBSTITUTIONS

No substitutions shall be accepted without the written consent of the Landscape Architect, Owner or their representatives. Proof must be submitted that the plant in question is not available in the type or size specified. The Landscape Architect or Owner shall determine the nearest equivalent replacement.

E. TRANSPORTATION AND STORAGE

All plant material shall be protected from possible injury or breakage of branches. All plants shall be delivered adequately covered to prevent windburn, drying, or damage. Plants which can not be planted immediately shall be adequately heeled in and protected from the drying of sun and wind. All plants shall be watered as necessary until planting. Storage period shall not exceed 72 hours. All palms shall have their buds tied with burlap strips to remain in place until the tree is well established in its new location (this may be waived with the consent of the Landscape Architect or Owner). Trees moved by crane or winch shall be adequately protected from chain marks and girdling by approved methods.

F. INSPECTION

No plant material shall be planted until it is inspected and approved by the Landscape Architect, Owner, or their representatives. Contractor shall give the Landscape Architect or Owner two (2) days notice for inspection of plant material. Inspection may be waived at the discretion of the Landscape Architect or Owner, in which case, the Contractor will still be responsible for complying with all specifications. Contractor shall be responsible for all inspections of plant material that may be required by State or Federal authorities and inspection certificates shall be submitted to the Landscape Architect or Owner. Rejected material shall be replaced at no additional cost. Landscape Architect, at his discretion, may tag any or all plant material in the nursery.

G. PLANTING SOIL

Planting soil shall consist of fertile friable soil of a sandy loam nature and shall be derived from 50% minimum amount of decomposed organic matter (muck or peat) and 50% clean sand with no trace of salinity. There must be a slight acid reaction to the soil. Planting soil shall be free from stones, plants, roots, clods, sticks and other foreign materials which might be a hindrance to planting operations or be detrimental to good plant growth. Planting soil shall be applied in accordance with the Methods of Installation and Details.

H. MULCH

Mulch shall be approved (as per Municipality) non-cypress mulch, unless otherwise specified, and shall be free of weeds, weed seeds, sticks and other foreign materials. Mulch shall be applied to a minimum three (3) inch depth, unless otherwise specified, and moistened at the time of application to prevent wind displacement.

I. COMMERCIAL FERTILIZER

Commercial fertilizer shall be an organic fertilizer containing equal percentages of nitrogen, phosphoric acid, and potash as available plant food by weight. 50% of the nitrogen shall be derived from natural organic sources. The trace elements of iron and magnesium must also be present. The minimum analysis acceptable shall be 62N-62P-62K. Fertilizer shall be dry, free flowing, and delivered to the site in unopened original containers, each bearing the manufacturer's guaranteed analysis. If Milorganite with trace elements is to be used, application rates are as follows:

Trees: 12 lbs./2"-3" caliper tree
7gal : 4 lbs./container
3gal : 1 lb./container
1 Gal. Can: .5 lbs./container
4" Pot: .25 lbs./container
Groundcover Beds 10 lbs./100 sq. ft.

Fertilizer shall be spread before laying mulch and at the above recommended rates, unless otherwise specified. If plant tablets are called for, they shall be Agriform 20-10-5 formula, 21 gram tablets. Tablets shall be placed mid-way to the plant ball in the back fill material and at manufacturer's rates, unless otherwise specified.

J. WATER

Water is to be furnished by the Owner. The Contractor shall transport as required.

K. SOD (WHEN APPLICABLE)

Sod shall be one year old and of the variety indicated in the plant list. Sod shall be dense, vigorous, and green, with the grass having been mowed at least three times at a 2"-2 1/2" height before lifting from the field. Sod shall have a good root development and compact growth and contain no weeds, vermin, fungus, or other diseases. No sod shall be used which is not certified as being free of the imported fire ant. All sticks, stones, and other foreign material over one inch in diameter shall be removed from the top 2" of soil. Grade areas to be sodded so that the top of sod will be the finished grade. Solid sod shall be laid with closely abutting joints with a tamped or rolled even surface. Avoid a continuing seam along the line of water flow in swales. Place sod at right angles to slope. All sod edges shall be neat and even and conform to the shape of the planting plans. Rolling may be required at the discretion of the Landscape Architect or Owner. If the Landscape Architect or Owner determines that top-dressing is required after rolling, clean sand will be evenly applied over the entire surface and thoroughly washed in. Rolling and top-dressing shall be done at no extra cost to the Owner.

L. SEED (WHERE APPLICABLE)

Grass seed shall be of the mixture called for in the plant list. It shall be a standard grade seed of the current or last year's crop. Seed which has become wet, moldy, or otherwise damaged will not be accepted. Seed must come in unopened packages with the procurer's guaranteed analysis attached. Weed seed content shall not exceed 0.25%. Before any planting, the ground shall be plowed or scarified to a depth of at least 4" and shall be raked and smoothed evenly to establish a final grade. All sticks, and other foreign material over one inch in diameter shall be removed. Contractor shall use the Hydromulch seeding method and supply all material and equipment necessary to perform the specified work. Seed shall be applied at a rate of 2-3 pounds per 1000 sq. ft. (90-100 lbs./acre). Mulch shall be Silva Fiber processed wood fiber or approved equal and applied at the rate of 50 lbs./acre. All materials shall be uniformly blended in an agitating system using clean water and applied uniformly at the rates specified. Contractor shall be responsible for proper watering of the seeded areas in order to avoid runoff, and for keeping the ground moist until the grass is re-established, and watering for proper growth until the water is accepted. Contractor shall repair erosion caused by excessive rainfall or watering at no extra cost to the Owner. Any areas which are damaged or do not germinate within the first thirty (30) days shall be re-seeded and maintained until grass is established. Grass shall be vigorous and healthy and coverage shall be at least 95% prior to final acceptance.

III. METHODS OF INSTALLATION

A. LAYOUT

Location of plants and layout of all beds are indicated on the plans. Plant locations are to be staked in the field by the Contractor. Landscape Architect or Owner will check staking of plants in the field and shall adjust to his satisfaction before planting begins. Where surface or subsurface obstructions are encountered or where changes have been made in construction, necessary adjustments will be approved by the Landscape Architect or Owner.

B. EXCAVATION FOR PLANTING

Planting holes shall be excavated to a minimum depth of four (4) inches deeper than the depth of the root ball except for trees over 10 feet in height (see section III, C). Holes shall be a minimum of six (6) inches greater in diameter than the root ball for shrubs and eighteen (18) inches greater in diameter for trees. All existing vegetation, including sod, shall be completely removed from all planting beds before planting. Four (4) inches of planting soil shall be incorporated into all planting beds for rooted cuttings. Where applicable, planting holes for all trees, shrubs, and groundcovers shall be excavated through any compacted building subgrade or road rock to undisturbed subsoil or clean sand fill. All excess excavation material shall be removed from the site by the Contractor. Holes shall be back-filled with planting soil as defined in Section II, G and as shown in details. The following is a guide for planting soil quantities:

Trees - 10' or greater	9 cu. ft.
Trees - 8' ht.	6 cu. ft.
Lerio	1 cu. ft.
3gal Can	.5 cu. ft.
Gallon Can	.25 cu. ft.
4" Pot	.125 cu. ft.

Ground Cover - 4" mixed into entire bed

Quantities of planting soil needed may be greater if excavation of building subgrade or roadrock is necessary.

C. SETTING TREES AND SHRUBS

All trees and shrubs are to be planted plumb on four (4) inches of planting soil and centered in the planting hole as to give the best appearance in relation to adjacent plants and structures. Trees over ten (10) feet in height shall be planted directly on the undisturbed subgrade. The finished grade level of the plant after settlement shall be the same as that at which the plant was grown. Rootballs on container grown material shall be scarified to prevent a root-bound condition. When the plant holes have been backfilled approximately 2/3 full with planting soil, water thoroughly, saturating rootball, before installing remainder of planting soil to top of hole, eliminating all air pockets. After settlement, add planting soil to the level of the finished grade, allowing three (3) inches for mulch. Form a shallow saucer around each plant by forming a ridge of soil along the edge of the planting hole. All Sabal palmetto are to be planted in sand. Water all plants immediately after planting.

D. PRUNING

Remove dead and broken branches from all plant material. Prune with sharp instrument flush with trunk or branch so as to leave no stubs. Prune to retain typical growth habit of the particular species. Pinch cuts over 1/2" in diameter with a waterproof antiseptic tree paint.

E. STAKING AND GUYING

Staking and guying of trees, where specified, is an option to be used by the Contractor, who will be responsible for material remaining plumb and straight for all given conditions through the guarantee period. The Landscape Architect, Owner or Owner's representative may require that a tree or trees be staked or guyed if the tree(s) are obviously unstable or pose a threat to person or property if they should fall. Tree support, if required by Landscape Architect or Owner, shall be done according to staking details provided. Staking and guying shall be done at no extra cost to the Owner. No method of support shall be permitted which causes physical damage to the plant. Any method of staking or guying not shown must be approved by the Landscape Architect.

F. MULCHING

All tree and shrub beds shall be mulched immediately after planting to a three (3) inch depth and thoroughly wetted down. Unless otherwise specified, the following configurations will apply:

- Trees and Palms: 3" diameter ring
 - Hedges: 3' wide beds
 - Shrub masses: continuous bed extending 2' outside of plants, in configurations shown on plans
- Ground cover beds: entire surface (mulching of certain ground cover plants may be waived by Landscape Architect)

G. FINISH GRADES

- Finish grades for all sod areas after settlement shall be 1/2" below top of adjacent curbs, walks, walls, and abutments.
- Finish grade of all ground cover beds after mulching and settling shall be 1/2" below finish grade of sod, adjacent curbs, walks and walls.
- Finish grading shall include the removal of all surface rock and other debris that prevents a smooth level surface.

H. CLEANUP

All areas shall be kept clean and orderly as the work progresses. Upon completion of planting, all excess deleterious materials and debris shall be removed from the site or disposed of as directed by the Landscape Architect or Owner. All tags and ribbons shall be removed from trees and shrubs.

I. MAINTENANCE

A maintenance period shall begin immediately after each plant is planted and shall continue until all planting has passed final inspection and acceptance. Maintenance of new planting shall consist of watering, cultivating, weeding, mulching, restaking, repairing and tightening guys, resetting plants to proper grades and positions, removal of dead materials, restoration of planting saucers, maintaining any barriers or fences, and any other necessary operations. Any damage created by the planting operation shall be repaired promptly. All trees and other B&B material shall be deep watered for a period of least twenty (21) days after installation and at least once every other day during the (21) day period.

IV. FINAL INSPECTION AND ACCEPTANCE

- Inspection of work to determine completion of contract, but exclusive of the replacement of plant materials under the Warranty Period, will be made by the Landscape Architect or Owner at the conclusion of all planting and at the written request of the Contractor.
- The Contractor will be notified by the Landscape Architect or Owner of the acceptance of all plant material and workmanship, exclusive of the possible replacement of plants subject to Warranty.

V. WARRANTY PERIOD AND REPLACEMENT

- The Contractor, as part of this contract, shall guarantee all materials, workmanship, and plant materials for a period of twelve (12) months from the time of final acceptance. Exception: sod shall be guaranteed for thirty (30) days. Guarantee shall apply to the position, health, shape, condition, and specified size and quality of all plant material.
- The guarantee shall be null and void for plant material that is damaged or dies as a result of freeze, hail or hurricane-force winds, provided the material was properly planted and in a healthy growing condition prior to such acts of Nature.
- The Contractor shall not be held responsible for failures due to neglect by Owner or acts of vandalism during the Warranty Period.
- During, or at the end of the Warranty Period, any plant that is dead or not in satisfactory condition, as determined by the Landscape Architect or Owner, shall be replaced by the Contractor at no cost to the Owner. Subsequent replacement costs shall be shared equally by the Owner and the Contractor, should the replacement not survive, unless the plant(s) has not been planted in accordance with previous specifications as determined by the Landscape Architect or Owner. All replacements shall be furnished and planted as specified herein.
- The Warranty Period for replaced plant material shall commence on the date of acceptance of the replaced item(s) of plant material.

VI. ADDENDA

All addenda apply to section(s) specified in the contract documents and therefore are to be considered a part of the contract.

SITE RESTORATION

The contractor shall remove all excess material and shall clean up and restore the site to its original condition or better. All damage, as a result of work under this Contract, done to existing structure, pavement, driveways, paved areas, curbs and gutters, sidewalks, shrubbery, grass, trees, utility poles, utility pipe lines, conduits, drains, catch basins, flagstones, rocked, graveled or stabilized areas or driveways and including all obstructions not specifically named herein, shall be repaired and restored to a condition acceptable to the Landscape Architect or owner.

CONTRACTOR TO CHECK DRAWINGS AND DATA

The Contractor shall verify all dimensions, quantities, locations, materials and details shown on the Drawings, supplementary drawings, schedules or other data received from the Landscape Architect, and shall notify him of all errors, omissions, conflicts and discrepancies found therein. Failure to discover or correct errors, conflicts or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory work, faulty construction, or improper operation resulting therefrom nor from rectifying such condition at his own expense. He will not be allowed to take advantage of any error or omissions, as full instructions will be furnished by the Landscape Architect or Owner, should any error or omissions be discovered. All schedules are given for the convenience of the Client, Landscape Architect and Contractor and are not guaranteed to be complete.

