PART 1 GENERAL

1.01 WORK INCLUDED
A. The scope of the work for the landscape contractor for the project shall include the provision of all labor, materials and equipment required to complete all tasks associated with the landscape and irrigation installation as shown on the drawings or noted herein. The landscape contractor is responsible for coordinating with the general contractor reasonable access to power and potable water sources as required to ensure plant survivability and delivery of a completed project that meets all the required specifications.
B. Subgrade Elevations: Excavation, filling and grading required to establish elevations 4" lower than elevations and contours shown on drawings are not specified in this Section.
C. Finish Grade Elevations: 1 inch below top of pathway edging.

1.02 QUALITY ASSURANCE
A. Subcontract landscape work to a single firm specializing in landscape work.
B. The landscape contractor shall be responsible for ensuring all work (including delivery, storage and disposal of their materials) is performed in compliance with applicable jurisdictional codes.
C. The landscape contractor shall be responsible for familiarizing themselves with project plans and scopes of work related to associated trades to be performed by others in order to identify key coordination items including, but not limited to, site access, material storage, and scheduling and sequencing of work. The landscape contractor is responsible for coordinating all site issues with the general contractor.
D. The plant quantities shown on the landscape contract documents are for the convenience of the landscape contractor. The landscape contractor is responsible for verifying all quantities and reporting any discrepancies to the Landscape Architect for clarification prior to contract award and at commencement of work. Contractor is responsible for confirming sod quantities and certifying such to the Owner or his representative.
E. The landscape contractor shall be responsible for the protection of all adjacent work, materials and equipment from damage due to their activities. The landscape contractor shall be solely responsible for any damage or injury to person or property that may occur as a result of the execution of their work.
F. Landscape Contractor to notify the Owner or his representative, or Landscape Architect at least three (3) working days prior to beginning any stage of work.
G. Owner or Landscape Architect to be immediately notified of any discrepancies found in field.
H. The Owner or his representative, or Landscape Architect reserve the right to field adjust plant material on-site to avoid conflicts or discrepancies not anticipated in the planning process.
I. Source Quality Control:
1. Ship landscape materials with certificates of inspection required by governing authorities. Comply with regulations applicable to landscape materials.
2. Do not make substitutions. If specified landscape material is not obtainable, submit to Landscape Architect proof of non-availability and proposal for use of equivalent material. When authorized, adjustment of contract amount will be made. The contractor is responsible for exhausting all means possible to obtain the materials as specified prior to requesting substitution.
3. Analysis and Standards: Package standard products with manufacturer's certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agricultural Chemists, wherever applicable.
4. Trees, Palms and Shrubs: Provide trees, palms and shrubs grown in a recognized nursery in accordance with good horticultural practice. Provide healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as decay, knots, sun-scald, injuries, abrasions, and disfigurement. Root systems shall be vigorous and fibrous, filling the container but shall not be root bound or exhibit spiraling roots. Verification of the health and vigor of all plant material is the sole responsibility of the landscape contractor.
A. Provide trees, palms and shrubs for grade Florida No. 1 as outlined under the current edition of the Grades and Standards for Nursery Plants, Florida Department of Agriculture, unless otherwise noted.
i. Sizes: Provide trees and shrubs of sizes shown or specified. Trees, palms and shrubs of larger size may be used if acceptable to Landscape Architect, and if sizes of roots or balls are increased proportionately.
B. Inspection: Landscape Architect reserves right to inspect trees, palms and shrubs either at place of growth or at site before planting, for compliance with requirements for name, variety, size and quality.

1.03 SUBMITTALS
A. Certification: Submit certificates of inspections as required by governmental authorities, and manufacturer's or vendor's certified analysis for soil amendments and fertilizer materials. Submit other data substantiating that materials comply with specified requirements.
B. Submit seed vendor's certified statement for each grass seed mixture required, stating botanical and common name, percentage by weight, and percentage of purity, germination, and weed seed for each grass seed species.
C. Planting Schedule: Submit planting schedule showing schedule dates for each type of planting in each area of site.
D. Maintenance Instructions: Submit procedures for maintenance of landscape work.

1.04 DELIVERY, STORAGE AND HANDLING
A. Packaged Materials: Deliver packaged materials in original containers showing weight analysis and name of manufacturer. Protect materials from deterioration during delivery, and while stored at site.
B. Sod: Time delivery so that sod will be placed within 24 hours after stripping. Protect sod against drying and breaking of rolled strips.
C. Trees, palms and shrubs: Provide freshly dug trees, palms and shrubs. Do not prune prior to delivery. Do not bend or bind-tie trees or shrubs in such a manner to damage bark, break branches or destroy natural shape. Provide protective covering during delivery.
D. Deliver trees, palms and shrubs after preparations for planting have been completed and plant immediately. If planting is delayed more than 6 hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist.
E. Do not remove container grown stock from containers until planting time.

1.05 JOB CONDITIONS
A. Proceed with and complete landscape work as rapidly as portions of site become available.
B. Utilities: Determine location of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, as required. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.
C. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Landscape Architect before planting.
D. Planting Schedule: Where applicable, prepare a proposed planting schedule. Schedule dates to establish a logical sequence for completing each type of landscape work to avoid damage to other landscape work and work performed by other discipline. Correlate with specified maintenance periods to provide maintenance from date of substantial completion. Once accepted, revise dates only as approved in writing, after documentation of reasons for delay.
E. Coordination with Lawns: Plant trees, palms and shrubs after final grades are established and prior to planting of lawns, unless otherwise acceptable to Landscape Architect. If planting of trees, palms and shrubs occurs after lawn work, protect lawn areas and promptly repair damage to lawns resulting from planting operations.

1.06 SPECIAL PROJECT WARRANTY
A. Warrant lawns through specified maintenance period, and until final acceptance. The required period is for one full year following installation of lawn areas.
B. Warrant trees for a period of one year after date of substantial completion against defects death and unsatisfactory growth, except for defects resulting from neglect by Owner, abuse or damage by others, or unusual phenomena or incidents which are beyond Landscape Contractor's control.
C. Warrant shrubs for 1 full year after date of substantial completion.
D. It is understood that the warranty is to be inclusive of all labor, materials and equipment necessary for the replacement of any plant materials required.
E. Should the landscape contractor be required to replace any damaged, diseased, dying or dead plant material it is understood that the replacement material is to be of the same species, size and quality as that originally specified on the Landscape Plan. The contractor will be responsible for the removal of all materials and leaving the impacted area clean following any remedial action.
F. Remove and replace trees, shrubs or other plants found to be dead or in unhealthy condition during warranty period. Make replacements during growth season following end of warranty period. Replace trees and shrubs which are in doubtful condition at end of warranty period; unless, in opinion of the Landscape Architect, it is advisable to extend warranty period for a full growing season or for one full year.
1. Another inspection will be conducted at end of extended warranty period to determine acceptance or rejection. Only one replacement will be required at end of warranty period, except for losses or replacements due to failure to comply with specified requirements.

PART 2 PRODUCTS

2.01 TOPSOIL
A. If topsoil is not available on site it must be furnished as specified. Throughout all parts of site where finish grades and contour lines differ from existing contour lines, bring to finish grade contours shown on "Grading Plan."
B. Topsoil shall be friable fertile soil with representative characteristics of area soils. It should be free of heavy clay, silt, stone, extraneous lime, plant roots and other foreign matter greater than 1 1/2" diameter. It shall not contain noxious plant growth (such as bermuda or nut grass). It shall test in neutral Ph range of 5.0 to 6.75 and contain no toxic substances that can be deemed to impede plant growth. The contractor shall be prepared to have soil lab-tested at his expense by the Landscape Architect or Owner. Topsoil shall comply with the following quantitative analysis.

COMPONENTS	VOLUME MEASURE	PARTICLE SIZE
Organic Matter	3 - 5%	
Silt	10 - 30%	0.05 to 0.002 MM
Sand	25 - 75%	0.2 to 0.05 MM
Clay	5 - 25%	0.002 MM and below

2.02 SOIL AMENDMENTS
A. If necessary to bring soil into above specified limits:
B. Lime: Natural limestone (Dolomite) containing not less than 85% of total carbonates, ground so that not less than 90% passes a 10-mesh sieve and not less than 50% passes a 100-mesh sieve.
C. Peat Humus or Peat Moss: Texture, moisture and pH range suitable for intended use.
D. Humus Soil Conditioner: Consisting of yard trimmings and biosolids co-compost.
E. Commercial Fertilizer: Complete fertilizer of neutral character, with 40% - 50% of the total nitrogen in a water insoluble form. It shall be uniform in composition, dry and free flowing.
1. For trees, palms and shrubs, provide fertilizer with not less than 6% available phosphoric acid, 6% nitrogen and 6% soluble potash.
2. For lawns, provide fertilizer with not less than 6% phosphoric acid, and 6% potassium, and percentage of nitrogen required to provide not less than 1 lb. of actual nitrogen per 1000 square feet of lawn area. Provide nitrogen in a form that will be available to lawn during initial period of growth.

2.03 PLANT MATERIAL
A. Plant list/schedule is part of this specification section.
B. Quality: All plants shall comply with Grades and Standards for Nursery Plants, latest edition, prepared by the Florida Department of Agriculture and Consumer Services.
C. Deciduous Trees: Provide trees of height, spread, and caliper listed or shown and with branching configuration for Florida No. 1 graded trees in Grades and Standard for Nursery Plants for type and species required. Provide single stem trees except where special forms are shown or listed. Ball condition variable.
D. Balled and burlap trees should be dug and prepared for shipment in a manner that will not damage roots, branches, shape and future development after planting. The product received on-site should have a firm ball with natural soils. Dried, cracked or broken rootballs will not be accepted.

E. Coniferous and Broad-leafed Evergreens: Provide evergreens of size shown or listed Dimensions indicate minimum height, spread, and caliper. Provide specified quality evergreens with well-balanced form complying with requirements for other size relationships to the primary dimension shown and branching configuration for Florida No. 1 graded trees in Grades and Standard for Nursery Plants for type and species required.
F. The landscape contractor is responsible for confirming the availability of all the specified plant materials within four (4) weeks of project award. All requests for substitution due to lack of availability must be made to the Landscape Architect in writing within this period. No substitution shall be permitted without prior written approval from the Landscape Architect. The contractor is responsible for exhausting all means possible to obtain the materials as specified prior to requesting substitution.
G. Root suckers on Live Oaks are not acceptable.
H. No double or multi-trunk trees unless otherwise specified.
I. Caliper: Trunk caliper (trunk diameter) is measured six inches from the ground on trees up to and including four inches in caliper, and 12 inches above the ground for larger trees. Since trunks are seldom round, the average of the largest diameter and that perpendicular to it, is referred to as caliper

2.04 GRASS MATERIALS
A. Grass Seed: Provide fresh, clean, new-crop seed complying with established tolerance for purity and germination. Provide seed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified. Attach a schedule of requirements.
B. Sod: Provide strongly rooted sod free of weeds and undesirable native grasses, capable of growth and development when planted.
C. No muck-grown sod shall be utilized in detention areas.

2.05 MISCELLANEOUS LANDSCAPE MATERIALS
A. Ground Cover: Provide plants established and well-rooted in removable containers or internal peat pots and with not less than minimum number and length of runners specified.
B. Anti-Erosion Mulch: Provide clean, dry, mulching hay or straw of coastal bermuda, pangola or bahia grass. Only undeteriorated mulch which can be readily cut into the soil shall be used.
C. Mulch: Melaleuca or equal. The use of cypress mulch is prohibited.
D. Stakes and Guys: When required provide stakes and deadmen of sound new hardwood or treated softwood free of knot holes and other defects. Provide wire ties and guys of 2-strand, twisted, pliable galvanized iron wire not lighter than 12 ga. with zinc-coated turnbuckles. Provide not less than 1/2" hose, cut to required lengths to protect tree trunks from damage by wires.

PART 3 EXECUTION

3.01 LAYOUT
A. Layout individual trees and shrub locations and areas for multiple plantings. Stake locations and outline areas and secure Landscape Architect's acceptance before start of planting work. Make adjustments as maybe required.

3.02 PREPARATION OF PLANTING SOIL
A. The landscape contractor is responsible for the preparation of soils within all planting areas inclusive of providing all imported soil materials, soil amendments, soil conditioners and fertilizers as required.
B. Before mixing, clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth.
C. Mix specified soil amendments and fertilizers with topsoil at rates specified. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.
D. For planting beds, mix planting soil either prior to planting or apply on surface of topsoil and mix thoroughly before planting.
1. Mix lime with dry soil prior to mixing of fertilizer.
2. Prevent lime from contacting roots of acid-loving plants.
E. Remove all shellrock encountered and backfill with clean sand or sand/soil mix.

3.03 PREPARATION FOR ALL PLANTING AREAS
A. Eradicate weeds within the limits of all planting areas prior to beginning landscape installation. Perennial weeds and grasses to be removed include, but are not limited to, nut grass, puncture vine, morning glory, dog fennel, torpedo grass, Bermuda grass, Bahia grass, kikuyu grass, crab grass, carpet grass, sedge and other noxious and/or invasive weeds. The site is to be maintained weed free throughout planting operations.
B. Existing plant material to be removed, except where noted on the Landscape or Tree Disposition Plans.
C. Pre--till to scarify soils in all planting areas to a minimum depth of 4". Densely compacted areas between 85% and 90% are to be cross ripped to a minimum of 8" depth. In the process of tilling remove unacceptable materials including, but not limited to, foreign debris, construction waste, roots, concrete, asphalt and rocks greater than ½" diameter on average. In areas to receive sod till in fertilizer to a depth of 2" at a rate of 12 pounds per cubic ft.
D. All planters shall be excavated to a minimum depth to reach native soil and back-filled with a suitable soil consisting of fifty percent (50%) composted organic matter, well-mixed with native soil. Backfill material shall be free from rock, construction debris, or other extraneous material.
E. All road rock, concrete, asphalt and other non-natural material to be removed from all planting areas prior to landscape installation.
F. Spread a layer of 2 to 3 inches of humus soil conditioner over the entire planting areas Planting areas shall include all new sod areas, shrub areas and tree areas. These areas shall be as large as 3 times the diameter of the beds of the plants, except where confined by hardscape features such as paved parking areas, paved walk ways, structures, etc. Overlapping areas shall be considered to be one large planting area for the entire mass. The humus soil conditioner shall then be uniformly disked, tilled or aerified into the existing soil to a depth of 6 to 8 inches with the following exception: no rototilling shall occur closer to the trunks of established plants than one half the distance to the dripline of the existing plant canopy. All plants, including hedges and ground cover shall be planted in individually dug holes and the material dug from the holes shall then be further mixed with the prepared site soil prior to backfilling of the planting holes around the rootballs.
G. All landscape beds, including sod areas, shall be leveled and raked smooth prior to any planting.

3.04 PREPARATION FOR PLANTING LAWNS
A. Preparation of Unchanged Grades: Where lawns are to be planted in areas that have not been altered or disturbed by excavating, grading, or stripping operations, prepare soil for lawn planting as follows: Till to a depth of not less than 6"; apply soil amendments and initial fertilizers; remove high areas and fill in depressions; till soil to a homogenous mixture of fine texture, free of lumps, clods, stones, roots, and other extraneous matter.
1. Prior to preparation of unchanged areas, remove existing grass, vegetation and turf. Dispose of such material outside of Owner's property; do not turn over into soil being prepared for lawns.
B. Elsewhere: Loosen subgrade of lawn areas to a minimum depth of 4". Remove stones over 1 1/2" in any dimension and sticks, roots, rubbish and other extraneous matter. Limit preparation to areas which will be planted promptly after preparation.
C. Spread planting soil mixture to minimum depth required to meet lines, grades and elevations shown, after light rolling and natural settlement.
D. Place approximately 1/2 of total amount of planting soil required. Work into top of loosened subgrade to create a transition layer and then place remainder of planting soil.
E. Allow for sod thickness in areas to be sodded.
F. Grade lawn areas to smooth, even surface with loose, uniformly fine texture. Roll and rake and remove ridges and fill depressions, as required to meet finish grades. Limit fine grading to areas which can be planted immediately after grading.
G. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.
H. Restore lawn areas to specified condition if eroded or otherwise disturbed after fine grading and prior to planting.

3.05 PREPARATION OF PLANTING BEDS
A. Loosen subgrade of planting bed areas to a minimum depth of 12" using a cultimulcher or similar equipment\ Remove stones over 1 1/2" in any dimension, and sticks, stones, rubbish and other extraneous matter. Spread planting soil mixture to minimum depth required to meet lines, grades and elevations shown, after light rolling and natural settlement. Place approximately 1/2 of total amount of planting soil required. Work into top of loosened subgrade to create a transition layer, then place remainder of the planting soil. Add soil amendment.
B. Excavation for Trees and Shrubs: Excavate pits, beds and trenched with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. Loosen hard subsoil in bottom of excavation.
1. For balled and burlapped (B & B trees and shrubs), make excavations at least half again as wide as the ball diameter and equal to the ball depth.
2. For container grown stocks, excavate as specified for balled and burlapped stock, adjusted to size of container width and depth.
C. Dispose of subsoil removed from landscape excavations. Do not mix with planting soil or use as backfill. Fill excavations for trees and shrubs with water and allow to percolate out before planting.

3.06 PLANTING TREES, PALMS AND SHRUBS
A. Lay out individual trees, palm and shrub locations and areas for multiple plantings where required. Stake locations and outline areas and secure Landscape Architect's acceptance before start of planting work. Make adjustments as may be required upon approval.
B. Set balled and burlapped (B&B) stock on layer of compacted planting soil mixture, plumb and center of pit or trench with top of ball at same elevation as adjacent finished landscape grades. Remove burlap from sides of balls; retain on bottoms. When set, place additional backfill free from rocks and debris around base and sides of ball and work each layer to settle backfill and eliminate voids and air pockets. When excavation is approximately 2/3 full, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing final layer of backfill.
C. Balled and burlapped trees with natural burlap: pull back or remove at a minimum, the top 1/3 of the burlap from the root ball. Synthetic/plastic burlap and all other non-biodegradable materials must be removed completely from the root ball and disposed of.
D. Trees in baskets: Remove wire baskets to a depth of 18" min. All synthetic strapping and other non-biodegradable materials must be completely removed and disposed of. Any burlap must be pulled back or removed from the top of the rootball.
E. If trees are to be containerized, root ball will be shaved at the periphery to remove all circling roots.
F. Set container grown stock as specified for balled and burlapped stock, except cut cans on 2 sides with an approved can cutter; remove bottoms of wooden boxes after partial backfilling so as not to damage root balls.
G. Top-most root shall be visible within the top 2" of the root ball.
H. All proposed trees shall be installed either entirely in or entirely out of planting beds. Planting bed outlines shall not be obstructed and shall be smooth and flowing. If trees are located outside planting beds in grass areas, maintain a minimum three feet 3' wide offset to allow for mowers to maneuver.
I. Face of trees and palms to be located a minimum of 2'-0" off all sidewalks/bike paths or other paved surfaces, unless otherwise notated on plans.
J. Groundcover and shrubs to be laid out in a uniform and consistent pattern.
K. Dish top of backfill to allow for mulching.
L. Mulch pits, trenches and planting areas. Provide not less than 3" thickness of mulch and work into top of backfill and finish level with adjacent finish grades. Not more than 2" mulch shall be placed over the rootball of the trees. At the base of the plant, 2" must be maintained free of mulch.
M. Guy and stake trees immediately after planting, as indicated.
N. The landscape contractor shall install plant materials using the best horticultural practices:
1. Protect plant material from damage during delivery, staging and installation. Do not begin installation of shrub and groundcover materials prior to completion of irrigation installation and finish grading.
2. Do not install plant materials in winds in excess of 30 miles per hour.
3. Do not install plant material if deemed site conditions will impede the ability of plant material to thrive without notifying the Landscape Architect of concerns prior to installation.
4. Perform all work in accordance with all applicable laws, codes and regulations inclusive of all permits and inspections required by federal, state and local jurisdictions.
5. The use of cables and chains for the lifting of trees is prohibited. Trees are to be lifted using nylon straps a minimum of 4" in width. Wrap trunks to protect from scraping and scarring.
6. The 'choke' strapping method for lifting trees is prohibited.
7. Do not drop plant material.
8. Limit the amount of plants to be installed per day to those that can adequately be watered in the same day.
9. Carefully remove containerized plants from their cans to avoid breaking the rootball. Containers should only be removed immediately prior to installation and plants should be immediately watered after placement.
10. Remove burlap and cut steel baskets from at least the top third of the rootball for all B&B material. Remove wire baskets to a minimum depth of 18".
11. Plant material must be installed at correct elevation in relation to finish grade as indicated on the planting details after settling. Plants set at incorrect elevations will need to be raised or lowered accordingly at no additional cost to the owner.
12. Planting pits for trees and shrubs must be excavated to the dimensions specified on the planting details. Following planting area immediately surrounding plant is to be tamped firm and use water jet technique to remove all air pockets repeating as required.
13. Apply re-wetting agent to the surface of all plant pits for trees and shrubs per manufacturer's recommendations.
14. Apply shredded hardwood mulch in even layer to a 3" depth. Mulch must be pulled off the base of all plant material.
15. Continuously monitor status of installed materials and make modifications, clean-ups and replacements as required.

3.07 PRESERVED PLANT MATERIALS
A. The contractor is responsible for protecting and maintaining all plant material to remain within the limits of construction as indicated on the plans. Existing trees to remain shall be undisturbed and protected by barricades. Barricades are to be installed prior to any construction or earthwork takes place on the site. Barricades shall remain in place through the duration of all construction activity and not removed until authorization has been received by the Landscape Architect and governing municipality.
B. No vehicle shall traverse this area nor shall any storage of materials or equipment be permitted within this protected area.
C. The contractor shall bear the sole responsibility of replacement for any damage to protected materials caused by construction activity without additional costs to the owner.

3.08 TRANSPLANTED PLANT MATERIALS
A. Root prune all large canopy trees to be relocated prior relocation one half of the root system at a time and allow of adequate harden off time.
B. Transplanted Sabal Palms shall be hurricane cut and rootballs shall be wrapped in burlap or plastic if not being planted within a 24 hour period.
C. Palms of other species shall have their fronds tied together to prevent leaf damage and facilitate handling.
D. Planting hole for transplanted material should measure two times the diameter of the root ball.
E. Trees shall be planted at the same depth as it was in the field.
F. The landscape contractor shall be responsible for providing supplemental irrigation through hand watering or other means (including temporary drip, water wands and soaker hoses) to help establish all transplanted trees. The contractor should continue to monitor the moisture content for all transplanted trees and adjust supplemental irrigation as needed.
G. All relocated trees shall be staked accordingly.
H. The contractor shall bear the sole responsibility of replacement for any damage to transplanted materials caused by construction activity, deficient irrigation, or poor transplant procedure without additional costs to the owner.

3.09 PRUNING
A. All pruning shall be done on the site before planting as directed by Landscape Architect. Pruning shall follow modern horticultural practices (Grades and Standards for Nursery Plants) and shall be done with approved tools designed for the purpose intended. Lopping, topping, or shearing of trees or shrubs will be grounds for rejecting the plants as unsuitable and not meeting requirements. Damaged, scarred, frayed, split, or skinned branches, limbs or roots shall be pruned back to line wood nearest to the next sound outside lateral bud, branch, limb or root. The terminal leader or bud in all trees or shrubs shall be left intact and not removed unless damaged.
B. Prune, thin out and shape trees and shrubs. Prune trees to retain required height and spread. Unless otherwise directed by Landscape Architect, do not cut tree leaders, and remove only injured or dead branches from flowering trees, if any. Prune shrubs to retain natural character.

3.10 SODDING NEW LAWNS
A. Lay sod within 24 hours from time of stripping.
B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Tamp or roll tightly to ensure contact with subgrade. Work sifted soil into minor cracks between pieces to sod; remove excess to avoid smothering of adjacent grass.
C. There shall be no gaps greater than ½" between pieces of sod.
D. Water sod thoroughly with a fine spray immediately after planting. Newly sodded areas shall be kept moist for the first week after planting after which a minimum watering rate of 2" per week, including rainfall shall be applied.
E. No muck-grown sod shall be utilized in detention areas.
F. Landscape Contractor is responsible for replacing any damaged sod.

3.11 MAINTENANCE
A. The landscape contractor shall be responsible for the maintenance of all plant materials and the planting areas immediately after planting and until final acceptance but the owner, Landscape Architect, and governing municipality.
B. Maintain trees, palms, shrubs and other plants until final acceptance but in no case less than following period: 30 days after substantial completion of planting.
C. Maintain trees, palms, shrubs and other plants by pruning, cultivating and weeding as required for healthy growth. Restore planting saucers. Tighten and repair stake and guy supports and reset trees and shrubs to proper grades or vertical position as required. Restore or replace damaged wrappings. Spray as required to keep trees and shrubs free of insects and diseases.
D. Remove and replace excessively pruned or malformed stock resulting from improper pruning.
E. Maintain lawns for not less than the period stated below, and longer as required to establish an acceptable lawn.
1. Sodded lawns, not less than 30 days after substantial completion.
2. Seeded lawns, not less than 60 days after substantial completion.
F. Maintain lawns by watering fertilizing, weeding, mowing, trimming, and other operations such as rolling, regrading and replanting as required to establish a smooth, acceptable lawn, free of eroded or bare areas.
G. Landscape Contractor is responsible for watering all sod and plant materials from day of installation through final acceptance even if irrigation is not in place, unless this responsibility is assumed in writing by another party.
H. Contractor is responsible for returning to the site after a period of (1) one year to remove the staking from the trees and palms.

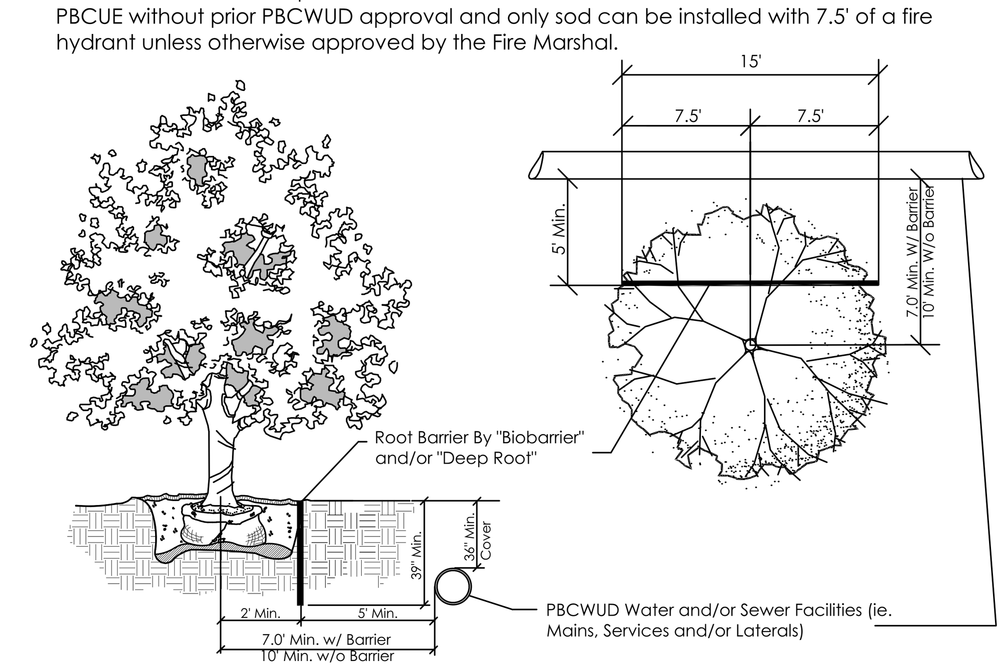
3.12 CLEANUP AND PROTECTION
A. During landscape work, keep pavement clean and work area in an orderly condition.
B. Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged landscape work as directed.

3.13 INSPECTION AND ACCEPTANCE
A. When landscape work is completed, including maintenance, Landscape Architect will, upon request, make an inspection to determine acceptability. Landscape work may be inspected for acceptance in parts agreeable to Landscape Architect, provided work offered for inspection is complete, including maintenance.
B. Seeded lawns will be acceptable provided requirements, including maintenance, have been complied with, and healthy, uniform close stand of specified grass established, free of weeds, bare spots and surface irregularities (95% coverage required for acceptance).
C. Sodded lawns will be acceptable provided requirements, including maintenance, have been complied with, and healthy, well-rooted, even-colored, viable lawn is established, free of weeds, open joints and bare areas (95% coverage required for acceptance). Where inspected landscape work does not comply with requirements, replace rejected work and continue specified maintenance until re-inspected by Landscape Architect and found to be acceptable. Remove rejected plants and materials promptly from project site.

3.14 IRRIGATION
A. An automatic irrigation system providing 100% coverage with 50% minimum overlap is to be designed and installed to maintain an established landscape.
B. Bubblers shall be provided on all trees.
C. The landscape contractor shall be responsible for providing supplemental irrigation through hand watering or other means (including temporary drip, water wands and soaker hoses) to help establish the new and salvaged material. The contractor should continue to monitor the moisture content for all trees and shrubs.
D. The landscape contractor is responsible for obtaining all necessary permits prior to installation.
E. Provide an as built drawing of the irrigation system to the Landscape Architect.
F. A rain sensor is required on all irrigation systems.

LANDSCAPE AND ROOT BARRIER NOTE:
Trees shown on this plan are for graphic reprsentation only. Tree spacing is based on design requirements and the trees shown on this plans attempt to accomplish that spacing while maintaining the required setbacks from utilities. Trees may be field adjusted to avoid conflicts with driveways and underground utilities. In any case the trees shall be located in the filed in accordance with the planting details shown hereon.

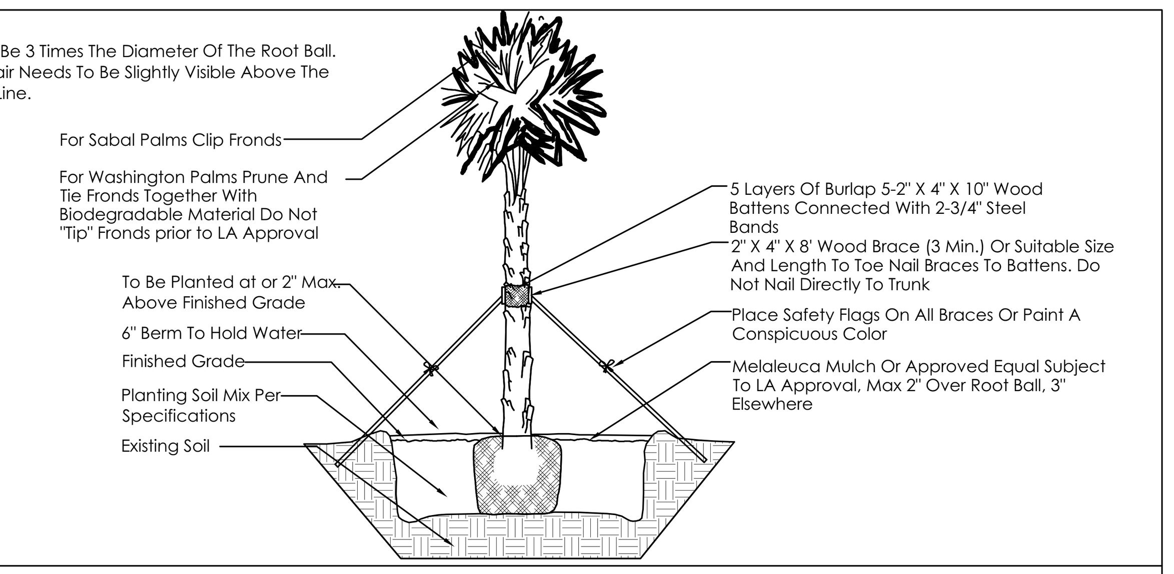
Additionally, trees are to be installed with a ten foot (10') separation from any water or sewer main and/or service, hydrants, and lift stations. If a ten foot (10') separation cannot be achieved, the tree can be installed with a root barrier system. Refer to the "Root Barrier" detail for installation requirements. Howerever in no case shall a tree encroach into a PBCUE without prior PBCWUD approval and only sod can be installed with 7.5' of a fire hydrant unless otherwise approved by the Fire Marshal.



ROOT BARRIER DETAIL

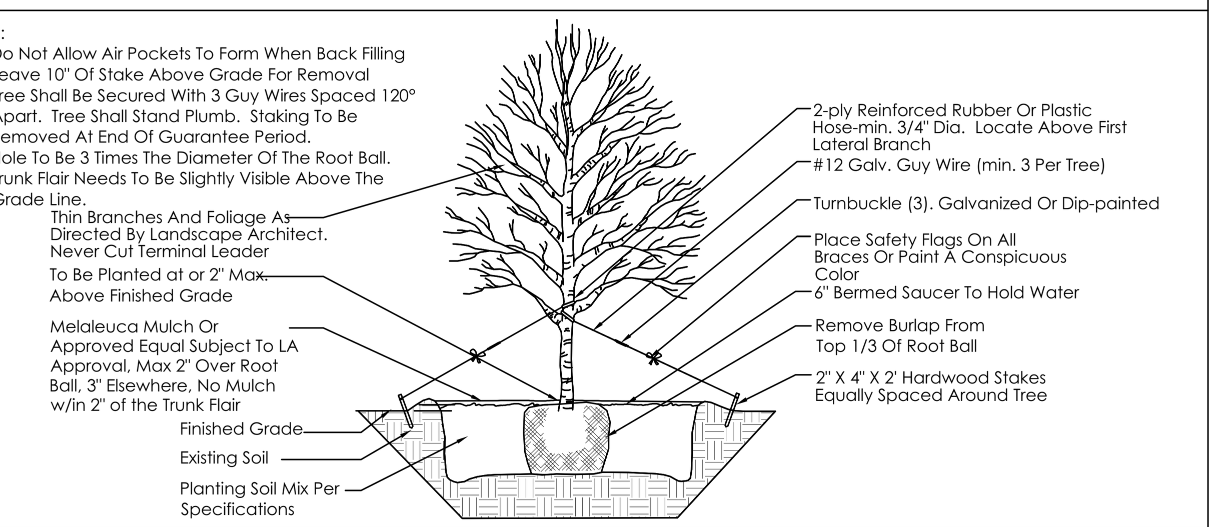
PLANTING DETAILS

Notes:
1. Hole To Be 3 Times The Diameter Of The Root Ball.
2. Trunk Flair Needs To Be Slightly Visible Above The Grade Line.



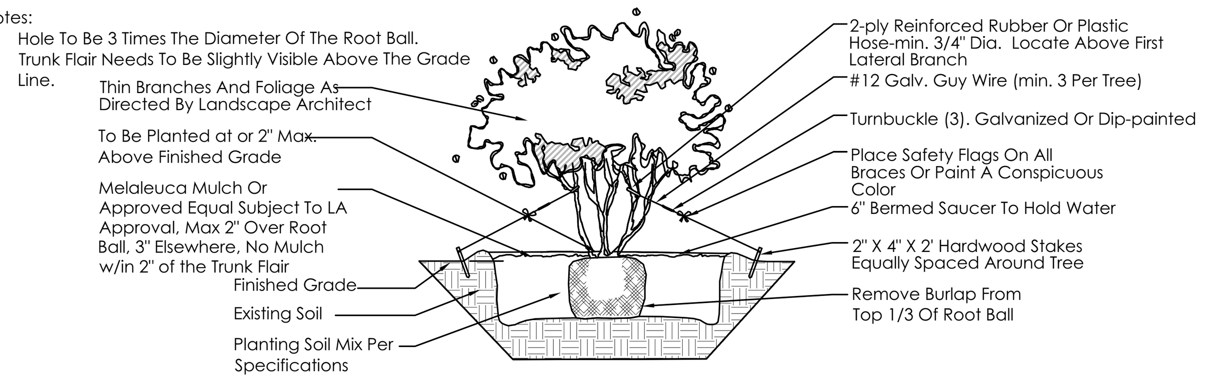
PALM PLANTING DETAIL

Notes:
1. Do Not Allow Air Pockets To Form When Back Filling
2. Leave 10" Of Stake Above Grade For Removal
3. Tree Shall Be Secured With 3 Guy Wires Spaced 120° Apart. Tree Shall Stand Plumb. Staking To Be Removed At End Of Guarantee Period.
4. Hole To Be 3 Times The Diameter Of The Root Ball.
5. Trunk Flair Needs To Be Slightly Visible Above The Grade Line.



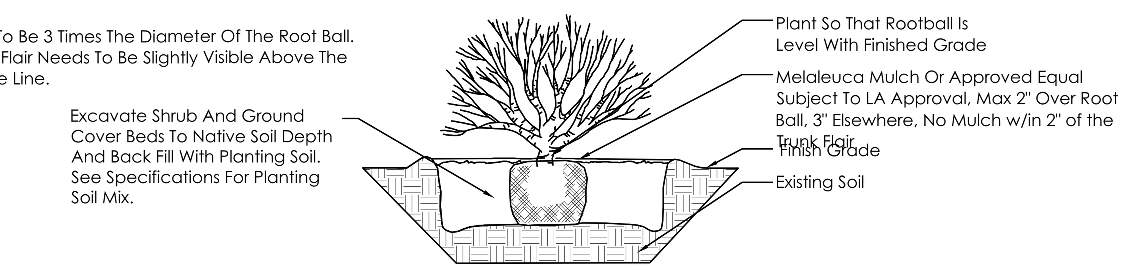
LARGE TREE (OVER 8' HEIGHT) PLANTING DETAIL

Notes:
1. Hole To Be 3 Times The Diameter Of The Root Ball.
2. Trunk Flair Needs To Be Slightly Visible Above The Grade Line.



MULTI-TRUNK TREE PLANTING DETAIL

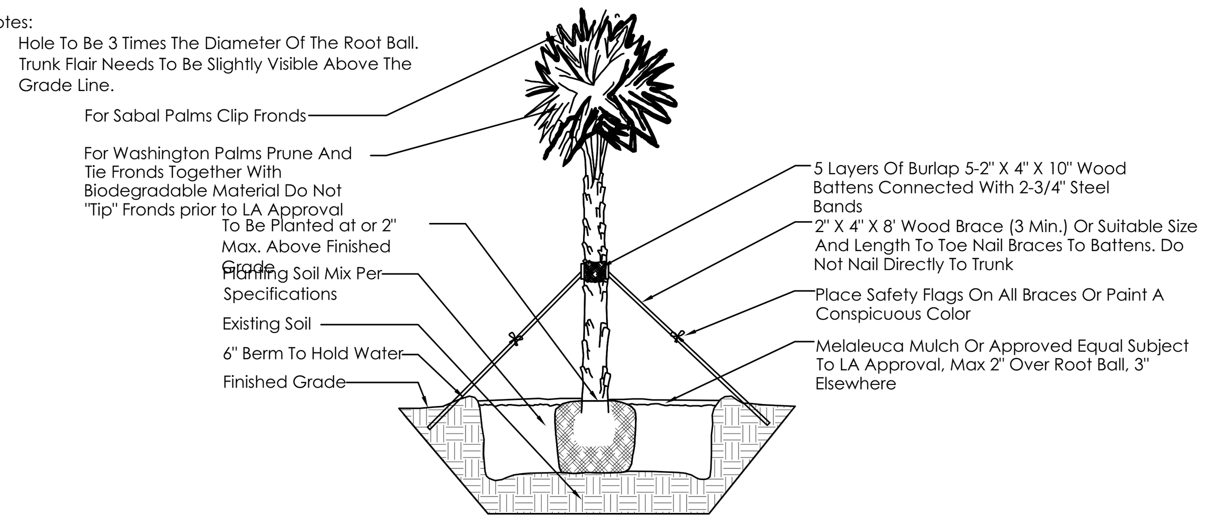
Notes:
1. Hole To Be 3 Times The Diameter Of The Root Ball.
2. Trunk Flair Needs To Be Slightly Visible Above The Grade Line.



SHRUB AND GROUNDCOVER PLANTING DETAIL

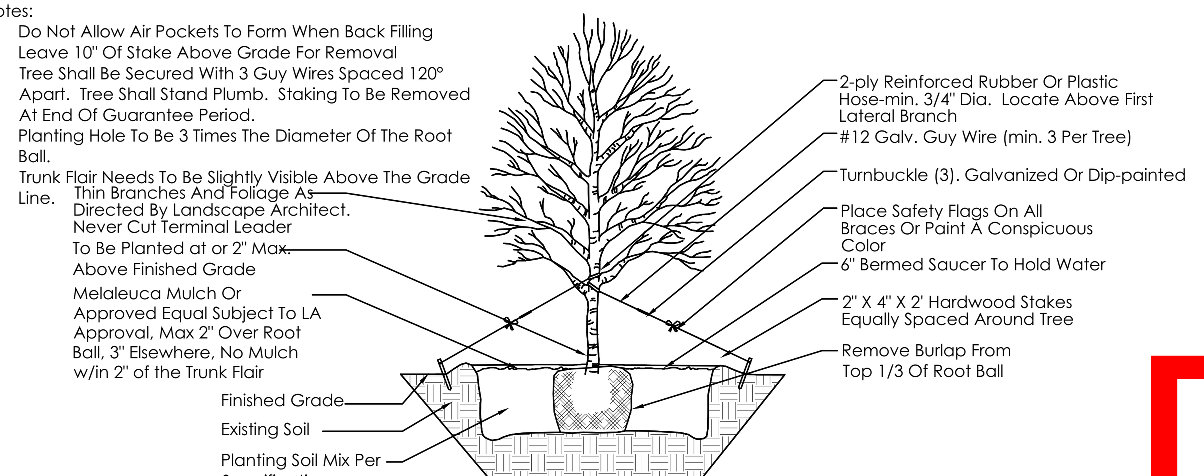
Transplant Details

Notes:
1. Hole To Be 3 Times The Diameter Of The Root Ball.
2. Trunk Flair Needs To Be Slightly Visible Above The Grade Line.



PALM PLANTING DETAIL

Notes:
1. Do Not Allow Air Pockets To Form When Back Filling
2. Leave 10" Of Stake Above Grade For Removal
3. Tree Shall Be Secured With 3 Guy Wires Spaced 120° Apart. Tree Shall Stand Plumb. Staking To Be Removed At End Of Guarantee Period.
4. Planting Hole To Be 3 Times The Diameter Of The Root Ball.
5. Trunk Flair Needs To Be Slightly Visible Above The Grade Line.



TREE PLANTING DETAIL

SCHMIDT NICHOLS
LANDSCAPE ARCHITECTURE AND URBAN PLANNING
1551 N. Flagler Dr, Ste 102
West Palm Beach, FL 33401
Phone: 561.684.6141
Email: info@snlandplan.com
Website: www.snlandplan.com
License No: LC26000232

Martin Brower Industrial
Pompano Beach, Florida

REGISTERED LANDSCAPE ARCHITECT JON ERIC SCHMIDT LA 0001638 STATE OF FLORIDA

Digitally signed by Jon Schmidt Date: 2022.11.02 12:14:52 -04'00'

The Seal Appearing On This Document Was Authorized By Jon Eric Schmidt On The Date Noted In The Electronic Seal.

Date:	08/04/22
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Drawn By:	SMT
Checked By:	JES
File No.	431.05
Job No.	431.05

REVISIONS / SUBMISSIONS

LANDSCAPE SPECIFICATIONS

LP-2 of 2

DRC
PZ22-12000023
12/07/2022