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Opportunity Inc.

Early Learning Center

Palm Beach County, Florida

Date: 06/02/16
 Scale: 1" = 20'-0"
 Design By: MLD
 Drawn By: MLD
 Checked By: Jes
 File No. 703.01
 Job No. 14-47

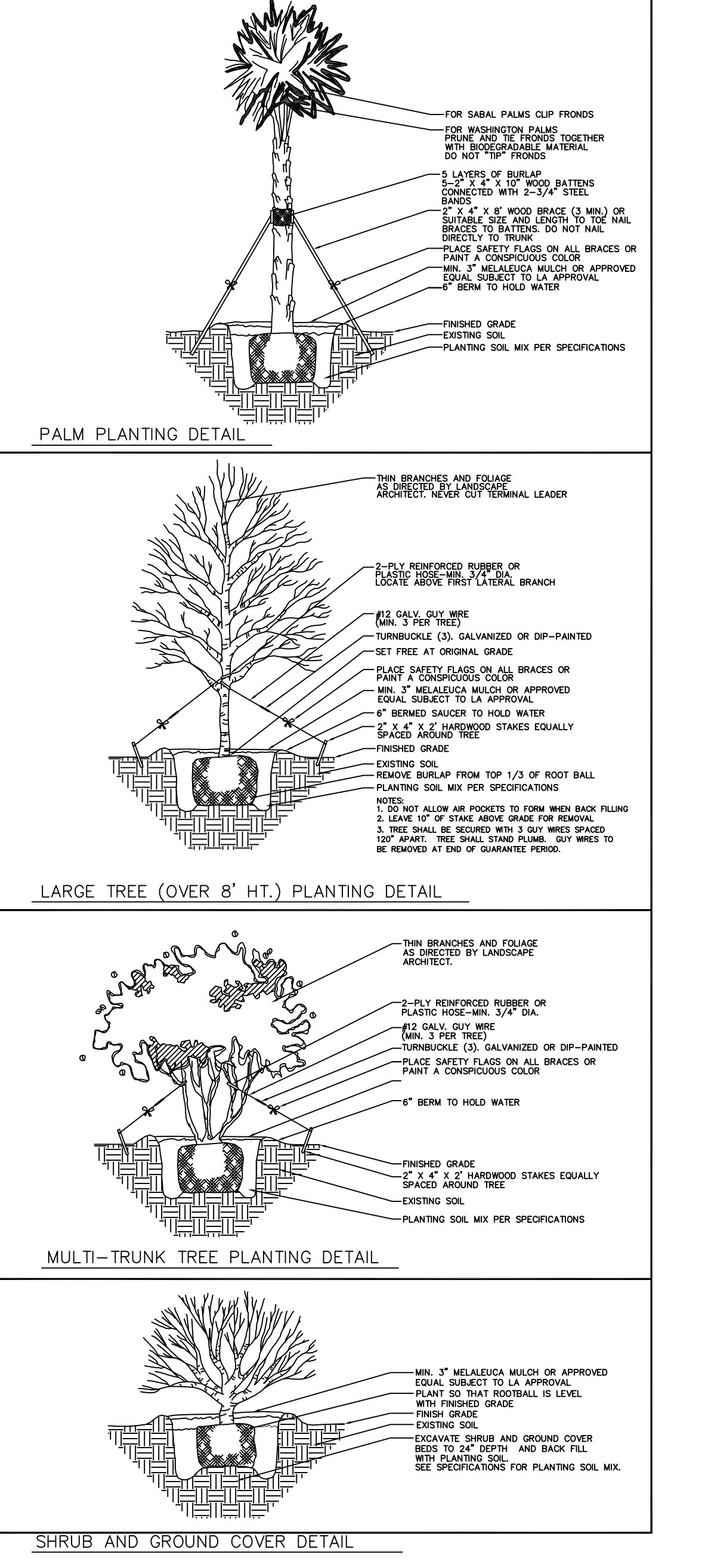
REVISIONS / SUBMISSIONS
 09/19/16 Updated Civil

Landscape Specs.

LANDSCAPE NOTES

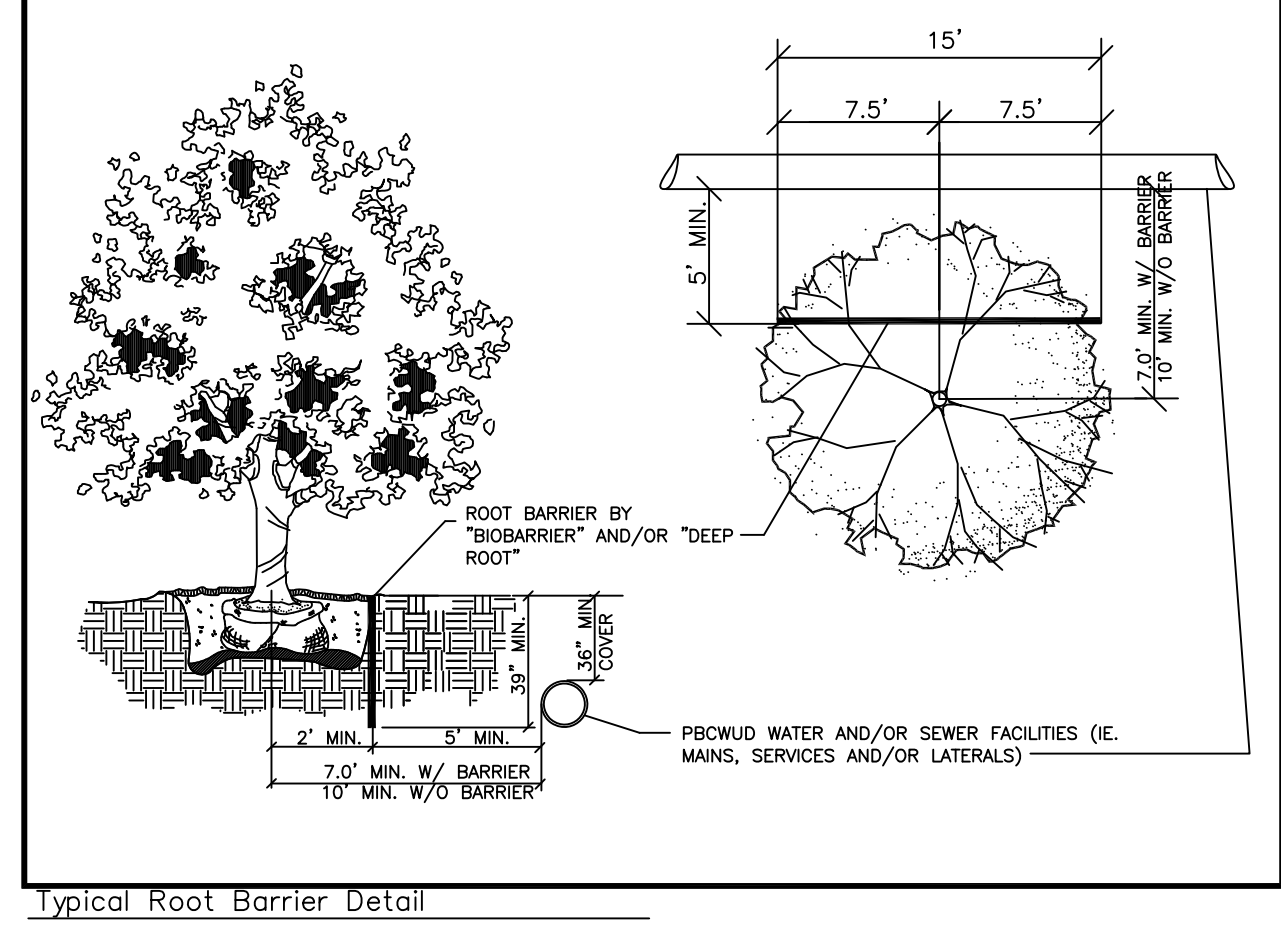
- GENERAL**
- All proposed material shall be Florida No. 1 or better as set forth in "Grades & Standards for Nursery Plants," Florida Dept. of Agriculture, 2nd Edition, 2/68. No deviations will be permitted.
 - By submitting a bid, the landscape contractor is responsible for providing the material specified on the plans. No substitutions will be accepted without prior written approval and acceptance by the Owner or his representative, or Landscape Architect.
 - Materials to be hand-selected at the discretion of the Owner or his representative, or Landscape Architect.
 - All work shall proceed in a professional manner in accordance with standard nursery and installation practices.
 - Quantities on plant list are for convenience only. Landscape Contractor is responsible for all plants shown on planting plans. When discrepancies occur between plant list and planting plans, the plans are to override the plant list in all cases. Contractor is responsible for confirming sod quantities and certifying such to the Owner or his representative.
 - Contractor is responsible for locating all underground utilities prior to digging. Notify the Owner or his representative, or the Landscape Architect immediately regarding discrepancies or conflicts.
 - 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.
 - Owner or Landscape Architect to be immediately notified of any discrepancies found in field.
 - 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.
 - Existing plant material to be removed, except as noted.
- TREES & PALMS**
- All trees, new and relocated, to be staked and guyed as detailed.
 - No double or multi-trunk trees unless otherwise specified.
 - Face of trees and palms to be located a minimum of 2'-0" off all sidewalks/bike paths or other paved surfaces, unless otherwise noted on plans.
 - Root barriers on Live Oaks are not acceptable.
 - All trees falling within grassed areas to have a 3" mulch ring with no more than 1" of mulch directly adjacent to the trunk of the tree. Min. 3' radius mulch ring to be provided.
- PLANTING BEDS**
- Groundcover and shrubs to be laid out in a uniform and consistent pattern.
 - All planting beds to receive 3" deep shredded mulch per specifications.
 - Landscape Contractor is responsible for verifying that clean top soil, meeting the attached specifications, exists in each planting bed prior to planting. Contractor shall add or amend top soil if necessary. Tree pits shall be backfilled as noted in attached specifications. Excavate all shrub and groundcover beds as specified and backfill with planting soil per specifications.
 - All existing asphalt base material to be removed from planting areas and replaced with clean top soil prior to planting. Final grade within planting areas to be 2" below adjacent paved areas or top of curb.
- SOD**
- Landscape Contractor is responsible for replacing any damaged sod.
 - All sod areas to receive 3" top dressing of soil per specifications.
- IRRIGATION**
- All landscape areas (including sod) shall be irrigated with an underground automatic sprinkler system providing 100% coverage, and a rain sensor per attached plans. No landscape installation shall occur until the irrigation system is operational, unless approval is granted by Owner or his representative, or Landscape Architect.

DETAILS



LANDSCAPE AND ROOT BARRIER NOTE:
 Trees shown on this plan are for graphic representation 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. However 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.



Trees, Shrubs and Ground Cover

- PART 1 GENERAL**
- 1.01 WORK INCLUDED**
- Extent of planting work is shown on drawings and in schedules.
 - 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.
 - Finish Grade Elevations: 1 inch below top of pathway edging.
- 1.02 QUALITY ASSURANCE**
- Subcontract landscape work to a single firm specializing in landscape work.
 - Source Quality Control:
 - General: Ship landscape materials with certificates of inspection required by governing authorities. Comply with regulations applicable to landscape materials.
 - 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.
 - 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.
 - 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-scan, injuries, abrasions or discoloration. Provide trees, palms and shrubs for grade needed as outlined under Grades and Standards for Nursery Plants, State Plant Board of Florida, unless otherwise noted.
 - 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.
 - Inspection: Landscape Architect reserves right to inspect trees, palms and shrubs either at place of origin before planting, for compliance with requirements for name, variety, size and quality.
- 1.03 SUBMITTALS**
- 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.
 - 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.
 - Planting Schedule: Submit planting schedule showing schedule dates for each type of planting in each area of site.
 - Maintenance Instructions: Submit typewritten procedures for maintenance of landscape work.
- 1.04 DELIVERY, STORAGE AND HANDLING**
- Packaged Materials: Deliver packaged materials in original containers showing weight analysis and name of manufacturer. Protect materials from deterioration during delivery, and while storing at site.
 - Sod: Time delivery so that sod will be placed within 24 hours after stripping. Protect sod against drying and breaking of rolled strips.
 - 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.
 - 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.
 - Do not remove container grown stock from containers until planting time.
- 1.05 JOB CONDITIONS**
- Proceed with and complete landscape work as rapidly as portions of site become available.
 - 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.
 - Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Landscape Architect before planting.
 - 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 disciplines. 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.
 - 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**
- Warranty lawns through specified maintenance period, and until final acceptance. The required period is for one full year following installation of lawn areas.
 - Warranty 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.
 - Warranty shrubs for 1 full year after date of substantial completion.
 - 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 during 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.
 - 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**
- 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."
 - 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 1/2" in 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. 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**
- If necessary to bring soil into above specified limits:
- 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.
 - Peat Humus or Peat Moss: Texture, moisture and pH range suitable for intended use.
 - Humus Soil Conditioner: Consisting of yard trimmings and biosolids co-compost.
 - 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.

- For trees, palms and shrubs, provide fertilizer with not less than 6% available phosphoric acid, 6% nitrogen and 6% soluble potash.
 - 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**
- Plant list is part of this specification section.
 - Quality: Trees, palms, shrubs and other plants shall conform to the standards for Florida No. 1 or better as given in the latest edition of "Grades and Standards for Nursery Plants, State Plant Board of Florida."
 - Deciduous Trees: Provide trees of height and caliper listed or shown and with branching configuration for 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.
 - Coniferous and Broadleaved Evergreens: Provide evergreens of size shown or listed. Dimensions indicate minimum height and spread. Provide specified quality evergreens with well-balanced form complying with requirements for other size relationships to the primary dimension shown.
- 2.04 GRASS MATERIALS**
- 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.
 - Sod: Provide strongly rooted sod free of weeds and undesirable native grasses, capable of growth and development when planted.
- 2.05 MISCELLANEOUS LANDSCAPE MATERIALS**
- 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.
 - Anti-Erosion Mulch: Provide clean, dry, mulching hay or straw of coastal bermuda, pangola or bahia grass. Only underseeded mulch which can be readily cut into the soil shall be used.
 - Mulch: Melaleuca or equal.
 - Stakes and Guyes: When required provide stakes and deadmen of sound new hardwood, treated softwood, or redwood of knotholes and other defects. Provide wire ties and guyes 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**
- 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**
- Before mixing, clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth.
 - 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.
 - For planting beds, mix planting soil either prior to planting or apply on surface of topsoil and mix thoroughly before planting.
 - Mix lime with dry soil prior to mixing of fertilizer.
 - Prevent lime from contacting roots of acid-loving plants.
 - Remove all shellrock encountered and backfill with clean sand or sand/soil mix.
- 3.03 PREPARATION FOR PLANTING AREAS (To include Lawn and Planting Bed Areas)**
- Spread a layer of 2 to 3 inches of humus soil conditioner over the entire planting area. 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 diameter 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.
- 3.04 PREPARATION FOR PLANTING LAWNS**
- Preparation of Unchanged Grades: Where lawns are to be planted in areas that have not been 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.
 - 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.
 - 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.
 - 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.
 - 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.
 - 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.
 - Restore lawn areas to specified condition if eroded or otherwise disturbed after fine grading and prior to planting.

- 3.05 PREPARATION OF PLANTING BEDS**
- 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.
 - Excavation for Trees and Shrubs: Excavate pits, beds and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. Loosen hard subsoil in bottom of excavation.
 - 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.
 - For container grown stocks, excavate as specified for balled and burlapped stock, adjusted to size of container width and depth.
 - 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**
- Lay out individual trees, palms 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 maybe required.
 - 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 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

Typical Root Barrier Detail