

SUPPLEMENTAL LANDSCAPE ARCHITECT NOTES
FOR SOIL AMENDMENTS AND LANDSCAPE
INSTALLATION (CONTINUED):

PART III. DEFINITIONS AND BASIS OF DESIGN FOR LANDSCAPE PRODUCTS.

A. DEFINITIONS: THE FOLLOWING PROVIDES SPECIFIC NOTES FOR VEGETATIVE (A.K.A. LANDSCAPE) INSTALLATION. THE FOLLOWING DEFINITIONS SHALL APPLY TO THESE LANDSCAPE ARCHITECTURAL PLAN AND DETAIL DRAWINGS:

1. BOXED TREES: A CONTAINER ROOT BALL PACKAGE MADE OF WOOD IN THE SHAPE OF A FOUR-SIDED BOX.
2. CALIPER: TRUNK CALIPER (A.K.A. TRUNK DIAMETER) IS MEASURED SIX INCHES (6") FROM THE GROUND ON TREES UP TO AND INCLUDING FOUR INCHES (4") IN CALIPER, AND TWELVE INCHES (12") ABOVE THE GROUND FOR LARGER TREES.
3. CLEAR TRUNK: AS APPLIED TO PALM TREES, A MEASUREMENT FROM THE TOP OF THE ROOT BALL TO THE POINT WHERE THE LOWEST UNTRIMMED LEAF'S PETIOLE DIVERGES FROM THE TRUNK.
4. CONTAINER PLANT: PLANTS THAT ARE GROWN IN AND/OR ARE CURRENTLY IN A CONTAINER INCLUDING BOXED TREES.
5. DEFECTIVE PLANT: A PLANT THAT FAILS TO MEET THE PLANT QUALITY REQUIREMENT OF THESE LANDSCAPE ARCHITECTURAL NOTES, PLAN AND DETAIL DRAWINGS.
6. DIAMETER AT BREAST HEIGHT (DBH): DIAMETER OF A TREE TRUNK AT BREAST HEIGHT, CONSIDERED FOUR-AND-ONE-HALF FOOT (4 1/2') FROM THE GROUND. USED TO MEASURE EXISTING TREES ON A PROJECT SITE; THIS IS NOT AN APPROPRIATE METHOD FOR MEASURING NURSERY TREES.
7. DRIP LINE: IMAGINARY LINE DEFINED BY THE BRANCH SPREAD OF A SINGLE OR GROUP OF PLANTS PROJECTED ONTO THE GROUND; SPECIFICALLY APPLIED TO TREES.
8. FIELD GROWN TREES OF BALLED AND BURLAPPED (BB&B): TREES GROWING IN FIELD SOIL FOR AT LEAST TWELVE (12) MONTHS PRIOR TO HARVEST.
9. FLORIDA-FRIENDLY LANDSCAPING (FFL™): A FLORIDA-WIDE PROGRAM, BASED ON FLORIDA STATUTE 373.185, OF NINE (9) PRINCIPALS PROMOTING SUSTAINABLE ALTERNATIVES TO CONVENTIONAL LANDSCAPING, PROVIDING GUIDANCE ON LOW IMPACT, ENVIRONMENTALLY FRIENDLY, SCIENCE-BASED LANDSCAPE PRACTICES THAT USE LESS WATER AND REDUCE POLLUTANT LOADING TO STATE WATERS.
10. HARDENED OFF FIELD GROWN TREE: TREES GROWING THROUGH BURLAP INDICATE TREE HAS OVERCOME STRESS ASSOCIATED WITH DIGGING THE TREE. THIS TREE WILL NOT DIE DUE TO THE STRESS ASSOCIATED WITH DIGGING. IF THIS TREE DIES IN THE LANDSCAPE, IT IS THE RESPONSIBILITY OF THE PURCHASER OF THE TREE, NOT THE NURSERY.
11. HEALTHY: PLANTS THAT ARE GROWING IN A CONDITION THAT EXPRESSES LEAF SIZE, CROWN DENSITY, COLOR, AND WITH ANNUAL GROWTH RATES TYPICAL OF THE SPECIES AND CULTIVAR'S HORTICULTURAL DESCRIPTION, ADJUSTED FOR THE PLANTING SITE SOIL, DRAINAGE, AND WEATHER CONDITIONS.
12. INVASIVE PLANT: PLANT SPECIES, GENERALLY ALIEN TO THE STATE OF FLORIDA, WHOSE INTRODUCTION OR CONTINUED CULTIVATION DOES, OR IS LIKELY, TO CAUSE ECONOMIC OR ENVIRONMENTAL HARM OR HARM TO HUMAN HEALTH.
13. KINKED ROOT: A ROOT WITHIN THE ROOT PACKAGE THAT BENDS MORE THAN NINETY (90) DEGREES.
14. LANDSCAPE MAINTENANCE: ACTIONS THAT PRESERVE THE HEALTH OF PLANTS AFTER INSTALLATION AND AS DEFINED IN THIS SPECIFICATION.
15. MULCH: CAN BE WOOD CHIPS, BARK, STRAW, PINE NEEDLES, LEAVES, NON-ORGANIC SUBSTANCES, AND SHREDDED RUBBER APPLIED TO THE SOIL SURFACE AROUND PLANTS TO CREATE A FAVORABLE ENVIRONMENT FOR GROWTH BY RETAINING MOISTURE, SUPPRESSING WEEDS, REGULATING TEMPERATURE, AND ENRICHING SOIL.
16. MULCH, PINE STRAW: MULCH MADE FROM THE FRESH, UNDECOMPOSED PINE NEEDLES RAKED FROM A FOREST FLOOR.
17. MULCH, WOOD: MULCH MADE FROM GROUND TREES AND WOODY BRUSHES.
18. NORMAL: THE PREVAILING PROTOCOL OF INDUSTRY STANDARD(S).
19. REASONABLE AND REASONABLY: WHEN USED IN THIS SPECIFICATION RELATIVE TO PLANT QUALITY, IT IS INTENDED TO MEAN THAT THE CONDITIONS CITED WILL NOT AFFECT THE ESTABLISHMENT OR LONG-TERM STABILITY, HEALTH, OR GROWTH OF THE PLANT. THESE NOTES RECOGNIZES THAT NURSERIES CANNOT PRODUCE PLANTS FREE OF ALL DEFECTS, BUT THAT SOME ACCEPTED INDUSTRY PROTOCOLS AND STANDARDS RESULT IN PLANTS UNACCEPTABLE TO THIS PROJECT.
- a. WHEN REASONABLE OR REASONABLY IS USED IN RELATION TO OTHER ISSUES SUCH AS WEEDS, DISEASED, INSECTS, IT SHALL MEAN AT LEVELS LOW ENOUGH THAT NO TREATMENT WOULD BE REQUIRED WHEN APPLYING RECOGNIZED INTEGRATED PLANT MANAGEMENT PRACTICES.
- b. THESE NOTES RECOGNIZE SOME DECISIONS CANNOT BE TOTALLY BASED ON MEASURED FINDINGS AND THAT PROFESSIONAL JUDGMENT IS REQUIRED. IN CASES OF DIFFERING OPINION, THE LANDSCAPE ARCHITECT SHALL DETERMINE WHEN CONDITIONS ARE JUDGED AS REASONABLE.
20. REGENERATED PALMS: PALMS THAT HAVE BEEN COLLECTED/DUG AND MAINTAINED UNTIL NEW WHITE OR CREAMY COLORED GROWTH IS VISIBLE AROUND A MINIMUM OF SEVENTY-FIVE PERCENT (75%) OF THE PERIMETER OF THE ROOT BALL. THE NEW ROOTS ARE HELD WITHIN A CONTAINMENT BARRIER. ROOTS WHICH PENETRATE OR ESCAPE THE BARRIER CANNOT BE INCLUDED IN THIS PERCENTAGE.
21. ROOT BALL: THE MASS OF ROOTS INCLUDING ANY SOIL OR SUBSTRATE THAT IS SHIPPED WITH THE TREE WITHIN THE ROOT BALL PACKAGE.
22. ROOT BALL PACKAGE: THE MATERIAL THAT SURROUNDS THE ROOT BALL DURING SHIPPING. THE ROOT PACKAGE MAY INCLUDE THE MATERIAL IN WHICH THE PLANT WAS GROWN, OR NEW PACKAGING PLACED AROUND THE ROOT BALL FOR SHIPPING.
23. ROOT COLLAR (ROOT CROWN, ROOT FLARE, TRUNK FLARE, FLARE): THE REGION AT THE BASE OF THE TRUNK WHERE THE MAJORITY OF THE STRUCTURAL ROOTS JOIN THE PLANT STEM, USUALLY AT OR NEAR GROUND LEVEL.
24. SHRUB: WOODY PLANTS WITH A MATURE HEIGHT OF APPROXIMATELY LESS THAN FIFTEEN FEET (15').
25. SPADE HARVESTED AND TRANSPLANTED: FIELD GROWN TREES THAT ARE MECHANICALLY HARVESTED AND IMMEDIATELY TRANSPLANTED TO THE FINAL GROWING SITE WITHOUT BEING REMOVED FROM THE DIGGING MACHINE.
26. STEM: THE TRUNK OF THE TREE.
27. SUBSTANTIAL COMPLETION ACCEPTANCE: THE DATE AT THE END OF THE PLANTING, PLANTING SOIL, AND IRRIGATION INSTALLATION WHERE THE LANDSCAPE ARCHITECT ACCEPTS THAT ALL WORK IN THESE SECTIONS IS COMPLETE AND THE WARRANTY PERIOD HAS BEGUN. THIS DATE MAY BE DIFFERENT THAN THE DATE OF SUBSTANTIAL COMPLETION FOR THE OTHER SECTIONS OF THE PROJECT.
28. STEM GIRDLING ROOT: ANY ROOT MORE THAN ONE-QUARTER INCH (¼") DIAMETER CURRENTLY TOUCHING THE TRUNK, OR WITH THE POTENTIAL TO TOUCH THE TRUNK, ABOVE THE ROOT COLLAR APPROXIMATELY TANGENT TO THE TRUNK CIRCUMFERENCE OR CIRCLING THE TRUNK. ROOTS SHALL BE CONSIDERED AS STEM GIRDLING THAT HAVE, OR ARE LIKELY TO HAVE IN THE FUTURE, ROOT TO TRUNK BARK CONTACT.
29. STRUCTURAL ROOT: ONE OF THE LARGEST ROOTS EMERGING FROM THE ROOT COLLAR.
30. TREE: SINGLE AND MULTI-STEMMED PLANTS WITH MATURE HEIGHT APPROXIMATELY GREATER THAN FIFTEEN FEET (15').
31. TREE, CANOPY: A TREE WITH A NORMAL OVERALL HEIGHT AT MATURITY OF THIRTY FEET (30') OR MORE.
32. TREE, CHAMPION: TREES IDENTIFIED BY THE FLORIDA DIVISION OF FORESTRY AS BEING THE LARGEST OF THEIR SPECIES WITHIN THE STATE OF FLORIDA, OR, BY THE AMERICAN FORESTRY ASSOCIATION, AS THE LARGEST OF THEIR SPECIES IN THE UNITED STATES.
33. TREE, HERITAGE: A REGULATED TREE WHOSE GROWTH (RECORDED BY DBH) REACHES A

THRESHOLD TO QUALIFY IT, IF REMOVED, FOR ADDITIONAL MITIGATION.

34. TREE, MITIGATION: ONE OR MORE TREES SHOWN ON THE LANDSCAPE ARCHITECTURAL PLAN AND DETAIL DRAWINGS REQUIRED TO REPLACE, IN QUANTITY AND/OR SIZE, TREES CUT DOWN FOR CONSTRUCTION.
35. TREE, NUISANCE: A SPECIES OF TREE A MUNICIPALITY DECLARES UNDESIRABLE. BY BEST PRACTICE, NUISANCE TREES ARE NOT CONSIDERED REGULATED TREES AND, THEREFORE, DO NOT REQUIRE MITIGATION IN THE FORM OF FEE OR REPLACEMENT.
36. TREE, REGULATED: SURVEY TREE WHOSE GROWTH (RECORDED BY DBH) REACHES A THRESHOLD TO QUALIFY IT, IF REMOVED, FOR MITIGATION, USUALLY IN THE FORM OF FEE OR NEW TREE PLANTINGS.
37. TREE, SURVEY: TREE RECORDED ON A TREE SURVEY WITH LOCATION, DBH, AND SPECIES.
38. TREE, UNDERSTORY: A TREE WITH A NORMAL HEIGHT AT MATURITY LESS THAN THIRTY FEET (30') AND GREATER THAN FIFTEEN FEET (15').

B. BASIS OF DESIGN LANDSCAPE PRODUCTS

1. PLANTS: GENERAL
 - a. THE CONTRACTOR SHALL PROVIDE PLANTS OF QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY OR CULTIVARS AS SHOWN AND SCHEDULED IN THE LANDSCAPE ARCHITECTURAL PLAN AND DETAIL DRAWINGS.
 - b. ALL PLANTS SHALL CONFORM TO THE LATEST EDITIONS OF THE *FLORIDA GRADES AND STANDARDS FOR NURSERY STOCK* AND *ANSI Z60.1 AMERICAN STANDARD FOR NURSERY STOCK* UNLESS MODIFIED BY PROVISIONS IN THESE NOTES, DETAILS, AND DRAWINGS.
 - c. QUALITY PLANTS ARE OF HEALTHY STOCK, GROWN IN A NURSERY, AND REASONABLY FREE OF DIE-BACK, DISEASE, INSECTS, EGGS, BORES, AND LARVAE. AT THE TIME OF PLANTING ALL PLANTS SHALL HAVE A ROOT SYSTEM, STEM, AND BRANCH FORM THAT WILL NOT RESTRICT NORMAL GROWTH, STABILITY, AND HEALTH FOR THE EXPECTED LIFE OF THE PLANT.
 - d. PLANTS LARGER THAN SPECIFIED MAY BE USED IF ACCEPTABLE TO THE LANDSCAPE ARCHITECT. THE USE OF SUCH PLANTS SHALL NOT INCREASE THE CONTRACT PRICE, BUT LARGER PLANTS WILL BE UNACCEPTABLE IF THE RESULTING ROOT BALL CANNOT BE FIT INTO THE REQUIRED PLANTING SPACE.
 - e. IF A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE. THE MEASUREMENTS SPECIFIED ARE THE MINIMUM AND MAXIMUM SIZE ACCEPTABLE AND ARE THE MEASUREMENTS AFTER PRUNING, WHERE PRUNING IS REQUIRED.
 - f. ALL PLANTS SHALL BE TRUE TO NAME AS ORDERED OR SHOWN ON PLANTING PLANS.
 - g. ALL TREES SHALL COMPLY WITH FEDERAL AND STATE LAWS AND REGULATIONS REQUIRING OBSERVATION FOR PLANT DISEASE, PESTS, AND WEEDS. OBSERVATION CERTIFICATES REQUIRED BY LAW SHALL ACCOMPANY EACH SHIPMENT OF PLANTS.
2. PLANTS: QUALITY ABOVE THE SOIL LINE
 - a. PLANTS SHALL BE HEALTHY WITH THE COLOR, SHAPE, SIZE AND DISTRIBUTION OF TRUNK, STEMS, BRANCHES, BUDS AND LEAVES NORMAL TO THE PLANT TYPE SPECIFIED. TREE QUALITY ABOVE THE SOIL LINE SHALL COMPLY WITH FLORIDA GRADES AND STANDARDS, TREE GRADE FLORIDA, FANCY OR FLORIDA #1, AND THE FOLLOWING:
 - 1) TREES SHALL HAVE ONE CENTRAL LEADER. IF THE LEADER WAS HEADED, A NEW LEADER (WITH A LIVE TERMINAL BUD) AT LEAST ONE-HALF THE DIAMETER OF THE PRUNING CUT SHALL BE PRESENT.
 - a) ALL TREES ARE ASSUMED TO HAVE ONE CENTRAL LEADER TREES UNLESS A DIFFERENT FORM IS SPECIFIED IN THE PLANT LIST OR DRAWINGS.
 - b) ALL GRAFT UNIONS, WHERE APPLICABLE, SHALL BE COMPLETELY CLOSED WITHOUT THE VISIBLE SIGN OF GRAFT REJECTION. ALL GRAFTS SHALL BE VISIBLE ABOVE THE SOIL LINE.
 - 3) TRUNK CALIPER AND TAPER SHALL BE SUFFICIENT SO THAT THE LOWER FIVE FEET (5') OF THE TRUNK REMAINS VERTICAL WITHOUT A STAKE. AUXILIARY STAKE MAY BE USED TO MAINTAIN A STRAIGHT LEADER IN THE UPPER HALF OF THE TREE.
 - c. GROWTH: THE FORM AND DENSITY OF THE CROWN SHALL BE TYPICAL FOR A YOUNG SPECIMEN OF THE SPECIES OR CULTIVAR PRUNED TO A CENTRAL AND DOMINANT LEADER.
 - 1) CROWN SPECIFICATIONS DO NOT APPLY TO PLANTS THAT HAVE BEEN SPECIFICALLY TRAINED IN THE NURSERY AS TOPIARY, ESPALIER, MULTI-STEM, CLUMP, OR UNIQUE SELECTIONS SUCH AS CONTORTED OR WEEPING CULTIVARS.
 - c. LEAVES: THE SIZE, COLOR, AND APPEARANCE OF LEAVES SHALL BE TYPICAL FOR THE TIME OF YEAR AND STAGE OF GROWTH OF THE SPECIES OR CULTIVAR. TREES SHALL NOT SHOW SIGNS OF PROLONGED MOISTURE STRESS OR OVER WATERING AS INDICATED BY WILTED, SHRIVELED, OR DEAD LEAVES.
 - d. BRANCHES: SHOOT GROWTH (LENGTH AND DIAMETER) THROUGHOUT THE CROWN SHOULD BE APPROPRIATE FOR THE AGE AND SIZE OF THE SPECIES OR CULTIVAR. TREES SHALL NOT HAVE DEAD, DISEASED, BUD, OR OTHER DEFECTS IN BUD OR BRANCHES.
 - 1) MAIN BRANCHES SHALL BE DISTRIBUTED ALONG THE CENTRAL LEADER NOT CLUSTERED TOGETHER. THEY SHALL FORM A BALANCED CROWN APPROPRIATE FOR THE CULTIVAR/SPECIES.
 - 2) BRANCH DIAMETER SHALL BE NO LARGER THAN TWO-THIRDS (ONE-HALF IS PREFERRED) THE DIAMETER OF THE CENTRAL LEADER MEASURED ONE-INCH (1") ABOVE THE BRANCH UNION.
 - 3) THE ATTACHMENT OF THE LARGEST BRANCHES (SCAFFOLD BRANCHES) SHALL BE FREE OF INCLUDED BARK.
 - e. TRUNK: THE TREE TRUNK SHALL BE RELATIVELY STRAIGHT, VERTICAL, AND FREE OF WOUNDS THAT PENETRATE TO THE WOOD (PROPERLY MADE PRUNING CUTS, CLOSED OR NOT, ARE ACCEPTABLE AND ARE NOT CONSIDERED WOUNDS), SUNBURNED AREAS, CONKS (FUNGAL FRUITING BODIES), WOOD CRACKS, SAP LEAKAGE, SIGNS OF BORING INSECTS, GALLS, CANKERS, GIRDLING TIES, OR LESIONS (MECHANICAL INJURY).
 - f. TEMPORARY BRANCHES, UNLESS OTHERWISE SPECIFIED, CAN BE PRESENT ALONG THE LOWER TRUNK BELOW THE LOWEST MAIN (SCAFFOLD) BRANCH, PARTICULARLY FOR TREES LESS THAN ONE INCH (1") IN CALIPER. THESE BRANCHES SHOULD BE NO GREATER THAN THREE-EIGHTHS INCH (3/8") DIAMETER. CLEAR TRUNK SHOULD BE NO MORE THAN FORTY PERCENT (40%) OF THE TOTAL HEIGHT OF THE TREE.
 3. PLANTS: QUALITY AT OR BELOW THE SOIL LINE
 - a. PLANT ROOTS SHALL BE NORMAL TO THE PLANT TYPE SPECIFIED. ROOT OBSERVATIONS SHALL TAKE PLACE WITHOUT IMPACTING TREE HEALTH. ROOT QUALITY AT OR BELOW THE SOIL LINE SHALL COMPLY WITH THE PROJECT ROOT ACCEPTANCE DETAILS AND THE FOLLOWING:
 - 1) THE ROOTS SHALL BE REASONABLY FREE OF SCRAPES, BROKEN OR SPLIT WOOD.
 - 2) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF INJURY FROM BIOTIC (E.G., INSECTS AND PATHOGENS) AND ABIOTIC (E.G., HERBICIDE TOXICITY AND SALT INJURY) AGENTS. WOUNDS RESULTING FROM ROOT PRUNING USED TO PRODUCE A HIGH-QUALITY ROOT SYSTEM ARE NOT CONSIDERED INJURIES.
 - 3) A MINIMUM OF THREE STRUCTURAL ROOTS REASONABLY DISTRIBUTED AROUND THE TRUNK (NOT CLUSTERED ON ONE SIDE) SHALL BE FOUND ON EACH PLANT. ROOT DISTRIBUTION SHALL BE UNIFORM THROUGHOUT THE ROOT BALL, AND GROWTH SHALL BE APPROPRIATE FOR THE SPECIES.
 - 4) PLANTS WITH STRUCTURAL ROOTS ON ONLY ONE SIDE OF THE TRUNK (1 ROOTS) SHALL BE REJECTED.
 - 5) THE ROOT COLLAR SHALL BE WITHIN THE UPPER TWO INCHES (2") OF THE SUBSTRATE/SOIL. TWO (2) STRUCTURAL ROOTS SHALL REACH THE SIDE OF THE ROOT BALL NEAR THE TOP SURFACE OF THE ROOT BALL. THE GROWER MAY REQUEST A MODIFICATION TO THIS REQUIREMENT FOR SPECIES WITH ROOTS THAT RAPIDLY DESCEND, PROVIDED THAT THE GROWER REMOVES ALL STEM GIRDLING ROOTS ABOVE THE STRUCTURAL ROOTS ABOVE THE TOP OF THE ROOT BALL.
 - 6) THE ROOT SYSTEM SHALL BE REASONABLY FREE STEM GIRDLING ROOTS OVER THE ROOT COLLAR OR KINKED ROOTS FROM NURSERY PRODUCTION PRACTICES.
 - 7) THE FINAL PLANT GROWER SHALL BE RESPONSIBLE TO HAVE DETERMINED THAT THE PLANTS HAVE BEEN ROOT PRUNED AT EACH STEP IN THE PLANT PRODUCTION PROCESS TO REMOVE STEM GIRDLING ROOTS AND KINKED ROOTS, OR THAT THE PREVIOUS PRODUCTION SYSTEM USED PRACTICES THAT PRODUCE A ROOT SYSTEM THROUGHOUT THE ROOT BALL THAT MEETS THESE SPECIFICATIONS. REGARDLESS OF THE WORK OF PREVIOUS GROWERS, THE PLANT'S ROOT SYSTEM SHALL BE MODIFIED AT THE FINAL PRODUCTION STAGE, IF NEEDED, TO PRODUCE

THE REQUIRED PLANT ROOT QUALITY.

- 8) AT TIME OF OBSERVATIONS AND DELIVERY, THE ROOT BALL SHALL BE MOIST THROUGHOUT. ROOTS SHALL NOT SHOW SIGNS OF EXCESS SOIL MOISTURE CONDITIONS AS INDICATED BY STUNTED, DISCOLORED, DISTORTED, OR DEAD ROOTS.
 - a. THE CONTRACTOR SHALL SUBMIT THE FINAL PLANT GROWER'S PLANT QUALITY CERTIFICATIONS FOR EACH PLANT TYPE TO THE LANDSCAPE ARCHITECT. THE CERTIFICATION MUST STATE THAT EACH PLANT MEETS ALL THE ABOVE PLANT QUALITY REQUIREMENTS.
 - 1) THE GROWER'S CERTIFICATION OF PLANT QUALITY DOES NOT PROHIBIT THE LANDSCAPE ARCHITECT FROM OBSERVING ANY PLANT OR REJECTING THE PLANT IF IT IS FOUND TO NOT MEET THE SPECIFICATION REQUIREMENTS.
 4. ROOT BALL PACKAGE OPTIONS. SPECIFIC ROOT BALL PACKAGES SHALL BE REQUIRED WHERE INDICATED ON THE PLANT LIST OR IN THIS SPECIFICATION. ANY TYPE OF ROOT BALL PACKAGES THAT IS NOT SPECIFICALLY DEFINED IN THESE NOTES OR DRAWINGS SHALL NOT BE PERMITTED. THE FOLLOWING ROOT BALL PACKAGES ARE PERMITTED:
 - a. BALLED AND BURLAPPED PLANTS
 - 1) ALL BALLED AND BURLAPPED PLANTS SHALL BE FIELD GROWN, AND THE ROOT BALL PACKAGED IN A BURLAP AND TWINE AND/OR BURLAP AND WIRE BASKET PACKAGE.
 - 2) PLANTS SHALL BE HARVESTED WITH THE FOLLOWING MODIFICATIONS TO STANDARD NURSERY PRACTICES.
 - 3) PRIOR TO DIGGING ANY TREE THAT FAILS TO MEET THE REQUIREMENT FOR MAXIMUM SOIL AND ROOTS ABOVE THE ROOT COLLAR, CAREFULLY REMOVED THE SOIL FROM THE TOP OF THE ROOT BALL OF EACH PLANT, USING HAND TOOLS, WATER OR AN AIR SPADE, TO LOCATE THE ROOT COLLAR AND ATTAIN THE SOIL DEPTH OVER THE STRUCTURAL ROOTS REQUIREMENTS. REMOVE ALL STEM GIRDLING ROOTS ABOVE THE ROOT COLLAR. CARE MUST BE EXERCISED NOT TO DAMAGE THE SURFACE OF THE ROOT COLLAR AND THE TOP OF THE STRUCTURAL ROOTS.
 - 4) TREES SHALL BE DUG FOR A MINIMUM OF FOUR (4) WEEKS AND A MAXIMUM OF FIFTY-TWO (52) WEEKS PRIOR TO SHIPPING. TREES DUG FOUR TO FIFTY-TWO (4 TO 52) WEEKS PRIOR TO SHIPPING ARE DEFINED AS HARDENED OFF. DIGGING IS DEFINED AS CUTTING ALL ROOTS AND LIFTING THE TREE OUT OF THE GROUND AND EITHER MOVING IT TO A NEW LOCATION IN THE NURSERY OR PLACING IT BACK INTO THE SAME HOLE. TREES THAT ARE STORED OUT OF THE GROUND SHALL BE PLACED IN A HOLDING AREA PROTECTED FROM EXTREMES OF WIND AND SUN WITH THE ROOT BALL PROTECTED BY COVERING WITH MULCH OR STRAW AND IRRIGATED SUFFICIENTLY TO KEEP MOISTURE IN THE ROOT BALL ABOVE WILT POINT AND BELOW SATURATION
 - 5) IF WIRE BASKETS ARE USED TO SUPPORT THE ROOT BALL, A "LOW PROFILE" BASKET SHALL BE USED. A LOW-PROFILE BASKET IS DEFINED AS HAVING THE TOP OF THE HIGHEST LOOPS ON THE BASKET NO LESS THAN FOUR-INCHES (4") AND NO GREATER THAN EIGHT-INCHES (8") BELOW THE SHOULDER OF THE ROOT BALL PACKAGE.
 - 6) AT NURSERIES WHERE SANDY SOILS PREVENT THE USE OF "LOW PROFILE BASKETS", BASKETS THAT SUPPORT THE ENTIRE ROOT BALL, INCLUDING THE TOP, ARE ALLOWABLE.
 - 6) TWINE AND BURLAP USED FOR WRAPPING THE ROOT BALL PACKAGE SHALL BE NATURAL, BIODEGRADABLE MATERIAL. IF THE BURLAP DECOMPOSES AFTER DIGGING THE TREE, THEN THE ROOT BALL SHALL BE RE-WRAPPED PRIOR TO SHIPPING IF ROOTS HAVE NOT YET GROWN TO KEEP ROOT BALL INTACT DURING SHIPPING.
 - c. CONTAINER (INCLUDING ABOVE-GROUND FABRIC CONTAINERS AND BOXES) PLANTS
 - 1) CONTAINER PLANTS MAY BE PERMITTED ONLY WHEN INDICATED ON THE DRAWING, IN THIS SPECIFICATION, OR APPROVED BY THE LANDSCAPE ARCHITECT.
 - 2) PROVIDE PLANTS SHALL BE ESTABLISHED AND WELL ROOTED IN REMOVABLE CONTAINERS.
 5. PALMS
 - a. STANDARDS FOR PREPARING PALMS FOR TRANSPLANTING AND ESTABLISHMENT VARY BY SPECIES. GENERALLY, IN PREPARING PALM TREES FOR RELOCATION, ONLY REMOVE FRONDS THAT ARE COMPLETELY BROWN AND THAT HANG BELOW THE NINE (9) °O'CLOCK OR THREE (3) °O'CLOCK POSITION.
 - 1) ALL FRONDS CAN BE REMOVED ON SABAL PALMS.
 - b. ALL REMAINING FRONDS ABOVE HORIZONTAL SHALE BE LIFTED UP AND TIED TOGETHER AROUND THE CROWN IN AN UPRIGHT POSITION. UP TO TWO-THIRDS (2/3) OF THE OLDEST LIVE FRONDS CAN BE REMOVED; DO NOT TIE TOO TIGHTLY, BIND OR INJURE THE BUD. JUTE BINDER TWINE SHALL BE USED IN TYING UP THE FRONDS; WIRE WILL NOT BE PERMITTED. FRONDS SHALL BE UNTIED IMMEDIATELY AFTER PLANTING.
 - c. THE CONTRACTOR SHALL NOT FREE-FALL, DRAG, ROLL OR ABUSE THE TREE OR PUT A STRAIN ON THE CROWN (BUD AREA) AT ANY TIME. A PROTECTIVE DEVICE SHALL BE USED AROUND THE TRUNK OF THE TREE WHILE LIFTING AND RELOCATING SO AS NOT TO INJURE THE BUD, OR SCAR OR SKIN THE TRUNK IN ANY WAY.
 6. BELOW GROUND ANCHORAGE SYSTEMS (TREE STAPLES), TREE GUYING MATERIAL AND STAKING
 - a. THE USE OF WOOD TREE STAPLES IS THE PREFERRED SYSTEM OF JBPRO FOR SECURING MOST NEWLY PLANTED TREES. METAL TREE STAPLES ARE ACCEPTABLE.
 - b. BASIS OF DESIGN FOR TREE STAPLES TO BE CONSTRUCTED OF TWO-BY-TWO (2x2) DIMENSIONAL UNTREATED WOOD SECURING (USING THREE-INCH (3") LONG SCREWS) HORIZONTAL PORTIONS TO FOUR-FEET (4') LONG VERTICAL STAKES DRIVEN STRAIGHT INTO THE GROUND OUTSIDE THE ROOT BALL.
 - c. THE BASIS OF DESIGN FOR TREE GUYING IS ARBOR-TIE, FLAT WOVEN POLYPROPYLENE, THREE-QUARTERS INCH (3/4") WIDE, AND NINE HUNDRED (900) POUND BREAK STRENGTH. COLOR TO BE GREEN. MANUFACTURED BY DEEP ROOT PARTNERS, L.P. OR APPROVED EQUAL. AVAILABLE ONLINE AT <<https://www.deeproot.com/products/arbortie/arbortie-green/#head>>
 - d. THE BASIS OF DESIGN FOR STAKING IS LODGEPOLE PINE STAKES FREE OF KNOTS AND OF DIAMETERS AND LENGTHS APPROPRIATE TO THE SIZE OF PLANT AS REQUIRED TO ADEQUATELY SUPPORT THE PLANT.
 - a. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF THE METHOD FOR SECURING TREES, SUBMIT PRODUCT SPECIFICATIONS TO THE LANDSCAPE ARCHITECT FOR APPROVAL.
 7. WOOD MULCH (PLANTING AREAS AND PATHWAYS)
 - a. WOOD MULCH SHALL BE "WALK ON" GRADE (A.K.A. "PATHWAY" GRADE), COARSE, GROUND, FROM TREE AND WOODY BRUSH SOURCES. PINE BARK IS ACCEPTABLE IF IT IS SHREDDED AND MEETS THE FOLLOWING CRITERIA. THE SIZE RANGE SHALL BE A MINIMUM (LESS THAN TWENTY-FIVE PERCENT (25%)) OR LESS OF VOLUME) FINE PARTICLES THREE-EIGHTHS-INCH (3/8") OR LESS IN SIZE, AND A MAXIMUM SIZE OF INDIVIDUAL PIECES (LARGEST TWENTY PERCENT (20%) OR LESS OF VOLUME) SHALL BE APPROXIMATELY ONE TO ONE-AND-ONE-HALF INCHES (1" TO 1 1/2") IN DIAMETER AND MAXIMUM LENGTH APPROXIMATELY FOUR TO EIGHT INCHES (4" TO 8"), PIECES LARGER THAN EIGHT INCHES (8") LONG THAT ARE VISIBLE ON THE SURFACE OF THE MULCH AFTER INSTALLATION SHALL BE REMOVED. APPLY WOOD MULCH TO A DEPTH OF THREE INCHES (3") UNLESS SPECIFICALLY NOTED IN LANDSCAPE ARCHITECTURAL DETAILS.
 - a. THE CONTRACTOR SHALL SUBMIT MANUFACTURER'S PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS TO THE LANDSCAPE ARCHITECT FOR APPROVAL, OR
 - 2) SUBMIT A WOOD MULCH SAMPLE TO THE OFFICES OF JBPRO FOR LANDSCAPE ARCHITECT FOR APPROVAL IN A ONE (1) GALLON CONTAINER.
 - b. BECAUSE WOOD MULCH QUALITY CAN VARY SIGNIFICANTLY BETWEEN SUPPLIERS AND REGIONS, THE CONTRACTOR MAY SUBMIT A REQUEST TO THE LANDSCAPE ARCHITECT TO DEViate FROM THE ABOVE REQUIREMENTS TO PROVIDE ADEQUATE MATERIAL FROM LOCALLY RELIABLE SUPPLIERS.
 8. PINE STRAW
 - a. PINE STRAW MULCH SHALL BE COMPRISED OF PINE NEEDLES BETWEEN EIGHT INCHES AND SEVENTEEN INCHES (8" AND 17"). PINE STRAW MULCH SHOULD BE FREE OF PINE BARK, TWIGS, AND OTHER FOREST FLOOR DEBRIS. IN FLORIDA, PINE STRAW IS TYPICALLY GATHERED FROM LONGLEAF, SLASH, AND LOBLOLY PINES. APPLY PINE STRAW MULCH TO A DEPTH OF THREE INCHES (3") UNLESS SPECIFICALLY NOTED IN LANDSCAPE ARCHITECTURAL DETAILS. HOWEVER, PINE STRAW MULCH READILY COMPACTS WITH TIME, AND MULTIPLE APPLICATIONS ARE

- NECESSARY TO ESTABLISH THE THREE INCH (3") DEPTH. MULTIPLE PINE STRAW MULCH APPLICATIONS MAY BE NECESSARY WITHIN A YEAR OF THE FIRST APPLICATION.
- a. 1) SUBMIT MANUFACTURER'S PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS TO THE LANDSCAPE ARCHITECT FOR APPROVAL, OR
 - 2) SUBMIT PINE STRAW MULCH SAMPLE TO THE OFFICES OF JBPRO FOR LANDSCAPE ARCHITECT FOR APPROVAL IN A ONE (1) GALLON CONTAINER.
 - 3) SUBMIT A SCHEDULE TO THE LANDSCAPE ARCHITECT FOR DELIVERING AND APPLYING FOLLOW-ON APPLICATIONS OF PINE STRAW MULCH WITHIN A YEAR OF THE FIRST APPLICATION.
9. TREE BARK PROTECTION
 - a. TREE BARK PROTECTORS SHALL BE BLACK EXTRUDED RESIN MESH, FOUR INCHES (4") IN DIAMETER, FIVE FEET (5') LONG. THE BASIS OF DESIGN IS MANUFACTURED BY INDUSTRIAL NETTING, MINNEAPOLIS, MN, USA OR APPROVED EQUAL, AVAILABLE ONLINE AT <<https://www.industrialnetting.com/tree-bark-protectors.html>>.
 - b. FASTEN THE SPLIT SIDE OF THE TREE BARK PROTECTOR TOGETHER IN THREE PLACES WITH BLACK PLASTIC TAPE.
 - a. SUBMIT MANUFACTURER'S PRODUCT DATA TO THE LANDSCAPE ARCHITECT FOR APPROVAL.
 10. TREE WATERING BAGS
 - a. IF IRRIGATION IS UNAVAILABLE FOR NEWLY PLANTED TREES, THE CONTRACTOR SHALL SUBMIT A PLAN FOR USING SLOW-RELEASE WATERING BAGS OR OTHER MEANS.
 - b. WATER BAGS ARE ONLY FOR TREES BETWEEN ONE AND EIGHT INCHES (1" TO 8") TRUNK DIAMETER WITH BRANCHES AT LEAST TWENTY-FIVE INCHES (25") FROM THE GROUND.
 - c. TREE WATERING BAGS SHOULD HOLD A MINIMUM OF TWENTY-FIVE (25) GALLONS OF WATER AND WITH A SLOW DRIP HOLE(S) WATER RELEASE SYSTEM, SPECIFICALLY DESIGNED TO WATER ESTABLISHING TREES. WATER SHOULD RELEASE OVER A SEVERAL DAY PERIOD, NOT WITHIN A FEW HOURS
 - d. THE BASIS OF DESIGN FOR WATERING BAGS IS TREGEEATOR® BRAND BAGS MANUFACTURED BY SPECTRUM PRODUCTS, INC., YOUNGVILLE, NORTH CAROLINA 27596, AND AVAILABLE ONLINE AT <<https://tregegrator.com/products/original/index.html>>, OR APPROVED EQUAL.
 - e. SUBMIT THE MANUFACTURER'S PRODUCT DATA FOR APPROVAL ALONG WITH A SCHEDULE FOR REFILLING THE WATERING BAGS.
 - f. THE WATERING BAGS SHALL REMAIN THE PROPERTY OF THE OWNER AT THE COMPLETION OF THE WORK.
 11. VOLUMETRIC SOIL MOISTURE READER
 - a. THE VOLUMETRIC SOIL MOISTURE READER SHALL BE A PRECISION DIGITAL SOIL MOISTURE METER WITH ELECTRIC CONDUCTIVITY PROBE.
 - b. MODEL DSSMM500 BY GENERAL® SPECIALTY TOOLS AND INSTRUMENTS <<https://generaltools.com/soil-moisture-meter>>, OR APPROVED EQUIVALENT.
 - c. SUBMIT MANUFACTURER'S PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS TO THE LANDSCAPE ARCHITECT FOR APPROVAL.
 12. SOIL COMPACTION METER
 - a. FOR ASSESSING SOIL COMPACTION, USE A SPONTON® DIGITAL SOIL COMPACTION METER. MODEL 29360, AVAILABLE THROUGH FORESTRY SUPPLIERS <<https://gemplers.com/products/spoton-digital-soil-compaction-meter>>, OR APPROVED EQUIVALENT.
 - c. SUBMIT MANUFACTURER'S PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS TO THE LANDSCAPE ARCHITECT FOR APPROVAL.

C. SELECTION AND OBSERVATION OF PLANTS

1. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO SELECT AND OBSERVE ALL PLANTS AT THE NURSERY PRIOR TO DELIVERY AND TO REJECT PLANTS THAT DO NOT MEET SPECIFICATIONS AS SET FORTH IN LANDSCAPE ARCHITECTURAL PLAN AND DETAIL DRAWINGS. IF A PARTICULAR DEFECT OR SUBSTANDARD ELEMENT CAN BE CORRECTED AT THE NURSERY, AS ACCEPTED BY THE LANDSCAPE ARCHITECT, THE REMEDY MAY BE APPLIED AT THE NURSERY. ANY WORK TO CORRECT PLANT DEFECTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
2. IF THE LANDSCAPE ARCHITECT IS UNABLE TO OBSERVE PLANTS AT THE NURSERY PRIOR TO DELIVERY, THE LANDSCAPE ARCHITECT MAY OBSERVE AND APPROVAL ALL PLANTS UPON DELIVERY SUBJECT TO SIZE, HEALTH, QUALITY, CHARACTER, ETC.
3. REVIEW OR APPROVAL OF ANY PLANT DURING THE PROCESS OF SELECTION, DELIVERY, INSTALLATION AND ESTABLISHMENT PERIOD SHALL NOT PREVENT THAT PLANT FROM LATER REJECTION IN THE EVENT THAT THE PLANT QUALITY CHANGES OR PREVIOUSLY EXISTING DEFECTS BECOME APPARENT.
- a. THE LANDSCAPE ARCHITECT MAY MAKE INVASIVE OBSERVATION OF ANY PLANT'S ROOT SYSTEM IN THE AREA OF THE ROOT COLLAR AND THE TOP OF THE ROOT BALL IN GENERAL TO DETERMINE THAT THE PLANT MEETS THE QUALITY REQUIREMENTS FOR DEPTH OF THE ROOT COLLAR AND PRESENCE OF ROOTS ABOVE THE ROOT COLLAR. SUCH OBSERVATIONS WILL NOT HARM THE PLANT.
- b. THE CONTRACTOR SHALL BEAR ALL COST RELATED TO PLANT CORRECTIONS.
- c. ALL PLANTS THAT ARE REJECTED SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND ACCEPTABLE REPLACEMENT PLANTS PROVIDED AT NO COST TO THE OWNER.
- d. PER LANDSCAPE ARCHITECT GENERAL NOTES ON SHEET LG-01, SUBMIT TO THE LANDSCAPE ARCHITECT THE NAMES AND LOCATIONS OF NURSERIES PROPOSED AS SOURCES OF ACCEPTABLE PLANTS, AND A LIST OF THE PLANTS (BY COMMON AND SCIENTIFIC NAME) THEY WILL PROVIDE.
 - a. WHERE REQUESTED BY THE LANDSCAPE ARCHITECT, SUBMIT PHOTOGRAPHS OF PLANTS OR REPRESENTATIVE SAMPLES OF PLANTS. PHOTOGRAPHS SHALL BE LEGIBLE AND CLEARLY DEPICT THE PLANT SPECIMEN. EACH SUBMITTED IMAGE SHALL CONTAIN A HEIGHT REFERENCE, SUCH AS A MEASURING STICK. THE APPROVAL OF PLANTS BY THE LANDSCAPE ARCHITECT VIA PHOTOGRAPH DOES NOT PRECLUDE THE LANDSCAPE ARCHITECT'S RIGHT TO AND ACCESS MATERIAL WHILE ON SITE.
 4. THE CONTRACTOR SHALL PURCHASE TREES SHALL BE PURCHASED FROM THE GROWING NURSERY.
 - a. IF THE CONTRACTOR SEEKS TO USE A RE-WHOLESALE PLAN SUPPLIER FOR TREES, S/H MUST SUBMIT A LETTER TO THE LANDSCAPE ARCHITECT CERTIFYING THE REQUIRED TREES ARE NOT DIRECTLY AVAILABLE FROM A GROWING NURSERY.
 - 1) THE CONTRACTOR SHALL SUBMIT THE NAME AND LOCATION OF THE GROWING NURSERY FROM WHERE THE TREES WERE OBTAINED BY THE RE-WHOLESALE SELLER TO THE LANDSCAPE ARCHITECT.
 - 2) THE RE-WHOLESALE NURSERY SHALL BE RESPONSIBLE FOR ANY REQUIRED PLANT QUALITY CERTIFICATIONS.
 - b. THE CONTRACTOR SHALL REQUIRE THE GROWER OR RE-WHOLESALE SUPPLIER TO PERMIT THE LANDSCAPE ARCHITECT TO OBSERVE THE ROOT SYSTEM OF ALL PLANTS AT THE NURSERY OR JOB SITE PRIOR TO PLANTING INCLUDING RANDOM REMOVAL OF SOIL OR SUBSTRATE AROUND THE BASE OF THE PLANT. OBSERVATION MAY BE AS FREQUENT AND AS EXTENSIVE AS NEEDED TO VERIFY THAT THE PLANTS MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND CONFORM TO REQUIREMENTS.

D. PLANT SUBSTITUTIONS FOR UNAVAILABLE PLANTS

- a. THE CONTRACTOR SHALL SUBMIT ALL REQUESTS FOR PLANT SPECIES SUBSTITUTIONS, OR PLANT SIZE, TO THE LANDSCAPE ARCHITECT FOR APPROVAL AND PRIOR TO PURCHASING THE PROPOSED SUBSTITUTION.
 - a. REQUESTS SHALL ALSO INCLUDE SOURCES OF PLANTS FOUND THAT MAY BE OF A SMALLER OR LARGER SIZE, OR A DIFFERENT SHAPE OR HABIT THAN SPECIFIED, OR PLANTS OF THE SAME GENUS AND SPECIES BUT DIFFERENT CULTIVAR ORIGIN, OR WHICH MAY OTHERWISE NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, BUT WHICH MAY BE AVAILABLE FOR SUBSTITUTION.

PART IV. LANDSCAPE INSTALLATION

A. SITE CONDITIONS

1. THE LANDSCAPE ARCHITECTURAL PLAN AND DETAIL DRAWINGS REQUIRE ALL APPLICABLE

- PLANTING SOIL AND IRRIGATION WORK BE COMPLETED AND ACCEPTED PRIOR TO THE INSTALLATION OF ANY PLANTS.
- a. PLANTING OPERATIONS SHALL NOT BEGIN UNTIL SUCH TIME THAT THE IRRIGATION SYSTEM IS COMPLETELY OPERATIONAL FOR THE AREA(S) TO BE PLANTED, AND THE IRRIGATION SYSTEM FOR THAT AREA HAS BEEN PRELIMINARILY OBSERVED AND APPROVED BY THE LANDSCAPE ARCHITECT.
 2. ACTUAL PLANTING SHALL BE PERFORMED DURING THOSE PERIODS WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE IN ACCORDANCE WITH LOCALLY ACCEPTED HORTICULTURAL PRACTICES.
 - a. UNLESS A TIME PERIOD IS SPECIFIED IN THE LANDSCAPE ARCHITECTURAL PLAN AND DETAIL DRAWINGS, AN APPROVED REFERENCE IS THE COUNTY/REGIONAL UF/IFAS AGRICULTURAL EXTENSION.
 - b. DO NOT INSTALL PLANTS INTO SATURATED SOILS. DO NOT INSTALL PLANTS DURING INCLEMENT WEATHER, SUCH AS RAIN OR DURING EXTREMELY HOT, COLD OR WINDY CONDITIONS.
 - c. IN HARDINESS ZONES 7-11, PLANTING TREES AND SHRUBS FROM CONTAINERS CAN GENERALLY OCCUR YEAR-ROUND.
 - d. IN HARDINESS ZONES 7-11, PLANTING TREES AND SHRUBS FROM CONTAINERS CAN GENERALLY OCCUR YEAR-ROUND.
 - e. IN REGIONS WHERE THE SOIL TEMPERATURE DROPS BELOW 40-DEGREES FAHRENHEIT, CEASE PLANTING TREES AND SHRUBS FOUR (4) WEEKS PRIOR TO THE SOIL REACHING THIS TEMPERATURE. RESUME PLANTING WHEN THE SOIL TEMPERATURE IS EXPECTED TO REMAIN ABOVE 40 DEGREES.
 - f. DO NOT PLANT FRESHLY DUG TREES THAT ARE NOT HARDENED-OFF.
 - g. NO PLANTING SHALL TAKE PLACE DURING EXTREMELY HOT, DRY, WINDY OR FREEZING WEATHER.
 3. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
 4. NOTIFICATION OF THE LOCAL UTILITY LOCATOR SERVICE IS REQUIRED FOR ALL PLANTING AREAS: **THE CONTRACTOR IS RESPONSIBLE FOR KNOWING THE LOCATION AND AVOIDING UTILITIES THAT ARE NOT COVERED BY THE LOCAL UTILITY LOCATOR SERVICE.**

B. DELIVERY, STORAGE AND HANDLING

1. THE CONTRACTOR SHALL PROTECT MATERIALS FROM DETERIORATION DURING DELIVERY AND STORAGE. ADEQUATELY PROTECT PLANTS FROM DRYING OUT, EXPOSURE OF ROOTS TO SUN, WIND OR EXTREMES OF HEAT AND COLD TEMPERATURES. IF PLANTING IS DELAYED MORE THAN TWENTY (24) HOURS AFTER DELIVERY, SET PLANTS IN A LOCATION PROTECTED FROM SUN AND WIND.
 - a. WHILE IN STORAGE, BRACE TREES TO PREVENT TOPPLING OVER ONTO THEIR SIDES
 - 1) THE LANDSCAPE ARCHITECT WILL REJECT TREES WITH MULTIPLE DAMAGED OR BROKEN BRANCHES ON A SINGLE SIDE.
 - b. PROVIDE ADEQUATE WATER TO THE ROOT BALL PACKAGE DURING THE SHIPPING AND STORAGE PERIOD.
 - c. DO NOT DELIVER MORE PLANTS TO THE SITE THAN THERE IS SPACE WITH ADEQUATE STORAGE CONDITIONS. PROVIDE A SUITABLE REMOTE STAGING AREA FOR PLANTS AND OTHER SUPPLIES.
 - d. PROVIDE PROTECTIVE COVERING OVER ALL PLANTS DURING TRANSPORTING.
2. THE CONTRACTOR, USING A SOIL MOISTURE METER, SHALL DAILY CHECK THE SOIL MOISTURE IN THE ROOT BALLS OF ALL PLANTS TO ASSURE THE PLANTS ARE BEING ADEQUATELY WATERED. VOLUMETRIC SOIL MOISTURE SHALL BE MAINTAINED ABOVE WILTING POINT AND BELOW FIELD CAPACITY FOR THE ROOT BALL SUBSTRATE OR SOIL.

C. LAYOUT AND PLANTING SEQUENCE

1. NOTIFY THE LANDSCAPE ARCHITECT, MINIMUM OF FOURTEEN (14) DAYS PRIOR TO LAYOUT. LAYOUT ALL INDIVIDUAL TREE AND SHRUB LOCATIONS. PLACE PLANTS ABOVE SURFACE AT PLANTING LOCATION OR PLACE A LABELED STAKE AT PLANTING LOCATION.
 - a. LAYOUT BED LINES WITH PAINT FOR THE LANDSCAPE ARCHITECT'S APPROVAL. RELATIVE POSITIONS OF ALL PLANTS AND TREES ARE SUBJECT TO LANDSCAPE ARCHITECT APPROVAL.
 - b. THE LANDSCAPE ARCHITECT UNDERSTANDS PLANTS ARE NOT PRECISE OBJECTS AND MINOR ADJUSTMENTS IN THE LAYOUT WILL BE REQUIRED AS THE CONTRACTOR INSTALLS THE PLANTING PLAN. THESE ADJUSTMENTS MAY NOT BE APPARENT UNTIL SOME OR ALL OF THE PLANTS ARE INSTALLED. MAKE ADJUSTMENTS AS REQUIRED BY THE LANDSCAPE ARCHITECT INCLUDING RELOCATING PREVIOUSLY INSTALLED PLANTS.
 - c. THE LANDSCAPE ARCHITECT MAY REQUEST THAT PLANTS ORIENTATION BE ROTATED WHEN PLANTED BASED ON THE FORM OF THE PLANT.
 - d. WHEN APPLICABLE, PLANT TREES BEFORE OTHER PLANTS ARE INSTALLED.

D. SOIL PROTECTION DURING PLANT DELIVERY AND INSTALLATION

1. PROTECT SOIL FROM COMPACTION DURING THE DELIVERY OF PLANTS TO THE PLANTING LOCATIONS, DIGGING OF PLANTING HOLES AND INSTALLING PLANTS.
 - a. WHERE POSSIBLE DELIVER AND PLANT TREES THAT REQUIRE THE USE OF HEAVY MECHANIZED EQUIPMENT PRIOR TO FINAL SOIL PREPARATION AND TILLING. WHERE POSSIBLE, RESTRICT THE DRIVING LANES TO ONE AREA INSTEAD OF DRIVING OVER AND COMPACTING A LARGE AREA OF SOIL.
 - b. TILL TO A DEPTH OF SIX INCHES (6"). ALL SOIL THAT HAS BEEN DRIVEN OVER DURING THE INSTALLATION OF PLANTS.

E. SOIL MOISTURE

1. THE CONTRACTOR SHALL CONFIRM THE SOIL MOISTURE LEVELS IN PLANTING SOIL AND THE ROOT BALLS OF ALL PLANTS PRIOR TO, DURING, AND AFTER PLANTING USING A MOISTURE METER. IF THE MOISTURE IS TOO HIGH, SUSPEND PLANTING OPERATIONS UNTIL THE SOIL MOISTURE DRAINS TO BELOW FIELD CAPACITY.
2. VOLUMETRIC SOIL MOISTURE LEVEL SHALL BE ABOVE PERMANENT WILTING POINT AND BELOW

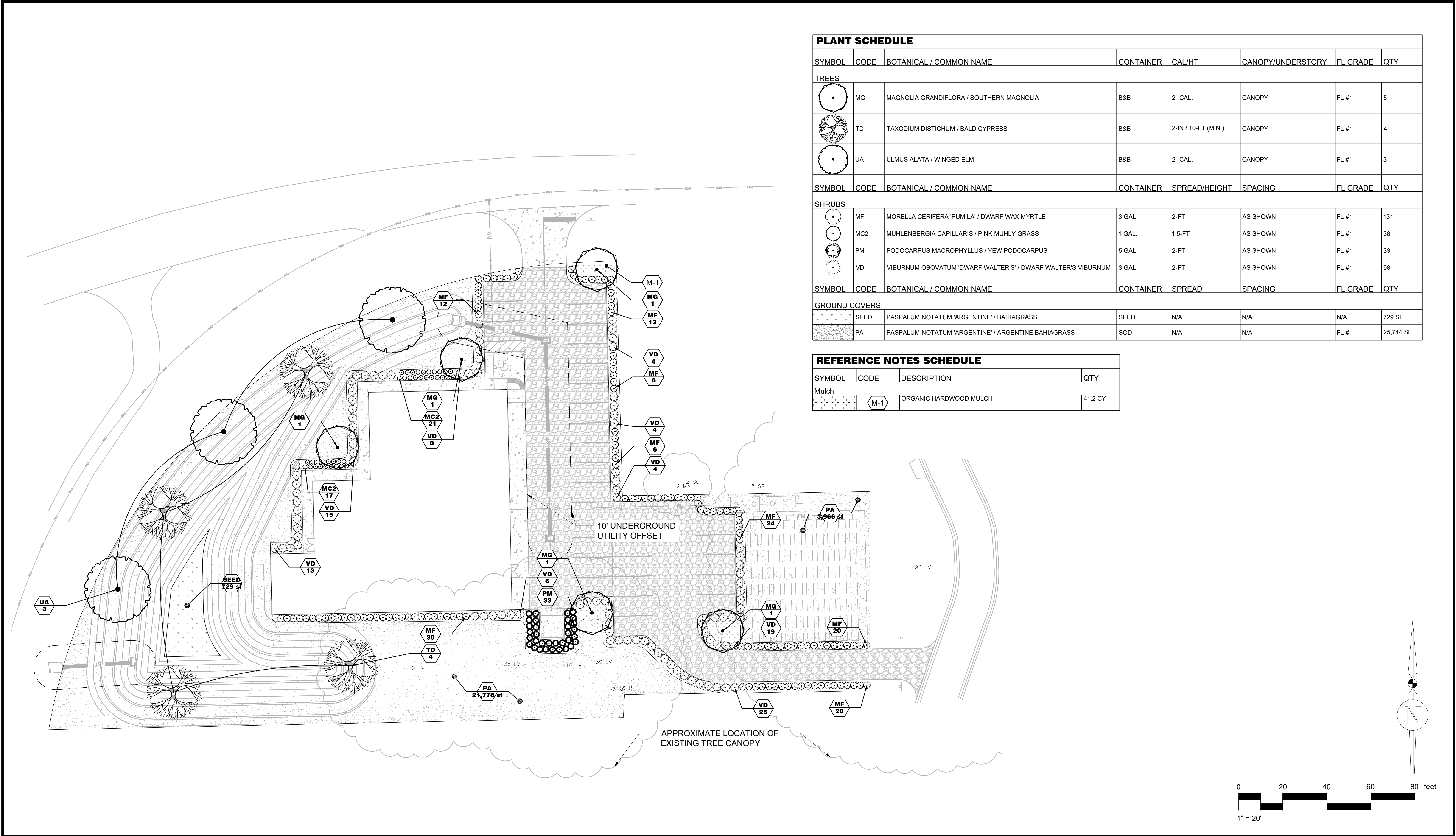
SOIL TYPE	PERMANENT WILT POINT	FIELD CAPACITY
SAND, LOAMY SAND, SANDY LOAM	5-8%	12-18%
LOAM, SANDY CLAY, SANDY CLAY LOAM	14-25%	27-36%
CLAY LOAM, SILT LOAM	11-22%	31-36%
SILTY CLAY, SILTY CLAY LOAM	22-27%	38-41%

F. INSTALLATION OF PLANTS: GENERAL

1. THE CONTRACTOR SHALL OBSERVE EACH PLANT AFTER DELIVERY AND PRIOR TO INSTALLATION FOR DAMAGE OR OTHER CHARACTERISTICS THAT MAY CAUSE REJECTION.
2. THE CONTRACTOR SHALL NOT DISTRIBUTE MORE PLANTS THAN CAN BE PLANTED AND WATERED ON THE SAME DAY.
3. THE CONTRACTOR SHALL OBSERVE THE ROOT SYSTEM OF EACH PLANT, REGARDLESS OF ROOT BALL PACKAGE TYPE AT THE TIME OF PLANTING TO CONFIRM THAT THE ROOTS MEET THE REQUIREMENTS FOR PLANT ROOT QUALITY PER THESE LANDSCAPE ARCHITECTURAL NOTES AND DETAILS. THE CONTRACTOR SHALL UNDERTAKE, AT THE TIME OF PLANTING, ALL MODIFICATIONS TO THE ROOT SYSTEM REQUIRED BY THE LANDSCAPE ARCHITECT OR CONSULTING ARBORIST TO MEET THE QUALITY STANDARDS.

--- CONTINUES ON SHEET LP-03 ---

REVISIONS				
NO.	DATE	DESCRIPTION	DRWN	APPR



PLANT SCHEDULE							
SYMBOL	CODE	BOTANICAL / COMMON NAME	CONTAINER	CAL/HT	CANOPY/UNDERSTORY	FL GRADE	QTY
TREES							
	MG	MAGNOLIA GRANDIFLORA / SOUTHERN MAGNOLIA	B&B	2" CAL.	CANOPY	FL #1	5
	TD	TAXODIUM DISTICHUM / BALD CYPRESS	B&B	2-IN / 10-FT (MIN.)	CANOPY	FL #1	4
	UA	ULMUS ALATA / WINGED ELM	B&B	2" CAL.	CANOPY	FL #1	3
SYMBOL	CODE	BOTANICAL / COMMON NAME	CONTAINER	SPREAD/HEIGHT	SPACING	FL GRADE	QTY
SHRUBS							
	MF	MORELLA CERIFERA 'PUMILA' / DWARF WAX MYRTLE	3 GAL.	2-FT	AS SHOWN	FL #1	131
	MC2	MUHLENBERGIA CAPILLARIS / PINK MUHLY GRASS	1 GAL.	1.5-FT	AS SHOWN	FL #1	38
	PM	PODOCARPUS MACROPHYLLUS / YEW PODOCARPUS	5 GAL.	2-FT	AS SHOWN	FL #1	33
	VD	VIBURNUM OBOVATUM 'DWARF WALTER'S' / DWARF WALTER'S VIBURNUM	3 GAL.	2-FT	AS SHOWN	FL #1	98
SYMBOL	CODE	BOTANICAL / COMMON NAME	CONTAINER	SPREAD	SPACING	FL GRADE	QTY
GROUND COVERS							
	SEED	PASPALUM NOTATUM 'ARGENTINE' / BAHIA GRASS	SEED	N/A	N/A	N/A	729 SF
	PA	PASPALUM NOTATUM 'ARGENTINE' / ARGENTINE BAHIA GRASS	SOD	N/A	N/A	FL #1	25,744 SF

REFERENCE NOTES SCHEDULE			
SYMBOL	CODE	DESCRIPTION	QTY
	M-1	ORGANIC HARDWOOD MULCH	41.2 CY

REVISIONS				
NO.	DATE	DESCRIPTION	DRWN	APPR

JBPro
CIVIL ENGINEERING | LAND PLANNING
SURVEYING | CONSTRUCTION SERVICES

3530 NW 43rd Street | Gainesville, Florida 32606
4420 US-1 S, Suite 1 | St. Augustine, Florida 32086

Gainesville: (352) 375-8999 | St. Augustine: (904) 789-8999
Toll Free: (844) Go-JBPro | E-mail: contact@jbpro.com

SHEET TITLE:

LANDSCAPE PLAN

CLIENT:

MICANOPY AREA COOPERATIVE SCHOOL INC.
MICANOPY, FL

PROJECT:

MACS PRE-K BUILDING EXPANSION

DATE:

MAY 2025

PROJECT NO:

0802-24-001

SHEET NO:

LP-04