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LANDSCAPE NOTES

PART I. GENERAL

I. DESCRIPTION OF WORK
A. PROVIDE ALL LABOR FOR PLANTING AS SHOWN ON THE DRAWINGS OR INFERABLE THEREFROM AND/OR AS SPECIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. LANDSCAPE PLANS PROVIDED INDICATE THE PROPOSED LOCATION OF LIVING PLANT MATERIAL ONLY. STRUCTURAL ELEMENTS AND HARDSCAPE FEATURES INDICATED ON THE LANDSCAPE PLANS ARE FOR INFORMATION PURPOSES ONLY. LANDSCAPE PLANS ARE NOT TO BE UTILIZED FOR STAKING AND LAYOUT OR LOCATION OF ANY STRUCTURAL SITE FEATURES INCLUDING BUT NOT LIMITED TO, BUILDINGS, SIGNAGE, PATHWAYS, EASEMENTS, UTILITIES OR ROADWAYS.
B. THESE SPECIFICATIONS INCLUDE STANDARDS NECESSARY FOR AND INCIDENTAL TO THE EXECUTION AND COMPLETION OF PLANTING AS INDICATED ON THE PREPARED DRAWINGS AND SPECIFIED HEREIN.
C. ALL APPLICABLE FEDERAL, STATE AND LOCAL PERMITS SHALL BE ATTAINED PRIOR TO THE REMOVAL, RELOCATION, OR INSTALLATION OF PLANT MATERIALS INDICATED WITHIN THE PLAN DOCUMENTS.
D. PROTECTION OF EXISTING FEATURES. DURING CONSTRUCTION, PROTECT ALL EXISTING TREES, SHRUBS, AND OTHER SPECIFIED VEGETATION, SITE FEATURES AND IMPROVEMENTS, STRUCTURES, AND UTILITIES SPECIFIED HEREIN AND/OR ON SUBMITTED DRAWINGS. REMOVAL OR DESTRUCTION OF EXISTING PLANTINGS IS PROHIBITED UNLESS SPECIFICALLY AUTHORIZED BY THE OWNER, AND WITH PERMIT AS REQUIRED BY ASSOCIATED FEDERAL, STATE AND LOCAL GOVERNMENT AGENCIES.

II. APPLICABLE STANDARDS
A. AMERICAN NATIONAL STANDARDS FOR TREE CARE OPERATIONS, ANSI A300. AMERICAN NATIONAL STANDARDS INSTITUTE, 11 WEST 42ND STREET, NEW YORK, N.Y. 10036.
B. AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1. AMERICAN NURSERY AND LANDSCAPE ASSOCIATION, 1250 EYE STREET. NW, SUITE 500, WASHINGTON, D.C. 20005.
C. HORTUS THIRD, THE STAFF OF THE L.H. BAILEY HORTORIUM. 1976. MACMILLAN PUBLISHING CO., NEW YORK.
D. FLORIDA DEPARTMENT OF AGRICULTURE "GRADES AND STANDARDS FOR NURSERY PLANTS", MOST RECENT ADDITION.
E. NATIONAL ARBORIST ASSOCIATION- PRUNING STANDARDS FOR SHADE TREES
F. ALL STANDARDS SHALL INCLUDE THE LATEST ADDITIONS AND AMENDMENTS AS OF THE DATE OF ADVERTISEMENT FOR BIDS

III. QUALIFICATIONS
A. LANDSCAPE PLANTING AND RELATED WORK SHALL BE PERFORMED BY A FIRM WITH A MINIMUM OF FIVE YEARS EXPERIENCE SPECIALIZING IN THIS TYPE OF WORK. ALL CONTRACTORS AND THEIR SUB-CONTRACTORS WHO WILL BE PERFORMING ANY LANDSCAPE WORK INCLUDED IN THIS SECTION OF THE SPECIFICATION SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
B. LANDSCAPE CONTRACTOR SHALL BE LICENSED AND SHALL CARRY ANY NECESSARY INSURANCE AND SHALL PROTECT THE LANDSCAPE ARCHITECT AND OWNER AGAINST ALL LIABILITIES, CLAIMS OR DEMANDS FOR INJURIES OR DAMAGE TO ANY PERSON OR PROPERTY GROWING OUT OF THE PERFORMANCE OF THE WORK UNDER THIS CONTRACT. ALL WORKERS SHALL BE COVERED BY WORKMAN'S COMPENSATION INSURANCE.

IV. REQUIREMENTS OF REGULATORY AGENCIES
A. CERTIFICATES OF INSPECTION SHALL ACCOMPANY THE INVOICE FOR EACH SHIPMENT OF PLANTS AS MAY BE REQUIRED BY LAW FOR TRANSPORTATION. FILE CERTIFICATES WITH THE LANDSCAPE ARCHITECT PRIOR TO ACCEPTANCE OF THE MATERIAL. INSPECTION BY FEDERAL OR STATE AUTHORITIES AT PLACE OF GROWTH DOES NOT PRECLUDE REJECTION OF THE PLANTS AT THE SITE.

V. SUBMITTALS
A. MANUFACTURER'S DATA: SUBMIT COPIES OF THE MANUFACTURER'S AND/OR SOURCE DATA FOR ALL MATERIALS SPECIFIED, INCLUDING SOILS, SOIL AMENDMENTS AND FERTILIZER MATERIALS. COMPLY
WITH REGULATIONS APPLICABLE TO LANDSCAPE MATERIALS.
B. SAMPLES: SUBMIT SAMPLES OF ALL TOPSOIL, SOIL MIXES, MULCHES, AND ORGANIC MATERIALS. SAMPLES SHALL WEIGH 1 KG (2 LB) AND BE PACKAGED IN PLASTIC BAGS. SAMPLES SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE DELIVERED TO THE SITE AND PROVIDE AN ACCURATE INDICATION OF COLOR, TEXTURE, AND ORGANIC MAKEUP OF THE MATERIAL.
C. NURSERY SOURCES: SUBMIT A LIST OF ALL NURSERIES THAT WILL SUPPLY PLANTS, ALONG WITH A LIST OF THE PLANTS THEY WILL PROVIDE AND THE LOCATION OF THE NURSERY.
D. SOIL TEST: SUBMIT SOIL TEST ANALYSIS REPORT FOR EACH SAMPLE OF TOPSOIL AND PLANTING MIX FROM A SOIL TESTING LABORATORY APPROVED BY THE LANDSCAPE ARCHITECT.
1. PROVIDE A PARTICLE SIZE ANALYSIS, INCLUDING THE FOLLOWING GRADIENT OF MINERAL CONTENT:

USDA DESIGNATION	SIZE IN MM
GRAVEL	+2 MM
VERY COURSE SAND	1-2 MM
COARSE SAND	0.5-1 MM
MEDIUM SAND	0.25-0.5 MM
FINE SAND	0.1-0.25 MM
VERY FINE SAND	0.05-0.1 MM
SILT	0.002-0.05 MM
CLAY	SMALLER THAN 0.002

2. PROVIDE A CHEMICAL ANALYSIS, INCLUDING THE FOLLOWING:
a. PH AND BUFFER PH
b. PERCENTAGE OF ORGANIC CONTENT BY OVEN-DRIED WEIGHT.
c. NUTRIENT LEVELS BY PARTS PER MILLION, INCLUDING PHOSPHORUS, POTASSIUM MAGNESIUM, MANGANESE, IRON, ZINC, AND CALCIUM. NUTRIENT TEST SHALL INCLUDE THE TESTING LABORATORY RECOMMENDATIONS FOR SUPPLEMENTAL ADDITIONS TO THE SOIL BASED ON THE REQUIREMENTS OF HORTICULTURAL PLANTS.
d. SOLUBLE SALT BY ELECTRICAL CONDUCTIVITY OF A 1:2, SOIL: WATER, SAMPLE MEASURED IN MILLIMHO PER CM.
e. CATION EXCHANGE CAPACITY (CEC).
E. MATERIAL TESTING: SUBMIT THE MANUFACTURERS PARTICLE SIZE ANALYSIS, AND THE PH ANALYSIS AND PROVIDE A DESCRIPTION AND SOURCE LOCATION FOR THE CONTENT MATERIAL OF ALL ORGANIC MATERIALS.
F. MAINTENANCE INSTRUCTIONS: PRIOR TO THE END OF MAINTENANCE PERIOD, LANDSCAPE CONTRACTOR SHALL FURNISH THREE COPIES OF WRITTEN MAINTENANCE INSTRUCTIONS TO THE LANDSCAPE ARCHITECT FOR TRANSMITTAL TO THE OWNER FOR MAINTENANCE AND CARE OF INSTALLED PLANTS THROUGH THEIR FULL GROWING SEASON.

VI. UTILITY VERIFICATION
A. THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITY COMPANIES FOR VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITY LINES IN THE AREA OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM NEGLECT OR FAILURE TO COMPLY WITH THIS REQUIREMENT.

PART 2. MATERIALS

I. PLANTS
A. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY-GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO YEARS. THEY SHALL HAVE BEEN FRESHLY DUG.
1. ALL PLANT NAMES AND DESCRIPTIONS SHALL BE AS DEFINED IN HORTUS THIRD.
2. ALL PLANTS SHALL BE GROWN AND HARVESTED IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK AND FLORIDA DEPARTMENT OF AGRICULTURE GRADES AND STANDARDS FOR NURSERY PLANTS.
3. UNLESS APPROVED BY THE LANDSCAPE ARCHITECT, PLANTS SHALL HAVE BEEN GROWN AT A LATITUDE NOT MORE THAN 325 KM (200 MILES) NORTH OR SOUTH OF THE LATITUDE OF THE PROJECT UNLESS THE PROVENANCE OF THE PLANT CAN BE DOCUMENTED TO BE COMPATIBLE WITH THE LATITUDE AND COLD HARDINESS ZONE OF THE PLANTING LOCATION.
B. UNLESS SPECIFICALLY NOTED, ALL PLANTS SHALL BE EXCEPTIONALLY HEAVY, SYMMETRICAL, AND SO TRAINED OR FAVORED IN DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLY AND OUTSTANDINGLY SUPERIOR IN FORM, COMPACTNESS, AND SYMMETRY. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF; FREE OF DISEASE AND INSECTS, EGGS, OR LARVAE; AND SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS. THEY SHALL BE FREE FROM PHYSICAL DAMAGE OR OTHER CONDITIONS THAT WOULD PREVENT VIGOROUS GROWTH.
1. TREES WITH MULTIPLE LEADERS, UNLESS SPECIFIED, WILL BE REJECTED. TREES WITH A DAMAGED OR CROOKED LEADER, BARK ABRASIONS, SUNSCALD, DISFIGURING KNOTS, INSECT DAMAGE, OR CUTS OF LIMBS OVER 20 MM (3/4 IN.) IN DIAMETER THAT ARE NOT COMPLETELY CLOSED WILL BE REJECTED.
C. PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED, EXCEPT THAT PLANTS LARGER THAN THOSE SPECIFIED MAY BE USED IF APPROVED BY THE LANDSCAPE ARCHITECT. USE OF LARGER PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. IF LARGER PLANTS ARE APPROVED, THE ROOT BALL SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.
1. CALIPER MEASUREMENTS SHALL BE TAKEN ON THE TRUNK 150 MM (6 IN.) ABOVE THE NATURAL GROUND LINE FOR TREES UP TO AND INCLUDING 100 MM (4 IN.) IN CALIPER, AND 300 MM (12 IN.) ABOVE THE NATURAL GROUND LINE FOR TREES OVER 100 MM (4 IN.) IN CALIPER. HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO THE MAIN BODY OF THE PLANT AND NOT FROM BRANCH TIP TO BRANCH TIP. PLANTS SHALL BE MEASURED WHEN BRANCHES ARE IN THEIR NORMAL POSITION. IF A RANGE OF SIZES IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE, AND NO LESS THAN 50 PERCENT OF THE PLANTS SHALL BE AS LARGE AS THE MAXIMUM SIZE SPECIFIED. MEASUREMENTS SPECIFIED ARE MINIMUM SIZES ACCEPTABLE AFTER PRUNING, WHERE PRUNING IS REQUIRED. PLANTS THAT MEET MEASUREMENTS BUT DO NOT POSSESS A STANDARD RELATIONSHIP BETWEEN HEIGHT AND SPREAD, ACCORDING TO THE FLORIDA DEPARTMENT OF AGRICULTURE GRADES AND STANDARDS FOR NURSERY PLANTS, SHALL BE REJECTED.
D. SUBSTITUTIONS OF PLANT MATERIALS WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE LANDSCAPE ARCHITECT. IF PROOF IS SUBMITTED IN WRITING THAT A PLANT SPECIFIED IS NOT OBTAINABLE, CONSIDERATION WILL BE GIVEN TO THE NEAREST AVAILABLE SIZE OR SIMILAR VARIETY, WITH A CORRESPONDING ADJUSTMENT OF THE CONTRACT PRICE.
E. THE PLANT SCHEDULE PROVIDED AT THE END OF THIS SECTION, OR ON THE DRAWING, IS FOR THE CONTRACTOR'S INFORMATION ONLY, AND NO GUARANTEE IS EXPRESSED OR IMPLIED THAT QUANTITIES THEREIN ARE CORRECT OR THAT THE LIST IS COMPLETE. THE CONTRACTOR SHALL ENSURE THAT ALL PLANT MATERIALS SHOWN ON THE DRAWINGS ARE INCLUDED IN HIS OR HER BID.
F. ALL PLANTS SHALL BE LABELED BY PLANT NAME. LABELS SHALL BE ATTACHED SECURELY TO ALL PLANTS, BUNDLES, AND CONTAINERS OF PLANT MATERIALS WHEN DELIVERED. PLANT LABELS SHALL BE DURABLE AND LEGIBLE, WITH INFORMATION GIVEN IN WEATHER-RESISTANT INK OR EMBOSSED PROCESS LETTERING.
G. SELECTION AND TAGGING
1. PLANTS SHALL BE SUBJECT TO INSPECTION FOR CONFORMITY TO SPECIFICATION REQUIREMENTS AND APPROVAL BY THE LANDSCAPE ARCHITECT AT THEIR PLACE OF GROWTH AND UPON DELIVERY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.
2. A WRITTEN REQUEST FOR THE INSPECTION OF PLANT MATERIAL AT THEIR PLACE OF GROWTH SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT AT LEAST TEN CALENDAR DAYS PRIOR TO DIGGING. THIS REQUEST SHALL STATE THE PLACE OF GROWTH AND THE QUANTITY OF PLANTS TO BE INSPECTED. THE LANDSCAPE ARCHITECT MAY REFUSE INSPECTION AT THIS TIME IF, IN HIS OR HER JUDGMENT, SUFFICIENT QUANTITIES OF PLANTS ARE NOT AVAILABLE FOR INSPECTION OR LANDSCAPE ARCHITECT DEEMS INSPECTION IS NOT REQUIRED.
3. ALL FIELD GROWN DECIDUOUS TREES SHALL BE MARKED TO INDICATE THE TREES NORTH ORIENTATION IN THE NURSERY. PLACE A 1-IN. DIAMETER SPOT OF WHITE PAINT ONTO THE NORTH SIDE OF THE TREE TRUNK WITHIN THE BOTTOM 12 INCHES OF THE TRUNK.
H. ANTI-DESICCANTS
1. ANTI-DESICCANTS, IF SPECIFIED, ARE TO BE APPLIED TO PLANTS IN FULL LEAF IMMEDIATELY BEFORE DIGGING OR AS REQUIRED BY THE LANDSCAPE ARCHITECT. ANTI-DESICCANTS ARE TO BE SPRAYED SO THAT ALL LEAVES AND BRANCHES ARE COVERED WITH A CONTINUOUS PROTECTIVE FILM.
I. BALLED AND BURLAPPED (B&B) PLANT MATERIALS
1. TREES DESIGNATED B&B SHALL BE PROPERLY DUG WITH FIRM, NATURAL BALLS OF SOIL RETAINING AS MANY FIBROUS ROOTS AS POSSIBLE, IN SIZES AND SHAPES AS SPECIFIED IN THE FLORIDA DEPARTMENT OF AGRICULTURE GRADES AND STANDARDS FOR NURSERY PLANTS. BALLS SHALL BE FIRMLY WRAPPED WITH SYNTHETIC, NATURAL, OR TREATED BURLAP, AND/OR WIRE. ALL SYNTHETIC FABRIC SHOULD BE REMOVED FROM THE ROOTBALL PRIOR TO PLANTING. TRUE BIODEGRADABLE BURLAP CAN BE LEFT AROUND THE ROOT BALL. THE ROOT COLLAR SHALL BE APPARENT AT SURFACE OF BALL. TREES WITH LOOSE, BROKEN, PROCESSED, OR MANUFACTURED ROOT BALLS WILL NOT BE ACCEPTED, EXCEPT WITH SPECIAL WRITTEN APPROVAL BEFORE PLANTING.
J. CONTAINER PLANTS
1. PLANTS GROWN IN CONTAINERS SHALL BE OF APPROPRIATE SIZE FOR THE CONTAINER AS SPECIFIED IN THE MOST RECENT EDITION OF THE FLORIDA DEPARTMENT OF AGRICULTURE GRADES AND STANDARDS FOR NURSERY PLANTS AND BE FREE OF CIRCLING ROOTS ON THE EXTERIOR AND INTERIOR OF THE ROOT BALL.
2. CONTAINER PLANTS SHALL HAVE BEEN GROWN IN THE CONTAINER LONG ENOUGH TO HAVE ESTABLISHED ROOTS THROUGHOUT THE GROWING MEDIUM.
K. BAREROOT AND COLLECTED PLANTS
1. PLANTS DESIGNATED AS BAREROOT OR COLLECTED PLANTS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK.
2. BAREROOT MATERIAL SHALL NOT BE DUG OR INSTALLED AFTER BUD BREAK OR BEFORE DORMANCY.
3. COLLECTED PLANT MATERIAL THAT HAS NOT BEEN TAKEN FROM ACTIVE NURSERY OPERATIONS SHALL BE DUG WITH A ROOT BALL SPREAD AT LEAST 1/3 GREATER THAN NURSERY GROWN PLANTS. WHEN SPECIFIED OR APPROVED, SHALL BE IN GOOD HEALTH, FREE FROM DISEASE, INSECT OR WEED INFESTATION AND SHALL NOT BE PLANTED BEFORE INSPECTION AND ACCEPTANCE AT THE SITE. TESTING MAY BE REQUIRED AT THE DISCRETION OF THE LANDSCAPE ARCHITECT AND/OR THE OWNER AND SHALL BE PROVIDED AT NO ADDITIONAL COST.
L. SPECIMEN MATERIAL: PLANT MATERIAL SPECIFIED AS SPECIMENS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT BEFORE BEING BROUGHT TO THE SITE. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THESE PLANTS SHALL BE FLORIDA FANCY.
M. PALMS
1. COCONUT PALMS SHALL BE GROWN FROM A CERTIFIED SEED.
2. ALL PALM SPECIES EXCEPT SABAL PALMETTO SHALL HAVE ROOTS ADEQUATELY WRAPPED BEFORE TRANSPORTING.
3. SABAL PALMS SHALL HAVE A HURRICANE CUT. SABAL PALMS SHALL BE INSTALLED ON SITE AT THE EARLIEST OPPORTUNITY IN THE CONSTRUCTION PROCESS. ALL SABAL PALMS SHALL BE FROM PALM BEACH COUNTY OR OTHER SANDY SOILS. ALL SABAL PALMS SHALL BE FLORIDA FANCY.
4. FOR BOOTED TRUNK PALMS, TRUNKS SHALL HAVE CLEAN INTACT BOOTS FIRMLY ATTACHED TO THE PALM TRUNK. FOR SLICK TRUNK PALMS, TRUNK SHALL BE CLEAR AND FREE FROM DEFECT AND SCARS.
5. THE CONTRACTOR SHALL TREAT ALL PALMS AS REQUIRED TO PREVENT INFESTATION BY THE PALMETTO WEEVIL.
N. SOD
1. SOD SHALL BE GRADED #1 OR BETTER. SOD SHALL BE LOAM OR MUCK GROWN WITH A FIRM, FULL TEXTURE AND GOOD ROOT DEVELOPMENT. SOD SHALL BE THICK, HEALTHY AND FREE FROM DEFECTS AND DEBRIS INCLUDING BUT NOT LIMITED TO DEAD THATCH, INSECTS, FUNGUS, DISEASES AND CONTAMINATION BY WEEDS, OTHER GRASS VARIETIES OR OBJECTIONABLE PLANT MATERIAL.
2. SOD SHALL BE SUFFICIENTLY THICK TO INSURE A DENSE STAND OF LIVE GRASS. SOD SHALL BE LIVE, FRESH, AND UNINJURED AT THE TIME OF PLANTING. PLANT SOD WITHIN 48 HOURS AFTER HARVESTING.
3. SOD AREA SHALL BE ALL AREAS NOT OTHERWISE IDENTIFIED AND SHALL INCLUDE THE AREA BEYOND THE PROPERTY LINE TO THE EDGE OF PAVEMENT AND/OR EDGE OF WATER.
O. IMMEDIATELY AFTER HARVESTING PLANTS, PROTECT FROM DRYING AND DAMAGE UNTIL SHIPPED AND DELIVERED TO THE PLANTING SITE. ROOTBALLS SHALL BE CHECKED REGULARLY AND WATERED SUFFICIENTLY TO MAINTAIN ROOT VIABILITY.
P. TRANSPORTATION AND STORAGE OF PLANT MATERIAL
1. BRANCHES SHALL BE TIED WITH ROPE OR TWINE ONLY, AND IN SUCH A MANNER THAT NO DAMAGE WILL OCCUR TO THE BARK OR BRANCHES.
2. DURING TRANSPORTATION OF PLANT MATERIAL, THE CONTRACTOR SHALL EXERCISE CARE TO PREVENT INJURY AND DRYING OUT OF THE TREES. SHOULD THE ROOTS BE DRIED OUT, LARGE BRANCHES BROKEN, BALLS OF EARTH BROKEN OR LOOSENED, OR AREAS OF BARK TORN, THE LANDSCAPE ARCHITECT MAY REJECT THE INJURED TREE(S) AND ORDER THEM REPLACED AT NO ADDITIONAL COST TO THE OWNER. ALL LOADS OF PLANTS SHALL BE COVERED AT ALL TIMES WITH TARPAULIN OR CANVAS. LOADS THAT ARE NOT PROTECTED WILL BE REJECTED.
3. ALL BAREROOT STOCK SENT FROM THE STORAGE FACILITY SHALL BE ADEQUATELY COVERED WITH WET SOIL, SAWDUST, WOODCHIPS, MOSS, PEAT, STRAW, HAY, OR OTHER ACCEPTABLE MOISTURE-HOLDING MEDIUM, AND SHALL BE COVERED WITH A TARPAULIN OR CANVAS. LOADS THAT ARE NOT PROTECTED IN THE ABOVE MANNER MAY BE REJECTED.
4. PLANTS MUST BE PROTECTED AT ALL TIMES FROM SUN OR DRYING WINDS. THOSE THAT CANNOT BE PLANTED IMMEDIATELY ON DELIVERY SHALL BE KEPT IN THE SHADE, WELL PROTECTED WITH SOIL, WET MULCH, OR OTHER ACCEPTABLE MATERIAL, AND KEPT WELL WATERED. PLANTS SHALL NOT REMAIN UNPLANTED ANY LONGER THAN THREE DAYS AFTER DELIVERY. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE LIFTED AND HANDLED WITH SUITABLE SUPPORT OF THE SOIL BALL TO AVOID DAMAGING IT.
Q. MECHANIZED TREE SPADE REQUIREMENTS
TREES MAY BE MOVED AND PLANTED WITH AN APPROVED MECHANICAL TREE SPADE. THE TREE SPADE SHALL MOVE TREES LIMITED TO THE MAXIMUM SIZE ALLOWED FOR A SIMILAR B&B ROOT-BALL DIAMETER ACCORDING TO THE AMERICAN STANDARD FOR NURSERY STOCK OR THE MANUFACTURER'S MAXIMUM SIZE RECOMMENDATION FOR THE TREE SPADE BEING USED, WHICHEVER IS SMALLER. THE MACHINE SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO USE. TREES SHALL BE PLANTED AT THE DESIGNATED LOCATIONS IN THE MANNER SHOWN IN THE PLANS AND IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE SPECIFICATIONS.

II MATERIALS FOR PLANTING
A. MULCH: EXCEPT AS OTHERWISE SPECIFIED, MULCH SHALL BE SHREDDED MELALEUCA MULCH - GRADE "A". ALL MELALEUCA MULCH SHALL BE MADE ENTIRELY FROM THE WOOD AND BARK OF THE MELALEUCA QUINQUINERVA TREE. IT SHALL NOT CONTAIN MORE THAN 10% BARK (BY VOLUME). SHREDS AND CHIPS SHALL NOT BE LARGER THE ¾" DIAMETER AND 1½" IN LENGTH. MULCH SHALL BE FREE OF WEEDS, SEEDS, AND ANY OTHER ORGANIC OR INORGANIC MATERIAL OTHER THAN MELALEUCA WOOD AND BARK. IT SHALL NOT CONTAIN STONES OR OTHER FOREIGN MATERIAL THAT WILL PREVENT ITS EVENTUAL DECAY. THIS SHALL BE APPLIED TO ALL PLANTED AREAS WHERE INDICATED SO THAT, AFTER INSTALLATION, THE MULCH THICKNESS WILL NOT BE LESS THAN 3". SUBMIT SAMPLE FOR APPROVAL.
B. PEAT: SHALL BE HORTICULTURAL PEAT COMPOSED OF NOT LESS THAN 60% DECOMPOSED ORGANIC MATTER BY WEIGHT, ON AN OVEN DRIED BASIS. PEAT SHALL BE DELIVERED TO THE SITE IN A WORKABLE CONDITION FREE FROM LUMPS.
C. GRAVEL MULCH: USE ONLY WHERE SPECIFICALLY INDICATED ON THE PLANS OF THE SIZE AND TYPE SHOWN. UNLESS OTHERWISE SPECIFIED IT SHALL BE WATER-WORN, HARD DURABLE GRAVEL, WASHED FREE OF LOAM, SAND, CLAY AND OTHER FOREIGN SUBSTANCES. IT SHALL BE A MINIMUM OF 3" DEEP AND SHALL BE CONTAINED WITH EDGING OR OTHER APPROVED GRAVEL STOP AS INDICATED ON THE PLANS. IT SHALL BE A MAXIMUM OF 1 1/2", A MINIMUM OF 3/4" AND OF A READILY-AVAILABLE NATURAL GRAVEL COLOR RANGE. PROVIDE GEOTEXTILE FILTER FABRIC BELOW AGGREGATE ROCK. SUBMIT SAMPLE FOR APPROVAL.
D. ROOT BARRIER: WHERE SPECIFIED, ROOT BARRIERS SHALL BE INSTALLED ON ALL TREE AND PALM MATERIAL IN ACCORDANCE WITH THE ROOT BARRIER DETAIL PROVIDED WITHIN THE PLAN DRAWINGS. ROOT BARRIERS SHALL COMPLY WITH ALL REQUIREMENTS OF THE MUNICIPALITY WITHIN WHICH THEY ARE LOCATED AS WELL AS WITH ANY UTILITY HOLDER REQUIREMENTS OF ANY AFFECTED UTILITIES. IN THE EVENT THAT CONFLICTING REQUIREMENTS EXIST BETWEEN THE ROOT BARRIER DETAIL PROVIDED WITHIN THE PLAN DOCUMENTS AND THE MUNICIPALITY/UTILITY HOLDER REQUIREMENTS, THE MORE STRINGENT OF THE REQUIREMENTS SHALL BE APPLICABLE.
E. PLANTER EDGING: USE ONLY WHERE SPECIFICALLY INDICATED ON PLANS. EDGING SHALL BE THE COLOR BLACK.
F. ANTI-DESICCANT: SHALL BE AN EMULSION SPECIFICALLY MANUFACTURED FOR AGRICULTURAL USE, WHICH PROVIDES A PROTECTIVE FILM OVER PLANT SURFACES. ANTI-DESICCANTS SHALL BE DELIVERED IN CONTAINERS OF THE MANUFACTURER AND SHALL BE MIXED ACCORDING TO THE MANUFACTURER'S DIRECTIONS. SUBMIT MANUFACTURER LITERATURE FOR APPROVAL.

III. MATERIALS FOR SOIL AMENDMENT
A. PINE BARK: HORTICULTURAL-GRADE MILLED PINE BARK, WITH 80 PERCENT OF THE MATERIAL BY VOLUME SIZED BETWEEN 0.1 AND 15.0 MM.
1. PINE BARK SHALL BE AGED SUFFICIENTLY TO BREAK DOWN ALL WOODY MATERIAL. PINE BARK SHALL BE SCREENED.
2. PH SHALL RANGE BETWEEN 4 AND 7.0.
3. SUBMIT MANUFACTURER LITERATURE FOR APPROVAL.
B. ORGANIC MATTER: LEAF MATTER AND YARD WASTE COMPOSTED SUFFICIENTLY TO BREAK DOWN ALL WOODY FIBERS, SEEDS, AND LEAF STRUCTURES, AND FREE OF TOXIC AND NON-ORGANIC MATTER. ORGANIC MATTER SHALL BE COMMERCIALLY PREPARED COMPOST. SUBMIT 0.5 KG (1 LB) SAMPLE AND SUPPLIERS LITERATURE FOR APPROVAL.
C. COURSE SAND: COURSE CONCRETE SAND, ASTM C-33 FINE AGGREGATE, WITH A FINES MODULUS INDEX OF 2.75 OR GREATER.
1. SANDS SHALL BE CLEAN, SHARP, NATURAL SANDS FREE OF LIMESTONE, SHALE AND SLATE PARTICLES.
2. PROVIDE THE FOLLOWING PARTICLE SIZE DISTRIBUTION:

SIEVE	PERCENTAGE PASSING
3/8 IN (9.5 MM)	100
NO. 4 (4.75 MM)	95-100
NO. 8 (2.36 MM)	80-100
NO. 16 (1.18 MM)	50-85
NO. 30 (0.60 MM)	25-60
NO. 50 (0.30 MM)	10-30
NO. 100 (0.15 MM)	2-10

D. LIME: SHALL BE GROUND, PALLETIZED, OR PULVERIZED LIME MANUFACTURED TO MEET AGRICULTURAL STANDARDS AND CONTAIN A MAXIMUM OF 60 PERCENT OXIDE (I.E. CALCIUM OXIDE PLUS MAGNESIUM OXIDE). SUBMIT MANUFACTURER LITERATURE FOR APPROVAL.
E. SULFUR: SHALL BE FLOWERS OF SULFUR, PELLETIZED OR GRANULAR SULFUR, OR IRON SULFATE. SUBMIT MANUFACTURER LITERATURE FOR APPROVAL.
F. FERTILIZER: AGRICULTURAL FERTILIZER OF A FORMULA INDICATED BY THE SOIL TEST. FERTILIZERS SHALL BE ORGANIC, SLOW-RELEASE COMPOSITIONS WHENEVER APPLICABLE. SUBMIT MANUFACTURER LITERATURE FOR APPROVAL.

IV. PLANTING MIX
A. PLANTING MIX
1. PLANTING MIX FOR TREES, SHRUBS, GROUNDCOVERS AND VINES: CHECK WITH LANDSCAPE ARCHITECT FOR APPROPRIATE MIXTURE.
2. PLANTING MIX FOR PALMS: MIXTURE OF COURSE SAND AND PEAT MIXED TO THE FOLLOWING PROPORTION:

COMPONENT	PERCENT BY VOLUME
COARSE SAND	75%
PEAT	25%

B. PLANTING MIX SHALL BE THOROUGHLY MIXED, SCREENED, AND SHREDDED.
C. PRIOR TO BEGINNING THE MIXING PROCESS, SUBMIT A 1-KG (2-LB) SAMPLE OF THE PROPOSED MIX WITH SOIL TEST RESULTS THAT INDICATE THE MIX RATIO AND THE RESULTS ACHIEVED.
D. DURING THE MIXING PROCESS BUT PRIOR TO INSTALLING THE MIX, SUBMIT A 1-KG (2-LB) SAMPLE FOR EACH 200 CUBIC METERS (250 CUBIC YARDS) OF PLANTING MIX, TAKEN RANDOMLY FROM THE FINISHED SOIL MIX, WITH SOIL TEST RESULTS FOR APPROVAL. IN THE EVENT THAT THE TEST RESULTS DO NOT MEET THE REQUIRED PARTICLE SIZE DISTRIBUTION, REMIX AND RESUBMIT A REVISED PLANTING MIX.
E. MAKE ALL AMENDMENTS OF LIME/SULFUR AND FERTILIZER INDICATED BY THE SOIL TEST RESULTS AT THE TIME OF MIXING.
F. ALL MIXING SHALL TAKE PLACE IN THE CONTRACTORS YARD, USING COMMERCIAL MIXING EQUIPMENT SUFFICIENT TO THOROUGHLY MIX ALL COMPONENTS UNIFORMLY
G. PROTECT THE PLANTING MIX FROM EROSION PRIOR TO INSTALLATION.

PART 3. EXECUTION

I. EXCAVATION OF PLANTED AREAS
A. LOCATIONS FOR PLANTS AND/OR OUTLINES OF AREAS TO BE PLANTED ARE TO BE STAKED OUT AT THE SITE. LOCATE AND MARK ALL SUBSURFACE UTILITY LINES. APPROVAL OF THE STAKEOUT BY THE LANDSCAPE ARCHITECT IS REQUIRED BEFORE EXCAVATION BEGINS.
B. TREE, SHRUB, AND GROUNDCOVER BEDS ARE TO BE EXCAVATED TO THE DEPTH AND WIDTHS INDICATED ON THE LANDSCAPE PLAN DETAIL DRAWINGS. IF THE PLANTING AREA UNDER ANY TREE IS INITIALLY DUG TOO DEEP, THE SOIL ADDED TO BRING IT UP TO THE CORRECT LEVEL SHOULD BE THOROUGHLY TAMPED.
1. THE SIDES OF THE EXCAVATION OF ALL PLANTING AREAS SHALL BE SLOPED AT A 45 DEGREES. THE BOTTOM OF ALL BEDS SHALL SLOPE PARALLEL TO THE PROPOSED GRADES OR TOWARD ANY SUBSURFACE DRAIN LINES WITHIN THE PLANTING BED. THE BOTTOM OF THE PLANTING BED DIRECTLY UNDER ANY TREE SHALL BE HORIZONTAL SUCH THAT THE TREE SITS PLUMB.
2. MAINTAIN ALL REQUIRED ANGLES OF REPOSE OF THE ADJACENT MATERIALS AS SHOWN ON THE DRAWINGS. DO NOT EXCAVATE COMPACTED SUBGRADES OF ADJACENT PAVEMENT OR STRUCTURES.
3. SUBGRADE SOILS SHALL BE SEPARATED FROM THE TOPSOIL, REMOVED FROM THE AREA, AND NOT USED AS BACKFILL IN ANY PLANTED OR LAWN AREA. EXCAVATIONS SHALL NOT BE LEFT UNCOVERED OR UNPROTECTED OVERNIGHT.
C. FOR TREES AND SHRUBS PLANTED IN INDIVIDUAL HOLES IN AREAS OF GOOD SOIL THAT IS TO REMAIN IN PLACE AND/OR TO RECEIVE AMENDMENT IN THE TOP 150-MM (6 IN.) LAYER, EXCAVATE THE HOLE TO THE DEPTH OF THE ROOT BALL AND TO WIDTHS SHOWN ON THE DRAWING. SLOPE THE SIDES OF THE EXCAVATION AT A 45 DEGREE ANGLE UP AND AWAY FROM THE BOTTOM OF THE EXCAVATION.
1. IN AREAS OF SLOWLY DRAINING SOILS, THE ROOT BALL MAY BE SET UP TO 75 MM (3 IN.) OR 1/8 OF THE DEPTH OF THE ROOT BALL ABOVE THE ADJACENT SOIL LEVEL.
2. SAVE THE EXISTING SOIL TO BE USED AS BACKFILL AROUND THE TREE.
3. ON STEEP SLOPES, THE DEPTH OF THE EXCAVATION SHALL BE MEASURED AT THE CENTER OF THE HOLE AND THE EXCAVATION DUG AS SHOWN ON THE DRAWINGS.
D. DETRIMENTAL SOIL CONDITIONS: THE LANDSCAPE ARCHITECT IS TO BE NOTIFIED, IN WRITING, OF SOIL CONDITIONS ENCOUNTERED, INCLUDING POOR DRAINAGE, THAT THE CONTRACTOR CONSIDERS DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. WHEN DETRIMENTAL CONDITIONS ARE UNCOVERED, PLANTING SHALL BE DISCONTINUED UNTIL INSTRUCTIONS TO RESOLVE THE CONDITIONS ARE RECEIVED FROM THE LANDSCAPE ARCHITECT.
E. OBSTRUCTIONS: IF ROCK, UNDERGROUND CONSTRUCTION WORK, UTILITIES, TREE ROOTS, OR OTHER OBSTRUCTIONS ARE ENCOUNTERED IN THE EXCAVATION OF PLANTING AREAS, ALTERNATE LOCATIONS FOR ANY PLANTING SHALL BE DETERMINED BY THE LANDSCAPE ARCHITECT.

II. INSTALLATION OF PLANTING MIX
A. PRIOR TO THE INSTALLATION OF THE PLANTING MIX, INSTALL SUBSURFACE DRAINS, IRRIGATION MAIN LINES, LATERAL LINES, AND IRRIGATION RISERS SHOWN ON THE DRAWINGS.
B. THE LANDSCAPE ARCHITECT SHALL REVIEW THE PREPARATION OF SUBGRADES PRIOR TO THE INSTALLATION OF PLANTING MIX.
C. DO NOT PROCEED WITH THE INSTALLATION OF PLANTING MIX UNTIL ALL UTILITY WORK IN THE AREA HAS BEEN INSTALLED.
D. PROTECT ADJACENT WALLS, WALKS, AND UTILITIES FROM DAMAGE OR STAINING BY THE SOIL. USE 12-MM (1/2 IN.) PLYWOOD AND/OR PLASTIC SHEETING AS DIRECTED TO COVER EXISTING CONCRETE, METAL, MASONRY WORK, AND OTHER ITEMS AS DIRECTED DURING THE PROGRESS OF THE WORK.
1. CLEAN UP ANY SOIL OR DIRT SPILLED ON ANY PAVED SURFACE AT THE END OF EACH WORKING DAY.
2. ANY DAMAGE TO THE PAVING OR ARCHITECTURAL WORK CAUSED BY THE SOILS INSTALLATION CONTRACTOR SHALL BE REPAIRED BY THE GENERAL CONTRACTOR AT THE SOILS INSTALLATION CONTRACTORS EXPENSE.
E. TILL THE SUBSOIL INTO THE BOTTOM LAYER OF TOPSOIL OR PLANTING MIX.
1. LOOSEN THE SOIL OF THE SUBGRADE TO A DEPTH OF 50 TO 75 MM (2 TO 3 IN.) WITH A ROTOTILLER OR OTHER SUITABLE DEVICE.
2. SPREAD A LAYER OF THE SPECIFIED TOPSOIL OR PLANTING MIX 50 MM (2 IN.) DEEP OVER THE SUBGRADE. THOROUGHLY TILL THE PLANTING MIX AND THE SUBGRADE TOGETHER.
3. IMMEDIATELY INSTALL THE REMAINING TOPSOIL OR PLANTING MIX IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS. PROTECT THE TILLED AREA FROM TRAFFIC. DO NOT ALLOW THE TILLED SUBGRADE TO BECOME COMPACTED.
4. IN THE EVENT THAT THE TILLED AREA BECOMES COMPACTED, TILL THE AREA AGAIN PRIOR TO INSTALLING THE PLANTING MIX.
F. INSTALL THE REMAINING TOPSOIL OR PLANTING MIX IN 200- TO 250-MM (8- TO 10-IN.) LIFTS TO THE DEPTHS AND SHOWN ON THE DRAWING DETAILS. THE DEPTHS AND GRADES SHOWN ON THE DRAWINGS ARE THE FINAL GRADES AFTER SOIL SETTLEMENT AND SHRINKAGE OF THE ORGANIC MATERIAL. THE CONTRACTOR SHALL INSTALL THE SOIL AT A HIGHER LEVEL TO ANTICIPATE THIS REDUCTION OF SOIL VOLUME, DEPENDING ON PREDICTED SETTLING PROPERTIES FOR EACH TYPE OF SOIL.
1. PHASE THE INSTALLATION OF THE SOIL SUCH THAT EQUIPMENT DOES NOT HAVE TO TRAVEL OVER ALREADY-INSTALLED TOPSOIL OR PLANTING MIXES.
2. COMPACT EACH LIFT SUFFICIENTLY TO REDUCE SETTLING BUT NOT ENOUGH TO PREVENT THE MOVEMENT OF WATER AND FEEDER ROOTS THROUGH THE SOIL. THE SOIL IN EACH LIFT SHOULD FEEL FIRM TO THE FOOT IN ALL AREAS AND MAKE ONLY SLIGHT HEEL PRINTS. OVER-COMPACTION SHALL BE DETERMINED BY THE FOLLOWING FIELD PERCOLATION TEST.
A. DIG A HOLE 250 MM (10 IN.) IN DIAMETER AND 250 MM (10 IN.) DEEP.
B. FILL THE HOLE WITH WATER AND LET IT DRAIN COMPLETELY. IMMEDIATELY REFILL THE HOLE WITH WATER, AND MEASURE THE RATE OF FALL IN THE WATER LEVEL.
C. IN THE EVENT THAT THE WATER DRAINS AT A RATE LESS THAN 25 MM (1 IN.) PER HOUR, TILL THE SOIL TO A DEPTH REQUIRED TO BREAK THE OVER-COMPACTION.
D. THE LANDSCAPE ARCHITECT SHALL DETERMINE THE NEED FOR, AND THE NUMBER AND LOCATION OF PERCOLATION TESTS BASED ON OBSERVED FIELD CONDITIONS OF THE SOIL.
3. MAINTAIN MOISTURE CONDITIONS WITHIN THE SOILS DURING INSTALLATION TO ALLOW FOR SATISFACTORY COMPACTION. SUSPEND INSTALLATION OPERATIONS IF THE SOIL BECOMES WET. DO NOT PLACE SOILS ON WET SUBGRADE.
4. PROVIDE ADEQUATE EQUIPMENT TO ACHIEVE CONSISTENT AND UNIFORM COMPACTION OF THE SOILS. USE THE SMALLEST EQUIPMENT THAT CAN REASONABLY PERFORM THE TASK OF SPREADING AND COMPACTION.
5. ADD LIME, SULFUR, FERTILIZER, AND OTHER AMENDMENTS DURING SOIL INSTALLATION. SPREAD THE AMENDMENTS OVER THE TOP LAYER OF SOIL AND TILL INTO THE TOP 100 MM (4 IN.) OF SOIL. SOIL AMENDMENTS MAY BE ADDED AT THE SAME TIME THAT ORGANIC MATTER, WHEN REQUIRED, IS ADDED TO THE TOP LAYER OF SOIL.
6. PROTECT SOIL FROM OVER-COMPACTION AFTER PLACEMENT. AN AREA THAT BECOMES OVERCOMPACTED SHALL BE TILLED TO A DEPTH OF 125 MM (6 IN.). UNEVEN OR SETTLED AREAS SHALL BE FILLED AND REGRADED.

III. FINE GRADING
A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FINISH GRADE (MIN. 6" BELOW ADJACENT F.F.E.). FINISH GRADES IN PLANTING AREAS SHALL BE ONE INCH LOWER THAN ADJACENT PAVING AND ARE TO INCLUDE 3" OF MULCHING. NEW EARTHWORK SHALL BLEND SMOOTHLY INTO THE EXISTING EARTHWORK, AND GRADES SHALL PITCH EVENLY BETWEEN SPOT GRADES. ALL PLANTED AREAS MUST PITCH TO DRAIN AT A MINIMUM OF 1/4" PER FOOT. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT PRIOR TO CONTINUING WORK.
B. FILL ALL DIPS AND REMOVE ANY BUMPS IN THE OVERALL PLANE OF THE SLOPE.
1. THE TOLERANCE FOR DIPS AND BUMPS IN LAWN AREAS SHALL BE A 12-MM (1/2 IN.) DEVIATION FROM THE PLANE IN 3,000 MM (10 FT).
2. THE TOLERANCE FOR DIPS AND BUMPS IN SHRUB PLANTING AREAS SHALL BE A 25-MM (1 IN.) DEVIATION FROM THE PLANE IN 3,000 MM (10 FT).
3. ALL FINE GRADING SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING, MULCHING, SODDING, OR SEEDING.
C. BERMING SHALL NOT BE PLACED WITHIN 10' OF ANY EXISTING TREE NOR WILL IT BE ALLOWED TO ENCROACH UPON ANY UTILITY, DRAINAGE, OR MAINTENANCE EASEMENT. BERMING SHALL NOT IMPEDE OR OBSTRUCT ANY NECESSARY SWALES NEEDED TO DRAIN OTHER AREAS FOR THE PROPERTY.

IV. PLANTING OPERATIONS
A. PLANTS SHALL BE SET ON FLAT-TAMPED OR UNEXCAVATED PADS AT THE SAME RELATIONSHIP TO FINISHED GRADE AS THEY WERE TO THE GROUND FROM WHICH THEY WERE DUG, UNLESS OTHERWISE NOTED ON THE DRAWINGS. PLANTS MUST BE SET PLUMB AND BRACED IN POSITION UNTIL TOPSOIL OR PLANTING MIX HAS BEEN PLACED AND TAMPED AROUND THE BASE OF THE ROOT BALL. IMPROPER COMPACTING OF THE SOIL AROUND THE ROOT BALL MAY RESULT IN THE TREE SETTLING OR LEANING. PLANTS SHALL BE SET SO THAT THEY WILL BE AT THE SAME DEPTH AND SO THAT THE ROOT BALL DOES NOT SHIFT OR MOVE LATERALLY ONE YEAR LATER.
1. DETERMINE THE ELEVATION OF THE ROOT FLARE AND ENSURE THAT IT IS PLANTED AT GRADE. THIS MAY REQUIRE THAT THE TREE BE SET HIGHER THAN THE GRADE IN THE NURSERY.
2. IF THE ROOT FLARE IS LESS THAN 50 MM (2 IN.) BELOW THE SOIL LEVEL OF THE ROOT BALL, PLANT THE TREE THE APPROPRIATE LEVEL ABOVE THE GRADE TO SET THE FLARE EVEN WITH THE GRADE. IF THE FLARE IS MORE THAN 50 MM (2 IN) AT THE CENTER OF THE ROOT BALL THE TREE SHALL BE REJECTED.
B. LIFT PLANTS ONLY FROM THE BOTTOM OF THE ROOT BALLS OR WITH BELTS OR LIFTING HARNESSES OF SUFFICIENT WIDTH NOT TO DAMAGE THE ROOT BALLS. DO NOT LIFT TREES BY THEIR TRUNK OR USE THE TRUNK AS A LEVER IN POSITIONING OR MOVING THE TREE IN THE PLANTING AREA.
C. REMOVE PLASTIC, PAPER, OR FIBER POTS FROM CONTAINERIZED PLANT MATERIAL. PULL ROOTS OUT OF THE ROOT MAT. LOOSEN THE POTTING MEDIUM AND SHAKE AWAY FROM THE ROOT MAT. IMMEDIATELY AFTER REMOVING THE CONTAINER, INSTALL THE PLANT SUCH THAT THE ROOTS DO NOT DRY OUT. PACK PLANTING MIX AROUND THE EXPOSED ROOTS WHILE PLANTING.
D. THE ROOTS OF BARE-ROOT TREES SHALL BE PRUNED AT THE TIME OF PLANTING TO REMOVE DAMAGED OR UNDESIRABLE ROOTS (THOSE LIKELY TO BECOME A DETRIMENT TO FUTURE GROWTH OF THE ROOT SYSTEM). BARE-ROOT TREES SHALL HAVE THE ROOTS SPREAD TO APPROXIMATE THE NATURAL POSITION OF THE ROOTS AND SHALL BE CENTERED IN THE PLANTING PIT. THE PLANTING-SOIL BACKFILL SHALL BE WORKED FIRMLY INTO AND AROUND THE ROOTS, WITH CARE TAKEN TO FILL IN COMPLETELY WITH NO AIR POCKETS.
E. CUT ROPES OR STRINGS FROM THE TOP OF SHRUB ROOT BALLS AND TREES SMALLER THAN 3 IN. CALIPER AFTER PLANT HAS BEEN SET. REMOVE BURLAP OR CLOTH WRAPPING AND ANY WIRE BASKETS FROM AROUND TOP HALF OF BALLS. DO NOT TURN UNDER AND BURY PORTIONS OF BURLAP AT TOP OF BALL.
1. DO NOT IMMEDIATELY REMOVE THE ROPES AND BURLAP FROM TREES LARGER THAN 3 IN. CALIPER. RETURN TO EACH TREE THREE MONTHS AFTER PLANTING AND CUT ALL ROPES AROUND THE TRUNKS AND TOPS OF THE ROOT BALLS OF THESE TREES.
2. COMPLETELY REMOVE ANY WATERPROOF OR WATER-REPELLANT STRINGS OR WRAPPINGS FROM THE ROOT BALL AND TRUNK BEFORE BACKFILLING.
F. SET BALLED AND BURLAPPED TREES IN THE HOLE WITH THE NORTH MARKER FACING NORTH UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
G. PLACE NATIVE SOIL, TOPSOIL, OR PLANTING MIX INTO THE AREA AROUND THE TREE, TAMPING LIGHTLY TO REDUCE SETTLEMENT.
1. FOR PLANTS PLANTED IN INDIVIDUAL HOLES IN EXISTING SOIL, ADD ANY REQUIRED SOIL AMENDMENTS TO THE SOILS, AS THE MATERIAL IS BEING BACKFILLED AROUND THE PLANT. ENSURE THAT THE AMENDMENTS ARE THOROUGHLY MIXED INTO THE BACKFILL.
2. FOR PLANTS PLANTED IN LARGE BEDS OF PREPARED SOIL, ADD SOIL AMENDMENTS DURING THE SOIL INSTALLATION PROCESS.
3. ENSURE THAT THE BACKFILL IMMEDIATELY AROUND THE BASE OF THE ROOT BALL IS TAMPED WITH FOOT PRESSURE SUFFICIENT TO PREVENT THE ROOT BALL FROM SHIFTING OR LEANING.
H. SOLID SOD SHALL BE LAID WITH CLOSELY ABUTTING JOINTS WITH A TAMPED OR ROLLED, EVEN SURFACE. STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES. BRING THE SOD EDGE IN A NEAT, CLEAN MANNER TO THE EDGE OF ALL PAVING AND SHRUB AREAS. SOD ALONG SLOPES SHALL BE PEGGED TO HOLD SOD IN PLACE ALONG SLOPES OR BANKS A WOOD PEG ACCEPTABLE TO THE LANDSCAPE ARCHITECT SHALL BE USED AT NO ADDITIONAL COST TO THE OWNER. IF, IN THE OPINION OF THE LANDSCAPE ARCHITECT, TOP-DRESSING IS NECESSARY AFTER ROLLING, CLEAN SAND WILL BE EVENLY APPLIED OVER THE ENTIRE SURFACE AND THOROUGHLY WASHED IN WITHOUT ADDITIONAL CHARGE.
I. THOROUGHLY WATER ALL PLANTS IMMEDIATELY AFTER PLANTING. APPLY WATER BY HOSE DIRECTLY TO THE ROOT BALL AND THE ADJACENT SOIL.
J. REMOVE ALL TAGS, LABELS, STRINGS, ETC. FROM ALL PLANTS.
K. REMOVE ANY EXCESS SOIL, DEBRIS, AND PLANTING MATERIAL FROM THE JOB SITE AT THE END OF EACH WORKDAY.
L. FORM WATERING SAUCERS 100 MM (4 IN.) HIGH IMMEDIATELY OUTSIDE THE AREA OF THE ROOT BALL OF EACH TREE AS INDICATED ON THE DRAWINGS.

V. RELOCATION OF EXISTING MATERIAL:
A. LANDSCAPE CONTRACTOR SHALL ROOT PRUNE TREES WHICH ARE TO BE RELOCATED IN ACCORDANCE WITH APPROVED HORTICULTURAL PRACTICES AND THE FOLLOWING PROCEDURES.
1. SELECT A HEALTHY TREE
2. SELECTIVELY TRIM THE CANOPY REMOVING DEAD LIMBS, CROSS BRANCHING OVER CROWNED AREAS, AND LOWER UNDESIRABLE LIMBS. FERTILIZE AND WATER TREES BEFORE PRUNING.
3. ROOT PRUNE 50% OF THE ROOT SYSTEM APPROXIMATELY 18"-2' DEEP (DEPENDING UPON SPECIES AND SIZE). THIS IS DONE BY HAND WITH SHARP HAND TOOLS OR A ROOT PRUNING SAW. THE DIAMETER OF THE ROOT BALL TO BE PRUNED IS 8-12 INCHES PER EVERY ONE INCH OF DIAMETER AT BREAST HEIGHT OF THE TREE.
4. BACK FILL THE EXISTING SOIL WITH PEAT MOSS TO STIMULATE NEW ROOT GROWTH OF THE PRUNED ROOTS.
5. WATER IN THOROUGHLY AND TREAT WITH A MYCORRHIZAE AND A LOW NITROGEN FERTILIZER (SO NOT TO BURN THE PRUNED ROOTS). BRACE TREES IF DEEMED NECESSARY.
6. THE ROOT PRUNED TREE SHOULD BE WATERED EVERY DAY (ESPECIALLY DURING WARM MONTHS OF THE SEASON), THE EQUIVALENT OF 5 GALLONS FOR EVERY DBH OF TREE PER DAY.
7. ROOT PRUNED TREES SHOULD BE LET TO STAND FOR A MINIMUM OF 6 WEEKS FOR TREES LESS THAN 8" DBH AND AS LONG AS 3 MONTHS FOR LARGER SPECIMENS PRIOR TO TRANSPLANTING.
8. FOR BEST RESULTS AND SURVIVORSHIP, NEW ROOT GROWTH SHOULD BE EVIDENT ON ROOT PRUNED TREES PRIOR TO TRANSPLANTING.
9. UPON TRANSPLANTING, WATER SHOULD BE APPLIED EVERY DAY AS OUTLINED IN STEP 6 FOR AT LEAST ONE YEAR.

VI. STAKING AND GUYING
A. THE CONTRACTOR SHALL STAKE ALL TREES AND PALMS IN ACCORDANCE WITH THE TREE AND PALM STAKING DETAILS PROVIDED WITHIN THE PLAN DRAWINGS. ALTERNATE METHODS OF GUYING OR STAKING MAY BE EMPLOYED WITH THE PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT.
B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OR ADJUSTMENT OF ALL TREES, PALMS OR SHRUBS THAT FALL OR LEAN DURING THE GUARANTEE PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY THE FALLING OR LEANING OF TREES.
C. STAKES AND GUYS SHALL BE INSTALLED IMMEDIATELY UPON APPROVAL OR PLANTING, AND SHALL BE REMOVED IN ACCORDANCE WITH THE STAKING DETAILS PROVIDE WITHIN THE PLAN DRAWINGS. ANY TREE THAT IS NOT STABLE AT THE END OF THE WARRANTY PERIOD SHALL BE REJECTED.

VII. PRUNING
A. PLANTS SHALL NOT BE HEAVILY PRUNED AT THE TIME OF PLANTING. PRUNING IS REQUIRED AT PLANTING TIME TO CORRECT DEFECTS IN THE TREE STRUCTURE, INCLUDING REMOVAL OF INJURED BRANCHES, WATERSPOUTS, SUCKERS, AND INTERFERING BRANCHES. HEALTHY LOWER BRANCHES AND INTERIOR SMALL TWIGS SHOULD NOT BE REMOVED EXCEPT AS NECESSARY TO CLEAR WALKS AND ROADS. IN NO CASE SHOULD MORE THAN ONE-QUARTER OF THE BRANCHING STRUCTURE BE REMOVED. RETAIN THE NORMAL OR NATURAL SHAPE OF THE PLANT.
B. ALL PRUNING SHALL BE COMPLETED USING CLEAN, SHARP TOOLS. ALL CUTS SHALL BE CLEAN AND SMOOTH, WITH THE BARK INTACT WITH NO ROUGH EDGES OR TEARS.
C. PRUNING OF LARGE TREES SHALL BE DONE FROM A HYDRAULIC MAN-LIFT SUCH THAT IT IS NOT NECESSARY TO CLIMB THE TREE.

VIII. MULCHING
A. ALL TREES, PALMS, SHRUBS, AND OTHER PLANTINGS WILL BE MULCHED WITH MULCH PREVIOUSLY APPROVED BY THE LANDSCAPE ARCHITECT. THE MULCH SHALL BE A MINIMUM 3" THICK LAYER OVER ALL TREE, SHRUB AND GROUND COVER PLANTING AREAS, UNLESS OTHERWISE SPECIFIED. ALL MULCH LAYERS SHALL BE OF THE SPECIFIED THICKNESS AT THE TIME OF THE FINAL ACCEPTANCE OF THE WORK. MULCH MUST NOT BE PLACED WITHIN 3 INCHES OF THE TRUNKS OF TREES, PALMS OR SHRUBS.
B. PLACE MULCH AT LEAST 3" IN DEPTH IN A CIRCLE AROUND ALL TREES LOCATED IN LAWN AREAS. THE DIAMETER OF THE CIRCLE SHALL BE 18" IN DIAMETER LARGER THAN THE BALL OF THE PLANT PROVIDED. MULCH MUST NOT BE PLACED WITHIN 3 INCHES OF THE TRUNKS OF TREES, PALMS OR SHRUBS.

IX. MAINTENANCE OF TREES, SHRUBS, AND VINES
A. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS PLANTED AND CONTINUE UNTIL ITS ACCEPTANCE HAS BEEN CONFIRMED BY THE LANDSCAPE ARCHITECT.
B. MAINTENANCE SHALL CONSIST OF PRUNING, WATERING, CULTIVATING, WEEDING, MULCHING, FERTILIZING, TIGHTENING AND REPAIRING GUYS AND STAKES, RESETTING PLANTS TO PROPER GRADES OR UPRIGHT POSITION, RESTORING OF THE PLANTING SAUCER, AND FURNISHING AND APPLYING SUCH SPRAYS OR OTHER MATERIALS AS NECESSARY TO KEEP PLANTINGS FREE OF INSECTS AND DISEASES AND IN VIGOROUS CONDITION.
C. PLANTING AREAS AND PLANTS SHALL BE PROTECTED AT ALL TIMES AGAINST TRESPASSING AND DAMAGE OF ALL KINDS FOR THE DURATION OF THE MAINTENANCE PERIOD. IF A PLANT BECOMES DAMAGED OR INJURED, IT SHALL BE TREATED OR REPLACED AS DIRECTED BY THE LANDSCAPE ARCHITECT AT NO ADDITIONAL COST.
D. WATERING: CONTRACTOR SHALL IRRIGATE AS REQUIRED TO MAINTAIN VIGOROUS AND HEALTHY TREE GROWTH. OVERWATERING OR FLOODING SHALL NOT BE ALLOWED. THE CONTRACTOR SHALL MONITOR, ADJUST, AND USE EXISTING IRRIGATION FACILITIES, IF AVAILABLE, AND FURNISH ANY ADDITIONAL MATERIAL, EQUIPMENT, OR WATER TO ENSURE ADEQUATE IRRIGATION. ROOT BALLS OF ALL TREES AND LARGE SHRUBS SHALL BE SPOT WATERED USING HANDHELD HOSES DURING THE FIRST FOUR MONTHS AFTER PLANTING, AS REQUIRED TO ENSURE ADEQUATE WATER WITHIN THE ROOT BALL.
E. DURING PERIODS OF RESTRICTED WATER USAGE, ALL GOVERNMENTAL REGULATIONS (PERMANENT AND TEMPORARY) SHALL BE FOLLOWED. THE CONTRACTOR MAY HAVE TO TRANSPORT WATER FROM PONDS OR OTHER SOURCES, AT NO ADDITIONAL EXPENSE TO THE OWNER WHEN IRRIGATION SYSTEMS ARE UNAVAILABLE.
F. REMOVE SOIL RIDGES FROM AROUND WATERING BASINS PRIOR TO END OF MAINTENANCE PERIOD, AS DIRECTED BY LANDSCAPE ARCHITECT

X. ACCEPTANCE
A. THE LANDSCAPE ARCHITECT SHALL INSPECT ALL WORK FOR ACCEPTANCE UPON WRITTEN REQUEST OF THE CONTRACTOR. THE REQUEST SHALL BE RECEIVED AT LEAST TEN CALENDAR DAYS BEFORE THE ANTICIPATED DATE OF INSPECTION.
B. ACCEPTANCE OF PLANT MATERIAL SHALL BE FOR GENERAL CONFORMANCE TO SPECIFIED SIZE, CHARACTER, AND QUALITY AND SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR FULL CONFORMANCE TO THE CONTRACT DOCUMENTS, INCLUDING CORRECT SPECIES.
C. UPON COMPLETION AND RE-INSPECTION OF ALL REPAIRS OR RENEWALS NECESSARY IN THE JUDGMENT OF THE LANDSCAPE ARCHITECT, THE LANDSCAPE ARCHITECT SHALL CERTIFY IN WRITING THAT THE WORK HAS BEEN ACCEPTED.

XI. ACCEPTANCE IN PART
A. WORK MAY BE ACCEPTED IN PARTS WHEN THE LANDSCAPE ARCHITECT AND CONTRACTOR DEEM THAT PRACTICE TO BE IN THEIR MUTUAL INTEREST. APPROVAL MUST BE GIVEN IN WRITING BY THE LANDSCAPE ARCHITECT TO THE CONTRACTOR VERIFYING THAT THE WORK IS TO BE COMPLETED IN PARTS. ACCEPTANCE OF WORK IN PARTS SHALL NOT WAIVE ANY OTHER PROVISION OF THIS CONTRACT.

XII. GUARANTEE PERIOD AND REPLACEMENTS
A. THE GUARANTEE PERIOD FOR TREES AND SHRUBS SHALL BEGIN AT THE DATE OF ACCEPTANCE.
B. THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL TO BE IN HEALTHY AND FLOURISHING CONDITION FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE.
C. WHEN WORK IS ACCEPTED IN PARTS, THE GUARANTEE PERIODS EXTEND FROM EACH OF THE PARTIAL ACCEPTANCES TO THE TERMINAL DATE OF THE GUARANTEE OF THE LAST ACCEPTANCE. THUS, ALL GUARANTEE PERIODS TERMINATE AT ONE TIME.
D. THE CONTRACTOR SHALL REPLACE, WITHOUT COST, AS SOON AS WEATHER CONDITIONS PERMIT, AND WITHIN A SPECIFIED PLANTING PERIOD, ALL PLANTS DETERMINED BY THE LANDSCAPE ARCHITECT TO BE DEAD OR IN AN UNACCEPTABLE CONDITION DURING AND AT THE END OF THE GUARANTEE PERIOD. TO BE CONSIDERED ACCEPTABLE, PLANTS SHALL BE FREE OF DEAD OR DYING BRANCHES AND BRANCH TIPS AND SHALL BEAR FOLIAGE OF NORMAL DENSITY, SIZE, AND COLOR. REPLACEMENTS SHALL CLOSELY MATCH ADJACENT SPECIMENS OF THE SAME SPECIES. REPLACEMENTS SHALL BE SUBJECT TO ALL REQUIREMENTS STATED IN THIS SPECIFICATION.
E. THE GUARANTEE OF ALL REPLACEMENT PLANTS SHALL EXTEND FOR AN ADDITIONAL PERIOD OF ONE YEAR FROM THE DATE OF THEIR ACCEPTANCE AFTER REPLACEMENT. IN THE EVENT THAT A REPLACEMENT PLANT IS NOT ACCEPTABLE DURING OR AT THE END OF SAID EXTENDED GUARANTEE PERIOD, THE LANDSCAPE ARCHITECT MAY ELECT SUBSEQUENT REPLACEMENT OR CREDIT FOR THAT ITEM.
F. AT THE END OF THE GUARANTEE, THE CONTRACTOR SHALL RESET GRADES THAT HAVE SETTLED BELOW THE PROPOSED GRADES ON THE DRAWINGS.
G. THE CONTRACTOR SHALL MAKE PERIODIC INSPECTIONS, AT NO EXTRA COST, DURING THE GUARANTEE PERIOD TO DETERMINE WHAT CHANGES, IF ANY, SHOULD BE MADE IN THE MAINTENANCE PROGRAM. IF CHANGES ARE RECOMMENDED, THEY SHALL BE SUBMITTED IN WRITING TO THE LANDSCAPE ARCHITECT. CLAIMS BY THE CONTRACTOR THAT THE OWNERS MAINTENANCE PRACTICES OR LACK OF MAINTENANCE RESULTED IN DEAD OR DYING PLANTS WILL NOT BE CONSIDERED IF SUCH CLAIMS HAVE NOT BEEN DOCUMENTED BY THE CONTRACTOR DURING THE GUARANTEE PERIOD.

XIII. FINAL INSPECTION AND FINAL ACCEPTANCE
AT THE END OF THE GUARANTEE PERIOD AND UPON WRITTEN REQUEST OF THE CONTRACTOR, THE LANDSCAPE ARCHITECT WILL INSPECT ALL GUARANTEED WORK FOR FINAL ACCEPTANCE. THE REQUEST SHALL BE RECEIVED AT LEAST TEN CALENDAR DAYS BEFORE THE ANTICIPATED DATE FOR FINAL INSPECTION. UPON COMPLETION AND RE-INSPECTION OF ALL REPAIRS OR RENEWALS NECESSARY IN THE JUDGMENT OF THE LANDSCAPE ARCHITECT AT THAT TIME, THE LANDSCAPE ARCHITECT SHALL CERTIFY, IN WRITING, THAT THE PROJECT HAS RECEIVED FINAL ACCEPTANCE.

WGI™
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NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY APPROVAL

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11.07.23	RESUBMITTAL	DN
2	06.21.24	RESUBMITTAL	

CAD	9413.00-LA.DWG
JOB NO.	9413.00
DRAWN BY	DN
CHECK BY	SW
DATE	06.13.2023

LANDSCAPE ARCHITECT OF RECORD
SIYANG WEN, PLA
FL # LA6667556
Siyang Wen

COASTAL RECYCLING OF POMPANO
2407 HAMMONDVILLE ROAD
POMPANO BEACH, BROWARD COUNTY, FLORIDA
LANDSCAPE SPECIFICATIONS

SHEET:
LP-3.02

Emmanuel Moran \\wgi.com\data\Projects\9400\9413.00 2551 Martin Luther King Blvd Pompano\LA\Drawings\Landscape\9413.00-LA.dwg ---- Plotted: 6/21/2024 10:48:13 AM Saved: 6/21/2024 10:42:37 AM