

1.15 SELECTION AND OBSERVATION OF PLANTS		5.) The root system shall be reasonably free of stem girdling roots over the root collar or kninked roots from nursery production practices.		delivery, set plants in a location protected from sun and wind. Provide adequate water to the root ball package during the shipping and storage period.		5.) If the plant is shipped with a wire basket that does not meet the requirements of a "Low Rise" basket, remove the top 6 - 8 inches of the basket wires just before the final backfilling of the tree.		B. Once installation is complete, wash all soil from pavements and other structures. Ensure that mulch is confined to planting beds and that all tags and flagging tapes are removed from the site. The Owner's Representative's seals are to remain on the trees and removed at the end of the warranty period.	
A. The Owner's Representative may review all plants subject to approval of size, health, quality, character, etc. 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 that were not observed.		6.) 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.		1. All plant materials must be available for observation prior to planting.		2. Using a soil moisture meter, periodically check the soil moisture in the root balls of all plants to assure that 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. Make all repairs to grades, roots, and damage by the plant installer to the work or other work at the site.	
B. Plant Selection: The Owner's Representative 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 this specification. If a particular defect or substandard element can be corrected at the nursery, as determined by the Owner's Representative, the agreed upon remedy may be applied by the nursery or the Contractor provided that the correction allows the plant to meet the requirements set forth in this specification. Any work to correct plant defects shall be at the contractor's expense.		E. Submittals: Submit for approval the required plant quality certifications from the grower where plants are to be purchased, for each plant type. The certification must state that each plant meets all the above plant quality requirements.		B. 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.		C. SPADE HARVESTED AND TRANSPLANTED PLANTS		3.19 PROTECTION DURING CONSTRUCTION	
1. The Owner's Representative may make invasive observation of the plant's root system in the area of the root collar and the top of the root ball in general in order 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.		2.2 ROOT BALL PACKAGE OPTIONS: The following root ball packages are permitted. 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 this specification shall not be permitted.		1. The Owner's Representative or Contractor shall approve the duration, method and location of storage of plants.		1. After installing the tree, loosen the soil along the seam between the root ball and the surrounding soil out to a radius from the root ball edge equal to the diameter of the root ball to a depth of 8 - 10 inches by hand digging to dislodge the soil interface.		A. The Contractor shall protect planting and related work and other site work from damage due to planting operations, operations by other Contractors or trespassers. Maintain protection during installation until Substantial Completion Acceptance. Treat, repair or replace damaged work immediately.	
2. Corrections are to be undertaken at the nursery prior to shipping.		A. BALLED AND BURLAPPED PLANTS		C. Provide protective covering over all plants during transporting.		2. Fill any gaps below this level with loose soil.		B. Damage done by the Contractor, or any of their sub-contractors to existing or installed plants, or any other parts of the work or existing features to remain, including roots, trunk or branches of large existing trees, soil, paving, utilities, lighting, irrigation, other finished work and surfaces including those on adjacent property, shall be cleaned, repaired or replaced by the Contractor at no expense to the Owner. The Owner's Representative shall determine when such cleaning, replacement or repair is satisfactory.	
C. The Contractor shall bear all cost related to plant corrections.		2. 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.		3.3 COORDINATION WITH PROJECT WORK		3. DRAINAGE		3.20 PLANT MAINTENANCE PRIOR TO SUBSTANTIAL COMPLETION ACCEPTANCE	
D. All plants that are rejected shall be immediately removed from the site and acceptable replacement plants provided at no cost to the Owner.		3. Plants shall be harvested with the following modifications to standard nursery practices.		A. The Contractor shall coordinate with all other work that may impact the completion of the work.		4. Remove all roots and substrate above the root collar and the main structural roots according to root correction details so root system conforms to root observations detail.		A. During the project work period and prior to Substantial Completion Acceptance, the Contractor shall maintain all plants.	
E. Submit to the Owner's Representative, for approval, plant sources including the names and locations of nurseries proposed as sources of acceptable plants, and a list of the plants they will provide. The plant list shall include the botanical and common name and the size at the time of selection. Observe all nursery materials to determine that the materials meet the requirements of this section.		a. 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.		B. Prior to the start of work, prepare a detailed schedule of the work for coordination with other trades.		5. Remove all substrate at the bottom of the root ball that does not contain roots.		B. Maintenance during the period prior to Substantial Completion Acceptance shall consist of pruning, watering, cultivating, weeding, mulching, removal of dead material, repairing and replacing of tree stakes, tightening and repairing of guys, repairing and replacing of damaged tree wrap material, resetting plants to proper grades and upright position, and furnishing and applying such sprays as are necessary to keep plantings reasonably free of damaging insects and disease, and in healthy condition. The threshold for applying insecticides and herbicide shall follow established Integrated Pest Management (IPM) procedures. Mulch areas shall be kept reasonably free of weeds, grass.	
F. The Contractor shall require the grower or job-site supplier to permit the Owner's Representative 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.		b. Trees shall be dug for a minimum of 4 weeks and a maximum of 52 weeks prior to shipping. Trees dug 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		C. Coordinate the relocation of any irrigation lines, heads or the conduits of other utility lines that are in conflict with tree locations. Root balls shall not be altered to fit around lines. Notify the Owner's Representative of any conflicts encountered.		6. Using a hose, power washer or air excavation device, wash out the substrate from around the trunk and top of the remaining root ball and find and remove all stem girdling roots within the root ball above the top of the structural roots.		3.21 SUBSTANTIAL COMPLETION ACCEPTANCE	
G. Where requested by the Owner's Representative, 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 Owner's Representative via photograph does not preclude the Owner's Representative's right to reject material while on site.		c. 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 4 inches and no greater than 8 inches below the shoulder of the root ball package. The basket shall be removed completely at time of planting.		D. It is understood that plants are not precise objects and that minor adjustments in the layout will be required as the planting plan is constructed. These adjustments may not be apparent until some or all of the plants are installed. Make adjustments as required by the Owner's Representative including relocating previously installed plants.		7. Maintain trunk plumb while backfilling soil around the roots.		A. Upon written notice from the Contractor, the Owners Representative shall review the work and make a determination if the work is substantially complete.	
1.16 PLANT SUBSTITUTIONS FOR PLANTS NOT AVAILABLE		1.) At nurseries where sandy soils prevent the use of "low profile baskets", baskets that support the entire root ball, including the top, are allowable.		E. SOIL PROTECTION DURING PLANT DELIVERY AND INSTALLATION		4. Lightly tamp the soil around the roots to eliminate voids and reduce settlement.		1. Notification shall be at least 7 days prior to the date the contractor is requesting the review.	
A. Submit all requests for substitutions of plant species, or size to the Owner's Representative, for approval, prior to purchasing the proposed substitution. Request for substitution shall be accompanied with a list of nurseries contacted in the search for the required plant and a record of other attempts to locate the required material. 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.		d. 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.		A. Protect soil from compaction during the delivery of plants to the planting locations, digging of planting holes and installing plants.		5. GROUND COVER, PERENNIAL AND ANNUAL PLANTS		B. The date of substantial completion of the planting shall be the date when the Owner's Representative accepts that all work in Planting, Planting Soil, and Irrigation installation sections is complete.	
1.17 SITE CONDITIONS		SPADE HARVESTED AND TRANSPLANTED		1. 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.		A. Assume that soil moisture is within the required levels prior to planting. Irrigation, if required, shall be applied at least 12 hours prior to planting to avoid planting in muddy soils.		C. The Plant Warranty period begins at date of written notification of substantial completion from the Owner's Representative. The date of substantial completion may be different than the date of substantial completion from the other sections of the project.	
A. It is the responsibility of the Contractor to be aware of all surface and sub-surface conditions, and to notify the Owner's Representative, in writing, of any circumstances that would negatively impact the health of plantings. Do not proceed with work until unsatisfactory conditions have been corrected.		1. Spade Harvested and Transplanted Plants shall meet all the requirements for field grown trees. Root ball diameters shall be similar in size as the ANSI Z60.1 requirements for Balled and Burlapped plants.		2. Till to a depth of 6 inches, all soil that has been driven over during the installation of plants.		B. Assume that soil grades in the beds are smooth and as shown on the plans.		3.22 MAINTENANCE DURING THE WARRANTY PERIOD by others	
1. Should subsurface drainage or soil conditions be encountered which would be detrimental to growth or survival of plant material, the Contractor shall notify the Owner's Representative in writing, stating the conditions and submit a proposal covering cost of corrections. If the Contractor fails to notify the Owner's Representative of such conditions, he/she shall remain responsible for plant material under the warranty clause of the specifications.		2. Trees shall be harvested prior to leafing out (bud break) in the spring or during the fall planting period except for plants known to be considered as fall planting hazards. Plants that are fall planting hazards shall only be harvested prior to leafing out in the spring.		3.7 SOIL MOISTURE		C. Plants shall be planted in even, triangularly spaced rows, at the intervals called out for on the drawings, unless otherwise noted. The first row of Annual flower plants shall be 6 inches from the bed edge unless otherwise directed.		A. After Substantial Completion Acceptance, the Contractor shall make sufficient site visits to observe the Owner's maintenance and become aware of problems with the maintenance in time to request changes, until the date of End of Warranty Final Acceptance.	
B. It is the responsibility of the Contractor to be familiar with the local growing conditions, and if any specified plants will be in conflict with these conditions. Report any potential conflicts, in writing, to the Owner's Representative.		3. Trees shall be moved and planted within 48 hours of the initial harvesting and shall remain in the spade machine until planted.		A. Volumetric soil moisture level, in both the planting soil and the root balls of all plants, prior to, during and after planting shall be above permanent wilting point and below field capacity for each type of soil texture within the following ranges.		D. Dig planting holes sufficiently large enough to insert the root system without deforming the roots. Set the top of the root system at the grade of the soil.		1. Notify the Owner's Representative in writing if maintenance, including watering, is not sufficient to maintain plants in a healthy condition. Such notification must be made in a timely period so that the Owner's Representative may take corrective action.	
C. This specification requires that all Planting Soil and Irrigation (if applicable) work be completed and accepted prior to the installation of any plants.		C. CONTAINER (INCLUDING ABOVE-GROUND FABRIC CONTAINERS AND BOXES) PLANTS		B. The Contractor shall confirm the soil moisture levels with a moisture meter. If the moisture is too high, suspend planting operations until the soil moisture drains to below field capacity.		E. Schedule the planting to occur prior to application of the mulch. If the bed is already mulched, pull the mulch from around the hole and plant into the soil. Do not plant the root system in the mulch. Pull mulch back so it is not on the root ball surface.		a. Notification must define the maintenance needs and describe any corrective action required.	
1. 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 Owner's Representative.		4. Container plants may be permitted only when indicated on the drawing, in this specification, or approved by the Owner's Representative.		3.8 INSTALLATION OF PLANTS: GENERAL		F. Press soil to bring the root system in contact with the soil.		2. In the event that the Contractor fails to visit the site and or notify, in writing, the Owner's Representative of maintenance needs, lack of sufficient watering shall not be used as grounds for voiding or modifying the provisions of the warranty.	
D. Actual planting shall be performed during those periods when weather and soil conditions are suitable in accordance with locally accepted horticultural practices.		5. Provide plants shall be established and well rooted in removable containers.		C. Observe each plant after delivery and prior to installation for damage of other characteristics that may cause rejection of the plant. Notify the Owner's Representative of any condition observed.		G. Spread any excess soil around in the spaces between plants.		3.23 MAINTENANCE DURING THE WARRANTY PERIOD by the plant installer	
1. Do not install plants into saturated or frozen soils. Do not install plants during inclement weather, such as rain or snow or during extremely hot, cold or windy conditions.		6. Container class size shall conform to ANSI Z60.1 for container plants for each size and type of plant.		D. No more plants shall be distributed about the planting bed area than can be planted and watered on the same day.		H. Apply mulch to the bed being sure not to cover the tops of the plants with or the tops of the root ball with mulch.		A. During the warranty period, provide all maintenance for all plantings to keep the plants in a healthy state and the planting areas clean and neat.	
1.18 PLANTING AROUND UTILITIES		D. BARE ROOT PLANTS		E. The root system of each plant, regardless of root ball package type, shall be observed by the Contractor, at the time of planting to confirm that the roots meet the requirements for plant root quality in Part 2 Products: Plants General: Plant Quality. The Contractor shall undertake at the time of planting, all modifications to the root system required by the Owner's Representative to meet these quality standards.		I. Water each planting area as soon as the planting is completed. Apply additional water to keep the soil moisture at the required levels. Do not over water.		B. General requirements:	
A. Contractor shall carefully examine the civil, record, and survey drawings to become familiar with the existing underground conditions before digging.		7. Harvest bare root plants while the plant is dormant and a minimum of 4 weeks prior to leaf out (bud break).		3.9 GROUND COVER, PERENNIAL AND ANNUAL PLANTS		1. PALM PLANTING		1. All work shall be undertaken by trained planting crews under the supervision of a foreman with a minimum of 5 years experience supervising commercial plant maintenance crews.	
B. Determine location of underground utilities and perform work in a manner that will avoid possible damage. Hand excavate, as required. Maintain grade stakes set by others until parties concerned mutually agree upon removal.		8. The root spread dimensions of the harvested plants shall conform to ANSI Z60.1 for nursery grown bare root plants for each size and type of plant. Just prior to shipping to the job site, dip the root system into a slurry of hydrogel (cross linked polyacrylamide) and water mixed at a rate of 15 oz. of hydrogel in 25 gallons of water. Do not shake off the excess hydrogel. Place the root system in a pleated black plastic bag and tie the bag snugly around the trunk. Bundle and tie the upper branches together.		C. Observe each plant after delivery and prior to installation for damage of other characteristics that may cause rejection of the plant. Notify the Owner's Representative of any condition observed.		A. Palm trees shall be placed at grade making sure not to plant the tree any deeper in the ground than the palm trees originally stood.		2. All chemical and fertilizer applications shall be made by licensed applicators for the type of chemicals to be used. All work and chemical use shall comply with all applicable local, provincial and federal requirements.	
C. Notification of Local Utility Locator Service, Sunshine 811, is required for all planting areas. The Contractor is responsible for knowing the location and avoiding utilities that are not covered by Sunshine 811.		9. Keep the trees in a cool dark space for storage and delivery. If daytime outside temperatures exceeds 70 degrees F, utilize a refrigerated storage area with temperature between 35 and 50 degrees.		D. No more plants shall be distributed about the planting bed area than can be planted and watered on the same day.		B. The trees shall be placed with their vertical axis in a plumb position.		3. Assume that hoses and watering equipment and other maintenance equipment does not block paths or be placed in a manner that may create tripping hazards. Use standard safety warning barriers and other procedures to maintain the site in a safe manner for visitors at all times.	
PART 2 PRODUCTS		10. Where possible, plant time of planting to be before bud break. For trees to be planted after bud break, place the trees before bud break in an irrigated bed of pea gravel.		E. The root system of each plant, regardless of root ball package type, shall be observed by the Contractor, at the time of planting to confirm that the roots meet the requirements for plant root quality in Part 2 Products: Plants General: Plant Quality. The Contractor shall undertake at the time of planting, all modifications to the root system required by the Owner's Representative to meet these quality standards.		C. All backfill shall be native soil except in cases where planting in rock. Water-settle the back fill.		4. All workers shall wear required safety equipment and apparel appropriate for the tasks being undertaken.	
2.1 PLANTS: GENERAL		a. The pea gravel bed shall be 18 inches deep over a sheet of plastic.		3. The resulting root ball may need additional staking and water after planting. The Owner's Representative may reject the plant if the root modification process makes the tree unstable or if the tree is not healthy at the end of the warranty period. Such plants shall still be covered under the warranty.		D. Do not cover root ball with mulch or topsoil.		The Contractor shall not store maintenance equipment at the site at times when they are not in use unless authorized in writing by the Owner's Representative.	
A. Standards and measurement: Provide plants of quantity, size, genus, species, and variety or cultivars as shown and scheduled in contract documents.		b. Space trees to allow the unbundled branches to grow without shading each other.		4. The Contractor remains responsible to confirm that the grower has made all required root modifications noted during any nursery observations.		E. Provide a watering berm at each palm. Berms shall extend a minimum of 18 inches out from the trunk all around and shall be a minimum of (6) inches high.		6. Maintenance vehicles shall not park on the site including walks and lawn areas at any time without the Owner's Representative's written permission.	
1. All plants including the root ball dimensions or container size to trunk caliper ratio shall conform to ANSI Z60.1 "American Standard for Nursery Stock" latest edition, unless modified by provisions in this specification. When there is a conflict between this specification and ANSI Z60.1, this specification section shall be considered correct.		c. Once stored in pea gravel, allow the trees sufficient time for the new root system to flush and spring growth of leaves to fully develop before planting.		F. Container and Boxed Root Ball Shaving: The outer surfaces of ALL plants in containers and boxes, including the top, sides and bottom of the root ball shall be shaved to remove all circling, descending, and matted roots. Shaving shall be performed using saws, knives, sharp shovels or other suitable equipment that is capable of making clean cuts on the roots. Shaving shall remove a minimum of one inch of root material up to 2 inches as required to remove all root segments that are not growing reasonably radial to the trunk.		F. Remove twine which ties fronds together after placing palm in planting hole and securing it in the upright position.		7. Maintain a detailed log of all maintenance activities including types of tasks, date of task, types and quantities of materials and products used, watering times and amounts, and number of each crew. Periodically review the logs with the Owner's Representative, and submit a copy of the logs at the end of each year of the maintenance agreement.	
2. Plants larger than specified may be used if acceptable to the Owner's Representative. Use of such plants shall not increase the contract price. If larger plants are accepted the root ball size shall be in accordance with ANSI Z-60.1. Larger plants may not be acceptable if the resulting root ball cannot be fit into the required planting space.		d. Pea gravel stored trees may be kept for up to one growing season.		G. Exposed Stem Tissue after Modification: The required root ball modifications may result in stem tissue that has not formed trunk bark being exposed above the soil line. If such condition occurs, wrap the exposed portion of the stem in a protective wrapping with a white filter fabric. Secure the fabric with biodegradable masking tape. Do NOT USE string, twine, green nursery ties or any other material that may girdle the trunk if not removed.		G. Palm trees shall be placed at grade making sure not to plant the tree any deeper in the ground than the palm trees originally stood.		8. Meet with the Owner's Representative a minimum of three times a year to review the progress and discuss any changes that are needed in the maintenance program. At the end of the warranty period attend a hand over meeting to formally transfer the responsibilities of maintenance to the Owner's Representative. Provide all information on past maintenance activities and provide a list of critical tasks that will be needed over the next 12 months. Provide all maintenance logs and soil test data. Make the Contractor's supervisor available for a minimum of one year after the end of the warranty period to answer questions about past maintenance.	
3. If a range of size is given, no plant shall be less than the minimum size and not less than 50 percent of the minimum size as large as the maximum size specified. The measurements specified are the minimum and maximum size acceptable and are the measurements after pruning, where pruning is required.		e. Pea gravel stored trees shall be dipped, packaged and shipped similar to the requirements for freshly dug bare root trees above.		H. Excavation of the Planting Space: Using hand tools or tracked mini-excavator, excavate the planting hole into the Planting Soil to the depth of the root ball measured after any root ball modification to correct root problems, and wide enough for working room around the root ball or to the size indicated on the drawing or as noted below.		H. Apply mulch to the bed being sure not to cover the tops of the plants with or the tops of the root ball with mulch.		C. Provide the following maintenance tasks:	
B. Proper Identification: All trees shall be true to name as ordered or shown on planting plans.		2.3 ANNUAL FLOWERING AND SEASONAL COLOR PLANTS		I. For trees and shrubs planted in soil areas that are NOT tilled or otherwise modified to a depth of at least 12 inches over a distance of more than 10 feet radius from each tree, or 5 feet radius from each shrub, the soil around the root ball shall be loosened as defined below or as indicated on the drawings.		I. Water each planting area as soon as the planting is completed. Apply additional water to keep the soil moisture at the required levels. Do not over water.		1. Watering: Provide all water required to keep soil within and around the root balls at optimum moisture content for plant growth.	
C. Compliance: 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.		E. Container or flat-grown plants should be sized as noted in the planting plan. Plants shall be well-rooted and healthy.		J. For trees to be planted in prepared Planting Soil that is deeper than the root ball depth, compact the soil under the planting soil using a mechanical tamper to assure a firm bedding for the root ball. If there is more than 12 inches of planting soil under the root ball excavate and tamp the planting soil in lifts not to exceed 12 inches.		J. Palm trees shall be placed at grade making sure not to plant the tree any deeper in the ground than the palm trees originally stood.		a. Maintain all watering systems and equipment and keep them operational.	
D. Plant Quality:		G. Defolting, tying, and hedging:		K. The measuring point for root ball depth shall be the average height of the outer edge of the root ball after any required root ball modification.		K. Palm trees shall be placed at grade making sure not to plant the tree any deeper in the ground than the palm trees originally stood.		b. Monitor soil moisture to provide sufficient water. Check soil moisture and root ball moisture with a soil moisture meter on a regular basis and record moisture readings. Do not over water.	
1. General: Provide healthy stock, grown in a nursery and reasonably free of die-back, disease, insects, eggs, borers, 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		5. In preparing palm trees for relocation, all dead fronds shall be removed.		L. Brace root ball by tamping Planting Soil around the lower portion of the root ball. Place additional Planting Soil around base and sides of ball in six-inch (6") lifts. Lightly tamp each lift using foot pressure or hand tools to settle backfill, support the tree and eliminate voids. Do NOT over compact the backfill or use mechanical or pneumatic tamping equipment. Over compaction shall be defined as greater than 85% of maximum dry density, standard proctor or greater than 250 psi as measured by a cone penetrometer when the volumetric soil moisture is lower than field capacity.		L. Do not straighten plants by pulling the trunk with guys.		c. Soil nutrient levels: Take a minimum of 4 soil samples from around the site in the spring and fall and have them tested by an accredited agricultural soil testing lab for chemical composition of plant nutrients including nitrogen, phosphorus, and % organic matter. Test results shall include laboratory recommendations for nutrient applications. Apply fertilizers at rates recommended by the soil test.	
2. Plant quality above the soil line:		2.4 PALMS		M. Where indicated on the drawings, build a 4 inch high, level berm of Planting Soil around the outside of the root ball to retain water. Tamp the berm to reduce leaking and erosion of the saucer.		M. Do not straighten plants by pulling the trunk with guys.		d. Make any other soil test and/or plant tissue test that may be indicated by plant conditions that may not be related to soil nutrient levels such as soil contaminated by other chemicals or lack of chemical uptake by the plant.	
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 the Florida Grades and Standards tree grade Florida Fancy or Florida #1 and the following:		F. Except as modified below or where the requirements are not appropriate to the specification of palms, palms shall meet all the requirements of the plant quality section above.		N. Thoroughly water the Planting Soil and root ball immediately after planting.		N. Do not straighten plants by pulling the trunk with guys.		e. Plant pruning: Remove cross over branching, shorten or remove developing co dominant leaders, dead wood and winter-damaged branches. Unless directed by the Owner's Representative, do not shear plants or make heading cuts.	
1.) Crown: 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.		G. Defolting, tying, and hedging:		O. Remove all nursery plant identification tags and ribbons as per Owner's Representative instructions. The Owner's Representative's seals are to remain on plants until the end of the warranty period.		O. All pruning shall be performed by a person experienced in structural tree pruning.		f. Trash removal: Remove all trash and debris from all planting beds and maintain the beds in a neat and tidy appearance.	
a.) 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.		5. In preparing palm trees for relocation, all dead fronds shall be removed.		P. Remove corrugated cardboard trunk protection after planting.		P. Remove corrugated cardboard trunk protection after planting.		g. Plant pest control: Maintain disease, insects and other pests at manageable levels. Manageable levels shall be defined as damage to plants that may be noticeable to a professional but not to the average person. Use least invasive methods to control plant disease and insect outbreaks.	
2.) 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.		6. All remaining fronds above horizontal shall be lifted up and tied together around the crown in an upright position. 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 lifted immediately after planting.		Q. Follow additional requirements for the permitted root ball packages.		Q. Follow additional requirements for the permitted root ball packages.		h. Restore plants: Reset any plants that have settled or are leaning as soon as the condition is noticed.	
3.) 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, broken, distorted, or otherwise injured branches.		2.5 PLANTING SOIL		R. Hand water root balls of all plants to assure that the root balls have moisture above wilt point and below field capacity. Test the moisture content in each root ball and the soil outside the root ball to determine the water content.					