



CITY OF NEW ORLEANS
DEPARTMENT OF PARKS AND PARKWAYS

MITCHELL J. LANDRIEU
MAYOR

ANN E. MACDONALD
DIRECTOR

SECTION 02481
INSTALLATION OF PLANT MATERIALS
Revised 8/16/2012

PART 1 – GENERAL

1.01 SCOPE OF THE WORK

- A. The Contractor shall visit the site prior to bidding to determine existing conditions.
- B. All work will be inspected by the Department of Parks and Parkways. Notify the Department of Parks and Parkways Landscape Architect at 658-3204 at least three (3) working days before the work commences.
- C. The following list of items that shall be required under this section to complete this project in the proper horticultural manner.
 1. Installation of Plant Materials
 2. Pruning
 3. Staking
 4. Mulching
 5. Watering
 6. Removal of Trees

1.02 QUALITY ASSURANCE

- A. Contractor
 1. For projects in which the Prime Contractor will perform landscape, irrigation or arboreal work, the Contractor shall have a current and valid Landscape Horticulturalist License, Arborist License and/or Irrigation Contractor License issued by the Louisiana State Horticultural Commission as is applicable to the scope of work of the project.
 2. The Contractor shall provide proof of qualifications.

B. Subcontractor

1. The Subcontractor to the Prime Bidder with responsibility for landscaping, irrigation or arboriculture shall provide a list of similar projects in terms of scope of work and budget completed over the past five (5) years. The Subcontractor shall have appropriate experience related to the work specified in the drawings and specifications.
2. The Subcontractor shall complete and submit AIA Document A305, "Contractor's Qualification Statement". Completion of Section 5, "Financing", is not required unless requested by the City.
3. The Subcontractor shall have a current and valid Landscape Horticulturalist License, Arborist License and/or Irrigation Contractor License issued by the Louisiana State Horticultural Commission as is applicable to the scope of work of the project.
4. The Subcontractor shall provide proof of qualifications.

C. Personnel:

1. The Contractor shall provide at least one person who shall be present at all times during execution of this portion of the project. This person shall be a Landscape Horticulturalist, Arborist or Irrigation Contractor licensed by the Louisiana Horticultural Commission as is relevant to the scope of work, and shall be thoroughly trained and experienced. This person shall also have experience directing all work performed under this section.

D. Standards:

1. *American National Standards for Tree Care Operations, ANSI A300.* American National Standards Institute, 11 West 42nd Street, New York, N.Y. 10036.
2. *Hortus Third*, The Staff of the L.H. Bailey Hortorium. 1976. MacMillan Publishing Co., New York.
3. *American Standard for Nursery Stock, ANSI Z60.1.* American Nursery and Landscape Association, 1250 Eye Street. NW, Suite 500, Washington, D.C. 20005.

PART 2 – PRODUCTS

2.01 GENERAL:

- A. The following list of materials shall be required under this section to complete all work described in these specifications and/or indicated on the project drawing. This includes, but is not limited to the following items and all related items necessary to complete this project:

1. Planting Soil Mixture
 2. Root Hormone Stimulant
 3. Pre-Emergent Herbicide
 4. Slow Release Fertilizer
 5. Mulch
 6. Slow Release Watering Bags
 7. Stakes
 8. Tree Trunk Protectors
 9. Edging
- C. Approvals for substitution must be requested no later than three working days prior to bid opening.
- D. Planting Soil Mixture: Garden soil is to be an approved mix containing no less than fifteen (15) percent clay with a PH range from five (5) to seven (7). It should be fertile, friable, natural loam, reasonably free of clay lumps, brush, weeds, and other litter, free of root stumps and stones larger than two (2) inches and any other extraneous or toxic matter harmful to plant growth. It shall be a mixture of the following materials in quantities specified: one part humus, one part coarse building sand, one part sand, and one part shredded bark mulch.
- E. Compost: Shall be double grind #2 screened composted hardwood garden mulch.
- F. Batture sand is prohibited due to associated weed infestation issues.
- G. Pre-Emergent Herbicide: Shall be Pendimethalin, Oryzalin or approved equal applied as per the manufacturer's instructions at the time of planting.
- H. Slow Release Watering Bags: Shall be twenty (20) gallon slow release by Treegator or equivalent manufacturer. The tree watering bag must meet or exceed the following specifications:
1. Made of polyethylene reinforced with nylon webbing and treated with U.V. inhibitors.
 2. All sides are watertight with ¼" heat seals.
 3. Bag is secured to the tree with heavy duty nylon zippers.
 4. Drip holes are cored through both ply of material to allow for adjustable drip times.

5. Treegator is manufactured by:
Spectrum Products, Inc.
1-866-873-3428
www.treegator.com

I. Tree Staking:

1. Stakes: Green T bar fence posts, 6' minimum length.
2. Ties shall be ArborTie, or approved equivalent, tree staking and guying material in color green. Approvals for substitution must be requested no later than three working days prior to bid opening.
3. Material for ties shall be: flat woven, polypropalene material, $\frac{3}{4}$ " wide and 900 lb. break strength.
4. Arbor Tie is manufactured by:
Deep Root Partners, L.P.
81 Langton Street
San Francisco, CA 94103
1 (800) 458-7668
www.deeproot.com

J. Root Hormone Stimulant: Mycor Tree Saver, or approved equal.

K. Peat Humus: Is decomposed peat with no identifiable fibers and with a PH range suitable for intended use.

L. Mulch: Organic mulch free from deleterious materials, of mulching grade, uniform in size and suitable for top dressing of trees, shrubs, or other plants, and consisting of the following:

1. Aged Ground Pine Bark for mulching
2. Pine Needles for top dressing

M. Tree Trunk Protectors: Made of expandable polyethylene to form a barrier around the tree to protect against bark damage from gardening equipment, tools and other small pests. Tree shield allows water and light to reach the plant while offering plenty of air circulation to prevent moisture and mildew build-up. This tube color is gray.

N. Edging: Steel Landscape Edging shall be DuraEdge manufactured by the J.D. Russell Company or approved equivalent.

1. Steel Landscape Edging Size: Comply with ASTM A 569, hot-rolled, standard flexible carbon steel landscape edging, fabricated in sections with stake pockets stamped, punched, or welded to face of sections approximately thirty inches (30") apart to receive stakes. Steel landscape edging shall be double staked at overlap joints, and designed to receive tapered steel stakes

2. 3/16" thick, 4" wide, by 16' length, with 6 stakes (actual coverage 15'-4")
 3. Steel Landscape Edging Finish: Unpainted
 4. Hot-Dipped Galvanized finish to be applied after steel landscape edging is cut to length and stake pockets are stamped, punched or welded. Galvanization shall comply with ASTM A123/A123M-97A. Zinc coverage shall be to a standard thickness of 3/16" x 4" wide, by 16' length – 3.0 mil (1.7 oz/s.f.)
 5. Steel Landscape Edging Stakes: Steel, tapered, 16" minimum length, and finished to match specified steel landscape edging in place, and shall be made by the manufacturer of the steel landscape edging for which they will be used.
 6. Accessories: Standard start/end sections, 90° corners, splicers as required, sectional and one-piece circles.
- O. Commercial Fertilizer: All fertilizer shall be a commercial balanced formula with the least 25% organic materials, and shall conform to applicable State fertilizer laws. It shall be a slow release formula, "Osmocote," or equal, and shall be used as specified by manufacturer. Fertilizer, unless otherwise specified, shall be delivered mixed as specified, in standard size, unopened containers, showing weight, analysis, and name of manufacturer. Fertilizer shall be complete and of neutral character, with some elements derived from organic sources and containing following percentages of available plant nutrients:

For trees and shrubs, Osmocote 18-6-12 to nine (9) months formulation (Sierra Chemical Corporation), or an approved equal.

2.02 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 be 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*.
 3. Unless approved by the Department of Parks and Parkways, plants shall have been grown at latitude not more than 200 miles north or south of the latitude of the project.
 4. Trees shall be grown from a recognized nursery using sound horticultural practices.

- B. Unless specifically noted, all plants shall be of specimen quality, 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 a natural excurrent growth form will have only one main branch leader. Trees with a damaged or crooked leader, bark abrasions, sunscald, disfiguring knots, insect damage, or cuts of limbs over three-quarter (3/4) inch in diameter that are not completely closed will be rejected.
 2. Trees shall have good branch structure in accordance with the natural form for the species. Branching will be plentiful and uniformly spaced along the trunk and have firm, strong attachments with the trunk.
 3. Sprouts shall be cleanly removed.
 4. Pruning scars will be clean cut leaving little or no protrusion from the trunk or branch.
 5. V-shaped branch unions with included bark will not be accepted.
 6. When present, foliage will be healthy and of normal size, shape, texture and color for the species.
- C. Plants shall conform to the measurements specified, except that plants larger than those specified may be used. Use of larger plants shall not increase the contract price. If larger plants are used, the root ball shall be increased in proportion to the size of the plant.
1. Caliper measurements shall be taken on the trunk six (6) inches above the natural ground line for trees up to and including four (4) inch 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.
 2. If a range of sizes is given, no plant shall be less than the minimum size, and no less than fifty percent of the plants shall be as large as the maximum size specified.
 3. Measurements specified are minimum sizes acceptable after pruning, where pruning is required.
 4. Plants that meet measurements but do not possess a standard relationship between height and spread, according to the *American Standards for Nursery Stock*, shall be rejected.
- D. Substitutions of plant materials will not be permitted unless authorized in writing by the Department of Parks and Parkways. 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. Poor-quality trees with cracked, wet, or loose root balls, poorly developed trunk-to-crown ratios, or undersized root balls shall be rejected.
- F. Trees that settle out of plumb due to inadequate soil compaction either under or adjacent to the root ball shall be excavated and reset. In no case shall trees that have settled out of plumb be pulled upright using guy wires.

G. Selection and Tagging

1. Plants shall be subject to inspection for conformity to specification requirements and approval by the Department of Parks and Parkways 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 Department of Parks and Parkways 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 Department of Parks and Parkways may refuse inspection at this time if sufficient quantities of plants are not available for inspection.
3. All plants shall be selected and tagged by the Department of Parks and Parkways at their place of growth. For distant material, photographs may be submitted for pre-inspection review.
4. All field grown deciduous trees shall be marked to indicate the trees north orientation in the nursery. Place a one (1) inch diameter spot of white paint onto the north side of the tree trunk within the bottom twelve (12) inches of the trunk.

F. Container Plants

1. Plants grown in containers shall be of appropriate size for the container as specified in the most recent edition of the *American Standard for Nursery Stock* and be free of circling roots on the exterior and interior of the root ball.
2. No trees will have large roots growing out of the container.
3. Container plants shall have been grown in the container long enough to have established roots throughout the growing medium.
4. The rooting medium shall be weed-free.

G. 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 *American Standard for Nursery Stock*. Balls shall be firmly wrapped with

nonsynthetic burlap and secured with nails and heavy, nonsynthetic twine. 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.

2. The rooting medium shall be weed-free.

H. Transportation and Storage of Plant Material

1. 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.
2. Branches shall be tied with rope or twine only, and in such a manner that no damage will occur to the bark or branches.
3. During transportation of plant material, the contractor shall exercise care to prevent injury and drying out of the plants. Should the roots be dried out, large branches broken, balls of earth broken or loosened, or areas of bark torn, the Department of Parks and Parkways may reject the injured plant(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.

I. Medjool Palms

1. Refer to Section 02483, Medjool Palms.

PART 3 – EXECUTION

3.01 INSTALLATION OF TREES, SHRUBS & GROUNDCOVERS

A. General

1. All locations for plants shall be flagged by the landscape contractor prior to excavation. Flag locations shall be approved by the Department of Parks and Parkways Landscape Architect prior to excavation.
2. The Contractor shall be responsible for contacting Louisiana One Call to verify the location of underground utilities prior to location flagging or excavation. Additionally, the Contractor shall contact the Department of Public Works for traffic signal line and communication line locations in addition to Royal Engineers for locations of street lights.
3. Seasonal Limitations – Planting and seeding shall be done whenever soil and weather conditions permit. This shall be determined by the Department of Parks and Parkways Landscape Architect. Planting season for non-tropical trees is November 1 through March 15.
4. Insofar as is practical, plant materials shall be planted on the day of delivery. In

the event this is not possible, the Contractor shall protect that stock not planted from sun or drying winds and shall keep the plants well watered and stored in the shade. Plants shall not remain unplanted for 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. All plants shall be lifted and handled from the bottom of the ball only. Plants moved with a ball will not be accepted if the ball is cracked or broken before or during planting operations.

5. The Contractor shall be responsible for providing all necessary equipment, materials, and labor to complete the project.
6. Plant list quantities are provided as an aid to bidders only. The Contractor shall verify all quantities on the plan. Improper plant counts made by the Contractor shall be no cause for additional costs to the Owner.

B. Planting Bed Preparation

1. Rake surface clear of stones, debris, rubbish, and trash before pit excavation. Dispose of such material away from the site.
2. A tiller may be used to loosen the soil if the planting is outside of the Critical Root Zone (CRZ) of existing trees. The CRZ extends in a radius of one foot per inch diameter, or to the tree drip line, whichever distance is greater.
3. For planting areas within the CRZ, an air spade may be used to loosen the soil for bed preparation.
4. Planting soil shall be installed as plant bed material for all shrubs and groundcovers in accordance with the details and plans.
5. The contractor shall provide positive drainage for all beds and plant areas.
6. Detrimental soil conditions: The Department of Parks and Parkways Landscape Architect is to be notified, in writing, of detrimental soil conditions encountered, including poor drainage. When detrimental conditions are uncovered, planting shall be discontinued until instructions to resolve the conditions are received from the Department of Parks and Parkways Landscape Architect.
7. 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 Department of Parks and Parkways Landscape Architect.
8. Trees:
 - a. Tree pits are to be excavated to the depth and widths indicated on the 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.

- b. For trees, 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.
 - i. In areas of slowly draining soils, the root ball may be set up to three (3) inches or one eighth (1/8) of the depth of the root ball above the adjacent soil level.
 - ii. Save the existing soil to be used as backfill around the tree.

C. Installation

1. Trees: Trees shall be set on flat-tamped or unexcavated pads and shall stand at approximately the same elevation as in the field or nursery. As planting soil is backfilled, it shall be placed in layers and tamped in place carefully so that no damage will occur to ball in any manner, or disturb the position of the ball.
 - a. 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.
 - b. If the root flare is less than two (2) inches below the soil level of the root ball, plant at the tree the appropriate level above the grade to set the flare even with the grade. If the flare is more than two (2) inches below the soil level of the root ball the tree shall be rejected.
 - c. Remove burlap or cloth wrapping and any wire baskets as completely as possible from the root ball. Do not turn under and bury portions of burlap at top of ball.
 - d. Set balled and burlapped trees in the hole with the north marker facing north unless otherwise approved by the Department of Parks and Parkways.
 - e. Place native soil into the area around the tree, tamping lightly to reduce settlement.
 - f. 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.
 - g. Outfit each tree with a twenty (20) gallon slow release watering bag.
2. Cut and remove containers for containerized plants.
3. 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.
4. Cut ropes or strings from the top of trees after plant has been set.
 - a. Completely remove any waterproof or water-repellant strings or wrappings from the root ball and trunk before backfilling.

5. The use of high nitrogen fertilizer in the planting hole is prohibited.
6. Contractor is responsible for providing local agricultural extension with existing soil report for fertilization recommendations.
7. Thoroughly water all plants immediately after planting. Apply water by hose directly to the root ball and the adjacent soil.
8. Remove all tags, labels, strings, etc. from all plants.
9. Space plants as indicated on details and plans.
10. Form watering saucers four (4) inches high immediately outside the area of the root ball of each tree and shrub as indicated on the drawings.
11. Apply root hormone stimulant as per the manufacturer's instructions.

E. STAKING AND GUYING

1. Staking of trees shall be done immediately after planting. Trees shall stand plumb after staking.
2. Staking methods shall be approved by the Department of Parks and Parkways Landscape Architect. Stakes shall be of sufficient strength to maintain the tree in an upright position that overcomes the particular circumstances that initiated the need for staking.
3. Where ArborTie, or approved equivalent, is used, it shall be installed as per the manufacturer's instructions.
4. Stakes shall be removed by the contractor at the end of the first growing season. Any tree that is not stable at the end of this time shall be rejected.
5. Three stakes shall be used for each tree.
6. Stakes shall not penetrate the ball of earth moved with the tree. Stakes shall penetrate existing soil below tree pit.
7. It shall be the landscape contractor's responsibility to prevent plants from falling or being blown over and to straighten or replant all plants which are damaged due to a lack of staking. If unstaked, plants blown over by high winds shall not be a cause of additional expense to the owner, but shall be the financial responsibility of the landscape contractor.

F. PRUNING

1. Plants shall not be heavily pruned at the time of planting. 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.

2. Pruning is required at planting time to correct defects in the tree structure, including removal of injured branches, double leaders, waterspouts, suckers, and interfering branches.
3. Each tree shall be pruned to preserve natural character of plant.
4. All injured tree and shrub roots shall be pruned to make clean cut ends before planting.
5. Main leaders of trees shall not be cut back.
6. If required, cut branches and roots with clean, sharp pruning instruments; do not break or chop. All cuts shall be clean and smooth, with the bark intact with no rough edges or tears.
7. No heavily pruned material will be accepted at any time. If the natural form is destroyed, the plant will be rejected.
8. Trees that have had roots pruned must be treated with a root stimulating hormone.
9. The trees or roots shall be pruned in accordance with generally accepted arboricultural practices.
10. The Contractor shall notify the Department of Parks and Parkways Urban Forester's office whenever trees or roots need to be pruned prior to beginning construction. All pruning is to be done under the supervision of the Department of Parks and Parkways Urban Forester.
11. Excavation of roots that need to be pruned must be done by hand or air spade within the drip line of the tree.

G. EDGING

1. **All edging locations shall be laid out in the field with spray paint by the Contractor and approved by the Department of Parks and Parkways Chief Landscape Architect prior to installation of any edging.** Field mark locations for steel landscape edging as indicated on Contract Drawings.
 - a. Horizontal Alignment: Install straight sections true to the alignments as indicated, free of waves or bends, using strings as guides.
2. Anchor with steel stakes spaced approximately 30 inches on-center, driven below top elevation of edging, or at every stake pocket location in landscape edging sections designed and manufactured to receive stakes. Stakes shall be located in solid undisturbed soil.
 - a. Vertical Alignment: Install parallel with the finished grade.

b. Damaged Edging: Replace edging sections damaged by construction operations.

3. **In the event that a tree root of one inch diameter or greater conflicts with the installation of the edging, contact the Department of Parks and Parkways Chief Landscape Architect for further instruction.**

H. FERTILIZER

1. Special Protection:

If stored at the site, fertilizer shall be kept in a weatherproof place and in such a manner that it will be dry and its effectiveness unimpaired.

G. MULCH

1. Aged ground pine bark mulch spread in designated areas in a three (3) inch minimum layer.

2. Top Dressing: Pine needle mulch spread in designated areas in a one (1) inch minimum thick layer.

3. Mulch must not be placed within three (3) inches of the trunks of trees.

4. The Contractor shall be responsible for the replenishment of mulch during the one-year guarantee period.

3.02 CLEAN-UP

A. The Contractor shall, periodically or as directed during the progress of the work, remove and properly dispose of debris, rubbish, trash, clippings, pruning, and defective or unacceptable materials. The Contractor shall continuously keep the project clear of hazardous obstructions.

B. Trash burning on the site will not be permitted.

C. Prior to substantial completion, all tools, surplus materials, equipment, trash, and debris shall be removed and the site left in a neat clean condition.

D. Paved areas shall be kept clean of soil, fertilizer, mulch, trash and debris, and shall be maintained in a broom clean condition at all times. Mud and soil tracked onto paved areas by equipment and workmen shall be removed promptly and completely.

E. Protection of Existing Trees, Lawn Areas and Restoration of site: Contractor shall take special precautions to ensure that lawn areas and tree roots are not damaged during construction. The Contractor shall fill and resod any areas damaged during his operation. Refer to Section 02480, Landscape Protection during Construction.

F. Materials and equipment shall be stored where directed and shall be limited to the quantity required for the work. Rejected materials shall be immediately removed from

the property.

PART 4 - PLANT GUARANTEE AND MAINTENANCE PERIOD

4.01 MAINTENANCE & GUARANTEE PERIOD:

- A. Final Acceptance shall be the final review and completion of all punch list items. The Guarantee Period shall be one full year after the date of Final Acceptance.
- B. Inspection of the work to determine its completion (Final Acceptance) will be made by the Department of Parks and Parkways Landscape Architect upon written notice requesting such inspection submitted by the Contractor at least ten (10) days prior to anticipated date. After the inspection, the Contractor will be notified of the date that the work has been approved or of any deficiencies of the requirements for work to remedy deficiencies.
- C. All planting work shall be maintained by the Contractor until Final Acceptance by the Owner. After Final Acceptance the one (1) year guarantee and watering period begins. The Contractor is to maintain the plant materials for the year, or one year for replacements after replacements are installed, whichever is longer.
- D. It is the responsibility of the Contractor to maintain all planting work through Final Acceptance and during the one year Guarantee Period. The Contractor is to maintain the plant materials for the year, or one year for replacements after replacements are installed, whichever is longer.
- E. Maintenance shall include all necessary watering, cultivating, fertilizing, weeding, pruning, disease and insect control, protective spraying, replacement of any plants which settle or planted too low, and other procedures consistent with good horticultural practices which are necessary to insure normal, vigorous and healthy growth of all work under this contract.
- F. The Contractor shall fully and satisfactorily maintain and protect all work performed under this contract until completion and acceptance of the work or portions thereof.
- G. One Year Plant Watering: Contractor shall irrigate as required to maintain vigorous and healthy plant growth. Overwatering or flooding shall not be allowed. The contractor shall furnish any water to ensure adequate irrigation. All plants shall be spot watered using handheld hoses during the first year after planting, as required to ensure adequate water within the root ball. **Watering shall occur a minimum of two (2) times per week for one full year from the date of planting during the months of March through October and one (1) time per week during the remainder of the year.**
- H. Stake Removal: **At the end of the one-year Guarantee Period, the Contractor shall be responsible for removing stakes from all trees planted under this contract.**
- I. Mulch: **Plants without the specified depth of mulch at the end of the one year guarantee period will be rejected.**

- J. All portions of the property including work resulting from other contracts which have been disturbed by causes due to, or incidental to, work performed under this contract shall be repaired and restored to the satisfaction of the Landscape Architect. The contractor shall repair or replace at his own expense any work related damage to the satisfaction of the Landscape Architect.
- K. To insure proper inspection of plant materials by the Contractor and proper maintenance relative to the appearance and survival of the plants during the period of construction, the Contractor shall inspect his planting according to the following schedule:

at least once a week for the first month,
at least once every two weeks for the next two months,
and at least once a month for the remainder of the construction period,
and the Guarantee Period after Final Acceptance.

Within twenty-four hours after each such inspection, the Contractor shall submit to the Parkway and Park Commission Landscape Architect a written report describing his findings as to condition of the plantings and compliance with the recommended care and maintenance program.

- J. Cost in connection with periodic inspections, as specified above, shall be included in the Contractor's Base Bid proposal and the Contract Lump Sum. Lump Sum amount stipulated shall be withheld from all monies due to Contractor by the Owner only after Final Acceptance of the entire project.

4.02 GUARANTEE PERIOD:

- A. The Guarantee Period shall be one full year after the date of Final Acceptance. The Guarantee Period ends officially with a final inspection by the Contractor and/or his subcontractor Landscape Contractor, the Owner, (the City) represented by the Department of Parks and Parkways Landscape Architect and the User Agency, and the City's Consultant upon the Owner's request. All replacements and repairs shall be completed no later than that day before the final inspection.

4.03 REPAIR AND REPLACEMENT OF SHRUBS AND GROUNDCOVERS

- A. The Contractor shall replace, in accordance with the drawings and specifications and throughout the guarantee period, any plants that die, or in the opinion of the Department of Parks and Parkways Landscape Architect are in an unhealthy or unsightly condition due to dead branches, excessive pruning, inadequate or improper maintenance, or any other causes due to the Contractor's negligence.
- B. The Contractor shall not be held responsible to replace or honor any warranty for the loss of any trees, plants, groundcovers or sod caused by fires, floods, freezing temperatures, lightning, winds above 50 miles per hour, or any other natural disaster, nor shall the Contractor be held responsible for acts of vandalism or acts of negligence on the part of the Owner occurring after the beginning of the one (1) year Guarantee Period.
- C. In the event that treatment or replacement is made necessary as a result of damage caused by circumstances which are beyond the Contractor's control and not due wholly

or partially as a result of any act or omission of the Contractor, such treatment or replacement may be authorized by the Owner by change order in accordance with the general conditions.

- D. The Contractor shall engage a qualified Licensed Arborist to perform tree repair work for trees damaged by construction operations, in a manner acceptable to the Department of Parks and Parkways Urban Forester. The Contractor shall make repairs promptly after damage to trees. The Arborist shall remove and replace dead trees and damaged trees which are determined by the Arborist to be incapable of restoration to normal growth pattern.
- E. Replacements shall be made during the first planting season following the death of plants. The cost of such replacements shall be borne by the Contractor. Replaced plant materials shall be guaranteed for one year. The Contractor shall replace plants as many times as is necessary in order to meet this requirement.
- F. If requested by the Department of Parks and Parkways Landscape Architect, the Contractor shall remove any dead plant materials in advance of the planting season.

4.04 END OF GUARANTEE PERIOD

- A. The Guarantee Period ends officially with a final inspection by the Contractor and/or his subcontractor Landscape Contractor, the Owner, (the City) represented by the Department of Parks and Parkways Landscape Architect and the User Agency, and the City's Consultant upon the Owner's request.
- B. No plants will be accepted unless they are alive and healthy and all related work conforms to the drawings and specifications.
- C. Should any portion of the work be unacceptable, Contractor shall make all work acceptable and request a re-inspection by the Department of Parks and Parkways Landscape Architect.
- D. Contractor will be notified by letter of acceptance within five (5) days after re-inspection should the latter be necessary.

END OF SECTION