



**Georgia's Growing Green Program (ARRA): Northeast Georgia Tree Planting  
for Ecosystem Restoration and Green Jobs**

**Tree Planting and Maintenance Guidelines**

**1. Scope of Work**

These specifications, including drawings and plant materials lists, apply to those items necessary for and incidental to the execution and completion of planting as indicated herein.

- a) All labor, supervision, equipment, materials, and supplies necessary for the execution of the work shall be provided for by the Contractor at no additional cost to the Council.
- b) Reasonable care shall be exercised during excavation, planting, filling, grading, and cleanup, to protect from damage all existing trees, shrubs, and other specified vegetation, and other site features, improvements, structures, and utilities.

**2. Applicable Specifications and Standards**

American Standard for Nursery Stock, ANSI Z60.1. current edition. American Nursery and Landscape Association, 1000 Vermont Ave. NW, Suite 300, Washington, D.C.20005

American National Standard for Tree Care Operations, ANSI A300 -most current edition. International Society of Arboriculture, PO Box 3129, Champaign IL 61826-3129.

**3. Planting Season**

All planting shall be done within the following dates:  
November 1, 2010 through February 15, 2011

\*If special conditions exist that warrant a variance in the above planting dates, a written request shall be submitted by the Contractor to Josh Crozier, RC&D Program Assistant, at 706-894-1591, [joshua.crozier@ga.usda.gov](mailto:joshua.crozier@ga.usda.gov) and Chris Hughes, RC&D Certified Arborist, at 706-202-6516, [chughes@brookwoodtree.com](mailto:chughes@brookwoodtree.com) stating the special conditions and the proposed variance. Permission for the variance will be granted in writing at the discretion of the Council.

**4. Plant Materials Requirements**

All plant materials will conform to the standards for plant material size and quality found in *American Standard for Nursery Stock, ANSI Z60.1*. American Nursery and Landscape Association, 1250 Eye Street. NW, Suite 500, Washington, D.C. 20005.

- 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.
- b) Unless approved by the Council, plants shall have been grown at 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



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- compatible with the latitude and cold hardiness zone of the planting location.
- c) Substitutions of plant materials will not be permitted unless approved in writing by the Council prior to the bid. 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.
  - d) Trees shall be balled and burlapped and 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 non-synthetic, degradable burlap and secured with nails and heavy twine. The root collar shall be apparent at surface of ball. Trees with loose, broken, processed, or manufactured root balls will not be accepted.
  - e) Trees with multiple or codominant leaders will be rejected. Trees with a damaged or crooked leader, bark abrasions, sunscald, disfiguring knots, insect damage, or fresh pruning scars over 1/4 in. diameter that are not completely closed will be rejected.
  - f) Tree trunk should not deviate more than 2 in. from center line and should not contain more than 1 section that is not straight between trunk flare and point where first branches emerge or tree will be rejected

### **5. Transportation and Storage of Plant Materials**

- a) Branches shall be tied with rope, twine, or soft woven fabric strap < 1" wide only, and in such a manner that no damage will occur to the bark or branches.
- b) During transportation of plant material, the contractor shall exercise care to prevent injury and drying out of the trees. Should the root balls be dropped, dried out, broken or loosened, or large branches broken, or areas of bark torn, the Council may reject the injured tree(s) and order them replaced at no additional cost to the Council. All loads of plants shall be covered at all times with nursery tarpaulin or canvas. Loads that are not protected will be rejected.
- c) Plants must be protected at all times from sun or drying winds. Those that cannot be planted immediately on delivery shall be stood upright and protected to prevent toppling, kept in the shade, 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 root ball in a manner to avoid damage. Never lift with any material attached to the trunk or canopy of the tree. Root balls should be protected against forecasted freezing temperatures.



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### **6. Excavation of Planting Areas**

- a) The Council and/or Arborist will stake or mark with paint all planting areas before digging. The Contractor will notify Digger's Hotline to verify location of underground utilities before excavation begins. The Contractor shall be responsible for assuring that utility marking is complete before excavation begins. The Contractor shall be responsible for all damage resulting from neglect or failure to comply with this requirement.
- b) The Contractor shall excavate planting areas as shown on the drawings (# 16 below). Excavation may be done by shovel, backhoe or stump grinder. **Planting hole may not be dug using a soil auger.** Use caution to not excavate planting hole too deep.

### **7. Planting Directions**

*Trees shall be planted according to the specifications found in "Tree Planting and Establishment Guidelines" of the Georgia Forestry Commission, 2002.*

- a) Trees shall be set on undisturbed soil and so that the trunk flare is 2" above surrounding finished grade after settling. Plants must be set plumb and braced in position until backfill soil has been placed and settled around the base of the root ball. Lift plants only with straps or lifting harnesses of sufficient width not to damage the root balls and are attached to the wire basket or place under the root ball. Do not lift trees by their trunk or use the trunk as a lever in positioning or moving the tree in the planting area.
- b) Remove any plastic or synthetic covering that may be present on the outside of the root ball. Pull roots out of the root mat, and cut circling roots with a sharp knife.
- c) Place native soil into the area around the tree, tamping lightly to reduce settling, and prevent shifting or leaning of the root ball. Water in backfill when soil depth is 1/2 the depth of the root ball to facilitate the removal of air pockets from the backfill. Improper compacting/tamping of the soil around the root ball may result in the tree settling or leaning.
- d) Cut ropes or strings from the top of root balls after plant has been set, tree is plumb and stable and 1/2 of backfill is settled around root ball. Remove burlap or cloth wrapping and any wire baskets from around top 1/3 of root balls. Do not turn under and bury portions of wire basket or burlap at top of ball. Completely remove any waterproof or water-repellant strings or wrappings from the root ball and trunk before backfilling.
- e) Thoroughly water all plants immediately after planting. Apply water by hose directly to the root ball and the adjacent soil in enough volume to thoroughly saturate through entire root zone.
- f) Remove all tags, labels, strings, etc. from all plants.
- g) Remove any excess soil, debris, and planting material from the job site at the end of each workday.
- h) Form watering saucers 100 mm (4 in.) high immediately outside the area of



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- the root ball of each tree as indicated on the drawings.
- i) Stake trees only as necessary on exposed or windy sites to prevent tree leaning. All proposed staking methods and materials must be approved by Council and Arborist representative prior to application.

### **8. Cleanup**

Soil, branches, binding and wrapping material, rejected plants, or other debris resulting from any tree planting shall be promptly cleaned up and removed. The work area shall be kept safe and neat at all times until the planting operation is completed. Under no condition shall the accumulation of soil, branches, or other debris be allowed upon a public property in such a manner as to result in a public hazard.

### **9. Mulching**

- a) All trees will be mulched with mulch previously approved by the Council representative. The mulch on trees shall be no more than 2" deep as shown on the drawing. Mulch must not be placed within 16 cm (6 in.) of the trunk flare of trees. Mulched area should extend 3 ft from the tree to form a 6 ft diameter circle.

### **10. Maintenance of Trees**

- a) Maintenance shall begin immediately after each plant is planted and continue until its acceptance has been confirmed by the Council representative.
- b) Maintenance shall consist of watering, cultivating, weeding, mulching, adjusting and repairing guys and stakes, resetting plants to proper grades or upright position, restoring of the watering 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 Council representative at no additional cost.
- d) Watering: Contractor shall irrigate as required to maintain vigorous and healthy tree growth. Over-watering or flooding shall not be allowed. The contractor shall monitor, adjust, and use existing irrigation facilities, if available, equipment, or water to ensure adequate irrigation. Root balls of all trees shall be spot watered using TreeGator Bags or other methods of slow water application during the entire maintenance period as required to ensure adequate water through the root zone.
- 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.



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### **11. Acceptance**

- a) The Council and/or Arborist representative 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 Council representative, the Council representative shall certify in writing that the work has been accepted.

### **12. Acceptance in Part**

Work may be accepted in parts when the Council representative and contractor deem that practice to be in their mutual interest. Approval must be given in writing by the Council representative 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.

### **13. Guarantee Period and Replacement**

- 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 and one year from the date of acceptance of the final portion of the planting.
- d) The contractor shall replace, without cost, as soon as weather conditions permit, and within a specified planting period, all plants determined by the Council representative 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 Council representative 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 and ensure mulch



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- depth and area remains as specified.
- g) The contractor shall make regular 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 Council representative. Claims by the contractor that the owner's practices resulted in dead or dying plants will not be considered if such claims have not been documented by the contractor during the guarantee period.

### **14. Final Inspection and Final Acceptance**

At the end of the guarantee period and upon written request of the contractor, the Council representative 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 Council representative at that time, the Council representative shall certify, in writing, that the project has received final acceptance.

### **15. Tree Maintenance Plan**

#### **Tree Watering**

- a) Maintain all watering saucers around plants so that enough water can be applied to establish moisture through major root zones.
- b) Hand water weekly March 15 through November 15 pending local rains
- c) Hand water November 15 through March 15 during dormancy during periods of unseasonably dry or warm weather.
- d) Methods of watering shall apply water at a rate slow enough to allow for infiltration into soil, such as TreeGator bags. Water saver granules or similar products are not permitted as a sole source of supplemental water.
- e) For hand watering, use a water wand to break the water force. Do not use watering equipment that exposes roots or dislodges soil and mulch.
- f) Maintain mulch area and depth as specified to reduce evaporation and frequency of watering
- g) If any maintenance materials are stolen or damaged, it's the landowner's responsibility to replace those materials.

#### **Pests, Diseases, and Insects**

- a) Inspect trees weekly for:
  1. Signs of stress, damage, and presence of insects, pests, or disease
  2. Leaf blotching, discoloring, or unusually light green or yellowish color
- b) Control pests, diseases, and insects as needed and at no additional cost to the Council
- c) Treatments should be applied by personnel with appropriate licensing, qualifications, and training and should be done with extreme care to avoid



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all hazards to people, property, and animals in the area or adjacent areas.

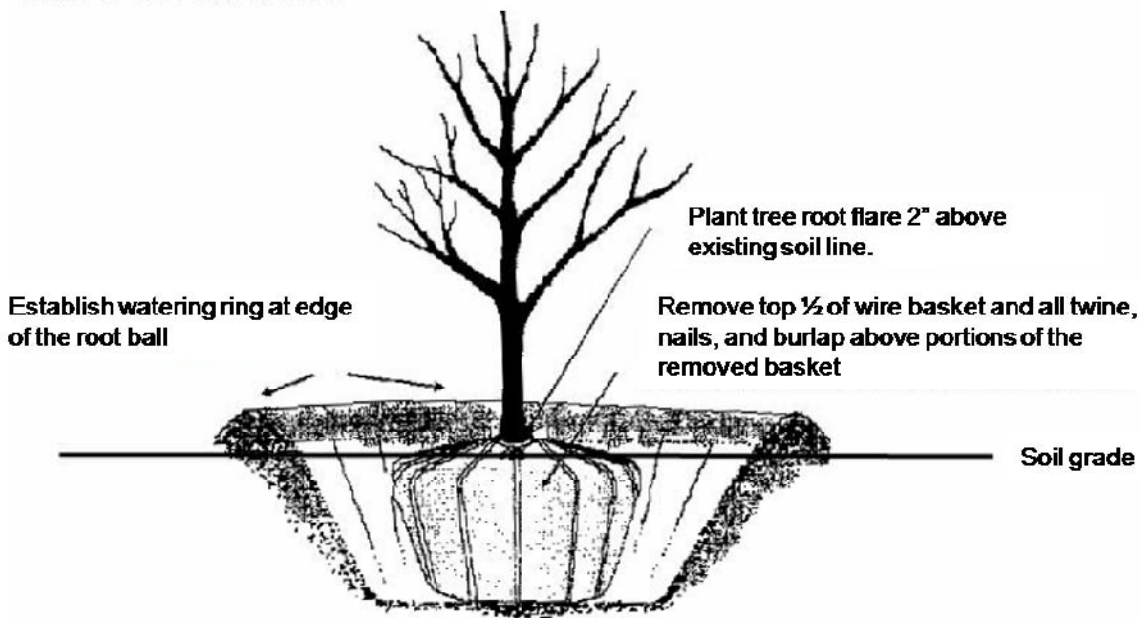
### **Staking (if applicable)**

- a) Inspect all guying, staking, and stability systems (if approved) monthly and readjust as needed to prevent girdling of trunk or any branches.
- b) Completely remove all staking systems and all above and below ground material at the end of the first growing season.

### **16. Tree Selection, Planting, and Establishment Specifications**

- a) All plant material will be **1.75" to 3" caliper as specified on drawings** and conform to the **American Standard for Nursery Stock**.
- b) All trees will be installed according to the following planting detail:
- c) Trees damaged as a result of poor installation practices or mishandling during shipment will not be accepted.
- d) All backfill will consist entirely of native soil. **No soil amendments will be added.**
- e) All trees installed under these specifications will be warranted for **one (1) year from time of completed/certified planting.**
- f) As part of the **one (1) year warranty tree maintenance** will include regular watering. In addition, mulching, removal of damaged branches, and insect control shall occur according to the following schedule:

**Tree planting hole shall be 2-3 times the diameter of the root ball and 2" more shallow**



- a. Mulching with composted wood chips over the entire planting area to a



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depth of 2" with no mulch placed within 6" of trunk. Mulch inspection will take place quarterly for proper coverage and mulch shall be renewed in fall.

- b. Inspection and removal of damaged branches will take place quarterly.
- c. Inspection and treatment for insect infestations will take place weekly.