

East Carolina University

TREE CARE PLAN

1. PURPOSE

The purpose of the East Carolina University (ECU) campus tree care plan is to identify the policies, procedures, and practices that are used in establishing, protecting, maintaining, and removing trees on the ECU campus. The overall goal of the plan is to ensure a safe, attractive, and sustainable campus urban forest. The specific objectives of the plan are:

- To ensure the safety of campus community and property
- Ensure proper selection of species, quality nursery stock, and proper planting procedures
- Promote species diversity and proper age structure in the tree population
- Protect high-value campus trees during construction and renovation projects
- Promote tree health, safety and sustainability by utilizing ISA's best management practices when maintaining campus trees
- Ensure that trees are reasonably replaced when there is mortality due to weather, pest infestations, injury, or construction displacement
- Encourage campus community members to respect and value the campus urban forest

2. RESPONSIBLE DEPARTMENT

ECU Grounds Services Department located within the Facilities Services Department under the direction of the Associate Vice Chancellor for Facilities Services.

3. ECU TREE ADVISORY COMMITTEE

The Campus Tree Advisory committee is comprised of faculty, staff, students and community reps throughout the university and Greenville area. The committee meets at least annually and provides important input in to care and improvement of the campus tree canopy.

4. ECU ARBORICULTURE PRACTICES

Note- All tree maintenance practices shall be accomplished within the ANSI standards and ISA BMP's

Pruning:

The maintenance pruning schedule shall be dictated by tree species, age, function, and placement.

- New Plantings shall be inspected at time of planting and any structural defects corrected in the crown and root ball
- Trees less than 5 years old shall be inspected biennially and pruned as needed
- Trees 5 -20 years old shall be inspected biennially and shall receive structural pruning as needed

- Trees 20 years old and older shall be inspected biennially receive maintenance pruning As needed to clean dead, diseased, dying, and defective branches from the crown
- Trees adjacent to roadways, walkways, signs, and street lights are biennially inspected for safety and clearance issues and maintenance pruned as necessary

Proper Techniques:

To encourage the development of a strong, healthy tree, ISA Best Management Practices shall be followed by the Grounds Services Personnel or by an approved contractor under the direction of the Grounds services personnel.

Mulching

Tree mulching- All trees shall be mulched to cover the critical root zone as needed to approximately 3” in depth. Periodically, CRZ of larger trees and tree groupings may be mulched extensively with natural wood chips in areas deemed appropriate by grounds personnel. All new trees shall be irrigated by automatic systems or gator bags.

Fertilization and Pest Management

- Trees are treated for pest problems as needed.
- There is no regular tree fertilization beyond treatment received as a result of lawn fertilization. Specimen, high-value trees and newer plantings may receive prescription fertilization when severe nutrient deficiencies are diagnosed.

IV. Other Practices

Tree Removals

- Live trees are generally removed only when required to protect the public safety or are detracting from the quality of the landscape.
- Trees may only be removed after consultation with the Campus Arborist and following FSSP 34-0008 Approval of Tree Removal Form

Planting and Tree Diversity

Increasing the diversity of tree species is important. However, species selection must be dictated by site conditions.

- A non-preferred ‘species list’ for campus planting does exist in the campus master plan but Committee members can be consulted regularly to recommend species for specific site conditions Based on the vernacular of the site, some landscapes will be planted in native species while others may include exotics. Known invasive woody plants are consciously avoided in tree planting plans.

Storm Response and Recovery

Storm response and recovery are generally accomplished in-house. In a crisis, the first priority is to remove tree debris that blocks campus thoroughfares, disrupts campus operations, or poses hazards to the campus community. Once these critical needs are addressed, a prioritized recovery plan is implemented during which unsalvageable trees are systematically removed and salvageable trees are pruned to restore their health and structure. As the tree planting budget permits, lost trees are strategically replaced to restore the structure and function of the campus urban forest in a reasonable time frame. During storm response and recovery, trees requiring specialized equipment not available in-house are addressed by outside contractor.

5. PROTECTION AND PRESERVATION PROCEDURES

I. Preservation during design phase

On the site survey map, identify all trees whose root systems are likely to be impacted by construction equipment, cut and fill activities, utility corridors, proposed walks and roads, and potential construction staging areas; and whose branches may be damaged by construction equipment.

NOTE: if trees are grouped in a forest or woodlot, then only the location of the woodlot and any trees greater than 24 inches diameter at 4.5 feet above the ground (DBH) need to be identified and shall be considered "Heritage Trees."

A. Not salvageable

1. All trees that are within the footprint or in close proximity to the footprint of a proposed building. (Note: alternative footprints to save large, valuable trees should be considered, provided that the alternatives maintain the desired features and costs of the proposed building)
2. Trees of undesirable species or in very poor health. Examples include, but are not limited to species that have low landscape value, and heavily diseased or damaged trees that have little chance of recovering desirable form and function, even if protected from construction damage.

B. Low priority for protecting

1. Small trees (less than 10 inches DBH) that fall outside of the building footprint, but are likely to be impacted by construction activities. Project with consultation of grounds personnel shall see if trees can be moved either to a new site or holding area and shall pay for relocation.

2. Larger trees outside of the building footprint with relatively low landscape value. Examples include but are not limited to, trees with poor form, species of relatively low landscape value, or trees with inadequate space to accommodate current or future growth even if the site is ameliorated.

C. High priority for protecting

1. Medium (> 10 inches DBH) to large (> 24 inches dbh) trees of desirable species with good form, good health, and room to continue to grow.

II. Avoid locating the general construction site around low and high priority trees where possible by:

A. Planning all construction activities including new utility corridors, staging areas, new sidewalks and new roads for a minimum clearance of 15 feet away from the base of trees, and not within the edge of the canopy drip line. Greater distances are desirable.

B. High priority trees should receive more consideration than low priority trees in planning corridors, staging areas, walks, and roads.

C. All trees within the construction zone and those trees outside the construction zone, impacted by any construction activities shall be protected in accordance with in the applicable ANSI standard and the ISA Best Management Practices, Protecting Trees During Construction

6. GOALS AND TARGETS

Tree Inventory

A digital tree inventory covering the core campus should be developed. When the data is placed on a web based server, updates will be performed by the Campus Arborist, Landscape Architect and the Landscape Superintendent. The inventory may be used for campus planning purposes, tree management, academic exercises (read only access), and the general public (read only access).

Tree Canopy Master Plan

- Shall Be Developed
- Shall include a n IPM program to coincide with the Sustainability Tracking and Rating System
- Campus Arborist Crew will be trained to ensure the proper planting, pruning and maintenance techniques are used for all tree maintenance activities.

7. TREE DAMAGE ASSESSMENT, ENFORCEMENT, AND PENALTIES

Assessment on low profile trees is performed via the Grounds Department, Campus Arborist and Campus Landscape Architect. Higher profile trees are assessed by an outside consultant (such as Bartlett Tree Experts). Enforcement of protection measures is performed by project managers and on-site engineers in accordance with ANSI Standards and ISA BMP's. Also attached construction standards will be enforced. Currently there is no recourse for specific tree damage other than to file complaint with ECU PD for criminal mischief.

1.1 RELATED SECTIONS:

Refer to Section 02200 for requirements regarding earthwork and the University Utility Locate process.

Refer to Section 02500 for requirements regarding pavement and surfacing.

Refer to Section 02810 regarding irrigation requirements.

1.2 SCOPE OF SECTION:

This section contains the requirements relating to lawns, trees, shrubs, and ground cover; including subsoil scarification, soil preparation and finish grading involving topsoil and landscape accessories.

1.3 GENERAL:

Any construction project which disturbs existing landscaping (sidewalks, benches, fountains, retaining walls, streetlights, accent lighting, trees, shrubs, ground cover, grass, flowers, etc.) shall include appropriate new landscaping. This landscaping effort shall include an analysis of the impacts the proposed development shall have upon adjacent land uses and provide any required buffering. Buffering shall be required whenever there is a potential incompatibility between adjacent land uses due to noise, incompatible visual elements such as loading docks or solid waste storage, or conflicts in circulation. Under these conditions, landscaping strategies may include the use of dense plant material, walls, berms or other improvements designed to provide a physical separation.

1.4 PROTECTION DURING CONSTRUCTION:

- A. Trees within the general construction area, as shown on drawing or marked in the field by the University, shall be protected in accordance with the latest standard accepted by the International Society of Arboriculture and/or the University's Grounds Department.

- B. Any vegetation, including trees and shrubs, severely damaged or destroyed shall be replaced by the Contractor with like species or another species approved by the Grounds Department through Project Manager or his/her designee. The Contractor shall be held liable for the difference in value between the replacement tree and the original tree. (See Section 1.8 Replacement of Trees.)
- C. Items A and B above shall be a standard contract clause in all University construction contracts.

1.5 SUBSOIL SCARIFICATION:

- A. Scarify or cultivate subsoils in order to break-up, crush or otherwise make subsoils capable of drainage. Scarification should be done to the following depths:
 - 1. Seeding or Sodded and Groundcover Areas 6 inches.
 - 2. Shrubbed Areas 24 inches.
 - 3. Tree Areas: 42 inches deep.
 - 4. Building perimeter: 42 inches deep by 20 feet wide.

Work must be approved by Grounds Department prior to placing topsoil. Prohibit travel over scarified areas except for placing topsoil and installation of plant material.

1.6 TOPSOIL

- A. Do not place topsoil until soil scarification has been approved. Place topsoil during dry weather. Depth of Topsoil should be placed as follows after rolling:
 - 1. Seeded or sodded areas: 4 inches
 - 2. Planted areas: 8 inches

1.7 LAWNS AND GRASSES:

- A. Normal procedure shall be to use sodding for new grassed areas. Seeding shall only be considered in large areas with low public visibility, and shall be approved by the Grounds Department through the Project Manager. Make special provision for control of soil erosion.

Sod shall be sand grown; mud-grown sod is not acceptable.

- B. GRASS TYPES:

Grass types shall be Emerald or Meyer Zoysia, Tifton 419 Bermuda, and Confederate Turf Type fescue. All new grass areas shall be irrigated.

C. RESODDING/RESEEDING:

Any area of vegetation that is damaged during construction shall be restored to its original state **within 72 hours of the completion of the associated construction work**. Grassed areas shall be resodded. Special care shall be taken before and after the restoration to ensure the area is not subject to erosion. Reseeding shall only be allowed in special cases with individual case approved by the Grounds Department through the Project Manager.

1.8 TREES, PLANTS, AND GROUND COVERS:

A. SELECTION:

Plant material shall be obtained from a source in plant hardiness Zone 8. Zones are defined on U.S. Department of Agriculture Plant Hardiness Zone Map. Selection of plant materials shall be subject to the approval of the Grounds Department through the Project Manager.

B. REPLACEMENT OF TREES:

Trees that are removed or damaged as a result of construction activities shall be relocated or replaced.

1. **DESIGN CONSIDERATION:** Whenever possible, existing trees that cannot be incorporated into proposed plans should be relocated. Relocated trees shall be planted in accordance with the latest standard of AAN (American Association of Nurseryman). New locations shall be approved by the Grounds Department through the Project Manager or his/her designee.
2. **DESIGN CONSIDERATION:** When trees are unable to be relocated, the University requires the Project to replace trees at a minimum of a two for one basis (at least two new trees for each tree removed). This ratio can change at the discretion of the Grounds Department depending on the quality and size of the trees being removed. Each replacement tree shall be a minimum of 4-inch caliper for Deciduous trees and 12 feet for Evergreen Trees. A list of acceptable replacement trees is maintained by the Grounds Department through the Project Manager. Replacement trees shall be selected from this list with the advice and concurrence of the Grounds Department through the Project Manager or his/her

designee. A variety of replacement trees should be selected to enhance the beauty of the Campus and mitigate tree loss through disease.

3. If an existing tree not designated on the construction plan to be removed is damaged during construction, the contractor is responsible for reimbursing the University for the Value of that tree. The Value will be determined by a North Carolina Certified Arborist at the discretion of the University. Part of the reimbursement will be allocated to the replacement of the tree as addressed in section 2.

C. TREE PRESERVATION:

The University has a policy concerning the preservation of trees on campus. To ensure that this policy is followed, the Architect/Engineer is responsible for incorporating appropriate measures into the landscape design of all projects.

In cases requiring resolution or assistance, the Grounds Department or Project Manager can be consulted.

D. MULCH:

Double shredded hardwood mulch minimum thickness 2" to a maximum thickness 3".

8. PROHIBITED PRACTICES

I. Bike Locking

ARTICLE XI BICYCLES Section 1. North Carolina motor vehicle laws consider a bicycle to be a motor vehicle insofar as the nature of the vehicle permits. Traffic regulations must be obeyed by bicycle riders. Traffic citations will be issued to operators of bicycles violating traffic regulations. Section 2. Trick riding of bicycles as defined in Article 1, Section 1 is prohibited. Section 3. Bicycles parked or operated on the East Carolina University campus shall be registered with the Department of Parking and Transportation Services and display a bicycle registration permit. All bicycles found on campus in violation of this section will be impounded until proof of ownership is determined or abandoned more than 30 days. An appropriate fee may be collected by the Department of Parking and Transportation Services before an impounded bicycle is released to the owner. Section 4. Bicycles will not be parked inside administrative or classroom buildings, in stairwells or hallways of residence halls, on sidewalks, ramps, or outside stairways. Bicycles may not park in areas other than those specifically designated for bicycle parking. Agents authorized by the Director of Date 4/27/2006 Page 24 Parking and Transportation Services or his/her designee may use force to remove and impound all bicycles found in violation of the Article. Section 5. Unregistered bicycles parked on campus will be considered to be abandoned. They will be impounded and disposed of in accordance with North Carolina State Statutes. Section 6. Bicycles will not be operated on the sidewalks of East Carolina University. Bicycles will not be operated in excess of 15 miles per hour and operators will observe and comply with traffic regulations. Section 7. Per Article IV Section 2. motor scooters and mopeds must park in spaces and zones specifically designated as Motorcycle Parking Only

9. COMMUNICATION STRATEGY

All tree issues shall be addressed by the Grounds Services Department. Tree preservation information is provided to contractors through the Project Management Department and monitored by the project manager and grounds services.

