



3322 Olive Street
St. Louis, MO 63103
Phone: 314-977-2956
Fax: 314-977-7127
www.slu.edu

**SAINT LOUIS
UNIVERSITY**

Grounds Services Department

Saint Louis University Campus Tree Care Plan

PURPOSE:

The purpose of the Saint Louis University (SLU) campus tree care plan is to identify the policies, procedures, and practices that are used in establishing, protecting, maintaining, and removing trees on the SLU 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:

- Ensure proper species selection, high-quality nursery stock acquisition, and industry-consensus 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 and safety 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

RESPONSIBLE DEPARTMENT:

The SLU Grounds Services Department within the Facilities Services Division under the direction of the Vice President for Facilities Services is responsible for implementation of the Campus Tree Care Plan.

CAMPUS TREE ADVISORY TEAM:

The Saint Louis University Tree Advisory TEAM is tasked with providing important input into the care and improvement of the campus landscape with a primary focus on the health and maintenance of the campus tree population.

The team members will voluntarily serve for a period of one academic year with a renewal option. Members will appoint team members to conduct day-to-day business of the team. Members are expected to actively participate and contribute in guideline and policy related issues along with research and information collection that would aid in the campus tree care plan. The SLU Tree Advisory Team will meet bi-annually to review current maintenance practices including but not limited to pruning, fertilization, installation/replacement, removal and protection.

Members include:

Grounds Services – Jeff Macko, Director
Grounds Services – Jim Anthony, Supervisor
Grounds Services – Clint Tucker, Grounds Worker/Certified Arborist
Facilities Management – Keith McCune, Assistant Director
Department of Biology – Dr. Shawn Nordell, Associate Professor
Department of Biology – Dr. Allison Miller – Assistant Professor
Student Government Association, Sustainability Committee – Tyler Yess (Fr) & Darion Mayhorn (Sr.)
Doisy College of Health Sciences – Dr. Charlotte Royeen
Department of Nutrition and Dietetics – Dr. Mildred Mattfeldt-Beman, Chair
St. Louis City Forestry Division – Jim Morrisson, Urban Forester

CAMPUS ARBORCULTURE PRACTICES:

Installation Practices

Plant Selection

Tree species used on SLU campus will come from a list of acceptable species as developed by the SLU Tree Advisory Team (see attachment A). This list will contain both native and non-native species that have been thoroughly screened for adaptability and serviceability to the physical conditions based on site orientation, drainage, soil, etc. Consider the restrictions of the planting site, the purpose for the tree, and each tree's unique growing requirements before selecting the type of tree to be purchased. Whenever possible and landscape plans allow, native species will be the preferred choice for both new installation and replacement.

Planting Seasons

The season for planting shall be as follows:

Deciduous Trees & Shrubs	Fall	Oct. 15 to Dec. 15
	Spring	Mar. 15 to May 15
Evergreen Trees & Shrubs	Fall	Sept. 1 to Oct. 30
	Spring	Mar. 15 to May 15

Nursery Stock

Nursery stock used on the SLU campus shall conform to the most current American Standard for Nursery Stock, ANSI Z60.1.

Planting

Stake out location for all plants and outlines for planting areas on the ground and obtain approval before an excavation is made. Make adjustments in locations and outlines as directed.

Remove underground debris or other obstructions encountered; loosen sub grade and check for drainage.

Tree planting shall conform to the most current ANSI A300 Part 6: Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Transplanting). The planting process will conform to these standards and to the most current Best Management Practices (BMP) for Tree Planting published by the International Society of Arboriculture.

Establishment maintenance shall be provided consisting of a minimum of supplemental irrigation during dry periods, mulch, corrective pruning and staking or guying for a period of 24 months after planting or as determined by the Grounds Services Department. Staking or guying is not normally required or recommended unless a tree is unable to stand without supplemental support. Where staking or guying is required the BMP for Tree Planting shall be followed. The BMP for Tree Planting shall be referenced for the best practices concerning establishment maintenance practices.

Maintenance Schedule

Pruning

No tree shall be pruned without first establishing clearly defined objectives. The maintenance pruning schedule shall be dictated by the tree species, age, function and placement. SLU practices the following guidelines for tree pruning in accordance with the most current ANSI A300 (Part 1) Pruning Standard:

1. All trees less than 5 years old shall receive structural pruning as required on an annual rotation.
2. All trees 6 – 20 years old shall receive structural pruning as required every two to five years.
3. All trees 20 years old and older shall receive maintenance pruning every five to seven years as required to crown clean (thin) high and low, raise the crown, reduce the crown and crown restoration.
4. Trees that are adjacent to pedestrian walkways, parking lots, and lights are inspected at least annually to address any clearance or safety issues.

Timing

1. Spring flowering trees that bloom on last season's growth (Crabapple, Cherry, Pear, etc) should be pruned just after bloom because new flower buds are set on subsequent summer growth.
2. Summer flowering trees that bloom on the current season's wood (Crapemyrtle, Linden, Golden Raintree, etc.) should be pruned directly after they flower or in late winter or early spring because flower buds are set on current season's growth.
3. Medium and mature shade trees should be pruned during the dormant season typically November 15 – March 15.

Pruning Methods (Types) – In accordance with ANSI A300 pruning standards:

1. Pruning to clean – the selective removal of cracked, broken, diseased, detached and dead branches.
 - a. To reduce hazards, and improve health and aesthetic of the tree.
 - b. This is the preferred pruning type for mature trees since minimal live branches are removed.
 - c. The size range and locations of limbs to be removed should be specified.
2. Pruning to thin – the selective removal of small live branches to reduce crown density.
 - a. Proper thinning retains crown shape and size and should provide an even distribution of foliage throughout the crown.
 - b. Thinning should not exceed twenty (20%) percent of the crown foliage.
 - c. The size range and locations of limbs to be removed should be specified.
3. Pruning to Raise (Elevate, Lift) – the selective removal of branches to provide vertical clearance.
 - a. Proper raising shortens or removes lower branches of a tree to provide clearance for building, signs, pedestrians, etc.
 - b. The Live Crown Ratio should be no less than fifty (50%) upon completion.
 - c. The size range and locations of limbs to be removed should be specified.
4. Pruning to Reduce (Shape, Drop Crotch) – the selective removal of branches and stems to decrease the height and/or spread of a tree.

- a. Reduction minimizes risk of failure, clears vegetation from buildings or other structures or to improve appearance.
 - b. Crown reduction should be achieved with reduction cuts, not heading cuts.
 - c. Reduction should be done on smaller diameter (1" – 4") branches.
5. Structural Pruning – the removal of live branches to influence the orientation, spacing, growth rate, strength of attachment and ultimate size of branches.
 - a. Structural pruning is used on young and medium aged trees to help engineer a sustainable trunk and branch arrangement.
 - b. Structural pruning reduces certain defects and spaces main branches along one dominant trunk.
 - c. The maximum diameter of the reduction cuts used with this pruning type should be specified.
6. Pruning to Restore – the selective removal of branches, sprouts and stubs from trees that have been topped, severely headed, vandalized broken in a storm or otherwise sustained damage.
 - a. The goal is to improve the tree structure, form or appearance.
 - b. Restoration may require a variety of types of cuts including heading cuts.
- 7.

Fertilization

Trees shall be fertilized to meet specific objectives. Common objectives of fertilization as found in the BMP for Tree Fertilization published by the International Society of Arboriculture are: correct a visible nutrient deficiency, correct a nutrient deficiency not readily visible but detected through soil or foliar analysis, increase vegetative growth, flowering or fruiting or increase the vitality of the plant. The Grounds Services Department shall make a determination on which trees will be fertilized based on need and available resources. The Grounds Services Department will also determine the best fertilization method.

1. Fertilization shall conform to the most current ANSI A300 (Part 2) Fertilization and the BMP for Tree Fertilization published by the International Society of Arboriculture.
2. No trees shall be fertilized from May 15 – October 15.

Inspection and removal:

No tree shall be removed until a complete assessment has been completed by the Grounds Services Department. Tree Risk Assessment will be used to determine and prioritize trees requiring removal for safety needs and shall conform to ANSI A300 (Part 9) Tree Risk Assessment and the best management practices (BMP) Tree Risk Assessment published by the International Society of Arboriculture.

1. The removal assessment shall include the following information:
 - a. Species
 - b. Location
 - c. Condition
 - d. Size (caliper)
 - e. Reason for removal

Managing for catastrophic events:

In the event of tree damage because of weather conditions such as high winds, thunderstorms, heavy snow, etc. Grounds Services or an approved contractor shall remove debris on the following priority:

1. Streets and roadways
2. Pedestrian walkways
3. Critical building entrances

4. Parking lots

NOTE: Grounds Services has discretion to modify the priority order as needed based on overall campus conditions.

Protection and Preservation:

The objective of tree management is to conserve trees and shrubs during site planning, construction and post-construction maintenance phases of development.

Tree protection zones shall be established and approved by Grounds Services for all construction sites where existing trees are to remain. The tree protection zones will be maintained throughout the duration of the project under the direction of the Grounds Services Department. Tree health shall be monitored throughout the duration of the construction/demolition project under the direction of the Grounds Services Department.

Trees identified for protection shall have a barrier that encompasses the entire drip line of the tree. The fence shall be a minimum of 4' in height and constructed of plastic or chain link fencing material. The barrier shall be installed at 1' for every inch diameter of the tree's diameter breast height (DBH) with the minimum protection zone to be not less than 3' diameter.

Prohibited practices in tree protection zones include:

1. Parking of vehicles, equipment, trailers, etc. in the zone
2. No placement or storage of construction materials or debris in the zone
3. No substances poured, disposed of or drain through the zone

Goals and Targets:

Develop an integrated tree replacement plan to restore the tree population to match the tree inventory completed in July 2003. The Tree Campus Advisory Team developed a multi-year approach to allow for proper planning cycles thereby reducing the impact on the fiscal year 2013 budget

The 2013 goal for the tree care plan is to re-establish the 2003 tree canopy on the Frost Campus bounded by Grand Avenue on the east, Vandeventer Avenue on the west, Lindell on the north and Laclede on the south. The total estimated number of trees required to achieve the goal is 65.

Since the physical campus has changed since 2003, re-establishment accounts for removals due to physical changes, safety and hazard considerations along with additional plantings since the 2003 inventory.

Tree Damage Assessment, Enforcement and Penalties:

Grounds Services perform routine assessment on campus trees < 12" DBH while an outside consultant performs routine assessment on campus trees > 12" DBH. The results determine whether a tree is removed, pruned and/or receives correctional treatments such as fertilization and insect/disease control applications.

Grounds Services tracks all tree removals and update the tree inventory annually. Damage to trees whether intentional or un-intentional should be reported to Grounds Services immediately for inspection and assessment.

Penalties for not reporting damage range from corrective counseling for university employees to disqualification for university contractors.

Appeals to imposed penalties are reviewed at the discretion of the Tree Campus Advisory Team.

Prohibited Practices:

Prohibited practices noted in the Protection and Preservation section and the maintenance schedule extend to all trees on University owned property.

Definitions:

ANSI – American National Standards Institute

Caliper – tree trunk diameter measured 6 inches off the ground

Drip Line

Diameter, breast height (DBH)

Guying

Live Crown Ratio

Native

Non-Native

Communication Strategy:

The campus should make every effort to communicate this plan to all members of the campus community who might be impacted by or have an impact on not only the campus landscape but also specifically trees. This includes students, faculty, staff, visitors and the surrounding community. Notice of the plan's adoption should be placed in the U-News. The plan should be communicated to target groups in the following ways:

1. Students and Faculty

The tree care plan should be placed on the website of the SLU Center for Sustainability, Facilities Services and other appropriate campus offices and departments. Doing so will allow students and faculty to easily access the plan at all times. Data from the tree inventory will also be placed online in order to be available to students. Environmentally-focused student groups, such as the Student Government Association Sustainability Committee should also be made aware of the plan.

2. Staff

Facilities Services should keep copies of the plan in its offices for consultation by employees, contractors and visitors and place a copy on their website.

3. Contractors

Any company contracted to perform work that may directly or indirectly affect campus trees should be given a copy of the plan, either as a hard copy or in electronic format. Contractors will need to be especially aware of portions of the plan concerning tree preservation and damage assessment.

4. Community and Visitors

The community should be made aware of the plan through a press release that coincides with SLU's announcement of Tree Campus USA certification. The announcement should make it clear where members of the community can find a copy of the plan. It should also include information on how they can become involved in management of the campus landscape through service projects and other activities