UAB Campus Tree Care Plan

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1. Purpose
The UAB Campus Tree Care Plan exists to:

Protect, promote, and preserve existing trees on UAB’s campus, while providing guidelines to encourage the addition of campus green spaces, in order to create a more attractive, healthy, and sustainable campus. This tree care plan is intended to act as a reference point in assisting the coordination between developers, landscapers, campus planners, and the general campus population, in order to ensure that related policies are upheld while maintaining the integrity of the trees on the UAB campus.

2. Responsible Authority
The Campus Tree Care Plan will be enforced by the Associate Vice President for Facilities Management.

3. Committee
The University of Alabama at Birmingham Campus Tree Advisory Committee was established as part of the Tree Campus USA initiative developed by the National Arbor Day Foundation. The committee consists of members of the faculty, staff and student groups, and also a member of the Birmingham community. The committee shall meet a minimum of twice per year, and additionally as needed. Each member will serve a 2 year term with option to renew as approved by the Chairperson (Manager, Campus Services and Grounds). The Committee will participate in annual reviews of the Tree Care Plan, and provide support for projects related to trees and green spaces on campus.

Members:

Facility Management
Tim Sullivan, Chairperson
Manager, Campus Services and Grounds
grasso@uab.edu

Faculty
Stephen Watts, Ph.D.
Biology Professor
sawatts@uab.edu

Staff
Julie Price, Ph.D.
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Students
Sarah Griffin
Political Science and Philosophy Majors
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Community Partners
Henry Hughes
Director of Education, Birmingham Botanical Gardens
hhughes@bbgardens.org
4. Tree Care Policies

UAB Specifications for Tree Insect Control

Sites:
Annual campus-wide applications to young trees (3”-5.5” inch in caliber).

Task:
Apply preventative insect control oil treatment to target eggs, larvae, and or insects on young trees 3”-5.5” inch in caliber to control the population of harmful scale insects.

Specifications and Frequencies:
1 treatment with horticultural oil applied at the appropriate label rate for the host plant applied in January during the appropriate temperature range.

Justification:
Insects, in particular scale insects, in our urban conditions threaten younger smaller trees. Scale insects use sucking mouth parts to extract juices from trees and weaken them to the point of death and or functional demise. Horticultural oils applied to dormant trees suffocates scale eggs, larvae, and insects. It is a safe, environmentally-friendly control method.

UAB Tree Replacement Plan

Scope: The intention of this tree replacement plan is to provide sustainable tree replacements for trees which require removal for non-construction or development reasons. Tree removals are sometimes necessary due to age, health, structural integrity, physical damage, construction, control efforts for evasive or non-native species, and emergencies.

* Rates: The replacement rate for lost trees is two trees replaced for every one tree lost. Removal sites and replacement sites may not necessarily be the same due to space limitations.

* Timing: The horticultural window of opportunity for tree replacement shall follow a reasonable annual horticultural time frame typically November through Mid-February.

* Species: The replacement species shall be chosen based on the short- or long-term use of the site, the best horticultural selection, and design match for the site. The replacement species may not necessary be the same as the removal species.
General Selection Criteria

- UAB should encourage the selection of trees appropriate for a particular urban site. Tree placement should consider energy saving values, nearby power lines, and root characteristics.
- Trees used for new plantings in urban areas should be selected primarily from species with low water requirements.
- Where appropriate, trees that benefit urban wildlife species by providing food or cover should be incorporated in urban plantings.

Campus Standards for Planting New Trees:
(a) Standard
(b) Standard (2)
(c) Evergreens
(d) Standard on a slope
(e) Evergreen on a slope
(f) Drainage
(g) Shrubs
(h) Sidewalk consideration
(i) Multi – trunk
NOTE: PLANT TREES 4" HIGHER THAN SURROUNDING GRADE OR HIGH ENOUGH TO ACHIEVE ADEQUATE ROOTBALL DRAINAGE. SEE STANDARD TREE DETAIL.

4" DIAM. PVC SIPHON TUBE, NON-PERFORATED WITH CAP. EXTEND PIPE 4" ABOVE GRADE, VISIBLE PORTION PAINTED BLACK.

FINISHED GRADE
LINE OF EXCAVATION
1'0" MIN
8"
1'0"
4"

TOPSOIL MIX
COMPACTED TOPSOIL MIX; ALLOW FOR SETTLING
SOIL FILTER, TURN UP 6" AT EXCAVATION WALL;
LAP EDGES 12"
WASHED CRUSHED STONE
EXISTING SUBSOIL
BLACK REINFORCED PROTECTIVE HOSE. PLACE ABOVE FIRST TIER OF BRANCHES.

#10 OR #12 GAUGE GALVANIZED GUY WIRE, DOUBLED & TWISTED, 1/4" DIAM. GALV. TURNBUCKLE

RED COLORED SAFETY FLAGGING EACH GUY:

2"X4"X4" PRESSURE TREATED STAKES. DRIVE FLUSH WITH GRADE.

LIGHTLY COMPACTED TOPSOIL MIX

NOTE: PROPER DRAINAGE FROM ROOTBALL IS THE RESPONSIBILITY OF THE CONTRACTOR

SOIL FILTER, TURN UP 6" AT EXCAVATION WALL, LAP EDGES 12"

4" PERFORATED DRAINAGE PIPE TO POINT OF NEAREST RELIEF (SLOPE MIN. 1/2" PER FOOT)

REMOVE ALL BURLAP & WIRE FROM TOP 1/3 OF ROOT BALL
REMOVAL CONTAINER & LIGHTLY SCARIFY ROOTS & SOIL BEFORE PLANTING.

SET PLANT SO THAT TOP OF ROOT MASS IS 2" ABOVE FINISHED GRADE

FORM SAUCER RIM 3" ABOVE FINISH GRADE AND SLOPE GRADUALLY AWAY FROM ROOTBALL

MULCH DEPTH IN PLANTING BED IS 3"

FINISH GRADE

TOPSOIL MIX, 12" DEPTH

REMOVE ALL STONE AND BUILDING MATERIAL AND SCARIFY TOP 30" OF SUBSOIL

LIGHTLY COMPACT TOPSOIL MIX UNDER PLANT

LOOSEN SUBSOIL AT BOTTOM OF PLANT PIT TO 4" DEPTH

12" MIN.

12" MIN.

CUTOFF AND REMOVE END OF EXISTING DOWNSPOUTS

EXTEND DOWNSPOUT

5' WIDE SIDEWALK 5'-0"

FINISHED GRADE 5'-0"

2% SLOPE

5% SLOPE

6" CURB

6" PVC PIPE

4' LONG DUCTILE IRON PIPE
Approved Species for UAB
Flowering
<table>
<thead>
<tr>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelanchier arborea</td>
<td>Serviceberry</td>
</tr>
<tr>
<td>Amelanchier × ‘Autumn Brilliance’</td>
<td>Autumn Brilliance Serviceberry</td>
</tr>
<tr>
<td>Cercis Canadensis</td>
<td>Redbud</td>
</tr>
<tr>
<td>Cercis canadensis ‘alba’</td>
<td>White Redbud</td>
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<tr>
<td>Chionanthus virginicus</td>
<td>Fringe Tree</td>
</tr>
<tr>
<td>Cornus florida ‘Cherokee Princess’</td>
<td>Cherokee Princess Dogwood</td>
</tr>
<tr>
<td>Cornus kousa</td>
<td>Kousa Dogwood</td>
</tr>
<tr>
<td>Cotinus coggyria</td>
<td>Smoketree</td>
</tr>
<tr>
<td>Crataegus Phaenopyrum</td>
<td>Washington Hawthorn</td>
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<tr>
<td>Franklinia alatamaha</td>
<td>Franklinia</td>
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<tr>
<td>Halesia carolina</td>
<td>Carolina Silverbell</td>
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<tr>
<td>Hammelis mollis</td>
<td>Chinese Witch-Hazel</td>
</tr>
<tr>
<td>Lagerstroemia indica ‘Byer's White’</td>
<td>Byer's White Crape Myrtle</td>
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<tr>
<td>L. indica ‘Choctaw’</td>
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<td>L. indica ‘Miami’</td>
<td>Miami Crape Myrtle</td>
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<td>L. indica ‘Tuscarora’</td>
<td>Tuscarora Crape Myrtle</td>
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<tr>
<td>L. indica ‘Victor’</td>
<td>Victor Crape Myrtle</td>
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<tr>
<td>L. indica ‘Natchez’</td>
<td>Natchez White Crape Myrtle</td>
</tr>
<tr>
<td>L. indica ‘Watermelon Red’</td>
<td>Red Crape Myrtle</td>
</tr>
<tr>
<td>L. indica ‘William Toovey’</td>
<td>William Toovey Crape Myrtle</td>
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<tr>
<td>M. soulangiana ‘Alba’</td>
<td>White Saucer Magnolia</td>
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<tr>
<td>Magnolia macrophylla</td>
<td>Bigleaf Magnolia</td>
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<tr>
<td>Magnolia soulangiana</td>
<td>Saucer Magnolia</td>
</tr>
<tr>
<td>Magnolia stellata</td>
<td>Star Magnolia</td>
</tr>
<tr>
<td>Malus floribunda ‘Calloway’</td>
<td>Calloway Crabapple</td>
</tr>
<tr>
<td>Philadelphus coronaries</td>
<td>Mock Orange</td>
</tr>
<tr>
<td>Prunus autumnalis</td>
<td>Autumnalis Cherry</td>
</tr>
<tr>
<td>Prunus yedoensis</td>
<td>Yoshino Cherry</td>
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</table>
Deciduous

<table>
<thead>
<tr>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acer barbatum</td>
<td>Southern Sugar Maple</td>
</tr>
<tr>
<td>Acer buergeranum</td>
<td>Trident Maple</td>
</tr>
<tr>
<td>Acer palmatum</td>
<td>Japanese Maple</td>
</tr>
<tr>
<td>Acer palmatum 'Atropurpureum'</td>
<td>Threadleaf Maple</td>
</tr>
<tr>
<td>A. palmatum ‘Dissectum’</td>
<td>Dissectum Japanese Maple</td>
</tr>
<tr>
<td>A palmatum 'Burgundy Lace’</td>
<td>Burgundy Lace Jap Maple</td>
</tr>
<tr>
<td>Acer rubrum 'October Glory’</td>
<td>October Glory Red Maple</td>
</tr>
<tr>
<td>A rubrum ‘Autumn Sunset’</td>
<td>Autumn Sunset Red Maple</td>
</tr>
<tr>
<td>Carpinus caroliniana</td>
<td>American Hornbeam</td>
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<tr>
<td>Celtis laevigata</td>
<td>Sugar Hackberry</td>
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<tr>
<td>Fagus grandifolia</td>
<td>American Beech</td>
</tr>
<tr>
<td>Fraxinus americana</td>
<td>White Ash</td>
</tr>
<tr>
<td>Fraxinus pennsylvanica ‘Marshall’</td>
<td>Marshall Ash</td>
</tr>
<tr>
<td>Fraxinus pennsylvanica ‘Urbanite’</td>
<td>Urbanite Ash</td>
</tr>
<tr>
<td>Ginkgo biloba</td>
<td>Ginkgo</td>
</tr>
<tr>
<td>Liriodendron tulipifera</td>
<td>Tulip Poplar</td>
</tr>
<tr>
<td>Nyssa sylvatica</td>
<td>Black Gum</td>
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<tr>
<td>Pistacia chinensis</td>
<td>Chinese Pistache</td>
</tr>
<tr>
<td>Quercus acutissima</td>
<td>Sawtooth Oak</td>
</tr>
<tr>
<td>Quercus alba</td>
<td>White Oak</td>
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<tr>
<td>Quercus laurifolia</td>
<td>Laurel Oak</td>
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<td>Quercus lyrata</td>
<td>Overcup Oak</td>
</tr>
<tr>
<td>Quercus nuttalli</td>
<td>Nuttall Oak</td>
</tr>
<tr>
<td>Quercus phellos</td>
<td>Willow Oak</td>
</tr>
<tr>
<td>Quercus prinus</td>
<td>Chestnut Oak</td>
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<tr>
<td>Quercus shumardi</td>
<td>Shumard Oak</td>
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<tr>
<td>Taxodium distichum</td>
<td>Bald Cypress</td>
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<tr>
<td>Ulmus parvifolia</td>
<td>Chinese Elm</td>
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<tr>
<td>Ulmus parvifolia ‘Emer I’</td>
<td>Athena lacebark Elm</td>
</tr>
<tr>
<td>Ulmus parvifolia ‘Emer II’</td>
<td>Allee lacebark Elm</td>
</tr>
<tr>
<td>Zelkova serrata</td>
<td>Japanese Zelkova</td>
</tr>
<tr>
<td>Botanical Name</td>
<td>Common Name</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td><em>Ilex cornuta ‘Bufordii’</em></td>
<td>Burford Holly</td>
</tr>
<tr>
<td><em>Ilex opaca</em></td>
<td>American Holly</td>
</tr>
<tr>
<td><em>Ilex X attenuata ‘East Palatka’</em></td>
<td>East Palatka Holly</td>
</tr>
<tr>
<td><em>Ilex X ‘Nellie R Stevens’</em></td>
<td>Nellie Stevens Holly</td>
</tr>
<tr>
<td><em>Ilex X ‘Fosterii’</em></td>
<td>Foster #2 Holly</td>
</tr>
<tr>
<td><em>Ilex vomitoria</em></td>
<td>Yaupon</td>
</tr>
<tr>
<td><em>Ilex vomitoria ‘Pendula’</em></td>
<td>Weeping Yaupon</td>
</tr>
<tr>
<td><em>Ligustrum japonicum</em></td>
<td>Wax leaf Ligustrum</td>
</tr>
<tr>
<td><em>Magnolia grandiflora</em></td>
<td>Southern Magnolia</td>
</tr>
<tr>
<td><em>Magnolia grandiflora ‘Bracken Brown Beauty’</em></td>
<td>Bracken Brown Beauty Magnolia</td>
</tr>
<tr>
<td><em>Magnolia grandiflora ‘Claudia Wannamaker’</em></td>
<td>Claudia Wannamaker Magnolia</td>
</tr>
<tr>
<td><em>Magnolia grandiflora ‘Green Giant’</em></td>
<td>Southern Magnolia</td>
</tr>
<tr>
<td><em>Magnolia grandiflora ‘Little Gem’</em></td>
<td>Little Gem Magnolia</td>
</tr>
<tr>
<td><em>Magnolia virginiana</em></td>
<td>Sweet Bay Magnolia</td>
</tr>
<tr>
<td><em>Magnolia x ‘Ann’</em></td>
<td>Ann Magnolia</td>
</tr>
<tr>
<td><em>Magnolia x ‘Full Eclipse’</em></td>
<td>Full Eclipse Magnolia</td>
</tr>
<tr>
<td><em>Myrica cerifera</em></td>
<td>Wax Myrtle</td>
</tr>
<tr>
<td><em>Osmanthus americanus</em></td>
<td>Devilwood</td>
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<tr>
<td><em>Pinus glabra</em></td>
<td>Spruce Pine</td>
</tr>
<tr>
<td><em>Pinus strobus</em></td>
<td>White Pine</td>
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<tr>
<td><em>Pinus taeda</em></td>
<td>Loblolly Pine</td>
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<td><em>Pinus virginiana</em></td>
<td>Virginia Pine</td>
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<tr>
<td><em>Quercus acuta</em></td>
<td>Japanese Evergreen Oak</td>
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<tr>
<td><em>Quercus laurifolia</em></td>
<td>Laurel Oak</td>
</tr>
<tr>
<td><em>Quercus virginiana</em></td>
<td>Live Oak</td>
</tr>
<tr>
<td><em>Tsuga canadensis</em></td>
<td>Canadian Hemlock</td>
</tr>
</tbody>
</table>
Managing for Catastrophic Events
For catastrophic events such as severe weather, fallen or hazardous trees and associated debris will be removed by Campus Services and Grounds personnel or an outside tree company. The cleanup will be prioritized to maintain critical access for police, fire department, hospital buildings, and roadways first.

5. Protection and Preservation Policies
For all Construction Projects

- Facilities Standard Number 02802 for Landscape/Hardscape Protection During Construction (Appendix A) is the guiding document for policies during construction related to trees, in addition to the statements below.
- Prior to the issuance of any approval or permit, all trees on the site shall be inventoried by the Landscape Architect, including size, species, location, and photos. The inventory shall be submitted to the Manager of Campus Services and Grounds.
- Any pruning done to accommodate a work site shall be performed by, or under the direction of, Campus Services and Grounds personnel.
- Six-foot chain link fence barricades shall be installed prior to construction to cover as much ground as possible outside the tree drip line. If more space is needed inside the drip line, barriers should not be inside of the tree critical root radius defined as the product of (the tree trunk’s diameter in inches at height of 4.5 ft) x 1.5, expressed in feet.
- No construction equipment, vehicles, offices, or materials shall be stored, parked or standing within the tree drip line.
- Wires, signs, and other similar items shall not be attached to trees.
- Drains shall be installed according to city specifications so as to avoid harm to trees due to excess water.
- No waste construction materials or wastewater (paint thinner, paints, cement rinsing, etc) shall be dumped on the ground or into any grate between the drip line and the base of the tree or uphill from any tree where certain substances might reach the roots.
- Cutting and filling around the base of trees shall be done only after consultation with the Landscape Architect and UAB Campus Services and Grounds.
- Trenching - Wherever cuts are made in the ground near the roots of trees, appropriate measures shall be taken to prevent exposed soil from drying out and causing damage to tree roots. When possible, utilities should be run around the drip line of the tree, to avoid critical damage. In some cases, boring may be used to avoid trenching.
- Damage to any tree during construction shall be reported to UAB Campus Services and Grounds, and the contractor shall pay to treat the tree for damage in the manner specified by the Landscape Architect and Campus Services and Grounds.
6. Goals and Targets

   Goals with Associated Targets

1. **Goal:** UAB should continue to support programs that encourage the engagement of interested citizens in the value of urban trees.
   
   **Target:** Plan and implement Arbor Day 2015 celebration.

2. **Goal:** Development projects should include the preservation of significant trees. Any adverse effect on the health and longevity of significant trees should be avoided through appropriate design measures and construction practices. When tree preservation is not feasible, the significant tree will be appraised by a certified arborist using *The Guide for Plant Appraisal, 9th Edition* to develop a supported estimate of current value. This amount shall be transferred into the UAB Tree Fund. Funds from site development tree removal can be put back into the same site’s redevelopment for tree planting as space permits. Remaining funds from each development project will remain in the fund to be used for planting other trees and tree maintenance.
   
   **Target:** Establish the UAB Tree Fund.

7. Tree Damage Assessment

Trees are evaluated for any risks they pose, using the Tree Hazard Evaluation Form (Appendix B). Damage is remedied through a combination of pruning, treatments, or removal if deemed necessary. Intentional damage caused during construction will be addressed as described in section 5 of this document.

8. Prohibited Practices

1. It is prohibited to attach signs to trees.
   
   *(Birmingham Ordinance No. 1809-F, Title 3, Article VI, Section 9, Subsection 3, Item 3, Part f)*

2. It is prohibited for any person to break, cut, injure, remove, burn, pull, or otherwise damage any tree located on any part of UAB campus.

3. It is prohibited to chain bikes to trees on campus.

4. Topping, heading, hat-racking, or any other form of inappropriate crown/branch reduction pruning shall not be permitted except in emergency situations or in executing a crown restoration procedure.

5. Under no condition shall a tree be planted on UAB campus for dedication without pre-approval and consultation with UAB Campus Planning.
9. **Terminology**

- **Arboriculture** - is the cultivation, management, and study of individual trees, shrubs, vines, and other perennial woody plants.
- **Caliper** - The diameter or thickness of the main stem of a young tree or sapling as measured at six (6”) inches aboveground level.
- **Development** - The act, process or state of erecting buildings or structures, or making improvements to a parcel or tract of land.
- **Drip line** – The area defined by the outermost circumference of a tree canopy where water drips from onto the ground.
- **Green space** - Any area retained as permeable unpaved ground and dedicated on the site plan to supporting vegetation.
- **Multi-stem trees** - all tree stems shall be measured at two feet above the ground, the sum of all these measurements equals the diameter of the tree for ordinance and mitigation purposes.
- **Native tree** - Any tree species which occurs naturally and is indigenous within the region.
- **Trenching** - The process of digging long, narrow channels in the ground for the purpose of laying pipes and wires during construction projects.

10. **Communication Strategies**

This plan will be available through the UAB Facilities website. It is meant to be accessible to developers, landcapers, campus planners, and the general campus population.
FACILITIES STANDARD

NAME: Landscape/Hardscape Protection During Construction
NUMBER: 02802

PURPOSE:
1. The general purpose of each Facilities Standard is to provide minimal criteria for construction materials at University facilities regarding code compliance, warranty, approved products, execution, and uniformity.

2. To protect the health and safety of patients, visitors, students, faculty, and staff, in addition to protecting non-project UAB property, all construction must be in accordance with NFPA 241 safeguarding construction, alteration, and demolition operations; Standard Building Code, Chapter 33, regarding site work, demolition, and construction; NFPA 101 Life Safety Code.

3. Construction safety is the responsibility of the contractor in accordance with the regulations and codes of the agency having jurisdiction, and according to the guidelines adapted by OSHA.

4. The Landscape/Hardscape Protection During Construction Facilities Standard establishes a series of guidelines for specifying this particular item on any construction project at the University. This Facilities Standard is not to be regarded as a specification.

EXECUTION:
1. Protection of Hardscape Materials:
   A. Pre-construction inventory photos of hardscapes are required prior to construction to document the pre-construction conditions.
   B. Hardscape protection measures, such as covering sidewalks, curbs, pavers, etc. with plate steel, plywood, or other materials, to disperse weight and prevent damage from construction vehicles should be applied. Access to and from the construction site should be defined and limited.
   C. Protection measures such as barriers, removing light poles, signs, etc. to prevent damage.

2. Protection of Landscape Materials:
   A. Pre-construction inventory photos of landscapes are required prior to construction to document the pre-construction conditions.
   B. Campus Services and Grounds personnel determine if any plant material can be salvaged and relocated based on the time of year, condition, size, species, and/or monetary or historical value of the material.
C. Any pruning done to accommodate a work site shall be performed by, or under the direction of, Campus Services and Grounds personnel.

D. All plant materials to remain in the construction zone shall be protected to prevent damage and cared for according to species requirements.

3. Protection of Irrigation Materials:
A. Irrigation systems protection measures such as burying heads, covering valves, identifying pipe locations, etc., are required prior to construction to prevent damage to wiring, piping, heads, valves, controllers, back flow prevention devices, etc.

4. Protection of Trees:
A. Protection barriers, defined as six-foot chain link fencing, shall be installed prior to construction and shall cover as much ground as possible outside the tree’s drip line. If more space is needed inside the drip line, barriers should not be inside of the tree’s critical root radius defined as the product of (the tree trunk’s diameter in inches at a height of 4.5 feet) x 1.5, expressed in feet.

B. Limit construction machine access, material storage, chemical and cement rinsing, and vehicle parking and office sites to non-tree areas.

END OF STANDARD
A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas

TREE HAZARD EVALUATION FORM 2nd Edition

HAZARD RATING:

Failure + Size + Target = Hazard
Potential of part:  Rating:  Rating

- Immediate action needed
- Needs further inspection
- Dead tree

TREEm CHARACTERISTICS

Tree #: ____________________ Species: ____________________

DBH: _______ # of trunks: _______ Height: _______ Spread: _______

Firm: □ generally symmetric □ minor asymmetry □ major asymmetry □ stump sprout □ scap-headed

Crown class: □ dominant □ co-dominant □ intermediate □ suppressed

Live crown ratio: _______ % Age class: □ young □ semi-mature □ mature □ over-mature/serescent

Pruning history: □ crown cleaned □ excessively thinned □ topped □ crown raised □ pollarded □ crown reduced □ flush cuts □ cable/braced

□ none □ multiple pruning events Approx. dates: ____________________

Special Value: □ specimen □ heritage/historic □ wildlife □ unusual □ street tree □ screen □ shade □ indigenous □ protected by gov. agency

TREEm HEALTH

Foliage color: □ normal □ chlorotic □ necrotic □ Epichloës? Y N Growth obstructions:

Foliage density: □ normal □ sparse Leaf size: □ normal □ small □ stakes □ wire/lines □ signs □ cables

Annual shoot growth: □ excellent □ good □ poor Twig dieback? Y N □ curb/pavement □ guards

Woundwood development: □ excellent □ average □ poor □ none □ other

Vigor class: □ excellent □ average □ fair □ poor

Major pests/diseases: ____________________

SITE CONDITIONS

Site Character: □ residence □ commercial □ industrial □ park □ open space □ natural □ woodland/forest

Landscape type: □ parkway □ raised bed □ container □ mound □ lawn □ shrub border □ wind break

Irrigation: □ none □ adequate □ inadequate □ excess □ trunk wetted

Recent site disturbance? Y N □ construction □ soil disturbance □ grade change □ line clearing □ site clearing

% grade paved: 0% 10-25% 25-50% 50-75% 75-100% Pavement lifted? Y N

% grade w/ fill soil: 0% 10-25% 25-50% 50-75% 75-100%

% grade grade lowered: 0% 10-25% 25-50% 50-75% 75-100%

Soil problems: □ drainage □ shallow □ compacted □ droughty □ saline □ alkaline □ acidic □ small volume □ disease center □ history of fail

□ clay □ expansive □ slope ______ aspect: __________

Obstructions: □ lights □ signage □ line-of-sight □ view □ overhead lines □ underground utilities □ traffic □ adjacent veg. □

Exposure to wind: □ single tree □ below canopy □ above canopy □ recently exposed □ windward, canopy edge □ area prone to windthrow

Prevailing wind direction: ____________________ Occurrence of snow/snow stems □ never □ seldom □ regularly

TARGET

Use Under Tree: □ building □ parking □ traffic □ pedestrian □ recreation □ landscape □ hardscape □ small features □ utility lines

Can target be moved? Y N Can use be restricted? Y N

Occupancy: □ occasional use □ intermittent use □ frequent use □ constant use

The International Society of Arboriculture assumes no responsibility for conclusions or recommendations derived from use of this form.
# TREE DEFECTS

**ROOT DEFECTS:**

- Suspect root rot: Y N
- Mushroom/conk bracket present: Y N
- ID: 

- Exposed roots: □ severe □ moderate □ low
- Undermined: □ severe □ moderate □ low

- Root pruned: ______ distance from trunk
- Root area affected: ______ %
- Buttress wounded: Y N
- When: 

- Restricted root area: □ severe □ moderate □ low
- Potential for root failure: □ severe □ moderate □ low

- LEAN: ______ deg. from vertical □ natural □ unnatural □ self-corrected
- Soil heaving: Y N

- Decay in plane of stem: Y N
- Roots broken Y N
- Soil cracking: Y N

Compounding factors: 

Lean severity: □ severe □ moderate □ low

---

**CROWN DEFECTS:** Indicate presence of individual defects and rate their severity (s = severe, m = moderate, l = low)

<table>
<thead>
<tr>
<th>DEFECT</th>
<th>ROOT CROWN</th>
<th>TRUNK</th>
<th>SCAFFOLDS</th>
<th>BRANCHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor taper</td>
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<tr>
<td>Bow, sweep</td>
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<tr>
<td>Codominants/forks</td>
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<tr>
<td>Multiple attachments</td>
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<tr>
<td>Included bark</td>
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<tr>
<td>Excessive end weight</td>
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<tr>
<td>Cracks/splits</td>
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<tr>
<td>Hangers</td>
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<tr>
<td>Girdling</td>
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<tr>
<td>Wounds/seam</td>
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<tr>
<td>Decay</td>
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<tr>
<td>Cavity</td>
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<tr>
<td>Conks/mushrooms/bracket</td>
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<tr>
<td>Bleeding/cap flow</td>
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<tr>
<td>Loose/cracked bark</td>
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<tr>
<td>Nesting hole/beehive</td>
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<tr>
<td>Deadwood/subs</td>
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<tr>
<td>Borers/termiteants</td>
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<tr>
<td>Cankers/gaits/barks</td>
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<tr>
<td>Previous failure</td>
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</tbody>
</table>

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**HAZARD RATING**

Tree part most likely to fail:

- Inspection period: ______ annual ______ biannual ______ other ______
- Failure Potential + Size of Part + Target Rating = Hazard Rating

---

**HAZARD ABATEMENT**

- Prune: □ remove defective part □ reduce end weight □ crown clean □ thin □ raise canopy □ crown reduce □ restructure □ shape

- Cabie/Brace: 

- Inspect further: □ root crown □ decay □ aerial □ monitor

- Remove tree: Y N
- Replace? Y N
- Move target: Y N
- Other: 

- Effect on adjacent trees: □ none □ evaluate

- Notification: □ owner □ manager □ governing agency

- Date: 

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**COMMENTS**