



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

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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.



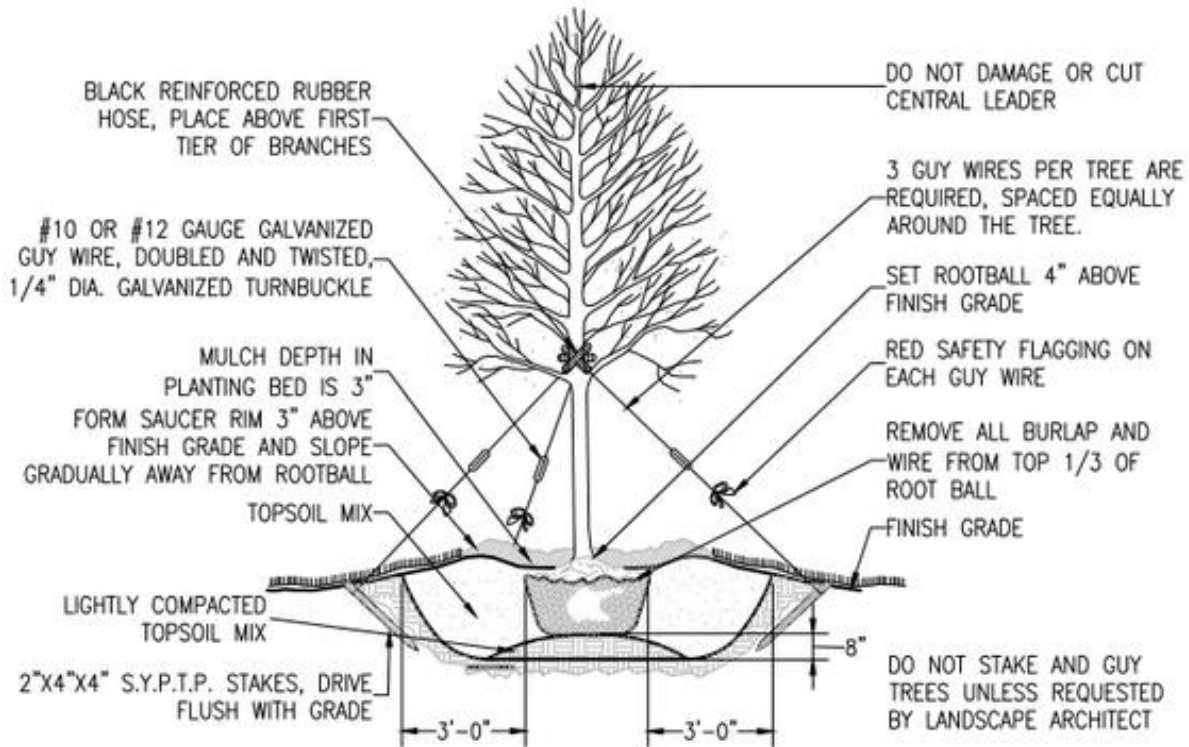
General Selection Criteria

- 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.

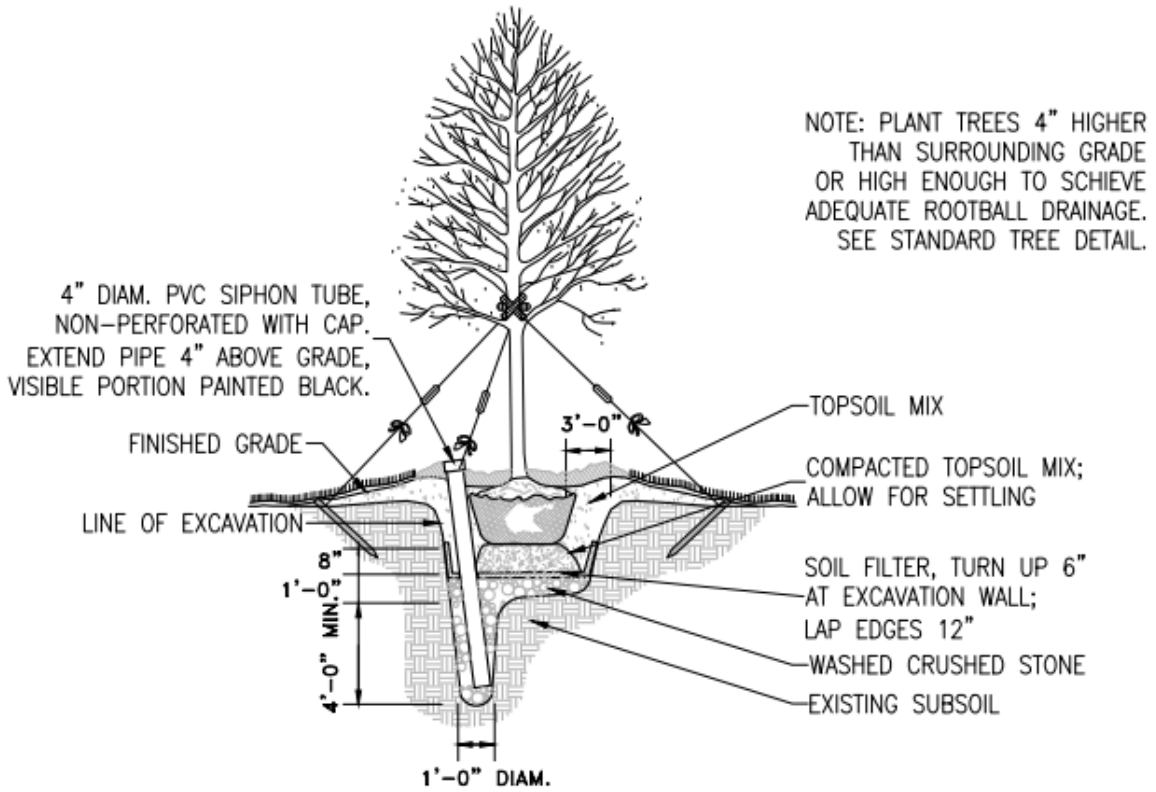
Campus Standards for Planting New Trees:

- (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

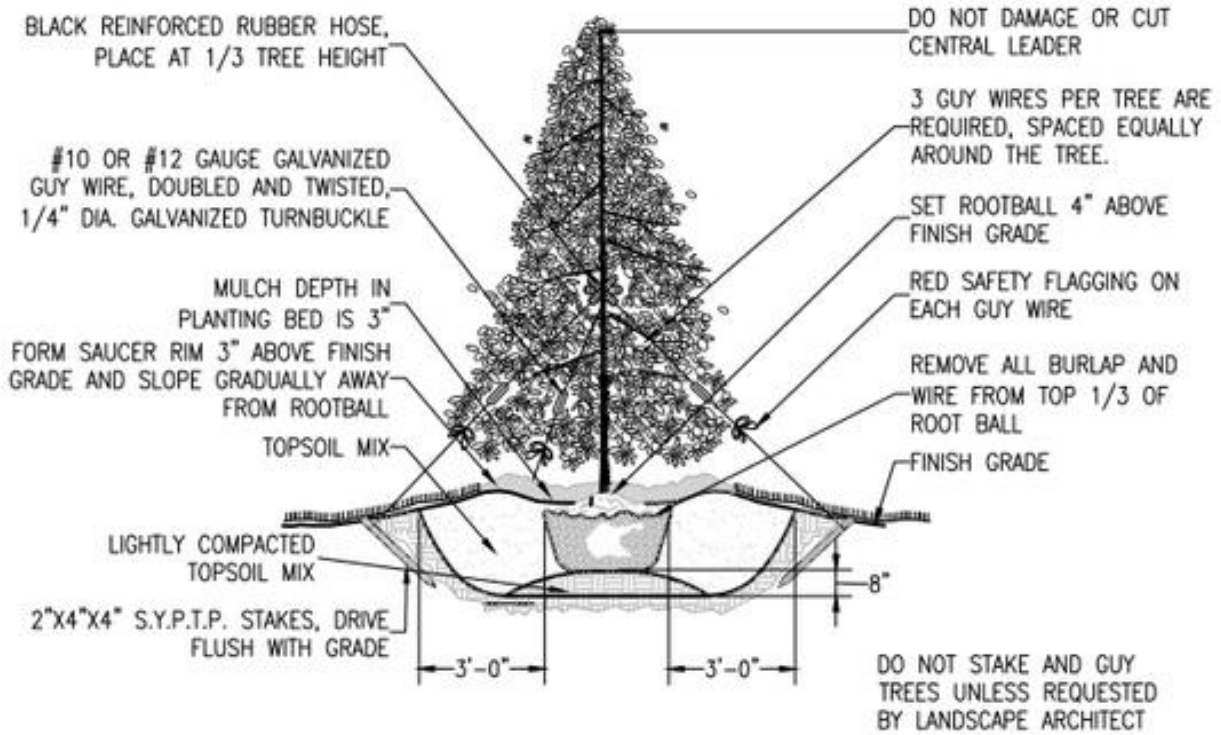
(a)



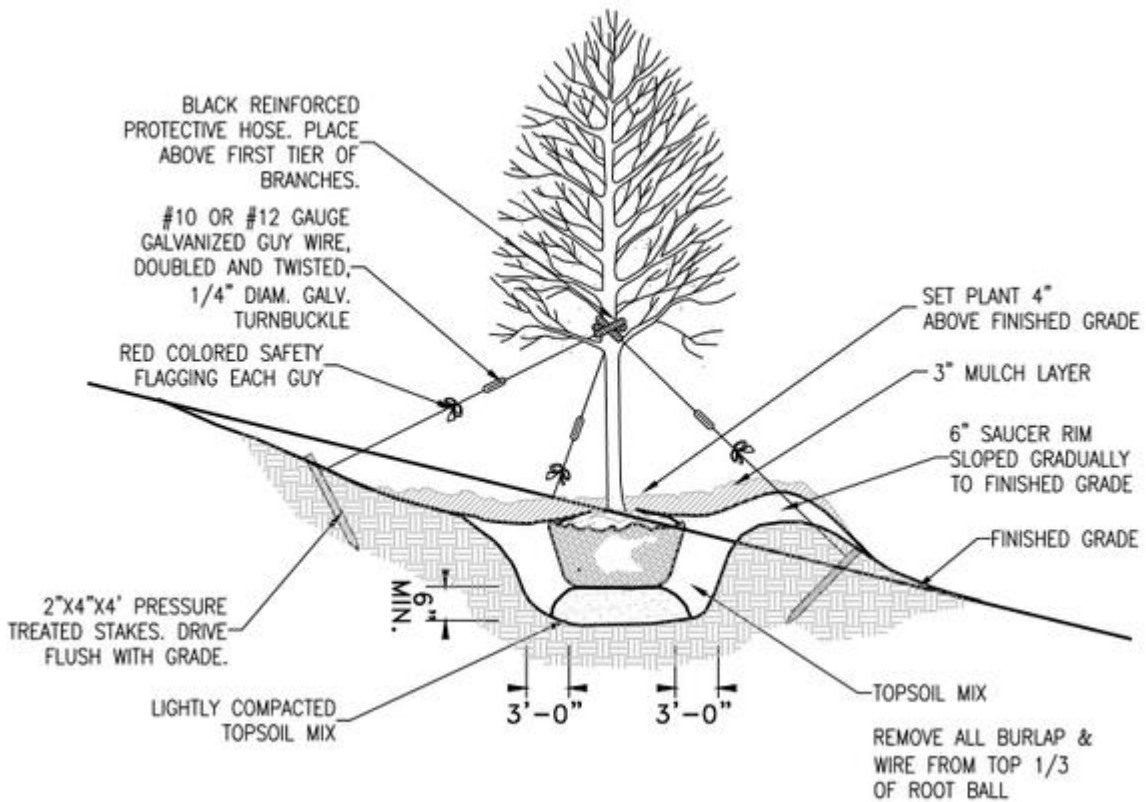
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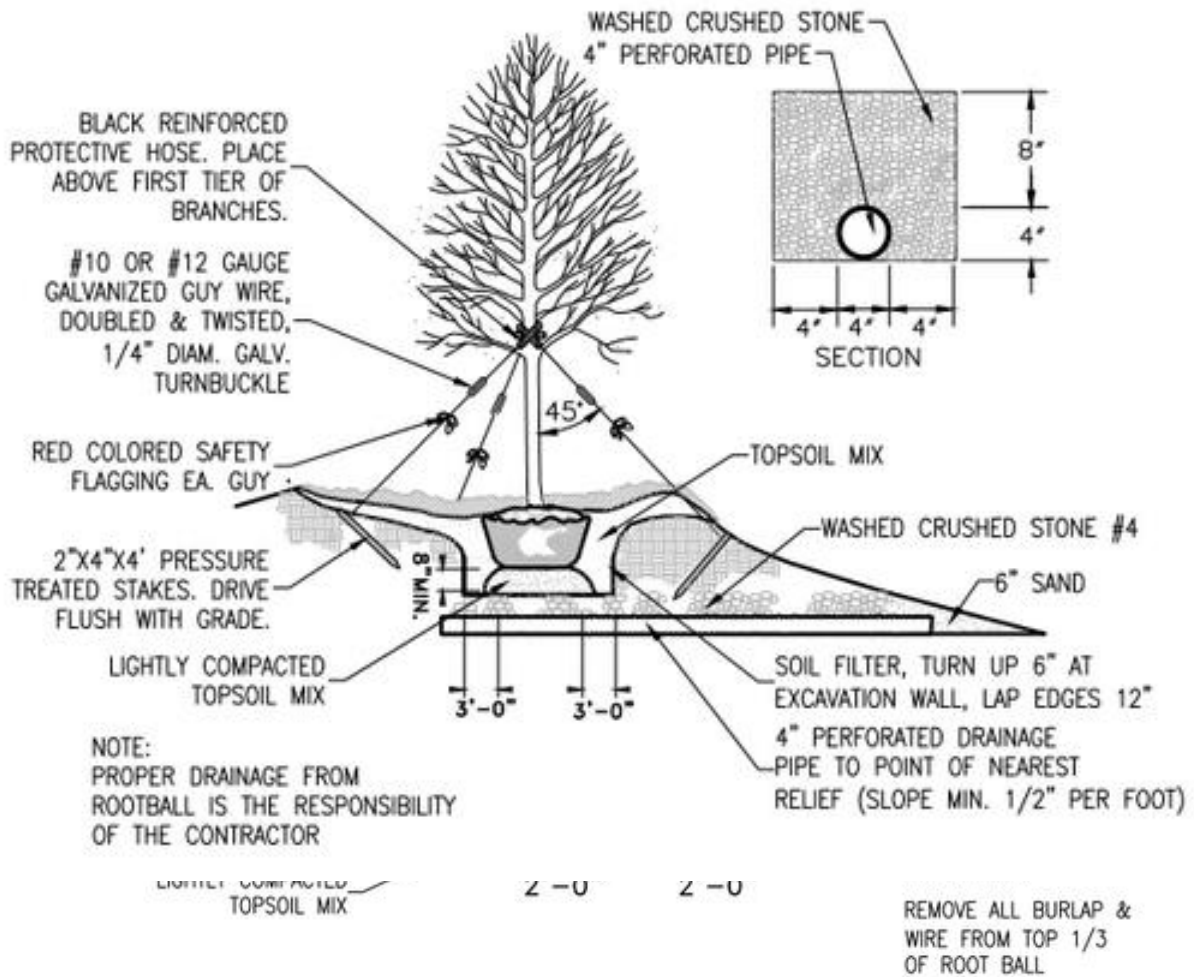


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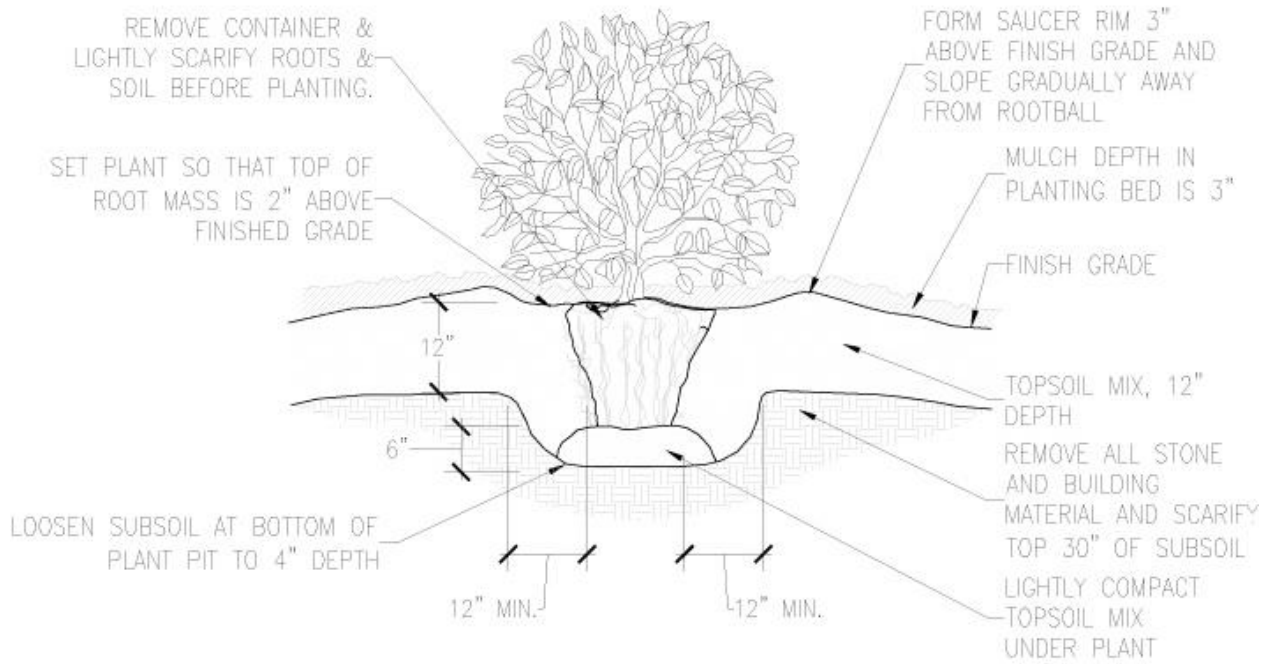


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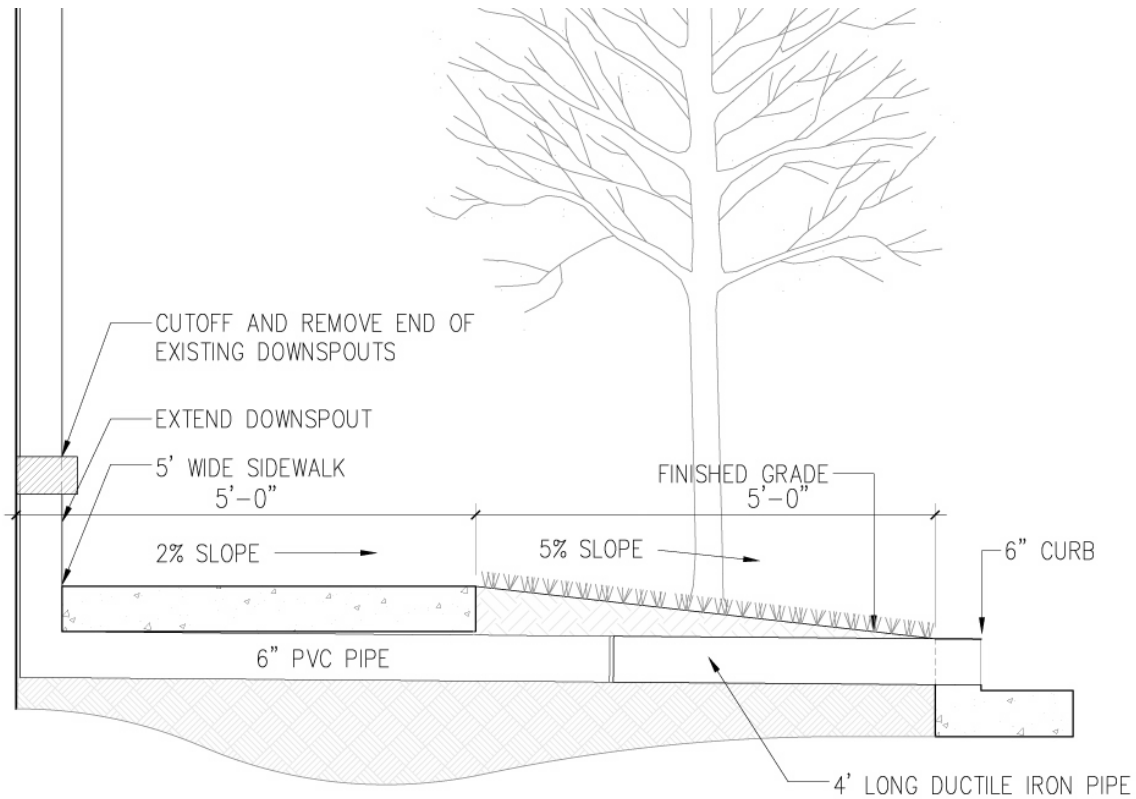
(f)



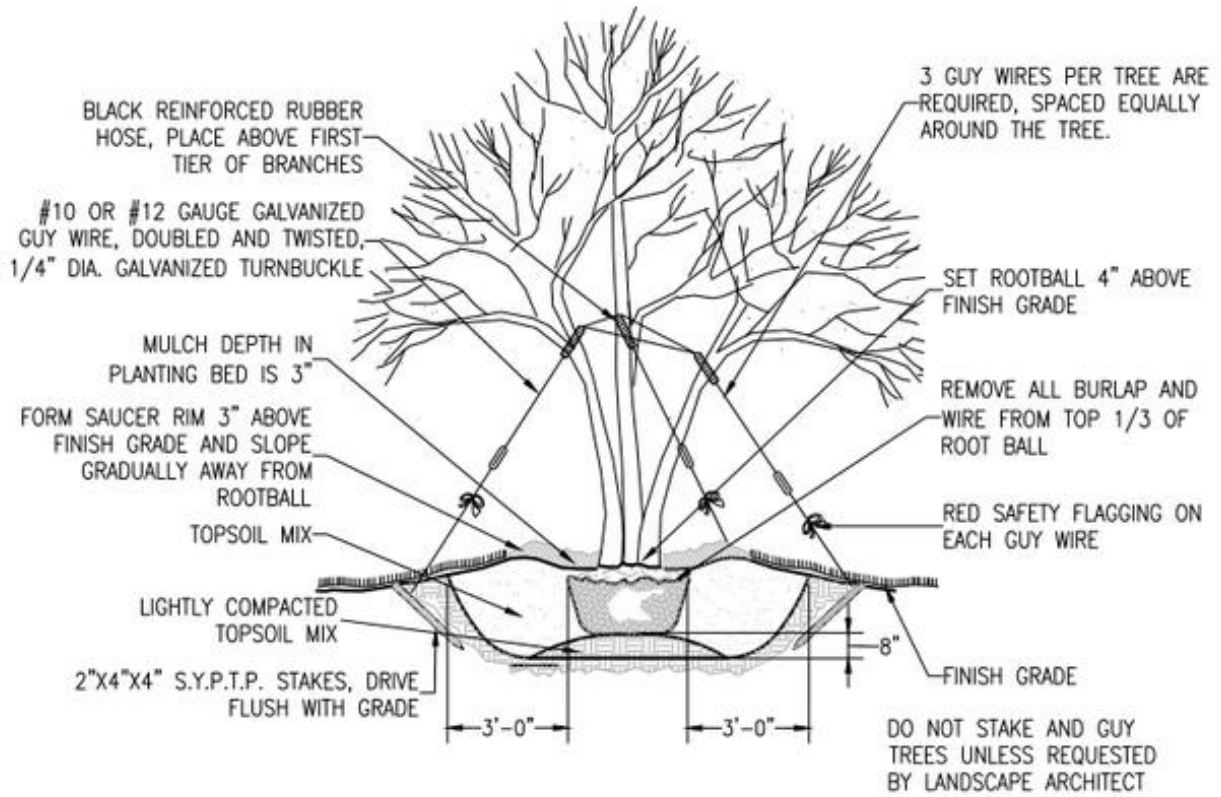
(g)



(h)



(i)



Approved Species for UAB
Flowering

BOTANICAL NAME

Amelanchier arborea
Amelanchier × '*Autumn Brilliance*'
Cercis Canadensis
Cercis canadensis 'alba'
Chionanthus virginicus
Cornus florida 'Cherokee Princess'
Cornus kousa
Cotinus coggyria
Crataegus Phaenopyrum
Franklinia alatamaha
Halesia carolina
Hammelis mollis
Lagerstroemia indica 'Byer's White
L. indica 'Choctaw'
L. indica 'Miami'
L. indica 'Tuscarora'
L. indica 'Victor'
L. indica 'Natchez'
L. indica 'Watermelon Red'Watermelon
L. indica 'William Toovey'
M. soulangiana 'Alba'
Magnolia macrophylla
Magnolia soulangiana
Magnolia stellata
Malus floribunda 'Calloway'
Philadelphus coronaries
Prunus autumnalis
Prunus yedoensis

COMMON NAME

Serviceberry
 Autumn Brilliance Serviceberry
 Redbud
 White Redbud
 Fringe Tree
 Cherokee Princess Dogwood
 Kousa Dogwood
 Smoketree
 Washington Hawthorn
 Franklinia
 Carolina Silverbell
 Chinese Witch-Hazel
 Byer's White Crape Myrtle
 Choctaw Crape Myrtle
 Miami Crape Myrtle
 Tuscarora Crape Myrtle
 Victor Crape Myrtle
 Natchez White Crape Myrtle
 Red Crape Myrtle
 William Toovey Crape Myrtle
 White Saucer Magnolia
 Bigleaf Magnolia
 Saucer Magnolia
 Star Magnolia
 Calloway Crabapple
 Mock Orange
 Autumnalis Cherry
 Yoshino Cherry

Deciduous

BOTANICAL NAME

Acer barbatum
Acer buergeranum
Acer palmatum
Acer palmatum 'Atropurpureum'
A. palmatum 'Dissectum'
A palmatum 'Burgundy Lace'
Acer rubrum 'October Glory'
A rubrum 'Autumn Sunset'
Carpinus caroliniana
Celtis laevigata
Fagus grandifolia
Fraxinus americana
Fraxinus pennsylvanica 'Marshall'
Fraxinus pennsylvanica 'Urbanite'
Ginkgo biloba
Liriodendron tulipifera
Nyssa sylvatica
Pistacia chinensis
Quercus acutissima
Quercus alba
Quercus laurifolia
Quercus lyrata
Quercus nuttalli
Quercus phellos
Quercus prinus
Quercus shumardi
Taxodium distichum
Ulmus parvifolia
Ulmus parvifolia 'Emer I'
Ulmus parvifolia 'Emer II'
Zelkova serrata

COMMON NAME

Southern Sugar Maple
 Trident Maple
 Japanese Maple
 Threadleaf Maple
 Dissectum Japanese Maple
 Burgundy Lace Jap Maple
 October Glory Red Maple
 Autumn Sunset Red Maple
 American Hornbeam
 Sugar Hackberry
 American Beech
 White Ash
 Marshall Ash
 Urbanite Ash
 Ginkgo
 Tulip Poplar
 Black Gum
 Chinese Pistache
 Sawtooth Oak
 White Oak
 Laurel Oak
 Overcup Oak
 Nuttall Oak
 Willow Oak
 Chestnut Oak
 Shumard Oak
 Bald Cypress
 Chinese Elm
 Athena lacebark Elm
 Allee lacebark Elm
 Japanese Zelkova

Evergreen

BOTANICAL NAME

Ilex cornuta 'Bufordii'
Ilex opaca
Ilex X attenuata 'East Palatka'
Ilex X 'Nellie R Stevens'
Ilex X 'Fosterii'
Ilex vomitoria
Ilex vomitoria 'Pendula'
Ligustrum japonicum
Magnolia grandiflora
Magnolia grandiflora 'Bracken Brown Beauty'
Magnolia grandiflora 'Claudia Wannamaker'
Magnolia grandiflora 'Green Giant'
Magnolia grandiflora 'Little Gem'
Magnolia virginiana
Magnolia x 'Ann'
Magnolia x 'Full Eclipse'
Myrica cerifera
Osmanthus americanus
Pinus glabra
Pinus strobus
Pinus taeda
Pinus virginiana
Quercus acuta
Quercus laurifolia
Quercus virginiana
Tsuga canadensis

COMMON NAME

Burford Holly
 American Holly
 East Palatka Holly
 Nellie Stevens Holly
 Foster #2 Holly
 Yaupon
 Weeping Yaupon
 Wax leaf Ligustrum
 Southern Magnolia
 Bracken Brown Beauty Magnolia
 Claudia Wannamaker Magnolia
 Southern Magnolia
 Little Gem Magnolia
 Sweet Bay Magnolia
 Ann Magnolia
 Full Eclipse Magnolia
 Wax Myrtle
 Devilwood
 Spruce Pine
 White Pine
 Loblolly Pine
 Virginia Pine
 Japanese Evergreen Oak
 Laurel Oak
 Live Oak
 Canadian Hemlock

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, landscapers, campus planners, and the general campus population.



UNIVERSITY OF ALABAMA AT BIRMINGHAM
DEPARTMENT OF FACILITIES PLANNING

FACILITIES STANDARD

NAME: Landscape/Hardscape Protection During Construction
NUMBER: 02802

ORIGINAL DATE: 04-Jun-2003
REVISION DATE: 26-Feb-2007

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.

NAME: Landscapes/Hardscape Protection During Construction
NUMBER: 02802

ORIGINAL DATE: 04-Jun-2003
REVISION DATE: 26-Feb-2007

- 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

Prepared by: 
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Mark A. Goska
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Approved by:  3/19/07
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Associate Vice President - Facilities

Appendix B



A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas
TREE HAZARD EVALUATION FORM 2nd Edition

Site/Address: _____
 Map/Location: _____
 Owner: public _____ private _____ unknown _____ other _____
 Date: _____ Inspector: _____
 Date of last inspection: _____

HAZARD RATING:						
_____	+	_____	+	_____	=	_____
Failure Potential		Size of part		Target Rating		Hazard Rating
_____ Immediate action needed						
_____ Needs further inspection						
_____ Dead tree						

TREE CHARACTERISTICS

Tree #: _____ Species: _____
 DBH: _____ # of trunks: _____ Height: _____ Spread: _____
 Form: generally symmetric minor asymmetry major asymmetry stump sprout stag-headed
 Crown class: dominant co-dominant intermediate suppressed
 Live crown ratio: _____ % Age class: young semi-mature mature over-mature/senescent
 Pruning history: crown cleaned excessively thinned topped crown raised pollarded crown reduced flush cuts cabled/braced
 none multiple pruning events Approx. dates: _____
 Special Value: specimen heritage/historic wildlife unusual street tree screen shade indigenous protected by gov. agency

TREE HEALTH

Foliage color: normal chlorotic necrotic Epicormics? Y N
 Foliage density: normal sparse Leaf size: normal small
 Annual shoot growth: excellent average poor Twig Dieback? Y N
 Woundwood development: excellent average poor none
 Vigor class: excellent average fair poor
 Major pests/diseases: _____

Growth obstructions:
 stakes wire/ties signs cables
 curb/pavement guards
 other _____

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 excessive trunk wetted
 Recent site disturbance? Y N construction soil disturbance grade change line clearing site clearing
 % dripline paved: 0% 10-25% 25-50% 50-75% 75-100% Pavement lifted? Y N
 % dripline w/ fill soil: 0% 10-25% 25-50% 50-75% 75-100%
 % dripline 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/ice storms 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 lean: 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)

DEFECT	ROOT CROWN	TRUNK	SCAFFOLDS	BRANCHES
Poor taper				
Bow, sweep				
Codominants/forks				
Multiple attachments				
Included bark				
Excessive end weight				
Cracks/splits				
Hangers				
Girdling				
Wounds/seam				
Decay				
Cavity				
Conks/mushrooms/bracket				
Bleeding/sap flow				
Loose/cracked bark				
Nesting hole/bee hive				
Deadwood/stubs				
Borers/termites/ants				
Cankers/galls/burls				
Previous failure				

HAZARD RATING

Tree part most likely to fail: _____

Inspection period: _____ annual _____ biannual _____ other _____

Failure Potential + Size of Part + Target Rating = Hazard Rating

_____ + _____ + _____ = _____

Failure potential: 1 - low; 2 - medium; 3 - high; 4 - severe

Size of part: 1 - <6" (15 cm); 2 - 6-18" (15-45 cm);

3 - 18-30" (45-75 cm); 4 - >30" (75 cm)

Target rating: 1 - occasional use; 2 intermittent use;

3 - frequent use; 4 - constant use

HAZARD ABATEMENT

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

Cable/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: _____

COMMENTS

