

Tree Protection And Landscaping Manual

City of Aiken, South Carolina

Thomas S. Rapp
Horticulturist

Revised August 2005

City of Aiken Approved Tree List

Botanical name	Common Name	Height	Spread	Suitable for Parking Lot
<u>Large Trees (Deciduous)</u>				
Carya (species)	Hickory	50-100'	25-70'	
Ginko biloba –male	Maidenhair Tree - male	50-75'	50-60'	
Mestasequoia glyptostroboides	Dawn Redwood	70-90'	25-35'	
Nyssa sylvatica	Blackgum	65-75'	25-35'	
Oxydendrum arboreum	Sourwood	40-60'	30-35'	
Quercus acutissima	Sawtooth Oak	50'	70'	
Quercus alba	White Oak	60-100'	60-80'	
Quercus falcata	Southern Red Oak	60-80'	60-70'	
Quercus lyrata	Overcup Oak	35-50'	30-50'	
Quercus michauxii	Swamp Chestnut Oak	60-70'	30-50'	
Quercus phellos	Willow Oak	60-75'	40-60'	yes
Quercus shumardii	Shumard Oak	60-80'	40-50'	
Taxodium distichum	Baldcypress	60-80'	25-35'	
Zelkova serrata	Japanese Zelkova	55-80'	50-75'	deleted 7-19-12
<u>Large Trees (Evergreen)</u>				
Juniperus Virginiana	Eastern Redcedar	40-50'	8-25'	
Magnolia (species)	Magnolia	50-80'	30-40'	
Quercus laurifolia	Laurel Oak	60-70'	50'	yes
Quercus virginiana	Live Oak	60-80'	60-120'	
<u>Small Trees (Deciduous)</u>				
Acer buergeranum	Trident Maple	30-40'	25'	yes
Acer palmatum	Japanese Maple	15-25'	15-25'	
Aesculus pavia	Buckeye, Red	15-20'	15-25'	
Carpinus caroliniana	Hornbeam, American	20-40'	20-30'	
Carpinus betulus 'Fastigiata'	Hornbeam, European	30-40'	15-20'	
Cercis canadensis	Eastern Redbud	20-30'	15-30'	
Chionanthus virginicus	Fringetree	12-15'	10-15'	
Cornus (species)	Dogwood	15-40'	15-30'	
Koelreuteria paniculata	Goldenraintree	30-40'	30-40'	
Lagerstroemia indica	Crape-Myrtle *	10-30'	15-25'	
Parrotia persica	Persian Parrotia	20-40'	20-40'	
Pistacia chinensis	Chinese Pistache	25-35'	25-35'	
Prunus x incamp 'okame'	'Okame' Cherry	15-25'	20'	
Prunus x yedoensis	Yoshino Cherry	35-45'	35-45'	
Ulmus parvifolia	Chinese Elm	40'	50'	yes
Vitex agnus-castus	Chastetree	10-15'	15-20'	
<u>Small Trees (Evergreen)</u>				
Ilex (species)	Holly	15-40'	8-20'	
Ligstrum japonicum	Waxleaf Ligustrum	8-12'	15-25'	
Magnolia grandfloria	Magnolia, 'Little Gem'	15-40'	20-30'	
Quercus myrsinifolia	Chinese Evergreen Oak	20-40'	20-30'	yes
Osmanthus (species)	Tea-Olive	10-12'	10-14'	

* Crape Myrtle will not be approved for use adjacent to street rights-of-way unless there are overhead power lines.

City of Aiken, South Carolina Protected Tree List

Trees on this list are protected by the Tree Protection provisions of the Zoning Ordinance and if Significant or Grand, must be shown on any required tree survey.

Large Trees (Deciduous)

Botanical Name	Common Name	Height	Spread
<i>Acer barbatum</i>	Southern Sugar Maple	50-60'	25-40'
<i>Acer rubrum</i>	Red Maple	40-50'	25-35'
<i>Betula nigra</i>	River Birch	20-40'	16-20'
<i>Carya (species)</i>	Hickory	50-100'	25-70'
<i>Carya glabra</i>	Pignut Hickory	50-65'	30-40'
<i>Carya ovata</i>	Shagbark Hickory	60-80'	25-35'
<i>Celtis laevigata</i>	Sugar Hackberry	50-70'	50-70'
<i>Celtis occidentalis</i>	Common Hackberry	55-80'	40-60'
<i>Cercidiphyllum japonicum</i>	Katsura Tree	40-60'	35-60'
<i>Cryptomeria japonica</i>	Japanese Cryptomeria	50-60'	15-20'
<i>Fagus grandifolia</i>	American Beech	50-75'	40-80'
<i>Fraxinus pennsylvanica</i>	Green Ash	60-70'	45'
<i>Ginkgo biloba</i>	Maidenhair Tree	50-75'	50-60'
<i>Gleditsia triacanthos</i>	Honey Locust	50-75'	35-50'
<i>Gordonia lasianthus</i>	Loblolly Bay	50-60'	10-15'
<i>Liquidambar styraciflua</i>	Sweet Gum	75'	50'
<i>Liriodendron tulipifera</i>	Tulip Poplar	80-120'	25-40'
<i>Metasequoia glyptostroboides</i>	Dawn Redwood	70-90'	25-35'
<i>Nyssa sylvatica</i>	Black Gum	65-75'	30-35'
<i>Platanus occidentalis</i>	Sycamore	75-90'	60-70'
<i>Quercus acutissima</i>	Sawtooth Oak	50'	70'
<i>Quercus alba</i>	White Oak	60-100'	60-80'
<i>Quercus coccinea</i>	Scarlet Oak	60-75'	45-60'
<i>Quercus falcata</i>	Southern Red Oak	60-80'	60-70'
<i>Quercus laurifolia</i>	Laurel Oak	60-70'	50'
<i>Quercus lyrata</i>	Overcup Oak	35-50'	30-50'
<i>Quercus michauxii</i>	Swamp Chestnut Oak	60-70'	30-50'
<i>Quercus nigra</i>	Water Oak	50-60'	60-70'
<i>Quercus palustris</i>	Pin Oak	50-75'	35-40'
<i>Quercus phellos</i>	Willow Oak	60-75'	40-60'
<i>Quercus rubra</i>	Red Oak	60-70'	50-60'
<i>Quercus shumardii</i>	Shumard Oak	60-80'	40-50'
<i>Salix babylonica</i>	Weeping Willow	30-50'	20-40'
<i>Sassafras albidum</i>	Sassafras	30-60'	25-40'
<i>Taxodium distichum</i>	Bald Cypress	60-80'	25-35'
<i>Zelkova serrata</i>	Japanese Zelkova	55-80'	50-75'

Protected Tree List (Continued)

Large Trees (Evergreen)

Botanical Name	Common Name	Height	Spread
<i>Cedrus deodara</i>	Deodara Cedar	40-60'	25-30'
<i>Juniperus virginiana</i>	Eastern Redcedar	40-50'	8-25'
<i>Magnolia</i> (species)	Magnolia	50-80'	30-40'
<i>Magnolia grandiflora</i>	Southern Magnolia	60-80'	30-40'
<i>Pinus palustris</i>	Longleaf Pine	60-80'	30-40'
<i>Pinus taeda</i>	Loblolly Pine	50-80'	30'
<i>Pinus thunbergiana</i>	Japanese Black Pine	25-30'	20-35'
<i>Quercus laurifolia</i>	Laurel Oak	60-70'	50'
<i>Quercus virginiana</i>	Live Oak	60-80'	60-120'
<i>Sabal palmetto</i>	Cabbage Palm	40-50'	10-12'
<i>x Cupressocyparis leylandii</i>	Leyland Cypress	35-50'	15-25'

Small Trees (Deciduous)

<i>Acer buergerianum</i>	Trident Maple	30-40'	25'
<i>Acer campestre</i>	Hedge Maple	30-40'	25'
<i>Acer ginnala</i>	Amur Maple	15-20'	15-20'
<i>Acer palmatum</i>	Japanese Maple	15-25'	15-25'
<i>Aesculus pavia</i>	Buckeye, Red	15-20'	15-25'
<i>Carpinus betulus</i> 'Fastigiata'	Hornbeam, European	30-40'	15-20'
<i>Carpinus caroliniana</i>	American Hornbeam	20-40'	20-30'
<i>Cercis canadensis</i>	Eastern Redbud	20-30'	15-30'
<i>Cercis chinensis</i>	Chinese Redbud	15-20'	6-10'
<i>Chionanthus virginicus</i>	Fringetree	12-15'	10-15'
<i>Chionanthus retusus</i>	Chinese Fringetree	20'	10-15'
<i>Cladastris kentukea</i>	American Yellowwood	30-50'	40-50'
<i>Cornus kousa</i>	Kousa Dogwood	15-20'	15-20'
<i>Cornus</i> (species)	Dogwood	15-40'	20-30'
<i>Halesia Carolina</i>	Carolina Silverbell	20-40'	15-30'
<i>Koelreuteria paniculata</i>	Golden Rain Tree	30-40'	30-40'
<i>Lagerstroemia fauriei</i>	Japanese Crape Myrtle	35-50'	25-35'
<i>Lagerstroemia indica</i>	Crape Myrtle	10-30'	15-25'
<i>Magnolia x soulangiana</i>	Saucer Magnolia	25-30'	20-30'
<i>Malus hybrida</i>	Flowering Crabapple	10-25'	10-25'
<i>Ostrya virginiana</i>	American Hophornbeam	30-40'	25-35'
<i>Parrotia persica</i>	Persian Parrotia	20-40'	20-40'
<i>Pistacia chinensis</i>	Chinese Pistache	25-35'	25-35'
<i>Prunus serrulata</i>	Kwanson Cherry	15-25'	15-25'
<i>Prunus x incamp</i> 'Okame'	Okame Cherry	15-25'	20'
<i>Prunus x yedoensis</i>	Yoshino Cherry	35-45'	35-45'
<i>Styrax japonicus</i>	Japanese Snowball	20-30'	15-25'
<i>Stewartia monadelph</i>	Tall Stewartia	25-35'	15-25'
<i>Ulmus parvifolia</i>	Chinese or Lacebark Elm	40'	50'
<i>Vitex agnus-castus</i>	Chastetree	10-15'	15-20'
<i>Vitex negundo</i> -'Heterophylla'	Cutleaf Chastetree	10-15'	15-20'

Protected Tree List (Continued)

Small Trees (Evergreen)

Botanical Name	Common Name	Height	Spread
Butia capitata	Pindo Palm	15-25'	10-15'
Eriobotrya japonica	Loquat	20-30'	30-35'
Ilex (species)	Holly	15-40'	8-20'
Ligustrum japonicum	Waxleaf Ligustrum	8-12'	15-25'
Magnolia grandiflora	Magnolia, 'Little Gem'	15-40'	20-30'
Magnolia virginiana	Sweet Bay Magnolia	40-50'	15-25'
Myrica cerifera	Wax Myrtle	15-20'	20-25'
Osmanthus (species)	Tea Olive	10-20'	10-14'
Pinus virginiana	Virginia Pine	20-40'	20-35'
Prunus caroliniana	Carolina Cherry Laurel	25-40'	15-25'
Prunus Laurocerasus	Common Cherry Laurel	10-18'	25-30'
Trachycarpus fortunei	Windmill Palm	20-40'	6-10'
Quercus acuta	Japanese Evergreen Oak	20-40'	8-16'
Quercus myrsiniflora	Chinese Evergreen Oak	20-40'	20-30'

General Notes:

- A) The Approved Tree List contains the readily available tree species which can be used in landscapes in Aiken. All the trees while maybe not native, will grow in this location if planted and maintained properly.

Any trees not listed here may possibly be used per approval by the City Horticulturist.

Native or natural landscaping is an option left to the owner of the site. It must, however, conform to all requirements of the Ordinance and be approved by the Planning Director and the City Horticulturist.

- B) Only trees from the small tree list should be planted under existing power lines. All overhead utilities should be shown on site survey.

An automatic irrigation system is required for all new landscaped areas to ensure long-term survival.

- C) Prior to issuance of a grading permit one or several of these specifications shall-all trees to be saved must be protected at a distance of 1 foot radius per inch DBH using orange construction fencing. The installation must be approved by the Planning Department and must remain until all site work, except for the final landscaping, is complete.

After construction is complete and the protective barriers are removed, all existing trees must be mulched with at least 3" of organic mulch and there will be no activity within the dripline of any Specimen or Significant Trees. Any work or activity to be done will only be done with the approval of the City Horticulturist.

- D) Contractors and/or developers must have a final landscape inspection by the Zoning Official before the Certificate of Occupancy can be issued by the Building Official. The Zoning Official can be reached at:

803-642-7608 Planning Department

It is advisable that the Zoning Official be notified at least five (5) days in advance of the desired Certificate of Occupancy.

- E) The next section contains a list of Standard Maintenance Procedures to be used in a landscape maintenance program to comply with Section 7.2 of the Ordinance.

STANDARD MAINTENANCE PROCEDURES FOR LANDSCAPED AREAS

Litter Control

- Trash Cans - all trash cans in the landscape shall be emptied on a regular basis
- Planted Areas - shall remain free of cans, paper and other debris
- Paved Areas - all paved surfaces should be swept or cleaned on a regular basis
- all cracks in pavement must be kept free of weeds at all times

Turf Maintenance

- Mowing - turf areas shall be mowed at least every two weeks
- Edging - all walks and shrub beds shall be edged often enough so as not to allow grass and weeds to grow over walks or into planted areas
- Overseeding - shall be the choice of the individual owner but mowing must conform to schedule as done for warm season turf

Shrub/Flower Bed Maintenance

- Weed Control - beds should remain free from weeds at all times (weeds-noxious or unwanted vegetative growth not normally tolerated in the landscape)
- Pruning/
Deadheading - shrubs shall remain in a controlled condition at all times so as not to look unkempt or prevent a hazard (as in planter islands)
- flowering plants (annuals, perennials, etc.) shall remain in good condition at all times and dead or dying flower heads shall be removed on a regular basis
- Mulch - organic mulch shall remain in good condition at all times to cover all areas (no bare spots), may be either pine straw, bark, or other organic material. Non-organic mulch is not acceptable.

Tree Maintenance

- Pruning
 - trees shall be maintained in a healthy condition at all times
 - any deadwood in trees shall be removed so as to prevent a hazard or unsightly condition
 - all sucker growth from the base or trunks of trees shall be removed to allow for a clear trunk
 - at any time should the head of a tree lose 50% or more of its live growth (or newly planted trees) it shall be removed an/or replaced
 - at no time will sucker growth be deemed a satisfactory replacement for the death and removal of the head of a tree
 - no topping or heading back of a tree shall be permitted which involves the cutting back to a stub, bud, or lateral branch not large enough to assume the terminal role. Crown reduction shall be used to reduce the size of a tree and is best accomplished by cutting limbs back to laterals that are at least 1/3 the diameter of the parent limb.
 - Maintenance of trees shall take their natural shape and growth patterns into account. Trees that are intended to grow full to the ground, such as Magnolias, shall not be limbed up
 - the percentage of foliage to be removed should not exceed 25% of the crown.

Avoiding Damage During Construction

Tree Protection Barriers

Barriers that extend beyond the drip lines of trees are essential to protecting trees during construction. The City requires orange construction fencing at a minimum distance of one foot radius for every inch DBH (Diameter at Breast Height). Clusters of trees should be fenced together. No activity, storage of materials or parking of vehicles is permitted within in the tree protection area.

Tree protection must remain intact and in place throughout the construction of the building, infrastructure, parking, and driveways is complete and until the site is ready for installation of the landscaping.. The location of the fencing cannot be changed without approval of the Planning Department.

Encroachment Into Drip Line

In cases where the trees to be saved cannot be fully protected to the required extent, the encroachment into the protected area must be indicated on the site plan and effort must be made to do as little damage to the tree as is possible. Within the protective fencing the area should be augmented with 3 inches of organic mulch prior to the beginning of work. The key to tree survival is the protection of the roots during and after construction including preventing soil compaction and severed roots. This may require:

- Additional fertilization
- Above-grade curbing
- The elimination of curbing
- Gravel rather than pavement
- Root bridging
- Tunneling under roots
- Retaining walls
- Rerouting utility lines

Breaks and Scrapes

Any breaks or scrapes should be repaired immediately.

Soil Chemistry

To prevent adverse effects of changes to the soil chemistry

- Spread heavy plastic to protect the ground where concrete is mixed or where sheetrock will be cut. The alkalinity can change the soil pH.
- Do not use wood products containing pentachlorophenol which is deadly to roots. CCA-treated timber (greenish colored) is a safer alternative.
- Paint brushes and tools should not be cleaned under trees.
- Dispose of chemical waste (paint thinner, engine oil, etc.) properly

Nails

Nothing should be attached to trees with staples, nails, screws, or other fastening devices. Use posts for signs, electrical wires, pulleys, etc.

Tree Planting and Maintenance Standards

Tree planting and maintenance, including pruning, must comply with the standards of the International Society of Arboriculture published in the American National Standards for Tree Care Operation published by the American National Standard Institute, Inc. (ANSI) 1995 edition.

Undisturbed Buffer Definition

A strip of land required as a condition of development in which no existing vegetation is to be removed except diseased, dead or dying trees and shrubbery and noxious plant material (e.g. Wisteria, Ivy, Kudzu, and other plants as approved by the City Horticulturist) that may compromise the health of the trees and shrubbery and in which additional trees and or shrubbery may be required at the discretion of the Planning Director in order to form a dense evergreen buffer.

Bradford Pear Replacement Policy

Because Bradford Pear trees have a short life span and tend to split, and because the purpose of the Landscaping and Tree Preservation provisions of the Zoning Ordinance is to promote installation of high-quality trees, removal and replacement of healthy Bradford Pears will be considered by the City Horticulturist on a case-by-case basis. Any Bradford Pear removed under this policy will be replaced by a minimum two-inch-caliper tree from the Approved Tree List unless deemed impractical by the Planning Director.

Amended January 23, 2007