1 Site and Landscape Design Guidelines

1.1 Hardscape.

Site development

The campus has a wealth of architectural representation. New landscape design should open views to historic and architecturally significant existing buildings. Site development should create a variety of open space types and experiences for campus users. Site amenities and plantings should enhance campus security through careful attention to circulation routes, lighting and maintaining visibility.

Site grading and stormwater management impact landscape development and ultimately the 'look' of the University campus. The design professional shall prepare a site development plan illustrating a comprehensive site plan that is specifically designed for the chosen site. Site development plan must demonstrate consideration for unique site features including topography, hydrology and existing vegetation and acceptable means and methods to preserve aspects of the site deemed desirable by the University. Mass clearcutting or regrading of a site to the extent that all native or existing conditions are lost will not be accepted by the University.

- Design professional shall include the services of a landscape architect registered in the State of Alabama during the preparation of the initial site development plan.
- Landscape design shall be considered in the development of grading and drainage design to achieve a comprehensive and aesthetically pleasing solution to site development.
- The contractor is responsible for obtaining approval for subgrades from the University's representative prior to placement of topsoil or mixed soil for planting.
- Building downspouts and drainage shall be routed to underground stormwater systems to reduce erosion in landscape areas.
- Yard inlets and area drains in landscape areas shall be located in grass areas where practical instead of planting beds.

Hardscape Design

Pedestrian pavements shall include a mix of scored concrete and brick pavers.

- Pavement patterns in entry plazas and at feature areas shall include a brick field in a herringbone pattern surrounded by scored concrete banding. Pavement patterns on pedestrian walkways may include scored concrete, or a scored concrete field and brick banding.
- All walkways for building entrances, plazas and feature areas shall consist of compacted dense grade base, concrete subslab, mortar bed and brick pavers or concrete topping slab.
1. **Application.** Hardscape is to be used to provide a durable, all-weather surface to accommodate pedestrian activity and outdoor gatherings and activities. Wherever possible, hardscape materials shall be chosen to maximize pervious surface area.

2. **Location.** Hardscape is intended generally for sidewalks and paths, plazas/building entrances, transit stops, and in gathering places adjacent to buildings or building groups. Materials should be chosen based on the activities intended for the location, including such considerations as the use of a combination of materials for prominent locations and compatibility with the materials and styles of adjacent buildings.

   *Sidewalks and Paths.* Most sidewalks and paths require only a concrete or asphalt surface while more prominent pedestrian areas, such as a concourse, may require additional accent surfaces, such as pavers, to visually reflect their importance. Pedestrian sidewalks shall be a minimum of 8' wide.

   *Plazas, Building Entrances and Gathering Places.* A combination of hardscape materials shall be used to distinguish building entrances, public spaces and gathering places. Suitable materials include brick, cast and natural stone, and concrete.

   *Transit Stops.* A suitably-sized, all-weather surface shall be provided along with other furnishings for transit stops.

1.2. **Surface Parking.**

Surface parking areas shall be treated as service or support areas and minimized from public views, to degree practicable, by location and/or through landscape screens. Parking areas shall also be arranged properly for vehicular and pedestrian safety and landscaped for shade and scale.

1. **Disposition in Relation to Buildings, Open Spaces and Circulation Areas.** Surface parking areas should be located away from open spaces and streets. Preferably parking lots are located internally to each “block” behind buildings. In this manner, access to and use of the lot may be shared among neighboring buildings.

2. **Pedestrian Access.** Convenient pedestrian paths should be designed into the arrangement of large parking lots to direct pedestrians to designated crossings and pedestrian linkages.

3. **Parking Lot Landscaping.** Landscaping shall be provided along the perimeter and within the interior of surface parking lots. Landscape areas shall be protected from vehicle encroachment by wheel stops located no less than three feet six inches from the curb or other landscape edge.

   *Perimeter Landscaping.* Landscaping shall be provided along the perimeter of any parking areas not bounded by a building. Such landscaping, consisting of all or a combination of hedge, trees, and wall/fence, defines the edge of the adjacent public space and limits access to and from the parking area to designated locations.

Hedges and walls/fences shall be between three to four feet in height.
Interior Landscaping. Landscaping islands shall be provided within parking lots, sized to provide sufficient root growth for canopy and/or understory trees. Landscape islands and circulation should be arranged to break down the overall scale of a large surface parking area so that it might be experienced as a group of small parking areas. Parking lots shall contain one minimum 20’ wide landscape median for every 3 bays of parking to break asphalt expanse.

Dimensional requirements?

Parking Lot Lighting. See §1.3.

1.3. Lighting.

1. Application and Location. Lighting shall be provided for safety and designed consistently throughout the campus. Lighting shall be provided in the following locations:

- Along streets, sidewalks, and other paths
- Within open spaces and parking lots
- At building entrances
- In locations appropriate for accenting of buildings, signage, gateway, and landscape elements

2. General Lighting Guidelines. For the lighting of landscaping, buildings, signs and gateway features, the following guidelines shall apply:

Fixtures. Pole-mounted fixtures shall be ornamental and of a pedestrian-scale generally. Where taller fixtures are needed, heights above 16 ft are discouraged. In no case, shall fixtures taller than 20 ft be permitted. This shall not apply to lighting for sports and recreational fields.

Avoid overly bright lights and frontal floodlighting. Use lower-wattage light sources. Lighting of landscape elements from a distance can interfere with nighttime vision and is discouraged. Up-lighting should only be used where it will not interfere with the vision of passersby.

Minimize light trespass and glare. Fixtures should be designed to direct light exactly where it is intended and appropriate shielding should be used to prevent light trespass and glare.

Choose appropriate light sources. Consideration should be given to the intensity and color of the light to ensure it complements the elements to be illuminated. High-pressure sodium lighting is prohibited.

Design and locate fixtures for service accessibility and safety. Fixtures should be of a type that is easy and safe for changing of lamps. Accessible locations encourage more regular maintenance. Tamper-resistant hardware should be used wherever a fixture is accessible to the public. Place “hot” fixtures so that physical contact with a hot lamp or fixture is normally avoidable.

Connect lighting to a control system. Lighting should be connected to a photocell to turn fixtures on and a time clock to turn them off.
3. **Architectural Lighting.**

*Highlight a building's most prominent features.* When the exterior of a building is to be illuminated, those features which are unique or significant about the building should be highlighted. Blank wall spans and other indistinct features should not be lighted except as needed for safety. “Close-in” lighting can be used to accentuate textures of building finishes such as stone and brick.

*Integrate lighting equipment into the building design.* Fixtures and wiring should be concealed by architectural elements. This ensures that equipment has a minimal visual impact during the daytime. Alternatively, building-mounted fixtures shall be designed as integral features consistent with the building’s geometry and architectural style.

*Avoid ground-based accent lighting.* Ground-based building lighting may interfere with the vision of passersby. Where lighting is desired at the lower portions of the building, fixtures should be attached to the building rather than being placed in the landscape.

*Design parking deck lighting to minimize light pollution.* Direct and indirect lighting shall be contained to minimize stray light. Idle modes should be used during off-peak hours to reduce light pollution and energy consumption.

4. **Site Lighting.**

*Fixtures along streets, sidewalks and paths.* Pedestrian-scale, pole-mounted lights shall be provided along streets, sidewalks, and paths. Spacing between pedestrian-scale fixtures shall be no greater than __ feet. Where illumination is also needed along the vehicular way, a combination fixture shall be used, with the taller fixture lighting the street and the pedestrian-scale fixture lighting the adjacent sidewalk, path or open space. Illumination shall be consistent with §1.3.5.

*Fixtures within parking lots.* Lighting shall be provided at the perimeter of and within surface parking areas. Light fixtures should be of the least height (less than 30') to provide the desired lighting level and shall be located in landscaping islands. Parking lot lighting shall use a shoe-box type fixture with no visible light source. Building-mounted lights may be used in combination with pole-mounted lights to provide adequate illumination in those portions of the parking lot near a building. Illumination shall be consistent with §1.3.5.

*Fixtures within open spaces.* Lighting in open spaces shall be provided through pedestrian-scale, pole-mounted lighting, lighted bollards and, where practical, building-mounted lighting.

*Fixtures at building entrances.* Grand building entrances, such as those which front on a plaza, shall include pedestrian-scale pole-mounted fixtures and building-mounted fixtures. More modest building entrances may include only building-mounted fixtures.

*Landscape lighting may be used selectively to highlight specimen trees and plantings and to define major building entrances.* Fixture selection should strike a balance between minimizing the number of units required to accomplish the desired effect and the ability to conceal light sources from view. In general, lamping for landscape illumination should be metal halide.
5. **Illumination Standards.** Lighting shall be provided of a height, spacing and intensity so as to create comfortable, safe and consistent illumination. Lighting shall be shielded to prevent glare and designed so that illumination does not exceed 0.2 footcandles on abutting community residential edges or 0.5 footcandles on abutting community nonresidential edges.

For streets, illumination at pavement level shall be maintained between 0.5 and 1.0 footcandles. The ratio of average to minimum illumination shall be no less than 4:1*.

For sidewalks, paths, and open spaces, horizontal illumination at grade level shall be no less than 0.5 footcandles. Vertical illumination at six feet above grade level shall be no less than 1.0 footcandles. Light sources shall have an initial output of no more than 1000 lumens, generally. The ratio of average to minimum illumination shall be no greater than 5:1*.

For parking lots, illumination at pavement level shall be no less than 0.5 footcandles for low-to-moderate activity areas and 1.0 footcandles for higher-activity areas. The ratio of average to minimum illumination shall be 5:1*.

For building entrances, illumination shall be maintained between 2.5 and 5.0 footcandles.

Lighting for signs shall be in accordance with the Wayfinding Graphics Master Plan.

*The ratio of average to minimum illumination may be higher in peripheral locations, such as adjacent to natural areas or community residential edges, where decreased illumination along the site boundary would be more appropriate.

1.4. **Landscape Design and Planting Materials.**

Tree Canopy and Existing Plantings

The University places a high value on its existing tree canopy and requires its partners in development, contractors and all vendors working on campus to respect and preserve existing trees.

- **Tree Protection Fencing.** Chain-link fencing shall be used to protect all trees and major plant material designated by the University to remain. The entire area below or within the drip line shall be enclosed with fencing to protect root systems during construction. The University will monitor protection fencing and will assess fines up to $1,000 per infraction if tree protection fencing is not kept in place and maintained during construction.

Landscape Design

Planting design is an important component in enhancing the appearance of a successful campus. Plant selection, quality of plant material and ongoing maintenance should be consistent throughout the campus to convey the visual image of a single integrated open space.

Plant material selection should enhance surrounding architecture and open space. Smaller flowering or accent trees may be used at gateways and buildings for emphasis. Shrub plantings at gateways and individual buildings should rely on evergreen material for year-
round interest with the addition of flowering shrubs and seasonal color for accent. Larger evergreen trees and shrubs should be used for massing and scale at buildings, and to screen service areas.

Planting and irrigation design shall promote water conservation through selection of plant materials with low water requirements, by grouping plants with similar water needs together, and by utilizing water-conserving irrigation design and equipment.

- Grass and trees shall be the primary plant material palette.
- Planting design in general shall on an organized simple scheme with primary use of evergreen material.
- Place emphasis on the selection of native trees and trees with spring and/or fall color.
- All trees shall be hand-selected by the University’s representative at the growing source to ensure consistent quality.
- Shrubs shall be used to define spaces as needed but shall not interrupt the open flow of grassed areas.
- Select shrub material that performs well with limited pruning.
- All shrubs shall be planted a minimum of five (5') feet from buildings for ease of building maintenance and window cleaning.
- To the extent possible use walkways as the edge of planting beds to reduce edging of lawn.

Plant materials used for landscaping purposes under these guidelines shall be selected from the Recommended Plant List. In general, plants with similar water and maintenance needs shall be grouped into locations to optimize water use and maintenance. High maintenance areas shall be limited to building entrances and other high-traffic areas.

1. **Recommended Plant List.** The recommended plant list classifies planting materials under the following categories: large trees, small trees, shrubs, groundcover and vines, perennials, ornamental grasses and annuals. The recommended plant list is attached at the end of these Guidelines.

2. **Trees.** Trees shall be used in accordance with the Campus Landscape Plan to provide shade; define edges of streets, paths and open spaces; and to support the intended pedestrian-scale of the Campus.

   Street and Path Trees. Street trees shall be located within the planting strip, between the sidewalk and curb. The planting strip shall be of sufficient width to prevent damage to the curb or sidewalk due to root spread. Streets with generous building setbacks should include canopy trees to reinforce the intended street width proportions. Streets with narrow building setbacks (or build-to lines) may use ornamental or understory trees. Trees shall be spaced in accordance with the Campus Landscape Plan. Off-street paths shall be lined with ornamental trees, at a minimum, and spaced in accordance with the Campus Landscape Plan.

   Trees in Open Spaces. Trees located within open spaces shall be arranged consistently with the intended geometry of the open space and shall be located so as to preserve intended views across or through the space. Larger open spaces should include a combination of understory
and canopy trees. Understory trees are sufficient for most plazas. Sufficient room shall be
provided in tree wells to accommodate the expected root spread of the tree type.

*Trees in Parking Lots.* A combination of hardwood and evergreen trees shall be used in surface
parking areas to provide shade and reduce heat islands.

*Existing Trees.* Generally, only those trees which are necessary for construction on the site
shall be removed. Removal of trees having a diameter at breast height of four (4) inches or
more is discouraged. Existing trees shall be protected from construction activities, as
required by the Facilities Planning Department.

3. **Landscape Maintenance.** The Campus is divided into five landscape areas (see attached
drawing), each with a specific level of landscape maintenance:

*Landscape Area A.* Most refined areas of campus. The turf should be of the highest quality,
with the lawns looking manicured at all times. Bare spots in the turf will not be acceptable.
Any area that will not support turf, for whatever reason, will require ground cover to be
installed in the bare areas. All A areas will be irrigated and hand watered as needed. The
plantings in these areas will be more formal in nature than other areas of campus. These
areas will be the highest priority for seasonal color installations. The seasonal color in the A
area will be changed more often than in other areas, so that continual color is maintained,
and a more delicate and refined material will be used. Large pots and hanging baskets will be
placed in these areas. This will require daily watering, deadheading, fertilizing and associated
care. Tree trimming as well as general landscape maintenance will be at the highest levels;
this will include pruning of existing plant material and re-mulching of landscape beds. Mulch
beds will need regular edging, so that mulch will not wash onto sidewalks or into lawns
during rain events. Mulch or grass clippings on sidewalks or lawn areas will not be
acceptable. Dark pine bark will be used as the primary mulch in the A area. The A areas will
be clean, green and well defined with abundant color during all seasons. These areas will be
the first priority for decorative banners to add additional color to campus.

*Landscape Area B.* Second highest priority of ground maintenance. These areas should
maintain a similar quality level to the A areas. The exception is that less day-to-day care will
be required in these areas. Annuals and other plant material will be selected based on a lower
level of required maintenance. For the most part, hanging baskets and large pots will be
limited. Certain B areas will not be irrigated, therefore turf management will be relaxed from
the A areas. Every effort will be made to professionally care for the turf, but certain areas of
less than pristine turf will be acceptable. Planting and mulch beds will be maintained much
the same; however, pruning and mulching will occur less often than in the A zone. The B
areas will be clean, green and well defined, with lower maintenance color beds where
appropriate.

*Landscape Area C.* Keep area clear of debris, mowed, edged and fertilized. For color in these
areas use flowering shrubs as opposed to annuals. Select low maintenance plant material for
use in these areas. These areas should be clean, green and well defined.
Landscape Area D. Keep all D areas free of downed trees and limbs, as well as general debris. These areas should be mowed down so that they do not appear weedy. D areas do not require leaf removal and are maintained in a more natural way. They are, however, important parts of campus and therefore should not be ignored.

Landscape Area E. These areas should be maintained in a natural state.

1.5. Site Furnishings.

Site furnishings shall be provided, which are consistent with the intended use of and desired level of activity within the open space, streetscape, or path. Site furnishings at building entrances or within building-specific outdoor spaces may vary from Standard Specifications, but shall be designed in harmony with one another and the character of the building.

1. Benches. Benches shall be provided along streets, paths, and along the perimeter of open spaces and as otherwise desired due to the nature of the space. Benches may be grouped at larger plazas, building entrances and features where larger groups may gather. All benches shall be placed facing pedestrian routes to maximize the ‘people watching’ aspect of the open space.

2. Trash Receptacles. Trash receptacles shall be provided near street intersections, entrances to buildings, along paths, and along the perimeter of open spaces and as otherwise necessary due to the nature of the space.

3. Kiosks. Kiosks shall be provided in accordance with the Wayfinding Graphics Master Plan.

4. Signage. All signage shall be provided in accordance with the Wayfinding Graphics Master Plan.

5. Bollards. Bollards may steel with decorative cast iron caps, cast iron or precast concrete. Steel bollards and chain may be used edge lawns to direct pedestrian traffic along the perimeter sidewalk. More substantial precast concrete bollards may be to control vehicular access. For emergency and service access, removable steel bollards may be used where major pedestrian walkways must accommodate service and emergency vehicles.

6. Post and Chain. Where temporary or adjustable barriers are needed, a simple post and chain type shall be used.

7. Other.

Art. Sculpture and similar types of public art should be included in prominent open spaces and located in harmony within the intended geometry of the space.

Furniture for outdoor dining shall be durable powder-coated steel tables and chairs. In areas that may be secured, weighted free-standing tables and stackable chairs will allow flexibility in seating arrangements. In more open areas, steel tables with permanently fixed seats will be
used. Where fixed seating is used, an appropriate portion of the overall seating should accommodate wheelchair access.

1.6. **Fences, Walls, and Screening.**

1. **Use of Fences and Walls.** Fences and walls shall serve one or more of the following purposes: to define transitions by providing physical boundaries between public, semi-public and private zones; to provide visual screening from service/support areas; or to retain soil. Generally, walls or a combination of decorative fence and shrubs, shall be used in more visible locations. Non-decorative fencing shall only be used in areas away from streets and paths and areas not visible from off-Campus.

2. **Site and Seat Walls.** Retaining walls, where practical, should also be designed to provide seating and/or to define transition zones within the Campus as described following. These walls should be constructed of masonry such as brick or stone, though some forms of decorative-face concrete may also be appropriate. A different but complementary material should be considered for the wall cap. When located within an open space with pre-existing site walls, the designer should consider use of the same or similar wall materials. In the absence of such precedents, wall design and materials should complement the materials of neighboring buildings, especially wherever the wall connects to a building.

The University will not permit the use of segmental block retaining wall systems on the University campus. Acceptable materials for seatwalls and retaining walls include the following:

- Stone veneer over cast in place concrete or CMU
- Brick veneer over cast in place concrete or CMY
- Precast concrete veneer over cast in place concrete or CMU
- Cast in place concrete with sandblast or parged finish.
- Wall caps shall be stone, precast concrete or brick.
- Tennessee stone walls with moss rock veneer.

3. **Transition Zones.** Fences/walls may be provided, as desirable, at transitions between public and private spaces, such as between a sidewalk and residential building entrance. Generally, those fences/walls located between a building front and the public space shall not be taller than four feet. Fences/walls taller than four feet shall only be located away from public views, including side or rear lot lines at the community edge.

4. **Parking Lots.** Parking lots shall be screened in accordance with §1.2.4 through a combination of landscaping and fence/wall.

5. **Loading and Service Areas.** Loading and service areas shall be screened from public view through a combination of location, landscaping and fence/wall. Uses requiring security fencing shall be located away from community edges where practical. Bulk trash containers
and building equipment shall be concealed within enclosures designed as integral elements of the building design.

*Security Fencing.* Where location is not sufficient to minimize public views of uses requiring security fencing, razor-wire and barbed-wire is discouraged and a wall or another fencing material should be selected. Black, vinyl-coated chain-link fencing shall be required at a minimum.

1.7. **Utilities.**

Utilities shall be located so as to minimize their visibility from open spaces, streets, and paths and shall be placed as recommended by the Facilities Planning Department and the Landscape Architect. Where location is not sufficient to minimize public views, screening shall be provided consistent with §1.6.
Recommended Plant Materials

Minimum acceptable plant sizes:

<table>
<thead>
<tr>
<th>MATERIAL GRADED BY CALIPER</th>
<th>Height</th>
<th>Spread</th>
<th>Rootball</th>
</tr>
</thead>
<tbody>
<tr>
<td>2” – 3” Caliper</td>
<td>14’ – 16’</td>
<td>8’ – 9’</td>
<td>28’ – 32’</td>
</tr>
<tr>
<td>3” – 4” Caliper</td>
<td>16’ – 18’</td>
<td>9’ – 10’</td>
<td>32’ – 42’</td>
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<tr>
<td>4” – 5” Caliper</td>
<td>18’ – 20’</td>
<td>10’ – 11’</td>
<td>42’ – 54’</td>
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<table>
<thead>
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<th>MATERIAL GRADED BY HEIGHT</th>
<th>Spread</th>
<th>Rootball</th>
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<tbody>
<tr>
<td>5’ – 6’ Height</td>
<td>2.5’ – 3’</td>
<td>16” – 18”</td>
</tr>
<tr>
<td>6’ – 8’ Height</td>
<td>3’ – 4’</td>
<td>20” – 22”</td>
</tr>
<tr>
<td>8’ – 10’ Height</td>
<td>4’ – 5’</td>
<td>22” – 24”</td>
</tr>
<tr>
<td>10’ – 12’ Height</td>
<td>5’ – 6’</td>
<td>28” – 32”</td>
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<table>
<thead>
<tr>
<th>CONTAINER MATERIAL</th>
<th>Height</th>
<th>Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>4” Pot</td>
<td>Full plant</td>
<td>Full plant</td>
</tr>
<tr>
<td>1 Gallon</td>
<td>9” – 12”</td>
<td>9” – 12”</td>
</tr>
<tr>
<td>2 Gallon</td>
<td>12” – 14”</td>
<td>12” – 14”</td>
</tr>
<tr>
<td>3 Gallon</td>
<td>16” – 18”</td>
<td>16” – 18”</td>
</tr>
<tr>
<td>7 Gallon</td>
<td>36” – 48”</td>
<td>24” – 30”</td>
</tr>
<tr>
<td>15 Gallon</td>
<td>48” – 54”</td>
<td>36” – 42”</td>
</tr>
<tr>
<td>20+ Gallon</td>
<td>60” +</td>
<td>48” – 54”</td>
</tr>
</tbody>
</table>

PLANT MATERIALS

Large Trees

- Acer barbatum
- Acer rubrum
- Acer saccharum
- Betula nigra
- Cedrus deodara
- Cornus x ‘Rutcan’
- Cryptomeria japonica
- Fagus grandifolia
- Fraxinus pennsylvanica
- Ginkgo biloba
- Liquidambar styraciflua ‘Rotundaloba’
- Liriodendron tulipifera
- Magnolia grandiflora x ‘Claudia Wannamaker’
- Magnolia grandiflora x ‘Bracken’s Brown Beauty’
- Magnolia virginiana
- Metasequoia glyptostroboides
- Nyssa sylvatica
- Picea glauca
- Pinus glybra
- Pinus taeda
- Pinus virginiana
- Pipturus chinense
- Populus alba
- Quercus acutissima
- Quercus alba

Southern Sugar Maple
Red Maple
Sugar Maple
River Birch
Deodar cedar
Constellation Dogwood
Cryptomeria
American Beech
Ash
Ginkgo
Fruitless sweetgum
Tulip tree
Southern magnolia
Southern magnolia
Australis Bay magnolia
Dawn Redwood
Black Gum
White spruce
Spruce pine
Loblolly pine
Virginia pine
Chinese Pistache
White Poplar
Sawtooth oak
White oak
Quercus bicolor
Quercus cocinea
Quercus falcata
Quercus lyrata
Quercus macrocarpa
Quercus mariandica
Quercus nigra
Quercus nuttallii
Quercus prinus
Quercus virginiana
Salix alba
Salix babylonica
Sapindus saponaria
Sequoiad sempervirens
Taxodium distichum
Tsuga canadensis
Ulmus americana
Zelkova serrata

Swamp white oak
Scarlet oak
Southern red oak
Overcup oak
Bur oak
Blackjack oak
Water oak
Nuttall oak
Chestnut oak
Live oak
White willow
Weeping Willow
Popcorn tree
Redwood
Bald cypress
Hemlock
American elm
Japanese Zelkova

Small Trees
Ilex latifolia
Ilex × attenuata
Ilex × 'Nellie R Stevens'
Juniperus virginiana 'Idyllwild'
Osmanthus fortunei
Thuja occidentalis
Acer palmatum
Amelanchier × 'Autumn Brilliance'
Ilex × 'Emily Bruner'
Magnolia × soulangiana
Myrica cerifera
Cornus florida
Osmanthus fragrans
Prunus serrulata
Prunus subhirtella
Prunus × yedoensis
Cercis canadensis
Cornus kousa
Crataegus phaenopyrum
Lagerstromia indica
Magnolia stellata
Malus
Vitis aestivalis

Lusterleaf holly
Foster holly hybrids
Nellie R Stevens holly
Idyllwild juniper
Fortune's osmanthus
Arborvitaes
Japanese maple
Autumn Brilliance Serviceberry
Emily Bruner holly
Saucer magnolia
Southern wax myrtle
Flowering dogwood
Fragrant tea olive
Japanese Flowering cherry
Higan cherry
Yoshino cherry
Redbud
Kousa dogwood
Washington hawthorn
Crapemyrtle
Star magnolia
Crabapple
Lilac chaste tree

Shrubs
Abelia × grandiflora
Acuba japonica
Agarista populifolia
Azalea hybrids
Azalea hybrids

Glossy leaf abelia
Japanese acuba
Florida Leucothoe
Encore
Girard
Glenn Dale
Azalea hybrids
Azalea hybrids
Azalea hybrids
Azalea hybrids
Azalea hybrids
Buddleia davidii
Bacbus microphylla
Bacbus semprevirens
Bacbus var. korana × B. semprevirens 'Green Velvet'
Calycanthus floridus
Camellia japonica
Camellia sasanqua
Cotinus coggyria
Cotoneaster dammeri
Deutzia gracilis
Deutzia scabra
Elaeagnus pungens
Euonymus alata
Euonymus fortunei
Euonymus japonicus
Euonymus kiatschovicus
Fatsia japonica
Forsythia × intermedia
Gardenia jasminoides
Hamamelis vernalis
Hydrangea arborescens 'Annabelle'
Hydrangea macrophylla
Hydrangea quercifolia
Hypericum prolificum
Ilex cornuta
Ilex crenata
Ilex decidia
Ilex glabra
Ilex latifolia
Ilex vomitoria
Ilex × meserveae
Illicium parviflorum
Juniperus chinensis
Juniperus conferta
Juniperus horizontalis

**Shrubs**

Juniperus procumbens
Juniperus virginiana
Kerria japonica
Ligustrum japonicum
Ligustrum sinense
Lonicera fragrantissima
Loropetalum chintense
Mahonia bealei
Mahonia fortunei
Nandina domestica
Nerium oleander

Indica
Kurume
Satsuki
Gumpo
Butterfly bush
Boxwood
American Boxwood
Green Velvet boxwood

Sweetshrub
Camellia
Sasanqua camellia
Smoke tree
Cotoneaster
Slender Deutzia
Deutzia
Elaeagnus
Burning Bush
Wintercreeper
Euonymus
Spreading euonymus
Fatsia
Forsythia
Gardenia
Vernal witchhazel
Annabelle hydrangea
Bigleaf hydrangea
Oakleaf hydrangea
Shrubby St. John's Wort
Chinese holly
Japanese holly
Deciduous holly
Inkberry holly
Lusterleaf holly
Youpon Holly
Hybrid hollies
Small Anise Tree
Chinese juniper
Shore juniper
Creeping juniper

Japgarden juniper
Eastern Redcedar
Kerria
Japanese privet
Chinese privet
Winter honeysuckle
Loropetalum
Leatherleaf mahonia
Chinese mahonia
Heavenly bamboo
Oleander
<table>
<thead>
<tr>
<th>Philadelphus coronarius</th>
<th>Mockorange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pieris japonica</td>
<td>Pieris</td>
</tr>
<tr>
<td>Pittosporum tobira</td>
<td>Japanese pittosporum</td>
</tr>
<tr>
<td>Raphiolepis indica</td>
<td>Indian hawthorne</td>
</tr>
<tr>
<td>Raphiolepis umbellata</td>
<td>Raphiolepis</td>
</tr>
<tr>
<td>Rhododendron alabamense</td>
<td>Alabama azalea</td>
</tr>
<tr>
<td>Rhododendron austrium</td>
<td>Flame azalea</td>
</tr>
<tr>
<td>Rhododendron canescens</td>
<td>Piedmont azalea</td>
</tr>
<tr>
<td>Rosa hybrida</td>
<td>Carpet roses</td>
</tr>
<tr>
<td>Rosa hybrida</td>
<td>Knockout'</td>
</tr>
<tr>
<td>Rosa hybrida</td>
<td>Homerun'</td>
</tr>
<tr>
<td>Spirea cantoniensis 'Lancata'</td>
<td>Double Reeves spirea</td>
</tr>
<tr>
<td>Spirea japonica</td>
<td>Japanese Spirea</td>
</tr>
<tr>
<td>Spirea prunifolia</td>
<td>Bridalwreath spirea</td>
</tr>
<tr>
<td>Spirea thunbergii</td>
<td>Thunberg Spirea</td>
</tr>
<tr>
<td>Syringa vulgaris</td>
<td>Lilac</td>
</tr>
<tr>
<td>Taxus baccata</td>
<td>Yew</td>
</tr>
<tr>
<td>Ternstroemia gymnanthera</td>
<td>Cleiera</td>
</tr>
<tr>
<td>Viburnum davidii</td>
<td>David viburnum</td>
</tr>
<tr>
<td>Viburnum plicatum var. tomentosum</td>
<td>Doublefile viburnum</td>
</tr>
<tr>
<td>Viburnum x pragense</td>
<td>Prague viburnum</td>
</tr>
<tr>
<td>Weigelia florid</td>
<td>Weigelia</td>
</tr>
<tr>
<td>Yucca filamentosap</td>
<td>Adam's Needle yucca</td>
</tr>
</tbody>
</table>

**Groundcovers and Vines**

<table>
<thead>
<tr>
<th>Gelsemium sempervirens</th>
<th>Carolina Jessamine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hedera helix</td>
<td>English ivy</td>
</tr>
<tr>
<td>Iberis sempervirens</td>
<td>Candytuft</td>
</tr>
<tr>
<td>Lonicera japonica</td>
<td>Japanese honeysuckle</td>
</tr>
<tr>
<td>Lonicera sempervirens</td>
<td>Coral honeysuckle</td>
</tr>
<tr>
<td>Ophiopogon japonicus</td>
<td>Mondo Grass</td>
</tr>
<tr>
<td>Pachysandra terminalis</td>
<td>Japanese pachysandra</td>
</tr>
<tr>
<td>Trachelospermum asiaticum</td>
<td>Asiatic jasmine</td>
</tr>
<tr>
<td>Trachelospermum jasminoides</td>
<td>Confederate jasmine</td>
</tr>
<tr>
<td>Vinca minor</td>
<td>Vinca vine</td>
</tr>
</tbody>
</table>

**Perennials**

<table>
<thead>
<tr>
<th>Astilbe arundii</th>
<th>Astilbe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyrtomium falcatum</td>
<td>Japanese holly fern</td>
</tr>
<tr>
<td>Echinacea purpurea</td>
<td>Coneflower</td>
</tr>
<tr>
<td>Heuchera hybrids</td>
<td>Heuchera</td>
</tr>
<tr>
<td>Hosta hybrids</td>
<td>Hosta</td>
</tr>
<tr>
<td>Lavandula angustifolia</td>
<td>English lavender</td>
</tr>
<tr>
<td>Perovskia atriplicifolia</td>
<td>Russian Sage</td>
</tr>
<tr>
<td>Rosmarinus officinalis</td>
<td>Rosemary</td>
</tr>
</tbody>
</table>

**Ornamental Grasses**

<table>
<thead>
<tr>
<th>Acorus gramineus</th>
<th>Dwarf sweet flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liriope muscari</td>
<td>Liriope</td>
</tr>
<tr>
<td>Miscanthus sinensis</td>
<td>Maidengrass</td>
</tr>
<tr>
<td>Muhlenbergia capillaris</td>
<td>Muhly grass</td>
</tr>
<tr>
<td>Pennisetum setaceum</td>
<td>Purple fountain grass</td>
</tr>
</tbody>
</table>
Annuals

*Alternanthera ficoides*  
*Angelonia angustifolia*  
*Antirrhinum majus*  
*Asparagus densiflorus*  
*Begonia semperflorens-cultorum*  
*Begonia × hybrida 'Dragon Wing'*  
*Brassica oleracea*  
*Caladium bicolor*  
*Calibrachoa hybrids*  
*Capsicum annuum*  
*Catharanthus roseus*  
*Celosia argentea*  
*Chrysanthemum hybrids*  
*Cleome hassleriana*  
*Cordyline indivisa*  
*Cuphea hyssopifolia*  
*Cuphea llavea*  
*Dianthus chinensis × barbatus*  
*Dichondra argentea*  
*Evolvulus pilosus*  
*Gaura lindheimeri*  
*Gomphrena globosa*  
*Impatiens walleriana*  
*Ipomoea batatas*  
*Iresine hybrids*  
*Lantana camara*  
*Lycoris radiata*  
*Pelargonium × bortorum*  
*Pentas lanceolata*  
*Petunia × hybrida*  
*Rudbeckia hirta*  
*Salvia gregii*  
*Salvia guaranitica*  
*Salvia splendens*  
*Salvia × 'Indigo Spires'*  
*Scaevola aemula*  
*Seneio cineraria*  
*Solenostemon scutellarioides*  
*Tagetes patula*  
*Torenia fournieri*  
*Tradescantia pallida*  
*Verbena hybrids*  
*Viola cornuta*  
*Viola × wittrockiana*  
*Zinnia elegans*  

Joseph's coat  
Summer snapdragon  
Snapdragon  
Asparagus fern  
Wax begonia hybrids  
Dragon wing begonias  
Kale and Cabbage  
Caladiums  
Million Bells  
Ornamental Pepper  
Periwinkle, Vince  
Celosia  
Belgian Mums  
Cleome  
Dracaena spike  
Mexican Heather  
Bat-faced cuphea  
Dianthus  
Dichondra  
Blue Daze  
Gaura  
Globe amaranth  
Impatiens  
Ornamental Sweet Potato  
Iresine  
Lantana  
Spider Lilies  
Geraniums  
Pentas  
Petunias  
Black-eyed Susan  
Red salvia  
Black and Blue salvia  
Scarlet sage  
Indigo Spires salvia  
Fanflower  
Dusty Miller  
Colesus  
Marigolds  
Torenia  
Purple Heart  
Verbena  
Violas  
Pansy  
Zinnia