

# THE UNIVERSITY OF ALABAMA



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## INTRODUCTION

### ANNUAL LANDSCAPE AND GROUNDS MAINTENANCE

The University of Alabama, located in Tuscaloosa, Alabama, on the edge of the Black Warrior River, was founded in 1831 as the state's first public college. From a landscape and grounds viewpoint, it has quickly become one of the most beautiful campuses in the nation. Assets such as its magnificent Live Oaks, Magnolias, and October Glory Maple Trees to its beautiful ponds, open, green quadrangles, and manicured flower beds give this University campus the charm, beauty and feel of the old south. Add to that the strong central core of the antebellum President's Mansion, the landmark Denny Chimes obelisk tower and a multitude of character striking architectural structures throughout the campus and you quickly see the rich heritage of Alabama's flagship University. This strategic plan will serve as the primary roadmap to insure the campus landscape and grounds continue to be a one of the key pillars that contributes to the heritage of the University of Alabama.

A well cared and properly maintained campus landscape and grounds, not only adds to the beauty of the campus, but it is critical to recruiting students. Dr Phillip Waite, Associate Professor in landscape architecture at Washington State, in his research, which was directed at the effective power of place, and how the landscape of a campus affects student recruitment, retention and learning performance, found that 62% of high school seniors make their choice of institution on the basis of the appearance of the campus buildings and grounds. The beauty of this campus also translates into an incredible recruitment tool to attract, not only the best and the brightest students, but quality faculty and staff while serving as a major foundation for a conducive environment to study, teach, research, work, entertain, recreate and relax; a place we proudly call The University of Alabama.

With all this landscape beauty, comes the enormous challenges of maintaining the highest level of landscape excellence, installation, and integration of new special landscape projects, meticulous planning for future landscaping on capital construction, and most importantly, paying close attention to detail on daily grounds and landscape maintenance. The annual grounds maintenance requirements, from daily routines to annual cycles will be outlined in detail in Part I of this plan, and provide descriptions of campus landscape and grounds projects in Part III. Ultimately, this Landscape and Grounds Strategic Plan will serve as a detailed reference guide/timeline to insure the most critical campus landscape needs and requirements are addressed over both the short and long term timeframes while formulating a solid plan for campus special projects in the landscape arena.

### CAMPUS LANDSCAPE AND GROUNDS PRIORITY AREAS

It is imperative that the most critical locations on campus be identified as top priority areas. These areas, because of their location, importance, or historical significance, require greater attention to detail to landscape grooming on a more consistent schedule. These areas, labeled as priority 'A' and priority 'B' areas are key areas; priority 'B' is not considered as important as priority 'A.' There are also priority 'C' and 'D' areas; each descending in importance.

### PROJECT STANDARDS, FIGURES AND TIMETABLES

All landscape project plans will adhere to the stringent guidelines for Project Standards as outlined in the University of Alabama Campus Master Plan dated 2007. The appendix in this plan provides clear and concise descriptions of each foreseeable project and illustrations to give the university a better idea of the end product of each project. It will also provide timetables for when the landscape critical needs should be accomplished during a yearly cycle.

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## **PART I**

### **ANNUAL LANDSCAPE AND GROUNDS MAINTENANCE**

#### **A. General Requirements and Information**

No landscape maintenance can be performed correctly without properly functioning equipment. All University, contractor leased landscape and grounds equipment (the term equipment includes vehicles in this document) shall be maintained in an efficient and safe operating condition while performing work on the University of Alabama campus. All equipment, without exception, shall have proper safety devices maintained at all times while in use. If any equipment does not contain proper safety devices, that equipment shall be removed from service without delay until the deficiency is corrected to the satisfaction of the Assistant Vice President for Facilities and Grounds. The same is true for the unsafe operation of any equipment by personnel employed or contracted by the University of Alabama when working on this campus.

Contractor personnel performing landscape and grounds maintenance on campus will be in compliance at all times with all contract requirements. In addition, contractor personnel will be properly identified and present themselves in a neat and professional manner at all times. All vehicles should also be properly identified and have a clean appearance while operated on campus. The contractor shall be responsible for storing its grounds equipment and supplies at an off campus location; their equipment will not be stored on University property.

#### **B. Campus Irrigation Systems**

The application of water to any landscape environment that incorporates grass, shrubs, flowers and trees into its design is considered one of the key components, if not the primary component, if success is to be achieved in regards to the look you are trying to portray. The most effective and efficient means to supply water, especially when it must be applied over an area encompassing 1000 acres, is by using irrigation systems.

The University of Alabama currently has 117 separate irrigation systems on the main campus (**See Figure 3.1 & Figure 3.2**). Establishing and maintaining beautiful, healthy, appealing and inviting landscapes can only be accomplished if the irrigation system(s) stays in a good operational condition and effectively functions in the manner it was installed. An irrigation system that does not operate correctly due to pressure malfunctions or controller lockups (will not turn itself off automatically), has breaks in the system that cannot be located, or in which sprinkler heads do not cover the entire required area (or worse, they spray into the street rather than the lawn) is not effective or resourceful. For this reason, a comprehensive, continuous, and dedicated maintenance repair schedule is extremely critical.

Irrigation maintenance must be accomplished daily. The short term goals will be to inspect each system at least once a week. The campus Grounds Team (Director, Assistant Managers and Irrigation Technician Team) accomplishes this task every Monday by evaluating the systems in their areas of responsibility. In addition, all Campus Grounds personnel are trained to note any questionable irrigation operations in their work areas. Malfunctions, leaks and suspicious pooling of water from any system will be reported and a work order established for immediate action/repair. Next, all irrigation systems must be documented in terms of exact location on campus and marked on drawings, and in the future with Global Positioning Satellite (GPS) technology. This documentation would include meters, controllers, clocks and sprinkler heads. The cost savings, in the ability to quickly locate malfunctioning components alone, would be in the thousands each year.

Finally, the campus currently utilizes four different types of irrigation systems. They are electric, hydraulic, battery and manual type systems. For operational effectiveness, compatibility, interoperability with the master controller systems, parts exchangeability and ease of maintenance/training all future campus installation should be electric systems. Finally, we must insure that all new sidewalk installation takes into account irrigation systems and needs. If conduit sleeves need to be added for irrigation or system parts need to be repaired or replaced due to damage cause by the installation, it needs to be scheduled.

### **C. Campus Sidewalks- Repairs, Replacement and Additions**

Due to the volume of foot, bicycle, golf cart, maintenance vehicles, contractor trucks and game day activities, sidewalk maintenance and repair has become an increasing concern on campus. With 1000 acres containing a multitude of sidewalks on every street, between facilities, around resident halls and throughout all quadrangle areas (Main Quad, Woods Quad, and Shelby Quad), it is paramount that the university maintain these pedestrian thoroughfares and handicap ramps in excellent working condition. This requires a continued inspection, evaluation and maintenance process that is vigilant in the areas of safety and usability; as well as functionality and aesthetics. Special attention should also be given to the different walkway surfaces. Different types and styles of concrete and pavers require a keen eye for their unique safety concerns, as well as their durability when placed under heavy weight.

The goal for this important area is to institute a plan that is both short and long term in execution. The campus sidewalks, plazas and quadrangle networks will be evaluated on continual basis. The campus will be divided into four major areas; each area will be inspected and problem areas documented; those areas will be addressed for repair/maintenance as needed. During the summer months, when the campus is less populated, a complete campus wide comprehensive sidewalk network evaluation will be accomplished. Major repairs, replacement and possible installation of additional sidewalks to augment the network where needed, will be done at this time of year. The Campus Master Plan Standard for width, depth, re-bars, lower layer crusted stone support and alternative material must be strictly enforced and adhered to.

The University must insure that all new sidewalk installation takes into account irrigation systems and needs. If conduit sleeves need to be added for an irrigation system, or irrigation parts need to be repaired/replaced due to damage caused by the installation, then the Facilities Maintenance Department or sidewalk contractor needs to communicate those issues. Building Maintenance and the Grounds Department should insure the correct course of action is scheduled.

### **D. Campus Seasonal Planting- Flowers and Shrubs**

A comprehensive horticulture list, along with a plan for seasonal planting, is critical for a university campus the size of the University of Alabama (**See Figure 3.3 & 3.4**). This plan designates the appropriate flowers and shrubs to be incorporated into each bed, basket and pot on campus. Flowers, in particular, will be strictly coordinated with the season that gives a particular species the best opportunity to flourish with beauty and color in the central Alabama climates and still project the southern landscape style the university strives to achieve. In addition, the color of blossoms desired in each location will be designated along with appropriate backup flowers/shrubs in the chance the primary choices are unavailable due to supplier shortages. Types of planting, especially any new additions to the campus horticulture list, should be coordinated and decided upon by the Campus Landscape and Grounds Committee. A long range goal will be to build a greenhouse, and grow several flower and shrub species on campus,

in the Grounds Department holding area.

The specific goal for planting is to adhere to a well-orchestrated horticulture schedule that follows the quarterly seasonal cycles for most areas on campus each year. Other areas may require planting only twice a year, but all areas will be specifically designed on the planting timetable. **(See Figure 3.5)**

### **E. Campus Tree Care**

One of the University of Alabama's hallmark assets is the over ten thousand beautiful trees on campus. A magnificent canopy of both young and old trees casts an inviting picture perfect backdrop for anyone who studies, works, plays or visits the Capstone. In addition, the beauty of these trees represents numerous species such as Red Maple, Dogwood, Live Oak, Willow Oak, Crape Myrtle, Foster Holly, Magnolia and Pine. **(See Figure 3.6)**

With so many trees located on one campus, the need for constant care, grooming, planting, transplanting and removal when necessary is essential to maintaining both the beauty and health of each tree. Such things as storm damage, stressors to trees, feeding, pruning, transplanting and mulching must all be considered during each annual cycle. The geographic location of the Deep South also dictates a need for continuous maintenance due to droughts, as well as a need for a work force that can react at a moment's notice due to the threat of extreme inclement weather like thunderstorms, tornados and hurricane winds from the Gulf Coast.

The short term goal for tree care includes a monthly campus inspection and evaluation of each tree on campus. This is a joint task performed by a dedicated team consisting of the Grounds Director, Managers, Horticulture Manager, Grounds Forester and the campus Landscape and Grounds Advisory Group. If a tree has concluded its life cycle, it is not cut down without the entire team's concurrence with the Vice President for Financial Affairs making the final decision, after briefing the University senior leadership. When appropriate, and depending on the location, fallen or dead trees will be replaced by new ones. If a tree is deemed to be growing in a bad location due to such things as new construction site or under power lines, the first choice will be to transplant if it is at all possible. If the existing trees are not able to be transplanted, existing trees are to be replaced in areas of new construction. **(See Figure 3.7)**

### **F. Campus Turf Care**

The care of different grasses and turf on campus takes considerable time, patience, dedication, and constant monitoring, as well as research to achieve the beautiful green look that is signature to the University of Alabama landscape. Often, depending on the project and location, this turf is installed using sod; however, larger areas are often established by seed. When possible, old turf is recycled from athletic fields/stadiums (when they are being re-sodded), and it is transplanted to other locations on campus that are in need of grass. Provided the selected turf grass is being used in the climate to which it is adapted, there are only four major ingredients that are needed to insure optimum turf density and color. If any one of the four of these factors is missing, growing healthy turf grass becomes a more serious challenge.

Sunlight is arguably one of the most crucial factors influencing the health of a turf grass in a given site. While it is true that some turf performs better in shade than others, there is no turf grass that thrives in shade. Fescue and Zoysia are two species that perform better in shade and when possible these species should be used. In addition to species selection, our department will strategically prune trees in an effort to allow more sunlight to penetrate the canopy and supply the turf with as much sunlight as possible.

The ability to provide adequate water is also vital to the health of a turf grass. Water does several things in a plant. Most importantly, it is a key element in photosynthesis, without it photosynthesis will not take place; this will result in plant death. Secondly, water gives the plant turgor allowing it to remain upright after pressure has been applied to it. Lastly, water is the resource a plant uses to cool itself off. As one can tell, without water the plant will suffer in several different ways. Just as important as water quantity is water quality. A water supply should be tested a minimum of one time per year to insure it is balanced, has a proper pH, and that there is not an accumulation of salts or other impurities that are detrimental to the health of a plant.

Availability of oxygen to plant roots is another essential component of a healthy turf grass system. In soil, there are solids and pore spaces. In an ideal situation, 50% of the pore space is occupied by oxygen and the other 50% is occupied by water. There are two ways in which we can help insure that this occurs. One is by core aeration. This creates a hole in the soil surface and allows pore space to be created. Core aeration also creates channels by which water and nutrients can more easily reach a root zone. The second is to help maintain proper soil oxygen by having proper soil drainage. If soil is water logged, there is little or no oxygen in the root zone, this in effect, suffocates the root system and will lead to eventual plant death. The President's Mansion lawn is the micro-causum of all the turf areas on campus and a good example of where all these techniques should be carefully followed to insure good plant health. **(See Figure 3.8)**

Proper fertility is also a vital aspect to a healthy turf grass. Soil testing should be done a minimum of one time per year. This will provide a snapshot of the soil condition and soil structure now, as well as serve as an indicator of where the soil's condition and structure will be in the future. Performing regular soil and tissue testing will also give the Grounds Department a baseline to follow to insure turf is getting its required nutrients in a given situation, while at the same time avoiding unnecessary applications that could be detrimental to a plant, as well as costly. **(See Figure 3.9)** While these four factors influence the health of a turf grass, there are several cultural practices that can be performed to aid in a turf's color and beauty. The first is over seeding. Over seeding is done to dormant or semi-dormant turf in the fall and winter months. A successful over seed is determined by site preparation, seed selection and seeding rates. Regular mowing must also be done to insure a turf grass has a consistent green color. Mowing should be done a minimum of one time per week. The pattern in which a turf is mowed should be alternated weekly; this will help keep the grass growing upright as opposed to laying in one direction. Once established, mowing heights should remain the same throughout a growing season.

### **G. General Grounds Maintenance, Leaf Removal and Mulch Application/Cycles**

The backbone behind sustaining a beautiful landscape appearance throughout the year is the ability to perform general grounds maintenance at an outstanding level. The key to accomplishing this mission begins with personnel. Topnotch leadership and support at all management levels and excellent groundskeeper training will take care of the toughest jobs, but it also takes pride, loyalty to the university and a sense of ownership by everyone to achieve the highest levels of excellence. This section will concentrate on the groundskeepers' techniques from achieving final results standpoint that encompasses all landscape maintenance areas.

Mowing any area of turf on campus takes a great amount of attention to detail to insure it is cut correctly and leaves a well groomed appearance when the task is complete. Several guidelines must be followed by the groundskeeper, in accordance with the work order of the day, to insure success. First, the correct height of the cutting blade on the mower should be established by the Team Leader or Assistant Manager for every area cut. The type turf being mowed and the season are the primary factors in determining the height of the grass to be cut. **(See Figure 3.10)**

The lay of the landscape should also be evaluated. Hillsides have different requirements than level turf. Safety should always be first and foremost in everyone's mind before starting the job. If it is more advantageous to use a standard push mower or weed-eater rather than a riding mower or bush-hog, then that should be evaluated and listed in the job instructions. In addition, the direction of the cut must be alternated each week if possible. This style of cutting, called crisscrossing pattern, helps stimulate healthy straight up standing growth and gives a clean-cut look to the grass.

Mowing cycles for each area on campus, if possible should be followed as outlined in the weekly schedule but due to work orders or special events this cannot always be followed. **(See Figure 3.11)** The majority of general Grounds Maintenance work on campus, mowing, edging, weed-eating, blowing, etc., is normally accomplished between the hours of 6:00 a.m. and 2:30 p.m. Monday through Friday. However, during the summer months some overtime is allowed or perhaps required to complete our assignments. This work schedule timing is necessary for several reasons; one of which is related to the health/safety of the Grounds and campus personnel (cooler temperatures, less dust due to dampness, less people on campus at 6a.m., etc.); it is also necessary to begin early in the morning so that hard to service areas like parking lots, streets, sidewalks, etc., can be serviced when empty or less occupied. However, the two exceptions to the 6:00 a.m. start policy are around all Residential Living Facilities on campus. The Residential Living category includes 70 plus facilities, such as halls, apartments, dorms, fraternities and sororities, to include Capstone Village **(See figure 3.12)**.

The first exception in these residential areas is that general Grounds Maintenance will start not earlier than 7:30 a.m. during normal school hours throughout the year. This time was established as a courtesy to the resident students/campus community in an effort to keep equipment that produces loud noise away from these buildings during normal sleeping hours; and because most students, faculty and staff are up and either on their way to work or in the first class period (usually scheduled for 8:00a.m.) by that time. The second exception is during dead week each semester when the start time is not earlier than time is 9:00 a.m. for the benefit of students who are preparing for exams. As a note, when beginning work near residential facilities, Grounds crews will begin their tasks at the outer most perimeters of the facilities and work their way toward the building. Using this operational strategy, crews will be working at the closest point to the facilities at an even later time in the morning, thus providing less noise even after the normal start times.

Edging all sidewalks, curbs, patios and shrub/beds is the single most important technique for leaving any area looking well groomed and cared for. It highlights a landscape or building like a picture frame. For the University campus, edging should be between approximately 1 to 1 ½ inch deep and ¾ to 1 inch wide from the sidewalk, curb or edge of hard-surface.

After mowing and edging an area, it should be fine-tuned by weed-eating any undesirable, unappealing leftover grass, ground-cover and weeds that are in hard-to-get-to areas such as sidewalk/curb cracks, around poles/bollards, buildings and signs. The entire area should then be blown clean of debris (sidewalks, streets, patio, steps, etc.). Extra care should be taken not to blow this debris toward/around pedestrians and vehicles. That debris should be blown in one central location, then raked and/or vacuumed and removed from the area. This same blowing/removal process should be followed when removing leaves from the campus grounds. This debris should not be placed in campus trash dumpsters. It should be taken to either the city dump or the current compost site at the University Arboretum.

The proper technique and process of applying mulch to trees, shrubs and beds on campus adds beauty to the landscape, extra moisture during heat stressed periods and protection to the plants during inclement weather. This

form of protective cover is one of the most beneficial processes that can be accomplished for the health of plants; especially trees and shrubs. However, all plant material, including flowers, can benefit from this practice. The need for the correct amount of moisture is key to the success of producing any healthy plant; in fact, the lack of water is the main cause of severe stress to most plants; and certainly young ones. Mulch material stands guard when a Groundskeeper is not available to help keep plants healthy. Applied at the proper thickness this extra layer of cover insulates soil, retains moisture, keeps out weeds, prevents soil compaction, reduces lawnmower damage to the plant and adds an aesthetic touch to the landscape. In addition, it improves soil structure, oxygen levels, surface/ground temperature and moisture availability for the plants it surrounds.

The standard technique for preparing all beds (trees, shrubs, flowers, etc.) for mulch application on campus will be to install a trench cut border on the outer-side perimeter of the bed. This style deep trench cut/edge will be a depth of approximately 4 inches. It will provide a trough or moat that will serve as a catch basin to keep debris (mulch, dirt, leaves, etc.) from spreading sporadically on streets, drives, sidewalks and surrounding landscape after heavy winds or rain. It also makes it easier to place the material back into the beds after inclement weather. This outer-side edge around trees and shrub/flower beds should be a clean, straight cut that follows the outline of the bed.

The goal is to apply mulch to all necessary beds, shrubs and trees on campus twice each year. **(See Figure 3.13)** The technique to accomplish this added plant protection is as follows: (1) Remove any grass or weeds within the mulch area. (2) Place the mulch material (bark, chip, leaves or pine needles) around the root zone of the shrub/tree. (3) If possible, insure the mulch does not touch the shrub's trunk. (4) Layer the mulch material approximately 2-4 inches in depth and slope down towards the trench at the edge of the bed. (5) Water to maintain adequate moisture.

## H. Campus Fertilizing Care/Cycles

Like the importance of the application of water to a landscape's environment; the correct and timely application of fertilizer is necessary to the health of turf, shrubs, flowers and trees and ultimately their overall appearance. Regular feeding of fertilizer promotes both healthy root growth and healthier vibrant looking shoots (grass blades, flowers and branches), which in turn generates a species that is better equipped to fight off weeds and resist pest, thus producing a longer lasting and beautiful turf, shrubs, flowers or trees. Healthier, thicker roots and cover also provides an additional layer of erosion control in some areas and promotes less maintenance overall.

When applying fertilizer to the UA landscape environment the terms correct and timely are critical in this process. **(See Figure 3.14)** The correct amount/volume of fertilizer and type is important (slow or quick release, all-in-one particle, crystal/granular or jell, organic or chemical, etc.). The short term goal is to insure the lay down schedule is strictly followed, the appropriate fertilizer and volume is used at the right time of in the agricultural schedule and followed up with irrigation as specified. (Most horticulture experts recommend fertilizing once or twice a year, however, feeding some turfs and plants more can be appropriate (depending on location dictated by the amount of shade and sunlight in the area).

## I. Campus Pesticide Use

On occasion, the plants will become stressed due to natural or unnatural events. When this happens, the competitive edge that the plant once had is given away to such pests as weeds, fungi, and insects. When any of these pests invades a plant, the application of the appropriate chemical to combat the pest and restore the plant's ability to maintain its health is necessary. Of the utmost importance and the first rule when working with these

chemicals is safety. Applying seed and granular fertilizers takes time and skill, but the process for applying pesticides is much more difficult and requires the closest attention to detail by the applicator. There is no room for error, and the application must be done correctly the first time; failure to do so can be disastrous, as well as costly. Along with safety, the timing of pesticide applications is also extremely important. A poorly timed application will, more times than not, fail. **(See Figure 3.9)**

**PART II****CAMPUS LANDSCAPE AND GROUNDS PRIORITY AREAS**

High Priority Areas:

1. The length of University Boulevard
  - a. From the Capstone College of Nursing to the West Entrance Gateway Sign/Sigma Nu House.
  - b. The width is approximately the distance up to the front of the buildings the line University Boulevard.
2. The University of Alabama President's Mansion (See Figures 3.14)
3. The Quad
4. The Crimson Promenade
5. Bryant-Denny Stadium
6. University Club
7. Mal Moore Athletic Building
8. University Systems/Building and Pinehurst houses #7, #9, and #11
9. North entrance sign/Manderson Landing
10. West entrance sign
11. East entrance (Capstone College of Nursing)
12. Capstone Village
13. Areas surrounding all core campus
14. Gorgas House
15. Shelby Complex/Shelby Quad
16. Woods Hall Quad
17. Marr's Spring/Pond area
18. Athletic Facilities/Walk of Champions

## **PART III**

### **CAMPUS LANDSCAPE AND GROUNDS PROJECTS**

#### **A. Irrigation Master Control System**

Healthy landscapes equate to beautiful landscapes. The primary element to achieve this result is the application of water, and the key to sustained health and beauty throughout all seasons is the right amount of water applied, no matter what time of the year. To take the University of Alabama campus to the next level of excellence, it will be necessary to supply irrigation to all critical areas; and ultimately to all turf, shrubs and flowers throughout the entire campus. Having complete control of over 110 individual systems on campus is imperative to maximize results and work efficiently, in addition to insuring the University is doing its part to conserve and utilize only the minimum amount of water necessary for its grounds operations.

We have found that the best way to achieve this was to install an intelligent, automatic water management system (a master controller) that communicates with many controllers. To date, we have 75 systems that are compatible with our Sentinel Toro master control. The master controller has helped manage scheduling conflicts between multiple controllers, manage the number of valves based upon flow capacities, provide water management capabilities with or without flow meters, alert systems when it is raining, manage the proper operations of valves so that system capacities are not exceeded, and will alert the user to the location of leaks in the systems.

The short term goal of 2010 was to evaluate our current 71 irrigation systems with a professional irrigation consultant. That process resulted in finding all campus irrigation meters and marking them using GPS technology. In addition, all systems (electric, hydraulic, battery and manual) have been evaluated for compatibility and the ability to successfully communicate/connect with the initial start-up of the Master Control System. The long term goal is to insure any new irrigation systems (major construction or special projects) are connected and integrated into the system and then incorporate the older systems into the master control computer. The goal is to have all systems electric on campus and connected to the master control system by 2015. There are an additional 21 hydraulic systems that will need to be converted to the Sentinel master control.

#### **B. Irrigation System Upgrades**

The long term goal to build our own Campus Irrigation Installation Team was realized in 2009. This team of seven irrigation techs has been very effective providing cost savings, flexibility and quick response to in-house service and landscape projects.

The short term goal is to have the Campus Irrigation Installation Team evaluate all current irrigation systems on campus for operational and upgrade needs. If an old system is to the point where it is no longer functional and is past the point where it can be repaired cost effectively then a plan to replace it will be evaluated. In addition, the Grounds Department will evaluate all areas that currently do not have irrigation on campus and determine the need in those areas as well as the cost to install a system. All new sidewalk installation must take into account irrigation systems and needs. If conduit sleeves need to be added for irrigation or system parts need to be repaired/replaced due to damage caused by the installation it needs to be scheduled. Each new Capital Project will have an irrigation plan (drawing) completed by the UA Campus Landscape Architects. Each plan will be installed by our UA irrigation team, if possible.

### **C. Marr's Pond, Marr's Spring and Marr's Park**

The goal was to restore the Marr's Pond landscape and give it back to the university as one of the beautiful "green" locations on campus for students, faculty, staff and friends to enjoy. Complete installation of an irrigation system was critical to recapturing this wonderful area. A pine forest hill side, juniper filled pond banks, refurbished walking-path, flowering shrub and floating flower pots was the vision of the Pond area. In addition, extending the walking path through the open space that leads to the spring and connecting the upper west bank sidewalk to the path has helped join the pond and spring areas. Removing the gravel from the old "Grounds" laydown/parking area, removing the driveway entrance on Marr's Spring Road and installing a sidewalk to stop vehicles from parking in the area has secured the new park area between the area. To create the park area, topsoil and turf were added after removal of the drainage ditch and old ROTC broken sidewalk. The turf was recycled from the athletic practice fields. An underground drainage pipe and drain were installed to correct this problem. The addition of benches, flowers, shrubs, trees etc. along the path completed what has become a wonderful "green" park area between the Pond and Spring. Finally, restoration of the spring area completed the entire project in 2011. The plan removed old, overgrown plant material from the perimeter of the pond, cleaned out and sealed the cisterns so the spring now flows again, and a new Shrewley English bridge was installed. We also connected the pond and park walk-path to the bridge and clean up the hill side behind the cisterns. The sidewalk is now completely ADA accessible. This area will continue to grow in beauty and functionality, as additional plants and trees are added, and a vision of installing a gazebo and picnic area planned.

### **D. Medical Center**

This project is to restore the irrigation system around the entire Medical Center complex to include the Medical School, Medical Clinic and the Student Medical Center. Once the irrigation is installed the plan is to add topsoil, sod or reseed the needed areas and add flower beds and flower pots where needed. This will be an extension to the planned addition to a landscaped English garden courtyard behind the Student Medical Center. The goal is to complete this project within the 2013 year.

### **E. Moody Music Building/Alumni Hall**

Moody Music Building is located in a key priority 'A' location. Although these facilities are not very old, the landscaping (trees, shrubs, and turf) had not been cared for correctly during the 1990s/early 2000 time frame. The hydraulic irrigation system was cut during road work and needed repairs; so the lawn has been completely without irrigation. It has left the turf with large bare spots throughout the lawn and dead in many other areas. This lack of irrigation has had the same effect on the plants and flowers around the buildings. During this same time frame, the trees and shrubs have never been pruned properly or, in many cases, never pruned at all. Poor pruning techniques have left the "smaller" shrubs, like Junipers, patchy and/or dead on the lower half of the plants and much larger than their normal intended size. Larger bushes, like Hollies, are well overgrown, up against the buildings and looking like thickets. Finally, because of negligent trimming all the trees are well overgrown and cause damage due to the branches up against the building walls.

The recommended course-of-action for this project was to complete landscape makeover for the buildings. This included a new electric irrigation system around the building and new landscaping of trees, shrubs and flower beds; making sure the correct trees and shrubs were selected and planted at the appropriate distance from the building. This project was completed by the end of 2013.

## **F. President's Mansion Landscape Upgrades**

The goal was to bring the yard of the University President's Mansion up to a higher standard that corresponded with the history and style of the mansion. The plan was to do most, if not all, the work for this project with Grounds Department personnel. The project consisted of the replacement of old overgrown plants, which gave the yard a cleaner, classier look that complimented the era of the historic home it supports.

## **G. Campus Gateway Entrances Landscape Projects**

There are three primary areas that serve as gateways to welcome visitors to the University of Alabama. They are located on the east side of campus (Hwy 82 and University Boulevard) at the Capstone College of Nursing, west side of campus at University Boulevard and Wallace Wade Avenue and the north side of campus at Jack Warner Parkway and Hackberry Lane. Each of these three areas has a separate landscape plan that will be or has been implemented in conjunction with other campus projects. The West Gateway entrance was completed in August 2008 as one of the Campus Landscape and Grounds Priority 'A' projects. All three of these areas are continuous improvement projects and are addressed year round.

## **H. Campus Landscape and Grounds Priority 'A' and 'B' Projects**

The Campus Landscape and Grounds Priority 'A' Project was a plan that consisted of ten mini projects along University Boulevard. The objective of these projects was to upgrade the landscape and beauty of street corners and lawns in front of selected halls. These mini projects were accomplished by University Grounds personnel in August 2008. They covered the following locations:

- |                               |   |
|-------------------------------|---|
| 1. Denny Chimes               | 6. Gallalee Hall                        |
| 2. Ole Row Sidewalk area      | 7. Corner of 6th Ave. (Moore Hall Side) |
| 3. Farrah Hall                | 8. Doster Hall                          |
| 4. West University Entry Sign | 9. Rose Administration Building         |
| 5. Russell Hall               | 10. Mini Park                           |

With the completion of these projects, all ten areas have been folded into a weekly grounds maintenance plan. Due to their priority locations, it is imperative that each area be given the highest standard of care to maintain their beauty.

The Campus Landscape and Grounds Priority 'B' is a plan that was implemented in the Spring of 2009 and consists of several projects that are in key locations on campus. Each area in this plan has unique needs for upgrades and improvements. Needs such as installation of irrigation systems, tree removal, lighting, overgrown shrub removal/pruning, new so, new flower planters, new trees planted and bollards with chains are being addressed. In addition, building up-lighting will be installed when appropriate. Priority 'B' projects are divided into three areas which include:

Area 1 (Perimeter of Quad):

1. Nott Hall

2. Lloyd Hall
3. Garland Hall
4. Bidgood Hall
5. Carmichael Hall

Area 2:

6. Woods Quad
7. Gorgas House

Area 3:

8. Moody Music Building
9. Bryant Conference Center
10. Alumni Hall

Area 4:

11. Moore Hall
12. Little Hall
13. Foster Auditorium

This plan is progressing very well with many portions completed and yielding outstanding results. Maintenance schedules have been developed to insure our highest standard of care.

### **I. Grounds Supply/Stock Project**

This project is a long term goal to develop a Grounds Department 'in-house' supply/stock room position that supports all Grounds equipment and installation needs on campus. The primary components for general grounds maintenance equipment (mowers, weed-eaters, trimmers, chain-saws, etc.) and irrigation installation components would be stocked. In addition, grounds safety equipment (ear-plugs, glasses, gloves, etc.) would be controlled. With a full supply of parts, a process can be incorporated into the campus maintenance operation that does not require continuous ordering of parts, several times a week. It will also help stop the delay in repairing a broken system due to waiting on parts and the ability to purchase larger quantities of supplies at the lowest prices. This new process will require education (a new way of doing business), budgeting, and possibly a "supply" personnel position to monitor, issue, control, and purchase parts as needed. This future Supply Personnel Position would cover all Grounds supply parts and equipment.

## PART IV

### CAMPUS LANDSCAPE AND GROUNDS POLICY

#### PURPOSE STATEMENT

**Trees provide numerous benefits to the campus of The University of Alabama.** Therefore, the University strives to maintain, preserve and enhance the forest/tree population within the University of Alabama campus (core and external properties). To increase the overall canopy, health and longevity of the university tree population, provide protection and to make sure that removal of all tree on campus are conducted with proper considerations and adequate replacement and to ensure UA trees are managed and cared for in a manner that is consistent with local, state and national tree health criteria. The University of Alabama Assistant Vice President for Facilities and Grounds, Grounds Department, University Forester and Landscape Architect will team together to provide the proper care and management to the campus forest.

#### POLICY

**Criteria for Tree and Vegetation Work:** Specific criteria will be established and applied to the removal and/or pruning of trees, shrubs and/or vegetation located in or on UA property. The criteria will be used to evaluate the overall public benefit of the proposed work. In all cases, safety concerns will receive the highest priority. Priority will be given to limiting removal, increasing forest canopy, and preserving appropriate vegetation on UA property. Misuse of any and all trees is prohibited (climbing, use of ropes, wire, hammocks, slack-lining, etc.). In order for a tree to be removed it must meet the following criteria:

- 1 Dead or have reached or exceeded their useful lifespan, and may present danger to life and property
- 2 Safety Hazard
- 3 Hazard to utility lines
- 4 Interferes with construction of facilities
- 5 Trees growing in inappropriate places, such as too close to structures, sidewalks, parking lots
- 6 Damaged trees from natural causes
- 7 Trees not consistent with the master plan
- 8 Approval of Landscape and Grounds working group

**Hazardous Tree Management:** Public health, safety and general welfare will be maintained through the use of generally accepted professional practices of evaluation and treatment to reduce risks to people and property from hazardous trees. Attention to proper selection, planting and maintenance of new trees will also be pursued to achieve long-term risk reduction.

**Pruning Standards:** The latest pruning standards established by the International Society of Arboriculture will be used in the maintenance of park vegetation. Maintenance Pruning is conducted on an as needed basis. Trees are evaluated and based on pruning needs are scheduled for pruning.

**Topping Disallowed:** Topping destroys the natural appearance of the tree and does not contribute to the campus aesthetics. Because “topping” of trees can cause permanent damage by promoting decay, as well as causing unnatural dense and weak branching structure; topping will not be practiced or permitted except under special circumstances.

**Tree Retention and Protection (Daily / Construction Site):** Having healthy trees is a top priority to keep our campus beautiful. Misuse of any and all trees is prohibited. Examples of misuse include, but are not limited to climbing, use of ropes, wire, hammocks, slack-lines, zip-lines, nails, tape and signage, etc. All these issues cause stress, scaring and, often broken branches, which can lead to disease and/or death of an otherwise healthy tree and therefore is prohibited. In addition, it is strictly prohibited to intentionally break off limbs and branches for personal convenience (i.e., tent and RV placement on campus). Trees on construction sites will be conserved wherever possible. Trees designated for retention will be protected from construction impacts according to standard plans and

specifications. No equipment or vehicle shall be parked or construction materials stored, or substance poured or disposed within the tree protection area. Construction and grounds management practices (fencing, feeding, watering, limiting traffic over root, etc) will be complied with throughout the construction process. Once construction projects are complete, any trees designated for protection shall receive deep root fertilization treatments for two years after project completion (one in Spring/ one in Fall). Often damage to tree roots on a construction site does not show up until years later. This will help ensure the overall health of the tree following any construction activities.

**Conservation of Rare Specimens:** Individual trees that are considered rare because of size, species or historical significance will be given extra protection and consideration for retention.

**Diseased or Infested Plants That Pose Risk to Trees:** Whenever possible, action will be taken to effectively decrease risk to other trees from pests and diseases. This may include removal and destruction of infected materials, pesticide treatments and/or alternative cultural practices. Other knowledgeable agencies, such as Local and State Cooperative Extensions, may be consulted as needed. However, as a minimum, UA Forester and Grounds Director will make an assessment and report their recommendation to the Assistant Vice President of Facilities and Grounds.

**Damage, Vandalism and Illegal Cutting:** Whenever possible, action will be taken to investigate and prosecute vandalism, misuse (see paragraph titled: **Tree Retention and Protection**) and illegal cutting of UA trees. This policy makes it illegal for anyone to vandalize or remove trees or other vegetation from the University of Alabama. Compensation for damages will be sought based on the appraised value.

**Tree Replacement:** At least one tree will be planted for every tree that is removed from the University of Alabama core campus. However, the location of the replacement tree(s) may not always be the same as the location of the removed tree. Trees that are to be removed in construction areas shall be replaced so that the tree volume is equal to the existing (**See Figure 3.7**) Replacement tree(s) species and location will be selected so that overall mature canopy volume will be maintained, or the tree(s) coincide with the overall landscape and building/facility needs and, finally, for overall aesthetics of the campus.

**Tree Planting/Transplanting:** Trees that are planted or transplanted should be done so that the overall health of the tree is taken into account. The best time to plant or transplant trees is September to the end of February. This gives the tree the best chance at survival. Not all instances occur that trees will be able to be planted or transplanted during this timeframe. In these instances, any tree planted or transplanted shall be monitored on a regular basis and watered daily until tree has established its root system. Trees that are staked when planted shall have stakes checked in six months after installing to ensure cables are not cutting into tree bark. If cables are no longer needed for the tree they shall be removed. Should cables still be needed the cables will be loosened so that they are not cutting into tree bark and reevaluated in six months.

**Campus Tree Inventory:** Campus tree inventory was completed Summer 2013 on campus and Bryce Property, excluding current construction projects going on at that time. Once construction projects are complete, existing and planted trees will be inventoried. (**See Figure 3.16**) Data was collected on each tree on campus, to include Bryce Property. This data includes: location of tree, diameter of tree, height of tree, health of the tree, any claims or damage made to the tree, if tree is a special tree (memorial, heritage, or dedicated), age of tree if known, and any safety issues or disease information on the tree. Every other year, the Campus Forester will re-inventory all trees on campus to ensure accurate data is kept on each tree. This information allows for the Campus Forester to make recommendations to the Campus Landscape and Grounds Committee concerning the overall health of the tree or removal of the tree. Each tree will be considered on a case by case basis taking into account criteria listed in the Criteria for Tree and Vegetation Work before recommending removal of such tree.

**APPENDIX  
PROJECT STANDARDS, FIGURES AND TIMETABLES**

**The University of Alabama Irrigation Systems  
Figure 3.1a**

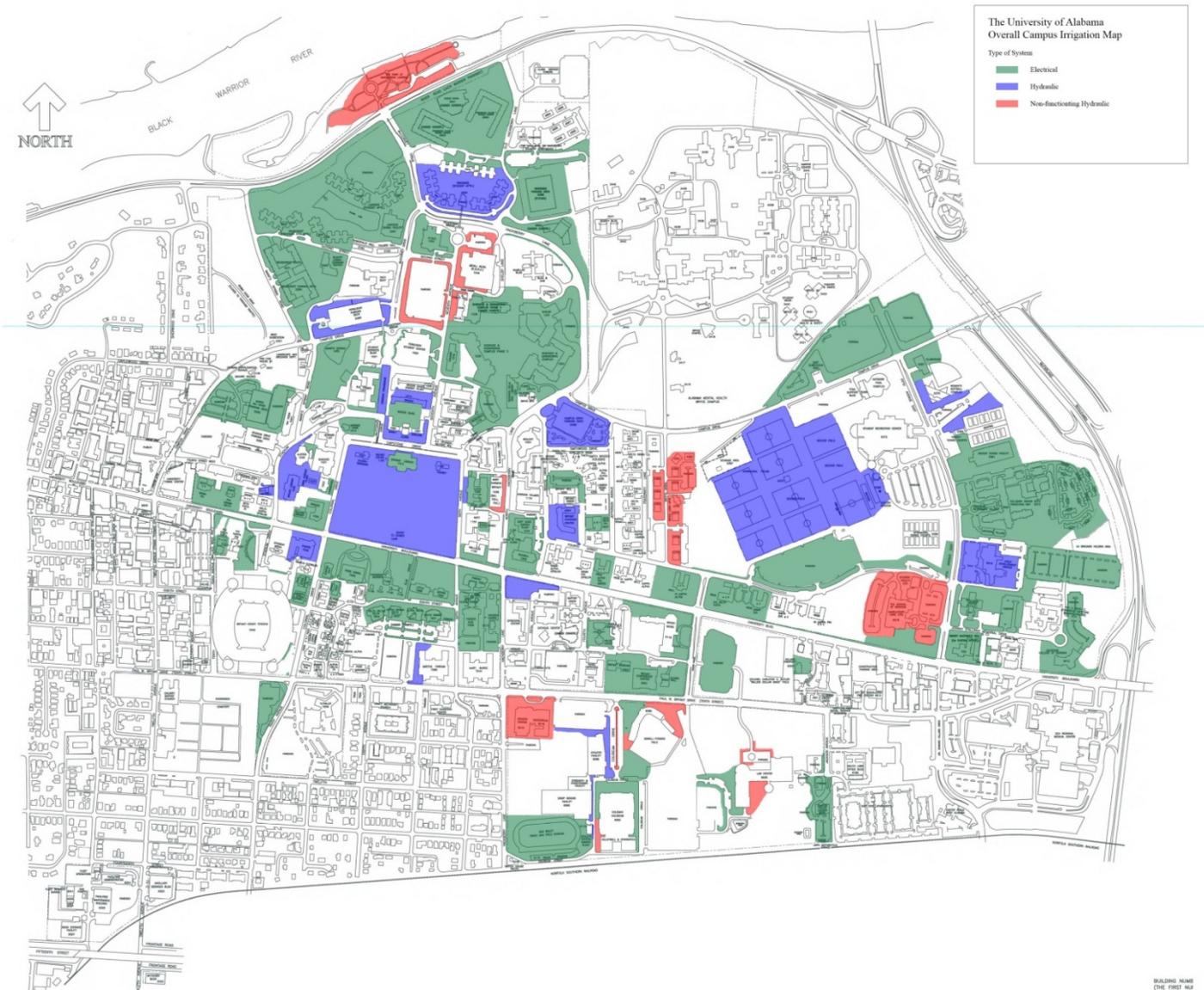
<b>The University of Alabama Irrigation Systems</b>				
<b>Hydraulic Systems</b>		<b>Electric Systems</b>		<b>Hydraulic/Electric Systems</b>
<b>Functional</b>	<b>Non-Functional</b>	<b>Functional</b>		<b>Functional</b>
AIME Building	Bryce Lawn Apartments	4th Street trees/sod	Moody Music Parking Lot	Law School N
Alston Hall	Clark Hall	600 Building	Moore/Little Hall	
Blount Building	Garland Hall	Adams Hall	Morgan Hall	
Bridge to Riverside	Manly Hall	Alumni Hall	N Bluff Parking Lot	
Bruno Library	Mary Harmon Bryant	Barnard Hall	N entrance sign	
Campus Dr. Parking Deck	Maxwell Hall	BB Comer	NE Commuter lot	
CBA Energy Plant	MDB Playlot	Bike Path	North East Parking Lot - RV Lot	
Child Development	The Park at Manderson Landing	Brewer Porch	North West Parking Lot - RV Lot	
Ferguson Parking Deck	Tom Bevil	Bryant Conference Center	Nott Hall Annex	
Martha Parham West		Bryant Museum	Palmer Lake	
Mini Park		Campus Dr./Hackberry Lane N	Pinehurst	
Promenade		Campus Drive Deck	Presidential Village I	
Quad		Capstone College of Nursing	Riverside E Parking Lot and Deck	
Reese Phifer Hall		Capstone village	Ridgecrest N	
Woods Hall		Carmichael Hall	Ridgecrest S	
		Chancellor Office System	Rose Administration	
		Dr. Hillard Property	Rose/Doster	
		East Commuter Lot	Russell Hall	
		East Energy	Science & Engineering (SERC/NERC)	
		Farrah	Shelby Hall	
		Ferguson Center Plaza	Shelby Hall W	
		Ferguson E	Small group volleyball	
		Fraternity Greenspace	Sarah Patterson Plaza	
		Gallalee Hall	Soccer Parking Lot	
		Gorgas House	South Ridgecrest	
		Gorgas Library	Stallings Center	
		Graves Hall	Temple Emanu-EL/Hillel House	
		Hackberry S	ten-Hoor Hall and Parking Lot	
		Lakeside Dining	Triangle Lot	
		Lakeside E, W	Tuomey Hall	
		Law School W	UAPD	
		Lloyd Hall	Univ. Blvd. Old Row	
		Mansion	University Club	
		Marr's Pond	Veteran Affairs Center	
		McClure Library	West Entry Sign Univ. Blvd.	
		Moody Music	Woods Quad	

Figure 3.1b

Athletic Facilities Irrigation Systems			
Hydraulic Systems		Electric Systems	Manual Systems
Functional	Non-Functional	Functional	Functional
Bryant Hall	Aquatic Center	Bryant Dorm	Football Greenspace
Coaches' Office	Baseball Stadium	Coliseum	
Soccer Stadium		Fosters Auditorium	
Softball Stadium		Indoor Tennis	
Tennis Stadium		Track Stadium	
		Sarah Patterson	
		Walk Of Champions	

Irrigations Systems Map

Figure 3.2



The University of Alabama Annuals List  
Figure 3.3

University of Alabama Annuals List			
Spring/Summer		Fall/Winter	
<i>Alternanthera angustifolia</i>	Joseph's Coat	<i>Antirrhinum majus</i>	Snapdragon
<i>Angelonia angustifolia</i>	Angelonia	<i>Brassica oleracea</i>	Flowering Cabbage and Kale
<i>Asparagus densiflorus</i>	Asparagus Fern	<i>Hedera helix</i>	English Ivy
<i>Begonia semperflorens-cultorum</i>	Wax Begonia Hybrids	<i>Petroselinum crispum</i>	Parsley
<i>Begonia x hybrid 'Dragon Wing'</i>	Dragon Wing Begonia	<i>Viola cornuta</i>	Viola
<i>Caladium bicolor</i>	Caladiums	<i>Viola x wittrockiana</i>	Pansy
<i>Calibrachoa hybrids</i>	Million bells		
<i>Catharanthus roseus</i>	Periwinkle, Vinca		
<i>Colocasio esculenta</i>	Elephant Ear		
<i>Hedra helix</i>	English Ivy		
<i>Impatiens x hybrida 'sunpatien'</i>	Sunpatiens		
<i>Impatiens walleriana</i>	Impatiens		
<i>Ipomoea batatas</i>	Ornamental Sweet Potato Vine		
<i>Lantana camara</i>	Lantana		
<i>Lysimachia nummulariaL.</i>	Creeping Jenny		
<i>Nephrolepis obliterate</i>	Kimberly Queen Fern		
<i>Pelargonium x hortorum</i>	Geraniums		
<i>Pentas Lanceolata</i>	Penta		
<i>Petunia x hybrid</i>	Petunia		
<i>Portulaca grandiflora</i>	Purslane		
<i>Rudbeckia hirta</i>	Black Eyed Susan		
<i>Salvia gregii</i>	Autumn Sage		
<i>Salvia splendens</i>	Red Salvia		
<i>Salvia guarantica</i>	Black and Blue Salvia		
<i>Scaevola aemula</i>	Fanflower		
<i>Sutera cordata</i>	Bacopa		
<i>Torenia fournieri</i>	Torenia		
<i>Tradescantia pallida</i>	Purple Hear		
<i>Tulipa hybrids</i>	Tulips		
<i>Verbena hybrids</i>	Verbena		

The University of Alabama Color Areas  
Figure 3.4

<b>The University of Alabama Color Area</b>		
<b>Beds</b>		<b>Hanging Baskets/Window Boxes</b>
Alston Front Bed	Law School Entrance	Carmichael (3)
Aquatic Center	Law School Steps	Conf. Center/Alumni Hall (14)
Bidgood/Carmichael Step Bed	Mal Moore	Doster (1)
Bidgood Sign Bed	Manderson Landing Sign	Ferg./Promenade (28)
Bruno Library	Martha Parham West	Foster's Auditorium (8)
Bryant Drive Sign Beds (4)	Medical Center	Gorgas House (3)
Bryant Museum Side Bed	Mini Park	Lloyd Hall (3)
Carmichael Hall	Moody Music	
Capstone Village	North Stadium Sign	<b>Permanent Planters/Pots</b>
Coliseum Beds	Nursing School Circle Bed	Alston (1)
Denny Chimes	Presidents Mansion	Alston Food Service (2)
Doster	Ridgecrest Island Bed	Bryce Lawn Apt. (3)
East Entrance Sign	RISE	Capstone Village (10)
Farrah Hall	Riverside Walk	Carmichael Hall (2)
Ferguson Circle Bed	Rose Admin.-Front bed and Step Beds	Conference Center/Alumni Hall (19)
Foster's Auditorium	Shelby Hall	Doster (2)
Galalee Hall	Speech and Hearing Courtyard	Gordon Palmer (2)
Garland Hall	Smith Hall	Gorgas House (12)
Gorgas House	South Lawn	Lloyd Hall (2)
Gorgas House Circle Bed	South Stadium Sign	Marr's Spring Pond Floaters (5)
Graves Hall Side Bed	Triangle Beds at Marr's Spring Rd and Stadium Drive (3)	Martha Parham (4)
Graves Hall Sign Bed	University Club	Nott Hall (2)
Homecoming Queen Bed	West Entrance Sign	Quad Maps (2)
Lakeside Dining	Woods Quad	Riverside Walk (2)

**The University of Alabama Color Schedule**  
**Figure 3.5**

<b>The University of Alabama Color Schedule</b>	
January	Routine maintenance of all Fall/Winter Color
February	
March	
April	Remove tulips and begin installation of Spring/Summer color. Begin routine maintenance.
May	
June	Routine maintenance of all Spring/Summer color.
July	
August	
September	
October	Remove summer color and begin installation of Fall/Winter color and tulips as weather permits. Begin routine maintenance.
November	
December	

## Campus Tree List

Figure 3.6

The University of Alabama Large Tree List		
<i>Acer barbatum</i>	<i>Quercus macrocarpa</i>	Dawn Redwood
<i>Acer rubrum</i>	<i>Quercus marilandica</i>	Black gum
<i>Acer saccharum</i>	<i>Quercus nigra</i>	White spruce
<i>Betula nigra</i>	<i>Quercus nuttallii</i>	Spruce pine
<i>Cedrus deodara</i>	<i>Quercus prinus</i>	Loblolly pine
<i>Cornus x 'Rutcan'</i>	<i>Quercus virginiana</i>	Virginia pine
<i>Cryptomeria japonica</i>	<i>Salix alba</i>	Chinese Pistache
<i>Fagus grandifolia</i>	<i>Salix babylonica</i>	White Poplar
<i>Fraxinus Pennsylvania</i>	<i>Sapium sebiferum</i>	Sawtooth oak
<i>Ginkgo bibba</i>	<i>Sequoia sempervirens</i>	White oak
<i>Liquidambar styraciflua 'Rotundaloba'</i>	<i>Taxodium distichum</i>	Swamp white oak
<i>Liriodendron tulipifera</i>	<i>Tsuga canadensis</i>	Scarlet oak
<i>Magnolia grandiflora x 'Claudia Wannamaker'</i>	<i>Ulmus americana</i>	Southern red oak
<i>Magnolia grandiflora x 'Braken's Brown Beauty'</i>	<i>Zelkova serrata</i>	Overcup oak
<i>Magnolia virginiana</i>	Southern Sugar Maple	Bur oak
<i>Metasequoia glyptostrobides</i>	Red Maple	Blackjack Oak
<i>Nyssa sylvatica</i>	Sugar Maple	Water oak
<i>Picea glauca</i>	River Birch	Nuttall oak
<i>Pinus glabra</i>	Deodar cedar	Chestnut Oak
<i>Pinus taeda</i>	Constellation Dogwood	Live oak
<i>Pinus virginiana</i>	Cryptomeria	White willow
<i>Pistacia Chinese</i>	American Beech	Weeping Willow
<i>Populus alba</i>	Ash	Popcorn tree
<i>Quercus acutissima</i>	Ginkgo	Redwood
<i>Quercus alba</i>	Fruitless Gum	Bald Cypress
<i>Quercus bicolor</i>	Tulip tree	Hemlock
<i>Quercus coccinea</i>	Southern Magnolia	American elm
<i>Quercus falcata</i>	Southern Magnolia	Japanese Zelkova
<i>Quercus lyrata</i>	Australis Bay magnolia	
The University of Alabama Small Tree List		
<i>Ilex latifolia</i>	<i>Cercis canadensis</i>	Saucer magnolia
<i>Ilex x attenuate</i>	<i>Cornus kousa</i>	Southern wax myrtle
<i>Ilex x 'Nellie R Stevens'</i>	<i>Crataegus phaenopyrum</i>	Flowering dogwood
<i>Juniperus virginiana 'Idyllwild'</i>	<i>Lagerstroemia indica</i>	Fragrant tea olive
<i>Osmanthus fortunei</i>	<i>Magnolia stellata</i>	Japanese flowering maple
<i>Thyia occidentalis</i>	<i>Malus</i>	Higan cherry
<i>Acer pamatum</i>	<i>Vitex agnus-castus</i>	Yoshino cherry
<i>Amalanchier x 'Autumn Brilliance'</i>	Lusterleaf holly	Redbud
<i>Ilex x 'Emily Bruner'</i>	Foster holly hybrids	Kousa dogwood
<i>Magnolia x soulangiana</i>	Nellie R Stevens holly	Washington hawthorn
<i>Myrica cerifera</i>	Idyllwild juniper	Crapemyrtle
<i>Cornus florida</i>	Fortune's osmanthus	Star magnolia
<i>Osmanthus fragrans</i>	Arborvitae	Crabapple
<i>Prunus serrulata</i>	Japanese maple	Lilac chaste tree
<i>Prunus subhirtella</i>	Autumn Brilliance Serviceberry	
<i>Prunus x yedoensis</i>	Emily Bruner holly	

The University of Alabama Tree Replacement Policy  
 Figure 3.7

The University Of Alabama Tree Replacement Policy												
Removed Tree Diameter (inches)	Diameter of Replacement Tree (inches)											
	1"	2	3	4	5	6	7	8	9	10	11	12
1"	1 Tree	1	1	1	1	1	1	1	1	1	1	1
2	5	1	1	1	1	1	1	1	1	1	1	1
3	10	3	1	1	1	1	1	1	1	1	1	1
4	17	5	2	1	1	1	1	1	1	1	1	1
5	26	7	3	2	1	1	1	1	1	1	1	1
6	37	10	5	3	2	1	1	1	1	1	1	1
7	50	13	6	4	2	2	1	1	1	1	1	1
8	65	17	8	5	3	2	2	1	1	1	1	1
9	82	21	10	6	4	3	2	2	1	1	1	1
10	101	26	12	7	5	3	3	2	2	1	1	1
11	122	31	14	8	5	4	3	2	2	2	1	1
12	145	37	17	10	6	5	3	3	2	2	2	1
13	170	43	19	11	7	5	4	3	3	2	2	1
14	197	50	22	13	8	6	5	4	3	2	2	2
15	226	57	26	15	10	7	5	4	3	23	2	2
16	257	65	29	17	11	8	6	5	4	3	3	2
17	290	73	33	19	12	9	6	5	4	3	3	2
18	325	82	37	21	13	10	7	6	5	4	3	3
19	362	91	41	23	15	11	8	6	5	4	3	3
20	401	101	45	26	17	12	9	7	5	5	4	3
21	442	111	50	28	18	13	10	7	6	5	4	4
22	485	122	54	31	20	14	10	8	6	5	5	4
23	530	133	59	34	22	15	11	9	7	6	5	4
24	577	145	65	37	24	17	12	10	8	6	5	5
25	626	157	70	40	26	18	13	10	8	7	6	5

**The University of Alabama Annual Maintenance for the President's Mansion**  
**Figure 3.8**

<b>The University of Alabama Annual Maintenance for the President's Mansion</b>	
January	Monitor landscape and perform maintenance as needed. Maintain Pansies, fertilize and replace plants as needed.
February	Maintain pansies and monitor tulip growth. Apply pre-emergent to turf by 20 February. Prune back Roses at mid-month.
March	Maintain pansies and monitor Tulip growth. Maintain landscape and lawn.
April	Add amendments to color beds and re-plant with red Salvia. Re-mulch, fertilize and maintain all shrub beds. Cut back all Liriope.
May	Perform routine maintenance on color beds fertilizing and deadheading as needed. Monitor and maintain landscape and lawn. Fertilize turf 1-2 pounds of N and K per 1000 square feet. Prune Azaleas by end of May.
June	Perform routine maintenance on color beds, shrub beds and lawn. Prune shrubs and trees as needed.
July	Maintain color beds, landscape and lawn.
August	Maintain color beds, landscape and lawn. Fertilize turf with 2 pounds of N per 1000 square feet. Re-mulch all beds in preparation for football season.
September	Maintain color beds, landscape, and lawn. Monitor Salvia. Over seed lawn with Fescue at 10 pounds per 1000 square feet.
October	Maintain color beds, landscape, and lawn. Over seed lawn with Fescue at 10 pounds per 1000 square feet. Once a dense stand of Fescue is established, replace an over seed with a pre-emergent herbicide application.
November	Maintain color beds, landscape, and lawn. Plant dark pink tulips and mixed color pansies as weather permits. Fertilize over-seeding with 1 pound of N per 1000 square feet.
December	Maintain Pansies and fertilize as needed. Monitor lawn and landscape. Re-mulch all beds after football season has ended.

**Turf Pesticide and Fertility Timeline**

**Figure 3.9**

<b>The University of Alabama Turf Pesticide Timeline</b>		
	<b>Cool Season Turf</b>	<b>Warm Season Turf</b>
January		Application of a non-selective post-emergent weed control (Round-up), if needed.
February	Application of pre-emergant herbicide.	Application of pre-emergant herbicide.
March		
April		Application of a fungicide to protect zoysia grass from zoysia patch.
May	Application of selective post-emergent weed if needed.	Application of a selective post-emergent herbicide if needed.
June	Possibility of an application of a broad spectrum fungicide, this will be dependent on disease pressure which is primarily dictated by weather patterns.	
July		
August		
September	Application of a pre-emergant herbicide.	Application of a pre-emergant herbicide. Possibility of an application of an insecticide to combat grubs and/or fall army worms as well as application of fungicide to protect against Zoysia patch.
October	Application of a selective post-emergent. Weed control if needed.	Application of a selective post-emergent
November	Application of a selective post-emergent	Application of a selective post-emergent
December	Application of a selective post-emergent	Application of a selective post-emergent

<b>The University of Alabama Turf Fertility Timeline</b>		
	<b>Cool Season Turf</b>	<b>Warm Season Turf</b>
January		
February		
March	Fertilize with 3-2-1 with quick release at a maximum of 1 pound nitrogen per 1000 square feet.	
April		Fertilize with a 3-2-1 product that will release 2 pounds nitrogen over approximately 16 weeks.
May		
June		
July		
August		Fertilize with a 3-2-1 at a minimum of 1-2 pounds Nitrogen and 1.5 pounds potassium per 1000 square feet.
September		
October	Fertilize with a 3-2-1 at a minimum of 1 pound nitrogen per 1000 square feet.	
November		
December	Fertilize with a 3-2-1 at a minimum of 1 pound nitrogen per 1000 square feet.	

**Special Note:** All applications of fertilizer will be based upon soil test results.

The University of Alabama Turf Cutting Height  
Figure 3.10

<b>The University of Alabama Turf Cutting Height</b>		
<b>Type</b>	<b>Warm Season</b>	<b>Cool Season</b>
Bermuda	2.5"-3"	3"-3.5"
Blue grass	3.5"-4"	3"-3.5"
Cintipede	3"	3"
Fescue	3.25"-3.5"	3.25"-3.5"
Zoysia	2.5"-3"	3"-3.5"

The University of Alabama Mowing Schedule

Figure 3.11

University of Alabama Mowing Schedule				
Monday	Tuesday	Wednesday	Thursday	Friday
Ferguson Student Center South Crimson Promenade	AIME Bevill H.M. Comer Houser Quad	Woods Quad	Little Moore Farrah Hayden Harris	Reese Phifer Temple Tutwiler Harris Eleventh
Ferguson Parking Deck	President's Mansion Rose Admin Doster Hall Presidential 1	Gorgas House Morgan Bidgood	Foster Burke Parham Barnwell New	Ten Hour Campus Drive West Fraternities
B.U.I.P. Paty Hall	Hardaway Annex A.F. Studies	Carmichael Graves McClure	Byrd Parker Adams Wilson Osband	Marr's Spring Pond Chi Omega Alpha Chi Omega Delta Chi
Somerville Palmer	Engineering Boiler Shop Bureau of Mines	Gallalee	Tutwiler and Parking Anthropology Moody Bryant Conference	Maxwell Freidman Powers
Lakeside Lakeside Dining	W.B. Jones Science College	Nott Lloyd Smith	Museum Alumni Hall Band Parking Lot	Campus Drive West
Riverside Parking Lot	Annex. Greenhouse	Aquatic Center Area *	Soccer Stadium * Hillel House	Outside Rec. Fields
Highland Apartments Health Services	Russell Gordon Palmer Biology	Coliseum *	Tennis Stadium * Temple Emanu-EL	The Park at Manderson Landing
McMillian Shelby Hackberry Lane	Campus Drive Parking Bryant Hall	Mal Moore Bld. *	Patton House	Pinehurst #7, #9, #11
Rogers Library Hackberry Park	Bryce Lawn Apts. Fraternities	Baseball Stadium *	Softball Stadium *	Rowing Complex when needed *
Hillard Property	New Parking Lot University Blvd.	Track Stadium *	Rec. Center Area	Kidd Bldgs
Brewer Porch Building	Student Medical Center 600-700/Capstone	Law School	Locke House	Boone's Cabin as needed
Parking lot next to Chevron Station	Stallings Ctr. Child Dev. Center	Retention Pond	System's Office	
Holding area by Publix	Retention Pond	Ridgecrest South Ridgecrest North	University Club	
East Side of Mini Park	AKA House		Office of Counsel	
Around Band Practice Field	Maintenance Property every 1st and 3rd Tues.		WUAL Radio Tower when needed	
Cross Country Track Course when needed *	Garage Area every 1st and 3rd Tues.			
South University Mall Lot	Strode Property every 1st and 3rd Tues.			
	Storeroom Area every 1st and 3rd Tues.			
	Wittichen Bld. every 1st and 3rd. Tues.			
	Brewer Porch Center every 2nd and 4th Tues.			
<b>Note:</b> * denotes outside Athletic Properties				
<b>Special Note:</b> All mowing schedules may vary due to weather and/or events.				

## The University of Alabama Residential Facilities on Campus

Figure 3.12

The University of Alabama Residential Halls, Fraternities, and Sororities		
Halls	Fraternities	Sororities
Tutwiler	Alpha Kappa Lambda	Alpha Chi Omega
Burke East	Alpha Phi Alpha	Alpha Delta Pi
Burke West	Alpha Tau Omega	Alpha Delta Sigma
Parham	Beta Theta Pi	Alpha Gamma Delta
Byrd	Chi Phi	Alpha Kappa Alpha
Parker Adams	Delta Chi	Alpha Omicron Pi
Harris	Delta Kappa Epsilon	Chi Omega
Bryant	Delta Tau Delta	Delta Delta Delta
Small Group Houses	Kappa Alpha	Delta Sigma Theta
Bryce Lawn	Kappa Alpha Psi	Delta Xi Phi
Ridgecrest South	Kappa Sigma	Delta Zeta
The Highlands	Lambda Chi Alpha	Gamma Phi Beta
Riverside-East, West, North	Lambda Sigma Phi	Kappa Alpha Theta
Lakeside-East and West	Omega Psi Phi	Kappa Delta
Ridgecrest East and West	Phi Beta Sigma	Kappa Kappa Gamma
Blount	Phi Delta Theta	Phi Mu
Friedman	Phi Gamma Delta	Pi Beta Phi
Paty	Phi Iota Alpha	Sigma Delta Tau
Sommerville	Phi Kappa Psi	Sigma Gamma Rho
Palmer	Pi Kappa Alpha	Zeta Phi Beta
Presidential I	Pi Kappa Phi	Zeta Tau Alpha
Presidential II	Sigma Alpha Epsilon	Delta Gamma
	Sigma Chi	
	Sigma Lambda Beta	
	Sigma Nu	
	Sigma Pi	
	Theta Chi	
	Zeta Beta Tau	

The University of Alabama Mulch Schedule

Figure 3.13

The University of Alabama Mulch Schedule		
Area A	Area B	Area C
Spring	Spring	Spring
Summer		
Fall	Fall	
Winter		

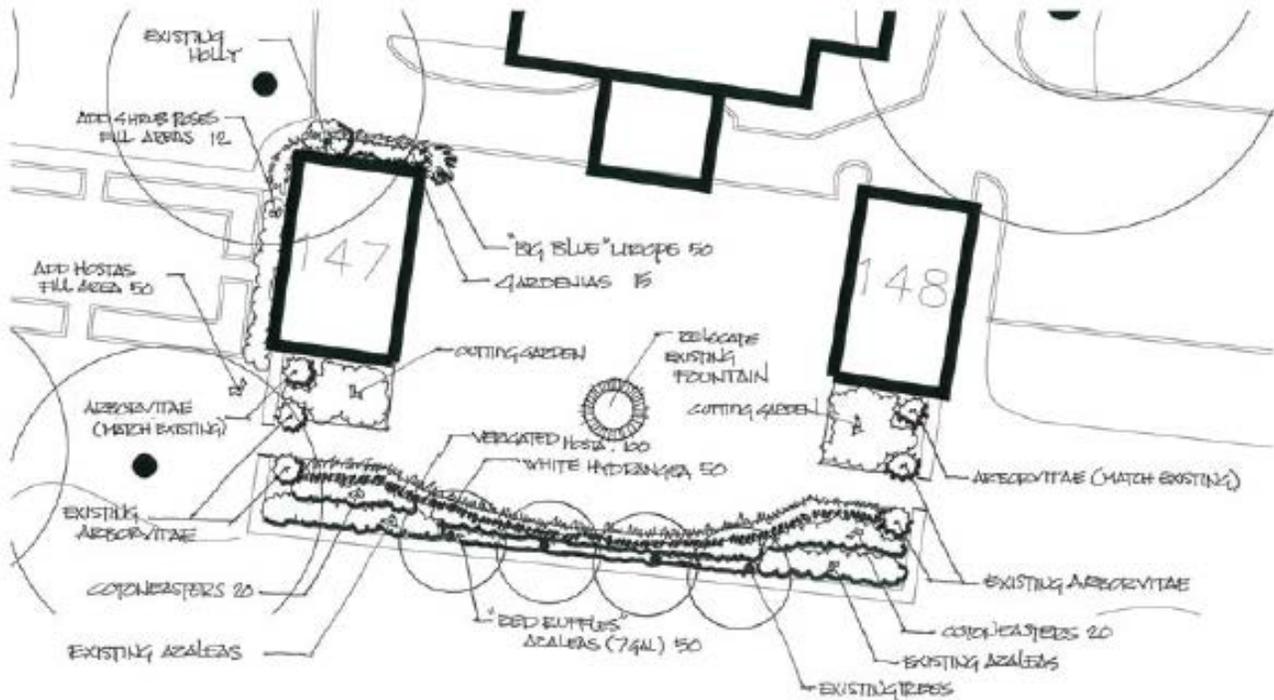
The University of Alabama Fertilizing Schedule

Figure 3.14

The University of Alabama Fertilizing Schedule		
Area A	Area B	Area C
Spring	Spring	Spring
Summer	Summer	Summer

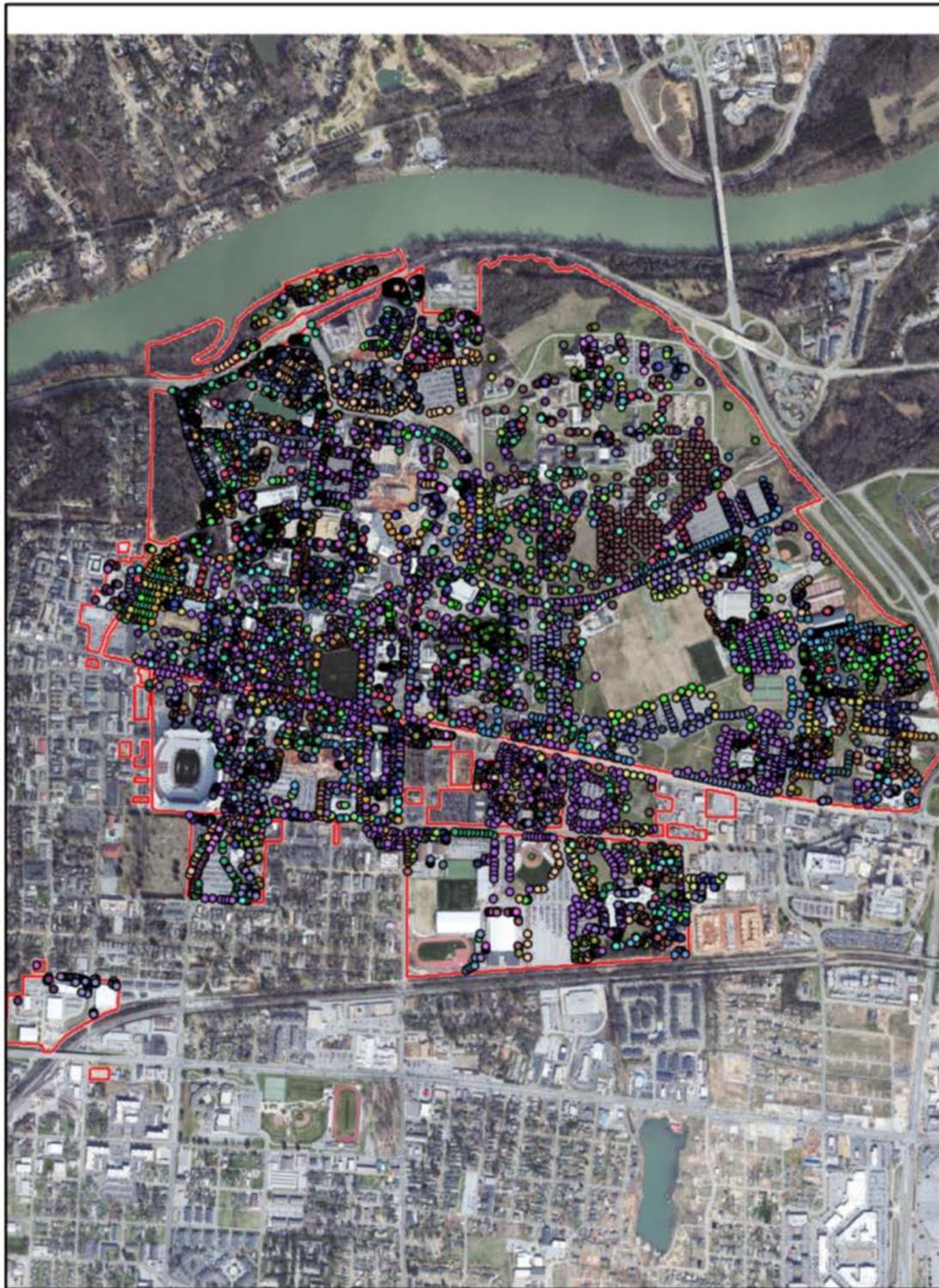
President's Mansion Landscape Upgrades

Figure 3.15



Campus Tree Inventory  
Figure 3.16

# University of Alabama Tree Survey



**Legend**

**Tree Sites**

**species**

- arborvitae
- ash,green
- ash,white
- baldcypress,comm
- basewood,american
- beech,american
- birch,river
- catalpa, southern
- cedar,deodar
- cherry
- cherry, carol lau
- cherry,black
- cherry,hig weepin
- chinaberry
- chinarf
- crabappl spp
- crapemyrtle
- cryptomeria
- cypress, leyland
- dogwood,flowering
- elm spp
- elm, chinese
- elm,american
- fringe tree
- ginkgo
- ginkgo,female
- ginkgo,male
- golden raintree
- hackberry,common
- hickory spp
- holly, american
- holly, deciduous
- holly, foster
- holly, savannah
- holly, yaupon
- locust, black
- magnolia spp
- magnolia,saucer
- magnolia,star
- magnolia,swtbay
- mapl,japanese
- mapl,rd oct glory
- mapl,red
- mapl,silver
- mapl,sug legacy
- mapl,sugar
- maple spp
- maple, norway
- mimosa
- mulberry spp
- mulberry,red
- myrtle, wax
- oak spp
- oak, cherrybark
- oak, laurel
- oak, live
- oak, nuttall
- oak, overcup
- oak, post
- oak, southern red
- oak, water
- oak, willow
- oak,bur
- oak,chestnut
- oak,pln
- oak,red
- oak,sawtoth
- oak,scarlet
- oak,schumard
- oak,shingle
- oak,swamp white
- oak,white
- pear spp
- pear,common
- pear,flwr bradrd
- pecan
- persimmon,common
- pine spp
- pine, lobloly
- pine, longleaf
- pine, shortleaf
- pine, slash
- pine, virginia
- pine,white
- pistache, chinese
- plum spp
- popcorn tree
- redbud,eastern
- redcedar,eastern
- soapberry
- sweetgum,american
- sycamore
- tuliptree
- tupelo,black
- unknown
- yew spp

