# The Dignity of Restraint



A Study to Preserve and Enhance The University of North Carolina at Chapel Hill's Majestic Tree Landscape



"My first impression of Chapel Hill was trees. My last impression is trees."

Robert House, Former UNC Chancellor

Cover: The "ancient forest" on a hill, McCorkle Place; the first building on campus, Old East and the Old Well. Watercolor by Peter Lindsay Schaudt, 2008. Inset: Aerial photo of campus, 2004



The University of North Carolina at Chapel Hill is nationally recognized for its beautiful historic campus. As a native son of North Carolina, an alumnus and professor, I have had the privilege of enjoying its atmosphere for many years. I am not alone; alumni maintain a deep emotional attachment to this place for good reason.

This report documents UNC's best loved landscapes and lays out plans for their future preservation and enhancement so that the people who follow us can enjoy and create their own memories of this special place. As Carolina nears completion of the most ambitious building program in its 213-year history; we are proud that we made a determined effort to protect and preserve these historic landscapes.

We thank the Getty Foundation Trustees for their generous support through the Campus Heritage program in making this campus vision a reality. It is my hope that with a greater understanding of Carolina's unique landscape legacy, we can achieve a balance between preservation and growth that acknowledges and reaffirms the historic, scenic, and botanic significance of this landmark campus.

Sincerely,

H. Holden Thorp

Chancellor

November 2008

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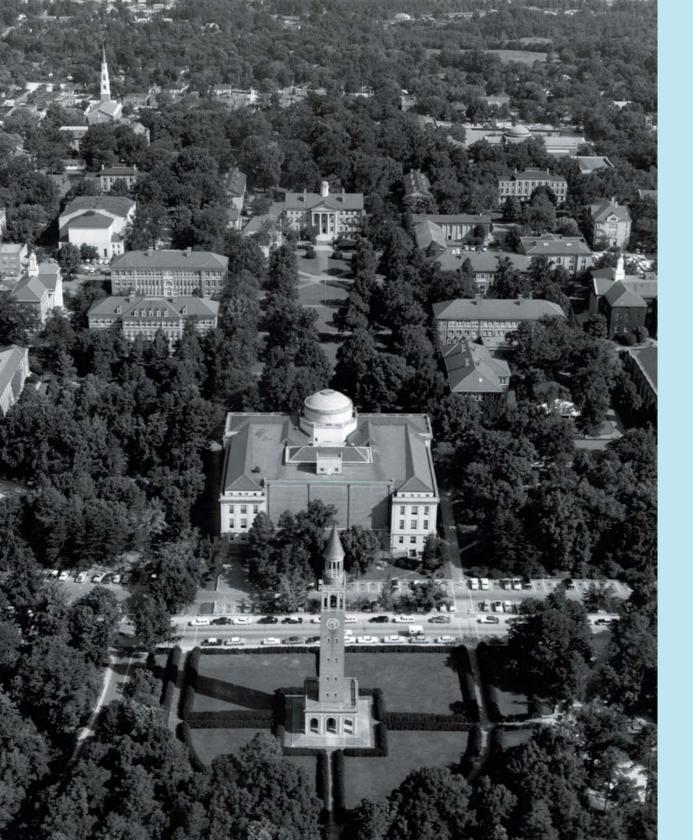
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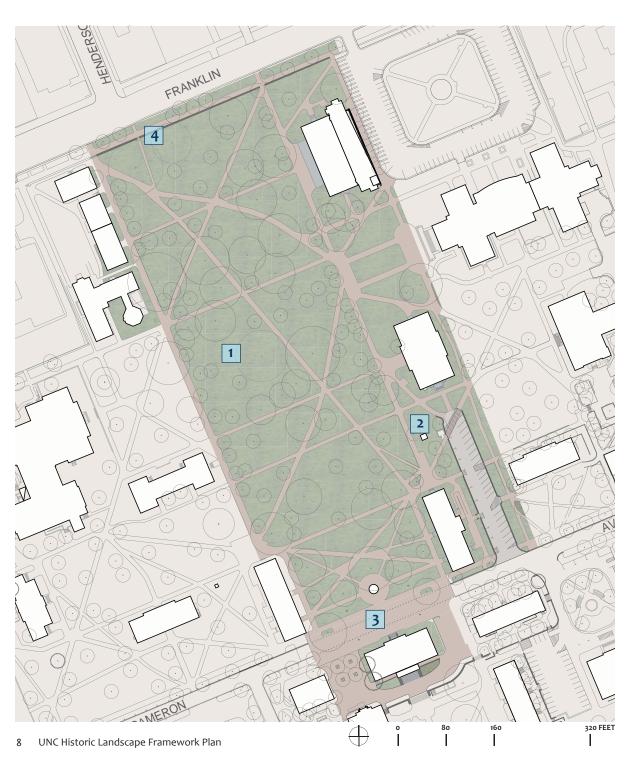
"The central campus sloped back and up over a broad area of rich turf, groved with magnificent ancient trees... There was still a good flavor of the wilderness about the place --- one felt its remoteness, its isolated charm."

Thomas Wolfe Look Homeward, Angel



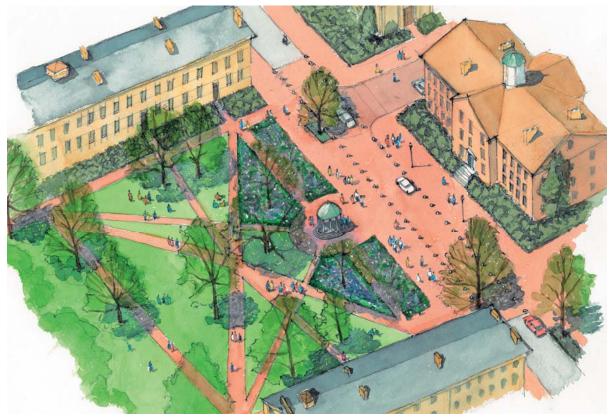
# **Executive Summary**

Illustrative site plan showing location of McCorkle Place, its campus context and proposed design interventions



### McCorkle Place: Summary of Recommendations

The gateway to the University, McCorkle Place, exhibits a strong sense of identity as it marks the historical beginnings of campus. Buildings act as a backdrop to the picturesque landscape of mature overstory trees and rolling topography of the quad. However, the lack of a dominant second generation of trees threatens the future character of this space. Views towards adjacent parking areas have become more prominent as foundation and screening plantings have been removed and replaced with varied plant material. Additionally, an opportunity exists to redesign the plaza surrounding the focal Old Well, creating a unified design reminiscent of the quads historical picturesque setting.



Bird's eye view showing the opportunity to reconfigure pathways, planting areas and extend the Old Well Plaza across Cameron Street towards the South Building



McCorkle Place, view to the South, 1905



McCorkle Place, 2004

# 1 DEVELOP A STRATEGY TO MAINTAIN & ENHANCE VEGETATIVE CHARACTER:

Inventory existing trees, their condition, tree canopy and soils to speculate vegetative growth patterns. Develop a matrix for plant selection and plant next generation of trees.

# 2 REVITALIZE & ENHANCE FOUNDATION AND SCREENING PLANTING DESIGN:

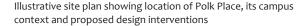
Assess existing foundation plantings and develop a prototypical layout and matrix of recommended plantings to be used at building foundations and to screen surrounding parking areas.

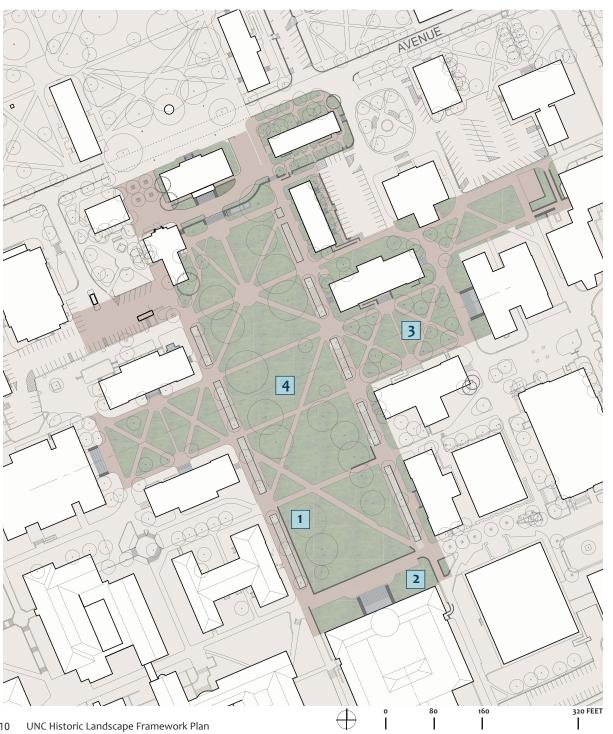
#### REDESIGN OF OLD WELL PLAZA:

Develop a picturesque, unified design for the Old Well Plaza by reconfiguring pathways and planting areas. Remove curbs and raise the grade to street height to create a pedestrian-oriented space.

# DEVELOP AN APPROACH FOR LOCATING & SELECTING ESSENTIAL SITE FURNISHINGS & MATERIALS:

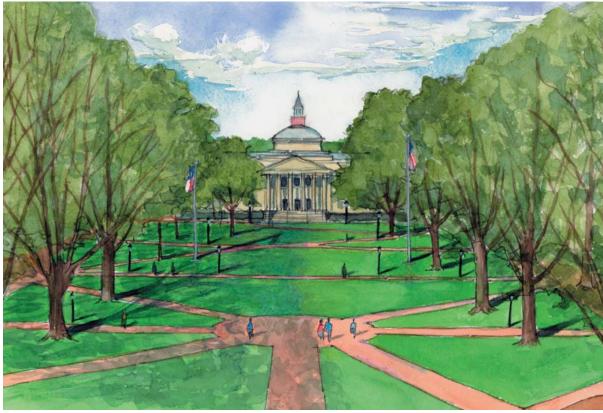
Address the need for site-specific furnishings and materials that reflect the origins and development of McCorkle Place. Develop an approach for locating these essential amenities.





## Polk Place: Summary of Recommendations

Polk Place exhibits a strong sense of identity with its dual lines of mature overstory trees, views over the great lawn, and heavily influenced Beaux Arts character. However, ongoing utility and renovation projects have plagued these assets, resulting in highly disturbed soils and stressed trees over much of the quad. Additionally, the location and addition of essential amenities such as bicycle racks and light standards also impact the space, interrupting long views over the great lawn. This visual integrity is also diminished in the side quads, as they are overdesigned and cluttered, further impacting the overall connectivity and relationship to the great lawn.



View showing the opportunity to relocate light fixtures, bicycle racks and the flag pole, to reinforce long views and the formal North-South axial relationship within Polk Place



Polk Place, view to the South, 1953



Polk Place between classes, 2008

#### **DEVELOP A STRATEGY TO MAINTAIN & ENHANCE VEGETATIVE CHARACTER:**

Inventory existing trees, their condition, tree canopy and soils to speculate vegetative growth patterns. Develop a matrix for plant selection. Utilize a tree interplanting strategy to install next generation of trees.

#### **REVITALIZE & ENHANCE FOUNDATION PLANTING DESIGN:**

Assess existing foundation plantings and develop a prototypical layout and matrix of recommended plantings to be used at building foundations.

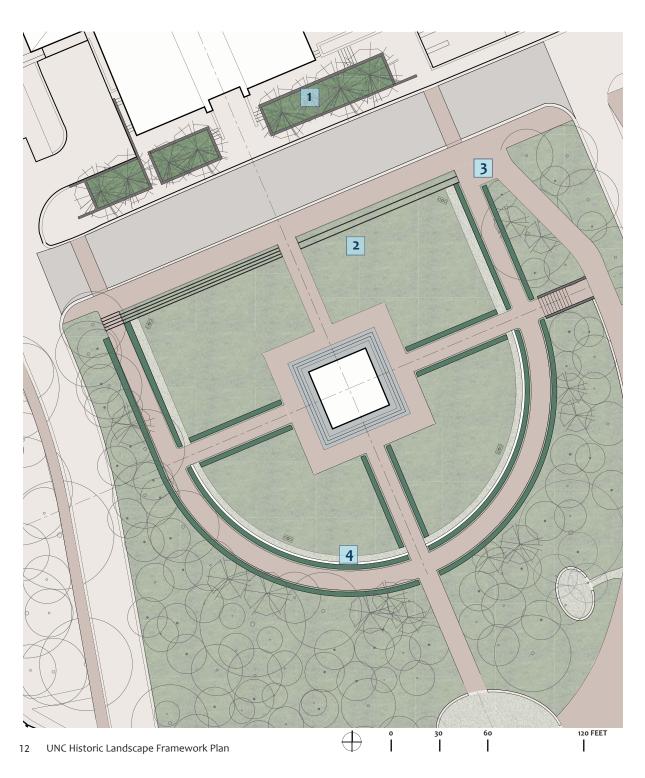
#### **REDESIGN OF SECONDARY QUADS:**

Edit and erase features from secondary quads to reunite grassed lawn panels with the larger quad. Reconfigure pathways, planting areas, and associated seating.

#### **DEVELOP AN APPROACH FOR LOCATING & SELECTING ESSENTIAL SITE FURNISHINGS AND MATERIALS:**

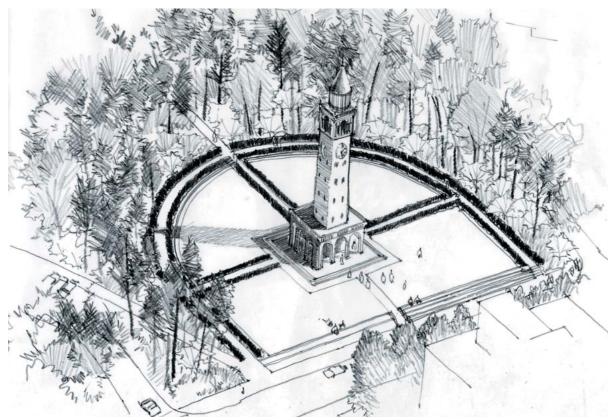
Address the need for site-specific furnishings and materials that reflect the origins and development of Polk Place. Relocate site amenities (such as bicycle racks) closer to building envelopes. Relocate features such as light fixtures and flagpoles to open up primary long views and enhance the formal axial relationships of Polk Place.

Illustrative site plan showing location of the Bell Tower Formal Garden, its campus context and proposed design interventions



### Bell Tower Formal Garden: Summary of Recommendations

The highly visible Morehead-Patterson Bell Tower defines a campus icon from the 1940's. The semicircular site, a formal landscape setting slightly isolated behind a veil of an overgrown boxwood hedge, functions more as a pass through space, rather than a destination. The space remains relatively underutilized throughout much of the year, with the exception of football game-days. The existing topography becomes steep to the west, creating accessibility concerns. The height of the existing boxwood hedges is also a liability, as they are overgrown and mask the base of the Bell Tower, enclosing the lawn panels, limiting views and generating safety concerns.



View showing the opportunity increase access and visibility into the Bell Tower space through the selective removal of boxwood hedge and terraced turf steps



Bell Tower, view to the South, 1953



#### **DEVELOP A STRATEGY TO ENHANCE VEGETATIVE CHARACTER & EXTEND** TRANSITION WOODLAND:

Develop a matrix for future plant selection. Extend edge of Kenan Woods to create a transition woodland area with flowering trees. Extend woodland across South Road by planting a bosque of trees within the existing planting areas south of the Wilson Library.

#### CONNECT THE BELL TOWER BACK TO THE **CAMPUS LANDSCAPE:**

Improve overall visibility towards the Bell Tower. Remove selected areas of boxwood hedge to open views towards the base of the Bell Tower. Modify the height of the hedge to enhance sight lines and aid in safety.

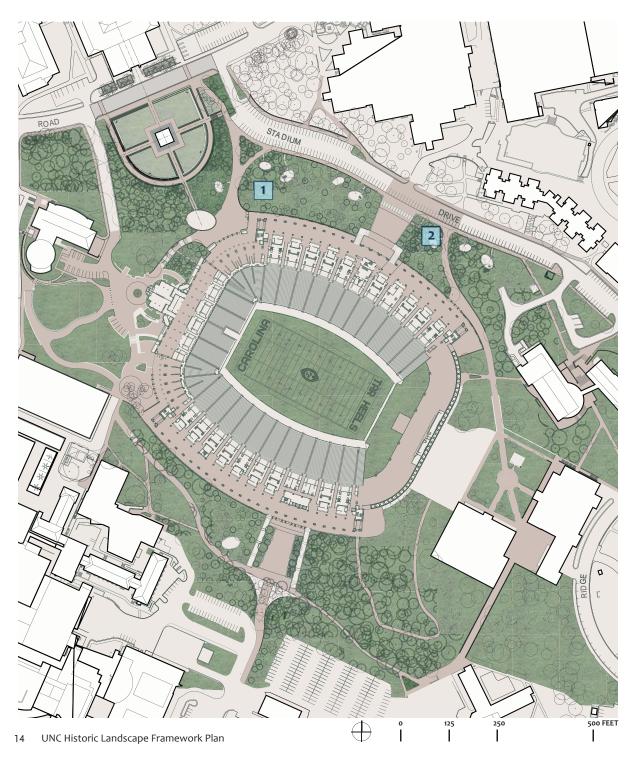
#### ADDRESS GRADING & ACCESSIBILITY:

Widen sidewalk to create a gathering area north of the Bell Tower. Install a limestone wall with turf steps to relieve grade and encourage use of the space. Introduce a diagonal walk that connects the existing crosswalk from the Wilson Library to Stadium Drive.

#### **IDENTIFY AN APPROACH FOR GREATER CONSOLIDATION OF FUTURE MEMORIALS:**

Install a curved limestone bench that can be engraved by graduating classes or patrons as a memorial.

Illustrative site plan showing location of Kenan Woods, its campus context and proposed design interventions

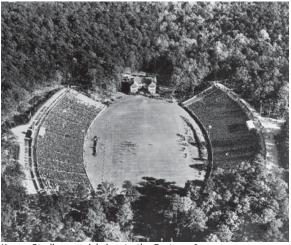


### Kenan Woods: Summary of Recommendations

Kenan Stadium and surrounding Kenan Woods lay both physically and socially at the center of campus life. Historically developed as a depressed bowl set within in a natural ravine, the immediate wooded setting has and continues to distinguish this stadium apart from other collegiate sports stadiums. However, the integrity of the woodland is in a state of decline, as many trees on site are overmature and further impacted by poor soil conditions. Game day and non-game day foot traffic also has a significant impact on the development of a prominent vegetative understory, as the pedestrian circulation is primarily uncontrolled. Since seedlings are not currently protected, opportunities for forest regeneration are limited. Therefore, a vegetation managment strategy mucst be developed



Sketch showing the opportunity to aid in woodland regeneration by containing and directing pedestrian traffic through the incorporation of chatham stone wall seating pods



Kenan Stadium, aerial view to the East, 1936



Kenan Woods, 2008

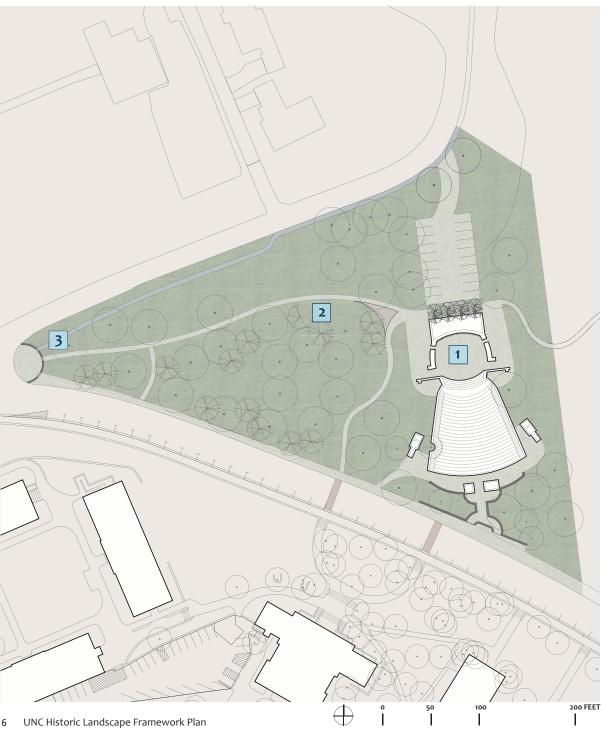
#### STRATEGY FOR THE REFORESTATION OF THE DECLINING WOODLAND:

Inventory existing trees, their condition, tree canopy and soils to speculate vegetative growth patterns. Develop a matrix for plant selection. Create a reforestation plan using step by step "patch" approach to manage the site over time and reconcile existing forest dynamics with site conditions. Install trees in "patches" to ensure growth and protection during seedling establishment.

#### **ENHANCE AND CONTROL PEDESTRIAN CIRCULATION:**

Introduce seating areas and gathering spaces to be used on game and non-game days to help alleviate soil compaction over root systems. Use Chatham stone walls and understory plant material to direct how visitors move through the space on both game days and everyday.

Illustrative site plan showing location of the Forest Theatre, its campus context and proposed design interventions

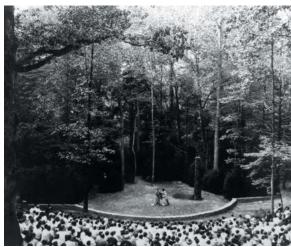


### Forest Theatre: Summary of Recommendations

Nestled into the rolling topography, the Forest Theatre sits almost hidden among a mature collection of beech, maple and oak trees. Informal paths wind through the site, creating short cuts to the nearby Battle Park trailhead, Coker Arboretum and back towards the larger campus. However, this beautiful facility is vastly underutilized due to obsolescent infrastructure, perhaps as a result of the lack of programming. Access into the site is also a concern, as makeshift pathways have resulted in exposed tree root systems, increased erosion and the presence of numerous invasive plant species along the edge of the adjacent slope.



View showing the opportunity to reactivate the Forest Theatre, installation of an evergreen backdrop and vegetated slope



View down to the Forest Theatre, ca. 1920



Forest Theatre, 2008

#### **IMPROVEMENTS TO EXISTING INFRASTRUCTURE:**

Rehabilitate the existing Theatre and associated out-buildings, bringing infrastructure up to code with improvements to utilities, ADA accessibility and stormwater management. Pursue National Register of Historic Places designation. Explore the creation of an expanded umbrella organization to aid in programming of the Theatre.

#### STRATEGY TO MAINTAIN AND ENHANCE **VEGETATIVE CHARACTER:**

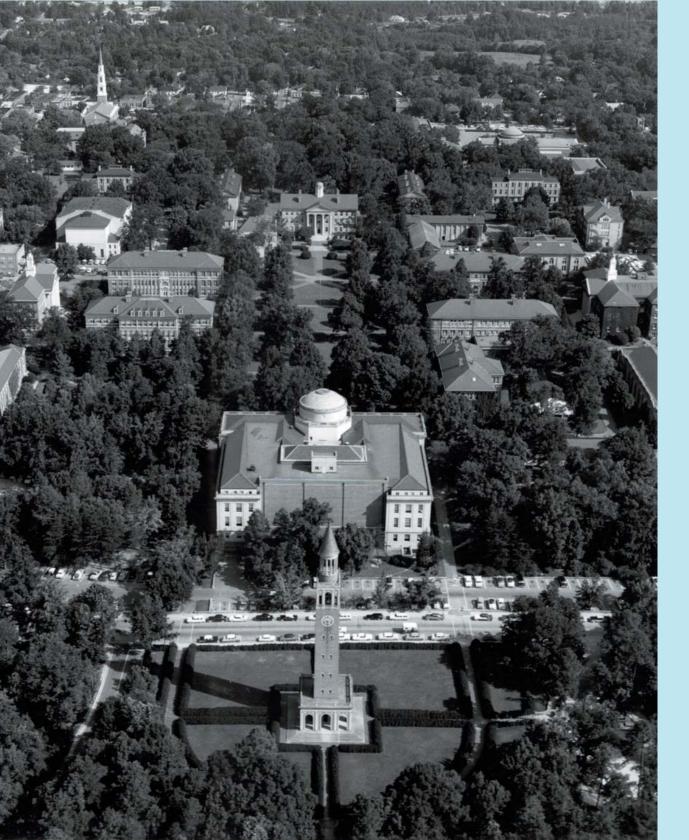
Inventory existing trees, their condition, tree canopy and soils to speculate vegetative growth patterns. Develop a matrix for plant selection. Remove invasive species and build up slope edge with understory plantings. Replace empty tree pits with new trees and screen view to parking lot with an evergreen grove and native vines.

#### **INCREASE ACCESSIBILITY & ENHANCE** 3 **CONNECTIONS:**

Create corner plaza at Battle Lane and Country Club Road. Enhance woodland pathways from plaza and through woods to honor existing desire lines. Create midblock crossings at formal entry. Explore opportunity to close street for special events and performances.

"There is a spirituality about the place. There is a magical quality here."  $\,$ 

James Moeser UNC Chancellor 2000 - 2008



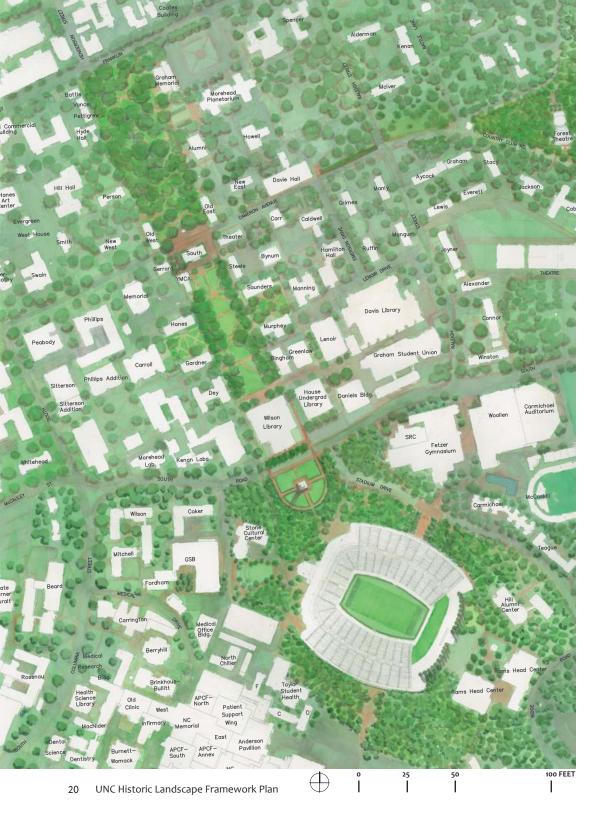
# About the **Historic Landscape** Framework Plan

Purpose of the Plan

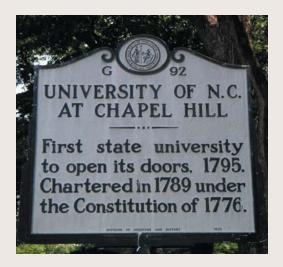
Scope of the Plan



As the first state University to open its doors in 1795, the University of North Carolina (UNC) at Chapel Hill has undergone five eras of distinct landscape design and management interventions. Displaying over nearly 215 years of sympathetic change, design elements and natural features are remarkably still extant from the University's first inception. The campus has been the fortunate recipient of botanical, horticultural, planning and landscape design expertise of a diverse group of stewards and patrons including: Elisha Mitchell (a



Top: Memorial plaque announcing the first charter of the University of North Carolina in 1789. Bottom: View of 4 students at the Old Well, 1892



professor of mathematics & natural philosophy), Kemp Plummer Battle (a lawyer, railroad president, university president, educator and historian), William Chambers Coker (a professor of botany), John Nolen (a landscape architect and co-founder of the planning profession). McKim, Mead, and White (a group of architects that completed the first comprehensive master planning effort for UNC). In an effort to document the evolution of physical and cultural change over five distinct eras, while

identifying significant surviving fabric from each,

historic preservation recommendations.

the University has produced this Historic Landscape Framework Plan. A series of guiding principles, further described on page 43, have been developed and applied to five distinct sites located with the University's historic core: McCorkle Place, Polk Place, the Bell Tower Formal Garden, Kenan Woods, and the Forest Theatre. These principles aim to knit together the cultural landscape of the UNC campus as a symphonic whole, utilizing a common language, introduced on page 55, for planning, design and



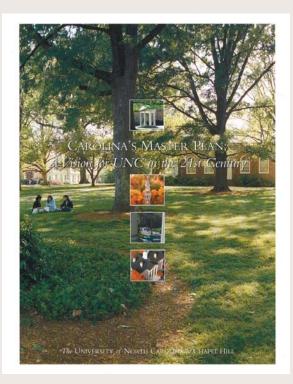


Illustrative campus concept showing the five landmark sites of interest: McCorkle Place, Polk Place, Bell Tower Formal Garden, Kenan Woods and Forest Theatre

## Scope of the Plan

Of the many landmark spaces that exist on the University of North Carolina's campus, five representative sites of interest comprise the historic core of campus. These spaces: McCorkle Place, Polk Place, Forest Theatre, Kenan Stadium Woods, and the Morehead-Patterson Bell Tower Formal Garden embody the unique character of campus and are the areas of detailed focus for this study. Examining the landscape through a series of cultural, natural and scenic "lenses," the Historic Landscape Framework Plan outlines strategies specific to each of these

Left: Cover from UNC's Campus Master Plan, 2001 Right: Cover from UNC's Landscape Heritage and Plant Diversity Report, February 2005





#### THE UNIVERSITY OF NORTH CAROLINA CHAPEL HILL









TASK FORCE LANDSCAPE HERITAGE & PLANT DIVERSITY

APPROVED BY THE CHANCELLORS BUILDINGS AND GROUNDS COMMITTEE

sites that preserves, rediscovers, and reaffirms the historical and botanical significance of this landmark campus.

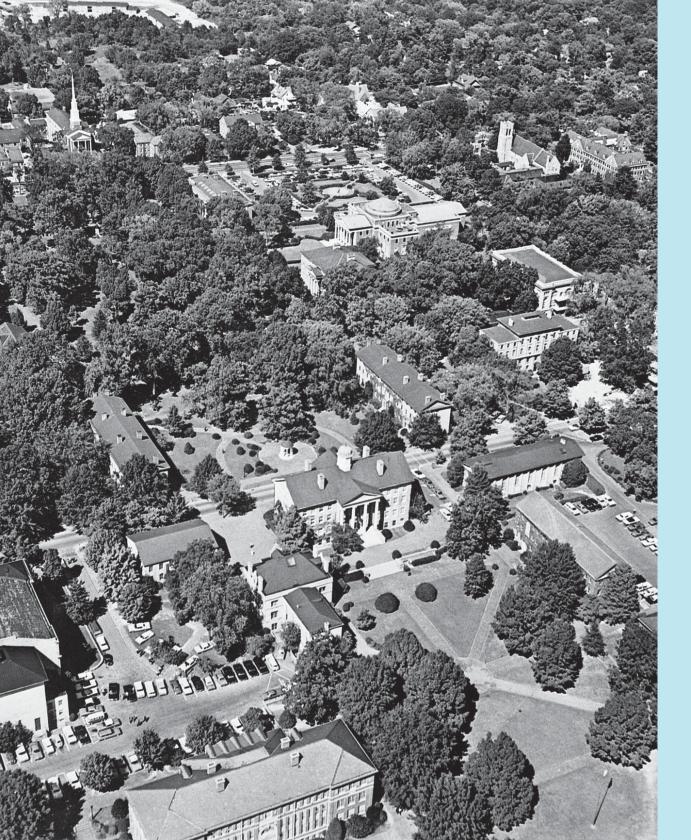
The Historic Landscape Framework Plan is not the first effort to examine trends in landscape change and development at UNC. It is, however, the first to integrate earlier documentation and analysis through the lens of a shared value system – placing equal emphasis on cultural, natural, and scenic attributes of the campus landscape into a single document.

Serving as a backdrop to this initiative, this planning effort recognizes the other critical planning efforts in the recent past. The UNC student population has consistently risen annually and is expected to exceed 30,000 students by the year 2010. In an effort to plan for this growth, the University completed a comprehensive Campus Master Plan in 2001, updated in 2006. The 2001 Master Plan included an Environmental Master Plan and a Stormwater Mangagment Plan. The goal of that plan is to provide campus-wide, long-term stormwater management

guidelines that define an alternative "sustainable" approach to conventional stormwater management practices. Additionally, the Landscape Heritage and Plant Diversity Report, approved in 2005, identifies and establishes guidelines for protection and preservation of heritage trees, significant trees and landmark spaces.

"The history of a place is imprinted into its soil."  $\,$ 

James Urban, 2008



# **UNC History: Its Significant Landscape Legacy**

Introduction

The Village of the University: 1793-1875

**Progress and Growth:** 1875-1920

A Comprehensive Vision for **Buildings and Landscape:** 1920-1930

**Building on the Vision:** 1930-1945

Implications for the Future: 1945-Present

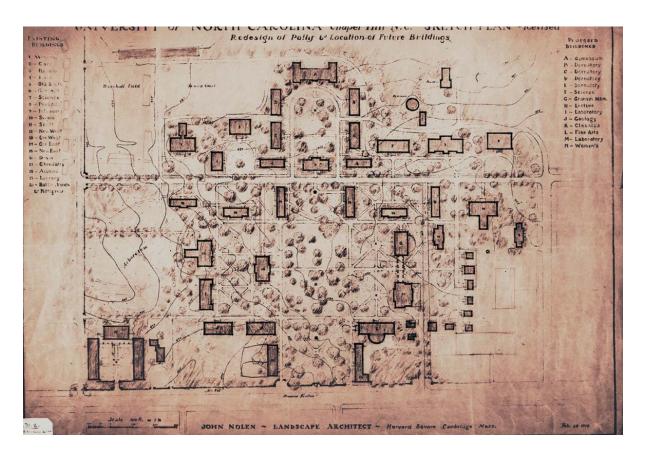


## Introduction

The book jacket to Henderson's <u>The Campus of the First State University</u> notes that for "all of those who have known and loved the University of North Carolina and its village will welcome this treasury of information and anecdote about the campus." Today, Henderson's sweeping survey is still the authoritative source when it comes to the history, background and evolution of the campus and the significant individuals, ideas, and trends that have shaped its cultural landscape.

Central to Henderson's survey and an invaluable

John Nolen's unrealized sketch plan for UNC's campus, 1919



aid to any researcher or historian are the period plans showing the development of the campus from 1793-1945. Illustrated in the book's appendix and represented in four maps whose originals exist at the UNC North Carolina Collection, Henderson's four historical maps are pioneering examples that are often referred to today as period plans, and are a commonly recognized component in a Cultural Landscape Report (CLR).

In the case of a historic designed landscape such as the UNC campus, even though historic design plans exist, it does not necessarily mean that they were realized fully, or even in part, similar to John Nolen's unrealized Sketch Plan shown above, dated February 28, 1919. Building on Henderson's original maps, along with a review of the archival resources and a site evaluation of the extant landscape today, as-built period plans have been delineated for all successive tenures of landscape change and are described in the following sections:

- The Village of the University: 1793 - 1875

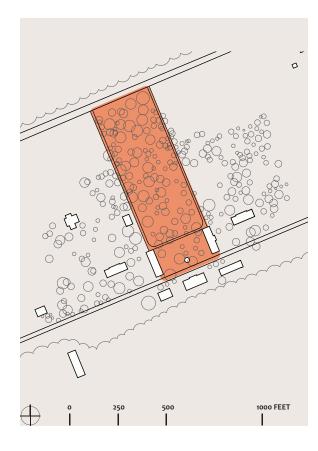
- **Progress and Growth:** 1875 - 1920

- A Comprehensive Vision for Buildings and Landscape: 1920 – 1930

- Building on the Vision: 1930 - 1945

- Implications for the Future: 1945 - Present

Period plan showing buildings, walks, and vegetation present on campus from 1793 -1875. Adapted from Archibald Henderson's "The Campus of the First State University"



# The Village of the University: 1793 - 1875

Situated in a unique setting on an elevated plateau between rocky slopes and coastal plains, the grounds for the site of the first public state University were marked by a group of commissioners on August 10, 1793 in the heart of North Carolina: Chapel Hill. Once referred to as "the village of the University," twelve Chapel Hill residents donated approximately 1290 acres to solidify the home of the First State University. Because of this donation, the village of Chapel Hill, chosen for its "accessible roads, elevated woodlands and natural flowing springs," remained

largely undisturbed during the University's founding years. Nestled between the kettles and kames of the Morgan Creek and its surrounding watershed, and embraced by a largely undisturbed mature forest of Oaks and Hickories, the landscape symbolizes the ecological connection of the University of North Carolina to its surroundings. University architect Arthur C. Nash reflected on the location of the University:

"The University is most fortunate in possessing a Campus site of unusual natural beauty. It is not a dead level, as is the Campus area of many other institutions, nor is it situated on precipitous terrain, like certain others; but, gently undulating, the lay of the land lends itself naturally to building sites at different levels, which itself makes for a variety of architectural effort."

Warm slopes and cool bluffs enclosed by mature sections of remnant forest add to the unique setting of Chapel Hill. Remaining noble trees, including the now iconic Davie Poplar, are thought to have influenced the placement of the first buildings



Engraving of the campus looking south, 1855

erected on campus, specifically Old East and Person Hall. The location of this "mighty sylvan esplanade," McCorkle Place, would continue to inform development and the citing of buildings into the next century, marking the long established connection of building to site.

Moving into the 19th century, the year 1818 marked the arrival of Elisha Mitchell, professor of mathematics and natural philosophy, to Chapel Hill. Appointed professor of geology, chemistry, and mineralogy in 1828, Mitchell is noted as

being responsible for improving the grounds by planting trees and shrubs in order to increase the horticultural diversity of plant material on campus. More than anyone else, Mitchell is perhaps most responsible for the linearity of the landscape, planting trees in rows and virtually transforming the primeval forest into nearly 100 acres of ornamental grounds.

As development continued northward, the appreciation for nature and a quest for beauty increased. The University trustees recognized

this appreciation and constituted a policy to beautify new developments with ornamental foundation plantings. Dry laid stone walls begin to appear around 1830, originally constructed to contain grazing cattle. Aware that new building development should occur within a certain pattern and style, one of the most celebrated architects of his generation, Alexander Jackson Davis (1803-1892) of New York City was hired by the University to develop the first campus plan in 1843. Davis, a co-founder of the American Institute of Architects



Plan showing buildings, walks, and vegetation present on campus from 1875 -1920. Adapted from Archibald Henderson's "The Campus of the First State University"

is perhaps best known as the designer of New York City's Federal Customs House, Lyndhurst in Tarrytown, N.Y., as well as Blandwood Mansion, the 1846 home of Governor John Motley Morehead in Greensboro, NC. From a landscape perspective, Davis was the ideal campus consultant, his sympathetic ideas on the picturesque were well known in his 1835 publication, Rural Residences, and he was a protégé of Andrew Jackson Downing, the landscape gardener and tastemaker of Hudson River Valley.

# Progress and Growth: 1875 - 1920

Still nestled within a sublime setting of undisturbed forest, the village of Chapel Hill grew slowly into the 1900's. As building supplies became more plentiful, skilled labor more specialized, and the student population increased, the University naturally began to expand southward, as shown in the period plan above. Though the Old Well, Caldwell Memorial, and Davie Poplar remained symbolic

focal elements on the northern quad, the movement to shift the orientation of the campus to the South was proposed, and shortly thereafter voted down by University Trustees. During this era, building construction continued, although Henderson has noted that there was no progression or unifying principles in the field of architectural design that played out on campus during this era.

Dr. William Chambers Coker (1872-1953) joined the University as a Professor of Botany in 1902. His landscape legacy remains largely intact to this

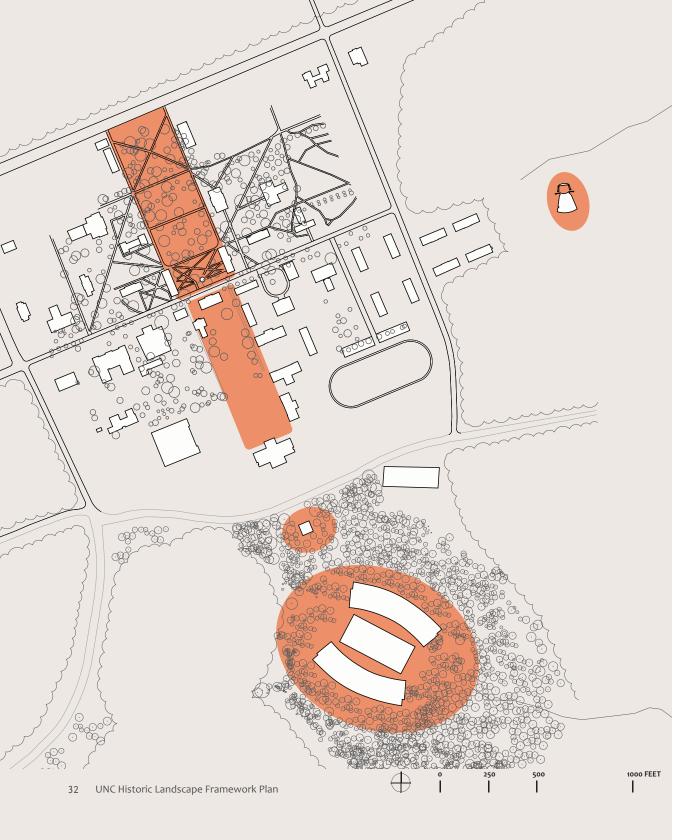


View of the Old Well, Old East, and South Building

day with the presence of two important campus landscapes: the Coker Arboretum and Bell Tower Formal Garden, both of which he played an instrumental role in creating. Coker was a staunch believer and promoter of the campus' natural beauty, and he felt that students should be able to flow out of the confines of their dorms into wild, scenic, undeveloped areas of the campus. He had an interest in native plants and catalogued over 400 species within the northern section of the Arboretum when it was established in 1903. Understanding the import of floristic health among the built environment, the University created the Grounds and Buildings Committee in 1913 to serve within an advisory capacity to the trustees on all landscape matters, with Coker as its first chair; serving until 1942 (he retired in 1945).

The automobile was introduced into the campus landscape during this era as circulation systems were altered to include new dedicated footpaths for pedestrians, while single lane drives were widened. University President, Kemp P. Battle demonstrated

his emotional tie to what is now known as Battle Park, often naming trees and springs and clearing pathways near his home. In 1918, William C. Coker sited an outdoor amphitheater on a grassy hill within Battle Park. The first walls of the Forest Theatre were constructed out of Chatham stone extracted from the nearby forest, creating a semi-circular stage a few years later with its first performance by Frederick Henry Koch and the Carolina Playmakers Theater Group occuring soon after.



Plan showing buildings, walks, and vegetation present on campus from 1920 -1930. Adapted from Archibald Henderson's "The Campus of the First State University"

# A Comprehensive Vision for Buildings and Landscape: 1920 - 1930

In 1920, Chapel Hill was still an isolated town. However, this decade marked a great building expansion on campus and the turning point in its architectural development, shown in the period plan at left. Up until this time, a diversity of architectural styles were abundant on campus, ranging from the colonial to neoclassical, echoing national trends at other philanthropically supported campus grounds. As the North Quadrangle was still the "front yard" and "gateway" to campus, a revival in the movement to expand the campus southward and retain all



Students between classes in Polk Place, 1936

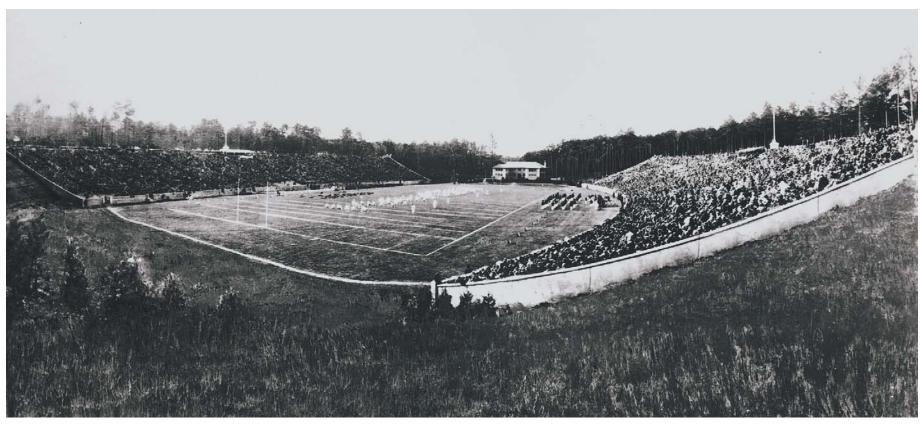
existing buildings along the North Quadrangle was proposed and approved.

With new construction expanding towards the south, the University recognized the need to hire an architect to help guide future development. This first comprehensive master planning effort undertaken by the University was granted to the celebrated architects, McKim, Mead, and White, of New York. Rather than viewing each new building as having its own architectural style, the University wanted a collection of building footprints that were

functional, resulting in outdoor spaces that would merge architecture, landscape architecture and civic art (sculpture, benches, lightpoles). This era would mark the transition from the "colonial" style of the north campus to the neoclassical Beaux-Arts style to the south campus. As physical improvements occurred throughout the campus, it was noted that these consciously created visual and spatial relationships began to define the placement of buildings. These consciously planned relationships began to form a continuous shared landscape

feature, resulting in a hierarchy of open spaces that began to evolve as future campus developments built on this vision and framework.

The construction of Wilson Library in 1928 formed a bookend to the South Quadrangle, further magnifying the strong north-south axial relationship extending from Franklin Street, through the North Quadrangle to South Building (shown on page 32). Extensive remodeling to the South Building from 1926-1927 and the construction of the Morehead-Patterson Bell Tower in 1940 further strengthened



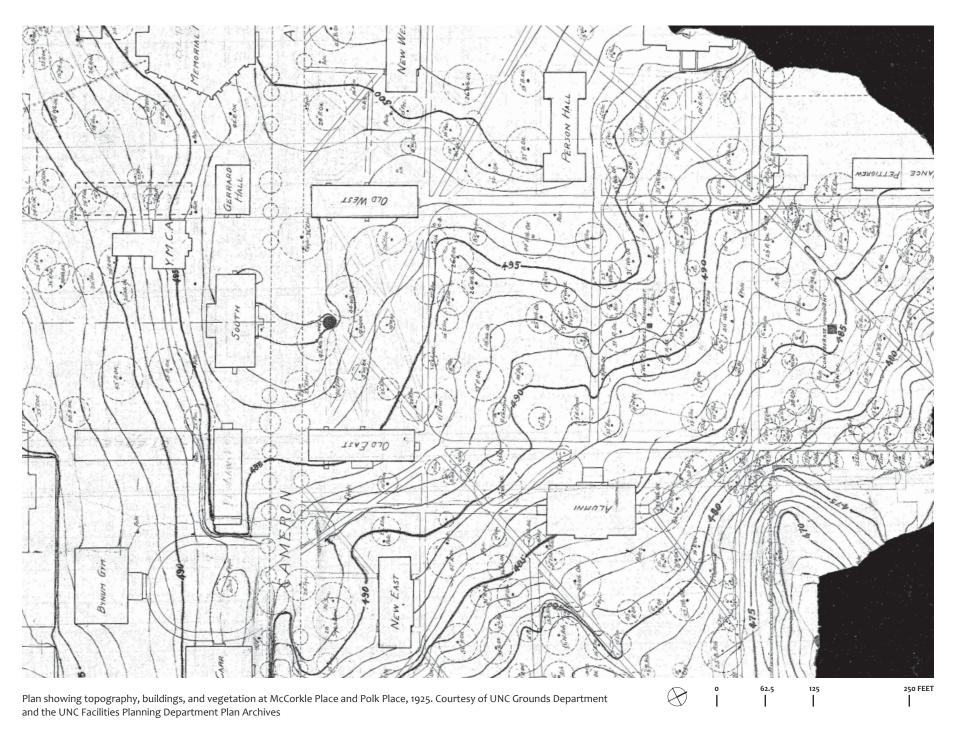
The "Greek" inspired bowl of Kenan Stadium looking East, 1930

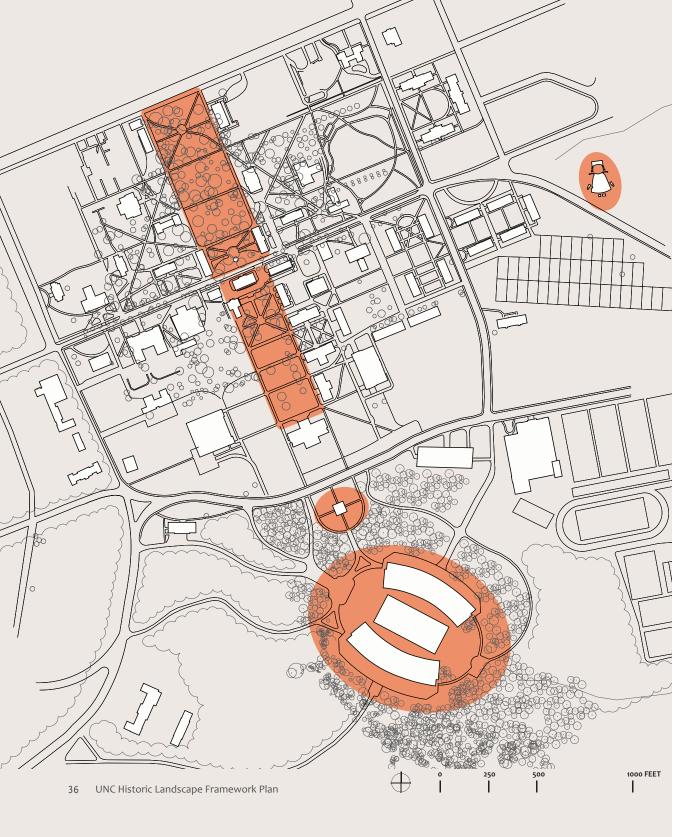
this formal axis. The construction of the Manning Hall "minor quadrangle" in 1922-1923 began to suggest another axial relationship extending from the east to the west. In 1954, this minor quadrangle would be replicated to the west, with the construction of Carroll Hall, feeding into the great lawn of the South Quadrangle. Spatial planning followed "City Beautiful" principles as the spaces surround the South Quadrangle began to form.

Nearing the end of the decade, a formal name change on behalf of University Trustees was proposed to change the North and South Quadrangle to McCorkle Place and Polk Place, respectively.

Beyond the Bell Tower, campus development was also occurring, in one of the many natural valleys surrounding the village -- this would become the future home of Kenan Stadium, constructed in 1922. The design intent of the stadium was to utilize the floor of the stream and its rising banks of equal steepness as a natural form for the development of the University's football field, keeping the surrounding forest intact. As noted by Henderson,

"the forest surrounding the ravine has been preserved; the stadium terrace and planting have been designed to blend with it. And the paths to the stadium wind through the forest and over bridges of stone to the brink of the valley from which, beginning at the level of the rim, the stadium drops away in smoothly curving lines to the field below." With development came an increase in vehicular circulation, as South Road was introduced in the 1920's providing access to the Stadium and its surrounding woodlands.





Plan showing buildings, walks, and vegetation present on campus from 1930 -1945. Adapted from Archibald Henderson's "The Campus of the First State University"

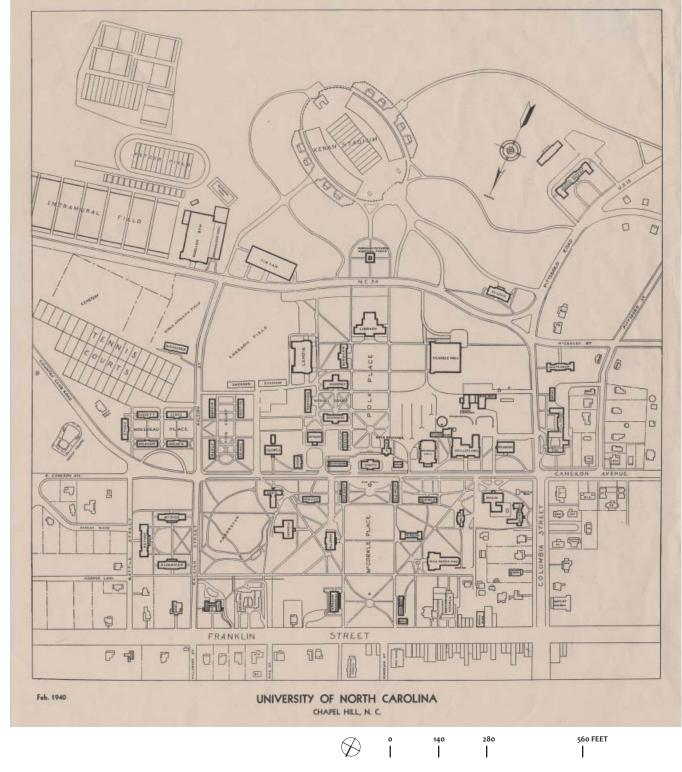
# Building on the Vision: 1930 -1945

During this era, campus development spread in all directions, representing a variety of architectural styles including Colonial, Greek Revival, and Modernist idioms. Building construction largely continued to follow the Beaux Arts principles of defining spaces and creating variety and contrast, while the landscape served as the overall unifying element of campus. Clearly the spatial and visual relationships utilized during the McKim, Mead, and White era a decade era had been adopted, and it is no surprise that a 1946 RFP for consulting services

Campus plan with North being down, 1940.

reinforced that "The importance of establishing and adhering to a general plan, prepared by a competent architect in collaboration with a landscape architect, cannot be overemphasized."

McCorkle Place officially became recognized as the front door to the University during this era. Changes were also underway with the installation of the Bell Tower Formal Garden in the 1940s. With its sweeping lines of boxwood hedges edging its semi-circular walks, the Tower's landscape provides a dignified setting and a scenographic circulation





# Implications for the Future: 1945 - Present

route leading to the sylvan landscape of the adjacent Kenan Stadium just immediately beyond.

Additional pathways were introduced, usually necessitated by new building construction. As part of these new improvements, circulation elements usually adhered to the formality of the City Beautiful principles, creating sharp, symmetrical lines through the landscape, as demonstrated by the alignment of pathways at the Bell Tower Formal Garden. Circular forms in paving begin to appear at McCorkle and Polk, perhaps drawing inspiration from the Wilson

Library dome, the rehabilitation of the Old Well, and the belfry atop the South Building.

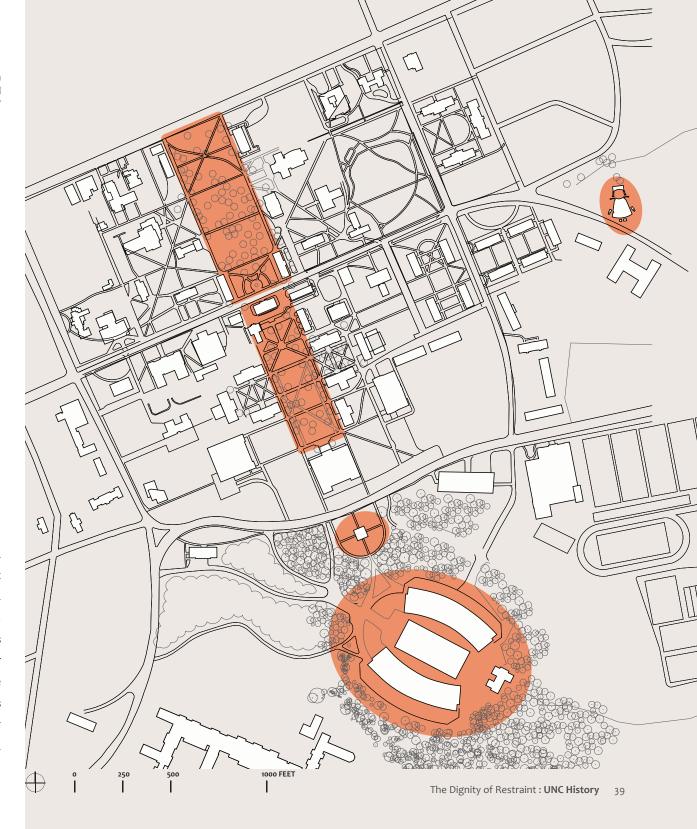
The year 1940 saw additional improvements with \$20,000 worth of renovations completed by the Works Progress Administration (WPA) to the Forest Theatre. The appearance and function of the theatre was enhanced with the addition of formal terraced seating, stage walls, and stone lighting towers, director's box and ticket box.

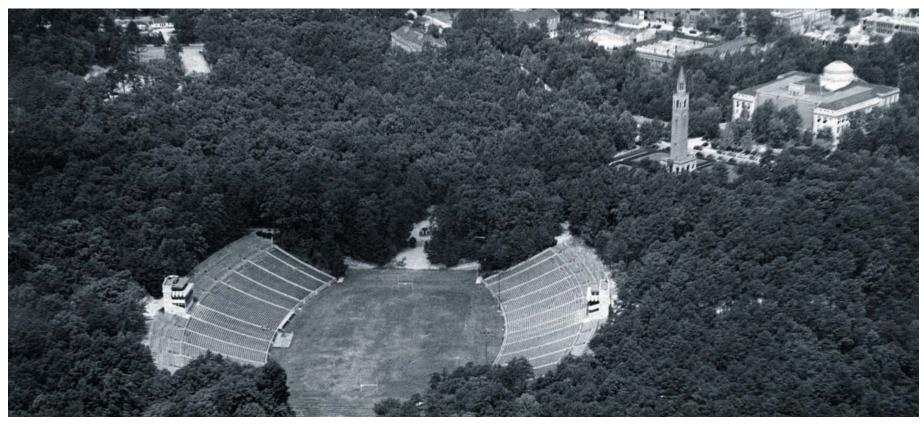
The campus landscape has continued to evolve and thrive since the mid–1940's with the incorporation of A.J. Davis' eclectic style and influence on architecture and landscape. Rather than demolishing earlier, now historic buildings and replacing them with new construction, the University has chosen to rehabilitate their significant building stock, and when possible preserve their historic character. This has led to the integration of many architectural styles over time, with buildings acting as a reflection of the types of development that were occurring

Plan showing buildings, walks, and vegetation present on campus from 1945-1973. Adapted from Archibald Henderson's "The Campus of the First State University"

during that specific era.

From 1960 to 1988 the population of Chapel Hill doubled in size and new campus buildings grew at a parallel pace, with large, self-sufficient and stand alone buildings being introduced into the 1960's. Since this time, the developed portion of campus had tripled, perhaps related to the advent of air conditioning and post WWII building surge. The expansion of Kenan Stadium in the 1960's lends itself as a primary example of the shift in ideology that UNC has faced with its continued growth and





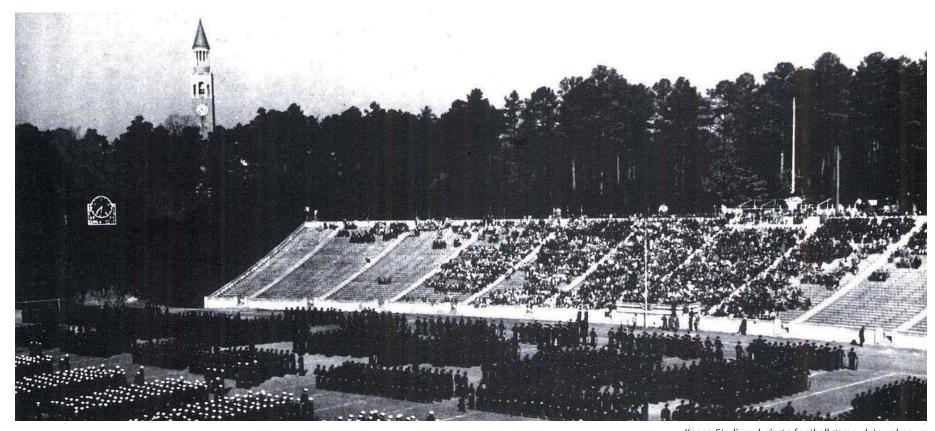
Kenan Stadium and the surrounding woodland, ca. 1960

development. The stadium that was once "of the woods" had expanded to a size that it now dominates a remnant woodland landscape, rather than being integrated within.

As the campus tripled in size, so did the number of people utilizing its amenities. Pathways continued to be introduced, often in response to pedestrian "desire paths" and similar to work at other campuses, were eventually honored by being paved-over with brick pavers in the 1950's. The presence of site utilities and furnishings became an important

component of the campus landscape into the next decade, due to increased need for seating and safety. The need for light standards across campus, whose geometric layout, typically centered on building entries, within McCorkle and Polk is documented in aerial photos from the 1960's.

Historic photographs show the integration of low Chatham stone walls as a means for seating within Polk Place beginning in the 1960's, and their repeated use has continued into the 21st century as an element of both function and unification of campus (which was written into the current campus design guidelines developed in 2001). In 1971, one in every four University students had a bicycle, necessitating the need for bicycle parking on campus and demonstrating the popularity of off campus housing. To make the campus more accessible for these commuters, Chapel Hill introduced the first bus system in 1980, which today is free for student use, reducing the amount of bicycle storage needed. Accessibility on campus became a growing concern by the end of the decade, with the University



Kenan Stadium during a football game, date unknown

undertaking renovations to more than 75 campus buildings, installing ramps, widening doors and introducing curb cuts into existing walkways.

The millennium brought about great change to building footprints across campus. With the approval of a higher education statewide bond referendum passed in November of 2000, private funding and overhead receipts, a total of 2.1 billion dollar in funding was available to the University for new construction and renovation projects. Recognizing the impact that new development

would have on its existing circulation system and open spaces, the University developed the 2001 Campus Master Plan and Design Guidelines as a means to grow responsibly while taking its natural areas into consideration. It is also during this time that the campus stewards began to place an even higher value on their collection of historic buildings and highly prized heritage landscape. It is the integration of these expanding values that gave rise to the Framework Plan that follows.

Knitting together the whole in a symphonic,

common language, elucidated by the detailed recommendations for five distinct sites within the University's historic core, this plan outlines strategies specific to each site, utilizing a series of guiding principles described in the following section to preserve, rediscover, and reaffirm the historical, scenic, and botanical significance of this landmark campus.

"This is forest country down here. Beautiful trees all around. These are woodland people down here."

Garrison Keillor A Prairie Home Companion



# UNIVERSITY OF NORTH CAROLINA. Chapel Hill. Hon.David L. Swain L.L. D. Pesident.

# **Guiding Principles**

Introduction

**New Foundations** 

**Quest for Dignity** 

**Recognition for Uniqueness** 

Integration of Civic Intent

Respect and Honor the Legacy



Introduction

View of the campus looking south. Hand-colored strike engraving by Richard Rummell, 1907

The five guiding principles which follow are the collective product of work sessions between the University and the consulting team. Although the project's scope of work placed a primary emphasis on five distinct, historically significant study areas, these principles should be used to guide and evaluate future work at this celebrated 215-year old campus.

#### – New Foundations:

Integrate cultural, scenic, and natural values into the University's decision making process.

### - Quest for Dignity:

Consider the impact on the whole to safeguard and manage the cultural, scenic, and natural values of the campus landscape.

#### - Recognition for Uniqueness:

Balance the site-specific design requirements of historic landscape features while understanding this space within the larger campus landscape.

### – Integration of Civic Intent:

Retain and honor both the civic ambition of patronage and insure its careful integration into the larger cultural landscape.

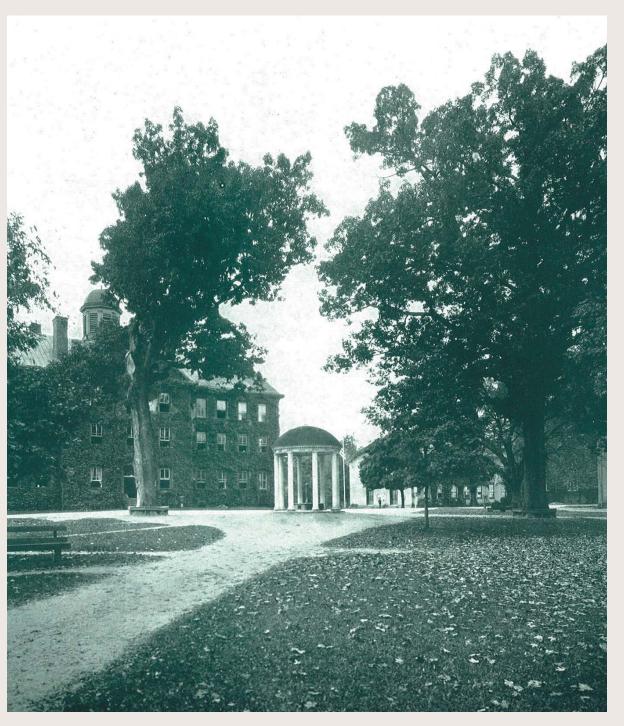
### $- Respect \ and \ Honor \ the \ Legacy:$

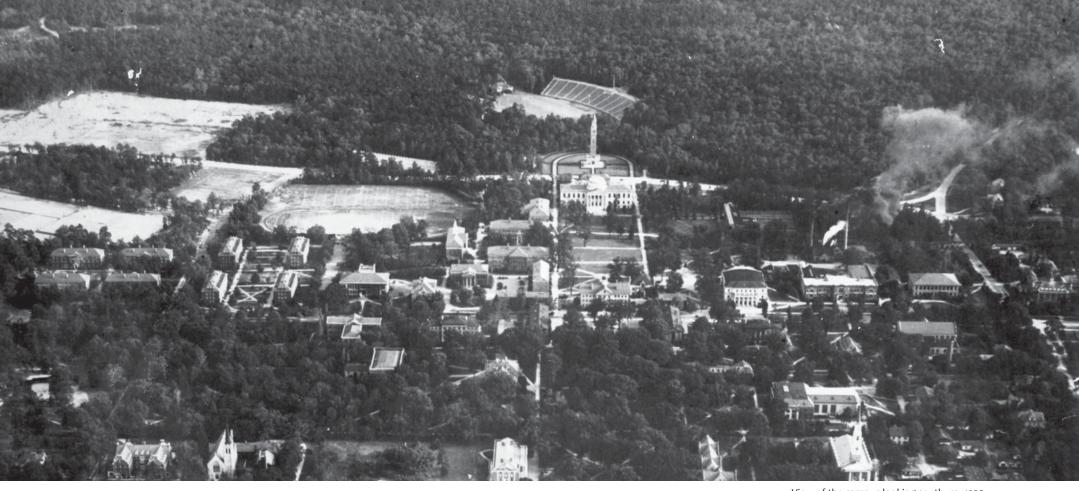
Preserve and reveal character-defining features and relationships that are historically significant while accommodating change.

View towards the Old Well, from 'A North Carolina View Book.' Albert Barden, photographer. Courtesy of Bynum Walter.

### **New Foundations**

This Historic Landscape Framework Plan represents a first efforts on the part of the University to document, analyze, and interpret the evolution of the historic designed landscape of the UNC campus. Serving as a framework for the narrative which follows, the consulting team has adopted the recognized historic periods articulated by Archibald Henderson in his seminal, The Campus of the First State University (1949). It is worth stressing however, that many of the ideas outlined in this summary go one step further, emphasizing more





View of the campus looking south, ca. 1935

than just buildings. Overarching visual and spatial relationships as well as individual, character-defining landscape features (e.g. pedestrian circulation systems, plantings, site furnishings, etc) are used as a basis of analysis, all of which are not included in Henderson's architecturally-centered history.

Integrating the campuses' historic, scenic, and cultural assets, with recent findings including technical research and analysis of existing trees, soils, stormwater, and plant diversity should be

factored into the University's decision making process. Collectively, when considered in concert with the campuses' historic and cultural values, these *new foundations* have the potential to elevate the depth of knowledge of the campuses evolution, or palimpsest, beyond just structures and trees.

When considering this integrated approach at McCorkle Place, the area historically known as "A Campus in the Woods," research suggests that the greatest change today is the loss of much of the large deciduous, coniferous and flowering tree

canopy. Analysis of aerial photographs of the 1920s and 1930s show McCorkle Place as a dense forest canopy (as compared to Polk which reads as a wide open greensward, shown above). Today, McCorkle is in need of vegetation management and renewal, and guiding the team's design recommendations, described on page 62, is an emphasis on integrating these new foundations, placing equal value on understanding the campuses' historic visual and spatial relationships, soil conditions, and historic plantings.

View of the eastern side of Old West with a general view of campus to the South. Copied from an engraved invitation to a senior class party, 1851



# **Quest for Dignity**

As we know from the period plans contained in this report, campus landscapes like UNC evolve over time, sometimes employing a "common language" accommodating change organically, or sometimes driven by a programmatic requirement. Ideally, when buildings are proposed, new paths and parking areas introduced, monuments and memorials sited, or furnishings and features introduced, the impact on the whole should be considered. We consider this idea to be a critical aspect of our larger quest for dignity.

In recent years, as the campus has grown more dramatically and will only accelerate as future student populations are projected to be around 30,000. The qualities that make the landscape both historically significant have been impacted by this growth, either through the introduction of new elements or institutional vegetation management practices. In response to this situation, an guiding principle for the campus landscape and in particular the five landmark study areas is to return dignity to these irreplaceable and at times subtle landscape

qualities, using a holistic perspective that will safeguard and manage the cultural, scenic, and natural values of the campus landscape.

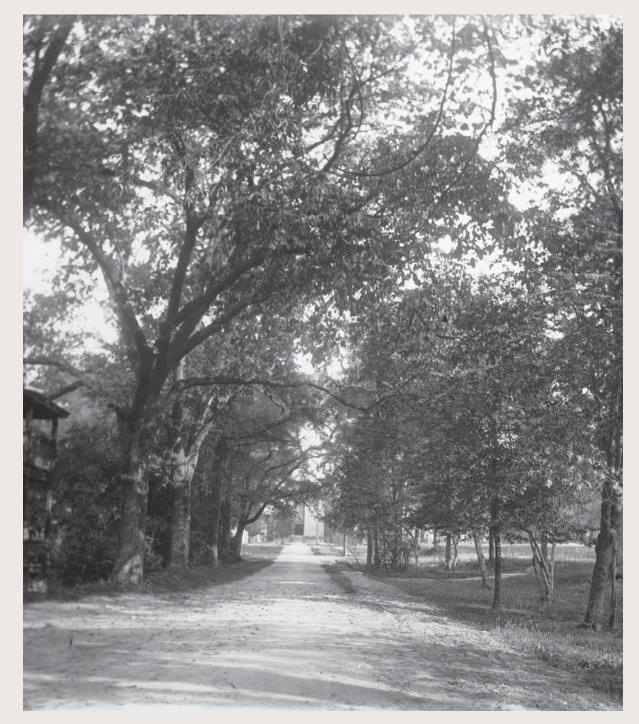
To illustrate how small changes in landscape management practices can remedy this situation, consider the following two examples: First, without jeopardizing the health of the historic hedge that was planted by William Coker around the Bell Tower, overall pruning should be undertaken to bring the hedge height down to be consistent with the height of the Bell Tower's platform. This would not only



open up views but would make the tower platform and steps attractive destinations for sitting and small gatherings. This idea is described further on page 97. A second example can be experienced when one moves around the terrace of the South Building, where historically one would have been afforded sweeping panoramas of Polk Place. Today's visitors may be surprised to find that the intended terrace views from the McKim, Mead and White building, are limited by overgrown hedges that have outlived their design intent. In particular, the hedges at

the southeast corner at the top of the terrace and below should be removed and replaced with shrubs that are a suitable height. These two examples may seem like relatively minor vegetation management decisions, but are significant in returning a dignity of setting to Beaux Arts era Bell Tower landscape and the viewing terrace at Polk Place.

To this end, in regards to new monuments, memorials, and furnishings, one way to return dignity to the UNC cultural landscape is to put an end to the "plop and drop" mentality that has occurred the past, and instead, consider the collective impact of the introduction of new furnishings and objects. For example, at Polk Place, site furnishings and elements such as bike racks, trash receptacles, and newspaper vending machines should be relocated outside of critical viewsheds and re-sited in close proximity to the building envelope at Hanes, Gardner, Saunders and Murphy. This form of "editing" or "erasure" could return formality to signature Beaux Arts era views from within tree allées and over the great lawn expanse.



# **Recognition for Uniqueness**

Each of the five study areas is significant in their own right and as part of a larger scenographic ensemble that collectively contribute to the UNC campus experience. There is perhaps no other university grounds in America where the Picturesque (McCorkle) and the City Beautiful/ Beaux Arts (Polk) campuses can be illustrated with seminal examples – and just by crossing a street.

The planning and design recommendations for these two iconic campus spaces should emphasize their historic distinctions while preserving, rehabilitating,



View to the stage of the Forest Theatre and woodland. ca. 1920. Photo courtesy of Linda Jewell, UC Berkeley and the North Carolina State Archives

and restoring those character-defining visual and spatial relationships and individual features where possible.

In response, the guidelines put forth in this Historic Landscape Framework Master Plan will attempt to recommend specific furnishings, features and materials (both living and non-living) that will honor and respect the uniqueness of each landscape setting. For example, rather than employ a standard furnishing palette for the entire campus, when appropriate, site specific furnishings and plantings

(from canopy trees to foundation plantings) will be recommended. Therefore, for example, a more rusticated bench would be proposed for McCorkle, while something that is appropriate for the City Beautiful era would be recommended for Polk Place.

In regards to plant materials, each study area has been afforded careful in-depth study that provides a foundation for decision making. In each case, plant materials of a given area and an understanding of its relative health has been documented and analyzed

to provide a framework for decision making at both macro and micro scales. As illustrated by Michael A. Dirr's research, based on the species composition and performance, site-specific strategic recommendations have been developed for the care of existing trees and to guide future planting. For example, in the unique landscape of the Forest Theatre, recommendations have been developed for several tree planting pits, now empty, within the theater seating areas. Here, replanting recommendations include the use of native oaks,



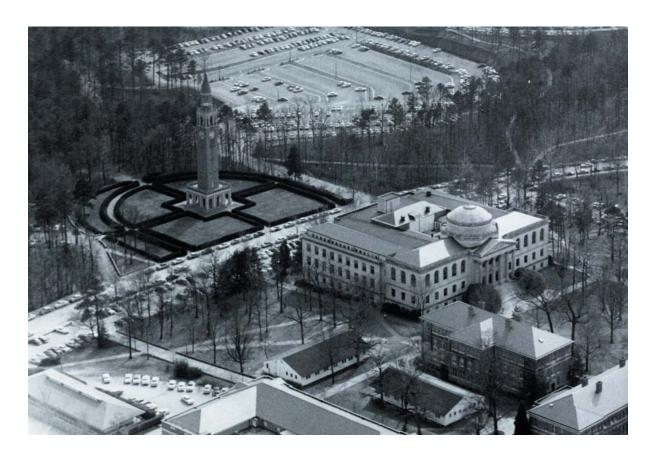
which are already present on site and native to the area. For each site, the unique natural, scenic and cultural values are considered when balancing the site-specific design quest of historic landscape feature while understanding this space within the larger campus landscape.

All five of the project study areas historically were at the time of their conception and design representative of a civic ambition. This civic pride, perhaps the shared vision of the Founding fathers, the Committee on Grounds and Buildings, college presidents or trustees, consulting designs, patrons, or philanthropists, all aspired to create an enduring and sustainable gesture that is today recognized as a heritage asset.

Although historically there were, and are today still a myriad of personal motivations for patronage



View of the Bell Tower and Wilson Library to the Southwest



– among them: piety, prestige and pleasure, our challenge in this era of corporate philanthropy and "your name here" at sports stadiums, art museums, theatres, hospital wings and even parks and gardens, is to retain and honor both the civic ambition of the patronage idea, and in the process insure its careful integration into the larger cultural landscape of the UNC Campus.

Illustrating this civic opportunity is the new design for the landscape associated with the Bell Tower which aspires to be both civic and functional. First, by physically and visually opening up the formal garden frontage along South Road and welcoming students with its stepped, grassed terrace, this green space will become both activated and functional in a way that it is not today. It could serve as more than just a functional or symbolic link between the campus and the stadium. In response to this opportunity, care also will be given to integrate the wooded Kenan Stadium landscape into the more formal Bell Tower landscape. It is at this juxtaposition that one of the most potentially

interesting moments for pedestrians moving north from the Kenan Stadium woods towards the Tower occurs — it is here that one is confronted with an unrivaled, perfectly framed view of the Bell Tower, and one that is representative of two eras of Wilson Library construction. This otherwise overlooked powerful visual image is a potential civic statement on the symphonic building construction that historically took place on campus, and places the new work within this context of this layered building ensemble.



# **Respect and Honor** The Legacy

In, The Campus of the First State University (1949), Henderson notes, "The Founding fathers made a good start with the Campus Plan, the members of this committee are carrying on faithfully. If future members maintain with loyalty this sound and worthy tradition, high standards of future Campus Architecture will be assured, at the University of North Carolina."

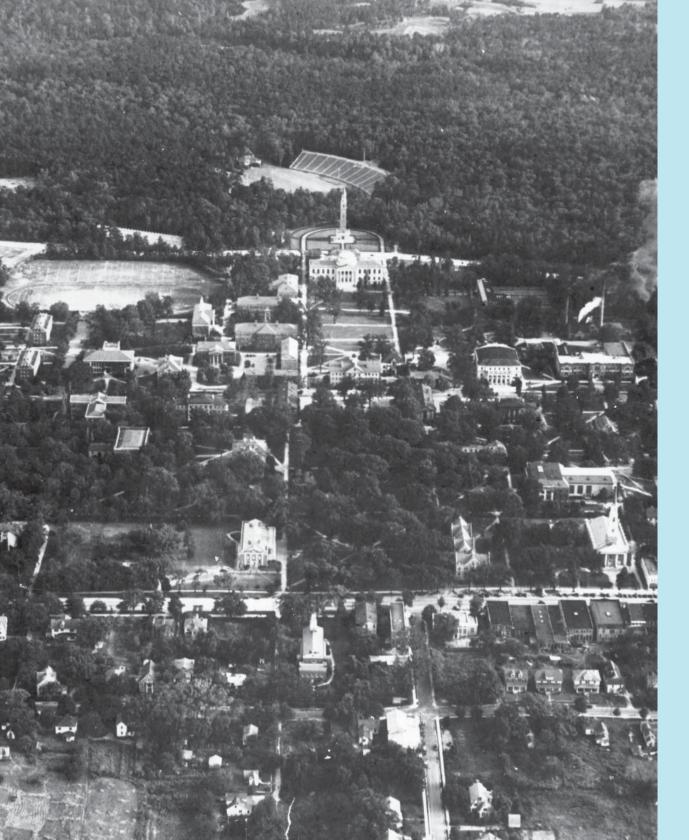
Today, the historic designed landscape of the UNC campus is recognized and celebrated for its collective natural, scenic, and cultural values. To honor this shared campus heritage, all recommendations in this Historic Landscape Framework Plan aim to preserve and reveal those character-defining features and relationships that are historically significant while accommodating change.

Honoring the legacy may take many forms including the pursuit of National Register of Historic Places designation for the Forest Theatre, preserving historic soils and heritage trees, restoring lost or severed significant visual relationships, or transforming the settings of iconic campus landscape

features, such as, the Old Well or Bell Tower in such a way that equal value is placed on historic preservation, design and sustainability.

"This arboretum-campus was the work of hands-on philosophers convinced of the power of nature to teach, to restore, to inspire students who will be our future leaders, as well as all of us who work here and return here."

Mary Coker Joslin, Niece of William Coker, Founder of Coker Arboretum



# **Priorities for the Future: Visualizing Five Landmark Sites**

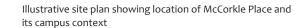
McCorkle Place

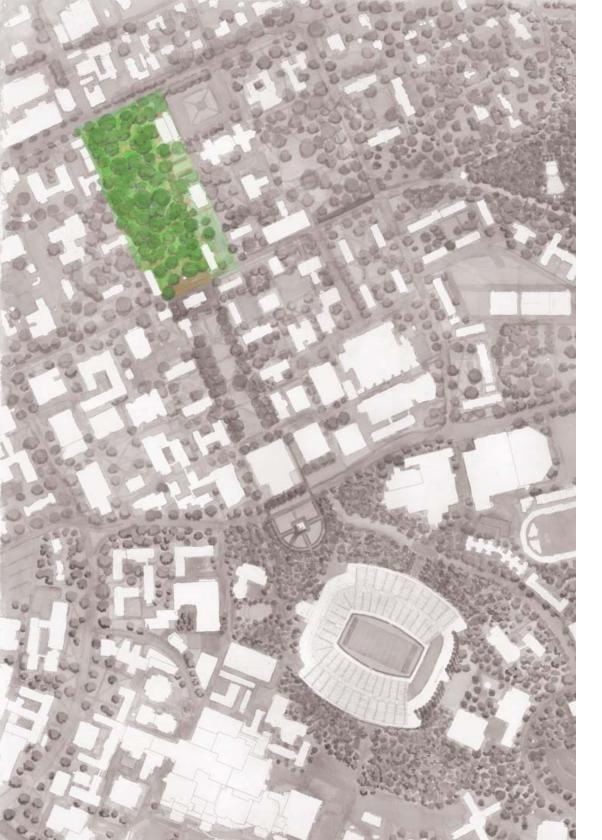
**Polk Place** 

**Bell Tower Formal Garden** 

**Kenan Woods** 

**Forest Theatre** 

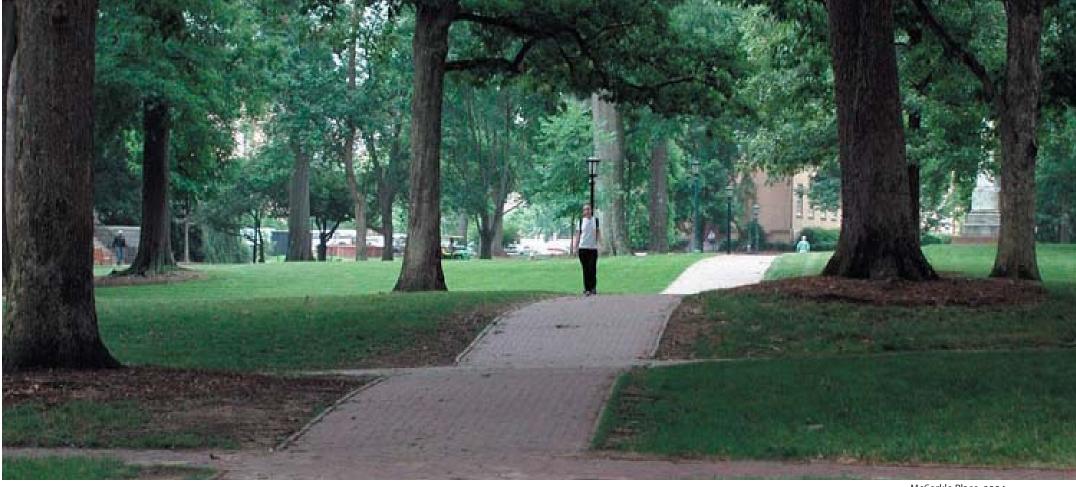




# **McCorkle Place**

#### **BACKGROUND**

What began as the highest elevation in a series of connected ornamental grounds, and nestled between Old East, Old West, and the South Building, McCorkle Place comprises the northern spine of the University's historic core and includes such signature landmarks as the Old Well and Davie Poplar. Named for Reverend Samuel E. McCorkle, who laid the cornerstone of Old East, McCorkle Place is the quintessential image of the picturesque – what Andrew Jackson Downing would describe

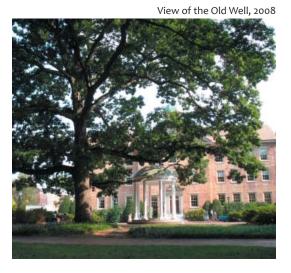


McCorkle Place, 2004

as "a certain spirited irregularity" and "somewhat wild and bold character, possessing rolling terrain, irregular walks, noble trees, and expansive viewsheds."

As much of the development at McCorkle Place occurred prior to the campus' first comprehensive plan, its varied architectural styles and organic building placement mark the historical beginning of campus. Architecture, ranging from Colonial to Beaux Arts in style, takes second stage to the pastoral landscape character, giving the wooded quad a

strong sense of identity. Long views abound the quad and its casual openness from Franklin Street highlights the gateway to campus. Seating in the quad is minimal, with a few teak memorial benches scattered throughout.



The Dignity of Restraint : McCorkle Place 57



# McCorkle Place site plan showing proposed design interventions:

- 1 Develop a Strategy to Maintain & Enhance Vegetative Character
- 2 Revitalize & Enhance Foundation and Screening Planting Design
- 3 Redesign of Old Well Plaza
- Develop an Approach for Locating & Selecting Essential Site Furnishings and Materials

#### LANDSCAPE ASSESSMENT

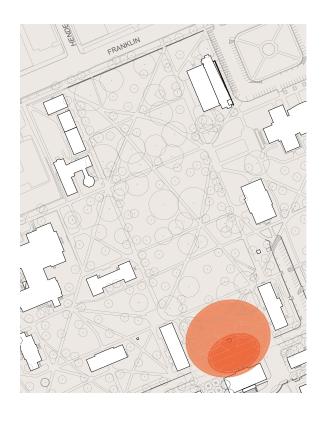
The buildings that surround McCorkle Place are among the first buildings constructed on campus with Old East (completed in 1795) as the only National Historic Landmark (NHL) in the five study areas. Connecting these structures and the community beyond, the pedestrian circulation system has largely developed in response to the desire paths which run through the landscape. Two primary paths run north-south on either side of the quad thus forming the primary gentle, folding

Above: View of walk from Franklin Street to Old East, 1892 Below: View through McCorkle looking South, 1905

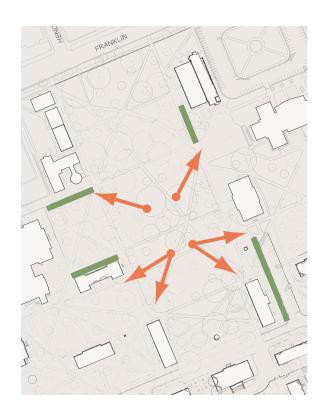


pedestrian connection from Franklin Street to the campus. Recognizing that the pedestrian circulation evolved organically where former dirt paths have been formally honored with brick paving, pathways have not required substantial re-grading and utility work as been minimal. As a result of these sensitive insertions, the historic topographic variation and large, established historic trees have been preserved and protected from utility intrusion and other development work. Fortunately, because of the limited impact on soils and vegetation during



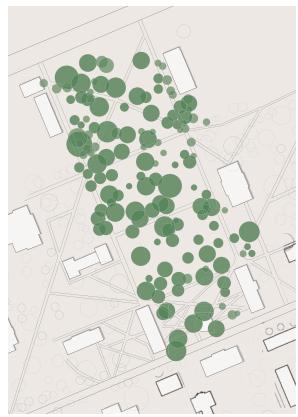






limited building construction, much of the original soil profile and what are thought to be remnants of the original primeval forest remain intact.

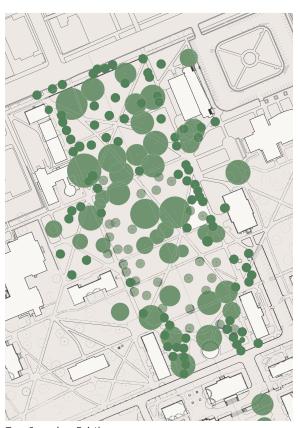
In regards to the tree collection, oaks make up the primary composition of sentinel trees within picturesque McCorkle Place, and this is not a surprise as A.J. Davis' colleague, A. J. Downing had opened his chapter on "Deciduous Ornamental Trees" in Landscape Gardening (1849) recognizing that "the Acadians believed the oak to have been the first created of all trees; and when we consider



Tree Canopies - 1925 Plan

its great and surpassing utility and beauty, we are fully disposed to concede it the first rank among the denizens of the forest."

Overall, the tree canopies of all species are "full and dense, foliage saturated blue-green, leaves plump and oversized, bark and trunks without wounds and abrasions" all of which are representative characteristics of excellent condition. McCorkle does, however, lack a representative second generation of trees. The plant selections that have been previously selected, including rows of cherries



Tree Canopies - Existing

lining the edges of the quad are not particularly shade tolerant, resulting in their decreased growth in the presence of competition. Foundation plantings vary from building to building lacking unification and are often out of scale with the architecture.

Light standards have also evolved to maintain campus safety and have continued to be incorporated into the overall space. These standard fixtures functionally achieve the designated footcandle requirement. Visually, however, their placement often diminishes views towards a



Tree Canopies - Speculative Future

building's entrance experience.

Since 1898, memorials have been introduced, beginning with the Caldwell Memorial. Since that time, additional memorials have been introduced on campus with less focus on the importance of historic visual and spatial relationships. As the needs of the 21st century are impressed upon this iconic space, it is important to consider such introductions as they relate to historic spaces, settings and viewsheds.



Birds eye engraving of the Old Well and McCorkle Place, looking South, 1907

# DESIGN STRATEGIES & IMPLEMENTATION CONCEPTS

1

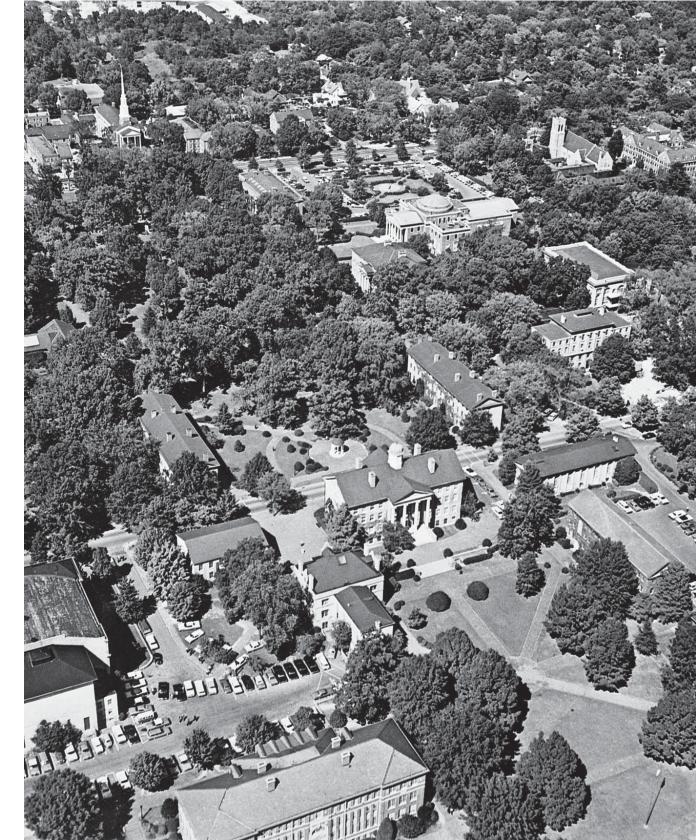
Develop a Strategy to Maintain & Enhance Vegetative Character

With a deeper understanding about its significant tree collection, its historic soils, and the interrelationship between each, a strategy for vegetation management and renewal must be employed to ensure that the distinct horticultural character of McCorkle Place is preserved and

Aerial view of McCorkle Place to the North, 1963

managed into the future. Restraint is the key at McCorkle, as it is an iconic space that still possesses its 19th century character.

As an approach to vegetation management at McCorkle, a matrix of appropriate plant selections has been developed utilizing William Chambers Coker's historical plant lists (e.g. Design and Improvement of School Grounds by W.C. Coker and Eleanor Hoffmann, 1921), UNC's current recommended plant palette, and suggestions from preeminent horticulturist Michael A. Dirr. This





McCorkle Place existing condition, 2008

matrix is shown in Appendix B.

A review of the matrix illustrates Dirr's finding that more speciation is needed at McCorkle, and due to the historic character and scale of the space it "should never be cluttered with small-stature trees." Therefore, it is important to introduce an understory component, composed of shade tolerant trees, including additional Quercus species, Carya species and Fagus grandifolia (American Beech), that over time will eventually take the place of the larger mature canopy trees. Dirr's research suggests

that historically this renewal has not been done as the material that exists today suggests that for a significant time period, from approximately the 1930s to 1960s trees were not consistently planted. To reverse this trend, the recommended approach would be to replant trees of similar type near each of the heritage trees, perhaps using the seeds from these trees that have performed well over time. From a plan of campus found from 1925 and depicted on page 35, it can be seen that the McCorkle quad primarily consisted of plants from the Quercus

genera with an *Ilex* understory. Many of these plants still remain in the quad today as a demonstration of longevity and health. This would be similar to the approach used with the regeneration of the Davie Poplar and its adjacent Davie Poplar II and III.



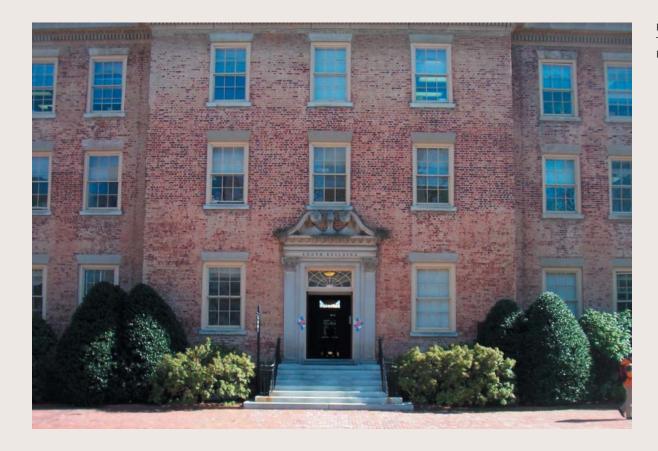
Sketch of McCorkle place showing opportunity to layer foundation plantings and screen parking areas to maximize views

#### Revitalize and Enhance Foundation and 2 **Screening Planting Design**

Recognizing that planting design plays an important role in representing the unique character of different campus spaces, including the settings for historic structures, a strategy to revitalize and enhance McCorkle Place's primary long views and foundation plantings are recommended. Based on the understanding that vegetation management and renewal is an important component to maintaining

McCorkle Place's 19th century vegetative character, a best-practices strategy for foundation plantings has been developed. In the past, the University has utilized a per building planting approach due to ongoing building renovations, resulting in the installation of non-uniform plant material. In response to this situation, a proposed prototypical layout has been in developed and is described in Appendix A. These recommendations illustrate the ideal planting intent around buildings: utilizing large groupings and masses where large evergreen

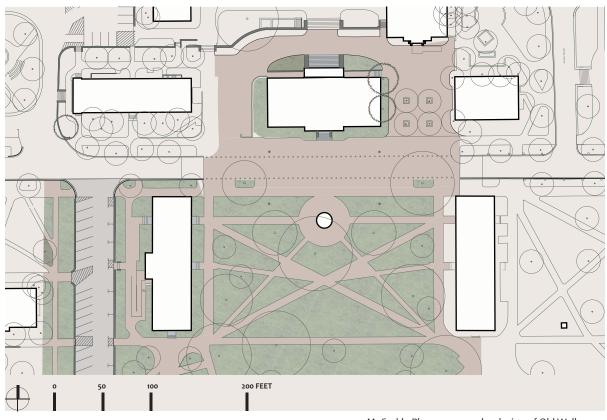
shrubs mark the corners with hardy deciduous and evergreen shrubs layered within, similar to images shown on page 66. This refined approach to foundation planting can also be applied when screening negative views of adjacent parking areas, as shown in the sketch above. Using a layered approach and perhaps utilizing boxwood shrubs relocated from the Bell Tower, plant masses can be maintained at a height that promotes pedestrian safety while also screening and guiding views across the quad as demonstrated in the sketch above.



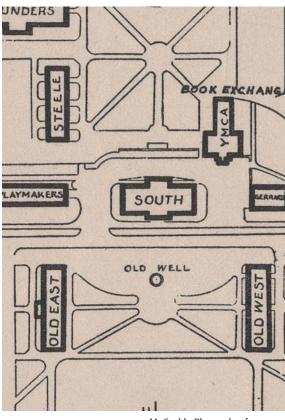
Foundation planting examples: Top: South Building, UNC Campus Bottom: Old West Building, UNC Campus











McCorkle Place, plan from 1940

### Redesign of Old Well Plaza

In addition to the forest canopy, one of the other significant opportunities in the current planning and design of McCorkle Place exists along Cameron Street, at the site of the Old Well.

Currently functioning as a pass-through nodal space, the Well, its immediate setting, and the heritage oak that stands immediately to its north, serve as one of the most powerful visual symbols of The University of North Carolina – and to some extent is an opportunity waiting to happen. Recognizing that historic circulation patterns have driven the evolution of the space, a strategy to reinvigorate and rehabilitate the Old Well as an active destination point, enhance its dignity of setting, while creating a powerful physical and visual connection between McCorkle and Polk has been recommended.

Based on archival research findings, historic maps document what was once a powerful physical relationship between McCorkle and Polk with the Old Well as the central iconic features that

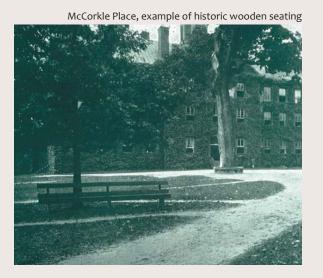
provides a picturesque backdrop and linkage between the City Beautiful era and Picturesque era quads. Cameron Street, as it exists today, divides the space both functionally and physically, with concrete curbs and vehicular traffic. To restore this fractured relationship, a pedestrian plaza that acts as a flexible use space is recommended. The development of this pedestrian-friendly space, as shown above, involves raising the grade to curb height along Cameron Street, which will strengthen the physical connection between McCorkle and



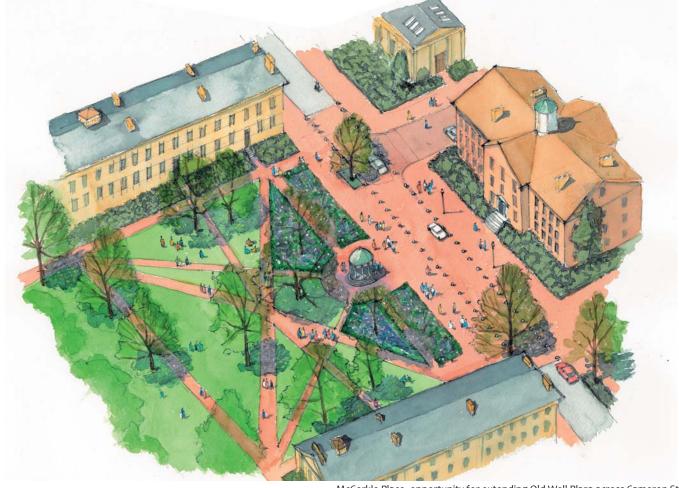
McCorkle Place existing view of the Old Well Plaza, 2008

Polk, reuniting these two central spaces. Vehicular traffic will be allowed to move through the plaza along Cameron Street and stormwater management must be considered; however priority will be given to the pedestrian. The existing azalea beds will be reconfigured to reflect the picturesque period and will be replaced with hydrangea beds flanking the Old Well. In order to recognize the uniqueness of the space, individual furnishings and features will seek their inspiration from McCorkle's Picturesque era of development, including site-specific designs

for bollards, perhaps in the form of short Chatham stone piers and rustic-seating in the form of wooden benches, inspired by the historic image at right. During special events, Cameron Street could be closed to vehicles allowing for the space to function solely for pedestrians.



UNC Historic Landscape Framework Plan



McCorkle Place, opportunity for extending Old Well Plaza across Cameron Street to the South Building

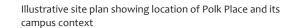
### Develop an Approach for Locating & **Selecting Essential Site Features & Materials**

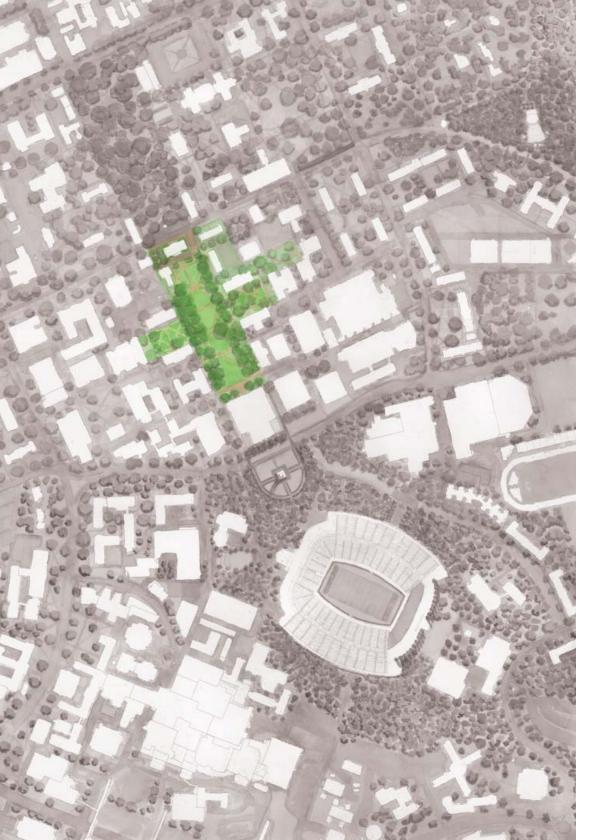
While the University is fortunate that McCorkle Place still possesses many of its character defining features and visual relationships, it is also important to develop a method to accommodate essential furnishings such as additional seating and lighting As described previously, one method for returning dignity to a space is by assessing the collective impact of removing, limiting and/or strategically

locating new site furnishings so that they do not diminish the quality and character of the landscape experience.

In developing an approach to address site furnishings, it is important to act site-specifically for all of the five study spaces including McCorkle and Polk. Therefore, rather than prescribing a homogenized furnishing palette for the entire campus grounds, complete with standardized benches, bricks and bollards, the University should consider using site-specific furnishings and

materials that reflect the origins and development of an individual space and setting. As previously noted, historically, moveable, wooden benches had been used at McCorkle. The rusticated nature of this type of bench embodies and builds on the Rural Architecture by providing "Rustic Seats" of the picturesque era, as described historically by Davis and Downing.





# **Polk Place**

#### **BACKGROUND**

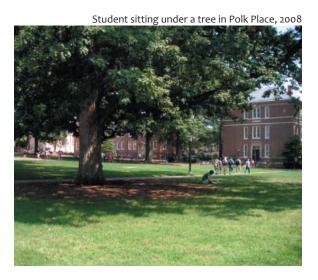
As the campus continued to extend south towards the Wilson Library into the 1920's, the design of new buildings became more consciously planned. In the 1950s, pedestrian pathways, once constructed of Chapel Hill grit, were repaved with brick in response to intensified use. Their design also began to follow a more formal geometry and was highly functional with two parallel pathways running north-south on either side of the great lawn, forming the primary connection from the Southern



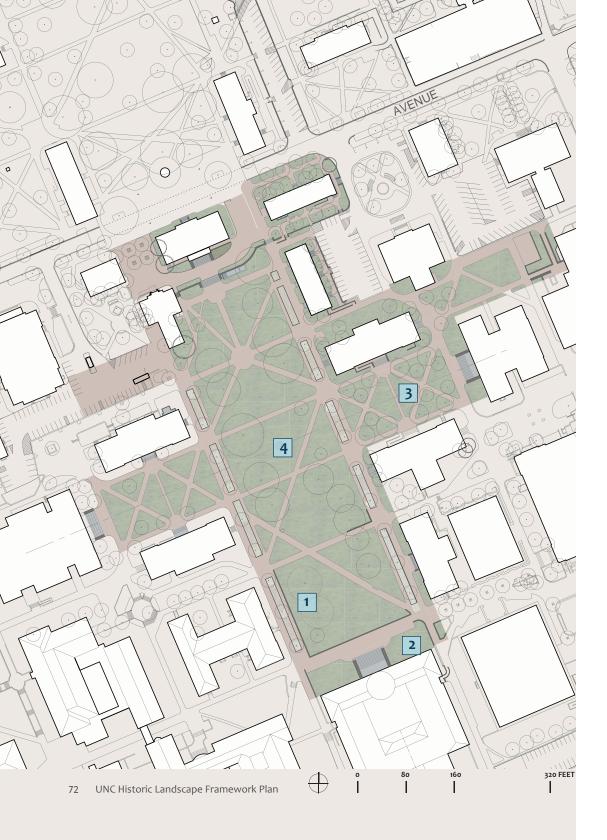
Polk Place between class periods, 2008

campus north toward the South Building and McCorkle, with secondary connections between the two. In addition, a diagonal path extending from the southeast corner of Polk and extending northwest towards Carroll Hall, dubbed the "Carolina Way," served students living on South Campus who frequented the walkway to attend classes. The strong linearity of these pathways was further emphasized with symmetrical rows of trees which also provided a framing devise for expansive views of the great lawn and its associated quads. Collectively,

these character-defining features define the open and formal character of Polk Place, including its relatively open visual and spatial relationships both within both the main quad and secondary quad.



The Dignity of Restraint: Polk Place 71



# Polk Place site plan showing proposed design interventions:

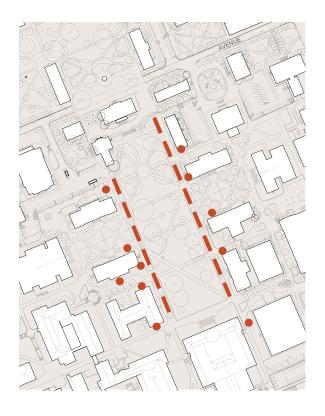
- 1 Develop a Strategy to Maintain & Enhance Vegetative Character
- 2 Revitalize & Enhance Foundation Planting Design
- 3 Redesign of Secondary Quads
- **4** Develop an Approach for Locating & Selecting Essential Site Furnishings & Materials

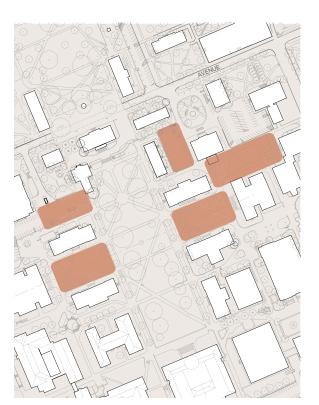
#### LANDSCAPE ASSESSMENT

Built-out primarily between 1920 through 1945 when there was demand for additional classrooms, the buildings surrounding Polk Place and their associated foot traffic have had a large impact on the quad today. The circulation through the formal quad is intermittently heavy between classes, as pathways have been widened and paved to accommodate ever-increasing foot travel. In addition to the walks paved with brick, less compatible new materials such as cobblestone pavers have been introduced



to the quad, often used in isolated areas of heavy foot traffic, for example, as a placemat underneath trash receptacles and newspaper vending machines. Unlike McCorkle, ongoing utility and renovation projects have plagued Polk Place during the development and expansion of the campus, resulting in highly disturbed soils over much of the quad. As a result, the soil disturbance at Polk has resulted in stressed trees. This factor is especially evident as one travels south and west of the space, where







there is evidence of decline and in some cases, loss of vegetation. This may be attributable to the extensive use of the quad for special events during the school year and their associated foot traffic. Attempts at alleviating soil compaction in the area have been introduced, including the incorporation of expansive mulch rings that surround all trees.

The formalism of the "City Beautiful" landscape is present at Polk, as much of the tree canopy maintains its strong linearity. Large trees thought to be nearly as old as the trees in McCorkle exist in Polk



Tree Canopies - Existing

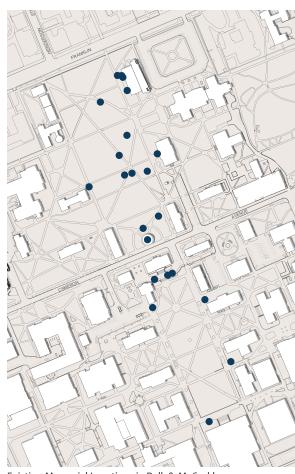
Place; however there is not one dominant genus, species, or cultivar present, which is not surprising since Dr. Coker often chose plant materials that were unusual or uncommon for the era. Lifespan and hardiness of plant material has become an increasingly important issue, as the Quercus phellos (Willow Oak) that line the outer edges of the quad are experiencing decreased performance, perhaps as a result of overmaturity, soil compaction from pedestrians, localized paving, and reduced root zone spaces. Other trees within the expansive lawn



Tree Canopies - Speculative Future

panels within the center of the space are performing well, including the Quercus alba (White Oak) that do not appear to be impacted by these conditions. Foundation plantings vary from building to building. While showing high levels of species diversity, these plantings lack a unified approach and are often out of scale with the architecture.

Similar to McCorkle, the introduction of memorials and small seating nodes in Polk Place has become ever more prevalent in the 21st century. Once again, the location of light standards follows the historic



Existing Memorial Locations in Polk & McCorkle

north/south and east/west axes, interrupting the visual integrity of the space by being centered at the front door of primary buildings. The location and addition of essential bicycle racks also impact the space, which have been installed without sensitivity to significant views across the quad. Seating is primarily limited to Chatham stone walls aligning pathways, with an occasional seating node located along the periphery. Although these walls have a long history on campus, in this area they have been introduced in ways that diminish their significance.



Polk Place existing edge of quad condition, 2008

#### **DESIGN STRATEGIES &** IMPLEMENTATION CONCEPTS



Develop a Strategy to Maintain & Enhance Vegetative Character

Similar to McCorkle, building on the understanding of the interrelationships between trees and soils, a strategy for vegetation management and renewal must be implemented at Polk Place. Management of the existing landscape to renew and retain the site's distinct "City Beautiful" character is a key component at Polk. In developing a vegetation management approach, a matrix of appropriate plant selections has been generated to guide the University's plant selection process. As with McCorkle, this matrix utilizes Coker's historical plant lists, UNC's current recommended plant palette, and suggestions from Michael A. Dirr. This matrix is shown in Appendix B.

Many of the trees that exist in this quad today are functioning well despite growing in compacted soils and paving over much of the rooting space. However, a review of existing health conditions show that many trees are nearing the end of their healthy lifespan. The proposed plant matrix illustrates that tree species such as Quercus phellos (Willow Oak) and Quercus michauxii (Swamp Chestnut Oak) should be planted within the quad, taking the place of larger trees as they senesce. Therefore, it is important to introduce an second generation of trees into the landscape, perhaps planting similar tree types near those that currently



Sketch of Polk Place showing opportunity for relocation of site amenities and interplanting of trees

exist. The linear style planting that exists as Polk should be retained, as historical plans from 1925 demonstrate (page 35) that this planting strategy has been in place over time.

As the findings by James Urban suggest, overstory trees should be spaced at approximately 60' along the outer edges of Polk Place to reduce root and crown competition in new plantings. However, since new plant material is installed at a smaller caliper size, an interplanting strategy should be established, similar to the diagram shown on page 78. For this method,

a fast growing columnar tree, such as Liriodendron tulipifera (Tulip Tree) could be planted between the slow growing, wide spreading canopy species (such as Willow Oak). As the trees grow older and the crowns of the slower growing species begin to spread and connect, the columnar tree would be removed. This would alleviate root and shoot competition and create a healthier growing condition while also maintaining the character of the space.

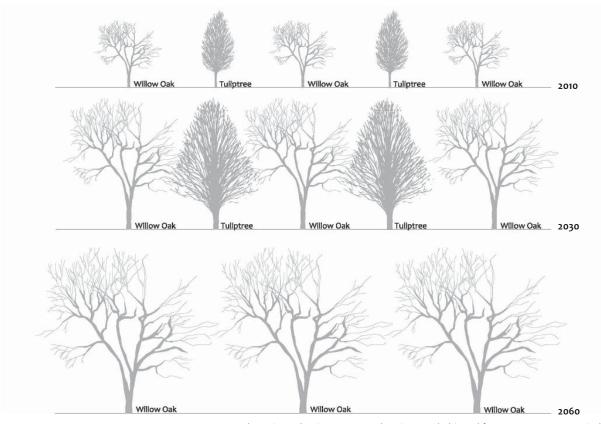
#### **Revitalize and Enhance** Foundation Planting Design

Based on the recommendation that vegetation management and renewal is an important component to maintaining Polk Place's formal Beaux Arts character, a best-practice strategy for foundation plantings and their use within the landscape hierarchy has been developed and is shown in Appendix A.

Developed in coordination with the overstory plant



Davie Poplar, 2008

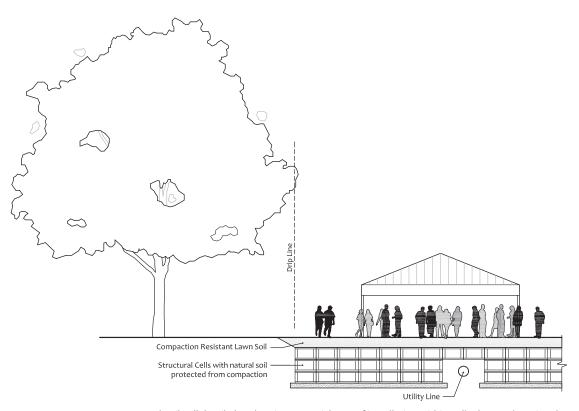


Proposed tree interplanting strategy, showing tree habit and form over a 50 year period

matrix for Polk Place, the approach for foundation planting should follow the prototypical layout described, where a mix of deciduous and evergreen shrubs massed in varying sizes surround each building.

At Polk Place, species diversity is prevalent with unusual plants such as *Camellia sasanqua* (Camellia), *Fothergilla 'Mt. Airy*' (Mt. Airy Fothergilla), and *Hydrangea quercifolia* (Oakleaf Hydrangea) existing within the quad, perhaps reminiscent from the Coker era. However, in some cases, the planting

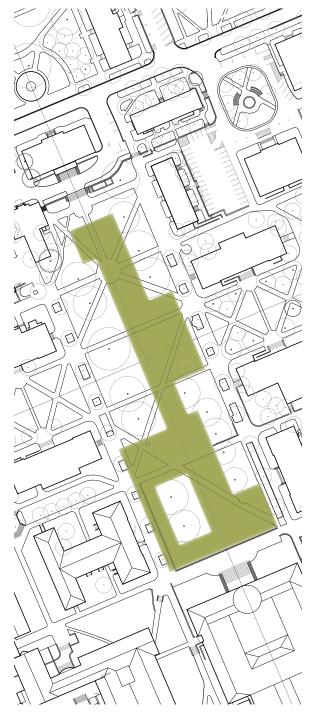
design is too detailed (much like a residential planting bed), utilizing too many taxa where grouping and massing of shade-tolerant plants would be more appropriate. Therefore, similar to the planting recommendation for McCorkle, a greater utilization of large groupings and masses should be used to aesthetically enhance and the space surrounding buildings. The scale of foundation plantings should both mark building entrances and be predominantly horizontal in nature, leading the eye across the landscape, with open campus green



Structural Soil Cell detail plan showing potential area of installation within Polk Place and section though quad

spaces appearing continuous and "flowing." Two ideal examples of foundation planting design can be seen on page 66, the South Building and the Old West Building on the University's campus.

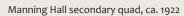
While UNC uses state of the art practices to maintain their landscape and its features, a strategy to alleviate soil compaction must be developed. Understanding that a need exists to balance the quality of soils with the function of the space, the proposed approach would involve introducing a structural cell approach, as shown above. Since the soils in Polk are relatively disturbed, utilization of this system would allow tree roots to move freely throughout the soil while also stabilizing the lawn areas, decreasing the level of compaction. As noted in research by James Urban, a complete soil evaluation and corresponding soil protection plan should be completed prior to any new development projects on campus. Additional research must be completed to determine actual areas of installation. However, it should be noted that it is intended that native soil profiles be preserved where possible.



The Dignity of Restraint: Polk Place 79



Manning Hall secondary quad existing condition, 2008







Manning Hall secondary quad, opportunity for redesign to unify lawn areas to the greater Polk quad

### 3

#### **Redesign of Secondary Quads**

As research findings from the 1930s and 1940s illustrate, the side quads at Polk Place were once open - uninterrupted grassed lawns with symmetrical paths uniting and serving the surrounding buildings and ultimately feeding into the greater central lawn of Polk Place. To reestablish this historically significant relationship, a design solution for each side quad has been developed. This solution involves the erasure of "contemporary," more urban design elements that have been introduced over the past several decades and are largely out of character with the Beaux Arts buildings and landscape.

To restore lawn areas and viewsheds, the raised stone planter walls that have been introduced into formerly open lawn side quads at Carroll and Manning Halls, should be removed, as shown in the sketch above. The results are shown in earlier historic images dating from 1922 (page 80), showing

an uninterrupted ground plane. Reintroducing a hierarchy of pathways in the quad will reunite the collection of buildings with their associated landscape features, while keeping the central lawn panel open. Carefully planned benches could be strategically integrated along the edges of the quad, again where they are most needed, near building entrances.

A similar approach would be used within the secondary quad space south of Bynum Hall. This space, with its misaligned pathways, brick planters



Bynum Hall quad, existing condition, 2008





Examples of seating options reminiscent of the Beaux Arts era

82 UNC Historic Landscape Framework Plan



Bynum Hall, opportunity for redesign to simplify the space and reunite with the Manning Hall secondary quad

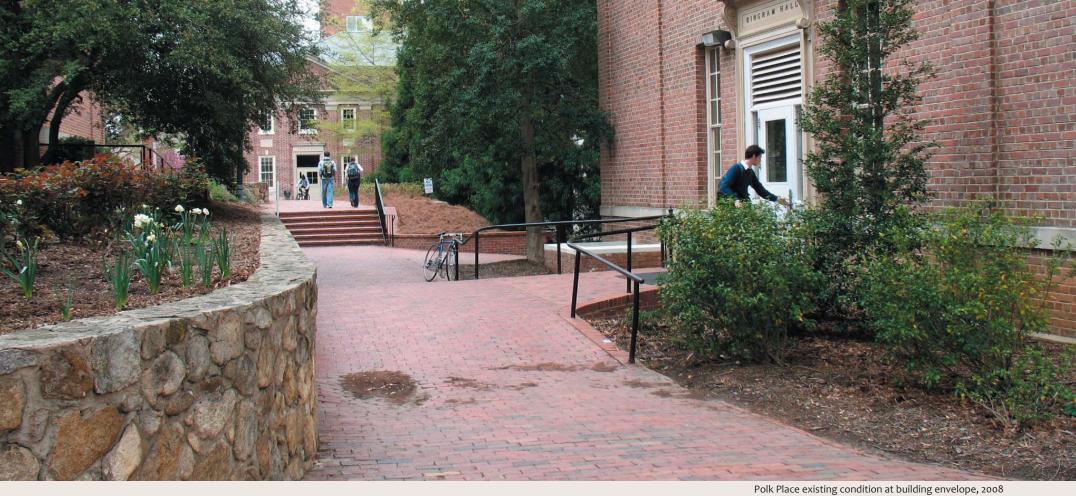
and gated formal garden, should be returned to the same open character as Polk Place. The removal of raised brick planters, realignment of pathways, and relocating the existing sculpture and boxwood shrubs, as depicted in the sketch above, will restore an elegant simplicity to the quad. Additional space to screen the adjacent parking area will be regained as well.



#### Develop an Approach for Locating & Selecting Essential Site Furnishings & Materials

As put forth at McCorkle, an approach should be developed which addresses the future installation of new materials (e.g. paving) and site furnishings (e.g. benches). As previously stated, it is the goal of this plan to make site-specifically, using materials that reflect the origins of a specific site's development. For example, in situations where pathways were paved over with brick pavers and stone benches

were used within the McKim, Mead, and White era, current planning and design recommendations will respond accordingly by replicating materials in a consistent and compatible way, such as incorporating a bench that may be backless to allow the view to continue (similar to the images shown on page 82). In essence, the goal is to re-interpret historic design precedents while creating simple, durable seating solutions that utilize historic materials in a modern way.





Polk Place, opportunity for relocation of bicycle racks near buildings to restore views through the historic core

While many of the strong and simple character defining features of Polk Place remain intact, there has also been a negative impact on the simplicity of the City Beautiful era setting with the introduction of new cobblestone paving, and an overabundance of site furnishings, such as seating, lighting, and bicycle racks. Using an approach similar to that of McCorkle, the goal is to return simplicity back to a space by assessing the collective impact and strategically removing, limiting and/or relocating site furnishings so that they do not diminish the

quality, character, and viewshed experience at Polk. An assessment of historic photographs of Polk Place from 1940 (page 86) illustrate the panoramic view from the South Building to Wilson Library. The quad, which was once visually open and free of flagpoles, bicycle racks and light fixtures, is today in need of restoration of its significant views. A review of existing site conditions (page 76) show that these accrued elements make the sidewalk at times difficult to navigate, threaten the longevity of mature trees, and significantly

impact what was intended to be sweeping and unobstructed views. Based on this assessment and the goal of returning the Beaux Arts simplicity to this space, these introduced features and elements such as bicycle racks and trash receptacles should be relocated to areas within close proximity to the building envelopes, as demonstrated in the sketch above. Recognizing that the areas near building foundations are best suited for user amenities, coupled with the fact that there is adequate space and ample opportunities for screening (e.g. walls or



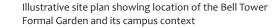
Above: View through Polk Place to the south, 2008 Below: View through Polk Place to the south, 1940

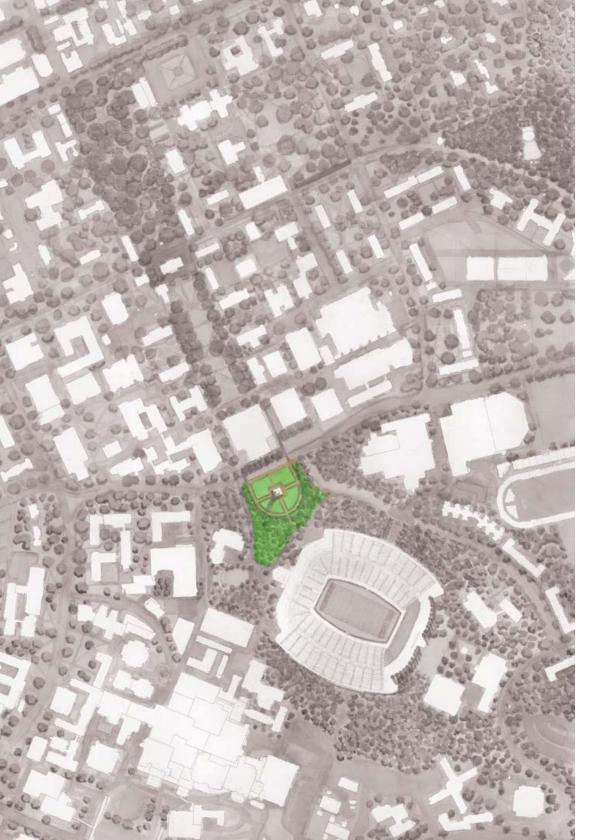




Polk Place, opportunity to restore historic center vista through the relocation of site amenities

hedge plantings as shown on page 84) this solution is not just practical, but will achieve the goal of returning dignity to the quad. In addition, light standards should be placed in a more thoughtful way so that they recede from views, similar to the image above. The location of the flagpole should also be considered for relocation to one of the side greens (perhaps other flags such as the State and College flags could be sited in these smaller secondary spaces.) In addition, if new memorial gardens or seating nodes are created, a comprehensive set of design and planning tools should be adopted to guide this work so that these do not diminish the overall visual and spatial relationships associated with this historic quad. In sum, a comprehensive approach to Polk's furnishings and features through targeted "editing" or "erasure" could both reinforce the formality and geometry to this Beaux Arts era landscape, shown on page 86.

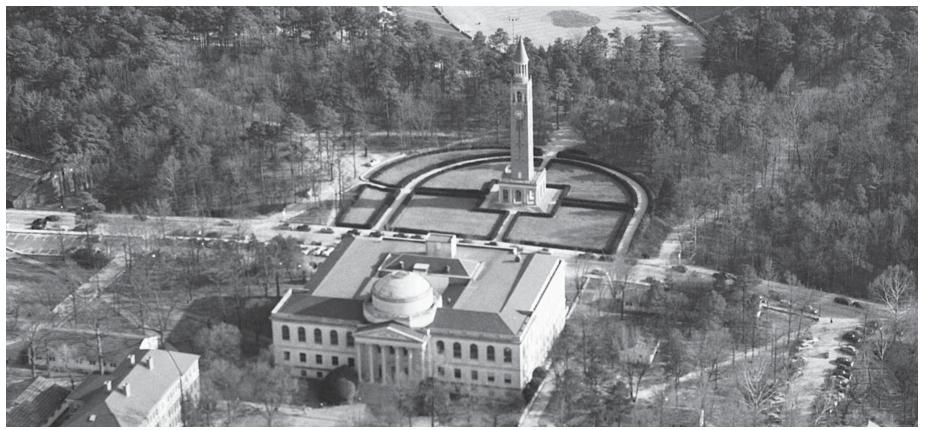




## Bell Tower Formal Garden

#### **BACKGROUND**

The Beaux Arts approach of architects McKim, Mead, and White spread to the southern part of campus in the 1930's, with the design and construction of the Morehead-Patterson Bell Tower – a modern interpretation of an Italian Romanesque campanile. Constructed of red brick and Indiana limestone, the tower was dedicated in 1931 as a memorial to John Motley Morehead and Rufus Lenoir Patterson. As with the University of California at Berkeley's Sather Tower, a Beaux Arts



Bell Tower Formal Garden, 1963

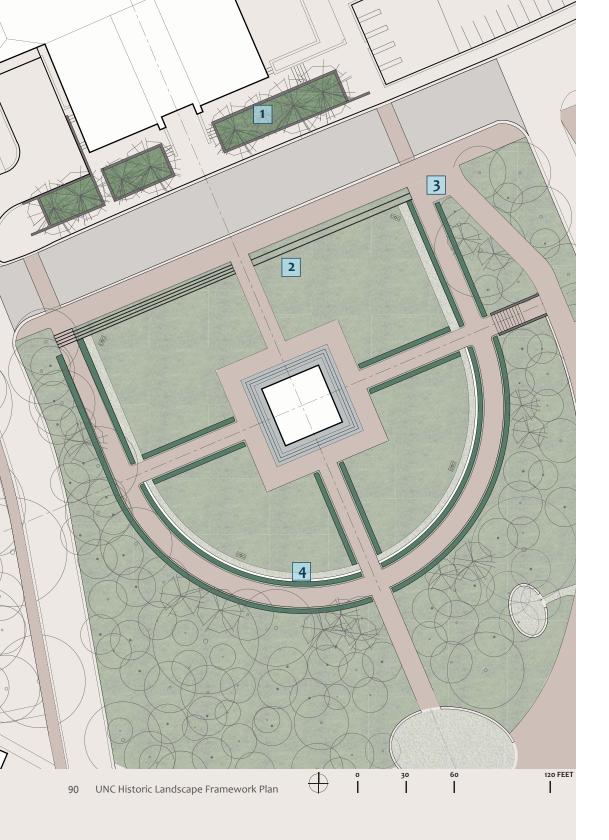
style campanile designed by Cass Gilbert in 1913. The Bell Tower at UNC has also become an iconic, vertical "campus" symbol.

Nestled between the rear of the Wilson Library expansion and Kenan Stadium, the site is carved out from the surrounding landscape of Kenan Woods. The semi-circular site, a formal landscape setting slightly isolated behind a veil of an overgrown boxwood hedge, functions more as a pass through space, rather than a destination. Divided into four garden rooms, the geometric landscape design was

laid out by Dr. William Coker in the 1940's. The boxwood hedge is still intact today, however most significant about the design of this "City Beautiful" era landscape is its historic circulation system, including its alignment, materials, and associated drainage.

View of the Bell Tower Formal Garden, 1950





# Bell Tower Formal Garden site plan showing proposed design interventions:

- Develop a Strategy to Enhance Vegetative Character & Extend Transition Woodland
- 2 Improve Visibility Towards the Bell Tower
- 3 Address Grading & Accessibility
- 4 Identify an Approach for Greater Consolidation of Future Memorials

#### LANDSCAPE ASSESSMENT

As viewed from the portico of the South Building, the Bell Tower appears to rise up from the dome of Wilson Library, a vertical extension of the Beaux Arts influence of Polk Place. However, moving south towards the Bell Tower site from Polk Place, one notes the massive, brutalist addition to the Wilson Library. The once direct relationship between the McKim, Mead, and White designed south façade of the Wilson Library and the campanile has been severed, resulting in the Tower and its landscape

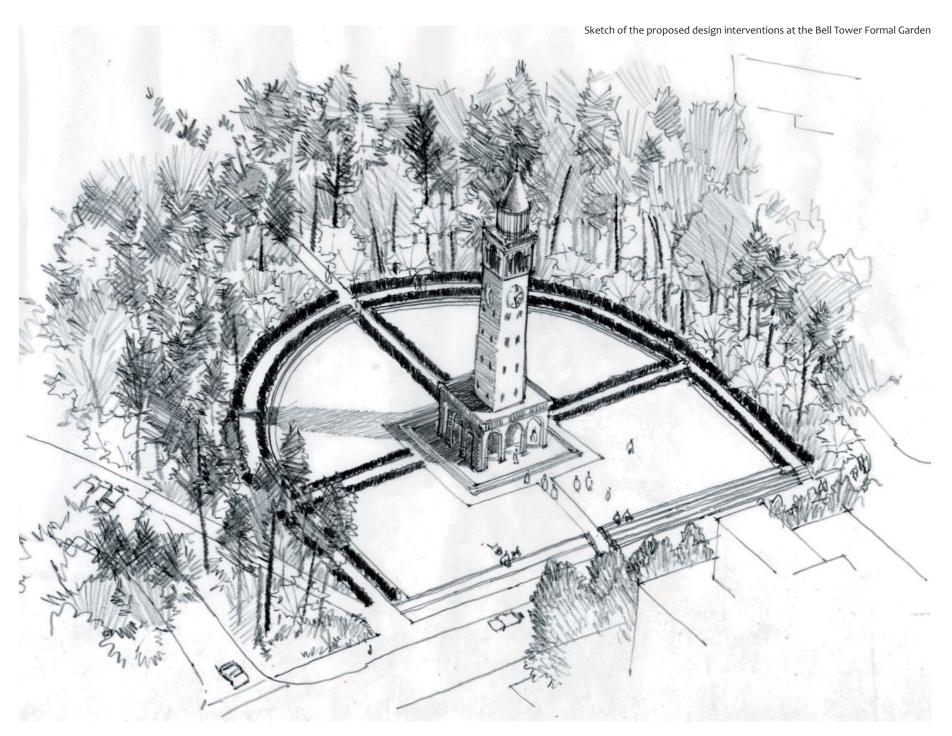




Diagram depicting the extension of surrounding woodland into the Bell Tower site

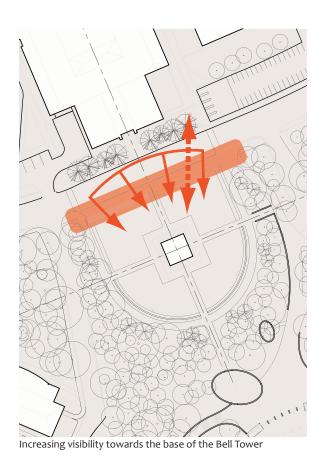
Extending Kenan Woods

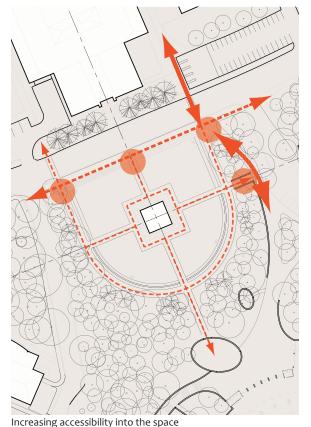
Flowering Tree

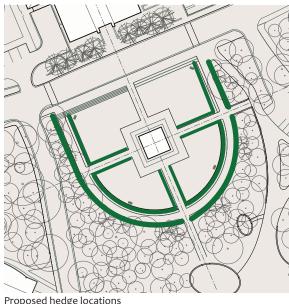
Deciduous/Evergreen Tree

being completely isolated on all sides.

The surrounding circulation system is also isolated and under used. As the two primary north-south pathways extending through Polk and ultimately McCorkle Place, terminate with a semi-circular walkway at the Bell Tower, it would appear to be a heavily traversed route, high in the campus circulation hierarchy. The walks however, are infrequently used by pedestrians. Rather, the sidewalk adjacent to Stadium Drive acts as the primary pedestrian route to campus, connecting the







Proposed hedge locations



Southern campus to historic core and avoiding the Bell Tower landscape altogether.

Given its highly visible setting within the wooded landscape of Kenan Woods, the original design intent suggests that this would have served as a campus destination; however the present-day lack of use has resulted in an underutilized remnant of the campuses open space network. Coker's surviving landscape design today portrays qualities unique to campus, including the use of boxwood hedge monoculture whose design intent is from the

Coker era. Today, these hedges are in reasonable condition, despite being sited upon disturbed soils. The hedges are currently maintained to a height of approximately 5 feet, trimmed down to their existing height in recent years in response to perceived safety and wayfinding. The existing height still generates safety concerns as it limits the visibility into the quadrated lawn spaces. Accessibility is also an issue, as the relatively flat topography becomes steep on the northwestern corner of the site, resulting in ramps that follow grade and do not meet current

#### ADA requirements.

There is no formal seating provided in this area, which also limits use. In sum, it is an underutilized space during most of the year with the exception of football game days where the lawn areas are covered with tents.





Bell Tower, opportunity to improve circulation to south campus

#### **DESIGN STRATEGIES & IMPLEMENTATION CONCEPTS**

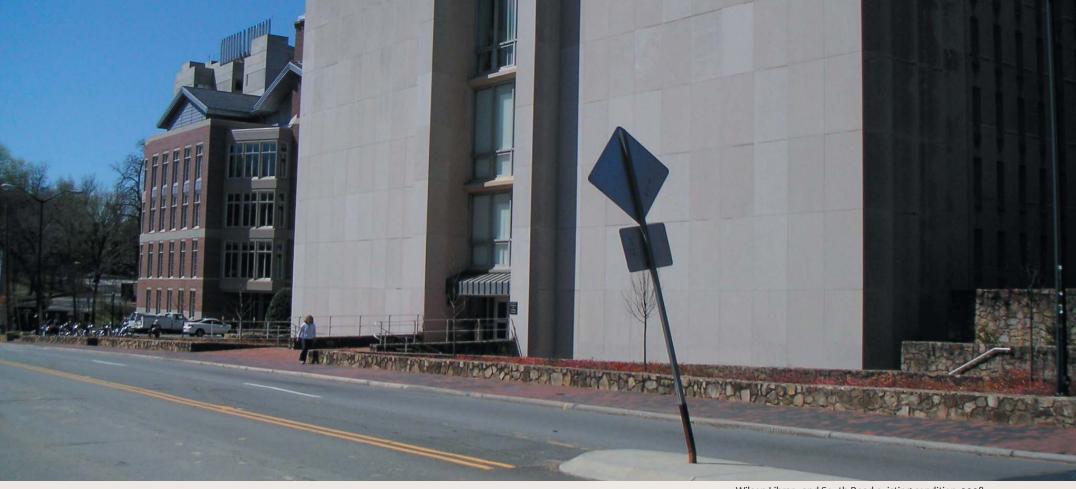


Develop a Strategy to Enhance Vegetative **Character & Extend Transition Woodland** 

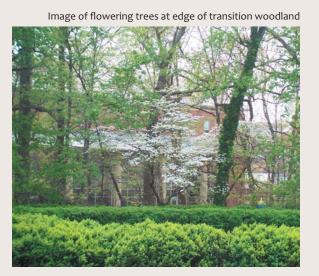
The once dense woodland character that surrounded the Bell Tower site was evident in historic photographs from the 1960's (page 89). With the understanding that this wooded buffer has remained since its inception, and also recognizing that the adjacency to Kenan Woods is, in part, gives the site its strong character, it is important to develop a strategy for vegetation management and renewal to maintain and restore the "Tower in the Woods" character.

As with the other five sites, a strategy for vegetation management and a matrix of appropriate plant selections has been developed. Similar to McCorkle and Polk, the matrix, which is shown in Appendix B, is inspired by Coker, the existing UNC plant palette and Dirr.

Here, Dirr's findings illustrate that regeneration is needed within the surrounding landscape and that additional overstory plant material should be planted to increase the density of the woodland edge south of the Bell Tower. The removal of the outermost line of boxwood hedge, as shown in the sketch on page 91, will help to create additional planting space for overstory tree plantings, such as Acer barbatum (Florida Maple) and Gymnocladus dioica (Kentucky Coffeetree). Dirr also suggests the incorporation of a flowering understory tree



Wilson Library and South Road existing condition, 2008



Example of limestone risers with turf treads





Bell Tower, opportunity to extend woodland across South Road

component, such as Cornus florida (Flowering Dogwood), Halesia tetraptera (Carolina silver bell), Amelanchier and Aesculus species, which can be planted in drifts along the edge of the transition forest to introduce spring color accents to the site, as shown in the image on page 96. In order to reinstate the critical connection from the Wilson Library to the Bell Tower, Dirr recommends filling the existing planting beds south of Wilson Library with evergreen trees, such as Magnolia grandiflora 'Claudia Wannamaker,' (Southern magnolia)

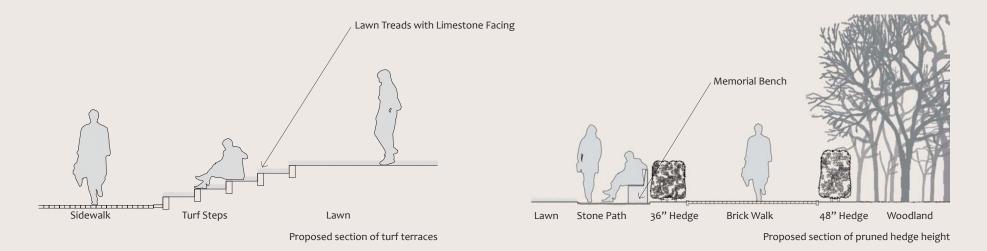
physically extending the "woods" across South Street towards the Beaux Arts campus, as shown in the sketch above.

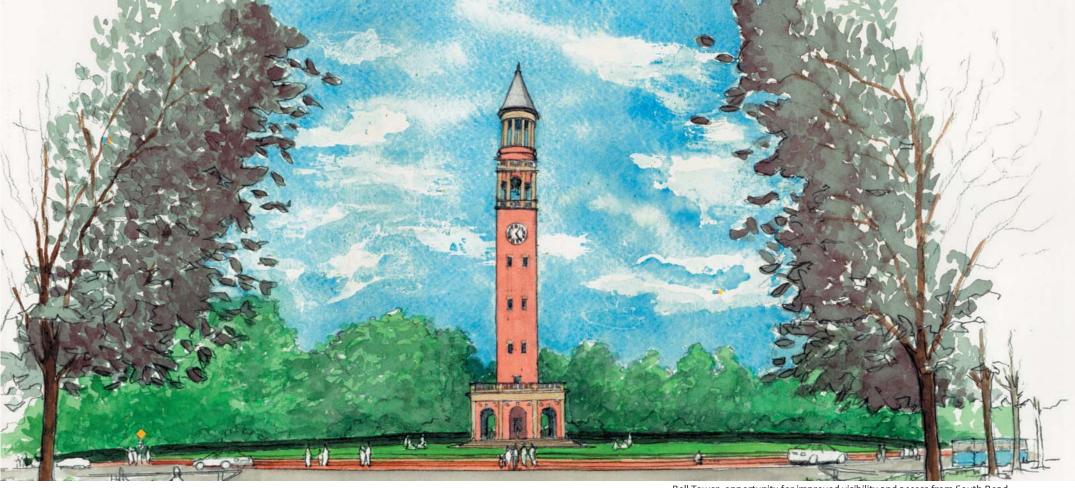
### Improve Visibility Towards the Bell Tower

Recognizing that planting design impacts the character of a space, a maintenance and management strategy of the existing plant material is recommended. By removing the linear section of

hedge that aligns with South Street, the lawn panels open up to welcome students with a stepped, grassed terrace with limestone risers (similar to those shown on page 96), becoming both activated and functional in a way that it is not today and creating a destination place. An interpretation of historical photographs of the Bell Tower, shown on page 89 show the boxwood hedge maintained to a lower height, making the base of the Bell Tower visible. To re-establish this relationship and preserve the formality of the garden rooms, it is recommended







Bell Tower, opportunity for improved visibility and access from South Road

that the hedges be trimmed to specified heights to encourage visibility and a feeling of safety as demonstrated in the section on page 98 and the sketch above.

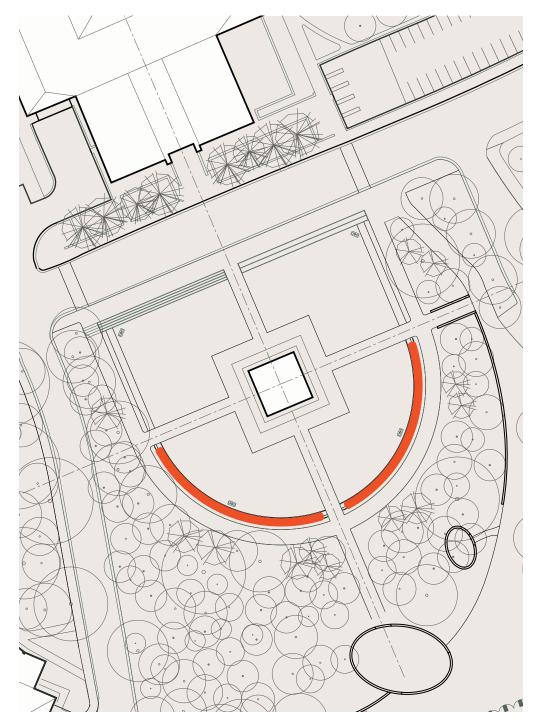
#### Address Grading & Accessibility

As previously noted, photographs from the 1940's show that this landscape has changed very little over time with relatively few modifications or adjustments. However, the lack of use at this space has suggested the need to reconnect the Bell Tower landscape to its surrounds, while encouraging increased use and visitation. Regarding the four lawn panels and their defining hedge, a strategy to incorporate change while honoring the historic design of the Tower landscape should be pursued.

Beginning with pedestrian circulation, it is recommended that the existing pathways leading to the site are rehabilitated along with the construction of new stairways and ramps, making the site universally accessible. In addition, widening the

sidewalk on South Street and introducing a slight diagonal walk to align with the existing crosswalk at Wilson Library. This connection will link Stadium Drive to South Road through a wooded walk, as shown on page 95, and will create space for congregation and while directing pedestrian flow through the surrounding woodland landscape. Stormwater best management practices should also be considered.

The Bell Tower landscape still possesses historic materials that were very much representative of





the Beaux Arts era – from bricks to boxwoods. Because these materials add to the authenticity and the character of the space, future design and management proposals should reinforce this historic vocabulary. For example, as brick and limestone were typically used within the McKim, Mead, and White era (and are present at the Bell Tower site), current design recommendations for new walks, walls, and benches will be guided by these materials and finishes (e.g. the use of limestone walls rather than Chatham stone walls, for example).

Images to describe style of proposed memorial bench, limestone terrace steps and opportunity for engraving.





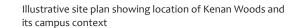
### 4

#### **Identify an Approach for Greater Consolidation of Future Memorials**

Both McCorkle and Polk have been subject to an ever-increasing number of dedications and memorials as shown on page 75, which together effectively clutter the landscape and diminish its character. In an effort to develop a systematic approach to collectively locating memorials, it is recommended to utilize the Bell Tower and its surrounding landscape as a designated location for future memorials.

The Bell Tower site, being a campus landmark and originally built as a memorial, has already been selected by the University as an area for dedication, in the form of paving tiles that surround the campanile. Building on this approach, a comprehensive strategy for additional forms of acknowledgement and memorialization could be incorporated into the design of seating spaces and walls instead of cluttering the walkways. It is

recommended that an engraved stone memorial bench be placed within two of the four lawn rooms as shown in the diagram on page 100. As donor opportunities arise, this bench or proposed walls could be easily engraved on an as-needed basis over time, similar to the images shown above.





### **Kenan Woods**

#### **BACKGROUND**

Surrounded by the historic core of campus to the north, the health affairs village to the southwest, and student dormitories and services to the southeast, Kenan Stadium and surrounding Kenan Woods lay both physically and socially at the center of campus life. The immediate wooded setting has and continues to distinguish this stadium apart from other collegiate sports stadiums. "The Stadium in the Woods" is not only a venue unrivaled in the world of football, but also a campus asset embedded



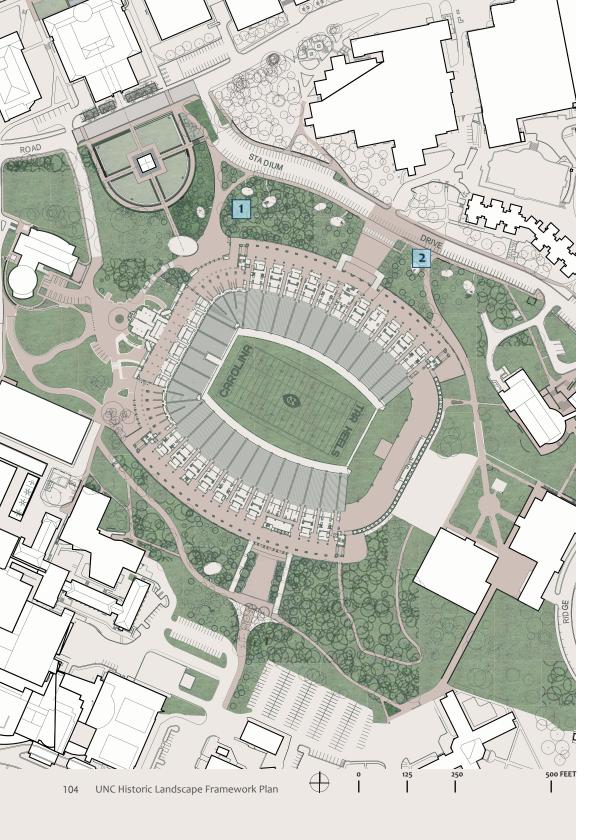
Kenan Woods, 2008

in the history and culture of student and alumni life at UNC.

Historically developed as a depressed bowl set within in a natural ravine, Kenan Stadium blended seamlessly with its woodland setting. Historic photographs show the stadium being surrounded by a dense forest, comprised mostly of evergreen vegetation, with the top of the seating area fluidly meeting the existing groundplane (page 105). Primarily funded by industrialist William R. Kenan, Jr., this natural "Greek" inspired amphitheater

sat roughly 24,000 people at its inception in 1927. Additional levels in the architectural "Structuralist" aesthetic were added in the early 1960's, nearly doubling the capacity and footprint of the stadium. Incremental expansion projects in 1979, 1987, and the mid-late 1990's added more seats and further encroached upon the surrounding woodland. The most recent expansion filled in the west end zone, turning the stadium into a horseshoe. The UNC Athletics Department and Education Foundation is undertaking a new master plan for the expansion of

Kenan Stadium that places strong emphasis on the conservation and regeneration of the surrounding woodland. Outbound utility boxes, small shelters, plazas, and parking areas continue to impinge upon the forest floor, while media boxes and gameday suites reach the height of the surrounding forest canopy.



# Kenan Woods site plan showing proposed design interventions and expansion:

1 Reforestation Strategy for the Declining Woodland

2 Enhance and Control Pedestrian Circulation

#### LANDSCAPE ASSESSMENT

Measuring approximately 25 acres in size (not including the stadium), Kenan Woods is classified as a remnant forest, a reminder of the Loblolly and Oak woodlands that once dominated the regional Piedmont. The woodland is currently old growth in stature with limited natural or human-induced regeneration. The lack of prominent understory is due to a number of natural and human induced factors. The fact that the majority are of the same age and size is not a sustainable situation for the

Above: Kenan Woods, 1936 Below: Kenan Stadium during a football game, 1929



future. Previously pinetum-like in character, and composed of species such as Pinus echinata (Shortleaf Pine) and Pinus taeda (Loblolly Pine), the continued succession of Kenan Woods has resulted in its transition to a predominately deciduous forest, composed of Acer rubrum (Red Maple), Carya glabra (Pignut Hickory), Carya tomentosa (Mockernut Hickory), Liquidambar styraciflua (Sweetgum), Nyssa sylvatica (Blackgum), Prunus serotina (Black Cherry), and Quercus alba (White Oak). These deciduous trees shade out understory planting,



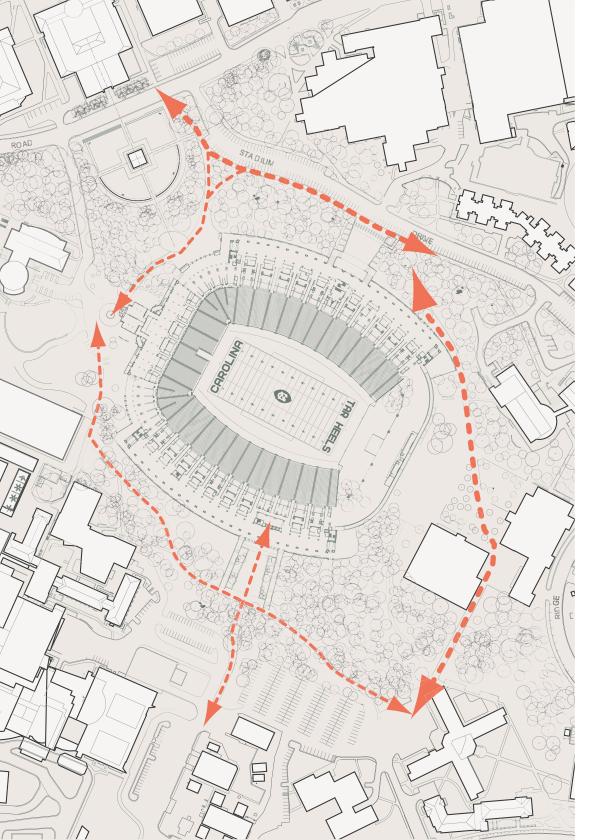


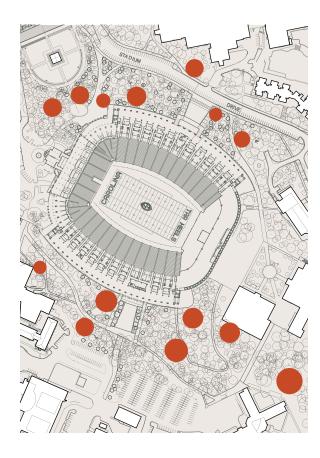


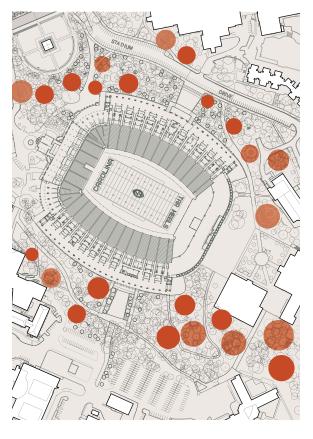


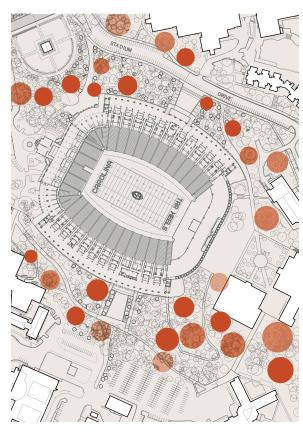
inhibiting evergreen regeneration.

Regardless of being constructed upon original topography, soil disturbance in the form of utility cuts, re-grading operations, and soil compaction have greatly impacted the Kenan Woods landscape. As the stadium continues to expand, associated pathways, outbound utility boxes, and athletic structures continue to be developed. Game day and non-game day foot traffic (shown above) also has a significant impact on the development of a prominent vegetative understory, as the pedestrian









circulation is primarily uncontrolled. Outbound parking surrounding the stadium allows people to filter in by foot from all sides. While brick paved pathways accommodate a high level of foot traffic, the overall layout surrounding the stadium is poor, resulting in bottlenecked areas and an overall lack of fluid pedestrian flow, which results in an overspill into the adjacent woods. Since seedlings are not protected, opportunities for forest regeneration are limited. In addition, cars pull up into the woods to tailgate on game days, further affecting soil

quality and compaction, resulting in an understory completely devoid of regeneration. However, as James Urban notes, "while compaction may be a part of the problem with the declining forest, other issues such as erosion, surface crusting which slows infiltration, loss of leaf duff, other soil disturbances, and other tree stress vectors also are likely contributing to the decline of the trees."

- Woodland Patches, First Installation
- Woodland Patches, Second Installation
- Woodland Patches, Third Installation



Kenan Woods, existing game day conditions, 2008





108 UNC Historic Landscape Framework Plan



Kenan Woods, opportunity to protect trees with improved circulation

## **DESIGN STRATEGIES & IMPLEMENTATION CONCEPTS**



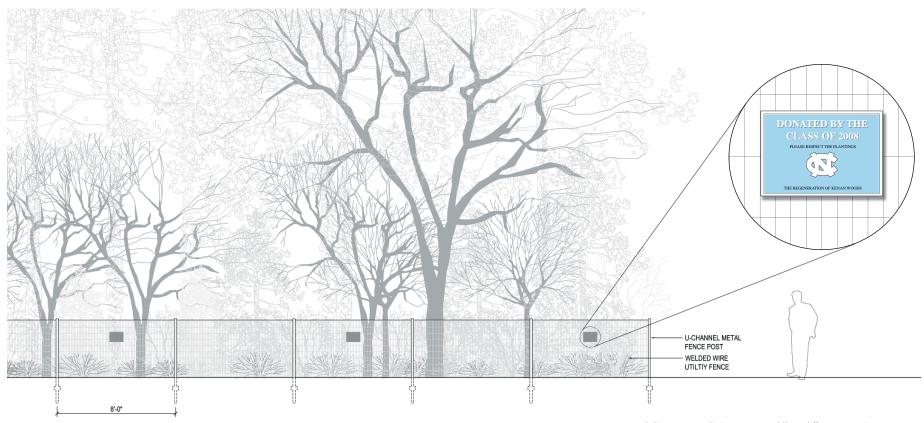
## Reforestation Strategy for the **Declining Woodland**

As a declining old growth forest surrounded by an ever-changing urban environment, the future of Kenan Woods is dependent upon a comprehensive management strategy. This woodland will never again be a true successional forest; however,

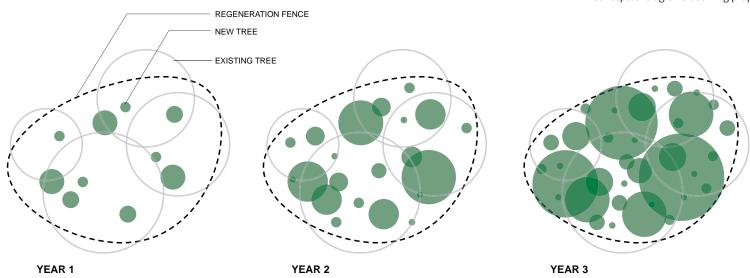
its woodland density, diversity, and health are all dependent upon short-term and long-term interventions. Therefore, it is recommended that UNC employ a step-by-step approach in concert with the current Kenan Stadium master planning effort centered upon immediate and annual planting strategies, consistent maintenance, and soil amendment/analysis to ensure that the woodland character of Kenan Woods is maintained and enhanced into the future.

It has long been an unwritten rule that Kenan

Stadium shall never be taller than the surrounding trees and as historic photos from the 1940's to present show (page 105), continual stadium expansion and contextual development pressures continue to diminish its significant and characterdefining woodland ring surrounds. Based on the existing species composition and the known low quality of the forest, a plan to manage forest succession is essential. It must also be recognized that each area of the Kenan Woods landscape is unique with different species composition, density,



Conceptual diagrams outlining proposed "patch" regeneration strategy





Detail of potential "patch" fencing solution with memorial plaque

and soil character. In response to this challenge, a matrix using William Coker's historical plant lists, selected plants from UNC's current plant palette, and suggestions from horticulturist Mike Dirr, has been developed, showing the species suitable for the unique conditions at Kenan and is shown in Appendix B.

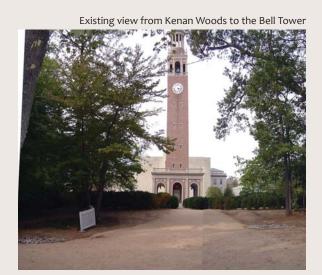
Ideally, it is recommended that the University employ a step by step approach to woodland management, incorporating a phased replanting and maintenance strategy to maintain diversity

and establish a variety of trees in different ages and sizes. Protected woodland "patches" would consist of fenced areas of at least 50 feet in diameter and would restrict pedestrian and vehicular traffic, as recommended in Jim Urban's findings, similar to the diagram shown on page 110. These patches would contain pioneer species such as Acer, Carya, Fagus, Ilex, Liriodendron, Nyssa, and Quercus that would tolerate competition from surrounding vegetation. Based on the areas of the woods that have the poorest quality vegetation, the highest level of tree

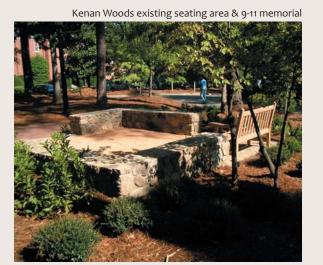
loss and the highest number of geriatric trees, the number of patches installed or removed each year would vary. Over time, these patches would align with each other, effectively forming a jigsaw puzzle of regeneration over the wooded landscape.



Kenan Woods existing condition, 2008







112 UNC Historic Landscape Framework Plan



Kenan Woods, opportunity to control pedestrians with new gathering spaces

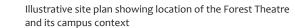
#### **Enhance and Control Pedestrian Circulation** 2

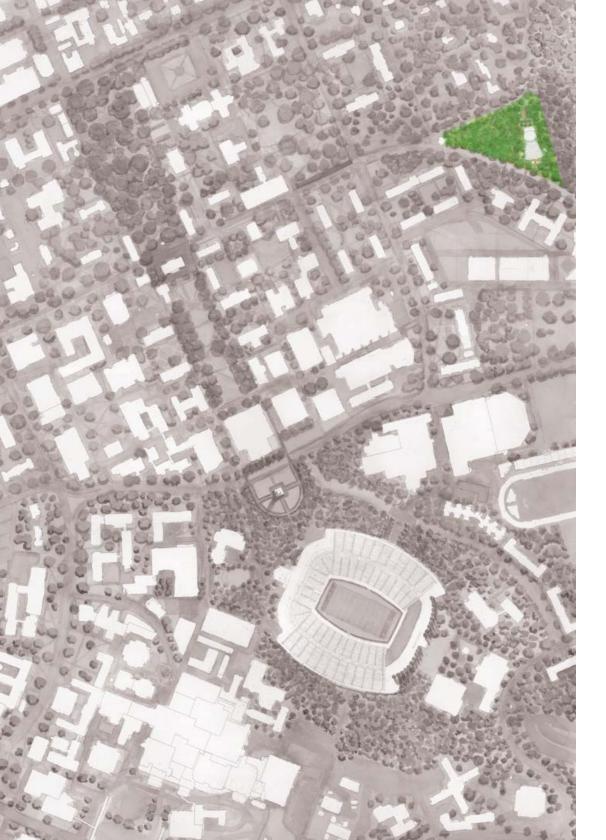
Another opportunity to aid in the regeneration of Kenan Woods exists in the design and management of pedestrian circulation. As visitor patterns have driven the design modifications through this area they have also impacted the condition of the surrounding woods. In response to this situation, a strategy to reinvigorate and protect the woods through the control of foot traffic patterns has been

developed.

This approach involves controlling and guiding pedestrian movement, while also creating a hierarchy of destination points within the existing circulation network. Beginning with pathways, it is recommended that a hierarchy of routes be established to accommodate and guide pedestrian traffic through the Woods. Gathering spaces will be provided along the walk, similar to the sketch shown above, to provide destination points that can also be programmed for different uses on both

game and non-game days. As illustrated by Urban's soils findings, Chatham stone is prevalent within the upper soil horizons within Kenan Woods, and as such would make an excellent material choice for these gathering spaces where, Chatham stone walls can be constructed as a method to direct visitors, encouraging movement on designated pathways rather than through the woods.

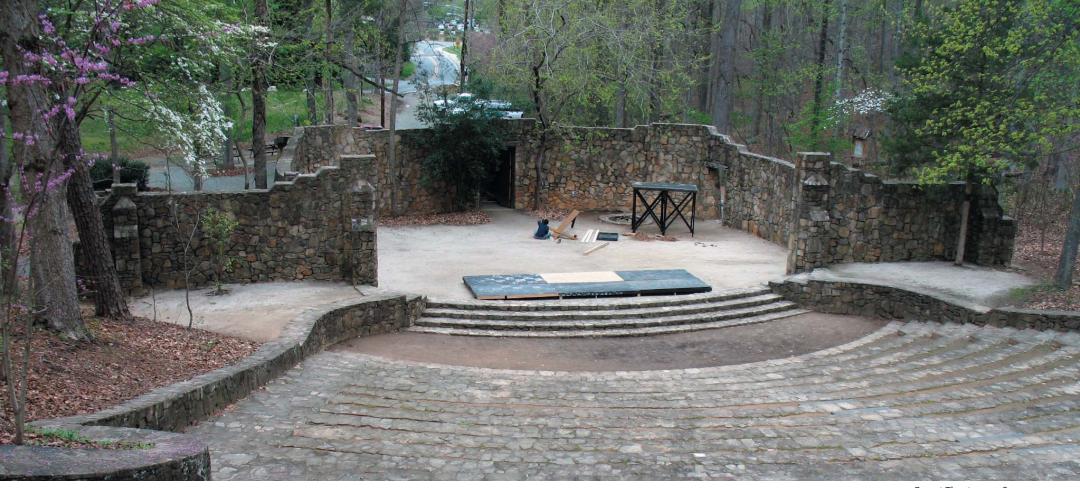




# **Forest Theatre**

### **BACKGROUND**

In 1917, the landscape architect and educator, Frank Waugh published, Outdoor Theaters. This first-ever treatise on the use and design of garden theaters and outdoor auditoriums included influential examples at college campuses including the University of California, Pomona and Vassar colleges. At Pomona for example, Waugh noted that the "theater had the happy fortune to grow up with the College" and that "it came because there was a real demand for it in college life."

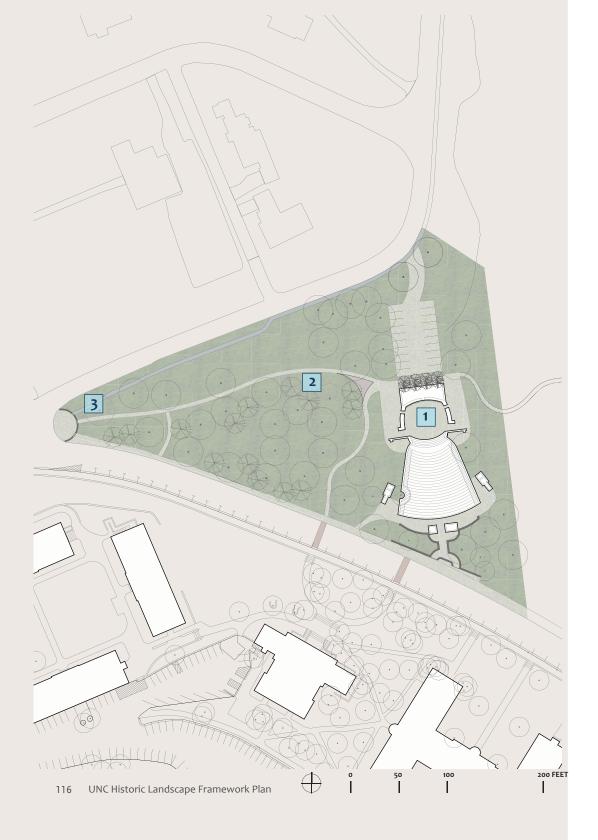


Forest Theatre, 2008

This too was clearly the situation at UNC where just one year after Waugh's pioneering treatise was published, the Forest Theatre was constructed as a semi-circular stage at the base of a grassy hill, Dr. Coker chose the wooded site in Battle Park as the location for an outdoor venue for the Playmakers Theatre Group. Improvements to the Theatre were made in the 1940's when the Works Progress Administration (WPA) constructed the Chatham stone wall sides to the theatre, the stone seating treads, and the stone lighting towers. The last recorded significant improvement occurred in 1948 with the construction of the timber dressing and storage area behind the Theatre. Performances continued through the 1950's and 1960's, with annual productions completed by the Department of Dramatic Art. The site is still owned by the University and managed by the North Carolina Botanical Garden since 2004, with the stipulation that the 93-acre tract of land remain parkland.

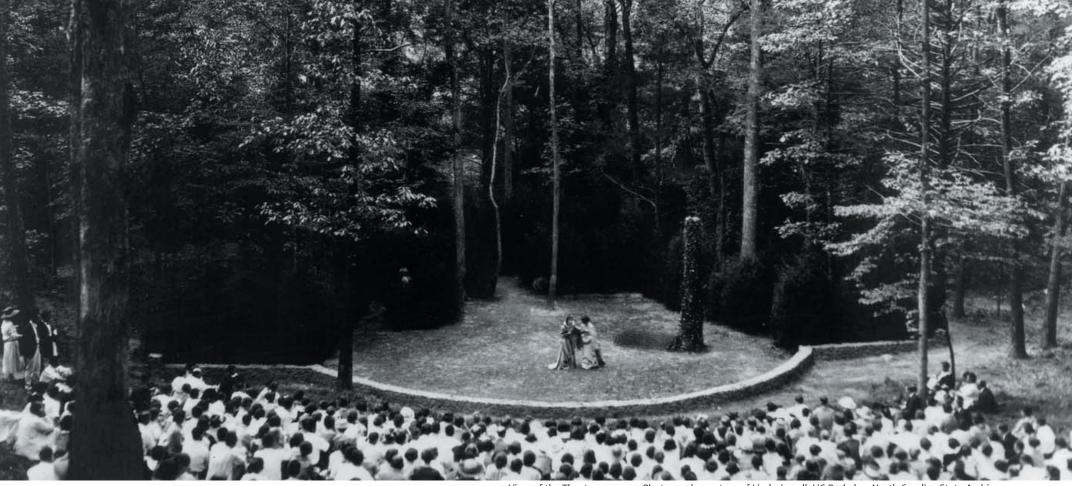
Built into the existing topography, the Frederick Koch Memorial Forest Theatre sits hidden among

a mature collection of beech, maple and oaks trees. Undefined paths wind through the site, creating short cuts to the nearby Battle Park trailhead, Coker Arboretum and back towards campus buildings and residence halls. A University parking area located on site south of Battle Lane provides approximately 12 spaces for permit parking with another University parking area located further to the north. The walk on the east side of Country Club Road is composed of Chapel Hill grit and runs at irregular widths. Used as a material that would not damage existing tree roots,



# Forest Theatre site plan showing proposed design interventions:

- 1 Improvements to Existing Infrastructure
- 2 Strategy to Maintain & Enhance Vegetative Character
- 3 Increase Accessibility & Enhance Connections



View of the Theatre, ca. 1920. Photograph courtesy of Linda Jewell, UC Berkeley, North Carolina State Archives

the crushed stone is replicated within the Theatre's seating area, pathways, and stage.

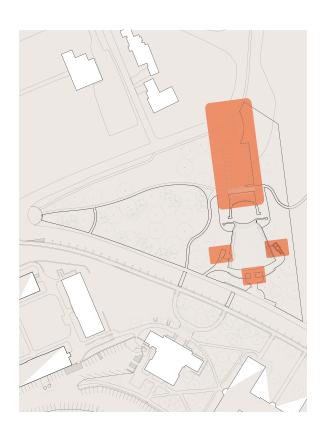
A small picnic area that sits on a bed of crushed bluestone was added to the site in the 1970's. Picnic tables, mounted on concrete slabs are sporadically splayed about and are used occasionally throughout the year.

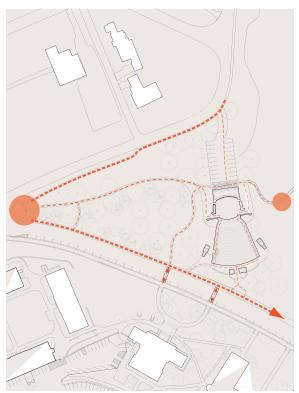
#### LANDSCAPE ASSESSMENT

With the construction of the Paul Green Theater Facility in the mid-70's, the use of the Forest Theatre has declined sharply. The North Carolina Botanical Garden has increased the frequency of use over the past four years, but the facility and surrounding grounds have suffered from previous lack of use and neglect. The fact that no major work beyond small maintenance projects to try to maintain status quo have taken place since 1948 is evident from a quick visual survey. The infrastructure is obsolete and in some instances is in ruin. The lack of on site utilities (including electricity and running water) and the need for infrastructure improvements limits the

activities that can occur which appear to be limited to small daytime theatre productions and the occasional wedding.

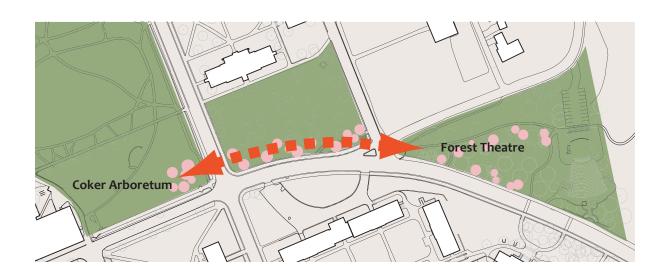
There is evidence of use, as a series of pathways, created by pedestrian compaction have eroded the existing slope to the Theatre. However, most of this foot traffic connects to the adjacent parking areas, Coker Arboretum and Battle Park (not the Theatre itself). These pathways have also resulted in the erosion and exposure of mature tree root systems down the face of the slope. Fortunately, the













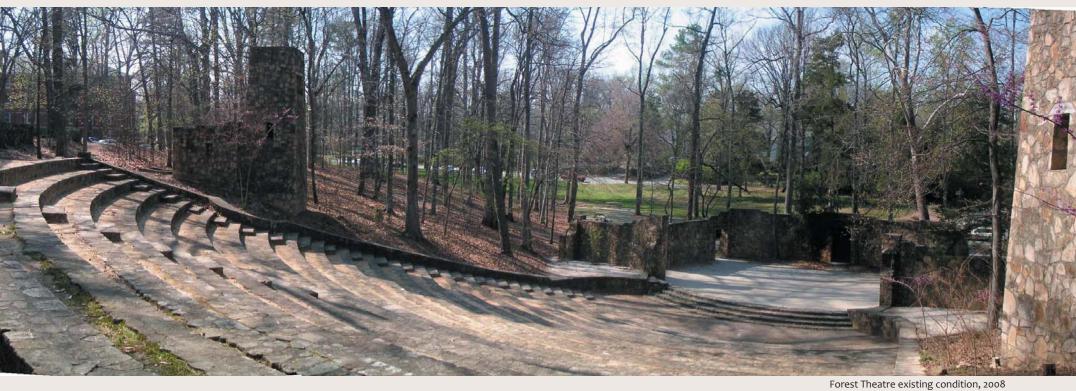
Section through Theatre, adapted from section by Linda Jewell, UC Berkeley

limited amount of foot traffic has not impacted the root systems of surrounding trees, but could, if the number of pedestrians using the makeshift pathways increases. Vehicular traffic traveling down Country Club Road, creates additional accessibility issues and safety concerns for the Theatre, as there is not a formalized crossing to allow pedestrians to pass from the surrounding Undergraduate Admissions building and Paul Green Theater into the formal entrance to the site.

As the Theatre was constructed into existing

topography, the vegetation and soils on site remain relatively undisturbed. Within the Theatre, a number of irregular curved walls suggest spaces where trees had once grown (this is also documented in historic photographs such as the image shown on page 117). Outside the Theatre walls, evidence of the regeneration of plant species such as Fagus, Acer, and Quercus are indicators of excellent site conditions. However, numerous invasive species have made their way into the edges of the forest, as have Hedera, Vinca and Toxicodendron

compete with native understory trees and shrubs, limiting regeneration. Stormwater management is also a concern, as the Theatre sits on a site previously inhabited by a stream valley and is prone to frequent flooding.





Forest Theatre, opportunity for vegetation management and renewal

## **DESIGN STRATEGIES & IMPLEMENTATION CONCEPTS**



Improvements to Existing Infrastructure

In this area more than the other five campus study areas, limited intervention is required. However, the need to rehabilitate the existing infrastructure is necessary to insure the success of each of the proposed design interventions. For this work an experienced historic preservation architect should be involved in the rehabilitation and restoration of the theatre, including bringing the infrastructure up to code (e.g. improvements to utilities and ADA accessibility). Additionally, two other major programmatic opportunities exist for the Theatre: pursuing National Register of Historic Places designation for the Theatre and the creation of an expanded umbrella organization.

Establishing a framework of detailed design history

and research on the WPA in the United States and in North Carolina, a historic designation of the Theatre should be pursued. Additionally, the Theatre would benefit from an umbrella "friends" organization, whose sole mission was the programming and management of the Theatre. The Theatre has tremendous potential to be revenue generating and serve as a catalyst for regional events. Beyond performances and weddings, the stepped design and associated parkland could lend itself to craft fairs, plant sales and other regional events.



Forest Theatre existing condition, 2008



Forest Theatre, opportunity to reconfigure parking area

# Strategy to Maintain & Enhance **Vegetative Character**

Historic photographs illustrate the wooded, enclosed character of the Theatre prior to its renovation in the 1940's (shown on page 117). To ensure the longevity of the Theatre's landscape setting including its dense tree collection and undisturbed soils, a strategy for vegetation management and renewal should be utilized to ensure that the landscape retains its distinct "primeval forest" character.

Similar to the previous five sites, a matrix of recommended plant materials has been developed for the Forest Theatre. Using information obtained from Coker, UNC's plant palette and Dirr, this matrix once again lists species that would be appropriate additions to the Forest Theatre landscape and is shown in Appendix B.

For this approach, it is recommended that native oaks be planted in the pits formerly occupied by trees within the Theatre. Additionally, the empty

space behind the Theatre should be filled with a formal grouping of large evergreen trees, perhaps a tree type of upright evergreen form, to replicate the evergreen backdrop to the Theatre, while also screening views towards the existing parking area, shown in the sketches on pages 121 and 123. Finally, the planting of native vines, such as Bignonia capreolata (Crossvine) and Parthenocissus quinquefolia (Virginia creeper), would add a tactile dimension to the back wall of the Theatre stage.

Dirr's research also suggests that the removal



Forest Theatre existing condition, 2008



Forest Theatre, opportunity for improved access

existing non-natives including Toxicodendron, & Hedera from the site will allow understory trees and shrubs to thrive. In addition, the planting of native flowering shrubs, such as Rhododendron and Viburnum species, along the revitalized slope and within the open glade northwest of the site will create a visual connection between the Theatre and Coker Arboretum, as shown in the sketch above. An educational opportunity also exists as part of this work to incorporate an interpretive component along the

edge of the forest, perhaps taking the form of labels for native trees and shrubs, similar to the strategy already employed the North Carolina Botanical Garden.



### Increase Accessibility & **Enhance Connections**

Recognizing that visitation and use has steadily decreased over time, a strategy to increase accessibility and visibility to the site should be a high priority. An opportunity exists to rehabilitate



Forest Theatre existing condition, 2008



Forest Theatre, opportunity for improved visibility

the Theatre and its associated landscape through the introduction of new public gathering spaces, reconfigured parking areas and enhanced entry points into the site, shown above.

Presently filled with oversized plantings that block visual access to the Theatre, it is recommended that the corner of Battle Lane and Country Club Road be redesigned to create an arrival space/secondary entrance into the Theatre, similar to the sketch shown above. As a part of this approach, the existing Yaupon Holly plantings should be removed and

a low Chatham stone seatwall entry plaza, which incorporates the existing boulder memorial, be installed. A Chapel Hill grit pathway, depicted on page 125, will lead visitors eastward from this gathering space, running along the base of the hillside towards the picnic area. The pathway will provide direct access to the back of the Theatre and terminate at the existing foot paths that thread themselves down the slope. As part of this work these paths should be honored and formalized, with these pedestrian routes rebuilt using metal



Forest Theatre existing condition, 2008



Forest Theatre, opportunity for improved access

grate treads and integral posts to protect existing tree roots and prevent soil erosion, as shown in the sketch above. Universal accessibility should also be addressed at both the upper and lower entrances, providing both physical and visual access to the Theatre.

The redesign of the picnic area will include the removal of the crushed bluestone and replacement with Chapel Hill grit. This approach will make consistent use of materials already present on site. In addition to the immediate surrounds, a strategy to

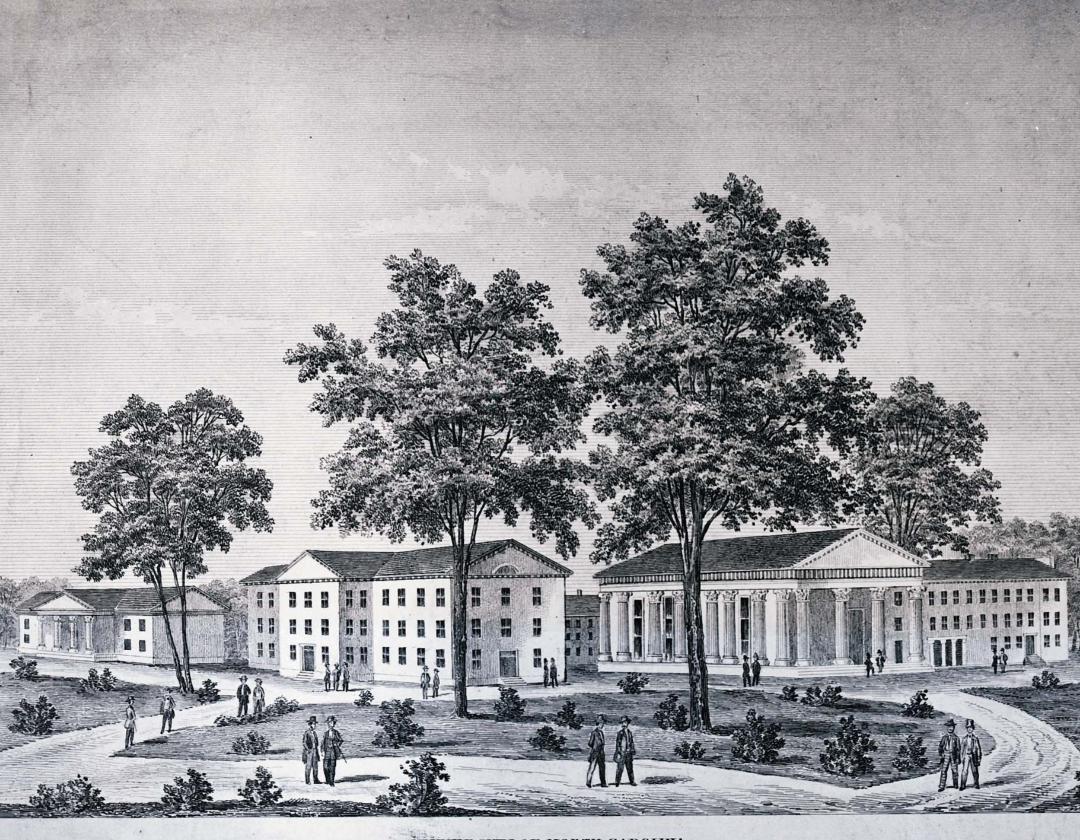
physically connect the Theatre to the larger campus is also recommended. Here, the installation of a mid-block crossing between the Forest Theatre and the Undergraduate Admissions building at Country Club Road would formalize the Theatre's entry, making it an attractive destination for campus tours or school visits. During special events, Country Club Road could be partially closed to vehicles allowing for the space to function primarily for pedestrians and associated Theatre festivals and performances.

"On all sides stand numbers of lofty oaks, ornaments of nature's producing, which rise as sylvan bowers beneath a summer's sun and form something like battlements to the attacks of tempests."

W.D. Williamson, 1843 The Boston Recorder



**Next Steps: Looking Towards** the Future





McCorkle Place, sketch of view through quad

The design interventions specified in this document inspire a "catalyst of sensitive change" for the five landmark study areas within the University's historic core: McCorkle Place, Polk Place, the Bell Tower Formal Garden, Kenan Woods, and the Forest Theatre.

The guiding principles discussed in this report provide a foundation for decision-making, while viewing the landscape through natural, scenic and cultural perspectives and integrating new knowledge. These underlying principles have

informed each recommendation, adding depth and breadth to the "visions" contained within this report. With strong University leadership and vision, these proposed design interventions are achievable and attainable in one's lifetime. It is recommended that the University utilize a gradual momentum strategy, beginning with individual projects within each area that can be easily funded and whole-heartedly supported.

These ideas comprise the first steps towards reaching the goal of understanding the significance

of historical landscapes, their importance on campus and knowing what specific design proposals need to be accomplished to preserve the unique characteristics that make this campus legendary.

With each step, the University comes closer to reaching it's goal: knitting together the cultural landscape in a symphonic, common language and acknowledging the importance of the "Dignity of Restraint" within the campus landscape.

"Truly magnificent campus ecosystems do not prosper without top-down ownership. UNC is the model for all campuses to aspire. May the tradition continue."

Michael A. Dirr, Ph.D of Horticulture and Author of Dirr's Guide to Woody Landscape Plants



# Acknowledgements



The University of North Carolina at Chapel Hill has one of the most unique and beautiful campus landscapes in America, if not the world. Current campus expansion pressures are cause for concern when the natural, scenic and cultural environment are the prime physical manifestation of the place, which is beloved by hundreds of thousands.

My mentor, legendary landscape architect Dan Kiley, taught me one critical word when describing designing in context- "appropriateness." The report's findings are both humble and bold when appropriate.

To respond to the project brief, we assembled a "dream team" borrowing this term from the 1992 men's Olympic basketball team consisting of Michael Jordan, Larry Bird and Magic Johnson. We too have an equivalent team in the profession of landscape architecture, cultural historical landscapes, horticulture, soil science and arboriculture.

Our "dream team" trio of international, preeminent experts consists of Michael Dirr, Ph.D. horticulture, Charles Birnbaum, FASLA, FAAR and James Urban, FASLA, ISA.

To have Michael Dirr work on this project has been a highlight career memory for everyone involved. He was truly a delight to work with and the breath of his ideas and knowledge is too overwhelming to describe. He is a living legend in the horticultural world and he will be leaving an important legacy in this report and his accompanying campus tree guide. It has been a joy and an honor to include his professional contributions in this report.

Charles Birnbaum, a good friend and colleague, was our lead navigator through this "journey." His knowledge of American landscape history and his passion of merging culture and landscape as a holistic design approach, will serve this campus well into the next century. Charles was able to take a complex set of issues and make the team comprehend the parts into a coherent whole. Lastly, Charles contributed greatly to the legible organization of the report's summary and main body of the report. He too will leave an important legacy for UNC.

I have known Jim Urban for 25 years. When I started my own design firm he was the first consultant I hired. Jim came to Chapel Hill to assess the soil and in two days was able to ascertain many "geologic" findings of the soil foundation of the spaces under study. His expertise "below ground" will guide a very talented and state-of-the-art UNC Grounds Department. His discovery of the original soil "horizon" layers at McCorkle Place was fascinating.

Bryan Lowrance of Bartlett Trees brought many years of past tree maintenance on campus to our attention and he will be our "eyes and ears" when new work and maintenance occurs on the five sites in this report.



I would like to thank our local landscape architectural experts Michael Cole, ASLA and Brian Jenest, ASLA who I have known over 20 years. Their spirit of collaboration has always resulted in beautiful, meaningful work.

This team had no shortage of passion or energy. Our team was overwhelmed by all the sylvan splendor and at the same time the team was very concerned on preserving, restoring and rehabilitating the historic core for future generations to gaze in awe.

Our client was extraordinary. Architect Paul Kapp and Director of Facilities Planning and University Architect Anna Wu with Landscape Architect Jill Coleman of Facilities Planning provided us, as every great client does, with total freedom of expression and no restriction to our thoughts and visions. It was easy to step in after three major studies under their leadership; the 2001 Campus Master Plan, Stormwater Plan of 2004 and Plant Diversity Task Force Report of 2005. Our work in this report has benefited greatly following these previous thorough reports.

One special mention is my associate Lisa DuRussel. Lisa was the day to day manager of coordinating our extensive team and organizing all the design thinking from all parties involved. Her energy carried the project from idea to reality within one

year's time.

The report "The Dignity of Restraint" was a labor of love for a great institution and for a truly remarkable place of learning. It is my hope that this report inspires future administrators and designers that make decisions regarding this special campus landscape on a hill.

Peter L. Schaudt Partner

Hoerr Schaudt Landscape Architects

Chicago, IL

July 2008

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Assistant: Margie Boccieri

Additionally, the design team would like to acknowledge the following for their contributions:

#### The Getty Foundation, Campus Heritage Grant Program

Bruce Runberg, Associate Vice Chancellor for UNC Facilities Planning and Construction Anna Wu, Director of UNC Facilities Planning and University Architect, AIA, LEED AP Paul Kapp, Facilities Planning, AIA, LEED AP Jill Coleman, Facilities Planning, ASLA, LEED AP Paula Gee Davis, Engineering Information Services Katherine O'Brien, Engineering Information Services

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Mark Zimmerman, Horticultural Specialist, Office of the Chancellor

Dr. Peter White, Director of North Carolina Botanic Garden Stephen Keith, Curator of Battle Forest and Manager of Forest Theatre

Dick Baddour, Director of Intercollegiate Athletics John Montgomery, Executive Director, The Educational Foundation

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Pete Anderson, Design Review Committee Charles Kahn, Design Review Committee David Godshalk, Design Review Committee Luanne Goodson-Greene, Design Review Committee Battle, Kemp P. History of the University of North Carolina. Vol I. 1789-1868. Raleigh, NC: Edwards & Broughton, 1907.

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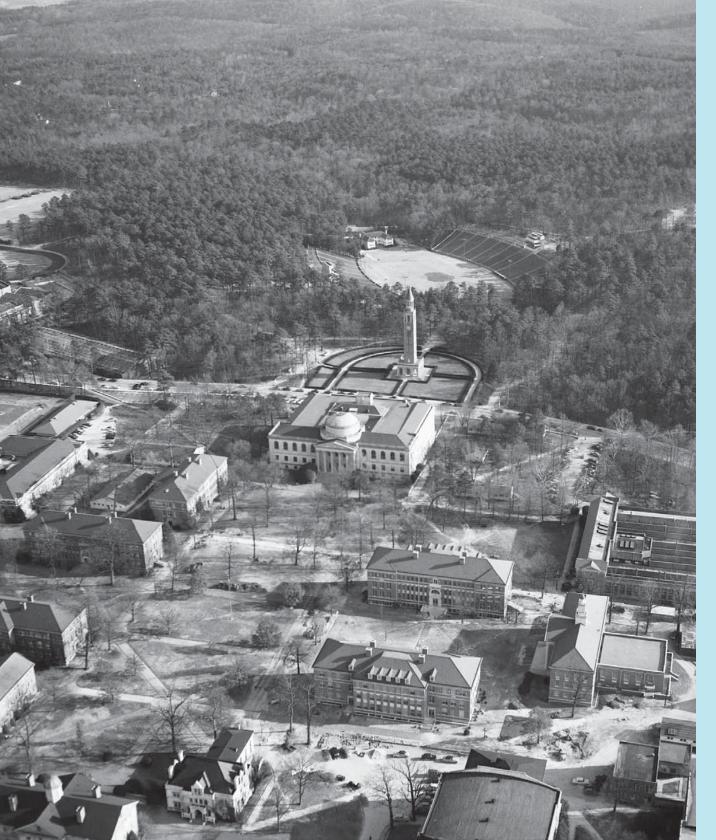
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All Historical Photographs Courtesy of the North Carolina Collection, University of North Carolina Library at Chapel Hill

# **Bibliography**

"What a great honor to be a part of the team that constructed the UNC Historic Landscape Framework Plan. The opportunity to peel the onion to discover the pride, caring and love for the campus trees and landscape will be forever cherished."

Michael A. Dirr, Ph.D of Horticulture and Author of Dirr's Guide to Woody Landscape Plants



# **Appendices**

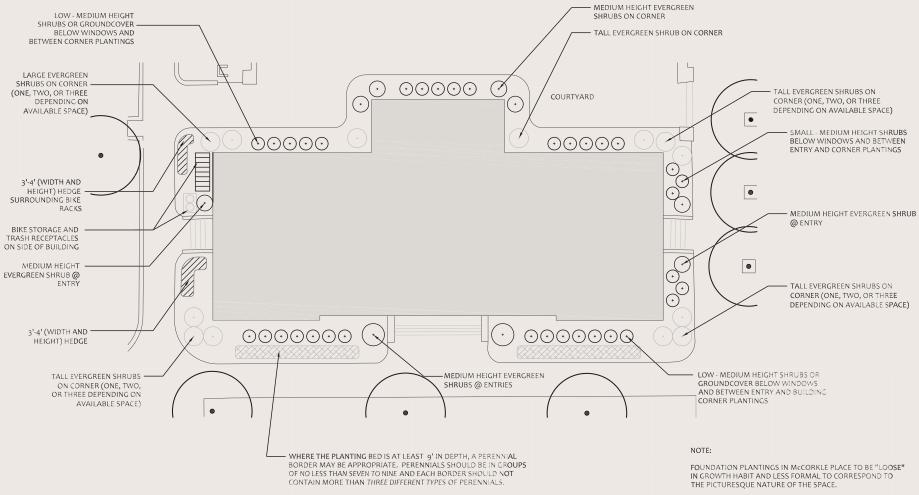
# Appendix A

Prototypical Plan of Foundation Planting Design

# Appendix B

Plant Matrices

### **APPENDIX A**



FOUNDATION PLANTINGS IN POLK PLACE TO BE "TIGHT" IN

GROWTH HABIT AND MORE FORMAL TO CORRESPOND TO THE CITY BEAUTIFUL/BEAUX ARTS NATURE OF THE SPACE.

SEE PLANT MATRICES FOR PLANT SUGGESTIONS.

# Prototypical Plan of Recommended Foundation Planting Design for McCorkle Place & Polk Place

# **APPENDIX B**

	e Place - Matrix of Recommended	l Trees	Currently On Site*	1949 Henderson Book (Coker Plants)	Heritage Report Plants**	Existing on Site in 1925 McCorkle Plan**	Drought Tolerant	Native to Southeast	Sun	Shade
Trees	Botanical Name	Common Name	J	5, 5)	Η Δ	Ð 5,	Ω	Z	S	N N
	Acer mono/Acer truncatum	Painted Maple	•							
	Acer rubrum <sup>1</sup>	Red Maple	•					•		•
	Acer saccharum	Sugar Maple	•					•		•
	Aesculus flava	Yellow Buckeye								•
	Carya sp.	Hickory	•							•
	Cladastris kentukea	American Yellowood	•							
	Fagus grandifolia	American Beech								•
	Ginkgo biloba <sup>2</sup>	Ginkgo								
	Gymnocladus dioicus <sup>3</sup>	Kentucky Coffee Tree					•	•	•	
	Ilex opaca	American Holly	•	•	•	•		•	•	•
	Magnolia acuminata	Cucumber Tree		•				•	•	•
	Nyssa sylvatica 'Red Range'	Black Gum / Tupelo				•		•	•	
	Platanus x acerifolia 'Yarwood'	London Planetree							•	•
	Quercus alba	White Oak	•		•	•	•	•	•	
	Quercus Falcata	Red Oak	•		•	•	•	•	•	
	Quercus phellos	Willow Oak	•		•	•	•	•	•	
	Tilia americana <sup>4</sup>	American Linden						•	•	•
	Tilia america var. caroliniana	Carolina Linden						•	•	•
	<i>Ulmus americana</i> <sup>5</sup>	American Elm	•		•			•	•	•

McCorkle Place - Matrix of Recommended Small Trees, Shrubs, and Foundation Shrubs  Small Trees and Shrubs			Currently On Site*	1949 Henderson Book (Coker Plants)	Heritage Report Plants**	Existing on Site in 1925 McCorkle Plan**	Drought Tolerant	Native to Southeast	Sun	Shade
Siliali Trees o	Botanical Name	Common Name			<u> </u>	ш +			01	- 01
	Danae racemosa	Alexandrian Laurel	•	•						•
	Fothergilla gardenii 'Mt. Airy'	Fothergilla	•	•			•	•	•	•
	Hydrangea sp.	Hydrangea	•	•			•	•	•	•
	Loropetalum chinensis 6	Chinese Fringe Flower					•		•	•
	Sarcococca confusa <sup>7</sup>	Sarcococca					•			•
Foundation S										
	Botanical Name	Common Name								
	Abelia x grandiflora <sup>8</sup>	Glossy Abelia	•	•			•		•	•
	Buxus sempervirens	Boxwood	•				•		•	•
	Gardenia augusta <sup>9</sup>	Gardenia	•	•			•		•	•
	Ilex sp., Red Series	Holly	•	• 11					•	•
	Ilex vomitoria 'Schillings'	Yaupon Holly	•	•			•	•	•	•
	Osmanthus fragrans 10	Tea Olive		•			•		•	•
	Prunus laurocerasus, such as 'Otto Luyken'	Cherry Laurel	•	•					•	•
	Rhododendron 'Encore', 'Robin Hill'	Evergreen Azaleas	•	•					•	•
	Viburnum 'Conoy', 'Eskimo'; V. tinus	Evergreen Viburnums	•	• 12			• 13		•	•
	Camellia sp.	Camellia	•					•		•

## McCorkle Place - Matrix of Recommended Perennials & Groundcovers

Perennials a	and Groundcovers		Currently On Site*	1949 Henderson Boo (Coker Plants)	Heritage Report Plants**	Existing on Site in 1925 McCorkle Plan*	Drought Tolerant	Native to Southeast	Sun	Shade
	Botanical Name	Common Name								
	Echinacea purpurea	Cone Flower					•	•	•	•
	Festuca ovina var. glauca	Blue Fescue	•						•	•
	Helleborus orientalis	Lenten Rose	•				•			•
	Hemerocallis	Daylily					•		•	
	Hosta	Hosta								•
	Liriope spicata	Liriope	•				•		•	•
	Ophiopogon japonicus	Mondo Grass		•					•	•
	Pachysandra terminalis	Spurge	•							•
	Pennisetum alopecuroides	Fountain Grass					•		•	•
	Polystichum acrostichoides	Christmas Fern	•				•			•

Notes: All trees, shrubs, perennials, and groundcovers recommended by Michael A. Dirr. \* Cultivars recommended may vary from existing. \*\* Refers to trees only 1) 'Autumn Flame', 'October Glory', 'Red Pointe' 2) Presidential Gold<sup>TM</sup>, Golden Colonnade<sup>TM</sup> 3) Stately Manor<sup>TM</sup>, 'Prairie Titan', 'Espresso' 4) 'Boulevard', Legend®, 'Lincoln', 'Sentry' 5) 'Creole Queen', 'Princeton', 'Valley Forge' 6) 'Purple Pixie', 'Purple Diamond' 7) S. hookeriana var. humilis, S. orientalis 8) 'Edward Goucher', 'Canyon Creek', 'Rose Creek', Kaleidoscope® 9) 'Daisy', 'Daruma', 'White Gem', 'Kleim's Hardy', 'Heaven Scent' 10) O. heterophyllus, O. x fortunei 11) vomitoria 12) V. obovatum, V. tinus, V. plicatum f. tomentosum 13) not 'Eskimo'

Polk Place  Trees	- Matrix of Recommended Trees, Small Trees and Shrubs		Currently On Site*	1949 Henderson Book (Coker Plants)	Heritage Report Plants**	Existing on Site in 1925 Polk Plan**	Drought Tolerant	Native to Southeast	Sun	Shade
	Botanical Name	Common Name								
	Quercus phellos Hightower®, 'Upperton'	Willow Oak	• 1				•	•	•	
	Quercus falcata var. pagodifolia	Cherry Bark Oak	•					•	•	
	Quercus lyrata	Overcup Oak						•	•	
	Quercus nuttallii	Nuttall Oak						•	•	
	Quercus michauxii	Swamp Chestnut Oak						•	•	
Small Trees	and Shrubs  Botanical Name	Common Name								
			•	•						
	Abelia x grandiflora	Glossy Abelia Acuba								
	Aucuba japonica		•	•			•			•
	Camellia sasanqua	Camellia	·					•		•
	Camellia japonica	Camellia	•	•				•		•
	Gardenia augusta	Gardenia	•	•					•	•
	Hydrangea sp.	Hydrangea	•	•			•	•	•	•
	Sarcococca confusa	Sarcococca	•				•			•
	Sarococca hookeriana var. humilis	Sarcococca	•				•			•
	Styrax obassia	Fragrant Styrax	•						•	•
										_
	Mahonia bealei	Leatherleaf Mahonia	•						•	•
	Mahonia bealei Rhododendron Encore hyb.	Leatherleaf Mahonia  Evergreen Azaleas	•						•	·
			•	•				•	•	•

Polk Place - Matrix of Recommended Foundation Shrubs, 1949 Henderson Book (Coker Plants) **Perennials & Groundcovers** Native to Southeast Existing on Site in 1925 Polk Plan\*\* Currently On Site\* **Drought Tolerant** Heritage Report Plants\*\* Shade **Foundation Shrubs** Botanical Name Common Name • 2 Holly *Ilex* sp. Buxus sempervirens Boxwood Osmathus fragrans Tea Olive Prunus laurocerasus ('Otto Lukyen') Cherry Laurel Perennials and Groundcovers **Botanical Name** Common Name Hellborus orientalis Lenten Rose Hemerocallis Daylily Hosta Hosta Liriope spicata Liriope Ophiopogon japonicus Mondo Grass Pachysandra terminalis Spurge

Notes: All trees, shrubs, perennials, and groundcovers recommended by Michael A. Dirr. \* Cultivars recommended may vary from existing. \*\* Refers to trees only. 1) Quercus phellos species on site, not cultivars. 2) Only Ilex vomitoria referenced in 1949 Henderson Book.

Christmas Fern

Polystichum acrostichoides

## **Bell Tower - Matrix of Recommended Trees**

Trees	er - Matrix of Recommended frees		Currently On Site*	1949 Henderson Book (Coker Plants)	Drought Tolerant	Native to Southeast	Sun	Shade	
	Botanical Name	Common Name							
	Acer barbatum (subsp. barbatum)	Florida Maple	•			•	•	•	
	Acer leucoderme (subsp. leucoderme)	Chalk Maple	•			•			
	Acer rubrum (edges only)	Red Maple	•			•	•	•	
	Acer saccharum	Sugar Maple	•			•	•	•	
	Carya sp. (in abundance)	Hickory	•			•	•	•	
	Fagus grandifolia	American Beech	•			•	•	•	
	Ilex opaca	American Holly	•	•		•	•	•	
	Liriodendron tulipifera	Tulip Poplar	•			•	•		
	Nyssa sylvatica (new cultivars)	Black Gum	•			•	•		
	Quercus sp.	Oak	•	•		•	•	•	

## Bell Tower - Matrix of Recommended Small Trees, Shrubs & Perennials & Groundcovers 1949 Henderson Book Native to Southeast Currently On Site\* **Drought Tolerant** (Coker Plants) Small Trees and Shrubs - Wooded Area around Bell Tower Common Name **Botanical Name** Aesculus pavia Red Buckeye Aesculus sylvatica Painted Buckeye Amelanchier sp. Serviceberry Old Man's Beard/White Fringetree Chionanthus virginicus Cornus Florida Flowering Dogwood • Cotinus obovatus American Smoke Tree Carolina Silverbell Halesia tetraptera (carolina) Hamamelis virginiana Witchhazel Hydrangea arborescens Smooth Hydrangea Ostrya virginiana Hophornbeam Stewartia ovata Mountain Stewartia Styrax grandifolius Bigleaf Snowbell Symplocos tinctoria Horse-sugar/Sweet-Leaf *Viburnum* sp. (in abundance) Viburnum Small Trees and Shrubs - Bell Tower Immediate Vicinity **Botanical Name** Common Name Buxus sempervirens Boxwood Cercis canadensis 'Oklahoma' Eastern Redbud

Notes: All trees, shrubs, perennials, and groundcovers recommended by Michael A. Dirr. \* Cultivars recommended may vary from existing. 1) plicatum f. tomentosum, obovatum, carlesii, tinus

Flowering Dogwood

Cornus florida

Kenan Stac	dium - Matrix of Recommended Trees, Small Trees and Shrubs		Currently On Site*	1949 Henderson Book (Coker Plants)	Drought Tolerant	Native to Southeast	Sun	Shade
	Botanical Name	Common Name						
	Acer barbaratum	Florida Maple	•			•	•	•
	Acer leucoderme (subsp. leucoderme)	Chalk Maple	•			•		
	Acer rubrum (edges only)	Red Maple	•			•	•	•
	Acer saccharum	Sugar Maple	•			•	•	•
	Aesculus flava	Yellow Buckeye				•	•	•
	Carya sp. (in abundance)	Hickory	•			•	•	•
	Cladrastis kentuckea	Yellowood				•	•	•
	Fagus grandifolia	American Beech	•			•	•	•
	Fraxinus americana	White ash	•			•	•	
	Gymnocladus dioicus	Kentucky Coffeetree			•	•	•	
	Ilex opaca	American Holly	•	•		•	•	•
	Liriodendron tulipifera	Tulip Poplar	•			•	•	
	Magnolia acuminata <sup>1</sup>	Cucumbertree Magnolia		• 3		•	•	•
	Nyssa sylvatica new cultivars	Black Gum	•			•	•	
	Pinus sp.	Pine	•	• 4	•	•	•	
	Quercus sp.	Oak	•	•		•	•	•
	Sassafras albidum	Sassafras	•			•	•	•
	Taxodium distichum	Bald Cypress			•	•	•	
	Tilia americana	Linden				•	•	•
	Ulmus americana <sup>2</sup>	American Elm	•			•	•	•

Michael A. Dirr for specific Recommendations. \* Cultivars recommended may vary from existing. 1) large leaf natives *Magnolia macrophylla* Bigleaf, *Magnolia tripetala* Umbrella 2) New Dutch Elm Disease resistant cultivars 3) *acuminata* 4) *glabra, palustris* 5) *acerifolium, dentatum, nudum, prunifolium, cassinoides, rufidulum* 

dium - Matrix of Recommended Sr Shrubs & Vines s, Shrubs, and Vines	mall Trees,	Currently On Site*	1949 Henderson Book (Coker Plants)	Drought Tolerant	Native to Southeast	Sun	Shade
Botanical Name	Common Name						
Aesculus pavia	Red Buckeye		•		•	•	•
Aesculus sylvatica	Painted Buckeye		•		•	•	•
Amelanchier species	Serviceberry			•	•	•	•
Callicarpa americana	American Beautyberry			•	•	•	•
Calycanthus floridus	Sweetshrub			•	•	•	•
Carpinus caroliniana	Ironwood				•	•	•
Chionanthus virginicus	Old Man's Beard/White Fringtree	•			•	•	•
Cornus florida	Flowering Dogwood	•	•		•	•	•
Cotinus obovatus	American Smoke Tree			•	•	•	•
Diervilla sp.	Bush Honeysuckle			•	•	•	•
Fothergilla species	Fothergilla		•	•	•	•	•
Halesia tetraptera (carolina)	Carolina Silverbell		•		•	•	•
Hamamelis virginiana	Witchhazel				•	•	•
Hydrangea arborescens	Smooth Hydrangea				•	•	•
Lindera benzoin	Spicebush		•		•	•	•
Ostrya virginiana	Hophornbeam				•	•	•
Stewartia ovata	Mountain Stewartia				•	•	•
Styrax grandifolius	Bigleaf Snowbell				•	•	•
Symplocos tinctoria	Horse-sugar/Sweet-Leaf			•	•	•	•
Vaccinium elliottii	Mayberry Highbush Blueberry				•	•	
Vaccinium sp. 5	Native Viburnums				•	•	•

Forest Th	eatre - Matrix of Recommended Trees Small Trees, Shrubs & Vines  vn Area	5,	Currently On Site*	1949 Henderson Book (Coker Plants)	Drought Tolerant	Native to Southeast	Sun	Shade
	Botanical Name	Common Name						
	Acer saccharum	Sugar Maple	•			•	•	•
	Fagus grandifolia	American Beech	•			•	•	•
	Liriodendron tulipifera	Tulip Poplar	•			•	•	
	Nyssa sylvatica	Black Gum	•			•	•	
	Quercus alba	White Oak	•		•	•	•	
	Pinus taeda	Loblolly Pine	•			•	•	
	Pinus glabra	Spruce Pine		•		•	•	
	Pinus strobus	White Pine				•	•	•
Trees - The	eatre Area East							
	Botanical Name	Common Name						
	Magnolia grandiflora	Southern Magnolia		•		•	•	•
	Pinus sp.	Pine	•		•	•	•	
	Quercus coccinea	Scarlet Oak	•			•	•	
Small Trees, Shrubs, and Vines - Theatre Area East								
	Botanical Name	Common Name						
	Bignonia capreolata	Crossvine				•	•	•
	Decumaria barbara	Climbing Hydrangea				•	•	•
	Parthenocissus quinquefolia	Virginia Creeper				•	•	•
	Viburnum <sup>5</sup>	Deciduous Viburnums				•	•	•

atre - Matrix of Recommended Small - Shrubs & Vines  Shrubs, and Vines - Natural Areas	Trees,	Currently On Site*	1949 Henderson Boo (Coker Plants)	Drought Tolerant	Native to Southeast	Sun	Shade
Botanical Name	Common Name						
Aesculus parviflora	Bottlebrush Buckeye				•	•	•
Aesculus pavia	Red Buckeye				•	•	•
Aesculus sylvatica	Painted Buckeye				•	•	•
Callicarpa americana	American Beautyberry			•	•	•	•
Calycanthus floridus	Sweetshrub			•	•	•	•
Chionanthus virginicus	Fringtree				•	•	•
Dirca palustris	Atlantic Leatherwood				•	•	
Fothergilla sp.	Fothergilla		•		•	•	•
Hydrangea aborescens <sup>1</sup>	Smooth Hydrangea				•	•	•
Hydrangea quercifolia	Oakleaf Hydrangea		•		•		•
Lindera benzoin	Spicebush		•		•	•	•
Rhododendron sp.	Deciduous Azaleas		•		•		•
Rhododendron <sup>2</sup>	Evergreen Azaleas		•		•	•	•
Stewartia malacodendron	Silky Stewartia				•	•	•
Stewartia ovata	Mountain Stewartia				•	•	•
Viburnum <sup>3</sup>	Native Viburnums	• 4			•	•	•

Notes: All trees, shrubs, perennials, and groundcovers recommended by Michael A. Dirr. Refer to "Tree Inventory and Health Status, Forest Theater Area" by Michael A. Dirr for specific Recommendations \* Cultivars recommended may vary from existing. 1) 'Annabelle', 'Mary Nell', 'Bounty', 'Ryan Gainey', subsp. Radiata 2) catawbiense, chapmanii, maximum, minus 3) acerifolium, dentatum, nudum, prunifolium, cassinoides, rufidulum 3) acerifolium, dentatum, nudum, prunifolium, cassinoides, rufidulum 4) Viburnum prunifolium, acerifolium 5) Viburnum rafinesquianum, rufidulum, dentatum

"North Carolina and the world beyond have changed since the Davie Poplar was planted by nature. Once we could rely on nature to make the world green; now humans must take a role in caring for the earth. Universities exist in part to help society find the balance between our planet's spectacular natural diversity and human use."

Dr. Peter White, Director, North Carolina Botanical Garden



