INTRODUCTION
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The 2014 master plan update for the University of North Carolina at Greensboro (UNCG) builds upon a legacy of over thirty years of planning at UNCG by assessing past campus development, recent planning studies, recent land acquisitions and new infrastructure connections to help the university grow in a thoughtful manner, both within and beyond current campus boundaries. This forward-looking document will guide the university in expanding its campus in a way that ensures a cohesive campus character and identity, promotes the further integration of living and learning on campus, and meets current institutional needs while maintaining flexibility to respond to uncertain future conditions.

The current master plan update was inspired by changes to the campus since the 2007 plan update was completed as well as recent land acquisitions along West Lee Street (to be renamed Gate City Boulevard in the fall of 2015). These changes are strengthening the UNCG student residential life experience and bringing new activities to the west of College Avenue and south of the railroad that had previously defined the south edge of campus. The Lee Street Corridor expansion is already underway with the construction of Spartan Village and the pedestrian underpass below the railroad track. These new developments have created concrete opportunities for re-examining campus connectivity and landscape design. The primary issue addressed in the plan is ensuring that new residential nodes connect seamlessly with, and maintain a strong shared identity with, the student life and academic centers of the campus.

The vision set forth in this master plan update will take many years to achieve. This plan proposes a range of interventions to be undertaken in the near-term (2014 to 2020) to fulfill UNCG’s immediate needs. Still, the plan documents a flexible long-term vision that builds upon these potential near term projects.
Drivers of the plan

The four Key Drivers of this plan include:

1. **Expansion into the Lee Street Corridor**
   Research conducted as part of the UNCG Strategic Housing Plan links an on-campus residential experience with student success and establishes a need for additional land to accommodate new residential development.

   The opportunity for acquisition that emerged south of West Lee Street sparked new partnerships between UNCG, the City of Greensboro, and the Glenwood neighborhood, resulting in the Spartan Village Revised Vision Plan.

   This plan, which also indicated the need for a new pedestrian underpass to provide a safe pedestrian connection to the existing campus, has illuminated the need for a comprehensive campus plan that connects current and future development back into a cohesive campus experience.
2. Recent Planning Studies
A number of recent studies of the UNCG campus informed the 2014 master plan update.

The November 2012 UNCG Transportation Plan Update emphasizes the success in decreasing automobile use and parking demand among campus community members in favor of increased transit and bicycle use. This is another important driver. Transportation planning that builds on UNCG successes will need to complement new development in the Lee Street Corridor. Additional information on UNCG transportation planning is included in Chapter 2.

The UNCG Climate Action Plan demonstrates a commitment to leadership in sustainability and to lowering the institution’s carbon footprint, both key considerations in this master plan update.

A number of recent space need studies further inform the master plan update. The 2008 Recreation Needs Assessment has helped guide the programming and siting of the Student Recreation Center on Lee Street; the 2008 Childcare Study recommends the placement of a new childcare facility on Tate Street; the 2011 School of Music, Theater, and Dance Planning Study describes the need for the addition to the existing building shown in the master plan update; the 2010 School of Health and Human Performance space needs assessment and the 2010 Athletics Program Needs Assessment both informed the overall capital needs list as follows.

3. The UNCG Capital Needs Assessment

<table>
<thead>
<tr>
<th>Primary Capital Needs</th>
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<tbody>
<tr>
<td>Nursing, Classroom, and Office Building</td>
</tr>
<tr>
<td>(including West Chiller Plant, phase 1)</td>
</tr>
<tr>
<td>Library Addition and Renovation including 20,000 sf data center</td>
</tr>
<tr>
<td>Eberhart Building Renovation</td>
</tr>
<tr>
<td>Moore Building Renovation</td>
</tr>
<tr>
<td>Student Services Building</td>
</tr>
<tr>
<td>Steam Pipe Infrastructure</td>
</tr>
<tr>
<td>South Chiller Plant, phase 2</td>
</tr>
<tr>
<td>Existing Student Recreation Center Renovation</td>
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<table>
<thead>
<tr>
<th>Other Capital Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Care Center</td>
</tr>
<tr>
<td>Laboratory Research Building</td>
</tr>
<tr>
<td>Jackson Library Renovation</td>
</tr>
<tr>
<td>Music Building Addition and Renovation</td>
</tr>
<tr>
<td>Curry Building</td>
</tr>
<tr>
<td>Graham Building</td>
</tr>
<tr>
<td>Ferguson Building</td>
</tr>
<tr>
<td>Bryan Building</td>
</tr>
<tr>
<td>Carmichael Building</td>
</tr>
<tr>
<td>HHP Building</td>
</tr>
<tr>
<td>Faculty Center</td>
</tr>
<tr>
<td>Foust Building</td>
</tr>
<tr>
<td>Clinical Service Building</td>
</tr>
<tr>
<td>Infrastructure/Utility</td>
</tr>
<tr>
<td>Field House/Athletic Office Complex</td>
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4. Funding Sources
Recognizing that state support for capital projects is generally declining, an important consideration throughout this master plan is the reality of implementing projects. A number of projects shown in this plan can be accomplished without state funding—the new Student Recreation Center on Lee Street, the repurposing of the existing Rec Center, and the High Rise Renovations.
Planning Process

Inclusive and Transparent Process
The process for updating the campus master plan builds on the university's open, inclusive, and transparent engagement process. The planning process was strongly influenced by the goal of improving student success. The emphasis on student life and integrating campus residential communities with student life activities and academics reflects the university's understanding that residing on campus improves student retention. This conclusion was supported by data collected in previous planning studies and also serves as a foundation for this plan.

Community Engagement Techniques
Several community engagement techniques were employed to educate and solicit input from the campus community. Campus open forums were held, online survey techniques were employed, and conversations were held with stakeholders. The number and variety of community engagement events were specifically designed to ensure that the maximum number of people in the campus community could be involved in the process.

In-person engagement:
- Campus Open Forums: A first round of campus open forums was held in March 2013. At the forums, the current state of the university was presented, in addition to new sustainability commitments, aspects of the current UNCG strategic plan, and the goals of the master plan update as they pertain to the built and natural environment. A second round of open forums, held in October 2013, presented the final plan concepts and recommendations to the campus and surrounding community.
- Stakeholder meetings: At these meetings, master plan update goals and progress were reported to the stakeholders involved in the campus community. By sharing progress reports with key stakeholders, the planning process moved forward without hitting major roadblocks.

Online engagement:
- Master Plan Website: A master plan website provided a portal for the campus and community to access information about the planning process and provided access to the MyCampus tool for soliciting more varied input and feedback.
- MyCampus: This online, visual mapping survey was used to collect data for several weeks during the spring of 2013. MyCampus asked the UNCG community to describe how they use the campus on a daily basis; what modes of travel do they use to reach campus, classes and other on-campus destinations; what spaces do they enjoy or avoid; what spaces are best suited for socializing, collaborating, or for quiet study; and what areas are busiest to travel or have high opportunities for interaction.

Community Engagement Responses
Approximately 240 students, faculty, and staff took the MyCampus survey and contributed their concepts of the campus for analysis. Participants mapped locations where they would meet their peers, places they would collaborate, where they ate, and how they moved around campus. In addition, respondents had an opportunity to submit comments about their perceptions of the campus environment. Highlights from the survey are included on the following page.
MyCampus Responses

UNCG students, faculty, and staff were asked about topics ranging from campus character to sustainability to safety and everything inbetween. The survey responses provided an important source of information and ideas for the master plan update, and helped lead to the plan’s focus on a robust pedestrian network as well inclusion of more places for students to gather both indoors and outdoors. The following are examples of the survey responses.

Example of map responses: What indoor and/or outdoor places on campus best reflect the character of UNCG?

Examples of written responses:

Campus Character
- The Quad exemplifies UNCG. Preserving our past and embracing the future.
- The best parts about the campus are the ones that integrate nature and the school. UNCG is starting to look more like a concrete jungle than a school.

Landscape
- [Kaplan Commons is] great for casual sports and events.
- Beautiful right in front of the music building.
- Lee St is very urbanized and I would like to see the campus’ wonderful natural areas flow into our new campus areas.

Meeting
- The floors [of Jackson Library] could use some more student available rooms. The downstairs is not so cool for me.

Safety
- Walking between Grogan, Reynolds and Cone can be scary at night. If there could be more lighting and emergency poles that would be nice.
- The entire Lee Street Corridor is going to be a challenge. The more you make it safe and clean, the more the community will approve. I would dump huge resources into improving this corridor.
A Sustainable Approach

A sustainable approach to campus development requires attention to the social, economic, environmental and resources aspects of sustainability. At the University of North Carolina at Greensboro, sustainability is defined in the Strategic Plan to incorporate academics, operations, and outreach. All of these endeavors “are conducted with careful attention to the enduring interconnectedness of social equity, the environment, the economy, and aesthetics.” The commitment to sustainability at UNCG is illustrated below in the sustainability framework developed by Sasaki Associates.

UNCG has demonstrated its commitment to sustainability in a variety of ways that have been expressed in the master planning process:

- Sustainability is a core value in the 2009 Strategic Plan.
- UNCG became a charter member of STARS (Sustainability Tracking Assessment & Rating System) in June 2010.
- The Arbor Day Foundation named UNCG an official Tree Campus as part of its Tree Campus USA program in 2009; UNCG has continued to earn this annual designation.
• UNCG adopted its first-ever Climate Action Plan in July 2013. The detailed plan includes sustainability initiatives around campus culture, academic offerings, facilities construction, operations and maintenance, investment, carbon emissions, health, and resource use (waste, water, air).

• The Division of Parking Operations and Campus Access Management (POCAM) has implemented travel demand strategies that have helped reduce greenhouse gas emissions on campus, reducing campus emissions from commuting by 970 million tons of carbon dioxide per year. The 2012 Transportation Master Plan Update includes numerous strategies to continue this trend towards more sustainable transportation choices on the UNCG campus.

• UNCG has initiated an undergraduate major and minor in Environmental Studies.

• The campus boasts active sustainability efforts:
  • University Sustainability Committee,
  • UNCGreen,
  • Earth Day festivities, and
  • the Sustainable Film Series.

This campus master plan update addresses sustainability across these four areas in the following ways:

Social
• The master plan update supports UNCG goals of increasing student success by providing a vision for integrated living-learning centers at the periphery tied to an academic and student-life core.
• The master plan update establishes design guidelines to ensure that the identity of the historic campus extends into the Lee Street Corridor.

• The plan supports the UNCG mission to be a “learner-centered, accessible, and inclusive community” that is “a source of innovation and leadership meeting social, economic, and environmental challenges in the Piedmont Triad, North Carolina, and beyond.”

• The plan builds on extensive UNCG strategic planning work and integrates specific studies on sustainability, transportation, facilities, and landscape as well as planning efforts in the Lee Street Corridor.

Environmental
• The plan reaffirms UNCG transportation planning and implementation efforts, which have resulted in improved conditions and infrastructure for bicyclists and pedestrians and a reduction in parking demand.
• The plan endorses the aims of the UNCG Campus Transportation Plan by recommending improvements to the transit hub at the Jackson Library, making the campus shuttles and other area transportation options more easily accessible, more pleasant, and more convenient to use.
• The plan preserves the strong core of academic and student life activities by establishing a framework of connectivity that ensures campus cohesion and links residential life and recreational activities back to the campus core.
• The plan establishes a landscape framework that builds on the history of excellence in landscape design and maintenance. It employs landscape as a connective tissue that extends into the Lee Street Corridor, strengthens east-west campus pathways, and provides outdoor

1 https://uncgtomorrow.uncg.edu/mission/
spaces to meet and socialize.

- The plan places a high priority on planting
trees, especially along Forest Street, and
improving landscapes across campus to
increase shade and enhance pedestrian
comfort.

Resources
- The plan strives to enhance water resources
by recognizing that the streams running
through campus are part of a regional
network. As such, it is incumbent upon the
university to protect water quality.
- The plan considers energy and atmosphere
by siting many of the proposed buildings
on an east-west axis.
- The plan promotes energy efficiency and
responsiveness to demand increases over
time.
- The plan supports and extends the travel
demand management strategies initiated
by UNCG that have reduced campus
commuter emissions by seventeen percent
since 2009\(^2\). By including amenities of
all kinds within walking distance, and
accommodating more students with on-
campus housing, the university can reduce
the number of individual automobile trips
to and from campus.

Economic
- The plan establishes a framework for
developing the Lee Street Corridor into
a mixed-use district that supports the
economic goals of both the campus
and the community.
- The plan respects the partnership
established between UNCG and the
Glenwood neighborhood by integrating
the agreements of the Glenwood/UNCG
Memorandum of Understanding (MOU).

\(^2\) Getting to Zero: The UNCG Climate Action Plan,
University of North Carolina at Greensboro, July 31,
2013.
This update to the UNCG master plan responds to the pressing need to connect recent campus developments into a larger holistic campus vision. It accomplishes this by building on the extensive community outreach that resulted in a Memorandum of Understanding (MOU) with the Glenwood neighborhood as well as various UNCG planning studies that guide transportation improvements and new campus building projects.

The plan is guided by seven goals, identified in partnership with the Master Plan Steering Committee, and establishes an overall concept as well as detailed guidelines for its realization. In addition, the plan provides a framework for pedestrian and bicycle connectivity that preserves service access and strengthens existing and planned transit hubs. Its design recommendations are made in the service of promoting student success and supporting the UNCG commitment to inclusivity and sustainability. The plan not only integrates sustainable development principles into its substance but also increases the visibility of existing achievements in sustainability.

This plan presents a vision for a future campus that creates a dynamic hub of living and learning along the Lee Street Corridor. This corridor will feature a strong campus identity while also creating spaces for dining, socializing and shopping bringing the campus and community life together. It creates a new identity along West Lee Street while respecting its importance as a major vehicular thoroughfare for the City. The plan also provides building and landscape design guidelines to ensure a cohesive environment emerges throughout the campus.
Goals

Seven goals inform the 2014 master plan update:

1. Plan for an engaging, collaborative learning environment that aligns with the UNCG strategic direction, mission, and vision.
2. Maintain realistic expectations within the current fiscal outlook.
3. Conduct an open, inclusive and transparent planning process.
4. Recognize internal and external plans for growth, particularly in the Lee Street Corridor.
5. Provide guidance for the character and quality of future campus development.
6. Address sustainability in the maintenance, operation, and growth of campus.
7. Plan for a safe pedestrian, bicycle, and vehicular environment, taking into account the recently updated Transportation Master Plan.

The three tenets of the master plan update form a framework to help the university meet these goals:

• Establish a student life corridor along Forest Street.
• Engage the Lee Street Corridor through new campus development and an ongoing partnership with the City of Greensboro.
• Promote sustainable development and decision making at every juncture.
The master plan concept strengthens the residential-student life corridor identified through the MyCampus survey results. In doing so, the plan supports student success by fostering a campus culture where student life, academics, and the administrative functions of the university are integrated.

By connecting the core of student life activity, located within Moran Commons, Jackson Library, and Elliott University Center to the new Railroad Pedestrian Underpass, the proposed north-south pedestrian spine becomes a key connector to the campus expansion in the Lee Street Corridor.

**Establishes New North-South Pedestrian Spine**
The concept knits new on-campus housing and student life amenities along Lee Street into the heart of campus and the core of student life. The concept provides a physical structure to support the extension of the UNCG campus identity into the Lee Street Corridor using architectural and landscape design guidelines.

**Reinforces Transit Hub**
Enhancements to the transit hub situated on Walker Avenue adjacent to the Jackson library will bring additional activity to the thoroughfare. The new spine directly connects transit lines with the proposed north-south bicycle and pedestrian traffic flow.

**Strengthens the Kaplan Commons**
Additional trees along the east and west sides of the lawn reshape the open space as a “clearing in the forest” adjacent to Forest Street and define the lawn as an outdoor space for campus community members. Visually permeable edges ensure the lawn’s visibility and accessibility.

**Introduces New Core Buildings**
A new student-services building strengthens the Forest-Spring Garden intersection as a student-life gateway.

**Brings the “Forest” to Forest Street**
To reinforce Forest Street’s new importance to campus circulation and sense of place, a significant and symbolic landscape identity is established along and adjacent to it. Formal tree allees with tree canopies extending over the path define the pedestrian corridor as an important passageway through campus.
Strengthens East-West Connections
The existing pedestrian connection through Moran Commons gains significance by linking to the new north-south pedestrian spine. By extending the Jackson Library’s tower façade toward the transit hub at the ground floor level, the concept allows the hub to feed directly into a new east-west connection that extends through the library to the eastern edge of campus at Tate Street. A preliminary design for a McIver replacement anchors a third east-west path from the Kaplan Commons through the EUC. A fourth pedestrian path along the Pedestrian Walkway connects the Spring Garden housing cluster to the academic and student life core of campus.

Establishes Integrated Transit Hub
The concept establishes a transit hub at Lee Street and Glenwood Avenue linking city and UNCG transit systems. It improves the pedestrian environment through increased crosswalk visibility, pedestrian signalization, and a direct connection to UNCG campus housing on Lee Street. This is a potential location for a future commuter and light rail stop.

Engages Lee Street Corridor
The UNCG campus expansion to the Lee Street Corridor has the potential to bring a much-desired shopping district to campus. Spartan Village will be activated with 600 additional beds of housing as well as a meaningful retail corridor that will serve the new residents of the area and the rest of campus.

Promotes Pedestrian Use of Union Street
A mall along Union Street will promote increased pedestrian and bicycle traffic away from the heavy traffic on Lee Street. The mall directs users to the Railway Pedestrian Underpass and north to Forest Street.
Master Plan Concept Diagram 2
Primary Elements

The master plan illustrates the realization of the master plan concept through landscape design and a framework for an expanded built campus. The sweep of the new north-south pedestrian corridor establishes a central path through the campus that connects to the Lee Street Corridor through the Railroad Pedestrian Underpass at Forest Street. A detailed look at three primary elements of this master plan illuminates how the formal recommendations realize the plan’s goals:

1. Lee Street Corridor
2. Forest Street Corridor
3. Kaplan Commons
Master Plan Elements

EXISTING BUILDINGS

PROPOSED BUILDINGS

Kaplan Commons

Forest St Corridor

Lee Street Corridor
Proposed Lee Street Corridor looking toward Union Street pedestrian mall from intersection of Lee Street and Glenwood Avenue
Lee Street Corridor

Many visitors and members of the campus community enter the campus by way of Lee Street. As a high-traffic-volume arterial, Lee Street presents the university with the chance to create a visual gateway to campus, creating a sense of arrival through welcoming signage, landscape or streetscape elements. In addition to letting visitors know they have arrived at UNCG, streetscape improvements will make the corridor safer for pedestrians by announcing to drivers that pedestrians are present. Crosswalks, a landscaped median, and other traffic-calming techniques can all improve the safety and beauty of this important thoroughfare.

Finally, improvements to the Lee Street Corridor should support business operations. By adding student housing and administrative support offices to the area, UNCG can create an around-the-clock environment, improving the perceptions of safety in the area and increasing the potential customer base for any new businesses. Additionally, streetscape improvements should allow left-turn access for cars trying to reach Lee Street businesses, and should not interfere with convenient parking for customers.

To accomplish the goals of creating a vibrant mixed-use campus corridor that maintains strong physical and aesthetic connections to the existing campus, this master plan update builds on the vision for the Lee Street Corridor established by the Revised Vision Plan (RVP) articulated as part of the MOU with the Glenwood neighborhood. In particular, this plan extends the concept of the pedestrian mall into the Lee Street Corridor. A pedestrian mall along Union Street is anchored by pedestrian-scaled landscaped plazas at the intersection of Lee Street and Glenwood Avenue. A ceremonial plaza marking the location of the Railroad Pedestrian Underpass connection to the existing campus and a new transit hub completes the pedestrian environment on the northern side of Lee Street.
Existing Lee Street Corridor

Proposed Lee Street Corridor
West Lee Street Proposals

Landscaped medians feature densely planted trees, pulling that element of the Forest Street Corridor into the Lee Street Corridor. Banners and signs announcing the presence of UNCG enhance the identity of Lee Street. Additional plantings kept relatively high around the trees in the medians and along the northern side of the street serve to minimize pedestrian mid-block crossings and direct pedestrians and bicycles to the signalized intersections at Glenwood Avenue, Aycock and Tate Streets. The landscaped pedestrian path along Union Street continues the tree line down to the Glen located between Lexington and Highland Avenues.

The plan recommends building footprints with minimal setbacks along Lee Street to provide better definition of the street as a space. A consistent height of four stories along Lee Street provides for mixed retail and housing, anchored at the corner of Glenwood Avenue and Lee Street by a group of three mixed-use buildings. At Lexington Avenue, the plan respects the existing cadence of residential buildings.
Existing Lee Street Section

Proposed Lee Street Section
Union Street
Along Union Street, the pedestrian promenade may be flanked on the ground floor by retail stores, restaurants, and/or living-learning community spaces. Upper stories will accommodate up to three stories of student housing to the north and step down to two stories along the southern edge near the Glenwood neighborhood. Solar panels may be installed on the new buildings along Union Street or at the Student Recreation Center to help UNCG achieve its sustainability goals.
Lee Street Corridor – West
The western end of the Lee Street Corridor establishes a new campus gateway at Aycock and Lee Streets and extends the western recreation zone south of Spring Garden Street. Key facilities proposed for this area of the Lee Street Corridor include the new Student Recreation Center and adjacent recreation fields.

Student Recreation Center
The new Student Recreation Center will provide a destination for pedestrians traversing the Forest Street pedestrian corridor, especially given its visibility from the Pedestrian Underpass Plaza. It will be important to consider how the building’s architecture integrates with the landscape and the pedestrian corridor. Special paving, specific building setbacks, street plantings, and lighting should be used to guide pedestrians across Lee Street and into the Student Recreation Center. The goal should be to have the Student Recreation Center feel completely integrated into the campus pedestrian network, rather than being an isolated building at the edge of campus.
Proposed plan for the western half of the Lee Street Corridor showing the new recreation center and recreation fields, tree screen along the railroad and new buildings to create a gateway at Aycock Street

New Recreation Fields

New recreation fields are recommended adjacent to the Student Recreation Center, in response to the student feedback received during the MyCampus survey and the existing recreational needs assessment. These fields will support student recreation activities.
Lee Street Corridor – East

The eastern end of the Lee Street Corridor will establish a mixed-use development characterized by ground floor retail and student housing in upper stories. Four story buildings will establish a continuous building line and contribute to an active pedestrian realm along Lee Street. Building height will be reduced toward the Glenwood neighborhood, reaching a maximum of two stories within a seventy-five foot buffer of neighborhood buildings.

Rendering of Spartan Village mixed-use development, Building 2 (Lord Aeck Sargent)
Lee Street Corridor Sustainability

UNCG’s Spartan Village development employed over twenty-five different sustainability strategies, and these should serve as a model for future development within the Lee Street Corridor. Some highlights are included below.

Social
• Supporting student success through living-learning centers and new on-campus residences.
• Involving the Glenwood neighborhood in the planning and design process for Spartan Village.

Environmental
• Asbestos abatement
• Replanting of trees removed for building construction

Resources
• Use of biocells to reduce stormwater runoff and prevent erosion
• Use of energy modeling to guide water and energy system planning
• Use of low-flow water faucets and fixtures
• Sustainable lighting design

Economic
• The economic impact of Spartan Village is expected to reach $591.3 million in spending by 2023
• The Spartan Village development is expected to contribute 945 jobs at its peak level of employment (not including employment related to construction of Spartan Village).
Spartan Village Mixed Use Development

Keeping students on campus as much as possible is pivotal to student success and maximizing the chances for learning moments. By creating a retail option on campus, students will be more inclined to spend their non-academic time on the campus itself. A recent market study conducted by HR&A determined that Spartan Village will contribute to a demand for up to 45,000 square feet of retail space, including up to 25,000 square feet dedicated to a grocery store.

By concentrating retail activity south of campus along Lee Street, shops and restaurants can take advantage of having maximum visibility from passers-by on the road, giving businesses the best chance for success. This concentration can also serve as the active retail core for residents of Spartan Village.

### Summary of Spartan Village Plan Economic Impacts

<table>
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<tr>
<th>Impact Category</th>
<th>Spending Impact (Present value total in 2011 $, millions)</th>
<th>Peak Employment Impact</th>
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<tbody>
<tr>
<td>Construction</td>
<td>$247.2 (current)</td>
<td>1664</td>
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<tr>
<td>Operations</td>
<td>$32.9 (2014-2023)</td>
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<tr>
<td>Student Spending</td>
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<td>Alumni Spending</td>
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<td>Total</td>
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<td>Local Sales Tax Revenue</td>
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</tr>
<tr>
<td>Local Property Tax Revenue</td>
<td>$7.5 (2014-2023)</td>
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Source: The Economic Impact of the University/Glenwood Mixed-Use Village Plan at the University of North Carolina Greensboro, 2011
FOREST STREET CORRIDOR

Proposed Forest Street pedestrian corridor looking north toward Jackson Library tower
Forest Street Corridor

Entering the existing campus from the Lee Street Corridor, pedestrians and cyclists emerge from the underpass onto the Forest Street Corridor. The southern entrance to Forest Street is marked by dense plantings of trees and allows for separation of bicycles and pedestrians. The corridor continues to the corner of Forest Street and Spring Garden Street where its northern terminus is marked by landscaped plazas in front of a proposed Student Services Center and in front of the Moore Humanities and Research Administration Building. The tree line at Spring Garden opens into the formal landscaping along Spring Garden Street and extends to the east and west along the northern edge of Oakland Avenue to buffer the campus from this transportation corridor.
The proposed plan includes an expansion of the McNutt building and a plaza in front of a proposed Student Services building at Forest Street and Spring Garden Street.
The plan establishes build-to lines along Forest Street that bring the building line to the pedestrian corridor’s edge and give further definition to the corridor as a space. A potential expansion of the McNutt building will enable that building to engage directly with the pedestrian corridor. The dense planting of trees along the corridor creates a continuous shaded landscape character in keeping with the identity of the existing campus. Additional landscape features such as drought-resistant plantings lining the pedestrian and bicycle and service access paths will help reinforce the pedestrian spine and underpass. The inclusion of shaded seating, sculptural elements, campus signs, and wayfinding elements will help to promote a safe pedestrian street.

The structure of the Oakland Avenue parking deck may allow for the addition of solar panels on its top level. For this reason, the parking deck may represent an opportunity to generate alternative energy and contribute to campus sustainability goals.

Consideration should also be given to relocating or removing the radio tower at the corner of Oakland Avenue and Forest Street to help keep the corridor at a pedestrian scale and to improve the pedestrian experience.
Existing Forest Street Section

Proposed Forest Street Section

Solar panels added to Oakland Avenue Parking Deck

Shaded seating

Separate pedestrian and bicycle routes

McNutt expansion engages with pedestrian spine
Proposed pedestrian path from the transit hub across Kaplan Commons; view looking northeast toward Jackson Library tower
Kaplan Commons

The Kaplan Commons is given stronger definition with formal tree lines along its edges and in the space between the new north-south pedestrian corridor and the entrance to the Elliott University Center (EUC). This design ensures the lawn provides a balance of shaded, intimate spaces along the edges and an expanse of flexible, ceremonial green space that can accommodate a variety of uses. The new pedestrian corridor provides a more direct pedestrian link to transit connections from Spring Garden Street and the Lee Street Corridor.

Elliott University Center (EUC)

The new north-south pedestrian corridor supplements but does not replace the existing path along the eastern edge of Kaplan Commons that leads directly to the EUC’s entrance. Kaplan Commons also serves as the central connector linking the new north-south path to east-west connections through the Jackson Library along the Walker Avenue axis and through the EUC. The EUC anchors a new pedestrian path through the campus that terminates at the proposed replacement for the existing Mclver building. In this way, Kaplan Commons is central to building a network of campus connections and is strengthened as a campus center.
The proposed plan extends the internal network of paths, proposes a new entrance to the Jackson Library from the transit hub, proposes a new Student Services building and a replacement for the McIver building.
Examples of informal interaction space that would be appropriate for the library addition and the adjacent exterior space.

Jackson Library
Renovation and Addition
A renovation and addition to the Jackson Library tower is proposed to allow for movement from the Forest Street Corridor through the library itself. The addition will introduce a new entrance to the library from the transit hub located north of Kaplan Commons. The new entry will feature a bright, open, pedestrian-scaled façade in front of the existing blank wall of the library tower. This expansion will accommodate new meeting spaces and support student learning.

Additionally, an overhang is proposed for the library entrance. The proposed overhang covers the waiting area adjacent to the transit hub to provide weather protection for people waiting for a shuttle. The overhang is envisioned as a beacon on the Forest Street Corridor, and through the use of lighting, columns, and plantings is imagined to have a sense of grandeur. The renovation extends the central library corridor through to the Walker Avenue façade thereby continuing the Walker Avenue axis as a major east-west connector through campus from Aycock Street to College Avenue. By strengthening this connection, the expansion provides an opportunity to make the library a more public building as much about people as about books.
Existing Jackson Library Facade at Walker Avenue Transit Hub

Proposed Section Showing Jackson Library Addition at Walker Avenue Transit Hub
Mossman Connection
Just south of Kaplan Commons, the new pedestrian corridor separates pedestrians and bicyclists from the vehicular service road that links the EUC to Spring Garden Street. A landscape buffer shields the access road from view. The new corridor creates opportunities to strengthen connections to the Mossman Building with a new entrance that opens onto the generous sixteen-foot pedestrian corridor. Pedestrians will be able to access the building via a staircase and an accessible ramp, and this increased accessibility will create opportunities to repurpose the building.

Mossman Building Renovations
Renovation at the Mossman Building for increased student services use represents an opportunity to meaningfully integrate the existing architecture with the new pedestrian corridor. The renovations will reconfigure the interior walls and hallways of the building to connect the interior spaces to the landscaped pathway.
North-South Pedestrian Corridor Buffer Landscape Forest Street Service Access

16’

Wide corridor accommodates pedestrians and cyclists

Landscape buffer hides EUC service access

New Student Services Building
The master plan proposes a future Student Services building at the corner of Forest and Spring Garden Streets. This building opens onto a small pedestrian plaza that sits across from the Moore Humanities and Research Administration Building and that connects the new building to the Forest Street Corridor. This building will share service access with the EUC. A physical connection between the new building and the EUC will provide an internal pedestrian connection to the student life core running parallel to the Forest Street Corridor.
McIver Street Properties

A new childcare center is proposed on McIver Street opposite the existing McIver Street parking deck. The new center would address the current need for a childcare center on campus. The proposed facility footprint is dumbbell shaped to allow for a front semi-circle driveway for drop-off and pick-up in the mornings and evenings. An additional supporting parking lot is across from it. It is anticipated that this would accommodate overflow cars during the drop-off and pick-up times. While mid-block crosswalks are not typically preferred, it is suggested that one be added in the interest of pedestrian safety.
The proposed McIver Building replacement showing how the building acts as the terminus for a new east-west connection through the EUC as well as for the north-south McIver pedestrian mall.

McIver Building Replacement

The top priority in UNCG’s capital priorities plan is the replacement of the McIver Building. The McIver Building is currently in a state of disrepair. While it is preferred that the replacement be at least equal in size to the existing building, current economic realities suggest that a phased construction plan will be necessary.

The proposed footprint is sited to respect the iconic Foust Building by incorporating a buffer between Foust and the McIver replacement.

The proposal for McIver also acknowledges the current role of the building as the southern terminus of the McIver Street pedestrian mall. At the same time, the southern wing of the building serves as the eastern terminus of the east-west axis linking the Kaplan Commons through the EUC to the College Avenue and McIver pedestrian malls.

The shape and orientation of the proposed building could accommodate a multi-phase construction process with the southern and eastern wings completed in the first phase in order to anchor the north-south and east-west pedestrian connections proposed in the plan. The northern wing, which would provide a more
formal entrance to the McIver pedestrian mall, could be completed as part of a second phase of construction.

Weatherspoon Art Museum Expansion

The planned expansion of the Weatherspoon Art Museum (WAM) at the corner of Tate and Spring Garden Streets would establish an iconic entrance to campus at this important gateway. It also would serve to anchor a new east-west pedestrian connection (parallel to Spring Garden Street) on the south side of campus. This master plan update integrates the existing design for the WAM expansion into its campus plan and reinforces its importance as a destination for the campus and wider community.

Additional Housing in Spring Garden Housing Cluster

An additional residence hall is proposed to strengthen the cluster of campus housing at the western end of the Spring Garden Street Corridor. The proposed housing is set back from Oakland Avenue and screened from Oakland Avenue and the railroad corridor by dense tree cover. The housing provides a southern edge for a landscaped quad defined by the new housing, the Jefferson Suites and the Tower Village complexes.
South Chiller Plant

UNCG has identified the need to add chiller capacity to the existing campus. A new Chiller Plant is proposed for the corner of Forest Street and Oakland Avenue to meet the current and future needs of the campus. Currently, there is a single central chilled water plant located in the McIver Parking Deck. The plant is 6,000 tons consisting of four chillers. The plant was originally constructed in 1997 and expanded in 1999 and 2002 to reach its current capacity. The plant serves approximately 40 buildings with a total area of just over 2,665,000 GSF. The plant is running at or near capacity and there is no room to expand the capacity within the existing footprint.

A second chilled water plant adjacent to the boiler plant on Forest Street is planned as the next major development in centralized chilled water. Based on the future needs and expansion of the campus chilled water system detailed in the Frameworks section of this report, the new plant should meet the following specifications. The plant shell would be constructed in its entirety with equipment added in response to load increases. At 7,500 tons, the plant footprint would be approximately 13,000 SF, excluding the exterior electrical service yard and cooling towers, which would require an additional 2,000 SF and 6,000 SF respectively. The towers could be located on the roof to reduce
the overall footprint. If the towers are located on the roof, the overall height would be 70 to 80 feet and would likely require architectural screening. If the towers are at grade, the plant height would be 35 to 40 feet. A detailed analysis would determine the appropriate plant capacity, optimum siting strategy and optimum land use strategy.

Important design feature for the new chilled water plant at Forest Street include:

- variable speed chillers
- variable primary chilled water pumping
- double ended switchgear with an A and B service for redundancy
- N+1 redundancy in all primary equipment

Finally, UNCG had previously considered a steam turbine chiller or even a steam turbine for power generation within the Forest Street chiller plant. The footprint described above does not include space for this equipment. A detailed analysis would determine the viability of steam driven or cogeneration equipment.
At the core of the 2014 master plan update is the new north-south pedestrian path stretching from Moran Commons towards the proposed transit hub at Jackson Library, through the improved Forest Street Corridor, below the railroad tracks and through the Lee Street Corridor along a new Union Street pedestrian promenade. The corridor serves as a armature for the larger master plan frameworks, which include landscape structure, access, sustainability, and development.
Proposed Campus Landscape Plan
Landscape Framework

The master plan is supported by a core landscape framework that links landscape typologies in the existing campus to the Lee Street Corridor. Tree planting, landscaped pathways, pedestrian malls, and landscaped plazas create a continuous ribbon of shaded, pedestrian paths and gathering spaces. This ribbon stretches from Peabody Park to the small glen adjacent to Union Street on the south and gives identity, character, and definition to the proposed campus spine.

Perhaps the most critical component to the new north-south pedestrian connection through campus is the outdoor space created along Forest Street. With the right landscape design, Forest Street can become an important symbol for the campus. To establish Forest Street as a central corridor for UNCG, outdoor spaces adjacent to the corridor should be created for active uses.

Landscape Typologies

The proposed landscape structure carries the landscape typologies on the existing campus into the Lee Street Corridor to maintain a strong campus identity and character as the campus expands. In the Lee Street Corridor, all four of the primary landscape typologies are important components:

- **Recreation fields** south of Lee Street continue the western recreation zone.
- **Formal greens** adjacent to Lofts on Lee and Spartan Village establish Union Street as a campus center.
- **The Glen**, extending south of Union Street, mirrors Peabody Park at the northern edge of campus and connects the formal pedestrian mall of Union Street with a more natural landscape.
- **The Union Street Pedestrian Mall** carries the iconic landscape of College Avenue and McIver Street pedestrian malls into the Lee Street Corridor and clearly identifies Union Street as an important campus activity center.

Secondary landscape typologies use landscape as connective tissue to tie the new landscape elements of the Lee Street Corridor into a cohesive whole and to link them back into the landscape structure of the existing campus.
Proposed Landscape Structure: Primary Typologies

- NATURAL FORESTED AREA
- FORMAL GREEN
- RECREATION LANDSCAPE
- PEDESTRIAN MALL

Key Streets:
- S. Aycock St.
- Walker Ave.
- W. Market St.
- Spring Garden St.
- W. Lee St.
- Tate St.
- College Ave.
- Forest St.
- Glenwood Ave.
- Haywood St.
- Silver Ave.
- Union St.
- Union St.
Lee Street Landscape
The landscape core is reinforced along the east-west axis of West Lee Street, which connects the central Pedestrian Underpass Plaza with the Aycock Street and Tate Street gateways as well as with the new Student Recreation Center and recreation fields.

The promenade landscape is composed of elements including street trees (on the northern side of the roadway) and landscaped medians found on the Spring Garden Street connector. However, along Lee Street, these elements serve not only to promote campus identity and character but also direct pedestrian and vehicular movement into a safer more legible framework. Left turns from the south onto West Lee Street are eliminated at McCormick Street and Lexington Avenue, and pedestrian mid-block crossings are discouraged by the use of high plantings along the roadside and within the medians. At Glenwood Avenue, Tate Street, and Aycock Street, pedestrian crossings are encouraged by improved paving to increase crosswalk visibility and new pedestrian signalization to facilitate safer crossings.

Landscaped Paths
Landscaped paths define the north-south pedestrian path and strengthen the pedestrian connection along Forest Street and the Union Street Pedestrian Promenade.

Landscaped Plazas
Where Forest Street meets Spring Garden, a landscaped plaza strengthens the pedestrian connection between a renovated Mossman building and a new student services building.

At the intersection of Glenwood Avenue and West Lee Street, landscaped plazas on the north and south sides of West Lee Street establish the importance of this intersection as a campus gateway where campus and community come together.

Landscaped Roadways
Landscaped roadways establish campus identity and character along north-south connector streets in the Lee Street Corridor. In addition, landscape along West Lee Street itself serves to protect pedestrians by shielding them from traffic and preventing mid-block crossings. It also establishes a campus identity along the roadway while respecting its importance as a major vehicular artery for the City of Greensboro.
Proposed Landscape Structure: Secondary Typologies
Access Frameworks

The new north-south dedicated pathway for pedestrians, non-motorized vehicles, and service vehicles will improve access without compromising safety. Cyclist routes are proposed along the Forest Street Corridor along with additional bicycle parking and other cyclist-friendly amenities. Additionally, the transit hub west of Jackson Library is situated directly on the pathway, improving access to campus and city-wide shuttles and buses. Finally, the corridor will meaningfully connect building entrances situated along its length in a formal and intentional manner, creating a cohesive and unified environment, and better integrate buildings on the western side of campus into the campus as a whole.

Additional east-west connections along the Walker Avenue axis, through the EUC and along the proposed pedestrian walkway parallel to Spring Garden Street will encourage movement across campus, linking the new pedestrian corridor with the existing pedestrian malls.

Pedestrian Access

The new north-south pedestrian corridor through campus will connect the Lee Street Corridor to the existing campus and support a new structure of east-west connectivity. The pedestrian corridor connects the western Spring Garden Gateway into the campus core and provides a clear east-west connection from Stirling Street to the new McIver Building through the EUC. A secondary east-west connection through Moran Commons to the Petty Science building provides a route from the center of student life to the College Avenue academic hub as well. South of Spring Garden, the plan includes the proposed design for a pedestrian pathway winding among existing and future buildings lining the south side of Spring Garden Street. The plan establishes a new pedestrian mall along Union Street within the Lee Street Corridor and establishes a safe pedestrian connection at Glenwood Avenue connecting into the existing campus.
Proposed Pedestrian Access and Circulation
Bicycle Routes

This campus master plan update affirms UNCG’s planned bicycle network illustrated in the 2012 Transportation Master Plan Update while putting forward an alternative vision to the City of Greensboro’s proposed bicycle route along West Lee Street. This master plan supports the UNCG proposal that connects to the larger Greensboro bicycle network along Holbrook and Haywood Streets south of Lee Street and along Spring Garden Street to the north of West Lee Street. North-south connector routes at Aycock and Glenwood (connecting through to Spring Garden) ensure that the integrity of the network is preserved. A bicycle path aligned with Tate Street through the parcel at the corner of West Lee Street and Silver Avenue provides another connection point with Spring Garden Street and could provide access to a short connector path along West Lee Street beyond the Lee Street Corridor if necessary.
Proposed Bicycle Access and Circulation
Transit Access and Hubs

This master plan update supports and reinforces the transit concept developed by UNCG in its 2012 Transportation Master Plan Update. The integration of the Walker Avenue transit hub into a strengthened pedestrian and bicycle network improves accessibility. The pedestrian underpass from Forest Street to Lee Street and proposed pedestrian improvements along Lee and Union Streets promote the importance and accessibility of the Pedestrian Underpass Plaza at the intersection of Glenwood Avenue and Lee Street as a future transit hub. Currently served by two Greensboro Transit Authority bus routes, this plaza will eventually require additional transit service to become a successful transit hub.

As the Lee Street Corridor develops, a new Spartan Chariot stop will enable smoother transitions from off-campus to on-campus transit services. Over time, UNCG can work with the HEAT bus service to include the Lee Street Corridor and the Glenwood Avenue transit hub into one or more of its routes. The creation of a proposed rail stop at this intersection would further strengthen its role as an important transit hub for the UNCG campus in the long term.
Proposed Transit Access and Circulation

- **SPARTAN CHARIOT**
- **HEAT**
- **GTA**
- **PART**
- **SPARTAN CHARIOT STOPS**

- **EXISTING**
- **PROPOSED**

---

- **Silver Ave.**
- **W. Lee St.**
- **Spring Garden St.**
- **Walker Ave.**
- **W. Market St.**
- **S. Aycock St.**
- **Tate St.**
- **McIver St.**
- **College Ave.**
- **Forest St.**
- **Glenwood Ave.**
- **Union St.**
- **Haywood St.**
Vehicular Access and Service Routes
The new north-south pedestrian path eliminates Forest Street as a general vehicular connector on campus while preserving service access along its right of way. This proposal uses the iconic structure of the pedestrian mall to connect the campus across the railroad corridor without substantially disrupting the vehicular circulation network.

Campus Gateways
Expansion into the Lee Street Corridor will increase the importance of campus gateways along Lee Street at Aycock Street, Tate Street, and Glenwood Avenue. Due to the barrier of the railroad tracks, these new gateways will need to be designed to convey UNCG character and identity and provide clear wayfinding to direct pedestrians, bicyclists and drivers to Lee Street Corridor amenities and the portion of campus north of the railroad corridor.
Proposed Vehicular and Service Access

ON-CAMPUS VEHICULAR ACCESS

OFF-CAMPUS VEHICULAR ACCESS

SERVICE ACCESS AND PARKING

GATEWAY
SERVICE ENTRY
Pedestrian Underpass Plaza Gateway

The Pedestrian Underpass Plaza is a gateway opportunity to announce the entrance to the UNCG campus from the south. Located at the intersection of Glenwood Avenue and West Lee Street, this gateway must be legible on both the north and south sides of Lee Street, directing both campus and community to the pedestrian underpass, the Union Street mall, and the new recreation hub along Lee Street.

Signage and landscaping like that outside the Aycock Auditorium would establish a sense of place at the Pedestrian Underpass Plaza along Lee Street.

The use of campus banners lining West Lee Street, architectural place markers identifying the plaza as a part of the UNCG campus, paving and landscape materials consistent with the campus environment, and wayfinding signs will establish this as a gateway connecting the UNCG campus with the larger Greensboro community.
Landscaped areas at the corner of Tate Street and West Lee Street provide opportunities for locating banners, maps, and other campus signage.

**Tate and Aycock Street Gateways**

To reinforce the campus connections established by the new north-south pedestrian path, the intersections of Tate Street and Aycock Street with West Lee Street must be defined as campus gateways. At Aycock Street, a campus building will anchor the corner in the long term. In the short term, landscaping, campus signage and improvements to pedestrian safety will promote a campus identity at the corner.

At Tate Street, the opportunity for shaping the corner through architecture is less certain. Here a formal landscaped buffer marked with a decorative kneewall announcing the presence of the UNCG campus would help establish the UNCG identity at the eastern end of the Lee Street Corridor.
Development Framework

The master plan update would introduce approximately 359,000 square feet of new development into the Lee Street Corridor. Together these new buildings would create a mixed-use pedestrian-friendly environment that benefits both the campus and the surrounding community. In addition, the plan recommends a variety of improvements to buildings and landscapes on the existing campus.

Near Term Build Out (2013-2020)
The vision for the future of UNCG’s campus development will take many years to achieve. This plan uses the period between 2013 and 2020 to lay the groundwork for a new campus structure that meets current needs and retains the flexibility to respond to future circumstances.

### Near Term Buildout (2013-2020)

<table>
<thead>
<tr>
<th>Building</th>
<th>Use</th>
<th>Gross Square Footage (GSF)</th>
<th>Number of Floors</th>
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<tr>
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<td>Residential</td>
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<tr>
<td></td>
<td>Retail/LLC</td>
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<tr>
<td></td>
<td>Retail/LLC</td>
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<tr>
<td>7A</td>
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<td>Retail/LLC</td>
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<tr>
<td>7B</td>
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<td>Total Residential</td>
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<tr>
<td>Total Retail/LLC</td>
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Full Build Out (2020 and beyond)
The core element of development in the long term is the new north-south pedestrian path. The path will align with the recently-completed railroad pedestrian underpass and will require new paving and landscape to define the pedestrian corridor from North Drive through campus down Forest Street. Additional landscape will provide the connective tissue to establish a campus identity along Lee and Union Streets and support future phases of development on the Lee Street Corridor.

In addition, this master plan update identifies opportunities to expand access to on-campus residential life, reinforce the Lee Street Corridor with retail and restaurant uses, and create a buffer between campus properties and the Oakland Avenue and railroad corridors.

### Full Buildout (Post 2020)

<table>
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<td><strong>TOTAL INCLUDING NEAR TERM</strong></td>
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<td><strong>2,147,400</strong></td>
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Development Impact
Both the short term development and full build out will move UNCG toward its goal of increasing opportunities for an on-campus residential experience. The inclusion of living-learning centers and retail within the development plans is intended to generate a rich environment that supports the academic and social needs of students as well as the needs of the surrounding community.

Near-term parking requirements for the Lee Street Corridor generated by the proposed short term build out are in line with those modeled in the 2013 Transportation Plan Technical Update.

<table>
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<th>Building</th>
<th>GSF</th>
<th># of Floors</th>
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<td><strong>Total</strong></td>
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Near Term Additional Housing (2013-2020)

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<th># of Floors</th>
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Full Build-Out Additional Housing (Post 2020)

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<tr>
<td><strong>Total Plus Near Term GSF</strong></td>
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Future Development Opportunities
The expansion of UNCG into the Lee Street Corridor is likely to address the desire to expand on-campus residential student life in the near term. To realize the vision for a new mixed-use district, additional land acquisitions within the boundaries of the Revised Vision Plan agreed upon with the Glenwood neighborhood will be necessary.

Over the long term, as the university's needs change in response to future conditions and space needs, additional land may be needed. Ideally, future land acquisitions will expand the campus adjacent to its current and future boundaries. Expansion along the commercial-industrial corridor of West Lee Street could strengthen the Lee Street Corridor campus expansion.

Expansion west of Aycock Street between Spring Garden Street and the rail corridor could support and extend the existing residential cluster at the western edge of Spring Garden Street on campus.

Finally, land acquisitions north of the current campus would strengthen the McIver Street academic axis and could create opportunities to consolidate UNCG’s performing arts programs.
Utilities Frameworks

Central vs. Regional Thermal Utilities

UNCG has invested in and had success with centralized thermal utilities. The steam plant along Oakland Avenue and the McIver chilled water plant have provided reliable and efficient operation. The primary drawback to developing a new central plant to serve the Lee Street Corridor is that its development model and funding through receipts is not well suited to meeting the cost requirements and timing of central plant construction. In addition, the cost of heating and cooling equipment to service the existing buildings in the corridor is not high enough to justify development of a central plant. Unless the funding mechanism driving the development of the Lee Street Corridor changes significantly, a true central plant serving the corridor is unlikely to be feasible.

A regional plant or plants could provide a viable alternative to a single central plant to serve the Lee Street Corridor. For example, the cluster of six mixed-use buildings planned to the east of the new Student Recreation Center is conceived to be approximately 400,000 SF. The basement or penthouse in the first building could include a combination of equipment and shell space for future equipment that would serve adjacent buildings. Equipment housed in this space would include elements such as chillers, cooling towers, hot water boilers and pumps.

Similarly, a second regional plant could be developed for the easternmost portion of the Lee Street development. That plant would be a little larger than the one described above assuming that the existing buildings are eventually connected to the new regional plant. For consistency in spare parts and training, the equipment would likely match the regional plant described above, although there would be an option for slightly larger chillers and boilers.

Given the scale of the Lee Street Corridor development, a modular approach to a regional plant is the most appropriate. Technologies that scale such as magnetic bearing chillers and condensing boilers would provide maximum flexibility. The initial round of equipment would meet the requirements of the first building with equipment added over time to meet new loads. The distribution piping system, however, would need to be sized for the anticipated loads regardless of when it is installed.

Should a regional plant not be an option, all development should follow sustainable design principles for building systems, building envelope and building orientation. All buildings, including developer buildings that will eventually become state property, are subject to the energy requirements contained in GS 143-135 (formerly SB 668). We recommend that UNCG require all projects that
result in an increase in their building inventory to include an energy model to demonstrate compliance with the statutory energy requirements contained in GS 143-135.

Electric Utilities
UNCG’s existing campus north of Oakland Avenue is served by Duke Energy at a single substation. UNCG owns the distribution system from the substation to each building, including all building transformers. The campus distribution system is 12.47 KV and all cabling is installed in a concrete encased ductbank.

Duke Energy has indicated that it is possible to use the existing campus’s substation to serve the Lee Street Corridor. As long as the parcels are all contiguous with the existing campus, it would be possible to pull a 12 kV circuit from the substation across the railroad tracks and Lee Street. This seems the most likely option should UNCG decide against individual building services.

Duke Energy’s electrical system on the Lee Street Corridor serves UNCG buildings as well as privately owned properties. The electrical system is a 24 kV “backbone” service on overhead poles that also carries services such as telephone, TV cable, internet service providers’ fiber, street lights, and traffic lights, among others. The system is a large distribution service for this part of Greensboro.

UNCG has expressed interest in burying the overhead cables along Lee Street and setting a new substation for the Lee Street Corridor. Both options are feasible, and Duke Energy is willing to proceed with a substation if certain requirements are met. The high cost to the university for either option, along with Duke Energy’s willingness to bury electrical feeders, makes implementation unlikely.

Challenges to Burying Overhead Cables:
- UNCG would need to find room on their property for the buried electrical service and then provide Duke Energy with a Right of Way.
- Continuity of service would be required during construction.
- As this is a “backbone” service, the ductbank would need to include spare circuits.
- Other utilities on the poles would need to be relocated and their services converted as well.
- One hundred percent of the cost would be borne by UNCG.

Central Plant Benefits
- Allow for more robust equipment that is generally more serviceable and lasts longer than unitary equipment.
- Support shared redundancy by adding equipment once at central location rather than multiple times at each building.
- Reduce maintenance time and cost as there are fewer pieces of equipment to service.
- Improve aesthetic and siting issues by eliminating the need for exterior equipment and service courts at individual buildings.
- Reduce long term energy costs due to higher efficiencies available with industrial grade equipment.
- Improve opportunities to drive energy conservation as the improvements are implemented at fewer pieces of equipment and not across the campus.

Lee Street Substation Requirements
- UNCG provides the land to accommodate the delivery point. They would own all the distribution downstream of the substation.
- The distribution voltage could be 24 KV or 12KV.
- UNCG would need to pay Duke Energy to remove the services installed for Spartan Village. Duke Energy will not sell these services to UNCG since they would be used for on-going service.
Chilled Water
The current campus building inventory results in approximately 4,850,000 GSF, excluding leased buildings, buildings located beyond the core campus, as well as remote and/or small athletic facilities, and parking decks. Allowing for another 400,000 SF of unanticipated growth or building replacement, the likely long-term inventory of buildings on a central chilled water system is 5,250,000 GSF. As shown on the Chilled Water System diagram opposite, much of the future connections will occur on the south or west side of campus.

This gross building area is approximately twice the building inventory served by the McIver Chiller Plant. The resulting future peak chilled water demand for the existing campus north of Oakland Avenue is likely to double from 6,000 tons to 12,000 tons. This is consistent with an average peak demand of 350 SF/ton with an eighty percent diversity factor. The 350 SF/ton average is a combination of research spaces, general academic buildings, libraries, residential communities and other miscellaneous building types on campus. A detailed analysis is required to develop an accurate load profile as well as the timing of the loads.

With a future campus demand of 12,000 tons, the minimum plant capacity for the new chilled water plant on Forest Street is 6,000 tons. To accommodate redundancy, a plant capacity of 7,500 tons, divided among five chillers, should be considered. The McIver and Forest Street plants would interconnect and share redundancy. The resulting installed and firm capacity for the campus chilled water system would be 13,500 tons and 11,625 tons respectively. A firm capacity of 11,625 tons provides for:

- N+1 redundancy for all identified development
- N+1 redundancy for an additional 400,000 SF except on the most demanding days

The second major requirement for a campus chilled water system is the distribution piping. As shown on the Chilled Water System diagram, much of the chilled water piping is already installed and being used. Completing or reinforcing the chilled water distribution piping requires:

- piping from the Forest Street plant to the existing 24” mains in the parking lot south of McNutt
- new 12” mains to support the new development on the southwest portion of campus
- new 12” mains to HPP and the SRF on the west side of campus
- completing the 24” north / south mains on Stirling Street to close the loop
- completing the east / west main that bisects the campus to reinforce the distribution grid

While much of the distribution piping would occur when the plant is built, some of the piping may be installed with individual building projects. Although the individual building projects may have to install more capacity than is necessary for a specific building project in this scenario, the approach will ensure that the distribution mains are sized for the overall performance of the campus chilled water system.
Chilled Water System
A sustainable approach to campus development requires attention to the social, economic, environmental and resources aspects of sustainability. At the University of North Carolina at Greensboro, increasing attention to protecting the natural environment and conserving energy resources complements a larger campus development strategy that encompasses social and economic considerations as well. The sustainability achievements of UNCG are captured in the sustainability framework diagram above, developed by Sasaki Associates.
Social
The master plan update supports the UNCG mission to be a “learner-centered, accessible, and inclusive community,” establishes design guidelines to ensure that the character of the historic campus extends into the Lee Street Corridor, and integrates existing studies on sustainability, transportation, facilities, and landscape as well as planning efforts in the Lee Street Corridor.

Environmental
The plan reaffirms UNCG successes in improving conditions and infrastructure for bicyclists and pedestrians and reducing parking demand, endorses improvements to the transit hub at the Jackson Library, and establishes a landscape framework that builds on the history of excellence in landscape design and maintenance. It employs landscape as a connective tissue that extends into the Lee Street Corridor and strengthens east-west campus pathways.

Resources
The plan promotes conservation of resources including water resources, energy, and carbon emissions; promotes an approach to increasing energy efficiency and responsiveness to demand increases over time; and extends the travel demand management strategies initiated by UNCG that have reduced campus emissions by seventeen percent since 2009.

Economic
The plan establishes a framework for developing the Lee Street Corridor into a mixed-use district that supports the economic goals of both the campus and the community and respects the partnership established between UNCG and the Glenwood neighborhood by integrating the agreements captured within the MOU into its building design requirement.
SOCIAL

Strategic Plan
The UNCG campus has been shaped by thoughtful planning and design since its founding in the late nineteenth century. The strong character of the campus is largely defined by the scale and relationship among its buildings and landscape. The history and culture of the university is truly embedded in its campus planning.

Emerging Challenges
In the first decade of the 21st century, the UNCG campus planning tradition was once again invigorated by the challenge of meeting the changing context of university education. Universities are increasingly called upon to be leaders not only in academia, but also among...
their local communities. They are centers of innovation and entrepreneurship as well as education, and they are key drivers of local economic development through partnerships with industry and their surrounding communities.

Rather than shrink from these challenges, UNCG has embraced the opportunities they present and has addressed them head on in the 2009-2013 strategic plan. This plan renews the university’s commitment to its core values of inclusiveness, collaboration, sustainability, responsibility, and transparency. While many of their initiatives are necessarily programmatic in nature and will be built on new pedagogical approaches, partnerships, and opportunities for engagement, the campus environment must also support the university’s goals and values as it defines itself for the 21st century.

To this end, the Strategic Plan emphasizes the following:

- **UNCG First**: Making UNCG the first choice of more students from all backgrounds.
- **Healthy UNCG**: Leading the UNC system in enhancing the health and wellness of students and employees.
- **Sustainability**: Developing and implementing additional sustainability practices in buildings, outdoor environments, dining services, transportation and campus access, campus maintenance and renewal, energy and climate, and academics and culture.
- **High-Impact Experiences**: Creating meaningful connections between student learning in the classroom and outside of it.
- **Community Engagement**: Promoting economic transformation, cultural expression, and community development.
People

The UNCG master plan update places people as its top priority. With only modest enrollment growth projected for 2022, one of the key aims of the UNCG Strategic Plan is to support students in the successful completion of their degrees through upgrades to academic buildings and increased opportunities for living and working on campus.

Student Success

Improving educational access and student success is a high priority in the 2013 UNCG Strategic Plan. The importance of campus planning for student success is reinforced by the ongoing efforts in planning for residential life, athletics and recreation and academic programs.

Enhancing Academic Experiences

A core factor influencing student success is the quality of student-faculty interaction and the ability of campus academic facilities to support various learning experiences. UNCG has been assessing the quality and quantity of its academic spaces to understand how well its facilities are able to meet the needs of 21st century pedagogies. In support of this goal, the university has engaged in the following efforts:

- The 2007 Campus Master Plan provided guidance to the university for identifying buildings in need of substantial upgrading or demolition to meet anticipated enrollment increases and the needs of UNCG’s academic programs. The plan also identified a variety of development opportunities for campus buildings that could house academic, residential, or student life functions.

- An Academic Program Review (2010-2012) identified strengths and weaknesses in the current curriculum with the goal of strengthening the academic experience overall.
• **Academic Facility Upgrades** and Planning Studies have initiated the process of translating master planning goals into campus upgrades that respond to the university’s academic program needs.

This master plan update builds on the work completed in 2007 by generating conceptual building footprints for a McIver replacement, the expansion of the Jackson Library, and the proposed new student services building. These conceptual footprints reinforce campus connections and promote the goal of integrating student living and learning environments.

**Expanding Living-Learning Communities**

The Strategic Housing Plan 2020, published in 2009, emphasized the value of on-campus living for improving student learning and retention rates. Freshmen who lived on campus their first semester were more likely to return for their sophomore year and persist in their education at UNCG for four years. For this reason, the Strategic Housing Plan articulated the goal of housing nearly half of undergraduates (forty-eight percent) by 2020, up from thirty-one percent in 2008. To complement this goal, the plan recommends bolstering residential life through campus learning communities and improvements to the campus physical environment. In support of these goals, UNCG has undertaken a number of initiatives, including:

• Renovation of the Quadrangle
• Construction of new housing at the periphery of campus:
  • The Jefferson Suites residence hall at the intersection of Spring Garden and Kenilworth Streets; and
  • The Spartan Village housing south of Lee Street

While this growth in residential life on the campus periphery supports the goal of creating more living-learning communities, it presents challenges in terms of knitting those communities together into a single campus system. This master plan update establishes a campus design framework to ensure campus cohesion and connectivity.

**Promoting Health and Wellness**

In addition to the Strategic Housing Plan, a variety of planning efforts are shaping the future of academic and recreational opportunities on campus in support of student success. The health and wellness of the campus community is a major factor in ensuring that faculty and staff are able to work effectively and meet the needs of the student population as well as in preparing students to engage in learning more successfully. The following represent university efforts to strengthen campus wellness.

• A 2008 **Campus Recreation Needs Assessment** showcased the need for additional recreational facilities to meet student demand and facilitate improved campus wellness. A Student Recreation Center will be built on West Lee Street to meet some of these recreational needs and will anchor student life in the expansion of campus to the south.

• A 2010 **Athletic Program Needs Assessment** determined that over the next ten years the Athletics Program will be in need of 229,000 GSF of indoor space, up from current facilities of 83,000 GSF. Additional outdoor facilities and repairs to existing facilities are also anticipated.

• The UNCG 2008 **Childcare/Research & Academic Building Feasibility Study** evaluated potential sites for a new consolidated childcare, observation, research, and office space. The selected site maximized accessibility, visibility, potential to blend in with the neighborhood and campus fabric, parking availability, and economic efficiency.
Place

The 260 acres of the UNCG campus and its surrounding environs represent a distinct “district” within the City of Greensboro. The primary roadways connecting UNCG to its surroundings include Spring Garden Street, Market Street, Aycock Street and Friendly Avenue. With the southern expansion of the campus, Lee Street has become an important mode of access for the campus as well. Lee Street provides direct access to Interstate 40 to the west, and to the east, Lee Street also connects the UNCG campus with the Gateway University Research Park South Campus and Union Square Campus.

The beauty of the UNCG campus grounds and the intimate relationship it has fostered among its academic, residential, and student life activities is one of its most valuable features. From the natural beauty surrounding streams running through the northeast quadrant to the historic beauty of the recently renovated Quadrangle, to the more contemporary design of the Elliott University Center, the character of the campus is reinforced by its architecture, landscape design and networks of paths and roads. These elements each contribute to UNCG’s sense of place individually, but they also complement each other and combine to create a memorable and meaningful campus experience. As UNCG continues to expand its campus, future residential and student life facilities will require new approaches to integrate them into the campus culture and community.
Campus Architectural Character
The built character of the UNCG campus has been shaped slowly over time, starting in the 1890s and continuing to the present, with new buildings added to the campus every decade. The earliest campus buildings established a palette of materials that have been carried through and reinterpreted in later building styles. The Foust Building (ca. 1892), North Spencer Residence Hall (ca. 1904), Forney Building (ca. 1906), and South Spencer Residence Hall (ca. 1907) all incorporated brick as the primary building material with distinctive light stone detailing around entrances, windows, and roof lines. Building stories are legible from the exterior due to the regular placement of windows across the façade and decorative details that mark the transition from the ground floor to the first story. These buildings also establish columns as an important architectural feature, an element that has been carried through many later campus buildings.

The architectural character of the central College Avenue axis of campus was anchored in the south and north in the 1920s with the construction of the Curry Building (1926) at the southern terminus of College Avenue on Spring Garden Street and the completion of the Guilford and Mary Foust Residence Halls in 1928 where College Avenue meets North Drive in the north. The addition of the Alumni House in 1935, the Petty Science Building in 1940, the construction of the original wing of the Jackson Library in 1950, and the expansion of the Home Economics Building (now the Stone Building) in 1951 completed the architectural definition of the central campus corridor.
The Quadrangle, completed in 1923, carries a historic architectural character into the western side of campus. In combination with the residence halls along College Avenue, the Quadrangle defines the architectural quality of the original campus residential core.

The architectural character of the campus has been updated over the years as spaces and buildings use the original palette of materials in more contemporary forms.

The Taylor Garden, completed in 1952-1953, showcases how blurring the line between landscape and architecture can generate a strong aesthetic character for the campus. However, the Mossman Building, completed in 1975, and the Bryan Building, completed in 1979, are both somewhat out of character with the existing campus architecture. The Music Building, completed in 1999, anchors the northern edge of campus where Mclver Street meets West Market Street. The Sullivan Science Building, opened in 2003, deviates from the historic facades on the UNCG campus and helps achieve a contemporary aesthetic while maintaining references to the past. The Moore Humanities and Research Administration Building, completed in 2006, helps to anchor the Forest Street Corridor with its rounded portico emphasized by contemporary columns. The building combines historic references with a contemporary details that evokes the spirit of the campus. The EUC Expansions of 2001 (major addition to west) and 2003 (renovation and addition to east) strengthened the connection between the EUC and the residential and recreational facilities to the north. Its rectilinear columns provide a striking contrast to the round columns that are more prevalent in campus architecture.
Community

Strengthening the campus community and its relationship with its neighbors is key to the success of this master plan update. An important driver of this plan is the opportunity to establish new campus residences within the Lee Street Corridor and the need to act as responsible stewards of development that will impact both the campus and the Glenwood neighborhood. Through an inclusive, transparent planning process, UNCG engaged with its campus community and built on the existing groundwork of neighborhood outreach it had established through its Memorandum of Understanding with the Glenwood neighborhood.
The City of Greensboro has 277,080 residents and is home to seven college campuses, including UNCG, North Carolina Agricultural and Technical State University (NC A&T), Greensboro College, Guilford College, Elon Law School, Bennett College for Women and Guilford Technical Community College. Taken together, these campuses provide significant educational resources to the city.
and contribute to local economic growth. They also present opportunities for collaboration, as evidenced by the recent partnership formed between UNCG and NC A&T to develop the Gateway University Research Park and the joint Union Square campus.

Greensboro’s location at the headwaters of the Cape Fear River Basin means that its economic activity and transportation networks directly impact a regional watershed system. Efforts to develop multi-modal transportation networks along major arteries and supplemented by a network of greenways and bicycle trails is one step toward increasing sustainability in the city as a whole.

The location of the UNCG campus - one mile west of downtown Greensboro along a major transportation corridor targeted for revitalization, nestled within a stream network feeding into the Cape Fear River Basin, and surrounded by historic residential communities – has required the university to use a multi-layered approach to sustainability that respects the goals and aspirations of the city and its neighbors. The proximity of the campus to the Piedmont Triad Airport ensures that UNCG is a key educational resource and economic anchor for the Piedmont Triad region.
Mobility

Greensboro

An effective partnership with the City of Greensboro has been and will continue to be essential for the successful transformation of the Lee Street Corridor. The city government's emphasis on developing multi-modal transportation networks, particularly along the High Point Road - West Lee Street Corridor, complements UNCG's vision for its expansion to the south.

The High Point Road/West Lee Street Streetscape Implementation Plan (2010) offers design recommendations that will transform the roadway from a vehicular thoroughfare into a multi-modal transit corridor. The design plan includes thirteen new bus shelters, improved street and sidewalk lighting, landscape, shared lanes for bicycles and fifteen new signalized intersections including three adjacent to UNCG.

The 2006 Greensboro Bicycle, Pedestrian and Greenway Plan envisions an integrated bicycle and pedestrian network linking the City with the UNCG campus. The plan's recommendations include the following:

- implementing bike lanes on all roads passing through the UNCG campus (as was recently done on Spring Garden Street);
- installing bike lanes along West Market Street and West Friendly Avenue to connect the northern campus area to the central business district;
- developing Walker Avenue as a bicycle boulevard; and
- improving the two railroad crossings at Lee Street and Aycock and Tate Streets, respectively.

Campus Access and Connections

The campus is nestled among established residential neighborhoods that each have a unique character and identity. The North Carolina Railroad Corridor is a barrier to UNCG's southern expansion. A recently-opened pedestrian underpass at Forest Street is the critical connector between the existing campus and new development along Lee Street. In addition to the accessibility provided by connector roads, UNCG also enjoys its proximity to a small, pedestrian-scaled node of restaurants and retail uses along Tate Street.

Gateways

Formal gateways mark the main entrances to the UNCG campus along the northern, eastern, and western boundaries of campus through landscaping and low brick walls adorned with the UNCG seal and the words “University of North Carolina at Greensboro.” With UNCG's expansion along the Lee Street Corridor, new gateways at the corner of Lee Street and Tate Street, the corner of Lee Street and Aycock Street, and the entrance to the pedestrian underpass at Forest Street will need to be defined through landscape design and, where appropriate, architectural character as well.
Sustainable Transportation Planning
The enviable accessibility of the campus within the City of Greensboro is augmented by the attention the university has given to its structure and accessibility within campus boundaries. Parking Operations and Campus Access Management (POCAM) has been particularly effective in adopting travel demand management strategies that have increased the use of public transit, bicycling, and walking among campus commuters. The result has been a reduction in greenhouse gas emissions associated with campus activity. More information on this reduction is available in the Resources section. UNCG’s approach to transportation planning has resulted in an ever-improving network of bicycle resources, pedestrian paths and sidewalks. Current transportation planning efforts are expanding these efforts and improvements.

Pedestrian and Bicycle Access
UNCG is compact and walkable, with nearly all of the campus within a ten minute walk from the centrally-located Jackson Library. While the university has made progress in strengthening north-south pedestrian connections by closing College Avenue and part of McIver Street to vehicles, east-west pedestrian routes are not yet well defined, and buildings situated away from College Avenue or McIver Street are not well-integrated into the campus fabric.

The 2012 Campus Transportation Plan Update identified areas on and around campus needing improved bicycle and pedestrian safety. On campus, there is a need for more bicycle racks and covered parking, potentially located in conjunction with existing parking structures. The plan makes the following general recommendations.

- A complete campus bicycle network that combines bike lanes along Spring Garden and Tate Street south of Lee Street with a system of sharrows and off-road campus connectors through the existing campus and bicycle boulevards that provide access from the surrounding communities.
- Provision of amenities to serve the network such as permanent bike racks; covered bike storage; bicycle stations with showers, covered parking and bike pumps; and a campus-wide bicycle sharing program.
- Improvement and construction of new sidewalks and pathways to establish a complete pedestrian network throughout the existing campus and south of the rail tracks.
- Enhancements to the two connections under the rail line at Aycock and Tate Streets at Lee Street.
- Enhancement of Aycock Street as a pedestrian gateway through the use of a landscaped median and pedestrian crossing signals.

Transit Access
In the fall of 2006, UNCG joined with Greensboro’s five other institutions of higher education to establish the Higher Education Area Transit (HEAT) bus service. Fare-free to students and staff, the HEAT buses travel several routes and connect UNCG — via a transit hub at Jackson Library and Walker Avenue — to nearby residential neighborhoods as well as the five colleges. Initial ridership and parking numbers indicate that it has been successful in curbing parking demand. In order to better serve the new campus developments south of Lee Street, UNCG has also extended its Spartan Chariot shuttle route to Lee and Union Streets to serve the new Spartan Village residential complex.
Existing Transit Accessibility for UNCG Campus
The 2012 Transportation Master Plan update recommends the following:

- an express shuttle service to run in the opposite direction of the current service and serve the Lee Street Corridor
- maintaining the Forest Street underpass as an appropriate location for a future commuter rail station
- increasing the use of alternative transportation
- establishing a second campus transit hub at the intersection of Lee Street and Glenwood Avenue.

Vehicular Access
UNCG benefits from having convenient and direct vehicular access to the City of Greensboro and regional roadways. The 2012 update preserves the limited vehicular access established in response to its 2001 master plan update. Vehicular access to the heart of campus, particularly along College Avenue, is restricted to service vehicles such as trucks and golf carts.

To improve safety at major crossings for pedestrians, bicyclists and drivers, UNCG should work with the City of Greensboro to provide safe crossings along Aycock Street, a major campus access point. The 2012 update recommends installing high visibility crosswalks at major intersections, including all signalized crossings of Aycock Street, curb extensions around on-street parking along Aycock and Walker Streets, PedAdvance signals along Aycock and Lee Streets, and bicycle sharrows along key roadways.

Parking Access
UNCG currently has approximately 6,600 parking spaces on campus, about half of which are in surface parking lots and one-third of which are in structured parking decks. Most of this parking is clustered within the southern quadrant of campus. The university provides the remaining required parking in park-and-ride lots.

The university has made great strides in using transportation demand strategies to curb the need for parking on campus. Parking occupancy dropped from ninety-five percent to eighty-six percent between 2005 and 2012 despite enrollment growth. This reduction in parking demand in response to successful travel demand management strategies suggests that current parking facilities combined with remote park and ride and planned Spartan Village parking will be able to meet projected demand through 2018.

The 2012 Transportation Plan recommends the following:

- maintaining the HEAT bus system,
- limiting on-street parking along Lee and Aycock Streets,
- creating a new ZipCar location in Spartan Village,
- developing a new transit hub in Spartan Village,
- providing preferred parking in decks for carpoolers and vanpoolers, and
- encouraging PART to introduce direct service to campus

Service Access
The preservation of service along College Avenue and McIver Street while closing those streets to regular vehicular traffic has contributed to the strong character of the UNCG campus. In other areas of campus, however, the co-mingling of vehicular, service, and pedestrian paths create challenges for maintaining a pedestrian-friendly environment. This challenge is most prominent along Forest Street and the area between Spring Garden Street and Oakland Avenue.
Land Use

Campus Land Use Patterns
The structure of the UNCG campus is defined by its patterns of building and land use and by pedestrian movement rather than vehicular circulation.

Pedestrian Corridors
The results of the MyCampus mapping survey clearly illustrate the three main north-south pedestrian corridors that organize the UNCG campus. In addition, a single east-west pedestrian corridor is evident along Spring Garden Street.

North-South Pedestrian Corridors

Academic Corridor
The academic corridor along McIver Street provides points of connection with the northern McIver Street gateway as well as the College Hill Historic District and the local restaurants and businesses along Tate Street.

Academic-Student Life Corridor
The academic-student life corridor running along the College Avenue pedestrian mall defines the character of the campus core. By knitting together the student-life core with the academic facilities, this corridor functions as the historic heart of the campus.

Residential-Student Life Corridor
Pedestrian and vehicular circulation remains mingled along much of the residential-student life corridor. Within this corridor, Forest Street presents the most direct opportunity to forge a north-south pedestrian connection that extends into the Lee Street Corridor.
East-West Pathways
East-west paths through campus are discontinuous and move between interior hallways and exterior paths. Existing and potential connectors include the following.

- Spring Garden Street, the primary east-west campus connector. Its role as a major vehicular thoroughfare means that additional pedestrian connections are still needed.
- Walker Avenue, which provides transit and pedestrian access from the west. The potential of the path as a true campus connector is limited by the library tower fronting onto the Walker Street transit hub.
- A pedestrian walkway proposed in a 2007 plan by landscape architect Susan Hatchell would run parallel to Spring Garden Street as a southern pedestrian connection.

Use Clusters
The structure of UNCG's campus is defined by its patterns of building and land use and by pedestrian movement rather than vehicular circulation. Buildings are arranged in clusters of academic, student life and residential uses with a western zone of recreational uses. In the existing historic campus, clusters are organized along three north-south spines. South of Spring Garden Street, however, the campus structure is strongly influenced by the east-west orientation of West Lee Street and the rail corridor.

Academic Clusters
Academic clusters are located along the McIver Pedestrian Mall and along Spring Garden Street. The Health and Human Performance Complex (HHP) remains separated from both academic clusters but its location enables it to bridge between academic and recreational uses through its emphasis on the academic study of recreation and health.

Student Life Cluster
A cluster of buildings that support student life and the student experience on campus is located in the center of the existing UNCG campus. Ensuring that new residential developments along Spring Garden and Lee Streets remain connected with these core student life buildings will be critical to the success of UNCG's campus expansion.

Residential Clusters
Three distinct residential clusters have developed on the UNCG campus. The oldest cluster extends north from the Quadrangle and includes the historic residence halls along the College Avenue Pedestrian Mall. The second cluster has developed at the western edge of Spring Garden Street. UNCG has created a third residential cluster in the Lee Street Corridor with its 2010 Lofts on Lee development and the 2013 Spartan Village residential complex. The challenge of connecting this southern cluster of residential buildings back into the campus core is a central issue addressed in this plan.

Recreation Zone
In addition to the three main use clusters identified above, a zone of recreational activity has developed along the western edge of campus. The zone continues to the south of Walker Street with the baseball stadium and recreation field. Plans to add recreation fields along Haywood Street at Aycock and a new student recreation center along Lee Street between Neal and McCormick Streets will effectively extend this zone down to the Lee Street Corridor and reflect the existing structure of campus to the south.
Lee Street Corridor Land Use Context

Within the main UNCG campus north of Lee Street, land use considerations are largely confined to the distribution of campus uses within buildings. As the university expands into the Lee Street Corridor in the south, it must connect back into the existing use patterns on campus and work within a more complex zoning framework. Land located within the UNCG expansion boundaries as defined by the Revised Vision Plan is divided among eight distinct zoning district categories. In 2011, the City of Greensboro approved a zoning amendment to introduce a Planned Unit Development (PUD) District to the area where the new Spartan Village housing has been constructed. The university’s outreach efforts were integral to the success of the zoning change, and the MOU agreement with the Glenwood neighborhood established the basis of the zoning regulations. The conditions of approval were:

- The property be developed substantially in conformance with the UNCG Mixed Use Village Housing – Phase 1 Plan dated July 11, 2011; and
- All buildings should be constructed using no less than seventy-five percent brick, masonry, hardie-board or stucco.

In order to remain in conformance with the MOU agreement, the UNCG plan must meet the following conditions:

- Development plans must be located within the boundary established on the Revised Vision Plan.
- UNCG buildings within seventy-five feet of single family homes cannot exceed two stories in height.
- Structures adjoining West Lee Street may not exceed four stories in height.
- UNCG will develop a multi-modal transportation plan using transportation demand management strategies to achieve reduced minimum but sufficient parking requirements.
- Ground floor spaces of mixed use buildings will be marketed as commercial space at attractive lease rates, with priority given to local businesses.

As UNCG continues into Phases 2 and 3 of its development plans for the Lee Street Corridor, it will need to consider whether an expansion of the Planned Unit Development District is appropriate in order to realize the vision for a lively mixed-use district along Lee Street.
Landscape

The exceptional quality and character of the UNCG campus landscape creates important opportunities for the master plan update. The landscape serves as the connective tissue in the existing campus structure and will provide the connective tissue to the campus expansion. Not only does the character of the landscape provide opportunities to develop a cohesive identity for the expanded campus, but it also provides a visual language that can be define the character of the connective pathways leading to the Lee Street Corridor. The principles of sustainability that permeate the campus landscape design and maintenance can be strengthened and extended in the master plan.

Campus Environment and Landscape Planning

UNC Greensboro has demonstrated its excellence in sustainable landscape design and maintenance through meeting the standards of the Tree Campus USA program since 2009. It has been recognized as a leader in landscape excellence by the Professional Grounds Management Society, which honored the campus with a Grand Award for Urban University Grounds in 2012. These achievements are even more remarkable because the university received its original campus land because the poor soil quality had made it unproductive in its previous use as farmland. Improving soil quality through fertilization and nutrient provision is critical for the preservation and expansion of the campus landscape.

Landscape Character and Materiality

UNCG has established a strong identity and character in its existing campus landscape. While the campus landscape as a whole promotes a strong, coherent identity for UNCG, the character and materiality of the landscape varies considerably, and this variation contributes to the overall beauty of the campus. The structure of the campus open space network is organized around four primary typologies that account for the largest and most imageable open spaces on campus. In addition, these spaces are knitted together with a secondary network of smaller, more intimate landscape that softens the transition between indoor and outdoor environments and between pedestrian and vehicular spaces.

The primary landscape typologies are:

- **Natural Forested Areas**
- **Formal Greens** that define the character of the campus core
- **Recreation landscapes**, including the playing fields and golf course
- **Pedestrian Malls** that maintain a clearly defined pedestrian environment and contribute to a strong campus character and identity

A secondary set of landscape typologies includes:

- **Plazas** with trees, water elements, seating and decorative stone elements
- **Paths and bridges** featuring decorative paving and sculptural elements.
- **Landscape along important roadways** in campus that provides a transition between the pedestrian environment of the sidewalk and the vehicular environment of the street.
Existing Campus Landscape Structure
Sustainability has been an important issue to the UNCG campus community for over a decade, and in recent years the efforts of individuals and departments have coalesced into a more comprehensive framework for resource sustainability on the UNCG campus.

Energy and Waste

**President’s Sustainability Plan**

In 2011, Chancellor Linda Brady signed the American College and University Presidents Climate Commitment (ACUPCC), committing the university to complete an emissions inventory, take immediate steps to reduce greenhouse gas emissions by choosing from a list of short-term actions, create a Climate Action Plan, integrate sustainability into the curriculum and infuse ACUPCC concepts into the educational experience, and make all of the commitments and progress reports publicly available.

**Climate Action Plan**

Part of the ACUPCC, the UNCG Climate Action Plan (CAP) is geared towards helping UNCG
achieve its goal of climate neutrality by 2050. In the CAP, UNCG proposes education and outreach to provide the campus community with information on how to adopt sustainable habits and promote a culture of sustainability. Additionally, new university policies will address new building energy targets, new campus vehicles, and other practices. Finally, the CAP addresses possible funding sources with which to implement these goals.

### Short – to medium – term project & policy proposals from the CAP (ENERGY)

<table>
<thead>
<tr>
<th>Proposed project</th>
<th>Approximate GHG Reduction vs. BAU (mtCO2e)</th>
<th>Additional direct costs to UNCG</th>
<th>Estimated payback period</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC energy efficiency construction standards (SB 668)</td>
<td>11,000 annually by 2050</td>
<td>None</td>
<td>-</td>
</tr>
<tr>
<td>New Construction Energy Efficiency Beyond the State Mandate (SB 668)</td>
<td>4,000 annually, averaged through 2050</td>
<td>$2.00 – 4.00 per gsf</td>
<td>10 years</td>
</tr>
<tr>
<td>Space Planning and Management</td>
<td>3,620 annually, averaged through 2050</td>
<td>Minimal</td>
<td>&lt;1 year</td>
</tr>
<tr>
<td>Energy Conservation in Existing Buildings</td>
<td>4,730 annually, averaged through 2050</td>
<td>$8 million</td>
<td>14 years</td>
</tr>
<tr>
<td>Behavior Change Initiatives</td>
<td>1,860 annually, averaged through 2050</td>
<td>Minimal</td>
<td>5 years</td>
</tr>
<tr>
<td>Steam Distribution Improvements</td>
<td>340 annually, averaged through 2050</td>
<td>$200,000</td>
<td>7 years</td>
</tr>
<tr>
<td>Steam Plant Improvements</td>
<td>1,170 annually, averaged through 2050</td>
<td>$500,000</td>
<td>11 years</td>
</tr>
<tr>
<td>Chiller Plant Improvements</td>
<td>310 annually, averaged through 2050</td>
<td>$75,000</td>
<td>2 years</td>
</tr>
</tbody>
</table>
Short – to medium – term project & policy proposals from the CAP (MATERIALS MANAGEMENT)

<table>
<thead>
<tr>
<th>Proposed project</th>
<th>Approximate GHG Reduction vs. BAU (mt-CO2e)</th>
<th>Additional direct costs to UNCG</th>
<th>Estimated pay-back period</th>
</tr>
</thead>
</table>
| Expanded education & marketing of recycling and reuse programs:  
  - More and better locations of recycling bins,  
  - More visible bins,  
  - Bins for donation, e-waste, etc. | 5% reduction in landfill waste every 5 years | Minimal | <1 year |

Campus Sustainability Achievements: Energy and Waste

Over the last decade, UNCG has undertaken a variety of sustainable initiatives that have collectively embedded the value of sustainability into its built environment. They include the following:

1. Three buildings with LEED certification of Silver or higher:  
   - The Quadrangle Renovation: Gold certification (2010)  
   - The School of Education Building: LEED Gold Certification  
   - The Jefferson Suites Housing Complex: LEED Silver Certification.

2. By 2018, ten new buildings on campus are anticipated to meet a minimum of LEED Silver certification.

3. Five building upgrades resulted in a cumulative 8.6 percent reduction in campus energy expenditure:  
   - Bryan

4. Replacement of 1200 lighting fixtures with high-efficiency fixtures in three residence halls.

5. Initiation of sustainable dining practices in Moran Commons including:  
   - Trayless dining  
   - Project Clean Plate  
   - The Steps Renewable Packaging Solutions program  
   - A Sustainable Purchasing Initiative that includes local purchasing, fair trade coffee and sustainable seafood programs.
Emissions

Travel Demand Management
Taken together, the Campus Transportation Plan of 2006, its 2012 Update and the Technical Memorandum issued in 2013 provide a roadmap for integrating UNCG sustainability goals into the campus transportation network through successful deployment of travel demand management strategies.

Since 2006, UNCG since has improved circulation by investing in transportation demand management strategies such as:

- coordinating with the Higher Education Area Transit (HEAT) shuttle bus system,
- partnering with the Greensboro Transit Authority (GTA) to provide students fare-free access to GTA buses with their student ID cards; and,
- limiting vehicular access to the center of campus, specifically along College Avenue.

The success of these travel demand management strategies has resulted in a steady decline of parking permit sales since 2006. This loss in revenue challenges the campus parking system. Strategies to offset the revenue loss include potentially raising the cost of parking permits, increasing permit sales to actual parking capacity, and implementing online permit sales with license plate recognition.

This decline in permit sales corresponds to a decrease in the use of single passenger vehicles for commuting and an increase in transit ridership and bicycling to campus. As a result, travel demand management strategies have had a critical impact on reducing CO2 emissions on campus. An expansion of these programs is estimated to reduce campus emissions by 970 million tons of carbon dioxide equivalent annually.

Short – to medium – term project & policy proposals from the CAP (TRANSPORTATION)

<table>
<thead>
<tr>
<th>Proposed project</th>
<th>Approximate GHG Reduction vs. BAU (mtCO2e)</th>
<th>Additional direct costs to UNCG</th>
<th>Estimated pay-back period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expanded education &amp; marketing of TDM programs</td>
<td>970 annually</td>
<td>Minimal</td>
<td>&lt;1 year</td>
</tr>
<tr>
<td>Complete Streets policy</td>
<td>To be determined</td>
<td>To be determined</td>
<td></td>
</tr>
<tr>
<td>Encourage affordable housing development for employees &amp; students with families within walking distance of campus</td>
<td>To be determined</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Rail stop at/near underpass</td>
<td>To be determined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Campus Sustainability Achievements: Emissions

1. Greenhouse gases from commuting students and employees have dropped more than seventeen percent since 2009.
2. UNCG’s travel demand management strategies are projected to reduce CO2 emissions on campus between 3.4 and 3.8 metric tons by 2020.

Water and Natural Systems

As UNCG expands to the South, it encounters small glens and green spaces that are likely watered by underground streams feeding into Mile Run Creek to the south. This creek is located at a low point in the topography south of campus, which means that it absorbs run-off from Lee and Aycock Streets as well as future stormwater runoff from the UNCG campus expansion. UNCG’s commitment to promoting sustainability in its campus environment and systems means that it carefully considers the environmental impact of its natural landscape planning and design including the potential impact of invasive species as well as stormwater management. The UNCG design and construction guidelines recommend the use of native plant species in any new landscape project. UNCG also expressed an interest in promoting stormwater management in landscape design along the Lee Street Corridor.
### Proposed project & Policy Proposals from the CAP (WATER)

<table>
<thead>
<tr>
<th>Proposed project</th>
<th>Approximate GHG Reduction vs. BAU (mtCO2e)</th>
<th>Additional direct costs to UNCG</th>
<th>Estimated pay-back period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emphasize native and drought tolerant species for landscaping</td>
<td>To be determined</td>
<td>minimal</td>
<td></td>
</tr>
<tr>
<td>Gray water / rainwater harvest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC condensate water capture</td>
<td>8000 gpd (at peak in summer)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living machine water treatment system (LONG TERM, but need to begin consideration of locations now)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Campus Sustainability Achievements: Water and Natural Systems

1. The new School of Education building’s design allows for water saving rates of around fifty percent

2. Initiation of sustainable landscape practices, including:
   - Use of organic and/or slow release fertilizers
   - Prioritization of drought resistant plants
   - Converting tractors to bio-diesel fuel

3. Campus-wide programs to reduce water consumption and loss, including:
   - Retrofit or install automatic flush valves in approximately eighty-five percent of toilets across campus
   - Retrofit approximately fifty percent of faucets to automatic and addition of faucet aerators to reduce water flow to half a gallon per minute
   - Preventive maintenance, monitoring and repair of leaks and monitoring of consumption
   - Campus outreach and education
   - Switching to foam soap in all public and community bathrooms
   - Retrofit Moran Commons with more efficient dishwashers
   - Increased purchase of pre-prepared and pre-washed produce
The economic sustainability of the UNCG campus is of primary importance for ensuring its ability to fulfill its mission. In addition, as the university expands into the Lee Street Corridor, the economic sustainability of the Glenwood neighborhood is becoming increasingly important. The UNCG partnership with the Glenwood neighborhood and associated MOU agreement provide a guide for ensuring the joint economic stability and sustainability of both the university and the neighborhood.

### Capital Priorities

The UNCG approach to prioritizing capital expenditures is guided by the goal of improving student success. Recent and planned construction of residential and recreational facilities will allow UNCG to offer additional amenities to the living-learning environment. At the same time, upgrading the university's academic facilities to accommodate new approaches to teaching and learning remains a top priority. This plan supports these goals by using a resource-sensitive landscape approach to strengthening campus connections while providing a flexible framework for future physical expansion within the Lee Street Corridor.

The provision of ground-floor retail space and off-street parking within the Lee Street Corridor supports economic development serving both the campus and the community. Design guidelines that promote a walkable, mixed-use urban district within the corridor will improve pedestrian safety and improve the economic viability of neighborhood businesses within the vicinity of UNCG's campus expansion.
Partnerships

Lee Street Corridor
The university’s strong relationship with the City of Greensboro and its surrounding communities has laid the groundwork for a campus expansion that responds to community concerns, respects neighborhood boundaries, and envisions future campus amenities that serve both the campus community and the adjacent neighborhood. The university’s strategic partnership with the Glenwood neighborhood is reflected in the Memorandum of Understanding (MOU) as well as the vocal community support for the university’s recommended zoning changes. The MOU has been a guiding document for this master plan update, which works to balance the needs of the campus as a whole with the priorities of the adjacent community. The campus has also worked closely with the City of Greensboro to ensure that its planning efforts remain in line with the city’s vision for the Lee Street Corridor.

Gateway University Research Park
UNCG has also demonstrated a commitment to partnerships with area universities to generate new academic and research opportunities for its students. Gateway University Research Park is a collaboration between North Carolina A&T State University (NC A&T) and UNCG designed to facilitate interaction between world-class researchers and businesses. The research park is designed to enable cutting-edge work in the life and physical sciences, engineering, technology and other applied science areas with the intent of moving scientific discoveries from the lab to the marketplace benefitting the local community, region, and North Carolina. Gateway University Research Park has two seventy-five acre campuses – one in the northeast section of Greensboro along the U.S. Highway 29 corridor (future Interstate 785) and the other near the I-40/I-85 corridor. Both the north and south campuses have capacity for future development if needed.

Union Square Campus
Further demonstrating its commitment to collaborating with local partners, UNCG is one of seven Greensboro-area institutions coming together to develop the Union Square Campus, a proposed shared facility on a seven acre site at Lee and South Elm Streets in downtown Greensboro. The project is designed to drive economic development and capture efficiencies of common space usage for UNCG, six partner universities, and business, foundations, and government entities. The first phase of development will be focused on healthcare professions and is slated to include a state-of-the-art healthcare simulation laboratory for students pursuing degrees at the Associate, Bachelor, and Doctoral levels. It will include space for the UNCG Doctor in Nursing Practice program. Subsequent phases will support programs in leadership, community healthcare outreach, and pre-K through eighth grade education innovation.
DESIGN PRINCIPLES
DESIGN PRINCIPLES

The UNCG Campus Design Principles respect the existing comprehensive campus design, which is memorable and unique, responsive to functional and environmental constraints, and in which all parts of the campus relate to each other to establish an integrated whole. Introducing campus design principles will help encourage visual unity and functional consistency in the overall development of the campus built environment over time, while at the same time creating a distinctive and pervasive sense of place appropriate for UNCG’s campus. The principles do not prescribe specific designs for the campus, but rather establish a design direction and series of performance objectives for landscape and architectural character.

UNCG Campus Design Principles:

1. UNCG’s identity encompasses the whole of its built environment and all that is created by it.
2. Building character should allow for continued design evolution with respect for campus history.
3. Buildings should have appropriate mass and form yet be human scaled and pedestrian oriented.
4. UNCG’s transitional spaces are important for continuity and creating connections through campus.
5. The use of color and materials should be balanced to weave buildings into the existing campus fabric.
6. The values of permanence and maintainability should be integrated into building aesthetics while promoting practical approaches to operational requirements.
Identity

UNCG's identity encompasses the whole of its built environment and all that is created by it.

Just as the university is a collection of diverse people, the built environment should reflect variation while simultaneously promoting a sense of community. Outdoor spaces provide the connectivity and framework for how the campus is experienced as a whole. These spaces must be intentionally considered and appropriately defined by not only the built ‘edges’ but the landscape and hardscape, materials, pathways and the objects within them and the sequence of movement among them. To promote a cohesive identity, UNCG should:

- Provide for a variety of spaces – public/private, large/intimate to allow and encourage both planned and chance interactions.
- Consider the nature of the spaces being developed and built, including formal quads, natural gardens and urban streets, in order to develop the appropriate relationship of building use and site and the visibility and interaction between them.
- Promote continuity of objects, materials, forms and colors in the landscape to strengthen the overall campus fabric and contribute to the formation of a sense of community and sense of place.
- Develop vistas to significant campus focal points for way finding as well as enriching the campus experience.
Campus Precedents: Identity

The William E. Moran Commons and Plaza flanked by a formal hard edge on the east and the softer topography and landscape to the west provides a great singular example of variety in spaces. Smaller gathering areas along the periphery of the hardscape in the hillside and balconies overlooking the larger plaza ensure an active public space.

Small “retreats” located at the edge of the McIver Street pedestrian mall create and enhance opportunities for informal interactions.
Intimate locations such as the space between Taylor and Aycock Auditorium or the path alongside the School of Music building allow for moments of solitude and quiet reflection.

Great vistas exist in both directions along College Ave. Future development should attempt to take advantage of existing landmarks such as the steam plant smokestack, which is a long-standing visual landmark for the campus visible even from the Lee Street Corridor.
Building character should allow for continued design evolution with respect for campus history.

The campus does not seek to mandate any particular style for buildings on campus and has allowed projects to seek their own identity.

- Building design should appropriately reflect its use, time and place within the campus context. Each project should include a review and discussion regarding its desired or intended stature on campus.
- Buildings should be individualistic but also mindful of the overall community within which they belong. Design references to materials, forms and colors help form a bond of continuity among buildings and over time.
- Buildings should appropriately address contemporary design and technologies while being respectful of the historical context of the campus. UNCG does not wish to assemble a campus of ‘period pieces.’

The earliest buildings on campus did not attempt to maintain a specific style; some such as Forney were simple and classical in form and detail while buildings such as Foust are more robust in both form and filigree.
A renovation to Shaw Hall used a stylized cornice on the adjacent additions to maintain the existing character while being visually distinct from the old cornice.
The Moore Humanities and Research Administration Building creates character in a traditional sense with brick reveals, precast banding and material patterning. Its use of columns to mark its main entrance references older campus architecture as well. The proportions of the windows, doors, and arch elements were carefully considered to ensure the building would respect the desired campus character.

The School of Education Building employs sun shading devices and an inset first level to create visual interest and make its internal floor structure visible on its facade.
Spencer Hall lacks a cohesiveness in design clarity with a metal structure framing its main entrance and a mix of pitched roofs and bulky towers, a stark contrast to the preferred campus character.

The Jackson Library tower is overwhelming in its consistency and greets the Walker Avenue transit hub with an imposing blank wall causing the building to be out of harmony with the campus.
Human Scale and Pedestrian Orientation

Buildings should have appropriate mass and form yet be human scaled and pedestrian oriented.

- Buildings should always maintain elements of human scale and appropriate relationships of overall massing and fenestration treatment.
- Fenestration and patterning should offer insights to the building use including residential, classroom, laboratory, offices, food service, and gathering where appropriate. Internal activities should be made visible and shared with the outdoor environment.
- As much as possible, buildings and windows should be oriented to reduce energy loss. In selecting glazing that reduces heat and energy loss, priority should be given to glazing that does not reduce visibility into the buildings. Visibility encourages interaction and promotes a sense of safety. Tinted color glazing is not desired on campus. A slight gray tint for shading purposes is the only color allowed.
- Larger buildings should be subdivided into component parts so they are not dominated by a singular mass.
- All buildings should be designed to promote universal access.
Campus Precedents: Human Scale and Pedestrian Orientation

The inset glass wall, columns, multiple second floor balconies and sun shades keep the large wall of Moran Commons from becoming overbearing and also provide visual interaction between inside and out.

Vertical as well as horizontal fenestration help to define very human scaled spaces within a larger open area at the Elliott University Center.
The Brown Building represents a classical approach to articulating the façade and giving scale to the building and entrance while addressing the natural site topography through landscaping and a wide staircase.

Bailey and Jamison Halls work together to form a street edge and backdrop to the sports fields.
The Cone Hall architecture makes no attempt to address its mass and scale. However, it is very appropriately located at a lower elevation and surrounded by large trees that help mask its size.

The elevation of the Graham Building is not sufficiently articulated or fenestrated in a manner that helps reduce the overpowering impact of these walls.
Transitional Spaces

Transitional spaces are important for continuity and creating connections through campus.

Some of the more memorable features at UNCG are its bridges and porches. Transitional spaces such as these where individuals can move from outdoor to indoor are frequent gathering areas.

- Within building interiors, lobbies at primary entrance ways should encourage gathering through provision of ample space and furniture to accommodate accidental meetings and small gatherings.
- Along building exteriors, porches, arcades and plazas at primary entries should also be celebrated and usable to encourage informal interaction and contribute to a dynamic pedestrian environment.
- Small gardens and landscaped paths with seating along secondary entrances help to create a network of gathering spaces around campus and provide greater variety in the types of gathering space that is available.
- Given the UNCG topography, the need for pedestrian bridges exists and should be exploited as design opportunities as well as providing functional connectivity in the landscape, between buildings and offer multilevel access to buildings.
- Internal circulation and building entrances should be sited to reinforce external circulation and promote greater campus connectivity. Buildings that face onto important plazas and formal outdoor areas should feature transparent fenestration allowing for visibility into the ground floor as well as articulated entryways that provide access, support connectivity, and contribute to the pedestrian scale of the surrounding environment.
- Campus connectivity should be reinforced through landscape design, with formal lines of trees demarcating important north-south pedestrian corridors within the existing campus and important east-west pedestrian corridors within the Lee Street Corridor. Within the existing campus, key east-west corridors should be marked with consistent formal paving materials and structural elements like pedestrian bridges as natural landscapes vary between formal and informal designs.
Campus Precedents: Transitional Spaces

The porches of North Spencer Hall have a true residential feel to them and contribute immensely to the sense of community on campus.

Improvements to the porches and patios at six residence halls on the Quad have greatly enhanced the desire for students to live here. These spaces allow each residence hall to have its own gathering space and a place from which to interact with the others on the Quad.
Bridges can be sculptural elements within the landscape as well as space defining elements. The decorative curved metal design of the bridge to the Music Building creates a dynamic contrast to the rectilinear building forms on campus and to the natural forested area it crosses.

The bridge to the Petty Building creates opportunities to view the College Avenue pedestrian mall from different perspectives and adds visual interest to the campus.
Color and Materials

The use of color and materials should be balanced to weave buildings into the existing campus fabric.

Buildings should generally adhere to the overall color and material palette existing on the campus. Particular attention should be given to the immediate context.

UNCG’s preference is for brick buildings with limestone or precast accents, off-white or ivory fenestration to coordinate with the accents, clear glass, and pitched roofs with slate shingles or zinc standing seams. Refer to UNCG Design and Construction Guidelines for detailed specifications.
Other colors and materials should be used judiciously for emphasis and expression. In general, contrasting materials are most successful when they are

- part of a cohesive palette used throughout a façade;
- used to emphasize entrances, windows, and roof lines;
- create a sense of rhythm and pedestrian scale along a large façade; and
- are used to articulate interior structures on the exterior as in articulating different stories or areas of a building where uses have changed.

Color and materials should be evaluated and considered on a twenty-four hour basis:
- consider exterior lighting from a color, location and shadow standpoint.
Permanence and Maintainability

The values of permanence and maintainability should be integrated into building aesthetics while promoting practical approaches to operational requirements.

UNCG expects a seventy-five to one hundred year or more life cycle of its buildings and low maintenance demands.

- Construction techniques, materials and form should reflect and express these values.
- Access control and controlled access should be integral to the overall building design so as to provide universal access and ensure security.
- Operational and service needs for buildings should be well planned and accounted for such that they allow for needed services with minimal disruption, interaction or visibility to the more public areas of the building and campus.
- Where service access is shared with pedestrian and bicycle access, paving and landscaping should prioritize pedestrian use without disrupting the physical access of service vehicles.
Campus Precedents: Permanence and Maintainability

Pitched roofs and overhangs are preferred where and when appropriate.

Combining suitable functions such as co-locating regional sized mechanical equipment in the McIver Street Parking Deck helps ensure flexibility in maintenance.
Service areas should be well screened to the greatest extent possible.

When achievable, multiple building service areas should be co-located for service from a single point as in the area between the Petty Science Building and Moore School of Nursing.
A cohesive landscape design will be instrumental in connecting the Lee Street Corridor to the rest of campus. Embedded within the vision for the Forest Street pedestrian path and the Lee Street Corridor is a set of landscape design guidelines that draw on the strength of the UNCG campus landscape.

These guidelines comprise the following elements:

- Shade Trees
- Planter Boxes
- Hardscape
- Water
- Signage
- Seating
- Lighting
- Trash Cans
- Bicycle Amenities

Landscape Design Vision

We envision these elements coming together in key locations on the campus to create new spaces that support a dynamic pedestrian environment and create strong linkages between the historic campus and the Lee Street Corridor. The Forest Street pedestrian mall and the Glenwood Avenue gateway to the Lee Street Corridor are two of these key nodes.
Shade Trees

Seating

Signage

Bicycle Amenities

Hardscape

Planter Boxes

Forest Street Pedestrian Mall

Lee Street Corridor
Shade Trees

Native North Carolina shade trees including river birches and pin (willow) oaks have been successfully used around campus to improve the pedestrian environment and create comfortable outdoor spaces.

Decorative grating over shade tree planting beds indicates more formal landscapes while linear beds provide a more natural feel.

Shade trees are an important element of the overall campus landscape. They help to define the character of outdoor spaces and provide protection and privacy to pedestrians walking through campus and sitting alongside campus paths.
Planter Boxes

Drought resistant plants, prairie grasses, and wildflowers contribute to the character and sustainability of the campus. Planter boxes should remain open to the ground to avoid the need for hand watering.

A mix of styles, including unstructured planting beds, formal planting boxes, and decorative gratings, can distinguish among more and less formal areas of campus.
Variation in color, shape and size of paving materials creates visual interest and a sense of rhythm along formal pedestrian pathways through campus.

The hardscape outside the Moore School of Nursing uses small pavers of different colors and contrasting accents to create a visually interesting path.

The use of brick, concrete, and permeable landscape on College Avenue creates an iconic place.
Water

The use of permeable materials including gravel, dirt, and rocks, and inclusion of water elements in landscape design can help mitigate storm water run-off. The inclusion of rain gardens and permeable landscapes at the edges of formal paths and plazas allows for storm water capture without impeding movement and accessibility.

Rounded stones (river jacks) reduce mulch erosion and build-up at storm inlet grates.

Fountains and ponds like the one featured in the Elizabeth Herring Garden, adjacent to the Music Building, use water to add character to the campus landscape.
Based on the 1989 Signage Program Design Guidelines, existing exterior signage reflects the color and material palette of the campus. A comprehensive exterior signage master plan update is desired at this time. Signage should not dominate the campus building and landscape context. It should be informative and ease way finding.

New signage should be consistent with existing way finding, reflecting the color and material palette of the campus.

The use of low, curved brick walls to announce important campus gateways should be continued in future campus development.
Seating

Seating provides opportunities for individual rest and reflection and can invite interaction. Campus seating materials include decorative metal for chairs and tables, wood, stone, or metal for benches, and landscape elements like rocks and steps. Seating should be designed in harmony with its surroundings, reflecting the formal or natural character of the surrounding landscape.

Benches and seating along major pathways often make use of natural materials like wood, brick, and stone with some examples of metal benches as well. Typically, metal seating is used for street and urban settings while wood seating is used in more natural and secluded areas.

Metal furniture in the form of benches and tables and chairs are present in more formal areas of campus like the Taylor Garden. Different styles of furniture allow for both individual repose and group interaction.
Lighting and Trash Cans

Tall black light poles with decorative fixtures provide pedestrian-scale lighting, define important campus paths, and contribute to campus character. They serve as a conduit for campus identity as the bearers of banners as well. In the Lee Street Corridor, reinterpretations of this style can create a contemporary campus identity that acknowledges the new campus context. Additional lighting can provide illumination for safety and to highlight landscape elements without becoming obtrusive and distracting. Emphasis on lighting for pedestrians is critical for ensuring pedestrian safety and comfort.

Metal decorative trash cans reinforce the historic character and pedestrian scale of the campus. The provision of clearly marked recycling cans and ash cans promotes sustainability and a clean campus landscape. Newer solar compactors further the sustainability of campus. They provide a contrasting, contemporary aesthetic and are more appropriate for campus edges and along vehicular paths.
Bicycle Amenities

Black, u-shaped permanent bicycle racks are standard. Bicycle racks should be located in close proximity to important campus destinations including residence halls, transit hubs, and centers of campus activity like the EUC and Jackson Library.

Bike racks should not block the main entrances to buildings or impede pedestrian circulation through campus. Bicycle racks are best placed in locations slightly offset from main entrances but in close proximity to side and alternative building entry points and should be screened as much as possible.
ACKNOWLEDGEMENTS

Master Plan Committee
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Cherry Callahan  Vice Chancellor for Student Affairs
Howard Doyle     University Architect
Daniel Durham    Director of Facilities Operations
Fred Patrick     Director of Facilities Design and Construction
Jorge Quintal    Associate Vice Chancellor for Facilities
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