# 2012

## COLLEGE OF CHARLESTON
## CAMPUS MASTER PLAN

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To Our College of Charleston Community:

In February 2011, the College began a campus- and community-wide planning process to develop a campus master plan that aligns with the goals of our 10-year Strategic Plan. These efforts were led by the architecture and planning firm Hanbury Evans Wright Vlattas + Company and two College committees composed of faculty, staff, and students. In addition, we engaged our campus community through open forums and solicited input from residents, city leaders, and historic preservation organizations. The result is the 2012 Campus Master Plan for the College of Charleston.

The plan emphasizes the need for new and renovated state-of-the-art classrooms, cutting-edge research laboratories, and updated visual and performing arts studios. In keeping with the College's holistic approach to education, the plan calls for the addition of modern residence halls, fitness and recreational facilities, and spacious study areas. The plan also identifies the need for an alumni center that supports the professional development of our graduates and fosters their life-long involvement with the College.

The College has always taken great care to preserve the beauty and charm of our historic campus while striving to provide our students, faculty, and staff with technologically advanced facilities and the latest learning resources. While this plan affirms our commitment to maintaining current undergraduate enrollment levels on our main campus, it also recognizes that our available classroom space and technological infrastructure do not meet the needs of our current students.

To achieve the envisioned future outlined in our Strategic Plan, the College must follow a path that respects our rich history, takes advantage of our unique location, and addresses the urgent need to modernize our campus while preserving its beauty for generations to come.

This plan provides that path, and I am pleased to share it with you.

Best regards,

P. George Benson
President

# ACKNOWLEDGEMENTS


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EXECUTIVE SUMMARY

# THROUGH THE GATEWAY

"Gateways to Greatness," a strategic plan for the College of Charleston, is a bold institutional vision that inspired this plan for the future of the campus. The 2012 Campus Master Plan will provide direction for physical improvements to help realize the vision of the strategic plan and continue to honor the College's ties to Charleston.

# EXECUTIVE SUMMARY

"Gateways to Greatness," a strategic plan for the College of Charleston, is a bold institutional vision that inspired this plan for the future of the campus.

The strategic plan has five goals and 10 strategies to achieving those goals:

GOAL 1 Provide students a highly personalized education based on a liberal arts and sciences core and enhanced by opportunities for experiential learning.

GOAL 2 Develop or enhance nationally recognized undergraduate, graduate and professional programs in areas that take advantage of our history, culture and location in Charleston and contribute to the well-being of the region.

GOAL 3 Provide students the global and interdisciplinary perspectives necessary to address the social, economic, environmental, ethical, scientific and political issues of the 21st century.

GOAL 4 Establish and promote a vibrant campus-life atmosphere dedicated to the education of the whole person through integration of curricular and co-curricular or extracurricular activities.

GOAL 5 Achieve financial security by creating a new financial model for the College of Charleston.

The 10 strategies were outlined to help ensure the goals are achieved. These strategies include:

STRATEGY 1 Enhance the undergraduate academic core.

STRATEGY 2 Develop nationally recognized graduate programs.

STRATEGY 3 Develop and retain a highly qualified and diverse faculty and staff.

STRATEGY 4 Recruit, enroll and retain an academically distinguished, well prepared and diverse student body.

STRATEGY 5 Enhance co-curricular and extracurricular programs for the holistic education of students.

STRATEGY 6 Align administrative and academic policies and procedures to support the college's purpose and achieve its envisioned future.

STRATEGY 7 Provide up-to-date facilities and infrastructure to enhance academic, co-curricular and extra-curricular programs.

STRATEGY 8 Collaborate with local, national and international institutions to leverage higher education for a stronger South Carolina.

STRATEGY 9 Establish campuswide policies and practices to generate new resources and foster greater self-sufficiency.

STRATEGY 10 Pursue national recognition for the College of Charleston's personalized liberal arts and sciences education and for the distinctive features of its undergraduate and graduate programs.

The power of the College's unique location in Charleston and the Lowcountry informs the advancement of Strategic Plan initiatives, including a student-focused academic experience with a growing research component; a more residential campus with expanded student life amenities focused on wellness; and partnership opportunities with public and private collaborators to leverage the College's intellectual capital and spur economic growth for the region. The unparalleled historic preservation commitment by both the city and campus, coupled with an entrepreneurial and vibrant outlook, will enable the campus to grow in harmony with the past while embracing future opportunities. New projects will expand the continuum of architectural integrity and extend the landscape heritage through thoughtful placemaking.

A move toward fully integrating technology into campus infrastructure and curriculum delivery will promote both increased efficiency and effectiveness in teaching and learning. Collaborative team learning spaces with Internet-based lecture capture will transform classrooms from passive to active environments that positively affect student outcomes. Transformative learning will happen in newly conceived learning spaces ubiquitous across campus, whether in traditional academic buildings, residence halls, or social gathering spaces like the Stern Student Center. Interdisciplinary interaction will be encouraged through intentional program adjacencies. Mixed-use buildings will promote a vibrant 24-7 campus environment, while focusing on the positive development of the whole person.

The Campus Master Plan process endeavors to distill the distinctive physical and cultural qualities that make the College both highly functional and compellingly attractive. With this understanding, these qualities are overlayed onto the program needs and desires expressed through extensive interviews and on-campus dialogue. Constrained growth opportunities within the historic zone require creative alternatives for focused planning scenarios and multiple implementation strategies. Integrated efforts with city planners, historic preservation groups, neighborhood associations, private development partners, in addition to the full spectrum of the campus community, require an organized, transparent, and engaged process.

In the end, the Campus Master Plan will help promote an intellectual community thoroughly "of the time," engaging and innovative, while inextricably tied to the history and traditions of Charleston and the Lowcountry.

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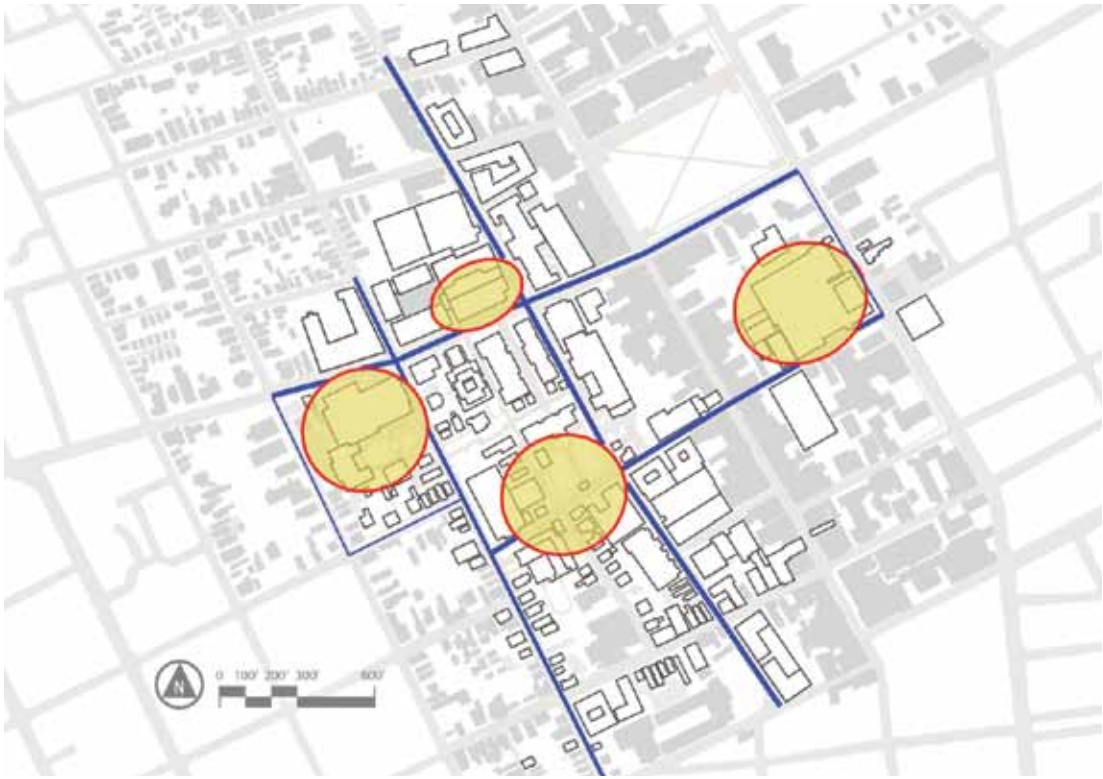
## THE PLAN

The 2012 Campus Master Plan is the result of a 12-month collaborative process with the College campus and the City of Charleston. The concepts, program, and framework represent an intentional synthesis of a complex set of interrelated ideas and goals in order to begin the process of physically embodying the goals of the College's Strategic Plan. The Campus Master Plan is a roadmap for future growth, while allowing flexibility in its implementation. The Campus Master Plan reinforces existing campus centers, honors the College's historic context, and strengthens its relationship with the host community.

The spiritual heart of the College is unquestionably Randolph Hall and the Cistern. This heart will be strengthened by redeveloping George Street between Coming and St. Philip Streets as a drivable urban plaza. It is anchored by a new Honors College on the east, across from Randolph Hall, which symbolically acknowledges the College's core mission of scholarship. A redeveloped Stern Student Center anchors the other end of the new plaza. The building will continue to serve as the home of student affairs and become the campus "living room" with much-needed student lounge and meeting space.

The intellectual heart of campus occurs at Addlestone Library and Rivers Green. The Campus Master Plan reinforces this heart with a new Learning Technology Center connected to the library and anchoring the open space on the east end. This will be the hub for innovative labs dedicated to enhancing curriculum delivery and learning. The Graduate Center on the south side of Rivers Green will bring another dimension to this intellectual heart, providing a centralized sense of identity for these students.

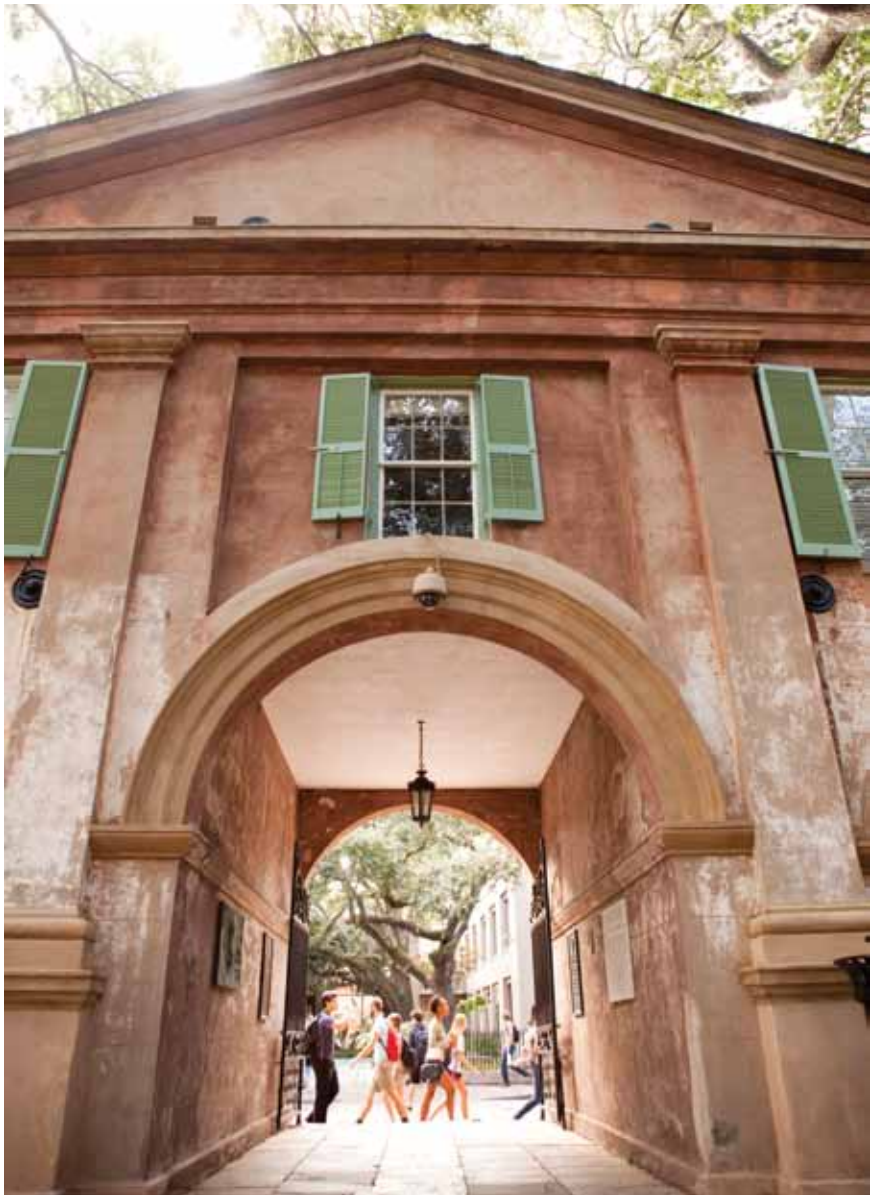
The zone addressing the physical needs of students is the East District anchored by the TD Arena, recreation and intramurals, and the School of Education, Health, and Human Performance. Additional facilities will strengthen these programs and improve the link to the core campus.



Campus Centers

A zone that offers a place for students, alumni, and community residents to come together has been developed along the north side of Calhoun Street at the intersection with St. Philip Street. A mixed-use retail/commercial, fitness, and alumni center with meeting space will anchor this corner.

Other major objectives derive from the Campus Master Plan Goals, which served as the touchstone for this process.



The Campus Master Plan reinforces existing campus centers, honors the College's historic context, and strengthens its relationship with the host community.

**Scholarship**

The physical campus takes its cues from the academy, finding value and inspiration from tradition while boldly exploring new ideas. Space deficits challenge the College to build—not just to catch up, but to leap forward—in order to achieve even greater levels of academic excellence. The Campus Master Plan cites the potential for almost 1 million square feet of new facilities, which are intended to reinforce the College's highly customized student-centered approach to learning by encouraging active learning and interdisciplinary collaboration. Blended learning initiatives will help to redefine curriculum delivery, enabling students to access information anywhere, anytime. Likewise, such initiatives provide scalable educational resources to allow the College to serve more constituents, both locally and globally.

**Engaged Stewardship**

The College will continue to be a steward of its many valuable facilities, while seizing opportunities to bring underperforming spaces into alignment. The Campus Master Plan optimizes site utilization while working within the limits of current zoning ordinances. With substantial space needs and limited expansion areas, outdated and undersized buildings become a primary target for redevelopment. This sustainable approach to growth promotes traditional patterns consistent with the city's fabric. It also encourages innovation. Infill projects will reinvigorate the campus core and allow the College program to continue to evolve in a compact, cohesive, and uniquely identifiable place galvanized by a rich past and bold future.

**Interdisciplinary Collaboration**

From a land use perspective, the Campus Master Plan utilizes infill projects to create or reinforce academic clusters. Generally, these are grouped by discipline, for example a Sciences and Mathematics district north of Calhoun Street on both sides of Coming Street. An undergraduate-focused cluster south of Calhoun Street spans the campus and connects west to Addlestone Library. The Rita Hollings Science Center anchors another cluster north of the Stern Student Center. A final cluster occurs at St. Philip Street and Liberty Street, where synergies exist between programs but not to the exclusion of programs in other clusters.


Land Use: Preferred Scheme

Traditional clustering by departments promotes smaller polycentric academic communities where related disciplines can collaborate. However, an innovative goal is to promote collaboration among departments that might not interact naturally. At the overlap of academic clusters, collaboration spaces are proposed to serve as centers for departmentally independent, problem-specific investigations. The campus clusters are connected along the main campus spine of College Way.

**Global, Holistic, High Impact**

Student life facilities and residence halls are mixed in with academic clusters to create a true living and learning community. Priority projects include expanding and enhancing student spaces for learning, socializing, and exercising. A new residence hall is proposed to accommodate more students on campus. These spaces will complement academic spaces and promote greater student interaction in campus-based activities, nurturing a life-long commitment to the College.

**Financial Sustainability**

In an economic environment of limited resources, public/private partnerships provide expansion opportunities for the College and economic development opportunities for the city. For example, available land north of Calhoun Street is an ideal opportunity for property acquisition or development through partnerships. The sharing of resources with other academic institutions, such as the Medical University of South Carolina, should be explored.

Sustainable building provides quantifiable long-term financial benefits through life-cycle cost savings, mitigation of storm-water issues, decreased energy use, and reduced parking demand through improved transit.

**Intentional, Organized, Efficient, Integrated, Inspired**

The 2012 Campus Master Plan is intentional in that it responds directly to the Strategic Plan and The Campus Master Plan Goals. It is organized based on pedagogy, program synergies, urban patterns, historic traditions, and innovative methodologies. The Campus Master Plan is efficient through the promotion of sustainable compact growth, maximization of site resources, and opportunistic, entrepreneurial partnerships. It is integrated in that it builds on urban and campus patterns and concepts and with City initiatives and systems. It is inspired by place. It extends the campus with new spaces, energizes the civic realm, reinforces hierarchy, and serves the holistic needs of the College.

## IMPLEMENTATION

Implementation of a master plan must be viewed through the lens of College priorities, opportunities, constraints, and vision, which are in constant flux. The Campus Master Plan must be flexible enough to handle change, while remaining strategically intact, thus ensuring organized and efficient growth. The Campus Master Plan is organized into four phases of development in five-year increments. Project placement has been carefully considered. Timing is based on College priorities.

Phase One focuses on projects already in the capital plan, such as the build-out of the Sciences and Mathematics Building, renovations to the Rita Hollings Science Center and Simons Center for the Arts, and an addition to the Yaschik/Arnold Jewish Studies Center. At the time of this publication, public/private partnership proposals for a 350-bed housing facility are currently being reviewed by the College. New projects that have emerged through the planning process for this phase include the Learning Technology Center and the mixed-use fitness and alumni center.

Phase Two offers a balance of academic, student life, and residential projects, including a relocation of the Honors College to a prominent campus address. New general classroom buildings, renovations, as well as the expansion of the Stern Student Center, the Business School, and the School of Education, Health, and Human Performance also are highlights.

Phase Three brings more academic facilities, specifically a new Sciences and Mathematics building.

Phase Four provides opportunities for long-term redevelopment projects at the College Lodge site, the Wentworth Parking Garage, the Thaddeus Street Education Center, and for a shared parking facility near the arena on George Street.

Great campuses present a coherent whole from a sum of their parts. For the College, buildings and grounds have equal importance in defining the character of place. Each project must contribute not only to the interrelated built systems of the city and campus but also to the College's greater collective strategic vision. This plan achieves these goals.

The Campus Master Plan cites the potential for almost 1 million square feet of new facilities, which are intended to reinforce the College's highly customized student-centered approach to learning.

**Building Projects**

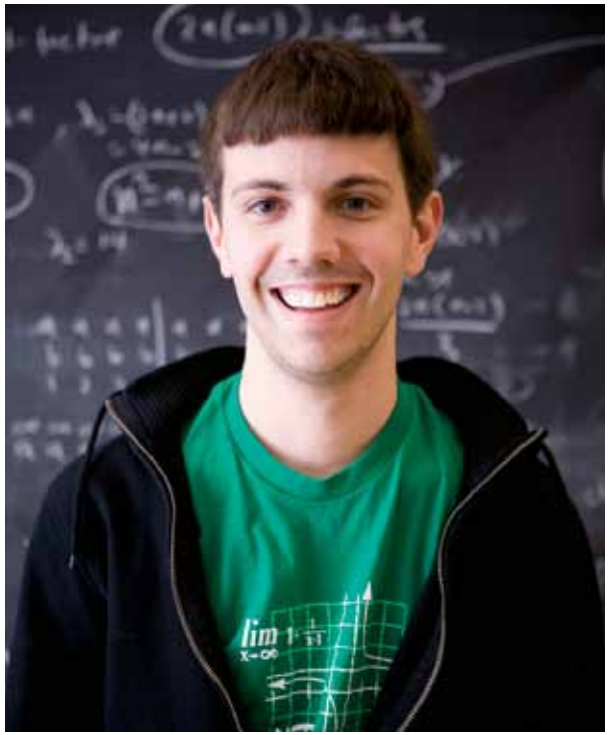
| | |
|---|---|
| New Facilities: | 863,000 GSF |
| Demolished: | 303,587 GSF |
| Net New: | 559,413 GSF |
| Existing Total: | 3,450,232 GSF |
| **Grand Total:** | **4,009,645 GSF** |

**Parking**

| | |
|---|---|
| Total New Facilities: | 1,000 Spaces |
| *Expansion of St. Philip Street Deck:* | *400* |
| *Shared new George Street Deck:* | *600* |
| Removed: | 700 Spaces |
| *Leased Aquarium Spaces:* | *600* |
| *Surface Lot Spaces:* | *100* |
| Net New: | 300 Spaces |
| Existing Total: | 2,250 Spaces |
| **Grand Total:** | **2,550 Spaces** |

# GOALS & PRINCIPLES

The following goals were established for the Campus Master Plan. They are in close alignment with the goals of the strategic plan.



## 1 SCHOLARSHIP

**Defining "place" as a catalyst for educational excellence**

Support the delivery of a highly significant and personalized liberal arts and sciences education on a campus that facilitates community, mentoring, and high-impact learning. Provide facilities enhanced by a high standard of flexible and ubiquitous technology. Ensure the physical campus represents a teaching tool of urban integration.

## 2 ENGAGED STEWARDSHIP

**History, traditions, and natural assets of place inspire a bold vision**

Celebrate the campus's defining sense of place, the richness of the city's context, and the historic and natural uniqueness of the Lowcountry. Engage College neighbors and City partners, while seeking opportunities for sustainable campus renewal. Serve in partnership with the City and its many institutions to leverage future opportunities.

## 3 INTERDISCIPLINARY COLLABORATION

**A mixed use, integrated, dynamic living/ learning environment**

Develop the campus as a stage for learning, community events, and outreach. Enhance the student-centered, collegial, and multidisciplinary experience through layered, multi-use facilities that yield a campus of 24 / 7 vibrancy. Partner with the community beyond the campus and engage with industry, the city, and region, while leveraging the College's coastal location with expanding global impact.

## 4 GLOBAL, HOLISTIC, HIGH IMPACT

**Nurturing emotional, social, intellectual and physical growth**

As the campus diversifies its students, faculty, and staff, provide a physical environment that engenders mentorship, collaboration, interdisciplinary behaviors, and critical thinking with global significance. Maintain a safe, healthy, pedestrian-oriented campus with amenities that encourage student, faculty, and community involvement. Plan facilities that provide co-curricular and extracurricular support to the academic mission.

## 5 FINANCIAL SUSTAINABILITY

**Security to excellence through new financial models and paradigms**

Create a plan that points the College toward technology investments that allow new curriculum delivery methods and that create new revenue streams through scalable course offerings. Create facilities and collaborative learning environments that attract research sponsorships. Adopt a sustainable physical growth model through redevelopment of underperforming existing facilities and new ways for funding projects.

# PLANNING PROCESS

## HANBURY EVANS PROCESS

The master planning process began in February 2011 and concluded with a final presentation to the Board of Trustees in January 2012. Partnering with the Offices of Business Affairs and Facilities Planning, the planning team held nearly 100 meetings with groups on the campus and in the community: administration, faculty, students, staff, the city, alumni, community groups, and other potential partners. The process was led by the Steering and Executive Committees. These collaborative workshops included interviews, focus groups, community meetings, small group charrettes, and public forums. Through data collection and analysis, the team was able to determine the College's assets, deficiencies, and future needs. A broad range of issues was explored:

1. Strategic Plan and Goals
2. Academic Programs and Facilities
3. Space Utilization and Needs Analysis
4. Enrollment Growth
5. Student Life
6. Residence Life
7. Athletics
8. Recreational Sports
9. Faculty, Staff, and Student Organizations
10. Urban Design
11. Land Use, Landscape, and Open Space
12. Future Land Acquisitions
13. Partnerships
14. Information Technologies
15. Pedestrian and Bicycle Safety
16. Transportation Access and Parking
17. Facilities Maintenance
18. Alumni
19. Utilities and Infrastructure
20. Sustainability

Clear documentation and communication of the Campus Master Plan is accomplished through multiple graphic representations of future development over time and ultimately described in this report.

A continuous cycle of analysis by the planning team, and feedback from College stakeholders, ensures the final plan is finely tuned to the College's campus needs and future goals while enhancing this already extraordinary place.

1 **Reconnaissance and Data Collection**

During this phase, multiple meetings occurred with deans, department heads, and other campus leaders to establish an understanding of existing conditions, assets, issues, desired growth, and need for change. The collected data was interpreted and presented to the College for review. Several areas were identified as priorities for further development. Critical to this phase was the Space Needs Assessment to identify current and future space deficits based on South Carolina space standards and national standards. As an update to the 2004 Campus Master Plan, it also was important to understand legacies from that effort as well as changes in institutional direction since that plan was published. Campus Master Plan goals were developed to serve as touchstones to the process and provide a direct link to the Strategic Plan.

2 **Analysis, Concepts, and Alternatives**

Based on the data and information received, each issue was analyzed, which in turn produced multiple ideas, concepts, and potential directions for growth and change for the College. The planning team presented various Campus Master Plan Program options, synthesizing aspirations, deficits, and pedagogical intent into potential capital projects. Analysis of the campus and urban context produced opportunity sites for future growth or redevelopment. Physical Plan Concepts were developed through the alignment of program, physical opportunity, and contextual placemaking. Alternative concepts were produced through the collaborative involvement of various constituent groups. A preferred direction emerged that established a framework for future campus development.

3 **Preferred Concept Refinement**

Once identified and agreed upon, the preferred concept was tested and refined to accommodate quantitative needs and goals. Program placement was refined further to maximize resource utility, promote synergistic adjacencies, and respond to campus and urban opportunities. This phase also develops the qualitative experience of the buildings and grounds by enhancing and extending the civic open space network of greens, gardens, paths, and streetscapes. Campus views, axes, edges, thresholds, nodes, and special features were reinforced. Building massing and scale were considered with regard to both zoning regulations and campus context.

4 **Integration and Documentation**

During this phase, the preferred plan concept was integrated with the natural and man-made urban systems that support the campus and its community. Circulation, infrastructure, and open space systems align to create a holistic campus framework. Contiguous campus growth is constrained by the historic urban environment, therefore integration with the city's urban form and planning priorities is important. This constraint further necessitates a flexible Plan that provides both a clear implementation strategy and the ability to accommodate unforeseen circumstances and fortuitous opportunities.

## PLANNING PARTNERS

The city and the College are so deeply entwined in an urban environment that the success and struggles of one can profoundly impact the other. This makes it essential for these two groups to work together frequently and with the interest of both in mind.

The campus master planning team met with City officials numerous times to discuss opportunities for growth and enhancements to the College and the city. City staff members continue to communicate with the College regarding mutually beneficial opportunities.

Public/private partnerships have been discussed and are being explored further to leverage resources beyond the capability of the State Legislature and the College. Other state institutions also provide opportunities to share resources and produce mutually beneficial outcomes for all partners involved.

CHAPTER 1

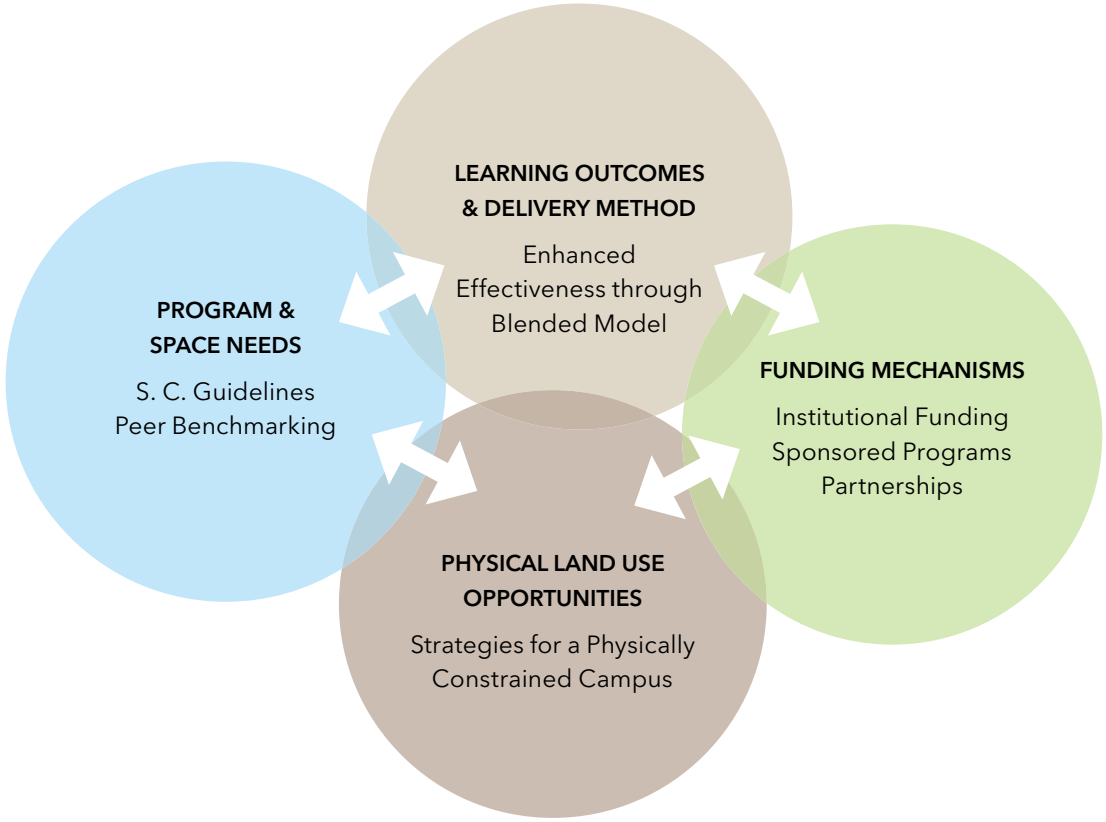
# RECONNAISSANCE & DATA

Initial on-site workshops were productive information gathering sessions. The planning team conducted interviews with key campus leaders and users, sought insight and feedback from the larger Charleston community, studied the physical environment of the campus and city, and focused on the institutional mission in order to develop a deep understanding of the College and its "place." The following is a distillation of the many ideas, perspectives, and critiques by stakeholders regarding the College's campus community and its future.

# PLAN DRIVERS

Four interconnected issues have emerged as "drivers" of the Campus Master Plan concepts: Program & Space Needs, Learning Outcomes & Curriculum Delivery, Land Use Opportunities, and Funding Mechanisms.

These "drivers" complement the stated intention of the Campus Master Plan goals and highlight the critical issues to be addressed in successfully achieving those goals. The first three of these drivers have been analyzed, vetted, and strategized by the entire team, culminating in specific recommendations for each issue. Various strategies for funding capital projects and initiatives also have been discussed comprehensively. However, future circumstances will dictate appropriate action. While a balance among the drivers has been achieved in the Campus Master Plan, the tension created by overlapping needs has served as a catalyst for creative solutions for campus growth, enhancement, and resource allocation.




## PROGRAM & SPACE NEEDS

A Space Needs Analysis was performed by the Planning Team based on South Carolina space standards as well as benchmarked national trends. Data received was for Base Year 2010, using an enrollment of 10,500 undergraduates and 1,032 graduate students. The Target Year is 2020, with an unchanged undergraduate enrollment and 2,390 graduate students. Findings indicate that the College remains in a current space deficit position relative to standards, even after significant capital improvements over the last seven years. Utilization of existing facilities was found to exceed standards, so the College is doing the best with its facilities. Past enrollment increases have driven the need for more buildings of all types. While recent campus improvements have been impressive, a deficit of 280,234 assignable square feet exists.

In addition to quantitative needs based on benchmarking standards, there are aspirational and quality of life needs such as improved student life facilities, more residential units, and an alumni center. These factors, with a slight graduate level enrollment growth at Target Year 2020, increase the deficit to 640,304 assignable square feet. To help translate abstract space needs assignable to a specific program use into the gross space needed for a building, un-assignable spaces such as staircases, corridors, mechanical space, and lobbies are included. Space Need identified for Target Year 2020 is 896,426 gross square feet.

## SPACE NEEDS – SUMMARY FINDINGS

Existing Deficit 280,234 ASF in 2010

Overall Need for Additional **640,304 ASF by 2020**

- Need for **266,026 ASF** Academic Space
- Need for **127,219 ASF** Academic Support Space
- Need for **247,059 ASF** Auxiliary Space

**896,426 Gross Square Feet* by 2020**

**Must overlay Qualitative & Aspirational Needs:**
Number of Students Housed on Campus
Student Life Amenities
Alumni Center

** GSF is calculated by multiplying the ASF by 1.4 to account for non-program building elements such as stairs, elevators, mechanical space, etc.*

Learning Technology Example: Information Technology Convergence Center, University of Mary Washington

## LEARNING OUTCOMES & CURRICULUM DELIVERY

Much discussion during the planning process focused on how to most effectively and efficiently improve student learning outcomes in accordance with the Campus Master Plan goals of Scholarship, Interdisciplinary Collaboration, and Financial Sustainability. New technology is generating compelling modes of curriculum delivery that satisfy the needs of efficiency and effectiveness. Active learning spaces infused with technology encourage team-based exercises, with greater instructor interaction and the ability to transcend geography for collaboration. Online capabilities allow and encourage a flip of the traditional lecture and homework. It is now considered more productive to post a recorded lecture to the Internet for viewing anytime to utilize valuable class meeting time for students to work through problems with instructors. Student-centered, customizable learning is enhanced and higher orders of learning become possible.

A "blended" model of online and classroom learning is recommended in the Campus Master Plan. This methodology will have impact on how space is configured in future growth scenarios. In some cases, technology will reduce the need for new classrooms. In other cases, technology will increase the amount of space per student station within a classroom. While it is recommended that technologically advanced learning spaces be ubiquitous on campus, a central location for the generation and advancement of curriculum delivery improvements also is recommended. The concept of a Learning Technology Center has generated excitement for future opportunities.

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USITE/Crerar Computing Cluster and Cybercafé, University of Chicago

## PHYSICAL LAND USE OPPORTUNITIES

The College is located in an exceedingly unique and beautiful location in its historic host city. This is a wonderful asset, yet it limits the ability of the campus to evolve physically. The campus is bordered on the north, south, and west sides by historic neighborhoods, where institutional growth is not permissible by zoning regulations. It is bordered on the east by King Street, the city's most dense and vital retail thoroughfare, providing very few opportunities for expansion. There are limited opportunities to the north, along the Calhoun Street Corridor, in which to grow. These areas would require property acquisitions or partnerships to become a reality. The historic relevance of Charleston means that much of the property that might be acquired would have severe use limitations and restrictions for physical alterations. Further, zoning regulations as to height and massing are controlled carefully, further affecting growth opportunities. These issues are major drivers affecting the College's ability to grow. However, it is important to remember that these issues also are a large part of the reason that Charleston and the College's campus are such compelling places.

In addition to the historic context, a College priority is retaining a consolidated, pedestrian-oriented campus. With very limited open sites in and around campus, careful redevelopment strategies for existing properties

The College is located in an exceedingly unique and beautiful location in its historic host city. This is a wonderful asset, yet it limits the ability of the campus to evolve physically.

are critical. College-owned structures with high levels of deferred maintenance or those that underutilize site capacity have been identified and recommended for redevelopment. By focusing energy for new growth within campus boundaries, a portion of the space deficit problem will be solved and also will create a more functional, beautiful, and connected campus. To fulfill the remainder of the space needs deficit, strategic acquisition through forged partnerships is required. The north side of Calhoun Street between Coming and St. Philip Streets is an underutilized parcel targeted for growth. This parcel would enable the construction of more College facilities, but it also would greatly enhance the physical presence and vibrancy of the Calhoun Street Corridor, which is synergistic with City planning goals. Other opportunities may exist around Marion Square and further east along the Calhoun Street Corridor as well.

The College has other locations regionally at Grice Marine Laboratory, the North Campus, Dixie Plantation, Patriots Point, and the James Island fields. Graduate programs will expand at Grice, Dixie, and the North Campus. Athletics will expand at Patriots Point. Opportunities within the Neck of the Peninsula exist for partnership with the City for expanded intramural and recreational fields.

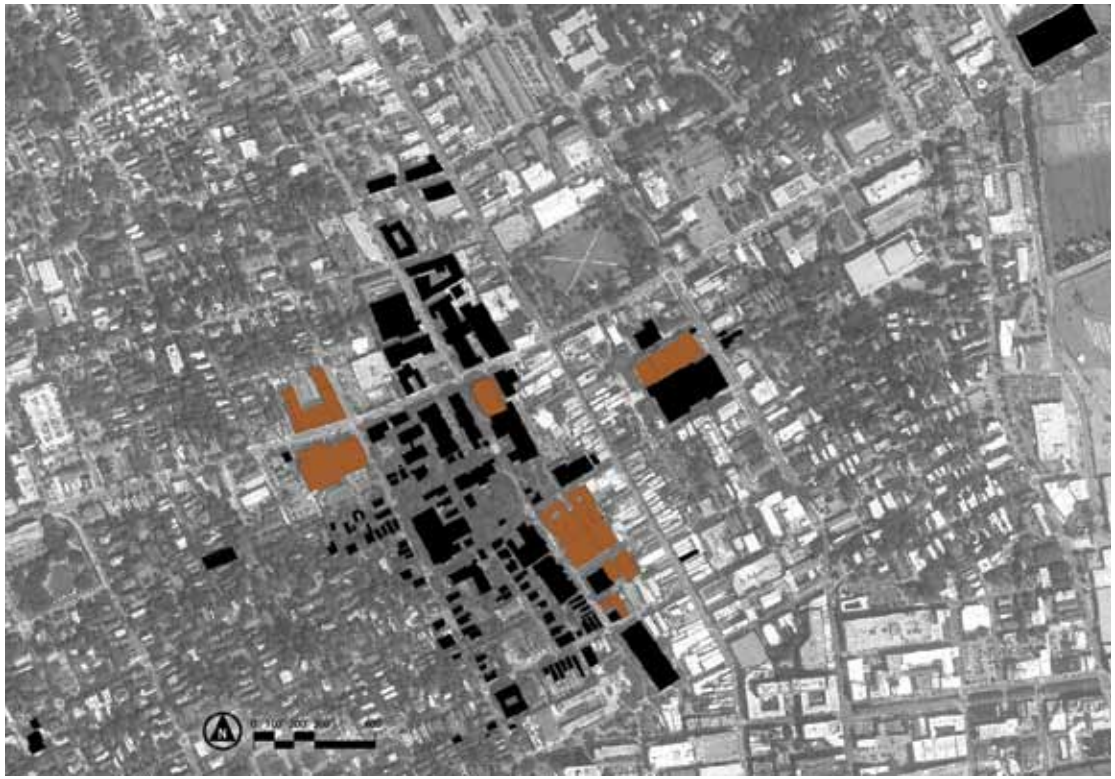
## FUNDING MECHANISMS

Financing strategies for needed capital projects will play a major role in determining project location, timing, and facility priorities. A greater variety of revenue sources needs to be harvested. The Strategic Plan states: "It is estimated that, relative to peer institutions, the College is underfunded by at least $50 million per year. State support as a percentage of the College's overall budget has fallen from 30 percent of the budget just a decade ago to just over eight percent today." (*Gateways to Greatness: College of Charleston Strategic Plan*). Institutional funding through its bonding capacity will continue to be a major source of capital funding for the College, but it has limits. Sponsored programs help to finance specific studies in various departments but will not serve to fund major capital needs.


A major comprehensive campaign is planned in the immediate future with the five-fold purpose of: 1. Increasing external funding; 2. Reducing reliance on state resources. 3. Raising awareness of the College locally, nationally, and internationally; 4. Growing a sustainable culture of philanthropy; and 5. Fostering greater alumni engagement. This effort will be important to change the culture of giving to the College.

As properties adjacent to current campus boundaries and not owned by the College are considered for redevelopment, public/private partnerships may provide a win-win proposition. The George Street Apartments/George Street Garage/Liberty Street Residence Hall/Fresh Foods complex is a successful example of such a partnership. A mix of uses within that project provides amenities for residents and the campus at large, while invigorating campus street life. Partnerships with the city and other institutions such as the Medical University of South Carolina also should be sought for their ability to share resources and add value to programs and projects.

# CAMPUS CONDITIONS



Capital Development Since the 2004 Campus Master Plan

Projects implemented since 2004 Campus Master Plan

Existing College of Charleston Buildlings

## DEVELOPMENTS SINCE THE 2004 MASTER PLAN

The 2012 Campus Master Plan is an update to the 2004 Campus Master Plan. The 2004 Campus Master Plan outlined a framework for academic space growth to serve enrollment at the College that grew significantly during the 1990s. Seven major projects have been completed in the last eight years. The growth and enhancements to campus over that time were immense, and the College should be applauded for these achievements. In that time, the following buildings were constructed:

- A new building for the School of Sciences & Mathematics
- Addlestone Library
- A mixed-use parking deck/retail/residence halls/food facility
- TD Arena
- Beatty Center for the School of Business
- Cato Center, an addition to Simons Center for the Arts
- A new building for the School of Education, Health, and Human Performance

These campus additions are impressive, and they have had a dramatic impact. However, the campus continues to evolve and currently is faced with new needs in addition to those that remain unaddressed from the 2004 Campus Master Plan. The 2012 Campus Master Plan builds on recent campus improvements, addresses the new institutional strategic vision, and finds new opportunities for growing a student-centered campus.

The 2012 Campus Master Plan builds on recent campus improvements, addresses the new institutional strategic vision, and finds new opportunities for growing a student-centered campus.

## CURRENT SPACE NEEDS

A special analysis by Paulien & Associates helped the planning team determine that 25 assignable square feet per student station is a good target for upgrading the College's classrooms to accommodate technology and create "active learning" spaces. The Paulien analysis indicates that the College's current ASF per student station is 18. The South Carolina standard is 22. The way college students live, learn, and communicate is drastically different than it was even 10 years ago. Technology is an important and growing part of academic life. Environments in which students live, study, and socialize should facilitate this new way of learning. The square footage deficits and the space needs analysis helped to develop a program list of new building projects. Substantial research space indicated in the Paulien analysis has been accommodated in part in the second proposed Sciences and Mathematics Building. Other sponsored programs will occur in new academic buildings as part of specific departmental activity. The program developed with the College's senior administration reflects the desired research component priority for this planning period.

Additional information on the Space Needs Assessment can be found in *College of Charleston: Utilization and Space Needs Analysis for the Campus Master Plan* Update, July 2011, with updated tables January 2012. A copy of the report may be obtained from the Office of Facilities Planning's Web site at facilitiesplanning.cofc.edu.

Additional information on technology and "active learning" can be found in *Transforming Teaching and Learning through New Approaches*, Sextant Group, July 2011. A copy of the report may be obtained from the Office of Facilities Planning's Web site at facilitiesplanning.cofc.edu.

| | |
|---|---|
| **Existing Deficit, Base Year 2010:** | 280,234 ASF |
| **Projected Deficit per Space Type by Target Year 2020:** | |
| Academic Space<br>(Includes Classrooms, Laboratories, Offices) | 266,026 ASF |
| Academic Support Space<br>(Includes Administration, Physical Education, Assembly & Exhibit) | 127,219 ASF |
| Auxiliary Space<br>(Includes Student Center, Residence Life, Health Care) | 247,059 ASF |
| **Total Deficit by Target Year 2020:** | 640,304 ASF |
| X 1.4 grossing factor = | |
| **Total Gross Square Foot* Deficit by Target Year 2020:** | **896,426 GSF** |

** GSF is calculated by multiplying the ASF by 1.4 to account for non-program building elements such as stairs, elevators, mechanical space, etc.*

## UTILIZATION & SPACE NEEDS ANALYSIS

Paulien & Associates was contracted by Hanbury Evans to examine the College's space needs. The Utilization & Space Needs Analysis included a determination of existing facility utilization and a quantitative evaluation of built space on the College's campus in comparison with recognized space standards.

### Introduction

An identification of space needs was made in relation to existing facilities at the base year of Fall 2010 and for projected needs 10 years in the future. The consultant used course and staff data provided by the campus and applied the South Carolina space standards and other recognized standards, as appropriate, to establish guideline space needs. The results are described in the body of this report, along with classroom and laboratory utilization and explanation of the space guidelines applied.

The purpose of this study was to accomplish the following:

- Identify and define existing and future space needs, taking into consideration the strategic plan, *Gateways to Greatness*. (One of the strategic plan's goals is to "provide appropriate, up-to-date facilities and infrastructure to support and enhance academic programs." It further identifies the desire to "...develop a new campus master plan to ensure that facilities are designed, constructed, and maintained to meet the ongoing needs of the campus and the community, and to promote student learning.")
- Provide space needs at a School or major administrative division level for all units.
- Provide base data for the College to efficiently utilize the campus' capital assets within the parameters of the approved 2012 Campus Master Plan.

### Planning Process and Assumptions

As a result of the strategic plan, the College is moving forward to becoming the Southeast's leading public liberal arts and sciences university. The strategic plan includes the core values of academic excellence, student-focused community, and power of place. The envisioned future combines a focus on students in a teaching institution with the opportunities of a research university. It is anticipated that undergraduate enrollment will remain stable and selected graduate programs will increase in size.

The enrollment figure used to project future year space needs was 10,500 headcount undergraduate students and 2,390 headcount graduate students. The space needs findings for the target year incorporated the student enrollment increase and the resultant increase in faculty and staff.

Paulien & Associates also requested data on courses, staffing, and facilities. The College provided a list of courses offered on campus and the enrollment for each course. The College also provided a list of faculty and staff identified by job title and unit assignment, as well as a room-by-room facilities inventory. Two new buildings are being planned at the College: a new residence hall and a new building at Grice Marine Laboratory. At the time of this report, planning for these buildings had not reached the point where estimates of building sizes could be included in the analysis.

## Key Findings

The Campus Space Needs Analysis identified space needed on campus at current and projected enrollment levels and compared the calculated space needs to existing facilities.

Application of normative guidelines for the campus identified an overall space deficit of 280,234 ASF at the base year. This represents 17 percent of the existing space on campus. At the target year, with the inclusion of anticipated increases in enrollment, faculty, and staff, the deficit increased to 640,304 ASF. This represents 40 percent of the existing space on campus at the target year.

The space analysis classified existing space categories on campus into the following three areas:

### ACADEMIC SPACE

Analysis of classroom, teaching laboratories, open and research laboratories, as well as academic office and other academic department space, showed an overall space deficit of 34 percent over existing space at the base year. This deficit increased to 60 percent, or 266,026 ASF, at the target year. Classroom space showed a deficit of 74,405 ASF. This is 71 percent of the target year existing classroom space. The teaching laboratory deficit was 25,059 ASF. Open laboratories showed a deficit of 8,383 ASF. Research laboratory space showed a deficit of 109,859 ASF. The deficit in academic office space shown was 42,216 ASF or 26 percent of existing office space at the target year.

### ACADEMIC SUPPORT SPACE

This space classification includes administrative offices, library, physical education and recreation, athletics, assembly and exhibit, and physical plant. The Academic Support Space category showed a deficit of 27 percent of existing space at the target year. The administrative office category showed a deficit of 12,007 ASF or 8 percent when guideline space was compared to target year existing space. The library category showed an 24,528 ASF deficit of space. Physical education and recreation showed a

## Campuswide Space Needs Analysis

| | Base Year<br>*Student Headcount = 11,532*<br>*Staff Headcount = 2,089* | | | | Target Year<br>*Student Headcount = 12,890*<br>*Staff Headcount = 2,237* | | | |
|---|---|---|---|---|---|---|---|---|
| **SPACE CATEGORY** | **Existing ASF** | **Guideline ASF** | **Surplus/ (Deficit)** | **Percent Surplus/ (Deficit)** | **Existing ASF** | **Guideline ASF** | **Surplus/ (Deficit)** | **Percent Surplus/ (Deficit)** |
| **Academic Space** | | | | | | | | |
| Classroom & Service | 104,228 | 172,697 | (68,469) | (66%) | 104,228 | 178,633 | (74,405) | (71%) |
| Teaching Laboratories & Service | 99,115 | 123,158 | (24,043) | (24%) | 99,115 | 124,174 | (25,059) | (25%) |
| Open Laboratories & Service | 34,079 | 40,822 | (6,743) | (20%) | 34,079 | 42,462 | (8,383) | (25%) |
| Research Laboratories & Service | 24,200 | 46,138 | (21,938) | (91%) | 24,200 | 134,059 | (109,859) | (454%) |
| Academic Offices & Service | 164,439 | 188,785 | (24,346) | (15%) | 164,439 | 206,655 | (42,216) | (26%) |
| Other Academic Department Space | 15,127 | 20,411 | (5,284) | (35%) | 15,127 | 21,231 | (6,104) | (40%) |
| *Academic Space Subtotal* | *441,188* | *592,011* | *(150,823)* | *(34%)* | *441,188* | *707,214* | *(266,026)* | *(60%)* |
| **Academic Support Space** | | | | | | | | |
| Administrative Offices & Service | 144,968 | 151,775 | (6,807) | (5%) | 144,968 | 156,975 | (12,007) | (8%) |
| Library | 104,441 | 124,437 | (19,996) | (19%) | 104,441 | 128,969 | (24,528) | (23%) |
| Physical Education & Recreation | 50,045 | 66,025 | (15,980) | (32%) | 50,045 | 68,075 | (18,030) | (36%) |
| Athletics | 76,524 | 80,981 | (4,457) | (6%) | 76,524 | 101,226 | (24,702) | (32%) |
| Assembly & Exhibit | 58,150 | 77,944 | (19,794) | (34%) | 58,150 | 80,404 | (22,254) | (38%) |
| Physical Plant | 7,966 | 20,574 | (12,608) | (158%) | 7,966 | 27,772 | (19,806) | (249%) |
| Other Administrative Department Space | 36,566 | 40,819 | (4,253) | (12%) | 36,566 | 42,458 | (5,892) | (16%) |
| *Academic Support Space Subtotal* | *478,660* | *562,555* | *(83,895)* | *(18%)* | *478,660* | *605,879* | *(127,219)* | *(27%)* |
| **Auxiliary Space** | | | | | | | | |
| Student Center | 61,500 | 91,845 | (30,345) | (49%) | 61,500 | 95,535 | (34,035) | (55%) |
| Residence Life | 631,479 | 646,000 | (14,521) | (2%) | 631,479 | 843,750 | (212,271) | (34%) |
| Health Care Facilities | 1,901 | 2,551 | (650) | (34%) | 1,901 | 2,654 | (753) | (40%) |
| Early Childhood Education Center | 5,093 | 5,093 | 0 | 0% | 5,093 | 5,093 | 0 | 0% |
| *Auxiliary Space Subtotal* | *699,973* | *745,489* | *(45,516)* | *(7%)* | *699,973* | *947,032* | *(247,059)* | *(35%)* |
| **CAMPUS TOTAL** | **1,619,821** | **1,900,055** | **(280,234)** | **(17%)** | **1,619,821** | **2,260,125** | **(640,304)** | **(40%)** |
| *Inactive/Conversion Space* | *39,362* | | | | *39,362* | | | |
| *Leased Out Space* | *8,976* | | | | *8,976* | | | |

ASF = Assignable Square Feet

deficit of 18,030 ASF or 36 percent of existing space at the target year. Athletics findings resulted in a deficit of 24,702 ASF. Assembly and exhibit space showed a deficit of 22,254 ASF. Physical plant space showed a deficit of 19,806 ASF of space at the target year.

### AUXILIARY SPACE

This functional space classification showed a 40 percent deficit of space at the target year. Student center space showed a deficit of 34,035 ASF. Residence life showed a deficit of 212,271 ASF at the target year. Health care facilities are roughly in balance.

### SPACE NEEDS ANALYSIS BY SCHOOL, COLLEGE AND MAJOR ADMINISTRATIVE UNIT

In addition to the analysis of space calculated by space category as shown above, space needs were calculated for each school and major administrative unit. The adjacent table outlines the findings.

### INSTRUCTIONAL SPACE UTILIZATION

The analysis of classroom and teaching laboratory utilization was summarized to show the weekly room hours of use and student station occupancy percentage.

**Classroom Utilization Summary**

| | |
|---|---|
| Total Assigned Square Feet | 101,460 |
| Average Assigned Square Feet per Station | 18 |
| Average Enrollment | 27 |
| Average Weekly Room Hours | 31 |
| Student Station Occupancy Percent | 69% |

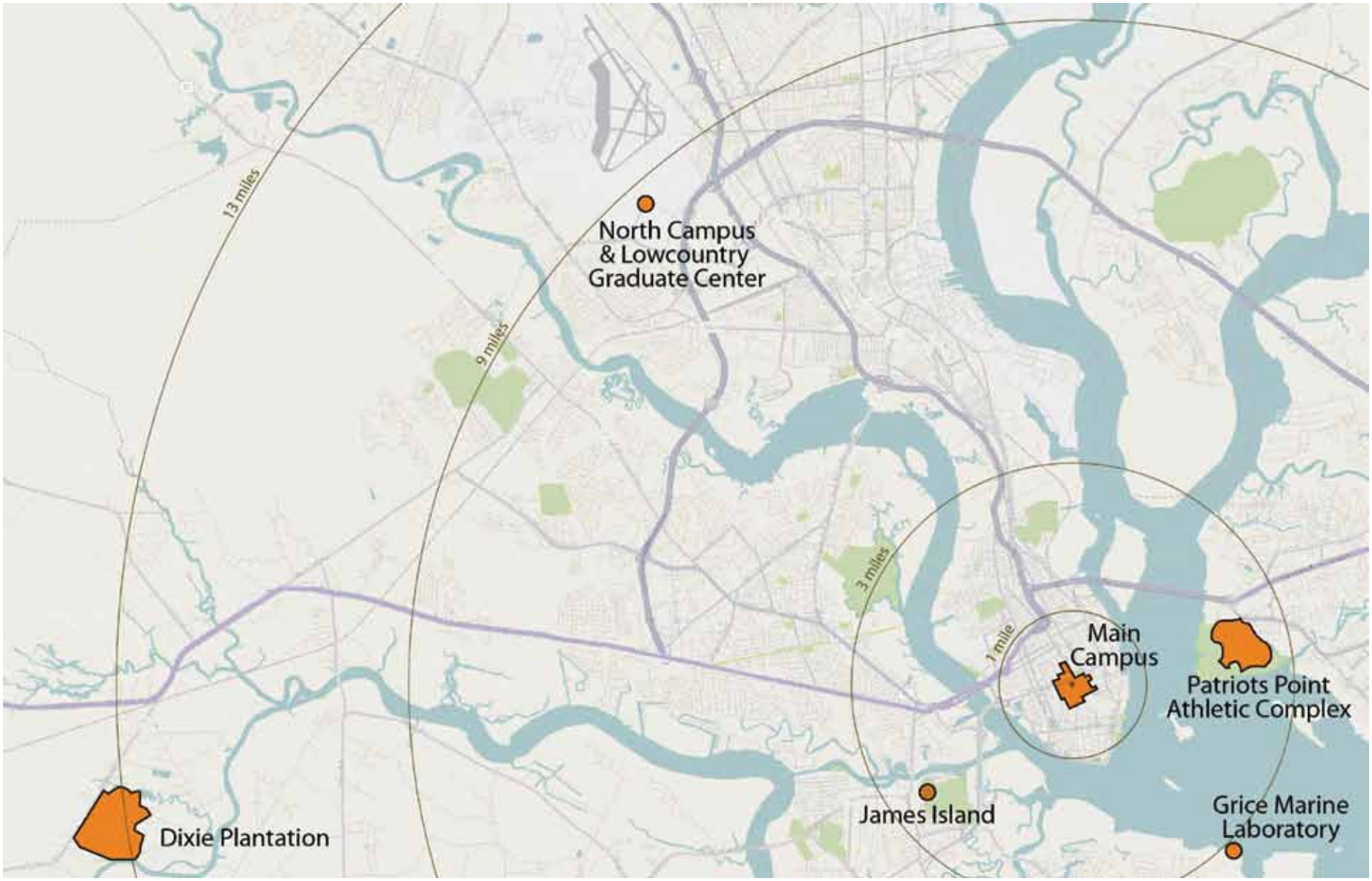
**Teaching Laboratory Utilization Summary**

| | |
|---|---|
| Total Assigned Square Feet | 78,239 |
| Average Assigned Square Feet per Station | 56 |
| Average Enrollment | 16 |
| Average Weekly Room Hours | 20 |
| Student Station Occupancy Percent | 74% |

**Space Needs Analysis by College/School or Major Unit**

| | Base Year *Student Headcount = 11,532 Staff Headcount = 2,089* | | | | Target Year *Student Headcount = 12,890 Staff Headcount = 2,237* | | | |
|---|---|---|---|---|---|---|---|---|
| **COLLEGE/UNIT** | **Existing ASF** | **Guideline ASF** | **Surplus/ (Deficit)** | **Percent Surplus/ (Deficit)** | **Existing ASF** | **Guideline ASF** | **Surplus/ (Deficit)** | **Percent Surplus/ (Deficit)** |
| **Academic** | | | | | | | | |
| Graduate School | 1,404 | 1,820 | (416) | (30%) | 1,404 | 2,090 | (686) | (49%) |
| Honors College | 2,903 | 4,180 | (1,277) | (44%) | 2,903 | 4,462 | (1,559) | (54%) |
| Libraries | 104,441 | 124,437 | (19,996) | (19%) | 104,441 | 128,969 | (24,528) | (23%) |
| School of Business | 21,653 | 25,417 | (3,764) | (17%) | 21,653 | 30,367 | (8,714) | (40%) |
| School of Educ, Hlth, & Humn Perf | 79,691 | 107,839 | (28,148) | (35%) | 79,691 | 115,580 | (35,889) | (45%) |
| School of Humanities & Soc Sciences | 49,839 | 58,469 | (8,630) | (17%) | 49,839 | 68,201 | (18,362) | (37%) |
| School of Lang, Cult, and World Aff | 23,494 | 29,155 | (5,661) | (24%) | 23,494 | 31,708 | (8,214) | (35%) |
| School of Sciences and Mathematics | 122,966 | 185,434 | (62,468) | (51%) | 122,966 | 264,032 | (141,066) | (115%) |
| School of the Arts | 92,697 | 100,567 | (7,870) | (8%) | 92,697 | 105,820 | (13,123) | (14%) |
| Classroom & Service | 104,228 | 172,697 | (68,469) | (66%) | 104,228 | 178,633 | (74,405) | (71%) |
| *Academic Subtotal* | *603,316* | *810,015* | *(206,699)* | *(34%)* | *603,316* | *929,862* | *(326,546)* | *(54%)* |
| **Administrative** | | | | | | | | |
| Academic Affairs/Provost | 59,448 | 51,946 | 7,502 | 13% | 59,448 | 57,317 | 2,131 | 4% |
| Athletics | 87,711 | 97,426 | (9,715) | (11%) | 87,711 | 118,181 | (30,470) | (35%) |
| Business Affairs | 126,090 | 170,614 | (44,524) | (35%) | 126,090 | 182,803 | (56,713) | (45%) |
| External Relations | 4,196 | 4,285 | (89) | (2%) | 4,196 | 4,490 | (294) | (7%) |
| Institutional Advancement | 11,620 | 13,134 | (1,514) | (13%) | 11,620 | 13,782 | (2,162) | (19%) |
| Office of the President | 26,509 | 26,777 | (268) | (1%) | 26,509 | 27,608 | (1,099) | (4%) |
| Student Affairs | 700,931 | 725,858 | (24,927) | (4%) | 700,931 | 926,082 | (225,151) | (32%) |
| *Administrative Subtotal* | *1,016,505* | *1,090,040* | *(73,535)* | *(7%)* | *1,016,505* | *1,330,263* | *(313,758)* | *(31%)* |
| **TOTAL** | **1,619,821** | **1,900,055** | **(280,234)** | **(17%)** | **1,619,821** | **2,260,125** | **(640,304)** | **(40%)** |
| *Inactive/Conversion Space* | *39,362* | | | | *39,362* | | | |
| *Leased Out Space* | *8,976* | | | | *8,976* | | | |

ASF = Assignable Square Feet

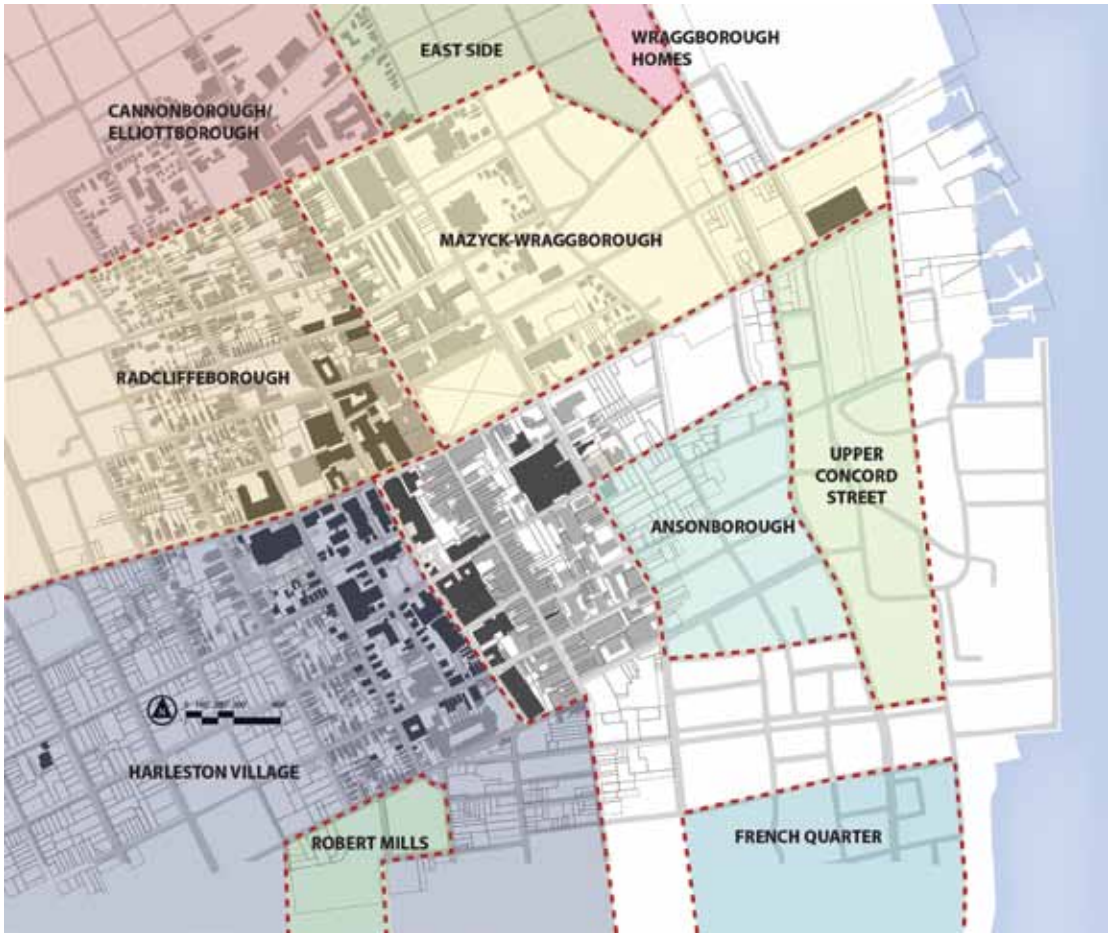



College of Charleston Locations

## EXISTING CONTEXT

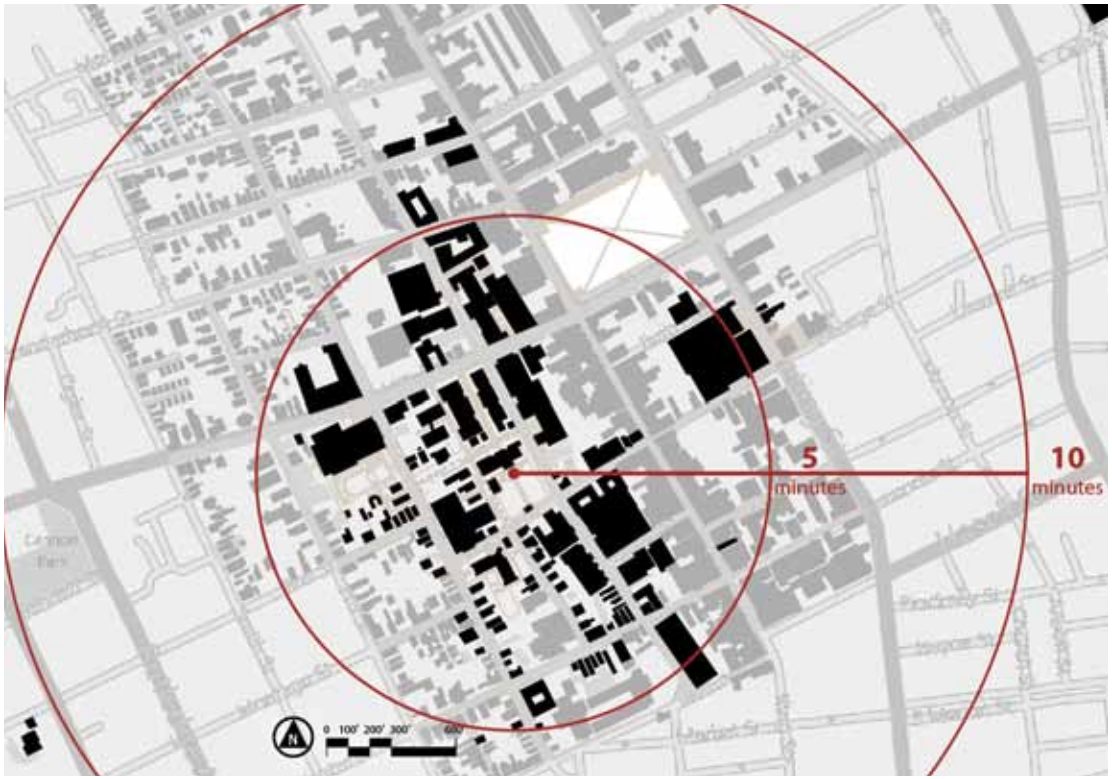
The physical place that is historic Charleston is both uniquely inspiring and constraining for an evolving institution like the College. The campus, once on the edge, has been surrounded and absorbed by the city grid over time. The city, as an extended campus, provides many benefits for students, faculty, and staff. The ability to use major civic urban areas like Marion Square and King Street provide for a rich collegiate experience. Surrounding neighborhoods offer a place for students to live, though sometimes with tension between students and neighbors, a problem facing most urban campuses. Open spaces, such as the Cistern, transcend the College boundaries and become important city spaces as well. The campus character exists seamlessly within the city, while having an identity of its own. Remarkably, as the campus has grown, it has retained a cohesive, compact feel. However, there is growing pressure to find new outlets for growth, whether on the peninsula or in surrounding areas.

Peninsula Context




Neighborhoods

The physical place that is historic Charleston is both uniquely inspiring and constraining for an evolving institution like the College.




Walking Radius

## CAMPUS ACCESS AND CIRCULATION

Access to campus from outlying areas is relatively simple. Calhoun Street is one of two major access points to the Peninsula from the west and leads straight to campus. Meeting Street is the primary connection from the north and east. It leads to Calhoun Street east of campus. Therefore, Calhoun Street coming from both east and west is the major access route to the College. Its importance to the future growth and identity of the College cannot be understated. With the exception of closures to College Way and Green Way, the campus is fully accessible by car. Narrow roads and busy intersections present challenges to maneuverability through campus for pedestrians, bicyclists, and drivers alike.

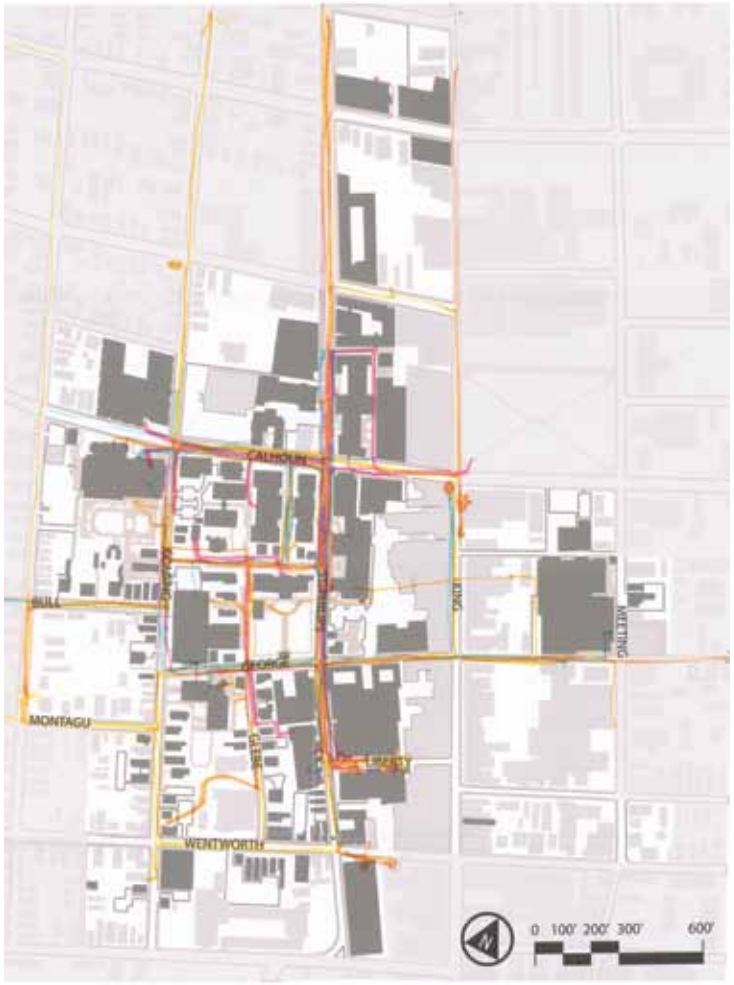
### Pedestrians

The city and the College are very walkable. The furthest walk across campus takes about 10 minutes. In general, the sidewalks in and around campus are narrow and busy.

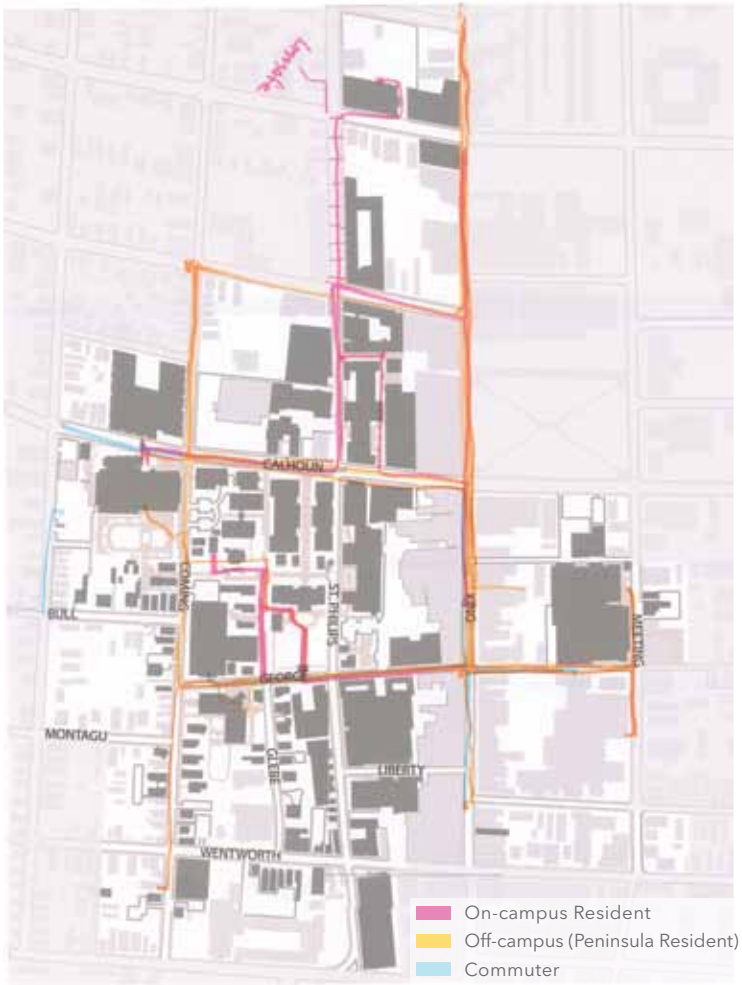
There are several areas of significant pedestrian/auto conflict. Specifically, these areas are at the intersections of Calhoun and Coming Streets and Calhoun and St. Philip Streets. Campus growth will continue north of Calhoun Street, so this must be a safety priority. St. Philip Street is the most used pedestrian route on campus, and existing sidewalks are not wide enough to handle the volume. With the library located on the west side, and the new building for the School of Sciences and Math on the northwest side of Coming Street, better crossings are also needed at the extension of Green Way.

### Bicycles

Approximately 41 percent of students walk or bike to campus regularly, while 11 percent of faculty and staff do so, according to a survey.* As mentioned previously, narrow roads and sidewalks, coupled with a lack of bike lanes, make biking in and around campus dangerous. There is growing demand for a city-wide bike plan with designated routes clearly identified. St. Philip Street would be a logical north-south bike route connecting campus to student housing to the north.

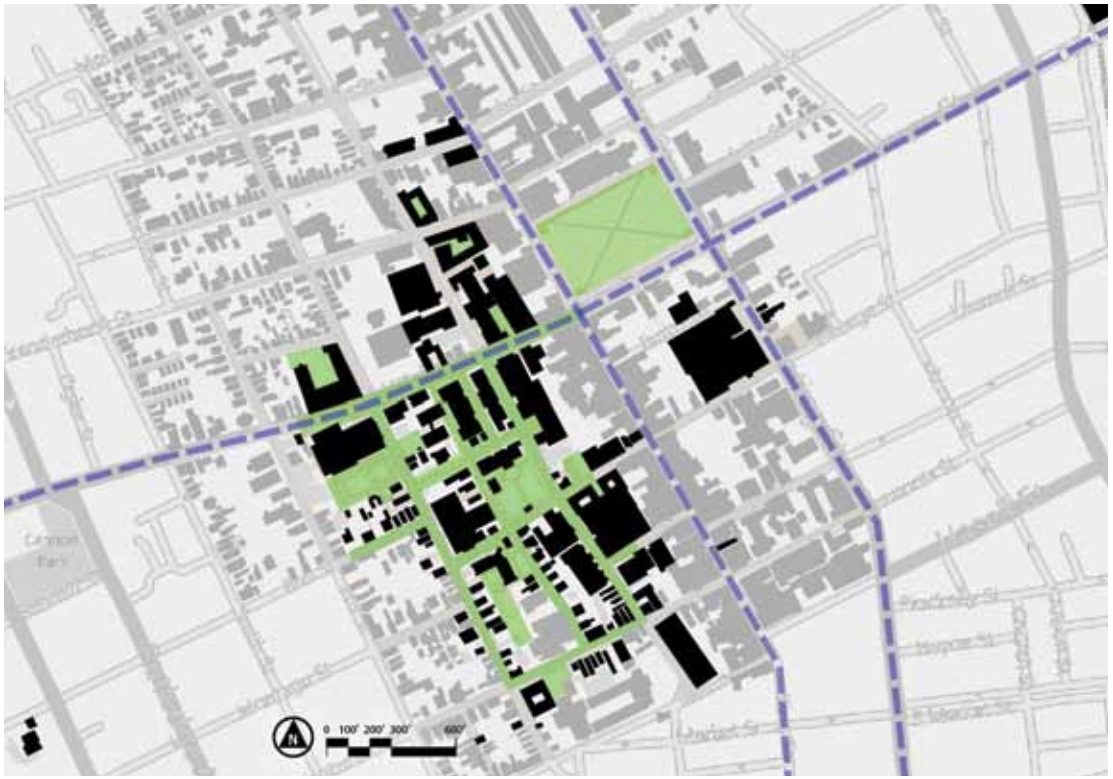



Pedestrian Circulation, Day:
The core campus is heavily traveled during the day.
(Diagrams created at open forum with students.)




Pedestrian Circulation, Night:
Activities and traffic increase on King Street after dark.

Narrow roads and busy intersections present challenges to maneuverability through campus for pedestrians, bicyclists, and drivers alike.




Campus Green Space &
Major City Thoroughfares


Existing CARTA Transit Routes

**Transit**

Approximately 44 percent of survey respondents drive to campus alone.* Incentives are needed for greater use of alternative modes of transportation. The College and the city are serviced by the Charleston Regional Transportation Authority (CARTA) bus system. Riding on CARTA is free for students, faculty, and staff. Riders must check CARTA's Web site for times of the express program, which doesn't run all day. Many would like this service expanded. Approximately 120 faculty/staff members use CARTA regularly. The DASH is a free trolley service that connects the lower peninsula.

**Parking**

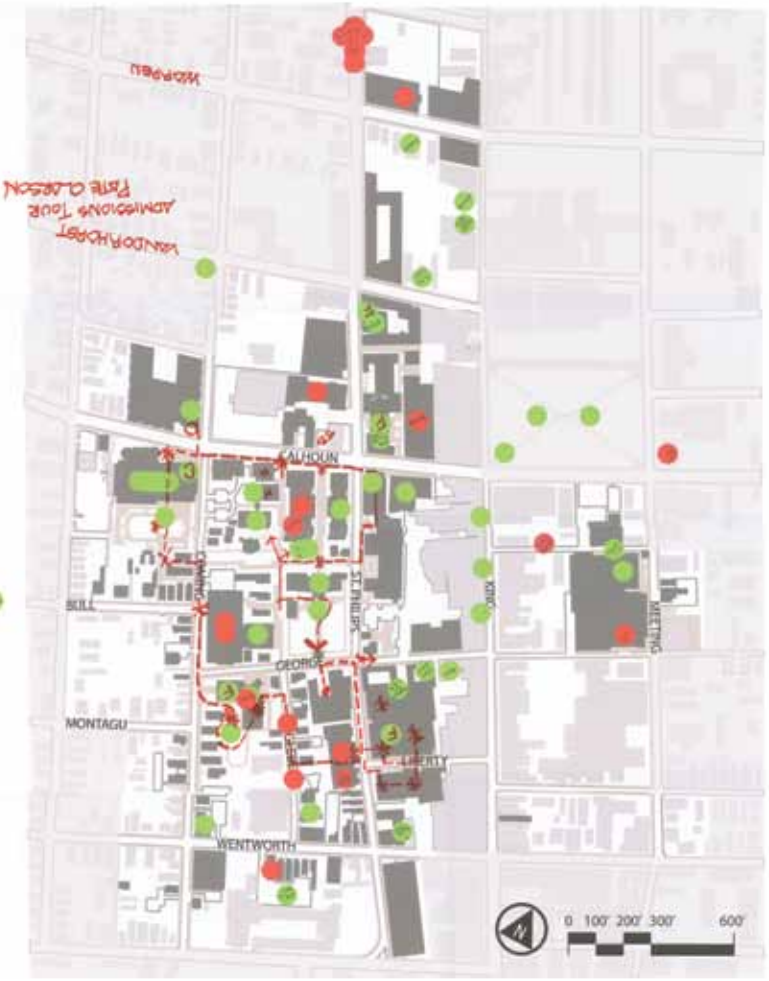
There are approximately 2,250 campus parking spaces. This includes parking decks, a remote parking deck to the east, surface parking lots, and on-street parking. There are three parking decks on campus: two are on St. Philip Street, and one is on Wentworth Street. Some parking is available in the Francis Marion parking deck on King Street as well. The remote parking deck is at the aquarium and linked to campus by CARTA. With the scarcity of land in this urban environment, existing surface parking lots are small, and they are prime sites for future development. On-street parking exists on Glebe Street, Coming Street, and a portion of St. Philip Street.

The remote parking deck by the aquarium is not owned by the College, though the College can use up to 600 spaces. Plans for new development adjacent to this parking deck threaten to eliminate the College's use of those spaces. If they are lost, it will be very difficult for the College to replace them, making alternate modes of transportation even more urgent.

The city's Department of Traffic & Transportation is considering an initiative to convert Coming and St. Philip Streets to two-way traffic from one-way in opposite directions. The initiative, tentatively scheduled for 2013, is to calm and balance traffic in the downtown area. Despite the positive intention, increase in traffic throughout campus would likely occur.


Parking

* See the "College of Charleston 2011 Campus Transportation Study; Analysis of Commuting Habits and Recommendations" by P. Brian Fisher, Ph.D. and Erin McAdams, Ph.D. for more information on survey results. The report is available from the Office of Sustainability.




Campus Spaces Analysis: Student responses to questions about places and spaces having positive or negative characteristics.

- Positive or successful spaces on campus
- Spaces in need of improvement

## GROUNDS

Rivers Green has joined the Cistern as an iconic open space. Few other large open spaces exist on campus due to the historic density of the city. The yard south of the Stern Student Center presents an opportunity for a usable student space adjacent to the student center. The courtyard north of the new Sciences and Mathematics building could become a more localized social space.

As within the historic city, campus open spaces are often smaller gardens or passages such as Green Way. Such spaces define the character of Charleston. Streets within and around campus are important parts of the open space and circulation networks. Gates, walls, and landscape give unique character to the grounds. Continuing the College's system of passages and gardens with site amenities, lighting, and paving material will enhance and extend the campus identity.

## INFRASTRUCTURE

The central energy plant located at the southeast corner of Calhoun and Coming Streets is close to capacity. New campus construction will require a supplemental facility. A location north of Calhoun Street is important to serve new demand in that area. The creation of redundancy through a loop system is important. However, tunneling under Calhoun Street to connect to the existing plant will be costly.

The current plant is steam-generated, which is not efficient. A hot-water system is preferable for the new plant with eventual conversion of the existing plant. However, the Sciences and Mathematics Building, which is supported by steam, would be expensive to convert. Still, sustainable alternatives to steam should be considered.

By continuing the College's system of passages and gardens with site amenities, lighting and paving material will enhance and extend the campus identity.


City of Charleston Zoning Map

**ZONES**

| | |
|---|---|
| GB | General Business |
| LB | Limited Business |
| DR-1F | Diverse Residential (19.4 units/acre) |
| DR-2 | Diverse Residential (26.4 units/acre) |

Height Districts

## ZONING

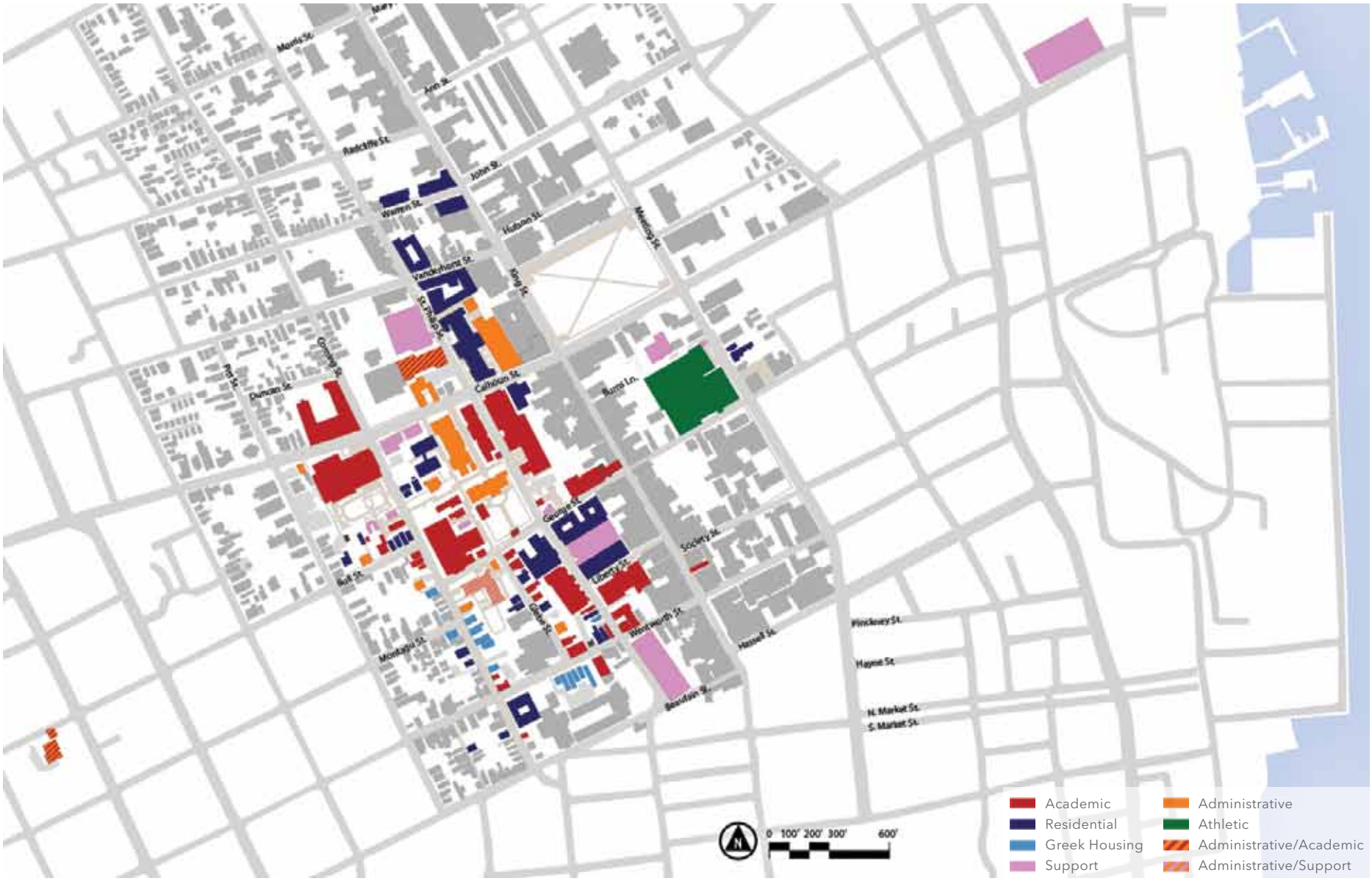
The College campus is governed by city zoning ordinances. The campus spans multiple zones:

General Business (GB): The GB district is intended to provide for a broad range of commercial uses and activities. It is the most intensive commercial zoning district. There is generally a 55-foot height limit, with special exception zones of 80, 100, and 120-foot limits along the east side of St. Philip Street.

Limited Business (LB): The LB district is intended to provide for a limited variety of commercial uses and services associated with neighborhood retail, financial, and office activities compatible with residential areas. The hours of operation for most permitted commercial uses are restricted to between 7 a.m. and 11 p.m. There is a 55-foot height limit.

Diverse Residential (DR-1F - and DR-2): The DR districts allow multi-family residential (three or more) dwellings and one-family attached dwellings as well as single- and two-family dwellings. The Board of Zoning Appeals may approve as a variance, fraternity houses, sorority houses, dormitories, and homes for the elderly. Height limit is 50 feet or three stories.

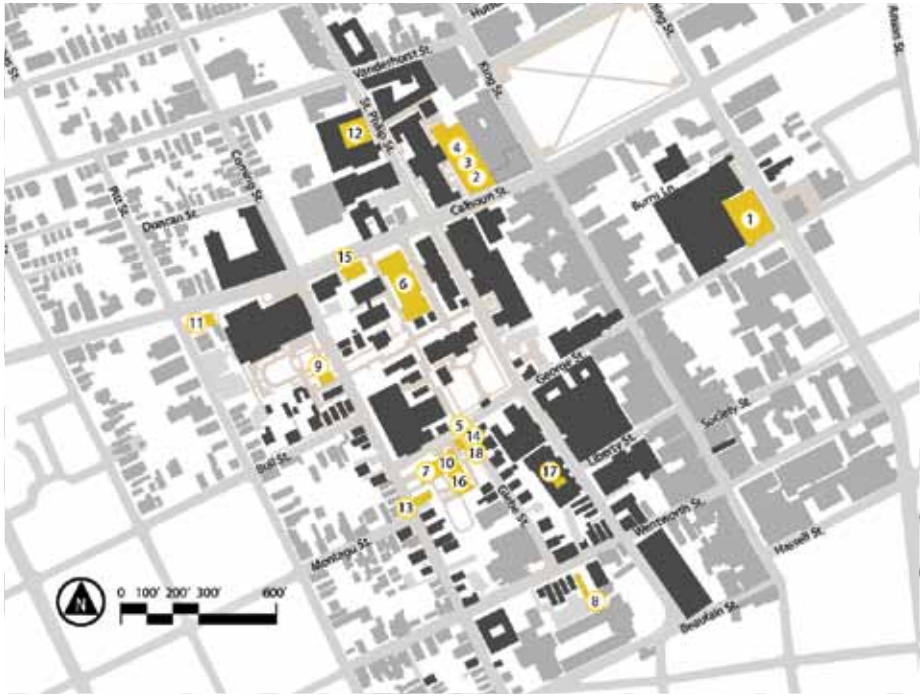
There also is a School Overlay Zone district, which allows the possibility of the College being granted a special exception, rather than a variance, for development. The School Overlay Zone is intended to identify those areas within residential zoning districts where school uses are appropriate. School uses are prohibited within residential zoning districts except within the S Overlay Zone and with a special exception being made by the Zoning Board.




Building Use


Residential Buildings

1 Campus Recreation Services
2 Career Center
3 Center for Civic Engagement
4 Center for Disability Services
5 Community Relations
6 Counseling & Substance Abuse
7 Dean of Students
8 Greek Life
9 Higdon Student Leadership Center
10 McNair Scholars
11 Multi-Cultural Student Programs
12 Public Safety
13 Residential Life
14 Religious Life
15 Student Health
16 Student Life
17 Upward Bound & Pre-College Programs
18 Victim Services



Student Affairs Locations

## BUILDINGS

The city is known as "The Holy City" because of its many steepled churches. The College was founded in 1770 during the colonial period. Therefore, the buildings on campus vary greatly in age, style, and size. The diverse architectural character on campus, and throughout the city, is a large part of what makes the College such a special place. On the main campus, 55 of the 133 buildings are historic structures. This is an amazing ratio for a campus, but it presents a challenge for growth and maintenance.

Campus icons, Randolph Hall and Sottile House, play important roles in continuing campus traditions. Many historic homes have been repurposed as academic and administrative offices.

Larger academic buildings, reflective of campus growth in the 1970s, are showing their age and are in need of renovation. New facilities have been well designed for programmatic needs and enhance the architectural heritage of the College.

The master planning team evaluated the conditions of campus buildings through observation and conversations with everyday users of the facilities. Based on the team's findings, buildings in need of improvements were placed in one of three categories: demolish, renovate, or repurpose. As with all campuses, some existing buildings have or will soon reach the end of their useful lives.


Potential Building Demolition

1 New Student Programs Building
2 Calhoun Annex
3 Treasurer's Office
4 College Lodge
5 Student Health Services
6 Rutledge Rivers
7 Buist Rivers
8 Maybank Hall
9 Greenhouse
10 Residence Life Facilities Office
11 Craig Hall
12 Thaddeus Street Education Center
13 J. C. Long Building

Underutilized and underperforming sites on campus will need to be redeveloped to implement the Strategic Vision.

## SUMMARY OF EXISTING CAMPUS CONDITIONS

The density and historic fabric of the city mean that few opportunities exist for new facilities without having to demolish existing underperforming campus structures and redevelop the sites. Other alternatives are property acquisitions and partnership opportunities.

Further enhancement of the campus as a pedestrian zone is important. Pedestrian connection across Calhoun Street is critical for campus cohesiveness and safety. Traffic calming methods should be employed.

Improving campus access for alternate modes of transportation is also important for safety and to reduce parking demand.

Retention of the feel of a campus seamlessly embedded in the city, while maintaining its identity, is a delicate balance. Building on existing centers of activity will help retain the compact and walkable ambiance.

Outdated buildings and underutilized sites should be considered for redevelopment. Such solutions for core programs are preferred to moving them to remote locations.

The expansion of the grounds footprint and character outward from the center of campus will create cohesiveness and enhance identity. Consistent site elements and landscape strategies will foster this goal.

Sustainable site solutions for storm-water management and collection can extend campus character, mitigate existing problems, save resources and reduce future costs. Sustainable energy solutions are important considerations for the campus.


Development Opportunities & Areas of Future Consideration

CHAPTER 2

# ANALYSIS & CONCEPTS

The first phase of the planning process was designed to formulate goals for the future physical campus, gain an understanding of existing conditions and context, and identify primary drivers affecting future campus growth. The second phase of the planning process synthesizes that data into conceptual physical and policy responses. Powerful ideas and concepts emerged through dialogue at on-site workshops with campus leaders and constituents.

## ANALYSIS & CONCEPTS PHASE

A physically constrained campus footprint demands creative strategies to achieve master plan goals. Innovative ideas and rich discussion about how to take campus technology to new places and how to reimagine spaces and facilities in qualitative ways resulted in three major concepts as outlined below:

1. Campus buildings and spaces should be designed to improve student learning outcomes and promote scholarship through new and improved curriculum delivery, active learning spaces, and technology-rich space.
2. The campus, for core College programs, should remain a compact, cohesive, and uniquely identifiable place within the city.
3. The College's physical assets should endeavor to educate the whole person in a balanced, safe, and connected intellectual community.



"The teaching methods used in the TEAL [MIT's Technology-Enhanced Active Learning] classroom produced about twice the average normalized learning gains for low-, intermediate-, and high-scoring students when compared to traditional instruction."



Active Classroom Examples

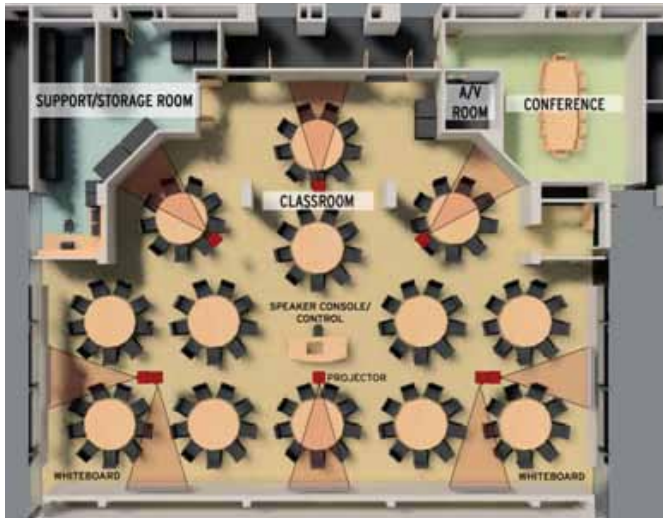
# LEARNING OUTCOMES & CURRICULUM DELIVERY

New technology continues to generate compelling modes of curriculum delivery that satisfy the need for both efficiency and effectiveness. Active learning spaces infused with technology encourage team-based exercises with greater instructor interaction and the ability to transcend geography in order to collaborate. Online capabilities allow and encourage a flip of traditional lecture and homework. It is now more productive to post a recorded lecture to the Internet for viewing and reviewing anytime. Valuable class meeting time then can be utilized to work through problems, with the instructor facilitating in person. Student-centered, customizable-learning is enhanced, and higher orders of learning become possible.

As a result of this trend, different kinds of learning spaces are emerging at universities around the country that change the face of teaching and learning. More than 100 universities have developed their own studio-based active classrooms. A few examples are Technology-Enhanced Active Learning (TEAL) at MIT; Transform Interact Learn Engage (TILE) Classrooms at the University of Iowa; Active Learning Classrooms at the University of Minnesota; and Student-Centered Active Learning Environment for Undergraduate Programs (SCALE-UP) at NCSU.

*"A variety of assessment techniques used by TEAL have shown the effectiveness of interactive engagement across a range of student backgrounds. The teaching methods used in the TEAL classroom produced about twice the average normalized learning gains for low-, intermediate-, and high-scoring students when compared to traditional instruction. These findings replicate the results of studies performed at other universities."*
*(http://web.mit.edu/edtech/casestudies/teal.html)*

When a student walks into such a room, the student sees and feels a difference. The room has been created to facilitate active, collaborative learning. It promotes interactions among groups of students. There is no "front" to the room. Conversation and collaboration happen everywhere. A decade of research suggests these new approaches are improving student learning outcomes. They have potential to reduce educational delivery costs for institutions.




© MIT TEAL/Studio Physics Project

MIT TEAL/Studio Physics Project

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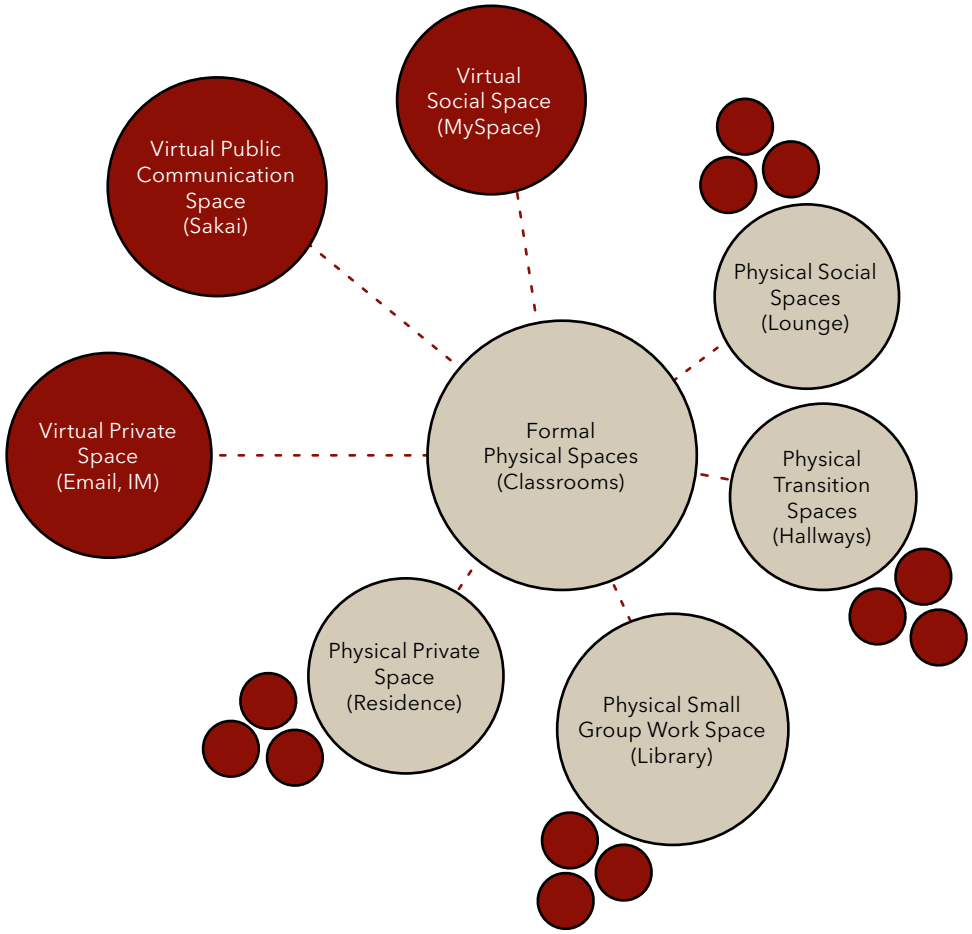
TILE Classroom Examples






The National Center for Academic Transformation (NCAT) is a forward-thinking, not-for-profit organization that is assisting campuses with course redesign. NCAT's approach brings together face-to-face activity with Web-based content in a planned, pedagogically valuable manner referred to as "blended learning." It provides today's students with anytime, anywhere access to materials and blends synchronous and asynchronous instruction to offer new approaches to educational delivery and facilitation. Blended learning is considered an effective strategy that helps position universities for the onslaught of technological developments and expectations certain to arrive in the future. It increases the options for greater quality and quantity of human interaction in the learning environment. Students can learn the way that suits them best: on their own time, at their own pace, in their own place, and using the tools with which they are most comfortable to communicate with peers and instructors.

Blended learning initiatives usher in a new paradigm of education and provide a model for enhanced student-faculty interaction. A close look at the learning and teaching relationships that facilitate a community of inquiry and builds upon cognitive, social, and teaching presence is at the heart of this pedagogical approach. A theme of engaging, enabling, and empowering learning must replace traditional approaches to meet the needs of "connected" students.

A "blended" model of online and classroom learning is recommended in this Campus Master Plan for the College. This methodology will have an impact on how space is configured in future growth scenarios. In some cases, technology will reduce the need for new classrooms. In other cases, technology will increase the amount of space per student station within a given classroom. While it is recommended that technologically advanced learning spaces be ubiquitous on campus, a central location for the generation and advancement of curriculum delivery improvements also is needed. The concept of a Learning Technology Center has generated much excitement within the College for promoting advanced teaching methodology.

# GROWING IN PLACE

Randolph Hall

School of Business

Silcox Gym and TD Arena

Campuses and cities are regenerative places. Layers of history are evident in the myriad styles and juxtaposition of buildings and reflect an evolution of place. Sustainable campus growth involves pruning that which is no longer viable and redeveloping other assets to the highest and best use. With very limited land resources, the College must be a steward of its many valuable assets, while seizing opportunities to bring underperforming ones into alignment. Working within the limits of current zoning, the Campus Master Plan optimizes site utilization.

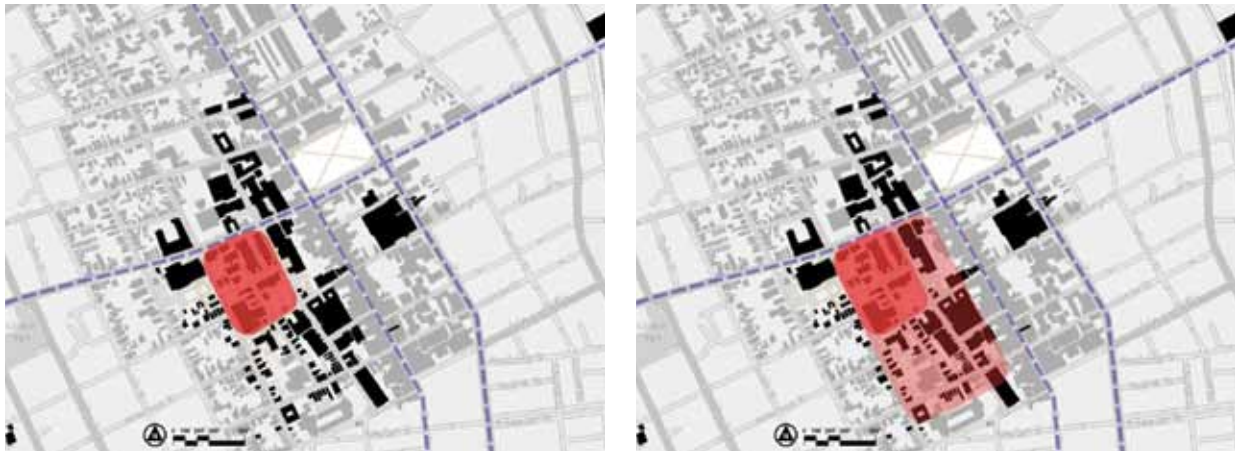
With substantial space needs and limited expansion areas, outdated and undersized buildings become a primary candidate for redevelopment. These projects lower maintenance costs, provide new state-of-the-art learning spaces, and add new square footage for growing or cramped programs. Multiple projects aggregate new space and will replace the need for finding a site and constructing a new building.

As evidenced by the Development Opportunities and Potential Acquisitions graphic from the Campus Conditions section, there are also on-campus sites (albeit very few) that are suitable for infill growth. Most are existing surface parking lots, which underutilize precious space in this urban environment. Infill growth is also sustainable in that it recycles existing land in a more productive way. These strategies reinforce and strengthen the campus core. The result is a clearly identifiable, compact, and cohesive campus.

The Camps Master Plan recommends exploring the possibility of acquiring property not owned by the College that is adjacent and underutilized. There are small opportunities contiguous with campus, larger opportunities further from campus along St. Philip Street, and more speculative opportunities to the east along Calhoun Street that may be better suited for public/private partnerships. It would be in the College's best interest to work with the community to develop strategies for acquisition that could be beneficial to all.

## CAMPUS GROWTH

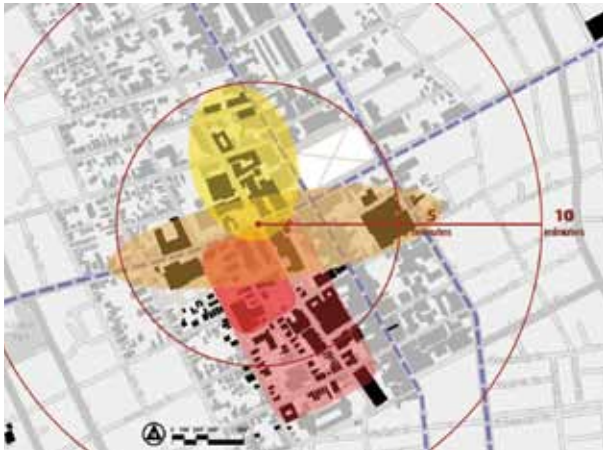
Without question, a prime opportunity for College growth is the north side of Calhoun Street between Coming and St. Philip Streets. This location is essentially "on campus." Underused surface parking on the western half of the site is an eyesore along one of the most important streets in the city. It presents a great opportunity to add new space and to brand the College by creating a vibrant city district along the Calhoun Street Corridor. Indeed, it is apparent by standing on the corner of St. Philip and Calhoun Streets on any given afternoon that the population center of the College has migrated from the Cistern to this intersection. The diagram "Growth Patterns of Campus Over Time" represents a conceptual understanding of the growth pattern of campus since its earliest days. Even with new facilities west, east, and north of the core, it remains a very compact campus.

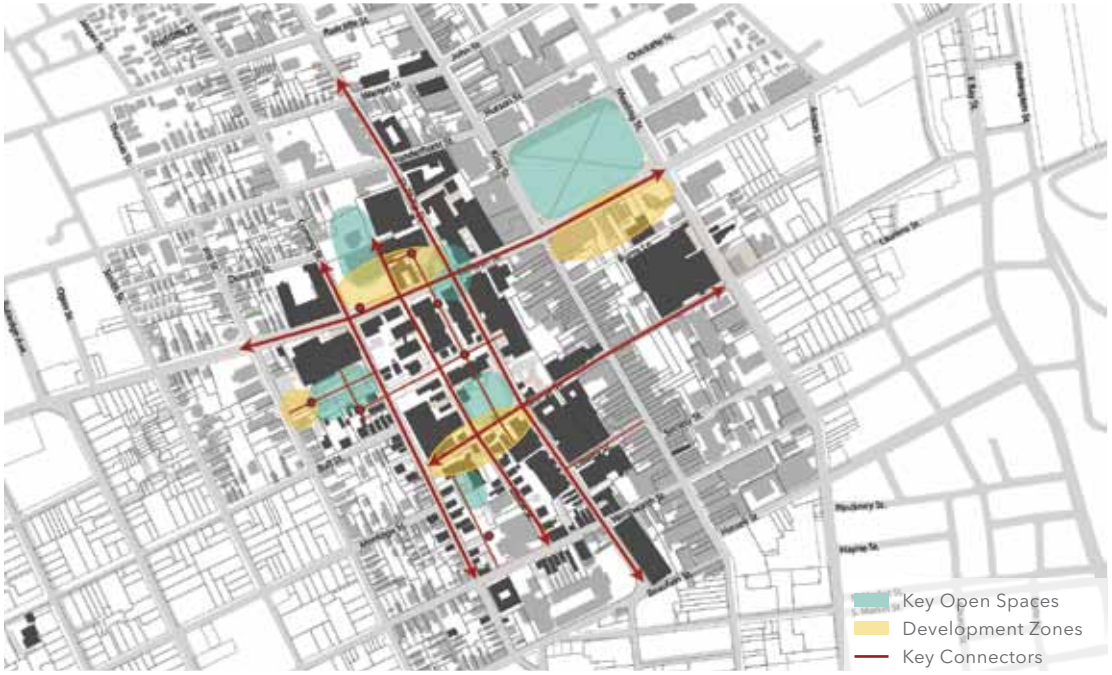


Concept Diagram: Growth Patterns of Campus Over Time

The north side of Calhoun Street, between Coming and St. Philip Streets, presents a great opportunity to add new space and to brand the College by creating a vibrant city district along the Calhoun Street Corridor.


Future Development Zone: View of surface parking lot at the corner of Coming and Calhoun Streets




Key Zones and Corridors

## KEY ZONES AND CORRIDORS

Key zones in and around campus are already important civic spaces and building zones that could be enhanced through extended development. They represent opportunities for creating mixed-use clusters to complement the core and the surrounding community. By strengthening key corridors and passages, the College will extend its framework and identity seamlessly to keep the campus connected. By reinforcing the primary use within these zones, multiple campus centers will be created to promote synergistic associations, collaborations, and broader impacts.

Streetscapes and Context

College Way

## LAND USE

Three conceptual schemes were considered by the planning team and the College. Each scheme had strong elements, but the scheme that generated the most support from stakeholders creates academic clusters. These clusters build on existing adjacencies, promote interdisciplinary nodes at the overlap, and reinforce an internal campus spine along College Way. The Calhoun Street and George Street Corridors remain important connectors. The concept is most reflective of the existing urban fabric.


Land Use: Preferred Scheme

# CREATING COMMUNITY

Emphasis has been placed on creating a true living and learning intellectual community. Priority projects include expanding and enhancing student spaces for learning, socializing, and exercising. A new residence hall is proposed to make a stronger residential campus. These spaces will complement academic spaces and promote greater student interaction in campus-based activities. Relationships developed through these spaces and activities will nurture a community of loyal alumni.

## CAMPUS CORE

The core campus, as conceptually indicated in the diagram "Campus Core with Key Corridors, Spaces, and Architectural Nodes," should be a pedestrian zone. Marion Square and King Street play major roles in the "off-hours" lives of residential students. Marion Square could be better leveraged by the College by siting non-core programs and functions around it. This would emphasize its importance to the College and the city. The green space represents the core campus's lush landscaping that should be cultivated and exported to new areas. There is a feeling of being in a unique realm within this zone. Expanded sidewalks, street calming initiatives, street trees, signage, and lighting are all important elements to promote safety within the campus core. By activating spaces with varied activities beyond Cougar Mall and the Cistern, such as the yard south of the Stern Student Center and Rivers Green, campus life will be enlivened.

Examples to emulate: Business School's Beatty Center Atrium and Addlestone Library

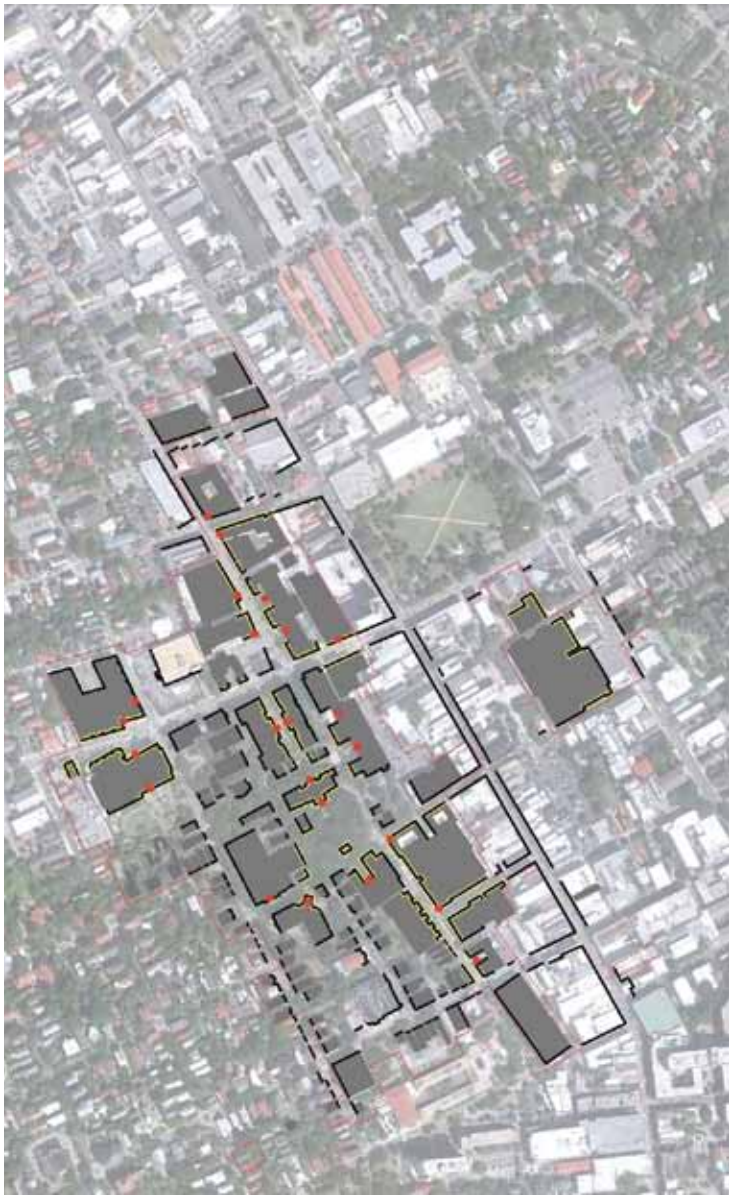

Campus Core with Key Corridors, Spaces, and Architectural Nodes

Emphasis has been placed on creating a true living and learning intellectual community.

Green Way

George Street Retail

Calhoun and George Streets are major east-west connectors to King Street. They provide the most opportunities for bringing mixed-use amenities to campus. The residential complex at the corners of George, St. Philip, and Liberty Streets, is a great example of breathing life into the campus by creating 24/7 street activity. As the building-edge diagram indicates, current College buildings along the south side of Calhoun Street turn their back (or sides) to the street. New development on the north side should activate the streetscape with retail at the ground level directed at the student market. Its south-facing orientation would make a great strip for cafés and coffee shops with outdoor seating, providing an amenity to surrounding neighborhoods. The intersection of St. Philip and Calhoun Streets could be an important urban node.



Building Edges


Calhoun Street Corridor


Regional Facilities and Opportunities

By complementing the academic mission with a broader range of important social outlets, the safe, beautiful environment will enable students to grow more fully and have a richer collegiate experience.

By rethinking the College's financial model, opportunities become available to extend the College's mission beyond the core campus and to enrich the experience of the campus community. The Calhoun Street Corridor is an important mixed-use, medium-intensity zone for the city as shown in the land use plan. Collaboration with the city will create opportunities for extending the campus outward and bringing the city in. Business development initiatives could dovetail well with College's strengths and facilities, bringing additional revenue and intellectual capital to this area of the city. The Medical University of South Carolina represents another partnership that should be strengthened. Again, the Calhoun Street Corridor between the two institutions is a prime opportunity for shared facilities. Other public institutions and private entities should be sought out for creative win-win partnerships.

The City has identified several landholdings that might be beneficial to the College and have partnership potential. These include several properties in the Neck: the Magnolia site, the Charleston Riverfront Park, and another smaller parcel to the north. These offer good opportunities for student recreation spaces and fields and possibly a shared aquatics center.
The expansion of College assets at Grice Marine Lab, Dixie Plantation, Patriots Point, and the North Campus would further extend and strengthen the College's presence in the region.

The 2012 Plan is focused on creating community on the main campus. By complementing the academic mission with a broader range of important social outlets in a safe, beautiful environment, students will have opportunities for a richer collegiate experience. The expansion of College assets at other existing locations (and potentially others) will serve to embed the College's mission more fully in the region, develop more partnerships, serve more people, and increase revenues.

CHAPTER 3

# THE FRAMEWORK PLAN

A preferred set of capital projects and locations emerged from the overlay of Analysis and Concepts onto the Plan Goals and Drivers. The resulting Framework Plan serves as a flexible roadmap for future growth and consists of several elements. The Plan Program prioritizes future building projects for the next 20 years. The illustrative models new campus development for both buildings and grounds. Diagrams explain and reinforce major design elements. District-level graphics highlight important concepts in greater detail. Three-dimensional renderings provide an interpretive look at the future campus.


18
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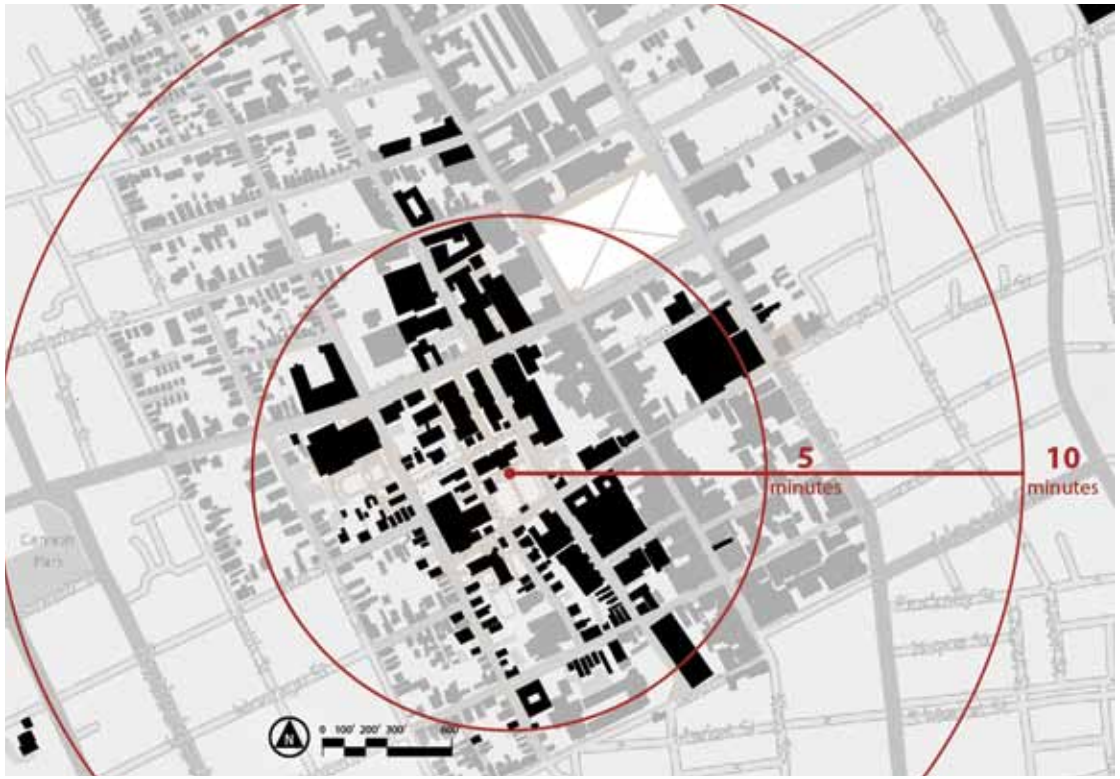
12

# PLAN PROGRAM




Existing Campus

The Plan Program was developed through the Analysis and Concepts Phase in collaboration with College personnel. Projects were developed, prioritized, and sized after weighing multiple need factors, resource allocation, and institutional mission.

Academic projects respond to current and projected space deficits overlaid with the goal of increasing technology to allow implementation of the blended learning model and creating flexible learning spaces.

Student life projects provide much-needed activity space, presenting an opportunity for a holistic campus experience, to attract and retain the best and brightest students.

Athletics and student fitness projects partially fulfill an overall need on the downtown campus. Athletics field space and specialized facilities will be located at Patriots Point or other locations. Additional student recreation field space is proposed in partnership with the City in one of several Neck locations.


Radcliffe Pl.
Radcliffe St.
John St.
Charlotte St.
Warren St.
Hutson St.
Meeting St.
Anson St.
E Bay St.
Washington St.
Vanderhorst St.
King St.
St. Philip St.
Coming St.
Pitt St.
Duncan St.
Calhoun St.
Burns Ln.
Laurens St.
George St.
Society St.
Liberty St.
Bull St.
Glebe St.
Montagu St.
Wentworth St.
Pinckney St.
Hassell St.
Hayne St.
Beaufain St.
N. Market St.
S. Market St.
Church St.
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N
0 100' 200' 300' 600'
20-year Plan Build-Out

| | Program | # of Floors | Total ASF | Total GSF | Renovation GSF |
|---|---|---|---|---|---|
| 1 | Existing Sciences & Mathematics Building, Build-out | 3 | | | 21,000 |
| 2 | Rita Hollings Science Center Renovation | 3 | | | 112,827 |
| 3 | Simons Center for the Arts Renovation and Expansion | 3 | | | 102,325 |
| 4 | Yaschik Arnold Jewish Studies Expansion | 3 | 10,714 | 15,000 | |
| 5 | 350-Bed Residence Hall (Site TBD) | TBD | TBD | TBD | |
| 6 | Learning Technology Center | 2 & 3 * | 32,143 | 45,000 | |
| 7 | Fitness Center | 2 | 28,571 | 40,000 | |
| 8 | Alumni Center / Meeting Space | 2 | 14,286 | 20,000 | |
| 9 | Honors College Relocation | 3 | 55,714 | 78,000 | |
| 10 | School of Education, Health, & Human Performance | 2 | 25,000 | 35,000 | |
| 11 | Athletics | 1 | 7,143 | 10,000 | |
| 12 | Business School Expansion | 2 & 3 * | 28,571 | 40,000 | |
| 13 | Health Services Replacement | 2 | 5,000 | 7,000 | |
| 14 | Academic Building – General Classroom | 4 | 32,143 | 45,000 | |
| 15 | Academic Building – Classroom Upgrade & Recovery Project | 4 | 35,714 | 50,000 | 76,418 |
| 16 | 125-Beds Residence Hall (Craig Hall Replacement) | 4 | 32,143 | 45,000 | |
| 17 | Stern Student Center Addition / Expansion | 4 | 34,286 | 48,000 | |
| 18 | Academic Building – Languages, Culture, and World Affairs | 4 | 29,286 | 41,000 | |
| 19 | New Sciences & Mathematics Building | 3 | 91,429 | 128,000 | |
| 20 | Expansion of St. Philip Street Garage (400 cars) / Chiller Plant | 5 | 7,143 | 10,000 | |
| 21 | Academic Building – Thaddeus Street Education Center Replacement | 3 | 55,714 | 78,000 | |
| 22 | Parking Deck – 600 cars (shared with City) | 5 | 0 | 0 | |
| 23 | Residence Hall Replacement (Lodge) 170 Beds, parking below | 2 | 42,857 | 60,000 | |
| 24 | Graduate Center | 2 | 5,714 | 8,000 | |
| 25 | Future Academic or Administrative Space | 6 | 42,857 | 60,000 | |
| | | **TOTALS **** | **616,429** | **863,000** | |

ACADEMIC GSF: **406,000**
STUDENT LIFE GSF: **115,000**
NET NEW BEDS: **350**
ADDED PARKING SPACES: **300**

** Buildings are two stories with some three-story areas.*

*** Note: These totals will increase once the square footage for the new residence hall is determined. Research space needs are partially accommodated in the second Sciences and Mathematics Building. The program reflects the current strategic vision of the College.*

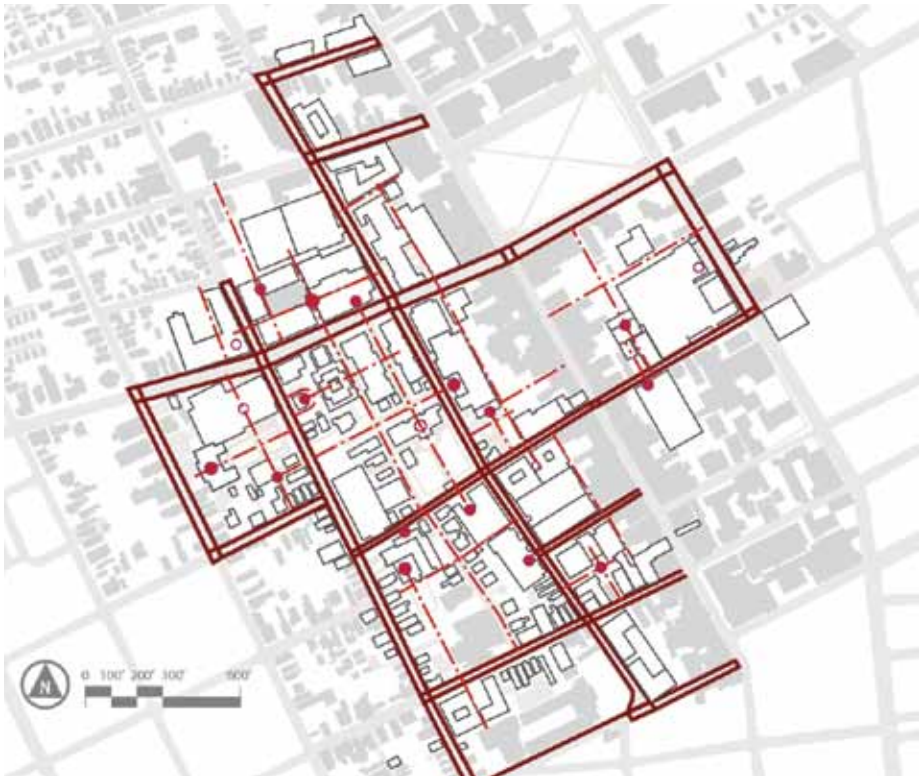

Campus Centers


Land Use Diagram

## PLAN SUMMARY

The Campus Master Plan is intended to guide physical growth in a way that reinforces the existing campus structure, while invigorating its sense of community. It provides direction for future development to further enhance a functional and beautiful campus, reflecting the spirit and mission of the College.

Distinguished campuses promote a sense of an intellectual community. The community proposed in The Framework Plan is characterized by a mix of uses in which the campus and community lives, learns, and plays. Strong community promotes intellectual, emotional, and physical growth. Community is further promoted by the idea of campus centers that create an ordered, cohesive, and memorable place.



Pedestrian Circulation Diagram

- Sidewalks
- Pathways
- Existing Architectural Elements
- Proposed Architectural Elements

Open Space Diagram

- Streets
- Passages
- Greens
- Gardens
- Plazas

The Campus Master Plan respects the urban historic context of Charleston. Infill projects within the existing campus and on adjacent sites are resource sensitive. By clustering uses, critical mass is given to synergistic programs and functions. Interdisciplinary collaboration spaces are located at the overlap of these clusters. Infill projects maintain a pedestrian-oriented compact campus and add vitality, thus strengthening the overall campus district within the city. Re-knitting the urban fabric through infill redevelopment improves campus character, fulfills space needs, and reduces land acquisition investment.

The Campus Master Plan promotes campus stewardship. History and traditions are revered, and natural features are highlighted and respected. Pride of place results in an enthusiastic campus community and engaged alumni. New buildings are sited to reinforce the civic realm, fronting streets, forming open spaces, and promoting pedestrian connections. The grounds are designed to expand the natural beauty of the core and encourage activity in outdoor spaces. These features weave the campus together to create an environment that directly supports academic programs, community resources, and student life facilities.

# CORE CAMPUS

The Cistern Yard is the heart of the core campus.

## OVERVIEW

The core campus will be reinvigorated with renovations to several existing buildings, redevelopment of several existing sites, and new construction on the very few buildable sites available.

New facilities will engage the streets or spaces on which they front to reinforce campus connections and spur more activity. New facilities will allow utilization of sites to maximize potential, while maintaining appropriate height and density. Major building projects manifest institutional mission and pedagogical aspirations, while strengthening campus hierarchy.

The proposed Learning Technology Center project will anchor Rivers Green and help to reinforce the intellectual heart of campus. The building will be the catalyst for reshaping how students learn at the College. The relocation of the Honors College to the Craig Hall site across from the Cistern will signify its importance and showcase its programs to potential new students through the Admissions Office on the ground floor. In place of the existing Honors College, new general classroom buildings will complete an academic cluster on the south side of Calhoun Street and adjacent to Addlestone Library. The Stern Student Center will be reconfigured to put student social spaces on George Street and on the south garden side to create a true social center. These spaces should be visible from the exterior to invite campus users inside.

It is proposed that George Street, between Coming, St. Philip, and Glebe Streets, be paved with Charleston brick pavers. This will emphasize the pedestrian zone and make the streets more like drivable plazas. It will unite the entire campus core from Calhoun to Wentworth Streets between Coming and St. Philip Streets.

The enhancement of pedestrian crossings at all intersections with textured crosswalks and raised tables, especially along Coming, St. Philip, and Calhoun Streets, will create a better-connected and safer campus. Both sides of Calhoun Street from Pitt to King Streets should be "branded" with College site amenities, such as lighting, banners, consistent landscape, walls, gates, and paving. Similar treatment should be implemented along Liberty and Wentworth Streets from St. Philip to King Streets and along George Street from Coming to Meeting Streets.

Sidewalks should be widened along St. Philip Street from Calhoun to Wentworth Streets to provide a safer pedestrian environment.

## CORE CAMPUS PROJECTS

(6) **Learning Technology Center (LTC)** creates civic presence on Rivers Green; provides intellectual and social hub; connects to Addlestone Library

(24) **Graduate Center** creates a sense of physical identity for graduate students

(14) (15) **Academic Building - General Classrooms** capitalizes on proximity to the library and LTC; creates presence on Calhoun Street

(3) **Simons Center Renovation and Expansion** accentuates campus presence and adds pre-function space with new entries and lobby space

(25) **Redevelopment of the existing College Lodge site potentially** allows mid-block passage behind Simons Center

(13) **Health Services relocation** sites it in a more private location on Coming Street

(2) **Renovation of Rita Hollings Science Center** brings an outdated, deferred-maintenance building to a usable standard.

(17) **Renovation and expansion of Stern Student Center** establishes better entry and presence on George Street; suggests pool removal to improve student activity spaces; activates garden space with a commons room in existing sunken garden

(9) **Redevelopment of the existing Craig Hall site for a new Honors College** retains Admissions on ground level; gives the Honors College Center a "place of honor" across from the Cistern

(21) **Redevelopment of the Thaddeus Street Education Site** installs state-of-the-art classrooms and adds a much-needed additional floor; capitalizes on views down Liberty Street


(18) **Redevelopment of Academic Building - Languages, Culture, and World Affairs** would replace an obsolete building with a more efficient facility, central to the St. Philip Street and Liberty Street academic cluster; entry would be from both streets

(12) **Business School expansion** suggests a redevelopment partnership in an existing building

(4) **Yaschik Arnold Jewish Studies expansion** provides kosher/vegan kitchen and dining hall on the first floor and academic space on upper floors

(16) **New Residence Hall** reinforces residential edge along Wentworth Street

(23) **Mixed-Use Residence Hall Redevelopment of Wentworth Street Parking Deck** provides opportunity for a residence hall on top or new mixed-use development

Existing

## KEY TRAITS OF A LEARNING TECHNOLOGY CENTER

- Multi-purpose, technology-rich, teaching and learning center
- Connects information, technology, teaching, and learning
- Supports student-driven collaborations and activities
- Supports faculty teaching initiatives with technology
- Balances uniqueness against utility
- Features open design, flexible spaces
- Enables smooth transitions to new technologies
- Contributes didactic quality to learning spaces and building
- Makes indoor/outdoor connection with programmed open space

Learning Technology Center Concept

Existing George Street and Stern Student Center

Proposed George Street and Renovated Stern Student Center

# NORTH DISTRICT

Corner of Calhoun St. and St. Philip St. facing the Joe E. Berry Jr. Residence Hall

## OVERVIEW

The north side of Calhoun Street between Coming and St. Philip Streets is a critical parcel for the College. Recent projects have expanded College residence halls north along St. Philip Street. Student pedestrian traffic is extremely heavy along St. Philip and Calhoun Streets from the Lightsey Center to the School of Sciences and Mathematics building and Addlestone Library.

New campus development will activate the north side of Calhoun Street with student and neighborhood-oriented retail amenities.

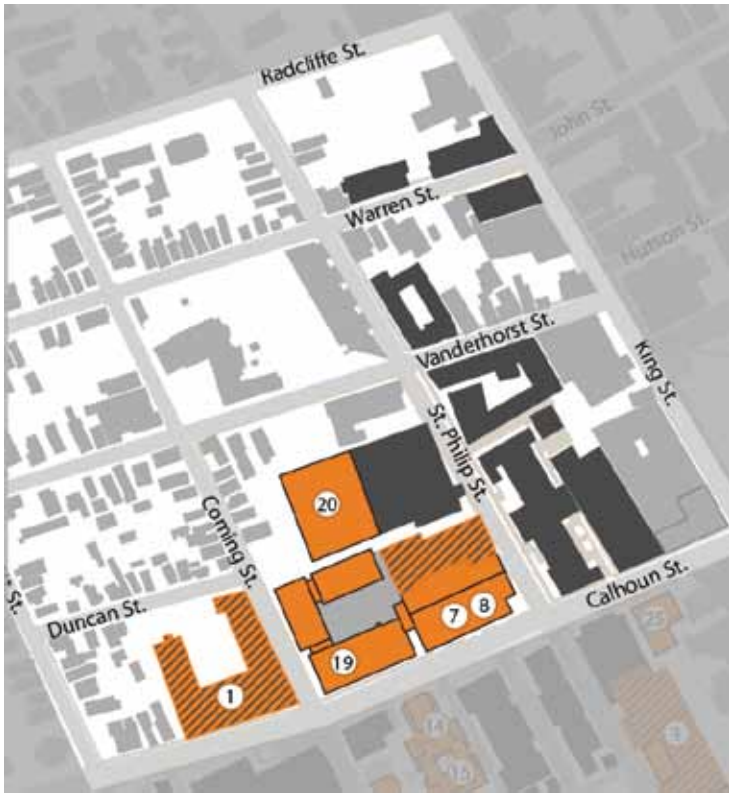
The area will provide usable space for outdoor seating and campus activities along the street and in urban plazas. The projects will generate revenue through leased space or through public/private partnerships.

The Framework Plan proposes to site highly used student spaces, such as a fitness center, at the busiest campus intersection of St. Philip and Calhoun Streets. This mixed-use project also will provide College alumni with a campus home related to a major student space. The idea promotes interaction between current students and alumni and builds legacy.

The consolidation of College buildings along the north side of Calhoun Street and the extension of College Way, the major north-south connector, across Calhoun Street, will better connect the campus. It also will improve the College's visibility and identity within the larger community, as Calhoun Street is the major campus gateway.

New development will connect the Bell Building and existing School of Sciences and Mathematics building into a cohesive whole. Circulation and open space in and around the site will provide a more functional and beautiful complex in keeping with the standards of the core campus.

Auto and service access to the expanded parking deck off Coming Street will alleviate congestion on St. Philip Street. A satellite chiller plant in the ground floor of the deck will provide much-needed capacity to the North District.




## NORTH DISTRICT PROJECTS

(1) **Build-out of the Existing Sciences and Mathematics Building**

(20) **Expansion of the St. Philip Street Parking Deck,** including a new satellite chiller plant at ground level.

(19) **New Sciences and Mathematics Building** includes some student-oriented retail services on the first level along Calhoun Street; allows outdoor café seating on setback from street; permits phasing over time depending upon acquisition of existing AT+T annex, which is to be demolished for courtyard space or alternatively retained for academic space with usable green roof.

(7) (8) **New Mixed-Use Building with Retail, Fitness Center, and Alumni Center with Meeting Space** includes ground floor retail services along Calhoun Street, with fitness center located behind the retail on the first floor and occupying the entire second floor; showcases the College by its prominent site; allows outdoor café seating on setback from street; creates social and meeting space for alumni on the third floor; connects to the Student Fitness Center through executive locker room.

Existing Calhoun and St. Philip Street Intersection

Mixed Use Retail/Student Recreation/Alumni Center Concept

# EAST DISTRICT

The TD Arena provides a venue to build spark college spirit while uniting campus and community.

## OVERVIEW

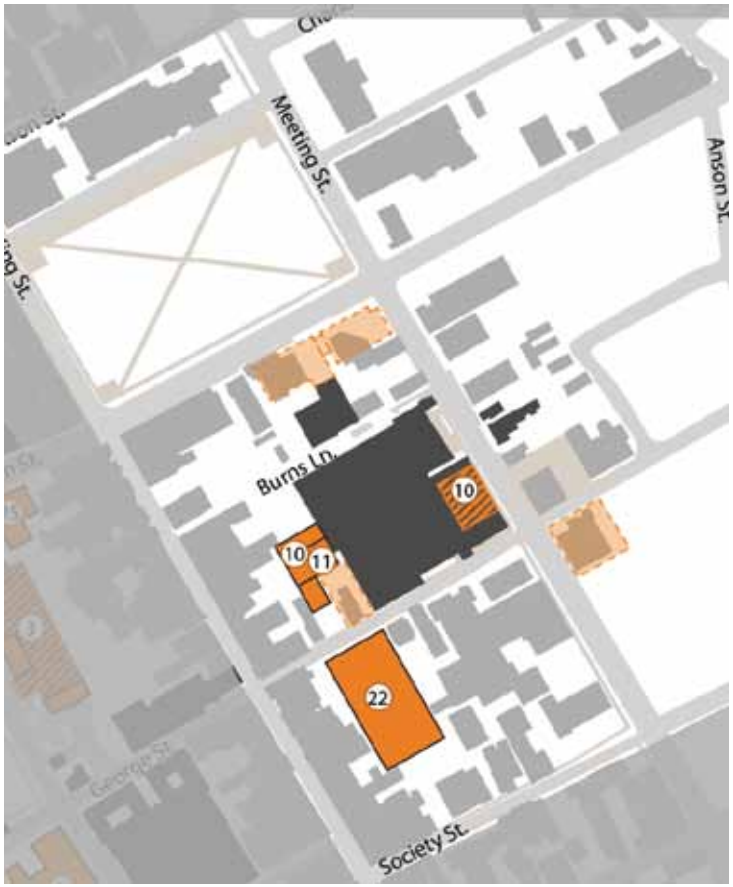
The George Street Corridor between King and Meeting Streets should feel like a natural extension of the core campus.

New facilities on the north side of George Street for athletics and the Department of Health and Human Performance will help to bridge the districts. Improvements to Silcox and Johnson Physical Education Center will spur more pedestrian traffic along George Street.

A public/private partnership is proposed to develop the south side of George Street with a mixed-use project and parking facility that will activate the street and provide much-needed parking for both the College and the City.

Other potential sites for partnerships include the south side of Marion Square along Calhoun Street from King to Meeting Streets. The existing block is underutilized and does not have the civic presence befitting Marion Square. Coupled with redevelopment of the existing College physical plant building, a significant number of new College facilities could be created. This would provide excellent exposure and identity for the College within the larger context of the city. A mixed-use project or projects would invigorate the Calhoun Street Corridor and Marion Square in keeping with the City's strategic vision. An expanded physical plant could be located further east in a more fitting context.

Other potential partnership sites, such the southeast corner of George and Meeting Streets, would provide an opportunity to relocate administrative functions off the core campus, thereby freeing space for student-centered functions.




## EAST DISTRICT PROJECTS

(10) **Renovation of Silcox (School of Education, Health, and Human Performance Expansion and Renovation)** convert existing basketball court for academic use by the Department of Health and Human Performance

(10) (11) **Addition to Johnson Physical Education Center** create shared facility for Athletics (first level) and the Department of Health and Human Performance (second and third levels)

(22) **Mixed-use and parking**

### Areas of future interest

Properties on south side of Calhoun Street on Marion Square
King George Inn adjacent to Johnson Physical Education Center
Office building at southeast corner of George and Meeting Streets

CHAPTER 4

# IMPLEMENTATION & DOCUMENTATION

The purpose of a long-term Campus Master Plan is to provide a flexible roadmap for growing the College campus. While the Framework Plan in Chapter 3 indicated the size and location of planned facilities, this section emphasizes the implementation of that Plan over time. Projects have been prioritized based on need, available resources, and aspirations.

A campus is an assemblage of integrated systems. Building patterns are inextricably linked to circulation systems, the open space network, and utilities infrastructure. Careful coordination as to the placement and timing of future campus facilities, and their relationship to the overall campus system, is critical to the Campus Master Plan's success.

# PHASING

**Building Projects**

| | |
|---|---|
| New Facilities: | 863,000 GSF |
| Demolished: | 303,587 GSF |
| Net New: | 559,413 GSF |
| Existing Total: | 3,450,232 GSF |
| **Grand Total:** | **4,009,645 GSF** |

**Parking**

Total New Facilities: 1,000 Spaces

*Expansion of St. Philip Street Deck: 400*
*Shared new George Street Deck: 600*

Removed: 700 Spaces

*Leased Aquarium Spaces: 600*
*Surface Lot Spaces: 100 (by new LTC 15, Simons expansion 15, Athletics 20, Jewish Studies expansion 20, Business expansion 20, new General Classroom Bldg 10)*

| | |
|---|---|
| Net New: | 300 Spaces |
| Existing Total: | 2,250 Spaces |
| **Grand Total:** | **2,550 Spaces** |

Implementation requires a complex staging of mutually dependent systems and events. Flexibility is a key feature of the Plan. The phasing indicated in this document probably will not occur in exactly this order. Opportunities, constraints, vision, and priorities are in constant flux. There are some projects that are clear priorities today, and some projects that must be implemented to make way for others. Within each phase and over time, priority projects will emerge. To the extent possible, projects to be constructed in proximity to one another have been linked by phase so as to minimize campus disruption and maximize construction efficiencies.

The Campus Master Plan is organized into four phases of development in five-year increments over 20 years. The plan image and table in this document summarize phasing and build-out.

**Building Demolition**

| | Building Description | Levels | Footprint | Total GSF |
|---|---|---|---|---|
| **Phase One** | 94 Wentworth Street - Offices | 1 | 970 | 970 |
| | Calhoun Annex | 2 | 7,082 | 14,164 |
| | Treasurer's Office | 1 | 3,167 | 3,167 |
| | Starbucks | 1 | 1,256 | 1,256 |
| | FedEx Kinko's | 2 | 2,585 | 5,170 |
| **Phase Two** | Residence Life Facilities Services | 1 | 2,034 | 2,034 |
| | Student Health Services | 1 | 5,170 | 5,170 |
| | Craig Residence Hall, 134 beds & Admissions | 3 | 18,598 | 55,793 |
| | Buist Rivers Residence Hall, 102 beds | 4 | 15,866 | 31,731 |
| | Rutledge Rivers Residence Hall, 101 beds | 4 | 13,193 | 26,386 |
| | King George Inn – Rear Building | 3 | 3,820 | 11,460 |
| | Memminger Site – Wentworth St. | 1 | 7,346 | 7,346 |
| **Phase Three** | AT+T Annex | 1 | 28,100 | 28,100 |
| | JC Long Building | 4 | 29,385 | 41,139 |
| | YMCA | 1 | 5,700 | 5,700 |
| **Phase Four** | College Lodge Residence Hall (bed recovery) 200 beds | 6 | 11,517 | 69,100 |
| | Thaddeus Street Education Center | 2 | 26,009 | 52,018 |
| | Greenhouse | 1 | 1,915 | 1,915 |
| | Campus Buildings Total Demolished: | | | 303,587 |
| | Non Campus Buildings Approximate Total Demolished: | | | 59,032 |
| | **Total Demolished:** | | | **362,619** |

| PHASE ONE | | GSF |
|---|---|---|
| 1 | Existing Science & Math Bldg – Build-out | |
| 2 | Rita Hollings Science Center Renovation | |
| 3 | Simons Center for the Arts Reno/Exp | |
| 4 | Yaschik Arnold Jewish Studies Expansion | 15,000 |
| 5 | 350-Bed Residence Hall (location TBD) | TBD |
| 6 | Learning Technology Center | 45,000 |
| 7 | Fitness Center / Mixed Use | 40,000 |
| 8 | Alumni Center / Meeting Space | 20,000 |
| | **TOTAL GROSS SQUARE FOOTAGE** | **120,000** |
| **PHASE TWO** | | |
| 9 | Honors College (Admissions ground level) | 78,000 |
| 10 | School of Ed. Health & Human Performance Reno/Exp | 35,000 |
| 11 | Athletics – ground floor | 10,000 |
| 12 | Business School Expansion | 40,000 |
| 13 | Student Health Services | 7,000 |
| 14 | Academic Building – General Classroom | 45,000 |
| 15 | Academic Building – Classroom Upgrade & Recovery | 50,000 |
| 16 | 125-Bed Residence Hall (Craig Hall Replacement) | 45,000 |
| 17 | Stern Student Center Renovation / Expansion | 48,000 |
| | **TOTAL GROSS SQUARE FOOTAGE** | **358,000** |
| **PHASE THREE** | | |
| 18 | Academic Building – Language, Culture, & World Affairs | 41,000 |
| 19 | New Sciences & Mathematics Building | 128,000 |
| 20 | Expansion of St. Philip Street Garage / Chiller Plant | 10,000 |
| | **TOTAL GROSS SQUARE FOOTAGE** | **179,000** |
| **PHASE FOUR** | | |
| 21 | Academic Building – Thaddeus Street Education Ctr. | 78,000 |
| 22 | New Parking Deck | |
| 23 | Residence Hall Replacement (College Lodge), parking below | 60,000 |
| 24 | Graduate Center | 8,000 |
| 25 | Future Academic or Administration Space | 60,000 |
| | **TOTAL GROSS SQUARE FOOTAGE** | **206,000** |
| | **ALL PHASES TOTAL** | **863,000** |


Building and Open Space Phasing

| OPEN SPACE PROJECTS | |
|---|---|
| A | Calhoun Street Enhancements – paving, lighting, signage/banners, landscape, crosswalks |
| B | St. Philip Street Enhancements – widen sidewalk where possible, paving, lighting, landscape |
| C | George Street Enhancements (St. Philip St. to Meeting St.) – paving, landscape, signage/banners |
| D | New Green Space at existing Multicultural Center / campus gateway |
| E | George and Glebe Street Enhancements (Coming St. to St. Philip St.) – paving, amenities |
| F | Stern Student Center green space – activate space through programming & design |
| G | New Courtyard at Athletics / Education, Health, & Human Performance |
| H | New Sciences and Mathematics Building green space |
| I | New Courtyard at JC Long / Business School expansion |
| J | Coming Street Enhancements |
| K | Other Street Enhancements – Pitt St., Wentworth St., Liberty St., Vanderhorst St., Warren St. |

# PHASE ONE

## IMPLEMENT PRIORITY PROJECTS

Phase One addresses immediate academic and student life needs. The College has five priority projects already in its capital plan. These projects will be the first to be implemented. Additionally, three new priority projects have emerged from the planning process.

**(1) Build-out of the Existing Sciences and Mathematics Building** The building was completed in 2009, and approximately 21,000 gsf of the building was left unfinished. The School of Sciences and Mathematics is in need of 141,066 ASF (approximately 197,492 gsf) of new space at the target year. Although, this build-out is not enough to accommodate the total need, but it is a start.

**(2) Renovation of Rita Hollings Science Center** Constructed in 1974 and expanded in 1987, deferred maintenance issues and outdated facilities for the growing science program make renovation an immediate need. It is difficult to create swing space for laboratories, so this building cannot be taken completely offline for the renovation. It is anticipated that the work will be accomplished in two phases, allowing half the building to continue to function while the other half is renovated.

**(3) Renovation and Expansion of Simons Center for the Arts.** Constructed in 1979, it is in need of a renovation. New entry lobbies will provide needed pre-function space for events and performances. Facilities upgrades will bring the complex to standard with the recently completed Cato Center, improving classrooms, studios, and performance space.

**(4) Addition to the Yaschik Arnold Jewish Studies Building** Constructed in 2002, a planned 15,000 gsf expansion will provide primarily academic space, but the expansion but also will include a kosher/vegan kitchen and dining area on the ground floor.

**(5) New 350-Bed Residence Hall, location TBD** At the time of this report, the College was reviewing proposals for the student housing project. It will be a public/private partnership with the developer acquiring a site and constructing the building with requirements established by the College. The master planning team has not located this residence hall on the plan diagram due to the unknowns associated with it.

**(6) Learning Technology Center**. The leveraging of technology to enhance learning outcomes through a blended learning model, as well as creating classroom incubators, has become a priority through this planning process. A collaborative learning lab and teaching technology hub, with capabilities in digital media, distance learning/media production, faculty curriculum development support space, active learning classrooms, and media-rich study spaces, are desired components.

**(7) (8) New Mixed-Use Building Containing Student-Centered Retail, Fitness Center, and Alumni Center with Meeting Space** Ground-floor retail along Calhoun Street will make this building a social hub for the campus community while generating revenue for the College.

Most of the remaining ground level and all of the second level would be devoted to a student fitness center. Improved fitness facilities are important to the strategic goal of educating the whole student. Current facilities are inadequate and scattered around campus in the Stern Student Center and Silcox. The College has a contract with East Shore Athletic Club facility (ESAC) to provide students with fitness facilities. While the College might continue this arrangement, it does not deliver a centralized student fitness hub. The Stern Student Center and Silcox have space needs for core functions, so moving the current modest fitness functions to a larger, centralized facility will enable the current occupants, Student Affairs and the Department of Health and Human Performance, to grow in place. Recreational fields could be added in partnership with the City in the Neck area of the Peninsula, just a short drive away.

An alumni center on the third level within this mixed-use building will bring together generations of students with a shared experience, strengthening ties to the College. Meeting space within the alumni center would provide a much-needed commodity for the campus.


| | | |
|---|---|---|
| 1 | Existing Science & Math Building, Build-out | |
| 2 | Rita Hollings Science Center Renovation | |
| 3 | Simons Center for the Arts Renovation & Expansion | |
| 4 | Yaschik Arnold Jewish Studies Expansion | 15,000 GSF |
| 5 | 350-Bed Residence Hall (Site TBD) | TBD |
| 6 | Learning Technology Center | 45,000 GSF |
| 7 | Fitness Center, ground & 2nd floor; Mixed Use, ground floor | 40,000 GSF |
| 8 | Alumni Center / Meeting Space, 3rd floor | 20,000 GSF |
| | **PHASE ONE TOTAL GSF** | **120,000 GSF** |

Learning Technology Center

New Mixed-Use Building with Retail, Fitness, and Alumni Center

Expanded & Renovated Simons Center for the Arts

# PHASE TWO

## CAMPUS UPGRADES AND REALIGNMENT

(9) **Honors College** In the interest of clustering complementary academic functions and fully utilizing scarce available campus property, the Plan proposes moving the Honors College from its existing location in Buist Rivers and Rutledge Rivers Residence Halls to what is now the site of Craig Residence Hall. This location for the Honors College, facing the Cistern and Randolph Hall, is a place of honor at a key campus gateway. The Office of Admissions will remain on the ground floor.

(10) **School of Education, Health, and Human Performance Ex-pansion and Renovation** The School of Education, Health, and Human Performance is in need of updated classrooms and laboratories. The proposed plan would utilize the existing basketball court in Silcox for expanded classrooms. A new addition on the southwest side of the Johnson Physical Education Building, currently a parking area, would bring two levels of new space to the program as well. A rooftop expansion to the Johnson Center was a very popular idea in the planning process. While preliminary structural analysis seems to indicate that this would not be possible, the Team thinks it is worth further exploration. The main addition addresses programmatic needs. A rooftop addition could provide future space.

(11) **Athletics Expansion** The presence of athletics is increased at the same new addition proposed for the Johnson Center. It would create opportunities for new offices and meeting rooms. Other needs, such as locker facilities, are proposed at Patriots Point. A track-and-field facility is a significant need. Several off-site locations are being explored in partnership with neighboring areas.

(12) **Business School Expansion** An opportunity exists for the School of Business to redevelop surrounding existing structures and a surface parking lot for expansion. The School would have frontage on both Liberty and Wentworth Streets.

(13) **Student Health Services** A new location for Student Health Services is indicated on Coming Street at the intersection with George Street. This site, with some surface parking, will serve Student Health Services well.

(14) (15) **General Classroom Academic Building** Buist Rivers and Rutledge Rivers Residence Halls and the current Student Health Services building will be replaced with academic buildings to serve the general undergraduate population. Its location adjacent to the library and other academic facilities is ideal. A smaller-scaled building along Coming Street could house collaboration space for interdisciplinary scholarship. The available site is limited due to underground utilities.

(16) **New Residence Hall** A proposed new residence hall will house undergraduate beds displaced from the redevelopment of the Craig Hall site into the Honors College. It will accommodate approximately 125 beds and complete the row of residential uses along the south side of Wentworth Street.

(17) **Stern Student Center Renovation and Expansion** Programmed as a center for student activities on campus, the Stern Student Center is not currently serving needs expressed by students, faculty, and staff. More and better student spaces and meeting spaces are needed. Removal of the swimming pool and renovation of large spaces for student functions is recommended. A new student center gathering space is proposed in what is now the outdoor sunken courtyard. This would provide a large social space connecting dining with the outdoor garden. Renovations to the entry along George Street would make the Stern Student Center much more inviting and bring more life to this part of the street. There are five options for relocating the swimming pool. These include: a new aquatics center on James Island; a location at Patriots Point; the new fitness center; the Johnson Physical Education Center Addition outlined in No. 10, or another location in partnership with a neighboring institution such as the Medical University of South Carolina.


| | | |
|---|---|---|
| 9 | Honors College Relocation (Admissions at ground level) | 78,000 GSF |
| 10 | School of Education Health & Human Performance | 35,000 GSF |
| 11 | Athletics – ground floor | 10,000 GSF |
| 12 | Business School Expansion | 40,000 GSF |
| 13 | Health Services Replacement | 7,000 GSF |
| 14 | Academic Building – General Classroom | 45,000 GSF |
| 15 | Academic Building – Classroom Upgrade & Recovery | 50,000 GSF |
| 16 | 125-Beds Residence Hall (Craig Hall Replacement) | 45,000 GSF |
| 17 | Stern Student Center Addition / Expansion | 48,000 GSF |
| | **PHASE TWO TOTAL GSF** | **358,000 GSF** |

Core Campus along George & Glebe Streets

Education Health & Human Performance and Athletics Expansion

New General Classroom Complex

# PHASE THREE

## CAMPUS UPGRADES AND CAPACITY

(18) **Academic Building – Languages, Culture, and World Affairs (LCWA)** This site would be redeveloped with a new building as the J.C. Long building becomes outdated. Along with the redeveloped Thaddeus Street Education Building site from Phase Four, the academic cluster would be strengthened.

(19) **New Sciences and Mathematics Building** An additional facility is needed to help reduce the deficit gap identified in Phase One. Sited across Coming Street from the existing science building, a synergistic cluster of academics would be created at the corner of Coming and Calhoun Streets.

(20) **St. Philip Street Parking Deck Expansion** By expanding the existing deck, approximately 400 more campus spaces will become available. A satellite chiller plant is also planned for this area in association with the deck.

| | | |
|---|---|---|
| 18 | Academic Building – Languages, Culture, and World Affairs | 41,000 GSF |
| 19 | New Sciences & Mathematics Building | 128,000 GSF |
| 20 | Expansion of St. Philip Street Garage (400 Cars) / Chiller Plant | 10,000 GSF |
| | **PHASE THREE TOTAL** | **179,000 GSF** |


New Sciences and Mathematics zone and St.Philip Street parking deck expansion

Academic Building – LCWA and the Business School Expansion

# PHASE FOUR

## LONG-TERM NEEDS

(21) **Redevelopment of the Thaddeus Street Education Center Site** The existing building will be in need of total redevelopment by this phase. A new structure is proposed that can fully maximize the site and add state-of-the-art classrooms to the College's inventory.

(22) **New George Street Parking Deck** A new deck for approximately 600 cars is proposed in partnership with private entities and the City. A mixed-use development, with retail or commercial uses, is suggested on the ground level along George Street, between Meeting and King Streets.

(23) **Mixed-Use Residence Hall Redevelopment of Wentworth Street Parking Deck** Another opportunity for creating more housing is on top of the existing Wentworth Street parking deck. It is structured for additional levels and can accommodate approximately 150 new beds. This project would accommodate lost beds from the College Lodge redevelopment site.

(24) **Graduate Studies Center** A Graduate Center will provide much-needed offices and meeting spaces for the graduate population. Given the goal to increase graduate enrollment, this becomes an important project for the College. It will be a part of the intellectual heart of campus across from the library, providing a sense of identity for these students.

(25) **Future Academic or Administration Space** The College Lodge Residence Hall currently occupies this site and will need replacement by this phase. It is proposed that the site be redeveloped for academic or administrative functions identified at that time.


| | | |
|---|---|---|
| 21 | Academic Building – Thaddeus Street Education Center Site | 78,000 GSF |
| 22 | Parking Deck – 600 cars (shared with City) | |
| 23 | Residence Hall Replacement (Lodge) 170 Beds, parking below | 60,000 GSF |
| 24 | Graduate Center | 8,000 GSF |
| 25 | Future Academic or Administration | 60,000 GSF |
| | **PHASE FOUR TOTAL** | **206,000 GSF** |

New Residence Hall above Wentworth Street Parking Deck

New Academic or Administration at the College Lodge Site

New Graduate Center along Rivers Green

# URBAN & ARCHITECTURAL DESIGN GUIDELINES

## SUSTAINABILITY

Sustainability is a major consideration that should overlay all architectural design discussions. The built environment at the College is unquestionably rich and unique. Stewardship of this cultural legacy should allow establishment of new initiatives to achieve environmental goals. The campus should evolve as a living research laboratory that teaches the campus and community about sustainability.

President Benson signed the American College & University Presidents' Climate Commitment in which signatories pledge to be leaders in reducing greenhouse gas emissions by implementing a carbon neutrality action plan, reporting on progress, and taking tangible action in two of the following areas:

- Establish a policy that all new campus construction will be built to at least the U.S. Green Building Council's LEED Silver standard or equivalent.
- Adopt an energy-efficient appliance purchasing policy requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist.
- Establish a policy of offsetting all greenhouse gas emissions generated by air travel paid for by the institution.
- Encourage use of and provide access to public transportation for all faculty, staff, students, and visitors at the institution.
- Within one year of signing this document, begin purchasing or producing at least 15% of the institution's electricity consumption from renewable sources.
- Establish a policy or a committee that supports climate and sustainability shareholder proposals at companies where the institution's endowment is invested.
- Participate in the Waste Minimization component of the national RecycleMania competition, and adopt three or more associated measures to reduce waste.

See: http://www.presidentsclimatecommitment.org/about/commitment


In August 2011, the College created the Office of Sustainability (http://sustainability.cofc.edu) to serve as the hub for teaching, research, and practice of sustainability on campus and in the greater Charleston community. The Office recently completed a transportation study, *2011 Campus Transportation Study: Analysis of Commuting Habits and Recommendations*, and a greenhouse gas analysis of campus will be available soon. Creative campus projects are underway, and campus enthusiasm continues to grow.

## SUSTAINABILITY RESOURCES

**The Society for College and University Planners**
http://www.scup.org/page/resources/topic-issue/sustainability

**The Association for the Advancement of Sustainability in Higher Education**
http://www.aashe.org/

**The U.S. Green Building Council**
http://www.usgbc.org/


Buildings and transportation are the top two factors in carbon dioxide emissions by sector in the United States (Source: Energy Information Administration, 2006. Emissions of Greenhouse Gases in the United States). Campuses are signifcant emitters in both categories. Long-term planning is sustainable by nature. Concepts such as compact, accessible, pedestrian-oriented campuses; the redevelopment of underperforming and underutilized sites; utilization of technology to enhance curriculum delivery effectiveness; partnerships with other institutions; and expansion of on-campus student life facilities are all sustainable strategies. Major areas for consideration are:

Water

- reduce storm-water runoff through rainwater harvesting
- conserve potable water, use gray water when possible

Energy and Atmosphere

- reduce greenhouse emissions
- reduce growth in energy demand
- use renewable energy
- distribute energy efficiently

Transportation

- support the use of sustainable transportation through policies and incentives
- create a connected multi-modal infrastructure regionally and locally
- design campus spaces and buildings to reinforce the convenience of automobile alternatives

Indoor Environmental Quality

- reduce indoor emissions
- provide for local control of occupants' immediate environment
- introduce daylighting for greater productivity

Resource Management

- recycle, reuse, reduce
- assess purchasing practices

Teach and Learn

- make the campus a learning laboratory

## UTILITY SYSTEM SUMMARY

### Overview

The College's main campus consists of approximately 3 million gross square feet, of which about half is served from a central energy facility (CEF) that provides steam and chilled water service for heating and cooling needs. The CEF is located on the southeast corner of Calhoun and Coming Streets and primarily serves loads south of Calhoun Street, with the exception being the new science building on the northwest corner of Calhoun and Coming Streets. The remainder of the loads are served by unitary equipment in each building, with the exception of the arena and surrounding buildings, which are served by a common plant.

The distribution piping from the CEF to the buildings was installed in the 1970s. The chilled water piping was reported to be Johns Manville glass-lined pipe, and the steam piping is a pre-insulated piping system.

Buildings connected to the CEF are served from a 13.8 Kv power distribution network owned by the College. There are two main service entry points, one at the CEF and the other at the south end of campus. Other buildings are served by separate services from South Carolina Electric & Gas (SCE&G).

### System Condition and Loads

The central plant equipment is in fair condition, with five to 15 years of remaining life. The cooling towers are located on the roof of the CEF and constrain the output capacity of the plant, limiting it to about 2,600 tons. The steam condensate return piping outside of the CEF has experienced multiple failures and is in need of replacement. Multiple steam leaks were visible from steam manholes, indicating leaking valves or traps that require replacement or repair.

The current peak heating and cooling loads are estimated in the accompanying table. These loads have been developed based on load factors currently experienced at other campuses for similar building types. Input from the plant operations staff about recent peak loads helped establish the diversity factor noted in the table.

The team has developed estimated loads for the buildings proposed by the 2012 Campus Master Plan. It has included loads for those facilities it expects to be connected to the CEF. Those that show 0 load will have either unitary equipment or will be connected to the TD Arena area plant.

In the future load summary, the team has not included a significant allowance for load reduction due to energy conservation measures. It recognizes the College is committed to these reductions, and they will have a huge impact on annual energy use but usually only a minor impact on peak load demands. For that reason, the team has not factored conservation measures into its load projections, so our projections could be conservative.

## Existing Load Summary Table

| Building Name | Usage Type | GSF | Cooling Load (Tons) | Heating Load (Mbtu) |
|---|---|---|---|---|
| Rita Hollings Science Center | Instruction | 112,827 | 269 | 2,257 |
| Towell Library | Institutional Support | 5,990 | 14 | 0 |
| Randolph Hall | Institutional Support | 41,643 | 99 | 833 |
| Physicians Memorial Auditorium | Instruction | 18,876 | 45 | 378 |
| Sottile Theatre | Institutional Support | 57,638 | 160 | 1,153 |
| Rutledge Rivers Residence Hall | Housing | 26,386 | 61 | 528 |
| Student Health Services | Student Services | 5,170 | 14 | 103 |
| Central Energy Facility | Plant O&M | 14,238 | 34 | 285 |
| Addlestone Library | Academic Support | 157,696 | 375 | 3,154 |
| Buist Rivers Residence Hall | Housing | 31,731 | 74 | 635 |
| School of Science & Math | Instruction | 127,576 | 304 | 2,552 |
| Simons Center for the Arts | Instruction | 102,325 | 244 | 2,047 |
| College Lodge Residence Hall | Housing | 69,100 | 161 | 1,382 |
| Maybank Hall | Instruction | 47,094 | 112 | 942 |
| Robert Scott Small Building | Instruction | 75,145 | 179 | 0 |
| Cato Center for the Arts | Instruction | 65,856 | 157 | 1,317 |
| Stern Student Center | Student Services | 76,650 | 213 | 1,533 |
| Liberty Street Residence Hall | Housing | 98,699 | 230 | 1,974 |
| George Street Apartments | Housing | 99,535 | 231 | 1,991 |
| Thaddeus Street Education Center | Instruction | 52,018 | 124 | 1,040 |
| Craig Residence Hall | Housing | 31,860 | 74 | 637 |
| **Total** | | **1,318,053** | **3,174** | **24,738** |
| **Diversity** | | | **0.69** | **0.56** |
| **Plant Peak** | | | **2,200** | **13,800** |

## Existing Load Summary Table

| Building Name | Usage Type | GSF | Cooling Load (Tons) | Heating Load (Mbtu) |
|---|---|---|---|---|
| Yaschik Arnold Jewish Studies Expansion | Institutional Support | 15,000 | 0 | 0 |
| 350-Bed Residence Hall (site TBD) | Housing | 148,750 | 346 | 2,975 |
| Learning Technology Center | Instruction | 45,080 | 107 | 902 |
| General Classroom | Instruction | 56,000 | 133 | 1,120 |
| Academic Building - Classroom Upgrade & Recovery Project | Instruction | 66,597 | 159 | 1,332 |
| Academic Building - Humanities and Social Sciences, LCWA | Instruction | 50,470 | 120 | 1,009 |
| New Sciences & Math Building #2 | Instruction | 92,400 | 220 | 1,848 |
| Business School Expansion | Instruction | 19,040 | 45 | 381 |
| Honors College | Housing | 60,000 | 143 | 1,200 |
| Graduate School | Institutional Support | 4,200 | 10 | 84 |
| School of Education Health & Human Performance | Instruction | 38,735 | 0 | 0 |
| Student Center Addition / Expansion | Student Services | 49,840 | 138 | 997 |
| Alumni Center / Meeting Space | Student Services | 20,000 | 56 | 400 |
| Parking Deck - 600 Cars | Parking | 0 | 0 | 0 |
| Fitness | Student Services | 38,735 | 86 | 775 |
| Physical Plant (Site TBD) | Plant O&M | 27,728 | 66 | 555 |
| Athletics | Athletics | 38,735 | 0 | 0 |
| CEF (Site TBD) | Plant O&M | 15,000 | 36 | 300 |
| George Street Apartments | Housing | 99,535 | 231 | 1,991 |
| Thaddeus Street Education Center | Instruction | 52,018 | 124 | 1,040 |
| Craig Residence Hall | Housing | 31,860 | 74 | 637 |
| **Total** | | **786,310** | **1,665** | **13,877** |
| **Diversity** | | | **0.69** | **0.56** |
| **Added Load to CEF** | | | **1,200** | **7,800** |
| **Existing Peak + New Loads** | | | **3,400** | **21,600** |

**Long-Term Goals**

The entire existing steam distribution piping system eventually will need replacement, while the steam condensate needs immediate attention. Although there is some need for steam in certain campus buildings for lab process loads and food preparation, this is fairly small. The College should consider transitioning to a more efficient hot water heating and distribution piping system and the installation of localized steam production or conversion of steam-using equipment to electrical equipment for the lab process and food preparation needs. This would reduce system losses greatly and could eliminate the need for manholes to access steam traps and isolation valves. This would be a difficult and costly effort, but the complete replacement of the steam piping system also would be costly and disruptive. The recommended course of action is to keep parallel systems (steam and hot water) in operation as expansion needs are met and eventually transition to a hot water system.

Most new, highly efficient chiller plants rely heavily on adequate cooling tower capacity that can produce low temperatures for chiller refrigerant condensing. It is important to select cooling towers carefully and allow sufficient space such that they operate at relatively low velocity and high efficiency. This is a constraint in the existing plant that should be corrected when a new plant is constructed or the existing plant is renovated or phased out. Additionally, most new chiller plants use variable speed chiller compressor motors to vastly improve part load performance and reduce annual energy consumption of the plant. Although these variable speed compressors do little to reduce full-load energy consumption, they are superior in performance when condensing water temperatures are less than what the system was designed to handle, which is the majority of the year.

**Expansion Options**

There appear to be two main options for expansion of the central heating and cooling facilities as noted below:

Option 1: Expand Existing Site
Option 2: Develop New Site North of Calhoun

The biggest challenge is finding the right site for the CEF in a fairly congested urban setting. The current CEF site is in a fairly prominent location that likely has high value for other uses but also is very convenient for the distribution of thermal utilities. The easiest solution, from an engineering standpoint, is to expand the plant area and capacity in the open parking lot adjacent to the current CEF. As noted in the load summaries above, the magnitude of the expected load increase is significant (about 50 percent increase in heating and cooling loads), but requires only a small increase in CEF area to house new equipment. If Option 1 were selected, a new distribution piping tunnel would need to be routed to the north side of Calhoun Street to pick up the new load additions.

Since there is little land available for a new CEF site to the south, another option is to locate the CEF site north of Calhoun Street. This site would be developed initially to serve the new buildings north of Calhoun Street, with the long-term goal of interconnection to the existing thermal utilities from the existing CEF, requiring a significant utility tunnel under Calhoun Street. Once the utility tunnel is in place and the plant area established north of Calhoun Street, the existing CEF equipment can be phased out of service and replaced with new equipment in the new plant.

## URBAN DESIGN GUIDELINES

These Design Guidelines complement the information and principles provided in the 2004 Campus Master Plan, which described the historical development of the College, urban organization, building typology, open space concepts, architectural elements, and materials. This document takes recommendations from that document (in **bold** or *italic*) and overlays new information as a result of the 2012 Campus Master Plan process.

### Maintain the Urban Fabric

- *Respect and follow the existing relationship between the buildings and streets.*
- *Be conscious of the many scales and building types within the city, and build within an appropriate hierarchy.*

A campus, by definition, is a collection of buildings balanced with open space. While the College is seamlessly embedded in the city, its slightly less dense campus fabric creates a unique identity. Campus edges are somewhat porous to allow access to mid-block internal open spaces as evidenced by the Coming, Calhoun, St. Philip, George Street block. Although Charleston does have wonderful examples of internal block spaces connected by passages, urban blocks typically are not oriented internally. Urban street edges are more continuous. The east side of St. Philip Street is an example; it forms a continuous edge to the campus core. This "language" suggests the following guidelines:

- Building edges should typically align, forming a continuous, consistent setback along streets or spaces. Important buildings and gateways at midblock passages, or at other key moments along a street edge, may have a more generous setback. The Simons Center for the Arts courtyard is an example; it is the eastern terminus to Green Way.
- Use consistent landscape, hardscape, and site amenities.
- Strengthen streets as urban connectors.

Simons Center for the Arts


Cougar Mall Gateway


Porters Lodge Gateway to the Cistern

**Preserve the historic context but contribute to it in a meaningful way**

- *Follow the general principles of proportion, scale, and massing established by the existing buildings and apply them to all construction.*
- *Reserve the heightened moments of hierarchy for the appropriate building, program, and site.*

Different building types should relate to the street or open space in different ways:

- Civic buildings, such as Randolph Hall or Addlestone Library, command prominent sites along primary axes or streets. They often have an associated open space, such as the Cistern or Rivers Green. An architectural feature and main entry faces the major space or street. Future civic buildings should embrace this vocabulary.
- Other campus buildings, such as academic, student life, and administration, should address the major street or space on which they front. Architectural features should reinforce campus axis or important intersections.
- Residential buildings facing streets should offer a degree of privacy, such as a gated garden and community space inside at the ground level.
- Ground-floor retail uses in mixed-use buildings should front the street. In some cases, a larger than typical setback from the street, or a small space to allow outdoor seating, should be encouraged.

Randolph Hall

Rivers Green

**Enhance and extend the system of open spaces**

- *Maintain the variety and quality of the open spaces within the established hierarchy.*
- *Improve the secondary pedestrian connections through the establishment of mid-block connections and interior gardens.*

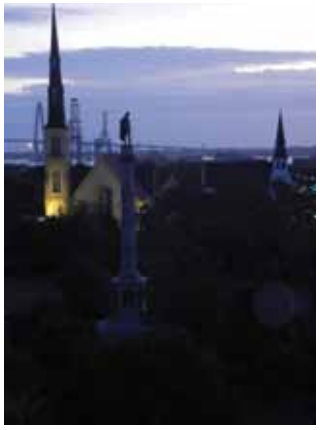
- Associate important civic spaces with important civic buildings as described above with Randolph Hall and the Cistern and Addlestone Library and Rivers Green.
- Secondary public outdoor spaces should have a formal relationship to surrounding buildings. The School of Sciences and Mathematics building courtyard is an example of a major building entry punctuating the north end. The yard south of the Stern Student Center would benefit from a greater relationship to the public space of the interior.
- Tertiary garden spaces relate less formally to surrounding buildings. They should be contained by walls and gates on multiple sides.
- Opportunity exists to expand the network of secondary connectors and pedestrian gateways. The extension of Green Way on the west side of Coming Street is an example. Other locations include the proposed extension of College Way on the north side of Calhoun Street and through the new classroom buildings west of the Robert Scott Small Building connecting across Coming Street to Addlestone Library.
- Other open space types that occur at the overlap of city and campus should be encouraged. Paving George and Glebe Streets between Coming and St. Philip Streets would define an urban drivable open space and create a greater sense of campus identity.
- Upper-level and rooftop terraces should be utilized to extend usable outdoor space. Where possible, recreational courts should be considered. Exceptional skyline views would lend a new perspective to urban living.

Stern Student Center Yard

Sottile House and Garden

Pi Kappa Phi Bell Tower

George Street Apartments



Skyline View

Addlestone Library

Liberty Street Residence Hall

Robert Scott Small Building

**Maintain the character of the campus through consistent use of materials**

- *Use materials appropriate to the building type and in response to the existing context.*

The College's building materials palette is expanding beyond brick and stucco to include more glazing and some use of metal panel.

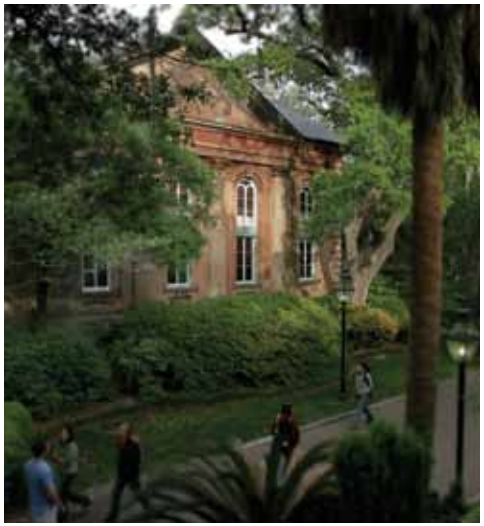
- Major campus buildings, such as Addlestone Library, should be clad in stone or precast concrete to help signify their importance.
- Academic and residential buildings should be primarily of brick to retain their connection to place.
- Architectural elements, such as porches, are important to campus at all scales, from historic houses to academic buildings to Randolph Hall. The importance of the campus buildings should be reflected in the scale of the porch.
- Porches provide usable thresholds between indoors and outdoors and the use of porches should continue. They provide a great amenity during temperate months for outdoor living and shade during the hotter months.
- Contemporary campus buildings, such as the George Street Apartments/Liberty Street Residence Hall complex, can be expressive of the times, while using scale, proportion, and façade modulation to relate to the historic context. The corner feature is evocative of a porch through its expressed frame and proportion of glazing to wall.

**Integrate the buildings with the landscape**

- *Continue the language of site walls and the practice of foundation plantings to support the established garden environment.*

- Like porches, walled gardens form outdoor rooms and are usable for a good portion of the year in this climate. They provide privacy, but they also become an important part of the open space network and should be encouraged.
- Site walls help define the College's boundaries and should be used in expanding areas of campus. Variations on the theme of wall and gate create a richness that should be encouraged.
- The lush campus exhibits several hierarchical layers of plantings, which should be continued. The live oak tree canopy provides an extraordinary level of diffused light. Palms provide the regimented rhythm to streetscapes where the building setback is too narrow for a spreading canopy. Flowering trees provide another level of garden enclosure. Foundation plantings tie the buildings to the ground and help enclose space as well. Flower beds should be reserved for gardens and small areas to be highlighted around the campus perimeter.
- Larger civic spaces should be landscaped with appropriate native species. Gardens can be more expressive exuding color and texture with the use of exotics.
- Sculpture and other site elements, such as fountains, add another dimension to placemaking by marking important nodes or centering spaces. They contribute detail to a campus that expresses pride of place and history.

Cougar Mall Fountain



Towell Library

Campus Wall and Gate

## LANDSCAPE GUIDELINES

The intent of the Landscape Guidelines update is to amend guidelines and proposals that were established in 2004, to strengthen what has worked well for the campus over the last eight years, to suggest areas for improvement, and to establish enhanced criteria as the campus expands to meet its programmatic and strategic initiatives.

### Landscape Palette

Specifically, the brick paving should be extended along the edges of the Education Building, both on St. Philip and Wentworth Streets. The same palette should be extended along George Street, at a minimum from St. Philip to King Streets and ideally from St. Philip to Meeting Streets.

### Planting

There is a strong movement on campus to have new plantings be native species. For many years, and in the tradition of historic Charleston Gardens, the core of the campus has been treated as an arboretum. This by definition implies a wide variety of exotic and native species. This practice should be continued in the campus core. Outside the core, plantings can focus more on native species. There have been several attempts to create a native garden on campus, but these have met with limited success. The new science building offers the perfect space and opportunity to create a native teaching garden. The campus space to the north of the building is organized in two tiers. The turf grass that occupies the lower and northern- most tier could be replaced with a native garden. The area is large enough to create several different garden areas. A portion of the garden could receive storm water from the site and thus be designed as a rain garden or bog garden. In a similar manner, different ecosystems native to the Carolina Lowcountry could be represented.

**Furniture**

ASSESSMENT OF NEEDS

Benches and seating features, bike racks, trash and recycling containers, and bollards are necessary items and must be incorporated as a part of the campus composition.

ASSESSMENT OF EXISTING STREET FURNITURE

The new Charleston benches work well for the campus, and their use should be continued. Tables and chairs, similar to those on the Addlestone Library terrace, should be added to appropriate settings throughout the campus to encourage habitation of campus spaces. A small terrace near the President's Garden in the Cistern is an ideal location for tables and chairs, as are settings around the historic homes. This will encourage habitation of these intimate and quintessential Charleston garden spaces.

Existing trash cans, glass recycling containers, and metal recycling containers need to be condensed into just two types, one for trash and one for recycling. Appropriate locations for these paired containers should be determined.

Movable bike racks work well and fit aesthetically with the campus environment. Additional racks should be provided. Coordination with the City's Department of Traffic and Transportation may allow for bike racks to occupy some select on-street parking spaces. All bike rack locations should be evaluated in conjunction with the College's Office of Sustainability, which has completed a careful analysis of campus mobility. This analysis will be valuable in making specific improvements to functionality and safety.

**Campus Spaces**

Opportunities abound for enhancing the role each campus space plays in the everyday life of the College. The 2004 master plan resulted in new benches and other furnishings. This effort should be extended. New benches, tables, and chairs should be provided. Places to accommodate active recreation within the campus core should be determined. For example, the space behind the Stern Student Center could accommodate a sand volleyball court. The space on George Street near the John Rivers Communication Museum is being transformed into a performance and practice space and outdoor exhibit space for the School of the Arts. Similar outdoor spaces can be created for other schools and departments within the College.

## CIRCULATION: REINFORCING A PEDESTRIAN PRECINCT

Pedestrian movement is ever increasing at the College as more and more students live on and close to campus, as public transportation improves, and as the College focuses less on creating parking facilities near campus. Vast numbers of people move through and around campus, often times spilling into street travel lanes because of narrow sidewalks. In this urban environment, automobiles will always be present on campus. However, conflicts with motorized vehicles for pedestrians, bicyclists, and skate boarders are numerous, dangerous, and must be minimized. Mid-block pedestrian crossings occur on Coming and St. Philip Streets, and there is a crossing at Coming and George Streets without a signal.

The entire campus, including the public streets that move through it, must continue to evolve into a pedestrian-dominated precinct. When motorized vehicles move along campus streets, operators should sense that these are areas where pedestrians have priority. Specific recommendations to enhance the pedestrian precinct include:

1. Become an active participant in studies being undertaken by the City's Department of Traffic and Transportation regarding the configuration of Coming and St. Philip Streets. Streets running through campus should be evaluated for pedestrian safety first, with traffic flow being secondary. Establish bike and skateboard safeways.
2. Make specific physical improvements to the public streets that move through the campus as outlined below. All streets within the campus boundary should be "branded" as part of the College campus with consistent paving, lighting, banners, landscape, signage, and site amenities such as trash and recycling receptacles.
3. All existing pedestrian crossings should be improved with new pedestrian crosswalks. These should be paved in brick and edged with granite cobbles. Signals at intersections should be evaluated to ensure pedestrian crossing times are adequate and safe. This is especially important at Calhoun Street/Coming Street and Calhoun Street/St. Philip Street. For example, pedestrians crossing Calhoun Street at Coming Street should have enough time to cross without concern for cars turning right or left onto Calhoun Street.

### Streets

#### CALHOUN STREET

This primary city artery connects to the southernmost bridge onto the Peninsula and is the closest one to the downtown core. It also is a hurricane evacuation route. With four lanes and more than 21,000 vehicles per day, it is a hostile barrier for pedestrians. As the campus grows north of Calhoun Street, heavier pedestrian flow across the street will create even greater challenges.

- Calhoun Street should receive College "branding" from Pitt Street to King Street to alert passing motorists of the significant pedestrian traffic they are likely to encounter.
- Intersections at Coming Street and St. Philip Street and the mid-block signaled pedestrian crossing at the College Way alignment should be paved as described above.
- A traffic simulation study is recommended to evaluate the viability of a midblock signal between Coming and St. Philip Streets that is synchronized with the existing signals.

#### ST. PHILIP STREET

St. Philip Street is the College's major north-south spine. It is a collector street, carrying approximately 4,000 vehicles a day. The City's Department of Traffic and Transportation is studying the possible transition of the paired one-way streets, Coming and St. Philip Streets, into two- way streets. This concept should be carefully studied by the College as well. While two-way streets of similar widths are usually calmer to pedestrians, this scenario may increase traffic on St. Philip and George Streets and create the added complexity of cars exiting in two directions from the parking deck just south of George Street.

- Care should be taken to ensure that whatever action is taken reduces safety concerns along the street. St. Philip Street should be "branded" as the College from Beaufain Street north to Warren Street.
- St. Philip Street is a logical street for a bike and skateboard safeway.
- The street should be narrowed to 22 feet from face-of-curb to face-of-curb. The sidewalk on the west side of the street should be increased in width by six feet. This will enhance pedestrian movement and safety.

- Wider sidewalks would allow for additional plantings and canopy, thus continuing the design vocabulary of the campus along these roadways.
- A raised crosswallk should be installed at the pedestrian crossing at Green Way.

### COMING STREET

Coming Street is a secondary north-south spine for the College and a more important collector street for the city, carrying more than 7,000 vehicles a day. Careful consideration should be given to conversion of this street to two-way direction. Parking and loading issues may occur upon transitioning, as there is no passing lane.

- On-street parking should continue as it does today.
- A traffic signal with a pedestrian crossing should be considered at George and Coming Streets to be sequenced with the traffic lights at Coming and Calhoun Streets.
- A raised crosswallk should be installed at the pedestrian crossing at Green Way.
- Coming Street should receive College "branding" from Beaufain Street to Duncan Street.

### WENTWORTH STREET

Wentworth Street is one of the few continuous east-west streets in this part of the city. It therefore carries significant traffic. It is the southern campus edge.

- A Peninsula Traffic and Parking Study in 2000 identified Wentworth and Beaufain Streets as candidates for conversion to two directions. This has been completed, resulting in calming traffic.
- Retention of on-street parking is recommended.
- Wentworth Street should receive College "branding" from Coming Street to King Street.

### GEORGE STREET

George Street provides access to the waterfront, the TD Arena, the Sottile Theatre, and the King Street retail corridor to and from Coming Street. It dead ends at the campus' west edge at Coming Street.

- If both Coming and St. Philip Streets were to become two-way, the need for George Street as a connector is vastly diminished. This strengthens the argument for closing George Street between Coming and St. Philip Streets.
- Paving the street with brick pavers will define the roadway as a drivable plaza and a pedestrian realm. It should feel more like a linear urban space than a street.
- Street width should be minimized to 20 feet from curb to curb using bollards to protect tree roots.
- The length of George Street, from Coming Street to Meeting Street, should be "branded" as College of Charleston.

### GLEBE STREET

Glebe Street is a very minor campus street with very little automobile traffic. It is a dead end on the north at George Street and on the south at Wentworth Street.

- Glebe Street should be paved similarly to George Street. Glebe Street should feel like a pedestrian way that has very occasional traffic.
- Access to church and school activities must be retained.
- If George Street were to close, Glebe Street would still be functional as a pedestrian-oriented service road.

### LIBERTY STREET

Liberty Street has very limited access as it spans only from St. Philip Street to King Street.

- It should be treated like a drivable pedestrian space.
- It is more important as a campus space than a street.
- The College "brand" should extend to King Street.

**Parking & Transit**

The 2012 Campus Master Plan does not significantly increase parking on campus. There are approximately 2,250 campus spaces currently.

An addition to the existing St. Philip Street parking deck would net approximately 400 spaces. A new shared deck is proposed south of the Johnson Physical Education Center on George Street, which would accommodate approximately 600 cars. With the assumed loss of 600 spaces at the Aquarium Parking Deck and 100 lost surface spaces on campus due to new development, the overall net parking space gain is 300; about a 13 percent increase. Few other opportunities exist near campus for a large new parking facility.

However, the College is constructing new facilities due to current and future space deficits, while keeping enrollment the same. Therefore, demand for new parking is minimal. The current parking situation is not ideal, but as in any urban environment, a balance must be struck between housing cars at great expense in structured parking with losing valuable land resources and providing a convenient amenity to those who live, work and visit the city.

A balanced approach to reducing parking demand should be implemented by:

- Housing more students on campus.
- Continuing to promote robust transit systems on the Peninsula and to neighboring communities.
- West Ashley, North Charleston, and James Island areas should continue to be a focus for park-and-ride with express transit routes because of their concentration of students, staff, and faculty.
- Working closely with CARTA to review routes and frequency for the free DASH service to insure it is meeting needs of the college community. A central DASH stop may be appropriate.
- Incentivizing sustainable transportation choices through discounts, real-time transit information, wifi access in transit, clear and comfortable stops, bike storage and showers, and privileged parking for ride-share participants or low-emitting vehicles.

- Working with the City to create more multi-modal opportunities, from bike lanes to light rail to water taxis.
- Providing daily or hourly lease vehicles on or near campus.
- Educating the campus community about available alternatives to driving to campus.

See the College of Charleston *2011 Campus Transportation Study: Analysis of Commuting Habits and Recommendations* (P. Brian Fisher, Ph.D. and Erin McAdams, Ph.D., College of Charleston Office of Sustainability, Fall 2011) for more information.

## IMPLEMENTATION

As new building and open space projects are considered for the campus, it is critically important that the design team is provided with a copy of the Campus Master Plan and guidelines at the beginning of the design process. This will help ensure that the design standards are achieved.

An annual review of maintenance practices should be undertaken to assure that each building, landscape, and space is maintained as intended. This is especially important for landscapes, as they are in a constant state of change.

As new projects are considered for the campus, it is critically important that the design team is provided with a copy of the Master Plan and guidelines.

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