

GEORGE MASON
UNIVERSITY

MASTER PLAN

SEPTEMBER 2002

*Prepared by Sasaki Associates
with MMM Design Group*

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Summary

The plan for George Mason University establishes a framework for orderly growth for what is arguably Northern Virginia's most dynamic institution. It supports the concept for a distributed university, with full-service campuses distinguished by centers of excellence in teaching and research, well placed to serve the needs of a rapidly growing but dispersed local population. It supports strengthening the ties between research, industry and economic development. It provides the strategies for consolidating the University's campuses as mature academic communities, serving as destinations and cultural resources for a larger world, and manifesting a clear and distinguished identity.

Currently, George Mason suffers from severe space constraints on its Fairfax campus, precluding appropriate service of its student constituency and limiting research activity. The master plan accommodates documented plans for expansion over the next five to seven years, and provides for anticipated growth on all three campuses over the next twenty years, assuming rates of growth consistent with demographic projections in the 2000 Census.

The plan is driven by the following observations:

- The Fairfax campus is and will remain primarily a commuter campus. Students should be able to enter and leave campus readily, and should have ready access to the core campus. The campus should become increasingly welcoming to students as an attractive and vibrant destination, not simply as a place to take classes. This will require rethinking access roads and the experience of arrival, and providing structured parking. It will also require maintaining a compact and walkable campus.
- The Fairfax campus can accommodate projected growth in student enrollments and research activity for at least twenty years. The density required to accommodate projected growth will be comparable to many University campuses, and will generate more liveliness and opportunities for interaction, while allowing the University to preserve open space, woodland, and the general beauty of the campus. The undeveloped land on the west campus at Fairfax should be developed as a research park, with the option of reverting to University use in the future. The core campus should be linked to the west campus by a bridge.
- Planned growth in the residential life program at Fairfax should be in large clusters, each more closely tied to the core campus. Additional open spaces and recreational facilities should be created to support residential growth.
- The campus should support the concept of "mixed use", with academic programs, research activity and student residences closely adjacent to each other, rather than in separate "zones."
- The Fairfax campus should continue to support the cultural life of the community, and cultural facilities should generally be located towards the perimeter of the campus for ease of access.



Aerial view of Fairfax Campus.

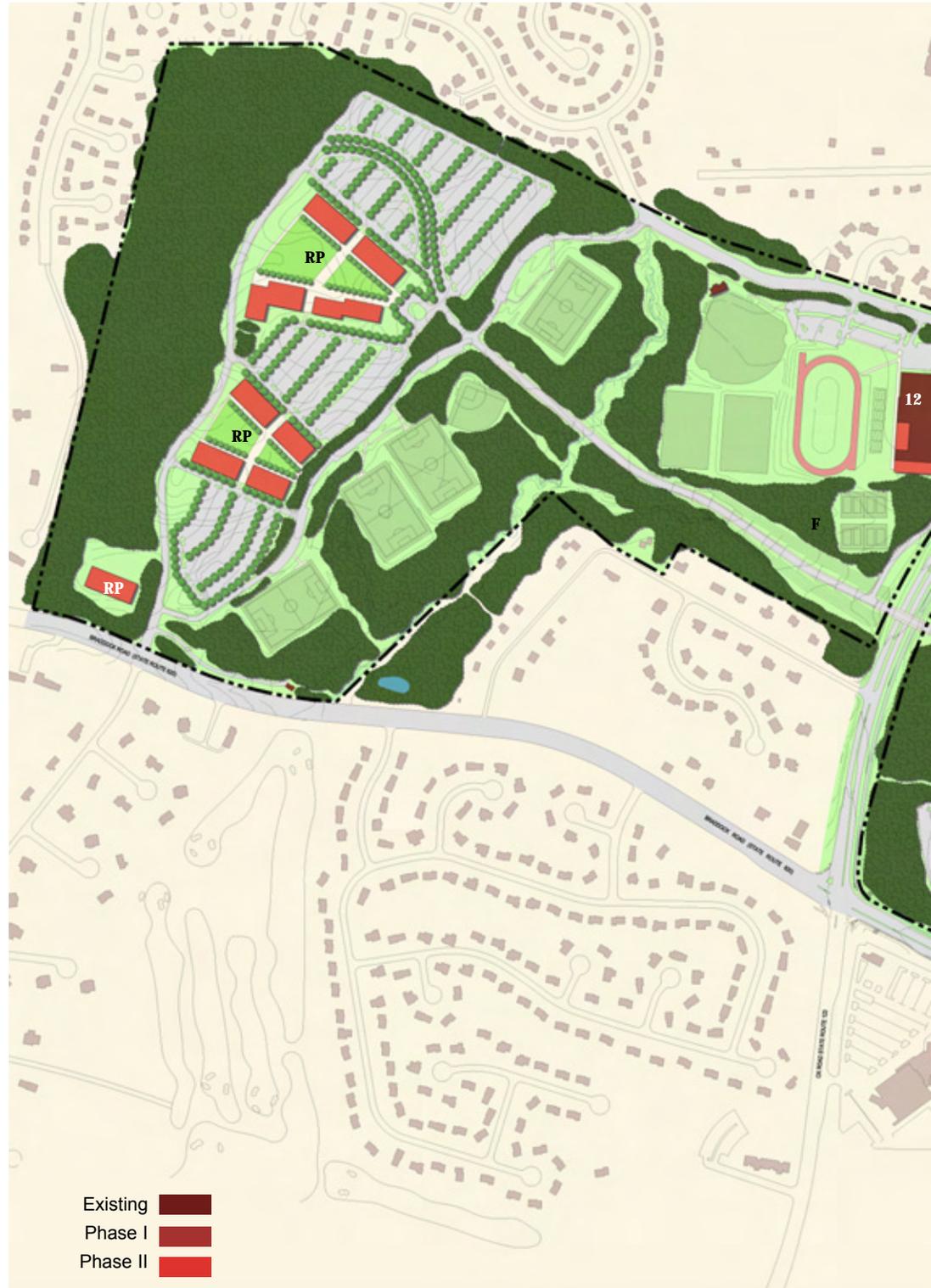
Fairfax Campus

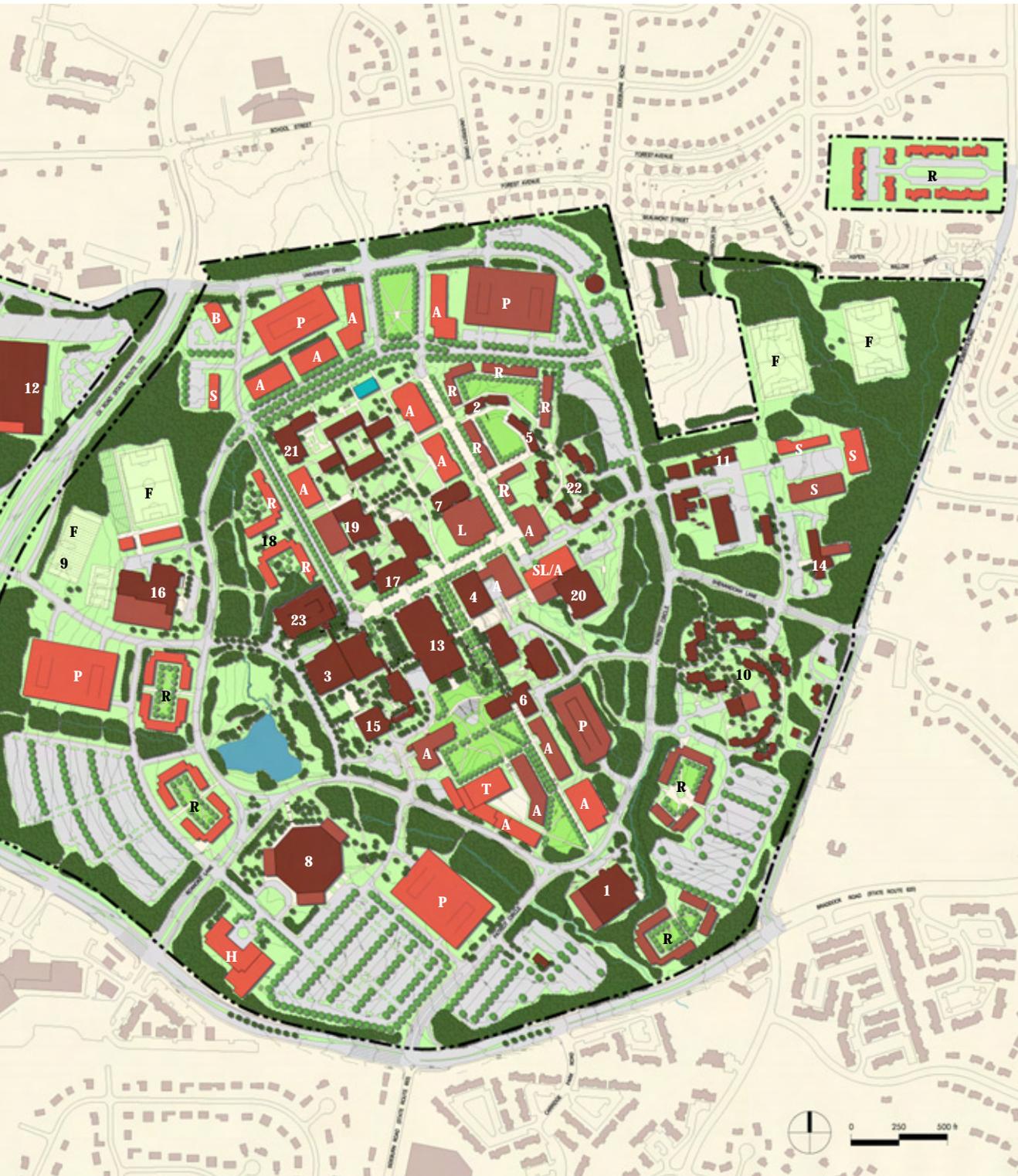
Existing

- 1 Aquatic Center
- 2 Commonwealth Hall
- 3 Concert Hall
- 4 David King Hall
- 5 Dominion Hall
- 6 Enterprise Hall
- 7 Fenwick Library
- 8 Patriot Center
- 9 Patriot Village (removed)
- 10 Presidents Park
- 11 Facilities & Physical Plant
- 12 Field House
- 13 Johnson Center
- 14 Krasnow Institute
- 15 Mason Hall
- 16 Physical Education Building
- 17 Robinson Hall
- 18 Student Apartments(removed)
- 19 Student Union I
- 20 Student Union II
- 21 Thompson Hall
- 22 University Commons
- 23 Parking Structure

Proposed

- A Academic & Research
- B Alumni Center
- F Play field
- H Hotel Conference Center
- L Library
- P Parking Structure
- R Residential
- RP Research Park (campus partner)
- SL Student Life
- S Support
- T Theater





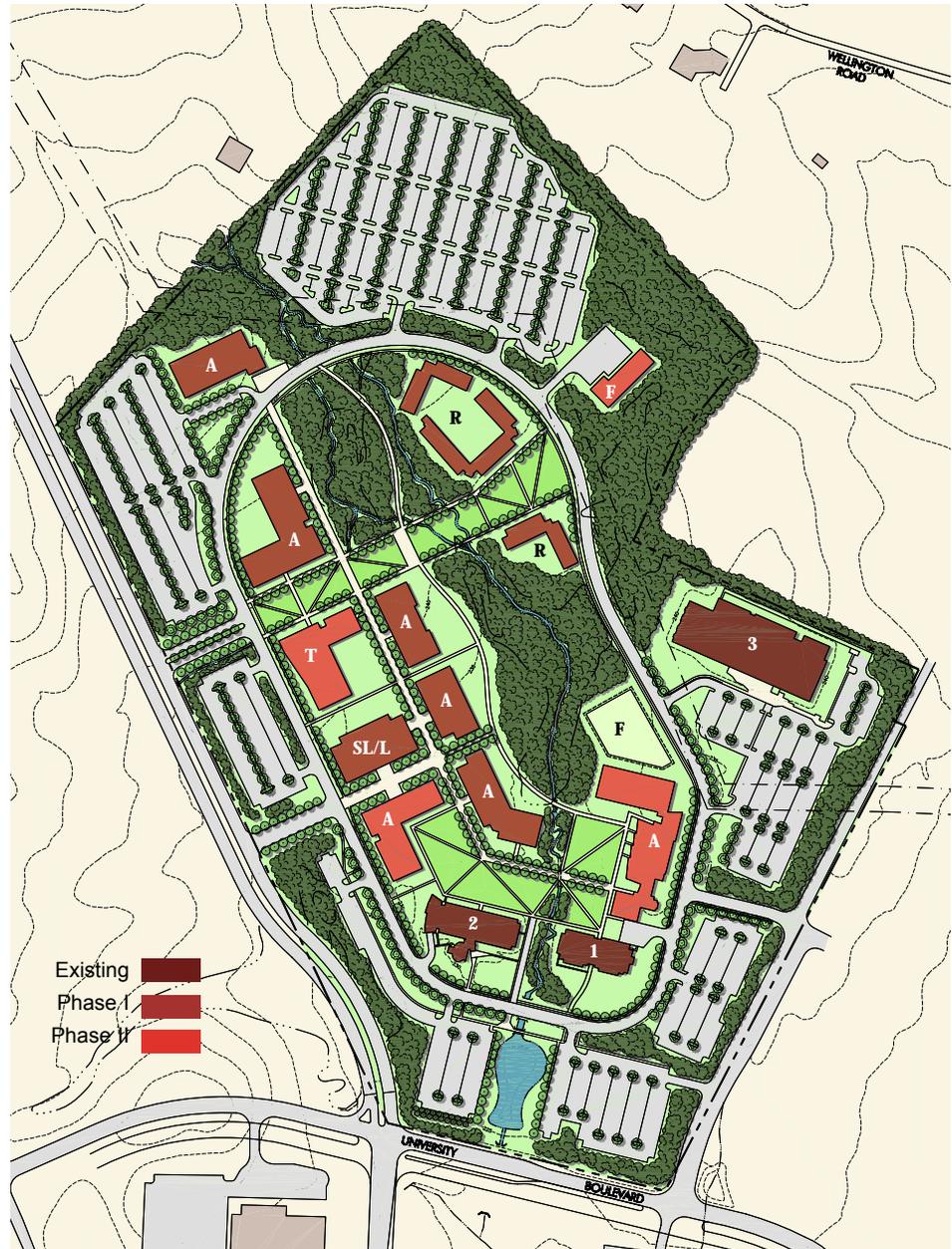
Prince William Campus

Existing

- 1 Prince William I
- 2 Prince William II
- 3 Freedom Aquatic and Fitness Center

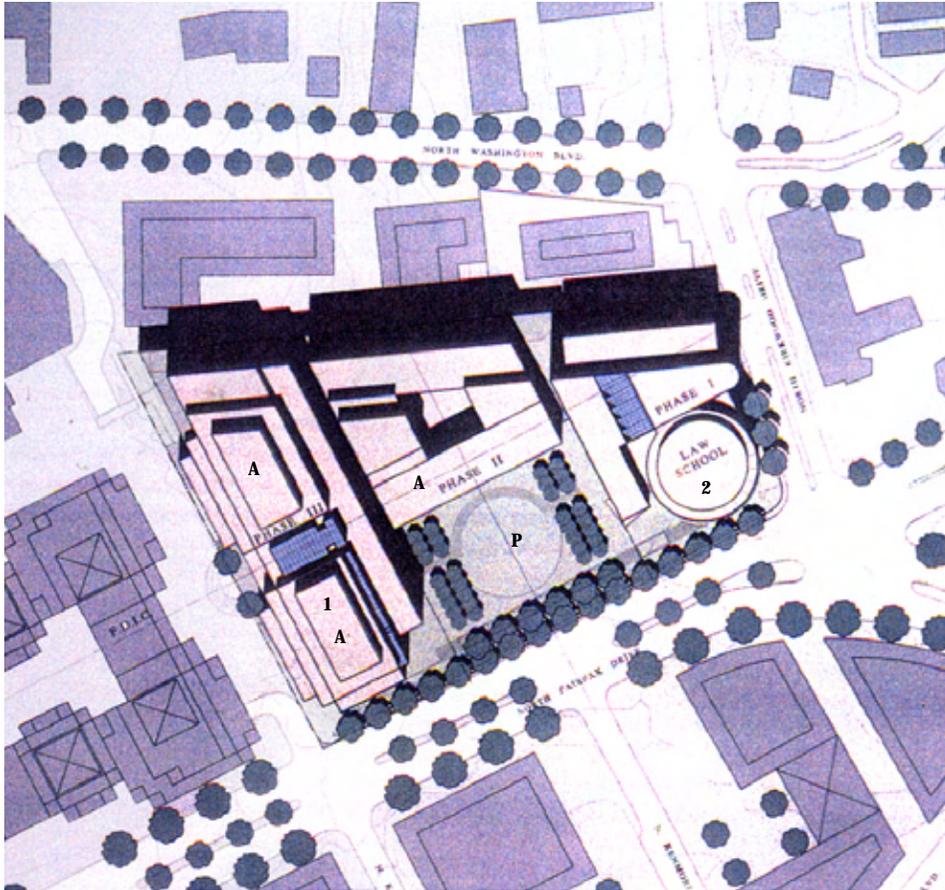
Proposed

- A Academic & Research
- L Library
- R Residential
- SL Student Life
- S Support
- T Theatre
- F Facilities and Physical Plant



- The Prince William campus should follow the general principals applied at Fairfax, providing a compact campus with a mix of learning, research and student services, with provision for a future residential program. It should continue to build on strong alliances with adjacent R&D efforts, and should expand its cultural value to the local community.

- The Arlington campus is in an urban context very different from Fairfax and Prince William, but similarly provides a mix of uses in a dense and active setting.



Arlington Campus

Existing

- 1 Arlington Original (replaced)
- 2 Arlington I

Proposed

- A Academic and Research
- P Parking Structure (below grade)

o n e *Introduction*



The master plan for George Mason University (GMU) provides a comprehensive development framework for GMU's land and buildings to the year 2007 and beyond. The plan addresses the University's three major campuses: Fairfax, Prince William and Arlington, as well as other University sites.

PURPOSE, OBJECTIVES AND SCOPE

The master plan establishes a coherent, systematic vision for growth and change at GMU, within the context of a strategic plan that calls for the distribution of programs between the University's three major campuses, building on the emerging strengths of each campus, population demographics and substantial overall growth in enrollment and research programs.

The master plan accomplishes several overarching goals:

- It is driven by GMU's program objectives, identified in the University's March 2001 Strategic Report, "Fulfilling Our Commitments".
- It provides a framework for the continued development of the distinctive "distributed campus" plan, setting clear priorities and guidelines for program focus and physical improvements on each of the three campuses.
- It provides strategies for meeting immediate needs and determines long-term build-out capacity of all three campuses while maintaining or improving the quality of the campus environment.
- It responds to the different environment the University is in since the last master plan, including changing priorities, growth in a variety of academic and student life program needs, and new data, telecommunications and distance learning technologies.
- It establishes a plan for University lands west of Ox Road in Fairfax as a future research park to promote technology research partnerships with the University.



Aerial views of George Mason University campuses at (from top to bottom) Fairfax, Prince William, and Arlington.

The master plan addresses the three major campuses at varying levels of detail, and other University sites in broad programmatic terms as described below:

Fairfax Campus

The master plan determines the capacity of the Fairfax campus to meet immediate needs and to absorb future growth while maintaining the quality of the campus physical environment. It establishes land use and density parameters to accommodate competing demands for limited campus land resources, including growth in co-curricular programs, such as athletics and recreation, student life needs and the desire for more on-campus housing. The plan builds on the University's recent successes in creating a community that effectively serves both commuter and residential students.

Prince William Campus

The master plan for the Prince William campus establishes a new vision for the campus and a framework for development that accommodates academic and research program initiatives in the context of the distributed campus model, student life needs, housing priorities, and community service and facility requirements.

Arlington Campus

The master plan integrates the recent Arlington campus master plan, prepared by Skidmore Owings and Merrill, and confirms the long-term potential of the campus to accommodate future program growth.

PLANNING PROCESS

A six-part planning process, outlined below, was used to develop the master plan:

- Data Collection and Interviews
- Physical Analysis
- Facility Needs and Program Development
- Alternatives Preparation
- Alternatives Refinement and Selection of Preferred Alternative
- Master Plan Documentation

The process was guided by a comprehensive consultation program with members of the GMU community, which included five work sessions with the University's Master Plan Committee, four presentations to the Board of Visitors, and an on-campus open forum for University faculty, staff and students.

Data Collection and Interviews

This initial phase of the planning process involved the collection of base data and interviews with University administrative staff and department heads. The principal documents and studies that were reviewed and formed the basis for analysis of the campuses and development of the plan were:

- *Fulfilling Our Commitments*, the University's strategic plan, March 1, 2001
- *The Distributed Campus Plan*, October 27, 2000
- GMU's enrollment projections to 2006-2007
- State Council for Higher Education of Virginia (SCHEV) guidelines
- GMU's existing space inventory
- 2002 – 2008 Capital Budget Requests
- *Department of Intercollegiate Athletics Strategic Plan*, January, 1997
- *Brailsford Study* of athletic and recreation facilities, Spring 2001



Three concepts introduced during the Alternatives Phase for accommodating Fairfax campus growth, including (from top to bottom): A. *Densify the Core Campus*, B. *Southern Expansion/ Dispersal*, and C. *Northern Expansion/ Town-Gown Linkage*. The final plan incorporated elements of all three concepts.

- *Study of Campus Parking Capacity at Fairfax Campus*, December 1999, prepared by Sheladia Associates Inc.
- *Building Community, Comprehensive Housing Plan in Support of the GMU 2007 Plan*, the University's housing plan
- *Current Projects Under Design and Construction*, September 1996 (includes the master plans for the Prince William and Arlington campuses)
- Previous master plans and planning efforts, including the 1987 Master Plan, prepared by Sasaki Associates

Extensive interviews were held with University administration and staff at the beginning of the planning process to elicit critical issues and ideas. Several major themes and significant issues emerged from these interviews. The themes and issues provided direction in developing alternative options for the campuses, and are summarized below:

- Using the master planning process to reinforce a compelling rationale for increasing public and private support for George Mason University.
- Integrating the strategic plan with the master plan.
- Implementing the distributed campus model.
- Establishing program and development options for Prince William campus and the west campus.
- Identifying uses of other campus sites.
- Creating a University community within the context of a suburban/commuter campus.
- Strengthening the relationship of the University with the surrounding community.
- Physical planning and campus design issues.
- The critical need for new space for all University functions: teaching, research, administration and student services.

Physical Analysis

A physical analysis of each campus was undertaken which examined:

- The influence of previous plans on the physical form of each campus
- Existing buildings and spatial arrangements
- Vehicular and pedestrian circulation
- Topography
- Open space elements and character

Facility Needs and Development Program

Current and future facility needs were determined using SCHEV guidelines based on the University's estimation of enrollment growth, and through discussions with faculty and senior administration regarding potential program growth. The master plan development program



Throughout the Alternative Phase the study model was used to explain and refine a variety of campus arrangements (new buildings shown in brown, existing in white).

for the campuses reflects facility needs for the next six years and contains all the projects identified in the University's six-year capital budget requests. A development program for the next twenty years and beyond was also prepared, and reflects the built-out capacity of the campuses.

Alternatives Preparation

Alternative master plan options for the Fairfax and Prince William campuses were prepared based on the themes and issues identified through the interview process, the analysis of campus conditions and the development program. The alternatives provided potential solutions for the campuses that addressed program accommodation, campus capacity, circulation and parking, campus image and creation of campus community. A physical model of the campus was prepared to assist with the evaluation of the alternatives.

Alternatives Refinement and Selection of Preferred Alternative

The alternatives were presented for discussion at work sessions with University staff, the Master Plan Steering Committee and the Board of Visitors. Based on the comments provided at these sessions, a preferred alternative was selected as the basis for the master plan.

Master Plan Documentation

Certain elements of the preferred alternatives were examined in further depth and the alternatives were refined to achieve a final master plan for the Fairfax and Prince William campuses. The final plan is documented in this report.



Key Dates in GMU's History

- 1957** University College, in elementary school, 17 students
- 1958** Town of Fairfax purchases 150 acres - George Mason College of the University of Virginia
- 1964** First four buildings completed - 356 students
- 1966** 4 year college authorized, and permission to expand into a university
- 1968** First undergraduate degrees conferred
- 1971** First graduate degrees conferred
- 1970** 442 additional acres acquired
- 1972** became independent University - 4166 students
- 1978** George Johnson became president
- 1979** Acquired Arlington School of Law - started awarding doctorates
- 1985** School of Information Technology and Engineering established
- 1990** Institute for the Arts established
- 1996** Alan Merten became president

INSTITUTIONAL HISTORY

Established in 1957 as a branch of the University of Virginia, George Mason became a four-year college in 1966. In 1972 it became an independent University. The current size and success of the University in the context of its brief 30-year history have established a somewhat legendary national reputation for the institution.

Rapid growth in graduate programs and undergraduate enrollment and an entrepreneurial spirit achieved high visibility for the institution early on. GMU was quickly characterized as an innovative institution, highly responsive to the changing needs of its surrounding community, taking full advantage of its location at the center of a burgeoning economic powerhouse for the nation, and its proximity to Washington, DC. In many ways, the University became a model for a 21st century university.

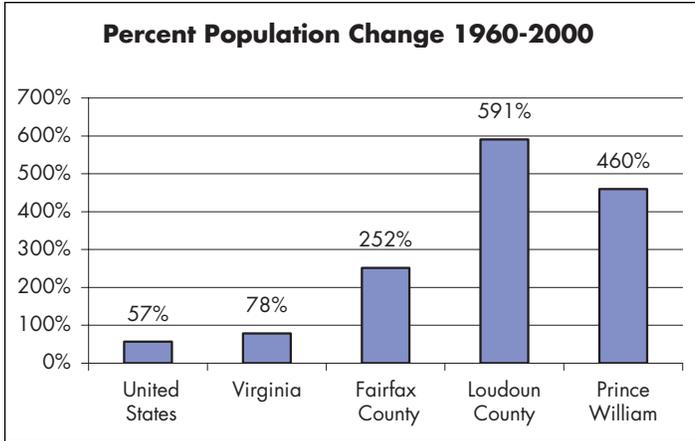
Ground was broken for the current Fairfax campus in 1963. Although early plans for the institution included a strong residential component, with students organized in residential colleges, the University has remained primarily a commuter institution. Recent population and business development trends have led the University to expand its operations to meet commuter student demand, and to capitalize on opportunities for public private partnerships. In 1979 the University acquired a campus and Law School in Arlington, VA, and in 1995 began development of a third campus in Prince William County, adjacent to the City of Manassas. These campuses are intended to grow as distinct centers of excellence, each with a particular research and academic focus, so that the University will be seen as “distributed”, rather than supporting “satellite” campuses.

REGIONAL GROWTH CONTEXT

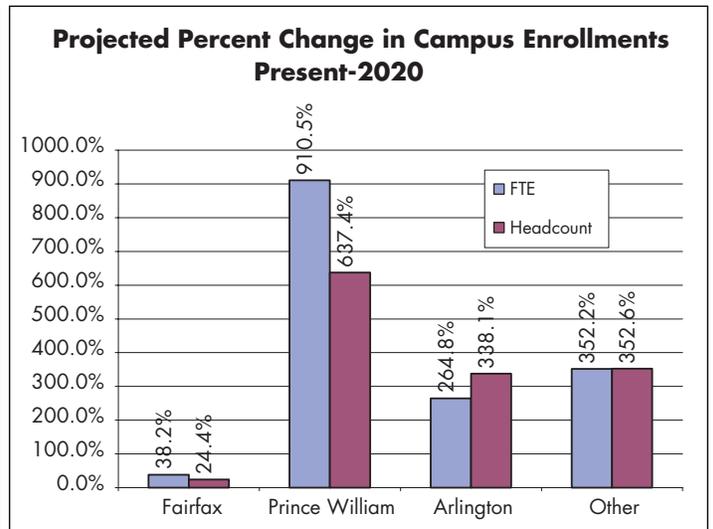
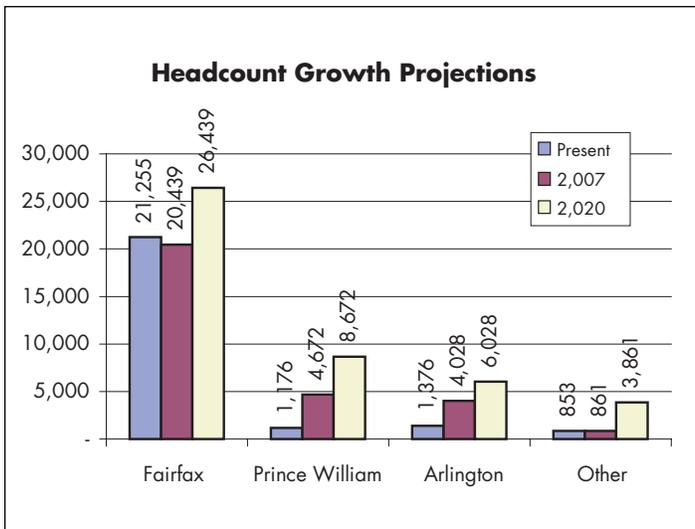
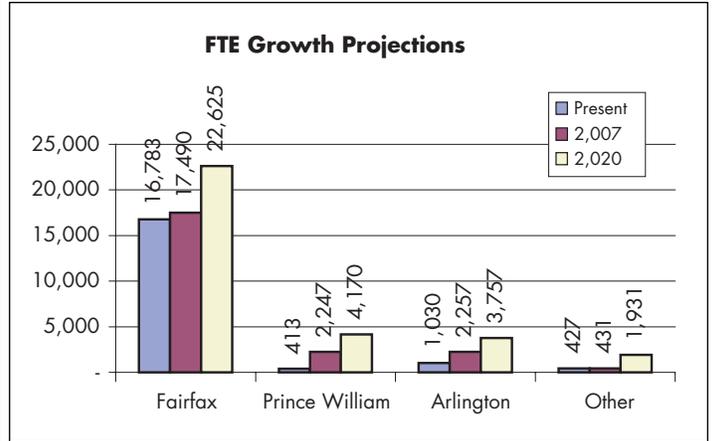
Northern Virginia has experienced rapid growth for decades. The suburban or recently rural counties of Fairfax, Loudoun and Prince William now account for one third of the population of the entire state. While population has expanded nationally by 57% since 1960, Fairfax County has grown 252%, Prince William 460%, and Loudoun, 591%. Originally stimulated by major expansion of the federal government, this expansion has more recently been fueled by business growth, particularly in information technology and business services. This growth has generated considerable local prosperity. Fairfax County now has the highest median family income in the nation (\$102,000).

The growth of the University and its expansion into new markets correlates strongly with this growth, and the focus of its programs reflects proximity to the nation's capital, and local business trends.

The University draws commuter students from a 50 mile radius, including Maryland, southern Pennsylvania, and West Virginia, as shown in the accompanying map, where the darker areas indicate zip codes from which larger numbers of students commute.



There has been significant population growth in northern Virginia.

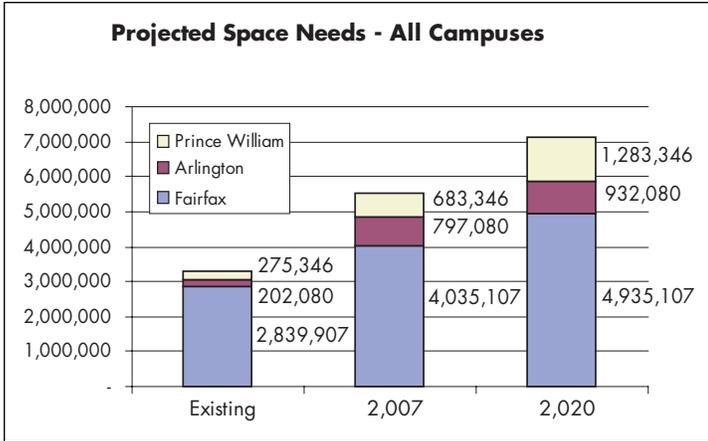


Significant enrollment growth is anticipated at George Mason.

UNIVERSITY GROWTH PROJECTIONS AND SPACE REQUIREMENTS

Enrollment

Enrollment projections provided by the Vice-Provost for Academic Affairs anticipate a total enrollment of 30,000 to 31,000 students (headcount) by 2007. The distribution of this enrollment among the three GMU campuses assumed continued rapid expansion at Prince William and Arlington, and the relocation or concentration of particular programs at these campuses. The growth trend was extended to 2020, on the basis of population projections resulting from the 2000 census, and resulted in a headcount in 2020 of approximately 45,000. At present, 86% of FTE students are enrolled at the Fairfax campus. By 2020, this number is projected to drop to 59%. The increased emphasis on distribution anticipates projected population distribution and the need to respond to local needs while serving a global market.



Enrollment growth will generate a need for significant new space at each campus.

Program Need

Anticipated demand for higher education in Northern Virginia will lead to major space shortages on the Fairfax and Prince William campuses, in education facilities, research space, and student services. In addition, increased emphasis on strong residential programs for undergraduates will require major investment in housing.

The University's space needs encompass Education and General (E & G) space, funded by the State, and Student Life and Non-Education and General (Non E & G), Housing, and Public/Private partnerships, all funded by fees and other sources. A summary of the current distribution of space on the campus was supplied by University staff.



Additions to the University's Aquatic Center and Physical Education building are planned to support enrollment growth.

E & G space needs based on current and projected enrollments were determined using SCHEV guidelines. The guidelines permit a range of square feet per FTE student. For the Fairfax Campus, it was established that there is a current shortage of E & G space in the order of 155,000 - 375,000 NSF, taking into account new space that will be added with the construction of Academic IV. The space deficit will increase to 500,000 - 700,000 NSF by 2007 and to 1,000,000 - 1,300,000 NSF by 2020.

At Prince William, there was, in the Fall of 2001, a surplus of 30,000 - 40,000 NSF, due principally to a surplus in research space. This space has now been allocated. The surplus will become a deficit of approximately 55,000 - 90,000 NSF by 2007 and 300,000 - 350,000 NSF by 2020.

The current master plan for the Arlington campus will accommodate projected FTE growth.

Student Union space needs were estimated at a rate of 9 NSF per FTE student. Other Non E & G space needs include facilities identified in GMU's six year capital budget, facility needs identified in discussions with University staff and through an estimation of space requirements based on comparisons with other comparable institutions. Student Union and other Non E & G space needs that were identified include the following facilities:

Fairfax Campus

- By 2007, additions to the Aquatic Center, the Physical Education building, the Patriot Center, the President's Park recreation center, and to Student Union II
- By 2020, an addition to the Field House, a new soccer stadium, a football field, recreation fields, tennis courts, a new theater, additional student union space, a new amphitheater and a pavilion.

Prince William

- A new performing arts center by 2007 and a combined 100,000 GSF student union and library facility by 2020.

The University's **Comprehensive Housing Plan** identifies the need for an additional 2,000 student residence beds beyond the existing supply of 3,000 beds by 2007. Based on the 2007 ratio of resident to commuter students, the need for another 1,500 beds was projected for 2020. It was assumed that housing would not be needed at Prince William until there is a greater concentration of facilities on the campus, but that up to 700 beds might be needed by 2020.

UNIVERSITY WIDE ISSUES

The University's strategic plan, entitled 2007 Plan, establishes the strategic direction for the University for the next several years. Several key themes from the plan underpin the master planning effort. These themes are summarized from a presentation to GMU's Board of Visitor's by Dr. Alan Merten, the University's President:

- GMU has established the goal to be "the University needed by a region and world driven by new social, economic, and technological realities."
- By 2007 enrollment on the three campuses will reach 30,000 students
- Residential students will increase from 3,000 to 5,000
- Several new facilities will be developed, including new academic buildings, an expanded library, expanded research facilities, and a new arts center
- Technology improvements will enhance learning, regionally and internationally
- George Mason will be a leader in Policy Studies, Information Technology, the Arts, and the Sciences. New programs will be developed in Conflict Resolution, Management, Health Care, Education, Social and Behavioral Sciences
- Research programs will move the University into top levels nationally
- Library expansion will occur in collections and digital resources
- Technology will support the University's educational objectives
- International activities and enrollment increases are anticipated

Increased regional interaction is anticipated, including stronger alliances with business, more faculty 'in the boardroom,' more business leaders in the classroom, more support from the business community with the University providing more service to the region.

t h r e e *Fairfax Campus*



Model of the Fairfax campus at 'build-out.'

VISION

The plan for the Fairfax campus reflects the entrepreneurial responsiveness of George Mason to a rapidly evolving society and to the changing needs of Northern Virginia. The plan addresses current space shortages on the Fairfax campus and accommodates projected growth on the main campus for the next twenty years, without resorting to academic development on the relatively remote west campus.

The current Fairfax campus is in many ways a remarkable success. From a modest, somewhat remote assembly of two-story buildings arranged in a rectangle in the woods, it has become, in less than forty years, a major destination in Northern Virginia. It is a hub for research, for learning and for culture, and a hothouse for the new knowledge and ideas that

drive the Virginia economy. The challenge now is to accommodate major new growth while strengthening the identity and effectiveness of the campus.

The campus has evolved along with its surroundings. Its initial manifestation seemed inspired by the pioneering vision of a one-room schoolhouse in the woods. In the early seventies, it played with notions of idealized community. In the eighties, as Fairfax County exploded around it, it took on more of the configuration of a suburban office park, with tastefully concealed parking lots, ample gracious green spaces, and somewhat anonymous but inoffensive buildings in a tranquil setting. With the build-out of the neighborhood in multiple suburban tracts completed, the consequences of sprawl fueled the demand for a new kind of destination – the mall as a new manifestation of community. The University responded by building its own mall, the Johnson Center. This became an inevitable, and remarkably successful, destination, attracting national attention. The model of the student as consumer, which dominated the nineties, is now struggling to integrate with the pervasive struggle to find new and better manifestations of community. In the larger world, “new urbanism” has taken a surprising hold on public imagination, with its emphasis, whether in downtowns or suburbs, on the public realm, on a non-hierarchical mix of uses, on buildings and places that invite participation, collectivism and informal sharing of knowledge and experience.

The current plan for Fairfax has responded to this evolution.. The vision for the campus is of a marketplace and festival of knowledge, a place where knowledge takes on meaning in the context of community. To achieve this, it must have the vitality, and the unpredictability, of an urban destination. Its outdoor spaces must invite expression and action, as much as the passive enjoyment of a tranquil setting. This requires compactness, and a variety of activities and uses in close proximity. It requires, too, the neutrality that open spaces can offer, in contrast to the more normative forces of a massive interior space such as the Johnson Center. The plan aims to complement the success of the Johnson Center, the mall, with a different and equally necessary kind of vitality, the vitality of the street. The busy street is the key metaphor of the plan.

Busy streets require a mix of uses and a density of occupation. The Fairfax plan brings housing closer to the core of the campus, and mixes it with teaching and research activity. New buildings are sited to create active pedestrian streets, and ideally will include a mix of uses in a single building. For example, a building might have student services as a kind of “store-front” use on the first floor, with academic or residential uses above. Visual connections will also be emphasized, with unobstructed sightlines connecting the campus together. Additional defined open spaces will be created. The sense of a dense more “urban” core will be emphasized by locating convenient structured parking close to the center, and by improving access roads and entrances to reduce delay for commuting students. The overall vision is one of accessibility, attractiveness, vitality and flexibility.



Images of the Fairfax campus.



Area context.

CAMPUS CONTEXT

GMU's Fairfax campus is the University's main campus, located in the City of Fairfax within the metropolitan Washington D.C. area. The campus comprises two sites located east and west of Ox Road (Route 123). The 360-acre easterly portion is bordered by Ox Road to the west, Roberts Road to the east, Braddock Road (Route 620) to the south, and University Drive to the north. It contains most of the University's academic, support and residential facilities. The west campus consists of an 202-acre parcel that extends west from Ox Road and contains the University's field house and sports fields. The area surrounding the campus consists principally of low-density residential subdivisions. There is a small commercial center just north of the campus on the west side of Ox Road. Fairfax's historic core is located approximately one mile north of the campus

History of Campus Development

Since 1967, growth and development at the Fairfax campus has been shaped by five master plans, each of which has left an imprint on the overall spatial arrangement and character of the campus. The key themes embodied in each of these plans and their impacts on campus development are summarized below:



Aerial view of Fairfax campus today

1967 Master Plan

The 1967 plan introduced the concept of “Academic Villages” (living and learning) grouped around a central quadrangle. Large parking lots underscore the conflict between the residential vision and suburban commuter reality. The plan established a strong connection to west campus and an orthogonal building arrangement.

Between 1967 and 1978, most new facilities that were built on the campus conformed to the intent of the plan, with the exception of student apartments west of the academic core. By 1975, Patriot Circle was established, but the campus remained concentrated on more level land. The tension between land for buildings and land for parking was already evident.

1978 Master Plan

This plan structured buildings in a strong axial arrangement and incorporated a pond, with a vista to Braddock Road. The plan moved dormitories to the perimeter, established a new entry, provided focal points for student life, maintained the bridge to the west campus, and introduced athletic facilities on the west campus.

While several facilities were built conforming to the plan, no move was made to establish the strong axis and development continued to occur on more level land. A new student union building did not conform to the plan.

1982 Master Plan

The 1982 plan was defined by a more informal layout and a large central green space with a public building at its center. The pond was maintained, but views to it were blocked by new buildings. While Patriot Circle defined the development zone, parking was moved inside Patriot Circle and a large public building was placed outside.

While development of the Patriot Center and a few other facilities were consistent with the plan, the central green space was not defined. Several temporary buildings not contemplated by the plan were built in the north half of the campus, both inside and outside Patriot Circle.

1987 Master Plan

The 1987 master plan re-established a strong central space by reorienting the campus towards its main entrance, with an ornamental lake, green space and a public theatre. It also provided for significant concentrations of residential space.

While the theatre, lake and entry were established, new buildings conforming to the plan failed to define the central space.

1991 Master Plan Revision

In 1991, the master plan was revised by introducing a central indoor space to replace a central outdoor space, reflecting the nature of a University dominated by commuters. In addition, another large public building was planned outside Patriot Circle and structured parking was introduced for the first time.



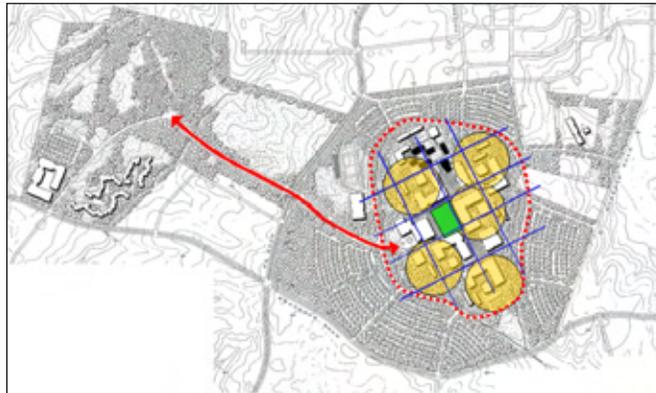
The campus in 1964, 1979 and today.

Influence of Previous Plans

Experience with these previous master plans reveals several key themes in the development of the Fairfax campus:

- The orthogonal grid has sustained a unified campus image.
- The west campus has not been critical in accommodating growth.
- Flatter sites are preferred but are currently under-utilized.
- Development has been shaped by the loop road and by topography.

While the plan has been followed, the steep southern section of the campus remains undeveloped and reestablishment of a north-south axis seems problematic. Plans to build around the pond remain.



1967 master plan.



1978 master plan.



1991 master plan.

CAMPUS CAPACITY ANALYSIS

Anticipated enrollment growth will generate a need for up to 2.1 million square feet of new and expanded facilities on the Fairfax campus over the next twenty years. To determine the capacity of the campus to accommodate these facilities, an analysis of campus density and development patterns was undertaken. The analysis examined existing campus density to establish how intensely campus land has been used. It then compared the density of the campus to that of several peer institutions as a broad measure of the potential of the campus to accommodate additional facility development. Finally, the analysis identified potential new development sites, as well as infill and redevelopment opportunities. The results are described below.

Existing Campus Density

The campus core area inside Patriot Circle has an area of 117 acres and contains nearly 2.3 million square feet of buildings and facilities, which equates to an overall Floor Area Ratio (FAR) of .45. Within the campus core area, there is a significant range of density, with earlier development occurring at much lower densities than later additions to the campus. The original academic quad, for example, has an FAR of .53, while development in the area surrounding the Johnson Center has an FAR of 1.30.

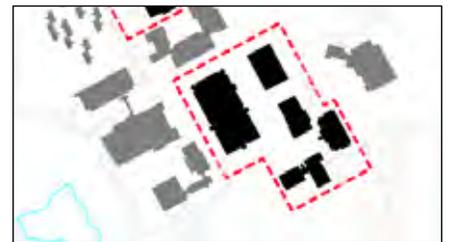
Peer Comparisons

A comparison with some of GMU's peer institutions reveals that many peer campuses are much denser than the Fairfax campus core. Densities for the institutions surveyed ranged from an FAR of .24 at Harvard Yard to 2.01 at the University of Texas, Austin, with an average FAR of .67 for the ten peers. Notably, two of these institutions have long-term growth plans that will add significant new program to their campuses. At the University of Central Florida, planned facility development will increase the density of its campus from an FAR of .33 to .76 over the next decade. The ten-year development plan for Virginia Tech is expected to increase the density of that campus from an FAR of .63 to .72.

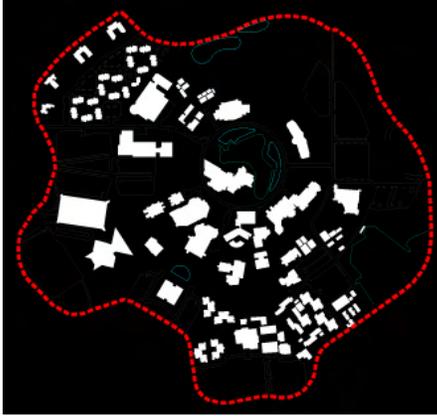
Development Capacity

The density analysis and peer comparison suggest that the Fairfax campus can accommodate additional development through more intensive land use. If, for example, the density of the campus were increased from the current FAR of .45 to the peer average of .67, an additional 1.1 million GSF of development could be accommodated.

There are several areas where new facilities could be accommodated on the Fairfax campus. Within the campus core, these include un-used land near the planned Academic IV building, infill sites around the original quadrangle, and on redevelopment sites containing obsolete or under-utilized facilities. Significant development potential also exists on surface parking lots outside the campus core. The master plan was developed based on the assumption that all required development to the year 2020 could be accommodated within these areas on the Fairfax campus.



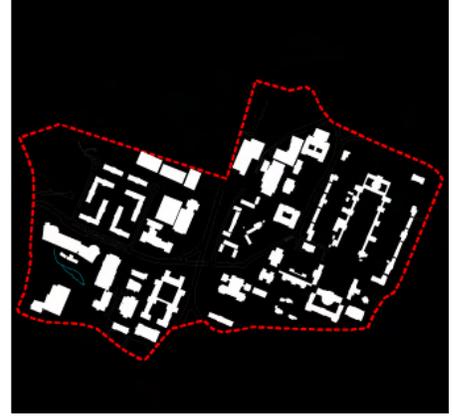
The original academic quadrangle has a density that is less than half the density of the area surrounding the Johnson Center.



University of Central Florida
Density = .33 Floor Area Ratio



University of Tampa
Density = .44 Floor Area Ratio



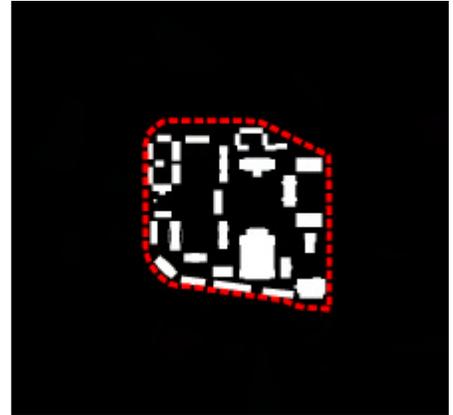
University of Virginia
Density = .59 Floor Area Ratio



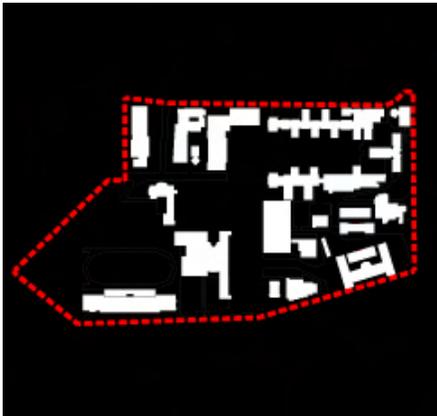
Virginia Tech
Density = .63 Floor Area Ratio



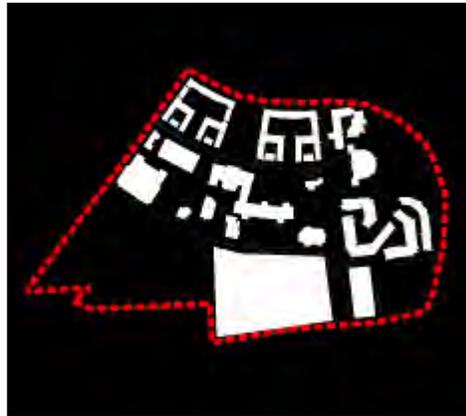
Rice University
Density = .79 Floor Area Ratio



Harvard Yard
Density = .84 Floor Area Ratio



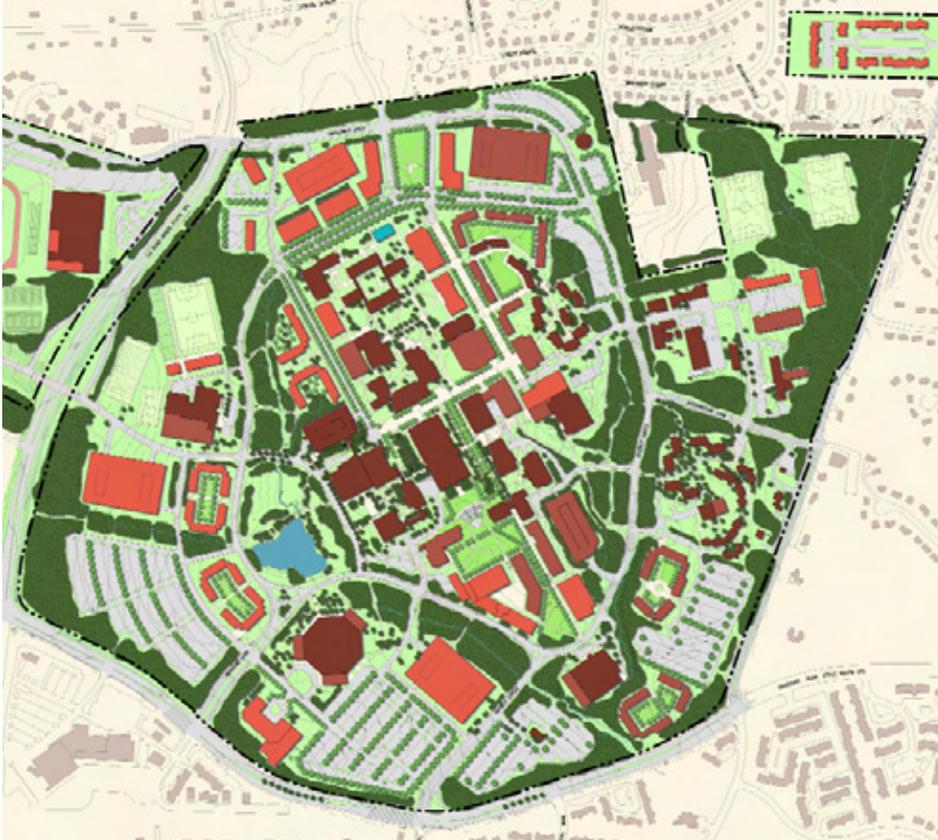
Carnegie Mellon
Density = .92 Floor Area Ratio



Harvard Business School
Density = .96 Floor Area Ratio



University of Texas, Austin
Density = 2.0 Floor Area Ratio



CAMPUS PLAN

Principles

Seven basic planning and design principles underpin the master plan for the Fairfax campus:

Create a Distinctive Sense of Place

The campus needs to define a sense of place that sets it apart from the surrounding suburban context. Future development should build on the special qualities of the campus to create a distinctive campus environment.

Foster a Vibrant Campus Community

The Johnson Center has become an animated focus for student life at the center of campus. The success of the Johnson Center should be translated across the campus, both outdoors and indoors to encourage 24-hour campus life. A mix of uses should be deliberately programmed in different areas of the campus.



The success of the Johnson Center should be translated across the campus.



A defining feature of the campus is its pedestrian friendly environment.

Establish a Unifying Campus Framework

To ensure that new facilities contribute to the vision for the campus, the plan must create a logical framework for future development that achieves a unified, coherent campus.

Maintain a Pedestrian-Friendly Campus

A defining feature of the campus is its pedestrian-friendly environment where principal academic and research functions are concentrated within a ten-minute walk of the campus core. New facility development should preserve and enhance the pedestrian character of the campus.

Concentrate Facilities Primarily on the East Campus

New facility development should be concentrated on the east campus to maximize use of the University's limited land resources, and to contribute to an efficient, animated campus environment.

Accommodate Transportation Needs

Enrollment growth will generate increased traffic on the campus road network, a need for more parking and additional demand for transit service. The master plan must address transportation needs while preserving the quality and character of the campus environment.

Engage the Community

GMU has a history of drawing from and contributing to the community. The master plan should reinforce opportunities to engage the community and strengthen community relationships.

Campus Framework

The master plan delineates a new campus framework to create an academic setting that is compact, rational and readable. Pedestrian "streets", semi-enclosed quadrangles, quality open spaces and vistas combine in a coherent whole. The campus framework provides a flexible structure for future campus program elements, while creating a unique sense of place. The framework is comprised of six fundamental elements:

- ***Arrival***
- ***Main Streets and Quadrangles***
- ***Connections***
- ***View and Landmarks***
- ***Natural Systems***
- ***Compact Core***



Arrival

GMU needs a distinctive sense of place, setting it apart from the surrounding suburban context; however, existing entrances to the campus from University Drive, Braddock, Ox and Roberts Roads do not create a strong University image or sense of arrival.

The master plan creates an experience of entry and arrival at all major entrances to the campus.

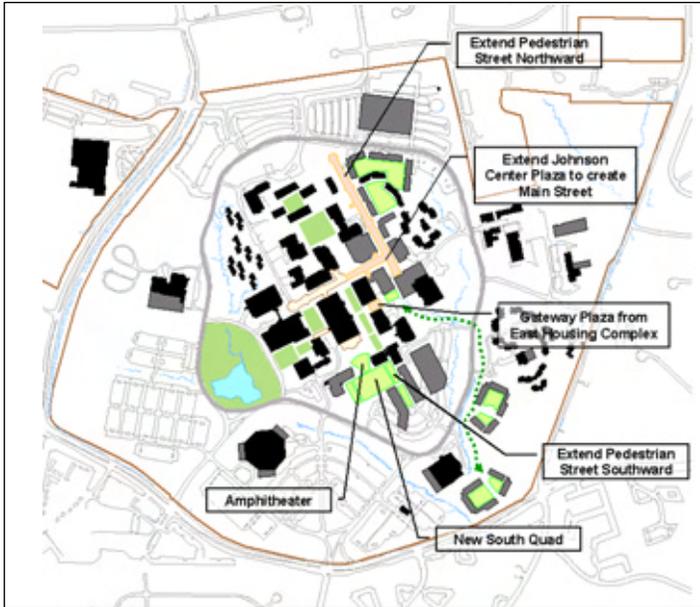
From University Drive and Ox Road, the plan introduces a major new entrance feature at George Mason Blvd., consisting of a large green space framed by new buildings extending between University Drive and Patriot Circle. A landmark building at the south edge of the green space marks the end of the east Academic Mall, which leads to the campus's main street.

The plan improves the entrances to the campus from Braddock Road by introducing a median within both the Roanoke River Road and Nottoway River Lane entrances and by rationalizing the Nottoway River Lane entrance. It also locates major new public facilities in these areas of the campus to create a stronger University presence next to Braddock Road.

The plan maintains the Shenandoah River Lane access to the campus as a secondary entrance, but widens the roadway to improve traffic circulation.



The master plan creates an experience of entry and arrival at all major entrances to the campus. The study model illustrates new green spaces that lead to the campus core.



The plan introduces pedestrian oriented Main Street and reinforces the existing pattern of quads across the campus.

Streets and Quads

While the Johnson Center has been extremely successful at creating a sense of community at the University, community must be distributed throughout the campus and not focused solely on the Johnson Center. To foster a sense of community, the plan introduces up to three 'main streets' designed to generate a visible concentration of pedestrian activity and serendipitous interaction. Buildings containing a mix of academic and student life activities such as classrooms, faculty offices, research labs, cafes, bookstore and a housing office will front these streets. The streets will require hardscape design and shade tree plantings to provide definition and enhance usability. The first street will be a development of the existing plaza, and the second will run behind the existing library along Chesapeake Lane, and be defined by new housing and academic buildings. Ultimately, Pohick Lane will evolve as a third main street containing residential, academic and student service uses.

The Fairfax campus currently contains a series of quadrangles that create opportunities for informal interaction among members of the College community. The plan reinforces this pattern of development through strategic infill around existing quadrangles with new building program and landscaping, and by creating a new 'South Academic Quad' framed on the north by Enterprise Hall and the new Academic IV building. Each quad will have its own identity, created by landscaping and building program. The plan orients building entrances to face onto quads to make them comfortable and inhabitable spaces, and encourages facades to be less monolithic and undifferentiated than those in many existing buildings.

Historically, the Fairfax campus has maintained clarity and logic by using an orthogonal grid as a discipline for the placement of buildings inside Patriot Circle. The plan continues and emphasizes this practice.



Connections

The principal campus connections consist of connections within the core, from the core to the periphery, and between the east and west campuses. The plan seeks to improve these connections at several levels.

Campus Core

Pedestrian routes through the core are not always continuous between destinations while few building entrances limit overall accessibility. Topography makes some parts of the campus less accessible than others.

The plan emphasizes three pedestrian-oriented main streets to simplify and enhance connections within the core. New facilities are concentrated along these routes with building entrances oriented to each street. The plan also preserves the existing pedestrian pathway to Enterprise Hall as the principal route to the new South Academic Quad. Parking garages within Patriot Circle are sited at the edge of the core at locations that provide direct links to the principal internal pedestrian routes.

Core to Periphery

Existing connections between the core and peripheral areas are not always clearly defined. Facilities located outside the core generally feel isolated and separated from the center of campus, and are not easily accessed. The plan enhances existing pedestrian routes between the core and peripheral areas and introduces new pathways to draw these areas together. Improved connections include:

- Re-alignment and extension of the northern portion of Chesapeake and Pohick Lanes to connect directly with Patriot Circle.



- Re-alignment and extension of Rivanna River Lane to the Chesapeake Lane main street to better connect the housing complexes with the core.
- A new pedestrian route connecting Housing V and VI and the new parking garage adjacent to the South Academic Quad to Student Union II and the new east-west main street.
- Extension of the pond loop road past the Physical Education complex and beyond to create direct access between the Physical Education facilities, and the core.
- A new pedestrian tunnel under Roanoke River Lane to connect future housing and parking facilities with the Patriot Center.

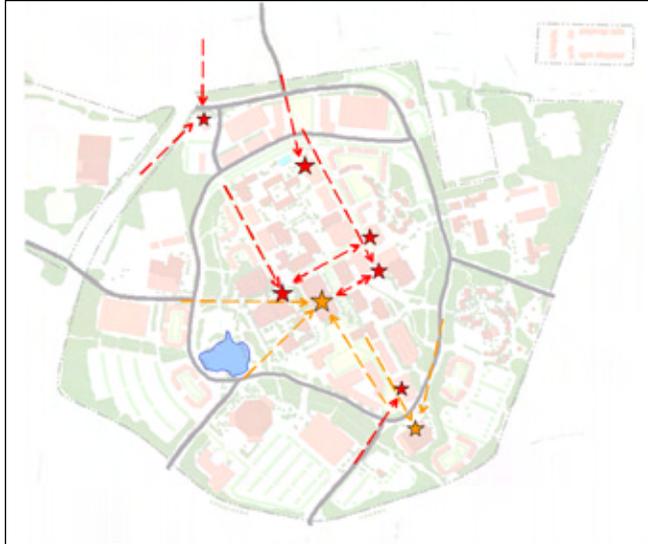
East and West Campus Connections

Currently, the only link between the east and west campuses is via University Drive. This connection is remote from the center of campus activity and does not facilitate convenient travel between the two campuses.

To improve connections between the east and west campuses, the plan re-introduces a bridge over Ox Road that is accessed via a new road from the Patriot Circle/pond loop road intersection and provides an alternative to the University Drive connection at the center of campus.



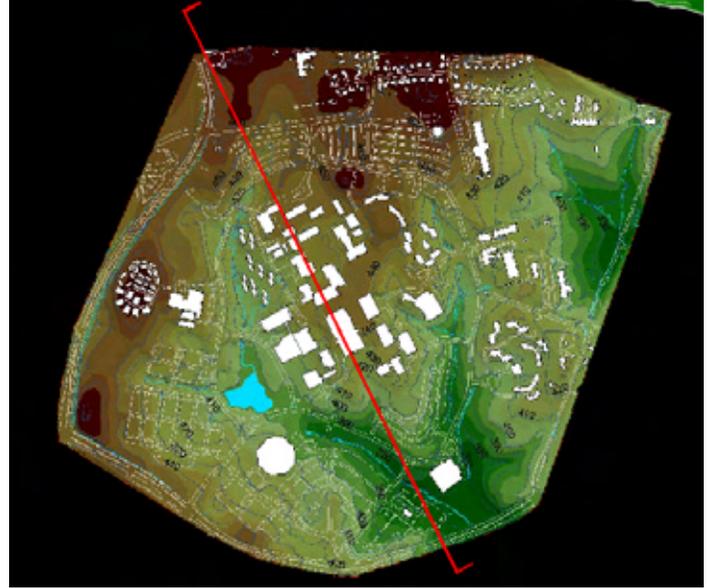
The plan enhances connections through the campus.



Views and Landmarks

Good visual connections make a campus seem safe and expansive and can strengthen the sense of community. The plan promotes strong visual connections throughout the campus, particularly from Patriot Circle to new main streets and between parking lots and residential areas. Implementation will require development of a landscape maintenance strategy, with emphasis on selective tree pruning and removal to encourage mature growth and more open vistas.

The plan strengthens visual landmarks which help with orientation and wayfinding.



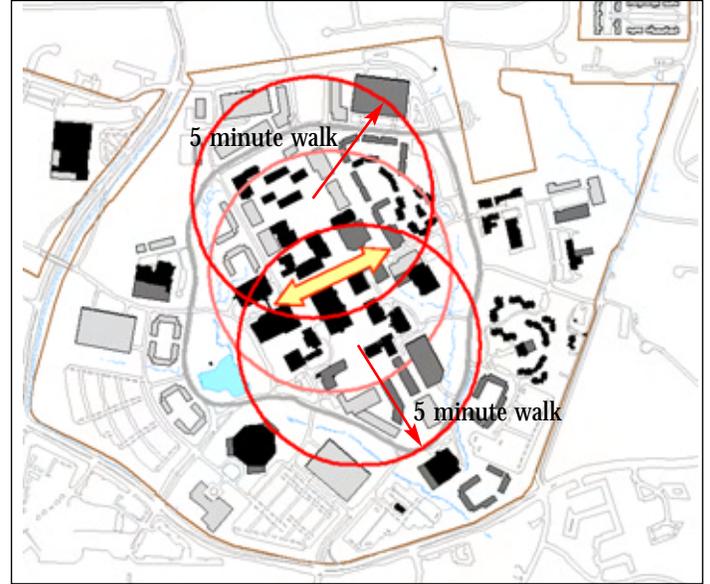
Woodlands, Wetlands, and Waterways

There are treed areas in most parts of the campus, which range from dense, natural wooded areas around the campus periphery to formal rows of trees along pathways in the campus core. The areas outside Patriot Circle create a secluded feeling on the campus, provide welcome greenery and screen parking lots. In some areas, trees obscure sightlines, which can contribute to orientation problems, as well as security concerns in parking areas.

Stream corridors occur in the low areas of the campus, with two streams roughly following the alignment of Patriot Circle and meeting south of the Aquatic Center, and two other branches running through the north-east corner of the campus. The streams are not generally visible from the core campus area, but can be seen from paths connecting peripheral residential areas to center of campus.

Woodland, wetlands and waterways contribute to the image of the campus and contribute to ecological diversity. The plan preserves these features as key structuring elements

The master plan strategically preserves woodlands, wetlands, and waterways to maintain the campus image and provide for ecological diversity. It also establishes ‘ecological corridors’ following drainage ways, streams, and topography, that buffer development, preserve essential natural features and provide for a connective network of walking trails and bikeways. It is recommended that view corridors be cleared strategically and that canopies be limbed-up and some under story growth cleared to improve visual connections.



Compact Core

A concentrated pedestrian-oriented campus will also foster community and encourage campus activity. While maintaining the maximum ten-minute walking circle within the academic core will generate significant foot-traffic on the proposed “main streets”, the plan recognizes the commuter nature of the student-body, and provides adequate adjacent structured parking for commuter students, so that their campus experience is primarily of animated streets, and not of long treks from remote wooded parking fields.



A compact core will encourage campus activity.



Phase I and Phase II academic and research projects extend the current 10-minute walk circle to two intersecting circles, each including the campus core, or main street.

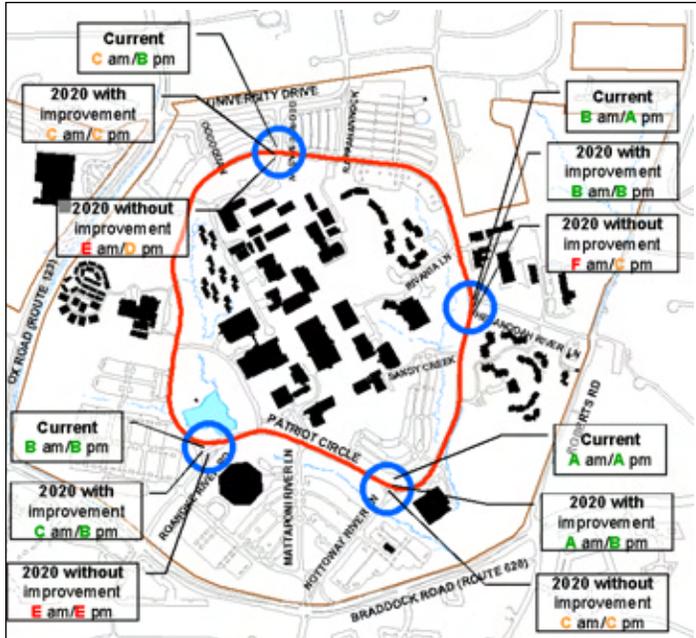
TRANSPORTATION

A transportation analysis of the campus was undertaken to identify existing areas of concern and to consider the impact of University growth on campus traffic conditions. The analysis examined existing intersection levels of service and projected future levels of service, both with and without improvements, based on anticipated enrollment growth. It identified the following areas of concern:

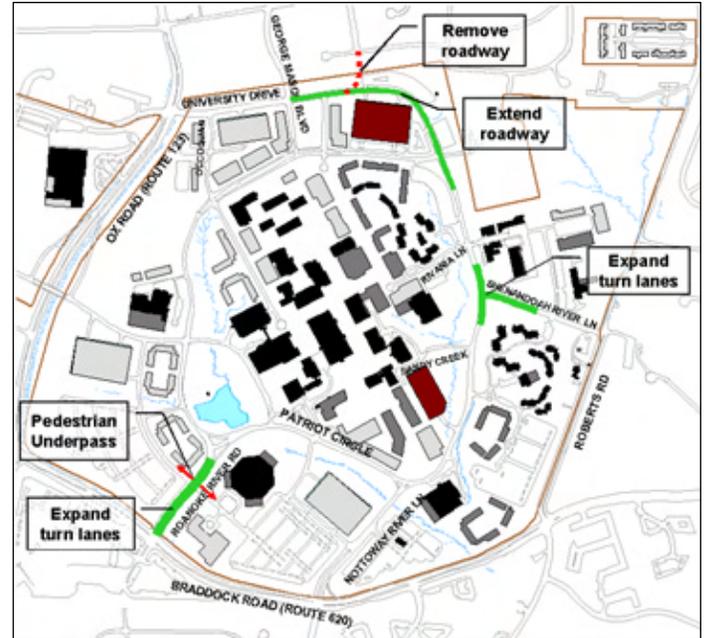
- The entrances to the campus from Braddock Road.
- The interior intersections of Roanoke River Lane, Nottoway River Lane and George Mason Blvd. With Patriot Circle.
- The intersections of Occoquan, Pohick, Shenandoah and Rappahannock River Lanes with University Drive.
- Left turns from parking lots (particularly Lot G) and entrance roads onto Patriot Circle during peak hours.
- Overall congestion during peak hours when events occur at the Patriot Center.

Recommended Solutions

The analysis recommended intersection improvements and other measures to address current and future on-campus traffic conditions. The master plan provides for the phased implementation of the recommended improvements corresponding to the two master plan phases. As Braddock, Roberts and Ox Roads are beyond the University's jurisdiction, improvements proposed for these roads will need to be accepted, approved and implemented by the appropriate State and County agencies.



Levels of service before and after improvements.



Phase 1 transportation improvements.

Phase 1 Campus Roadway Improvements (2002 – 2007)

Patriot Circle

- Expand turn lanes at Shenandoah River Lane.
- Re-align the northeast corner of Patriot Circle to connect with University Drive at Rappahannock River Lane.

Roanoke River Lane

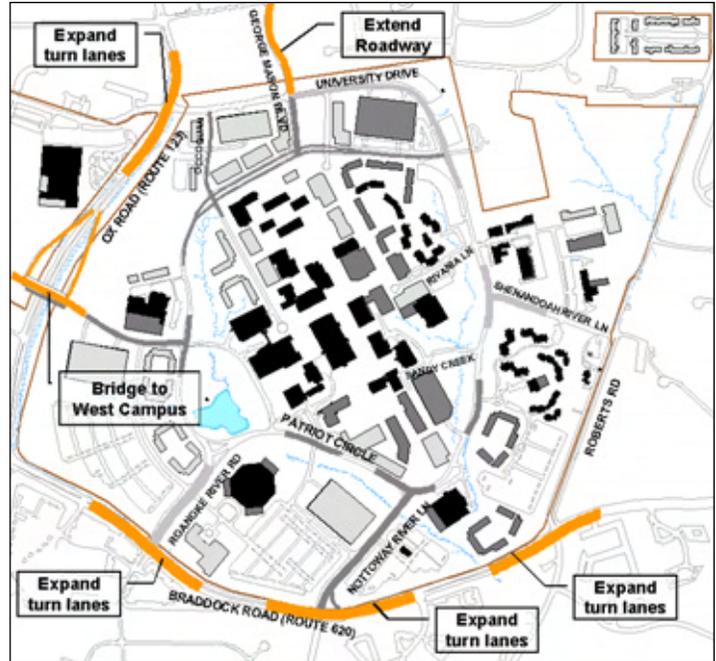
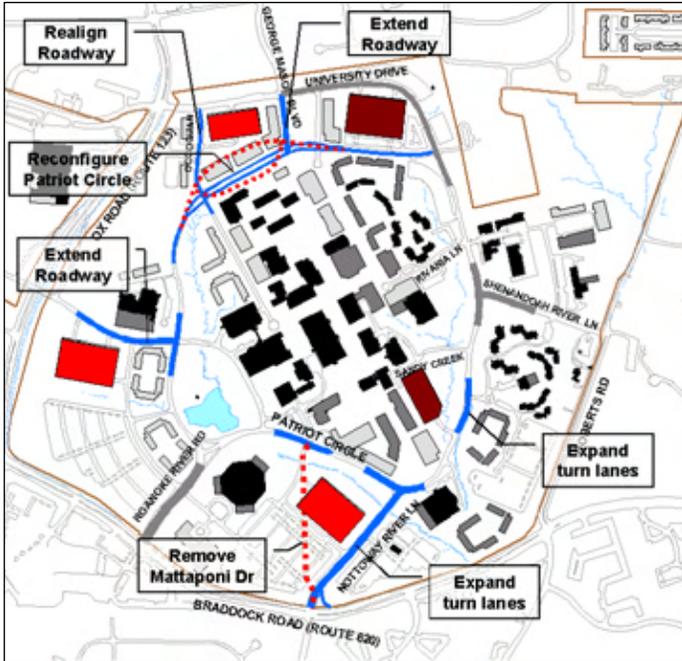
- Widen Roanoke River Lane from Braddock Road to north of Po River Lane to provide separate right turn, through and left turn lanes, with sufficient median to provide future double left turns.
- Provide two inbound lanes to accommodate future double left turns from Braddock Road.

Shenandoah River Lane

- Widen Shenandoah River Lane from Roberts Road to Patriot Circle to provide left turn lanes at all intersections and entrances.

Other Improvements

- Eliminate University Drive connection to off-campus at Rappahannock River Lane.
- Create a pedestrian underpass below Roanoke River Lane.



Phase 2 transportation improvements

Phase 2 Campus Roadway Improvements (2007 – 2020)

Patriot Circle

- Expand turn lanes at Nottoway River Lane, the future Ox Road overpass road, and all parking garage entrances.
- Re-align and re-configure Patriot Circle from approximately George Mason Blvd. to Occoquan River Lane to create divided travel lanes separated by a median and to accommodate new intersections with George Mason Blvd. and Occoquan Road.

University Drive

- Provide exclusive left, right and through lanes for east and west bound traffic on University Drive.

Nottoway River Lane

- Reconfigure Nottoway River Lane as a standard intersection with Braddock Road, including separate right and left turn lanes with sufficient median to provide future double left turn lanes.
- Provide two inbound lanes for future double left turns from Braddock Road. The widening should extend almost to Holston Creek Road to provide stacking length in the outbound lanes.
- Eliminate the intersection of Nottoway and Po River Lanes.

Other

- Extend and re-align George Mason Boulevard and Occoquan River Lane to connect with re-aligned Patriot Patriot Circle.
- Create a new roadway connection from Patriot Circle to future Ox Road overpass.
- Eliminate Mattaponi River Lane.

Exterior Roadway Improvements

Braddock Road

- Expand turn lanes at Roanoke and Nottoway River Lanes.
- Expand turn lanes at Roberts Road.

Roberts Road

- Widen Roberts Road to from Braddock Road to Shenandoah River Lane to provide separate right, through and left turn lanes at the intersection with Braddock Road.
- Provide two inbound lanes with the left lane becoming a left turn lane at Shenandoah River Lane.

Ox Road

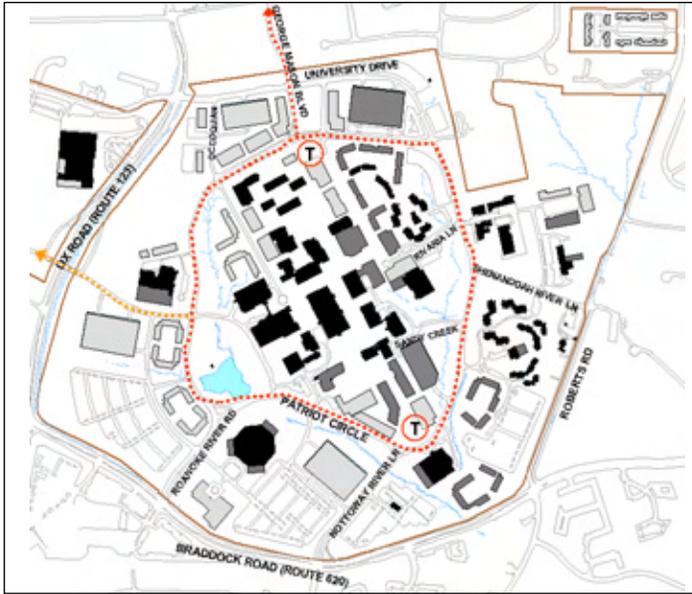
- Provide an additional south-bound left turn lane from Ox Road to University Drive.
- Adjust signal timing and sequencing to prevent stacking vehicles from blocking entrances to the campus.

Ox Road Overpass

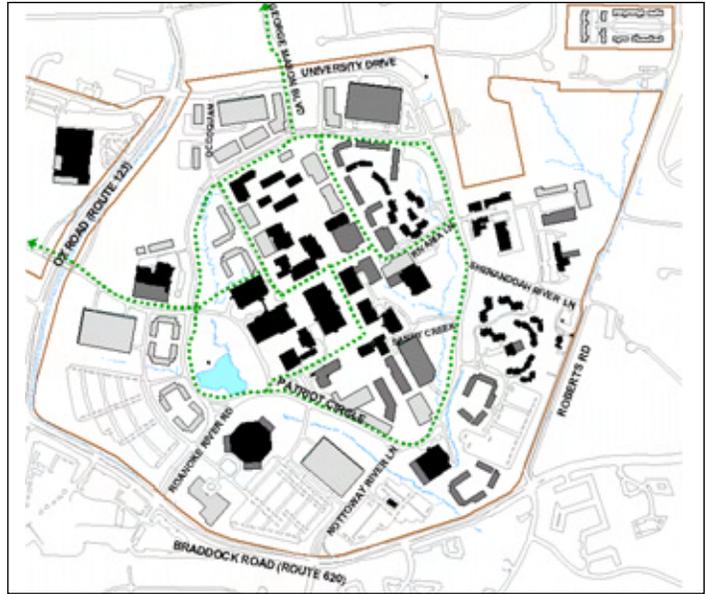
- Provide a bridge over Ox Road to connect Patriot Circle with the west campus.
- Provide ramps from the bridge allowing northbound access to Ox Road and southbound exit from Ox Road to provide additional access to the Patriot Circle and help to divert traffic from the Roanoke River Lane entrance.

Grade Separated Interchange at Braddock and Ox Roads

- Create a grade-separated interchange to improve the level of service at this intersection (no other significant improvements can be implemented to this intersection).



Proposed transit route.



Proposed campus bikeways.

Transit

The CUE bus currently makes a single stop at the north end of campus. To encourage the use of transit to the campus, it is recommended that the University work with the transit authority to introduce additional bus stops at key locations on Patriot Circle that are convenient to major destinations, such as the Johnson Center, the academic core, recreation facilities and student housing. Safe, direct pedestrian connections should be provided from future transit stops to the destinations they serve. The University should also give consideration to the introduction of a shuttle bus system to provide convenient connections between the east campus and the recreation fields, future research park and parking on the west campus.

Bikeways

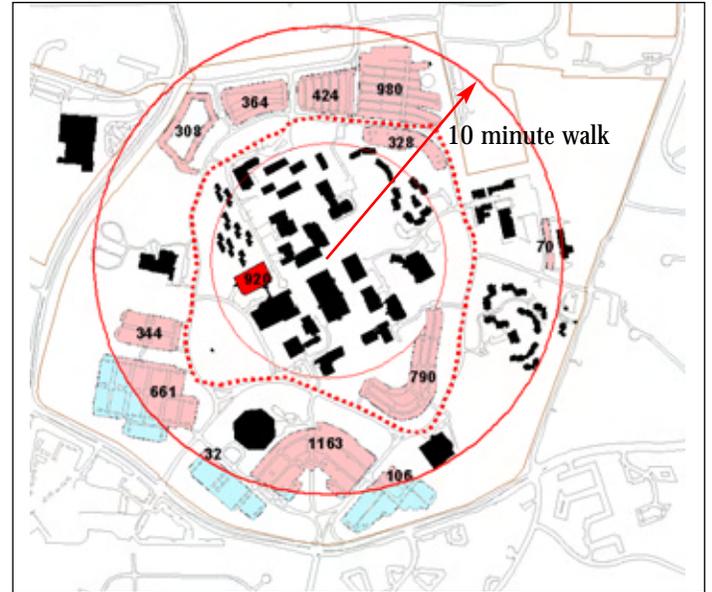
The opportunity exists to create an on-campus bicycle path system to facilitate travel around the campus, and for recreation. It is recommended that the University explore opportunities to introduce a separate bicycle path system inside Patriot Circle with connections to the campus core and to other major facilities at the edges of campus. The bicycle path could be extended to the west campus, once the bridge over Ox Road is constructed.

For safety reasons, it is not recommended that on-campus bicycle paths connect with the major roads surrounding the campus, given the very heavy traffic on these roads. However, opportunities for a connection to the Town of Fairfax historic core via a re-aligned George Mason Blvd. could be explored.

To support the use of bicycles on-campus, bicycle storage facilities should be provided that are convenient to major destinations, such as the Johnson Center, the academic core, recreation facilities and student housing.



Existing parking



Parking is concentrated at the edges of the campus.

PARKING

An assessment of parking conditions at the Fairfax campus was undertaken that examined the current parking context and estimated future parking needs based on growth projections for the campus. The assessment revealed several issues:

- The total number of parking spaces on the campus is adequate to satisfy the current demand for parking.
- There is a perceived shortage of convenient parking serving the campus core as many spaces are located at the edge of the University property. Of the 8,261 parking spaces on the east campus, over 1,400 or 17 percent are located more than a ten-minute walk from the campus core.
- The occupancy of parking lots close to the core is nearly 100 percent at peak times, while parking is generally available at peak times in lots that are more than a ten-minute walk from the core.
- The development of new facilities on the campus will ultimately displace nearly 3,600 existing surface parking spaces, which will need to be replaced.
- Increased use of facilities available to the general public could create peak demand that exceeds projections.

The master plan addresses parking at the Fairfax campus through a strategy that aims to ease parking conditions and improve parking convenience. For each phase of the plan, the strategy increases the overall supply of parking beyond projected demand and concentrates parking close to the facilities it serves. The strategy is outlined below.

Approach

Parking Ratios

Parking needs for the campus were estimated using the following parking ratios:

Staff and all Students: .34 spaces/person

Resident Students: .57 spaces/person

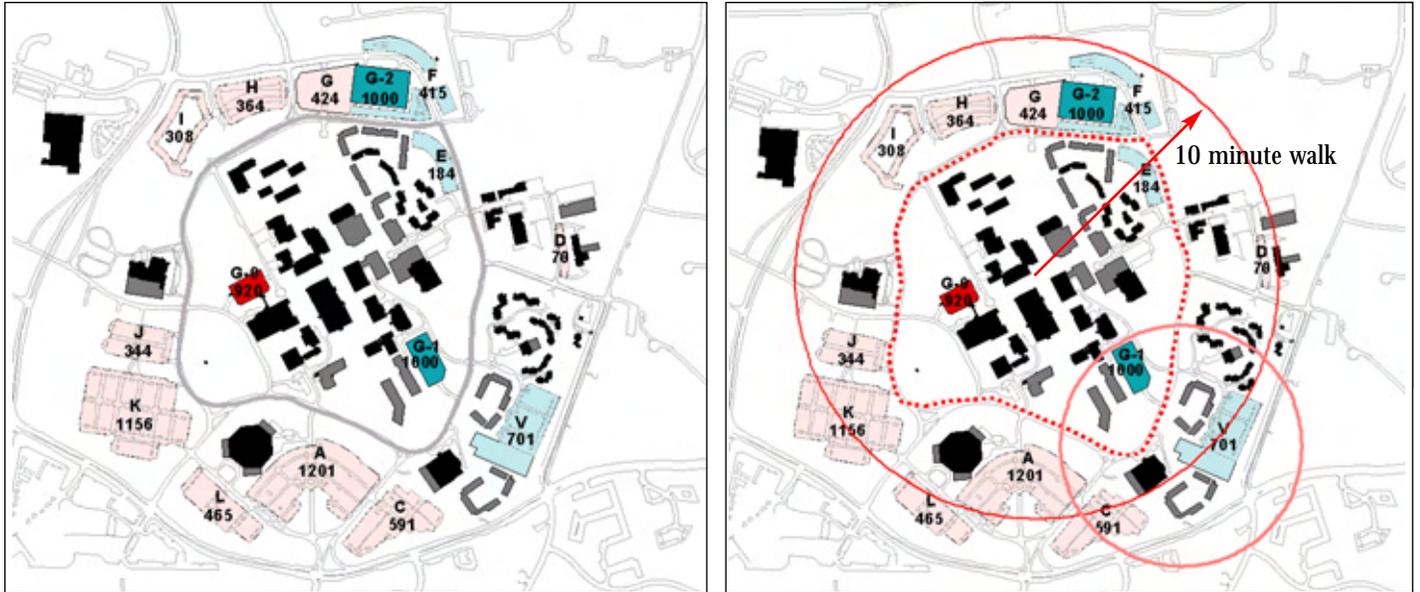
Staff/Commuter Students: .32 spaces/person

Parking Garages

The parking assessment established that the additional parking required to support enrollment growth and surface parking displaced by development would need to be accommodated in garages because existing surface parking lots cannot be significantly expanded if the spatial qualities and character of the campus are to be preserved, and several surface lots will be needed for future building sites. Garage locations were selected to achieve the following objectives:

- Increase the supply of convenient parking.
- Capture vehicles as they enter the campus.
- Mitigate traffic impacts on Patriot Circle and adjacent roadways.

The plan sites garages within a ten-minute walk of the campus core or adjacent to the facilities they serve, and near the principal entry points to the campus. It also balances the concentration of parking near each entry to the campus in order to distribute traffic more evenly on adjacent roadways.



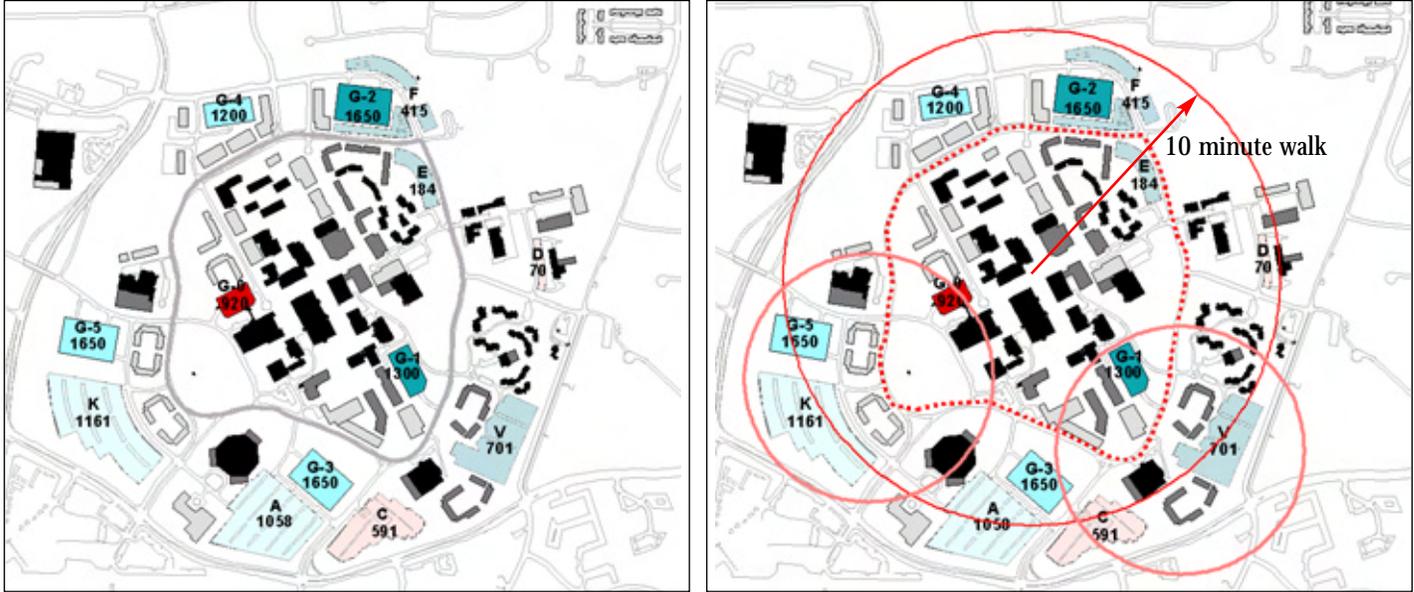
Phase 1 parking accommodation. The plan sets garages within a 10 minute walk of the campus core or adjacent to the facilities they serve.

Phase 1 Parking Accommodation

At the Fairfax campus, the need for parking by 2007 was estimated to be 9,447 spaces. This represents an increase of roughly 275 spaces beyond the existing inventory of 9,174 spaces.

The master plan adds a net total of over 1,700 new and replacement parking spaces on the east and west campuses and Shirley Gate site, which exceeds projected demand by approximately 1,500 spaces, or 15 percent. The majority of the new spaces are contained in the two 1,000-car parking decks that are planned in the 2007 capital budget, plus a 700-space lot next to Housing V-VI. The plan sites the two parking decks on existing Lots B and F. Approximately 1,500 of the displaced parking spaces are located in existing Lots B, E and F.

The plan increases the concentration of convenient parking by adding a net total of nearly 600 spaces within a ten-minute walk of the core, and 700 spaces next to the President's Park and Housing V-VI area.



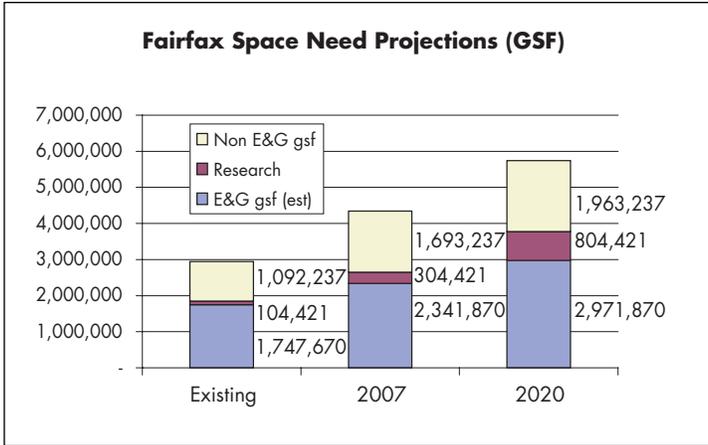
Phase 2 parking accommodation.

Phase 2 Parking Accommodation

The projected parking need for 2020 was estimated to be 12,214 spaces. This represents an estimated requirement for approximately 3,000 spaces beyond the current inventory.

By 2020, the master plan increases the supply of parking for University purposes by 5,200 new and replacement spaces beyond the current inventory. This exceeds the anticipated need by approximately 2,200 spaces, or 18 percent. The plan also provides 2,500 spaces for the future west campus research park, and 135 spaces for faculty housing on Roberts Road. Most of the new parking spaces added during this phase are contained in new garages, located on existing Lots A and H and next to housing by the future Ox Road bridge, and in additions to the two garages developed in Phase 1. Approximately 2,000 of the parking spaces displaced beyond 2007 are located in existing Lots A, G, H, I, J and L.

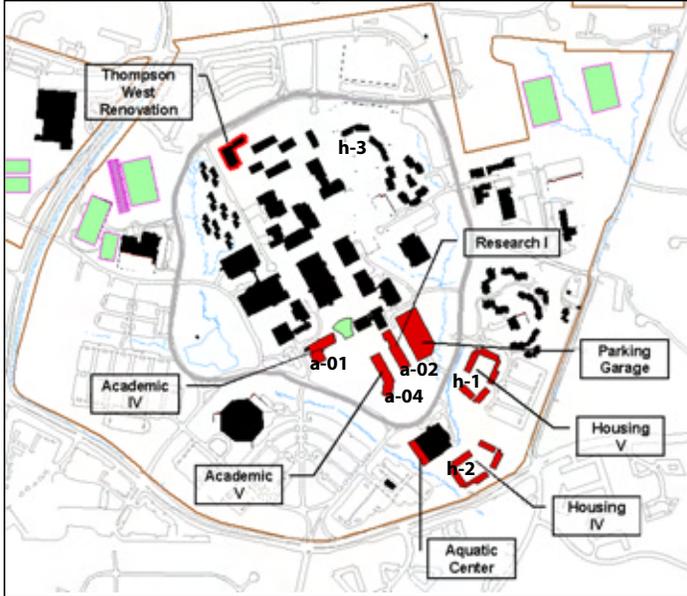
The plan further increases the concentration of convenient parking by adding a net total of 3,100 spaces within a ten-minute walk of the core.



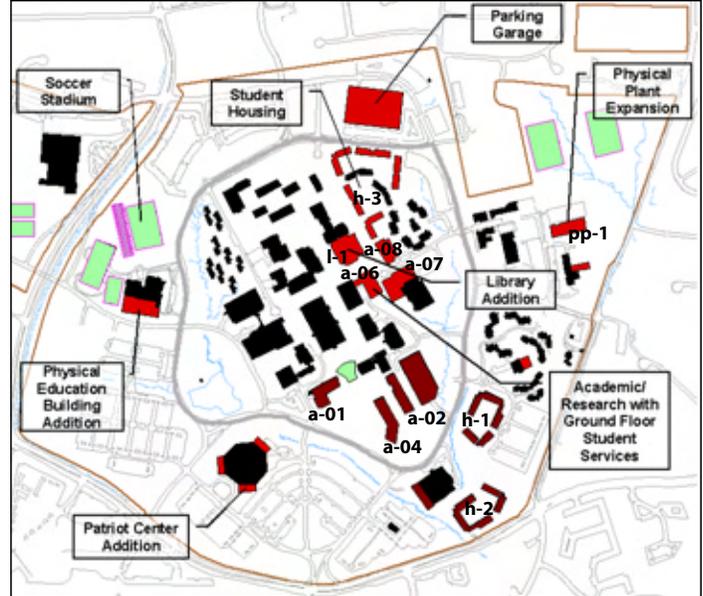
Over 2.0 million SF of new space will be needed by 2020 at the Fairfax campus.

PHASING & IMPLEMENTATION

The University's space requirements were translated into a two-phased facilities program for 2007 and 2020 for the Fairfax campus. The accommodation and phasing of the facilities development program is described below.

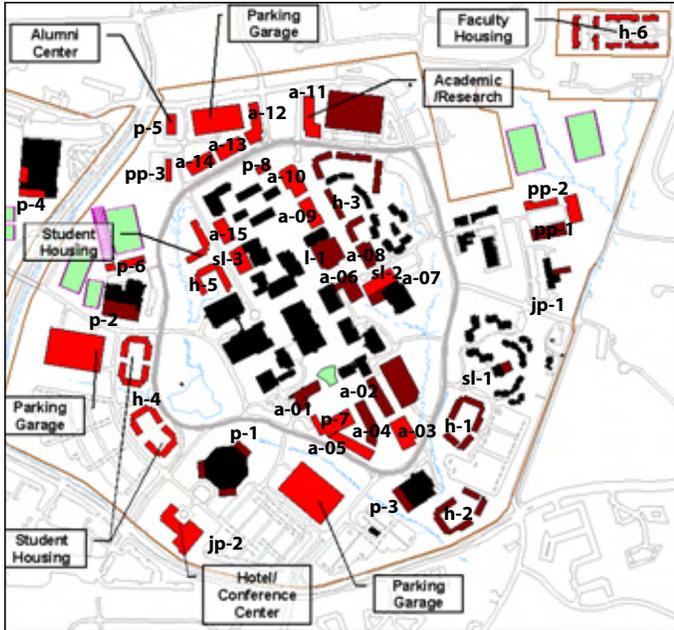


2002 planned facilities.

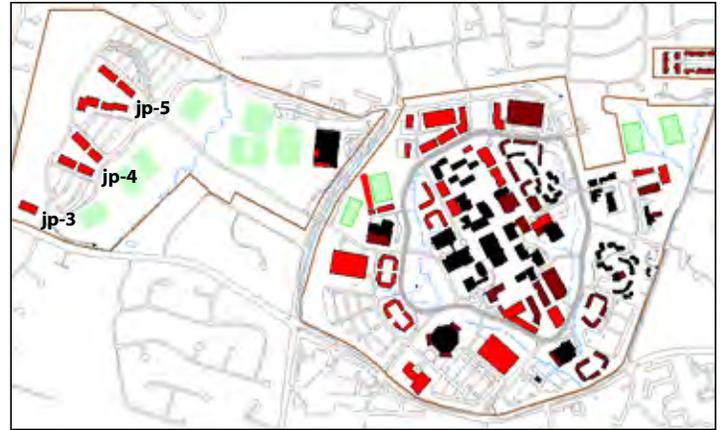


2007 planned facilities.

E & G, & Research		Housing		Student Life/Non E & G	
2007 Program	Total Area (GSF)	2007 Program	Total Area (GSF)	2007 Program	Total Area (GSF)
a-01 (Academic V)	105,584	h-1 (Housing V)	166,535	p-1 (Patriot Ctr. Addition)	25,368
a-02 (Academic/Research)	104,897	h-2 (Housing VI)	171,166	p-2 (P.E. Addition)	37,432
a-04 (Academic/Research)	117,969	h-3 (Future Housing)	355,050	p-3 (Aquatics Ctr. Addition)	13,410
a-06 (Academic/Research)	106,388	2007 Program Total	692,751	sl-1 (Student Ctr. Addition)	6,513
a-08 (Academic/Research)	92,000			sl-2 (SUII Addition)	41,231
l-1 (Library Addition)	183,036			2007 Program Total	123,954
pp-1 (Phys. Plant Expansion)	28,453				
2007 Program Total	738,327				

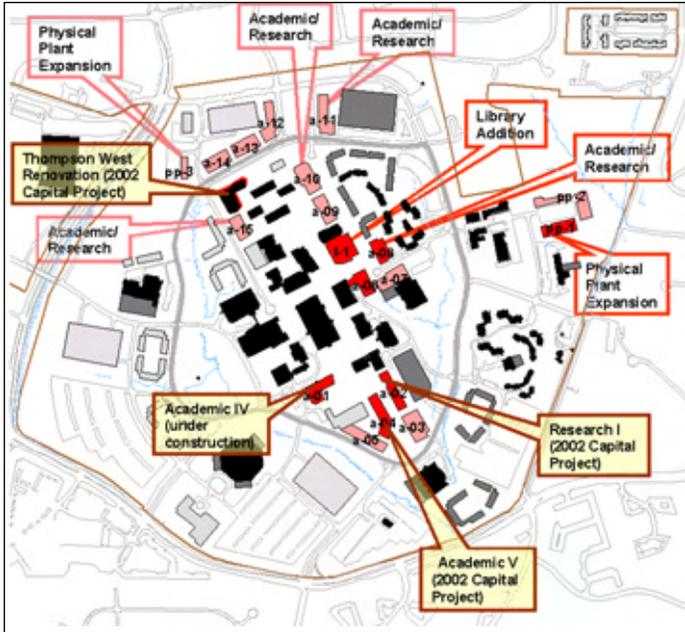


2020 planned facilities.



2020 planned facilities including West Campus.

E & G, & Research	Housing	Student Life/Non E & G	Campus Partnership Facilities
2020 Program a-03 (Academic/Research) 100,822 a-05 (Academic/Research) 117,081 a-07 (Above SC II addition) 92,006 a-09 (Academic/Research) 95,942 a-10 (Academic/Research) 215,607 a-11 (Academic/Research) 93,532 a-12 (Academic/Research) 89,259 a-13 (Academic/Research) 100,698 a-14 (Academic/Research) 100,698 a-15 (Academic/Research) 80,000 pp-2 (Phys. Plant Expansion) 75,000 pp-3 (New Phys. Plant) 75,000 2020 Program Total 1,235,643	2020 Program h-4 (Future Housing) 385,200 h-5 (Replacement Housing) 196,408 h-6 (Faculty Housing) 115,316 2020 Program Total 696,924	2020 Program p-4 (Field House Addition) 19,578 p-5 (Alumni Ctr.) 25,601 p-6 (Concessions/Restrooms) 17,497 p-7 (Theater) 62,109 p-8 (Open Air Pavillion) 7,800 p-9 (Amphitheater) sl-3 (SUI Addition) 47,197 2020 Program Total 179,782	2020 Program jp-1 (Krasnow Institute Bldg.) 25,368 jp-2 (Hotel/Conference) 37,432 jp-3 (Future Research) 65,000 jp-4 (Future Research) 280,000 jp-5 (Future Research) 280,000 2020 Program Total 687,800
E & G, & Research Total (2007 +2020) 1,973,970	Housing Total (2007 +2020) 1,389,675	Student Life/Non E & G Total (2007 +2020) 303,736	Campus Partnership Facilities Total (2007 +2020) 687,800



Education and general facilities

Education and General

The master plan program for 2007 reflects projects contained in the 2007 capital budget plus additional facilities to address the current space deficit, while the program for 2020 reflects projected space needs, as well as facilities identified by GMU staff.

The analysis of campus capacity demonstrated that significantly more development can be accommodated on the east campus and within the campus core area. The master plan accommodates all future E & G space on the east campus, principally within Patriot Circle, in order to maintain and enhance the pedestrian character of the campus, promote the development of campus community, and preserve the west campus for other future uses. The master plan sites E & G facilities to support the overall objectives and urban design framework established by the plan. The plan does not distinguish between academic and research buildings in order to encourage the mixing of research and academic functions. The University was strongly committed to keeping basic research closely integrated with teaching, ideally in the same building, to encourage student involvement in research and to maintain faculty engagement in teaching.

E & G, & Research	
2007 Program	Total Area (GSF)
a-01	105,584
a-02	104,897
a-04	117,969
a-06	106,388
a-08	92,000
l-1	183,036
pp-1	28,453
2007 Program Total	738,327
2020 Program	
a-03	100,822
a-05	117,081
a-07	92,006
a-09	95,942
a-10	215,607
a-11	93,532
a-12	89,259
a-13	100,698
a-14	100,698
a-15	80,000
pp-2	75,000
pp-3	75,000
2020 Program Total	1,235,643
E & G, & Research Total	1,973,970

By 2007, the plan accommodates over 700,000 GSF of academic and research building space on the east campus, including an addition to the library and expansion of the physical plant. Academic and research buildings, the library expansion and student service facilities are sited around a new 'south academic quad' framed on the north by Enterprise Hall and the new Academic IV building, and along Chesapeake Lane and the new east-west 'main street' to achieve dynamic mixed-use, living/learning environments in these areas. Physical plant expansion is accommodated next to the existing physical plant complex.

For 2020, the plan accommodates over 1.2 million GSF of academic and research building space on the east campus, plus further expansion of the physical plant. The siting of these facilities continues to support the master plan's objectives and design framework. New facilities are located around the new South Academic Quad to strengthen this area of the campus, over the expansion to Student Union II and along Chesapeake Lane to support the main street concept for these areas, and fronting onto Patriot Circle and a new green space between University Blvd. and Patriot Circle, as part of an enhanced entrance to this area of the campus.

Housing

The master plan housing program is based on the University's *Comprehensive Housing Plan in Support of the GMU 2007 Plan*, which establishes a target of 5,000 student housing beds by 2007. The master plan assumes that the ratio of resident to commuter students remains constant after the target ratio is achieved in 2007, which results a projected need for 6,500 beds by 2020. In addition, the 219 beds in the Patriot Village housing complex, which consists of 'temporary' trailers, will ultimately need to be replaced with permanent housing and the student apartment complex on Pohick Lane, which is in poor repair, will need to be replaced over the long term.

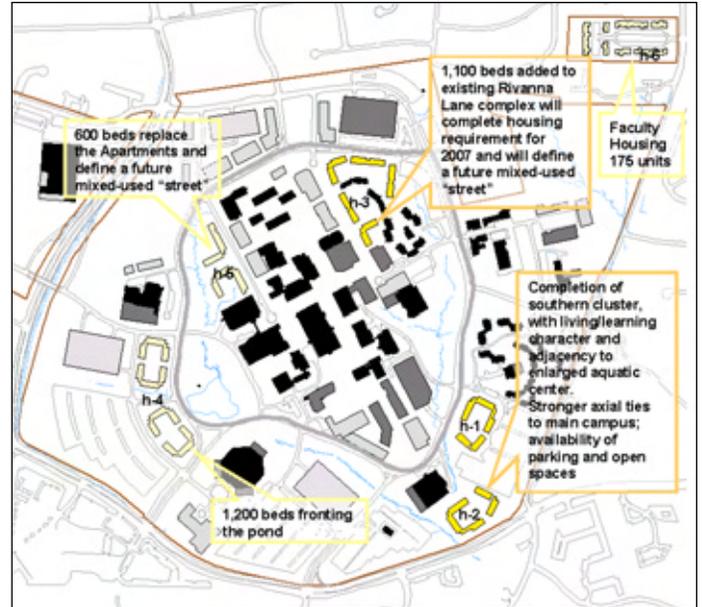
Housing V and VI will satisfy one half the 2007 need for new housing. Housing V is currently under construction, and will be ready for occupancy in Fall 2003. A site for Housing VI has been selected and construction has been scheduled to meet a Fall 2004 occupancy date. Another 1,000 beds will be needed to meet the 5,000-bed target.

The master plan locates future housing either on mixed-use 'main streets' close to the academic core or outside Patriot Circle adjacent to other amenities and support facilities. Visual and walking connections between housing clusters outside Patriot Circle and the academic core are strengthened. In all areas, housing is concentrated in sufficient numbers to achieve a critical mass of residents that will create viable residential communities.

By 2007, the master plan accommodates 1,100 beds in 'Housing VII' along Chesapeake Lane, next to the existing Rivanna Lane housing complex. Housing VII contains all the beds needed to achieve the University's 5,000 bed target. The development of Housing VII at this location will contribute to the vision for Chesapeake Lane as a main street. Other existing or planned adjacent uses that will support housing at this location include the Johnson Center, Student Union II, a new pavilion at Chesapeake Lane and Patriot Circle and new surface and structured parking.

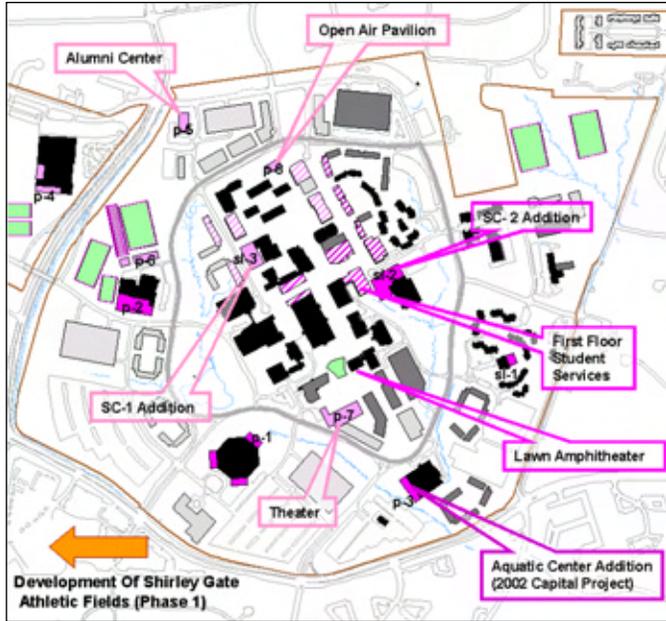
The master plan accommodates future housing beyond 2007 on the west side of the pond and at the site of the existing Pohick Lane apartment complex. These two sites contain a total of 1,818 beds, which is sufficient to meet the need for new and replacement beds. The pond housing is sited to frame and activate the pond open space and is supported by the Physical Education facilities, the Patriot Center and surface and structured parking. Pohick Lane has the potential to become another mixed-use main street containing residential, academic and student service uses and is close to the gym, Student Union I and surface and structured parking.

The master plan also accommodates 175 townhouse units for faculty and staff on the University's property north of the campus on Robert's Road.



New housing.

Housing	
2007 Program	Total Area (GSF)
h-1	166,535
h-2	171,166
h-3	355,050
2007 Program Total	692,751
2020 Program	
h-4	385,200
h-5	196,408
h-6	115,316
2020 Program Total	696,924
Housing Total	1,389,675



Student life and other facilities.

Student Life and Non Education and General

The Student Life and Other Non-Education and General (Non E & G) space program outlined in the master plan includes projects contained in GMU's six year capital budget, facility needs identified through discussions with University staff, and the consultant team's estimation of space requirements based on typical institutional standards.

Several Non E & G elements consist of additions to existing facilities. The master plan sites new Non E & G program at strategic locations to reinforce overall master plan objectives for different areas of the campus by enhancing existing facilities or supporting other elements such as student housing. Where possible, the master plan encourages the distribution of student service facilities, such as bookstores, convenience retail or cafes, along the campus main streets in order to reinforce the main street concept and bring vitality to these areas of the campus. The general planning principle of creating a mix of uses to enhance the overall vitality of the campus applies especially to student services.

Student Life/Non E & G	
2007 Program	Total Area (GSF)
p-1	25,368
p-2	37,432
p-3	13,410
sl-1	6,513
sl-2	41,231
2007 Program Total	123,954
2020 Program	
p-4	19,578
p-5	25,601
p-6	17,497
p-7	62,109
p-8	7,800
p-9	
sl-3	47,197
2020 Program Total	179,782
Student Life/Non E & G Total	303,736

Most of the 2007 Non E & G program consists of elements outlined in the University's six-year capital budget including additions to the Aquatic Center, the Physical Education building and the Patriot Center. Other elements include additions to the President's Park recreation center to support Housing V and VI, and to Student Union II. The master plan sites the Student Union II addition to the north of the existing facility as an anchor for the future main street that is planned for this area.

Program requirements beyond 2007 identified by University staff include an addition to the Field House, a new soccer stadium, football field and tennis courts next to the existing Physical Education building, and two new fields at the northeast corner of the campus next to Roberts Road, which are needed to support future enrollment. The need for a new theater was also identified by University staff, both to support an expanded fine arts program and as a facility for community use. The master plan sites the theater opposite the Patriot Center as part of a new academic quad that could house the fine arts program. This location is served by the parking facilities adjacent to the Patriot Center.

Enrollment growth will create a need for additional student union space. The master plan provides for an addition to Student Union I as an anchor to the future Pohick Lane main street, and as support for the student housing on the west side of the Lane.

The plan also introduces a new amphitheater and a pavilion. The amphitheater is sited near the new fine arts and theater complex at a location that takes advantage of the topography in that area of the campus. The pavilion is located at the termination of re-aligned George Mason Drive as a campus entry feature and to support the future Chesapeake Lane main street.

Campus Partnership Facilities

Campus partnership facilities consist of facilities developed and financed through partnership arrangements with the private sector or other public entities. Certain facilities developed in this way, such as a joint GMU - private research park on the west campus, may revert to University ownership over the long term. Partnership facilities that are currently being considered at the Fairfax campus include:

- Over 600,000 GSF of research uses on the west campus
- A 200 room hotel/conference center on the east campus
- An addition to the Krasnow Institute building

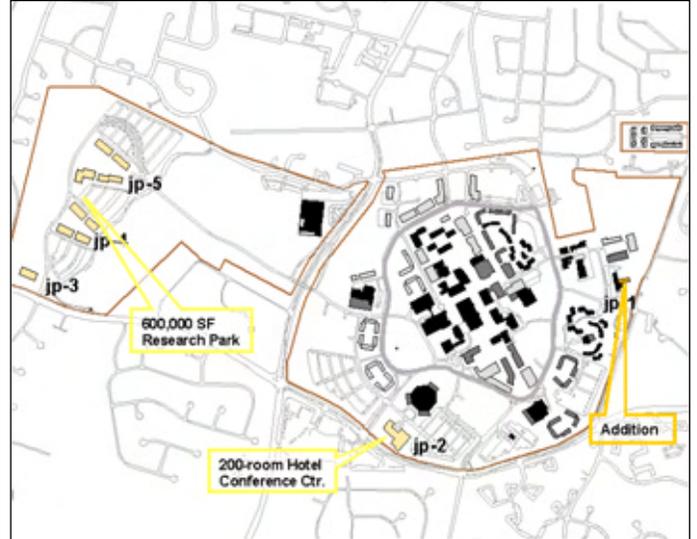
Accommodation of Campus Partnership Facilities

Each partnership facility must be conceived, designed and sited to meet the needs of both the University and the partner entity. Thus, the accommodation of each facility in the master plan gives consideration to the overall objectives of the plan, as well as the anticipated requirements of potential partners. The implementation of each facility will depend on the timing of opportunities that arise, and the University’s ability to establish appropriate relationships with potential partners.

The west campus research park is concentrated at the west edge of the west campus with direct access from Braddock Road so that it can function independently from the University. The master plan accommodates a total of 600,000 GSF of building space, plus 2,700 surface parking spaces within the park. As these facilities may revert to the University use over the long term, the plan sites buildings in a campus arrangement and maintains the two or three-story typical building height of the main campus. It also provides direct connections with the east campus via University Drive and the future Ox Road overpass bridge.

The University has identified the potential need for a hotel/conference center to accommodate visiting faculty, host University-related conferences and functions, and serve other public events. The master plan sites this facility near the Roanoke Lane entrance to the campus from Braddock Road. This location provides good visibility from Braddock Road and has direct access to a large supply of existing and planned future parking. It also supports the Patriot Center, which is often used for large public events.

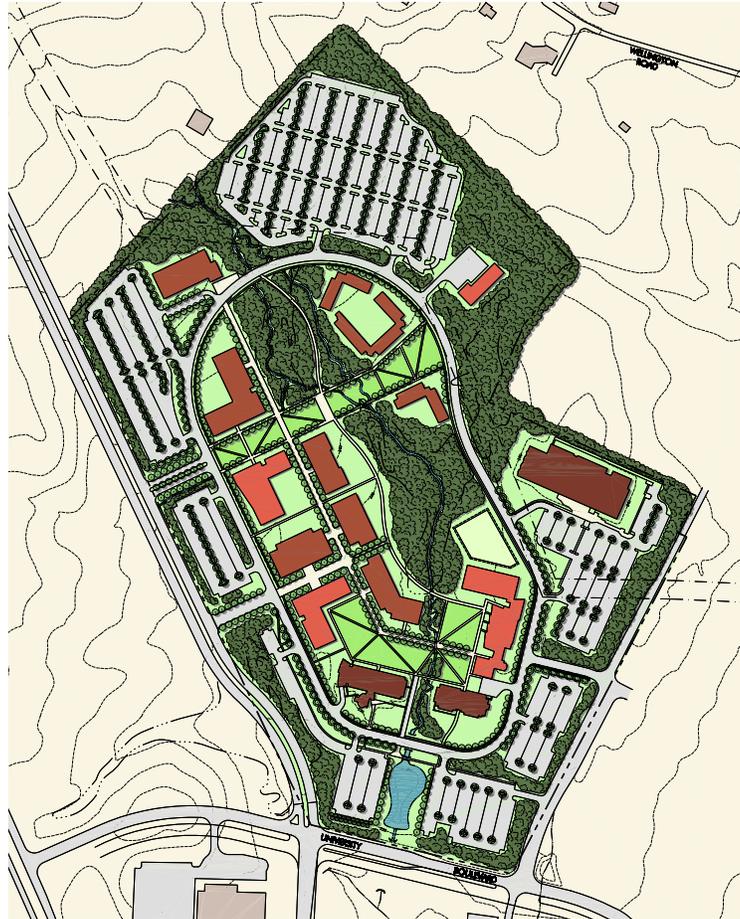
The plan accommodates an addition to the existing Krasnow Institute building, which may be needed in the future.



Campus partnership facilities

Campus Partnership Facilities	
2020 Program	Total Area (GSF)
jp-1	15,000
jp-2	165,000
jp-3	65,000
jp-4	280,000
jp-5	280,000
2020 Program Total	805,000
Campus Partnership Facilities Total	805,000

f o u r *Prince William*



VISION

The plan for Prince William is driven by the University's commitment to a "distributed" system rather than a system of satellites dependent on a main campus. Prince William should reflect in its programming and organization a self-sufficient institution with a particular focus in research activity and public/private partnerships.

The principal objective of the master plan for the Prince William Campus is to provide for the development of Prince William as a 'full-service campus' supporting new and relocated academic programs; University-related and public-private research facilities; student life; and recreation and cultural amenities.

The development of the master plan reflects on a smaller scale the values and resulting organization that drive the Fairfax campus plan. The plan aims to create a compact core campus, readily accessible from computer parking, respectful of the natural environment and integrating teaching, research, residential life and community-oriented cultural activities. The plan provides a flexible framework for rapid growth over the next twenty years.



The Prince William campus is located within the Innovation Research Park, in Manassas, Virginia.

Campus Context and History

GMU's Prince William is located in the City of Manassas, Prince William County, approximately 20 miles from the Fairfax campus and 35 miles from central Washington. The campus comprises a 124-acre site located adjacent to Route 234 within the Innovation research park. Prince William contains the Prince William I academic building, which opened in 1997, the Prince William II research building, completed in 1998, and the Freedom Aquatic and Fitness Center, which was built in partnership with Prince William County and the City of Manassas and opened in 1999. The Verizon auditorium was added to Prince William I in 1999.

The area surrounding the campus is designated for future research park use, but is currently only partially developed. Beyond the research park are residential subdivisions and land designated for future residential development. The historic Manassas core is located approximately three miles to the east of the campus.



The Prince William campus should be developed as a pedestrian oriented environment.



The campus needs to define a sense of place that sets it apart from the secondary suburban center.

CAMPUS PLAN

Principles

The planning and design principles for the Prince William campus reflect to those established for the Fairfax campus:

Create a Distinctive Sense of Place

The campus needs to define a sense of place that sets it apart from the surrounding suburban context. Future development should build on the special qualities of the campus to create a distinctive campus environment.

Foster a Vibrant Campus Community

The Prince William campus currently lacks the sense of vibrancy of the Fairfax campus and has no focus for student life equivalent to the Johnson Center. Future development should contribute to the creation of a campus community. A mix of uses, including a student center, should be deliberately programmed in different areas of the campus to encourage 24-hour campus life.

Establish a Unifying Campus Framework

As Prince William is largely un-developed, each new project will have a profound impact on the quality and character of the campus environment. To ensure that new development contributes to the overall vision for Prince William, the master plan must establish a logical framework for future development that achieves a unified, coherent campus.

Maintain a Pedestrian-Friendly Campus

The Prince William campus should be developed as a pedestrian-oriented environment. Future development should contribute to the pedestrian character of the campus.

Accommodate Transportation Needs

Enrollment growth will generate increased traffic on the campus road network and a need for more parking. The master plan must address on-campus transportation requirements, while preserving the quality and character of the campus environment. The design of the campus road network, including access to adjacent arterial roads, and the pedestrian circulation system must be coordinated as part of the overall campus design.

Engage the Community

The development of the Prince William campus has been defined by partnerships with the surrounding community and business. The master plan should reinforce opportunities to engage the community and strengthen community relationships.



Campus Framework

The master plan delineates a new campus framework to create an academic setting that is compact, rational and readable. A sense of arrival, a main street concept, quads, recognition of natural areas and strong visual connections work together to create a setting that integrates learning, research, and, in the future, residential life. The campus framework is comprised of five fundamental elements:

- Arrival
- Campus Road Network
- Natural Features
- Main Streets and Quadrangles
- Compact Core

Arrival

The existing entrances to the Prince William campus do not create a strong sense of arrival that sets the campus apart from the surrounding research park. The master plan introduces a new main entrance to the campus from the future adjacent arterial road. The entrance connects with the campus loop road and provides views through a formal open space framed by new buildings towards the wetland area at the center of campus. It also provides convenient access to the future performing arts center.

The plan creates a second entrance from the arterial road that also connects with the campus loop road. This entrance terminates at a pedestrian mall framed by buildings that leads to the campus 'main street.'

The plan preserves the existing entrances to the campus from University Blvd. to accommodate direct public access to the Freedom Aquatic and Fitness Center.



The master plan introduces two new entrances to the campus and maintains George Mason Circle as the principal campus circulation route.



Natural features define the character of the campus.

Campus Road Network

The original plan for Prince William provided for a loop road (George Mason Circle) as the principal campus circulation route. The current master plan maintains the original loop road concept, but adjusts its alignment to accommodate other elements of the overall campus design. The loop road encloses the wetland and open space at the center of campus, and separates the pedestrian-oriented core area from parking lots located outside the loop. The two new campus entrances link the loop road to the planned adjacent arterial road.

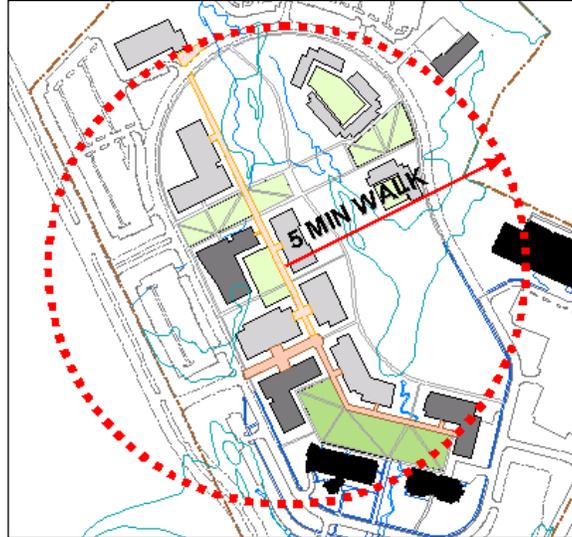
Natural Features

The Prince William campus contains a wetland at the center of the campus, stream corridors that roughly bisect the site, and small pockets. The topography is relatively even, although there is some variation with the highest elevation in the north-west portion of the property. Together these features create an attractive natural setting which helps to define the character of the campus.

The master plan preserves and enhances these natural features. The campus core is structured around a central open space containing the wetland. The central open space serves as the backbone of the overall open space network, which connects all other areas of the campus. The plan preserves the stream corridors within natural greenway areas, as well as the existing storm retention pond, which is incorporated as a landscape feature at the south edge of the campus. The plan also maintains woodland borders along the edges of the campus.



The Prince William open space network.



The plan maintains a five minute walk from the center of campus.

Open Space Network

The open space network for the Prince William campus consists of a main street connected with a series of quads and pedestrian malls.

The principal structuring element of this system is a north-south main street, which runs to the east of the existing Prince William I and II buildings. New buildings The street is lined with a mix of functions including classrooms, faculty offices, research labs student union space, a library and the new performing arts center. Hardscape design and shade tree plantings will provide definition to the street and enhance usability.

The open space network also includes a series of quadrangles framed by new building program and landscaping and connected by the main street. The plan orients building entrances to face onto the quads or malls to make them comfortable and inhabitable spaces. Future residential buildings on the east side of the central open space are also structured in a quadrangle arrangement.

Two pedestrian malls form another key element of the open space network. The main pedestrian extends from the main entrance to the campus and provides views and a physical connection through the central open space towards the student residential area to the east. A second mall extends from the secondary campus entrance and links the main street with the loop road.

Compact Core

The plan for the Prince William Campus maintains a pedestrian-oriented campus core. Virtually all facilities are located within a five-minute walk of the future student center at the center of the campus. All parking lots are sited outside the loop road at the periphery of campus, but within a maximum ten-minute walk of the campus core.



Parking is accommodated in surface lots along the campus perimeter.

PARKING

The master plan for Prince William assumes that parking will be needed and supplied using the same ratios established for the Fairfax Campus. It also assumes that all parking will be provided in surface lots. Currently there are 927 parking spaces on the campus. The estimated parking demand for the Prince William Campus is as follows:

2007

Staff/Commuter Students (5,793 x .32): 1,854 spaces

2020

Staff/Commuter Students (9,753 x .32): 3,121 spaces

Resident Students (700 x .57): 399 spaces

Total: 3,520 spaces

The plan accommodates a total of 1,116 new parking spaces by 2007, bringing the campus total to 2,043. By 2020, it adds another 1,570 spaces for a total of 3,613 spaces. All parking lots are located outside the loop road at the campus periphery and all spaces are within a ten-minute walk of the campus core.

PHASING AND IMPLEMENTATION

Campus Capacity

The master plan illustrates a long-term build-out strategy for the Prince William campus and reflects a development program beyond anticipated facility needs for the next twenty years. The build-out capacity of the campus is estimated to be approximately 1.1 million GSF, based on the following assumptions:

- New buildings will be an average height of three stories.
- All parking will be accommodated in surface lots at a rate of .32 spaces per person for staff and commuter students and .57 spaces per person for resident students.
- Development will not occur in natural areas, including the wetland, greenways and woodland areas, which will be preserved.

Anticipated enrollment growth will generate a need for up to 450,000 GSF of E & G space on the Prince William campus over the next twenty years. Another 350,000 GSF of Non E & G space identified through the master plan process, including housing, a performing arts center and student union space, also need to be accommodated on the campus. In total, this represents roughly 70 percent of the build-out capacity of the campus.

The space requirements for the Prince William campus were translated into a two-phased facilities program for 2007 and 2020 (see Table xx). The accommodation and phasing of the facilities development program is described below.



Proposed phasing at Prince William.

E & G, & Research		Student Life/Non E & G	
2007 Program	Total Area (GSF)	2007 Program	Total Area (GSF)
a-1 (Prince William III A)	97,008	t-1 (Performing Arts)	118,000
a-2 (Prince William III B)	105,000	2007 Program Total	118,000
pp-1 (Phys. Plant Building)	40,000		
2007 Program Total	242,008		

Housing	
2020 Program	Total Area (GSF)
h-1 (PW Housing I)	227,500
2020 Program Total	227,500

E & G, & Research	
2020 Program	Total Area (GSF)
s-1 (Student Union/Library)	50,000
a-3 (Academic/Research)	102,600
a-4 (Academic/Research)	75,600
a-5 (Academic/Research)	78,700
a-6 (Academic/Research)	143,000
a-7 (Academic/Research)	97,000
2020 Program Total	496,900

Student Life/Non E & G	
2020 Program	Total Area (GSF)
s-1 (Student Union/Library)	45,000
2020 Program Total	45,000

Housing	
Total (2007 + 2020)	Total Area (GSF)
	227,500

E & G, & Research	
Total (2007 + 2020)	Total Area (GSF)
	738,908

Student Life/Non E & G	
Total (2007 + 2020)	Total Area (GSF)
	163,000



Program accommodation.

Education and General

The master plan's E & G program for 2007 reflects projects contained in the 2007 capital budget, while the program for 2020 reflects projected space needs based on enrollment.

For 2007, the master plan accommodates all the program elements identified in the 2007 capital budget including:

- Prince William IIIA (100,000 GSF)
- Prince William IIIB (103,000 GSF)
- Physical plant building (40,000 GSF).

The plan sites Prince William IIIA and B in the south part of the campus to frame a new academic quad with the existing Prince William I and II buildings. It locates the physical plant complex outside the boundaries of the loop road in the northeast portion of the campus, in order to preserve sites inside the loop for academic, research or student life functions.

By 2020, the plan accommodates another 200,000 GSF of new academic and research facilities in several new buildings, which are sited along the new main street and around the south academic quad. Beyond 2020, the plan provides for another 300,000 GSF of E & G space, also located along the main street.

Student Life and Non Education and General

Non-E & G space needs are assumed to include only those facilities identified by University staff, plus student union space and consist of the proposed 100,000 GSF Performing Arts Center (PAC) and a future 45,000 GSF student union building.

The PAC is listed in the University's 2007 capital budget and is accommodated in the master plan for this period. The plan locates the facility on a site opposite the new main campus entrance, in order to provide good visibility and convenient access to the facility from the future arterial road. By 2020, the plan accommodates a combined 100,000 GSF student union and library facility, which is sited opposite Prince William IIIB along the secondary pedestrian mall.

Housing

The master plan assumes that housing will not be needed at Prince William until there is a greater concentration of facilities on the campus, some time after 2007. Ultimately, the plan accommodates a total of 700 beds or 227,500 GSF of student housing.

All student residence buildings are sited in quadrangles along the main pedestrian mall on the east side of the central open space. Parking for student housing is located in a surface parking lot across the loop road from the housing site.

Arlington f i v e



Aerial view of Arlington campus.

Context

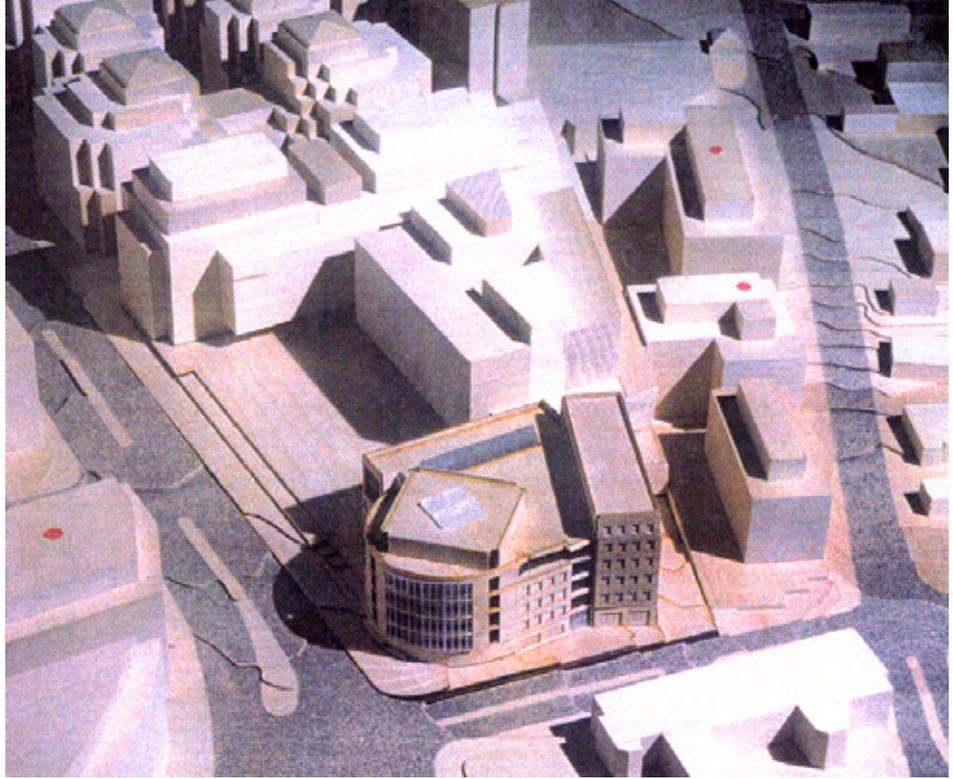
The Arlington campus is located on a 5.2 acre urban site in downtown Arlington. The campus currently consists of the recently completed Phase I development (Arlington I), which houses the Law School and other academic departments, the former Kahn department store building, which will be renovated to house additional masters programs, and a 332-space surface parking lot located between the two facilities.

Overview

GMU's *Strategic Plan for the Distributed Campus System* establishes the strategic and programmatic direction for the Arlington campus and serves as the basis for a separate master plan for Arlington, which was prepared by Skidmore, Owings and Merrill. The overall University master plan integrates the Arlington campus master plan, and confirms the long-term potential of the plan to accommodate future program growth.

Facility Needs

The current Arlington enrollment of approximately 1,400 FTE students is expected to grow to 2,200 FTE by 2007 and 3,400 FTE by 2020. According to SCHEV guidelines, these enrollment numbers generate a current E & G space need of 290,000 - 320,000 GSF and a future need of 400,000 - 447,000 GSF by 2007, and 640,000 - 710,000 GSF by 2020. The planned development of Arlington II, which will increase E & G space on the campus to approximately 385,000 GSF, will satisfy the projected space need for 2007. The future addition of another 180,000 GSF of space in Arlington III will address the incremental space need for the anticipated 2020 enrollment.



Model of Skidmore, Owings and Merrill plan for the Arlington campus.

The University's acquisition of the 200,000 GSF Foundation office building next the Arlington II site ensures that space will be available for campus growth over the long-term.

Campus Plan

The Skidmore, Owings and Merrill plan has served as the basis for development at the Arlington Campus. The plan provides for the development of a new Law School building and two future academic buildings organized around a landscaped plaza above two levels of below-grade parking. A separate parking plan, which was approved by the County, provides for the development of additional on-site parking and access to off-site lots for each phase of development.

The three phases of the plan are:

Phase I

Phase I (Arlington I) comprises the 150,000 GSF, four-story Law School building and the renovation of the Kahn department store for use on an interim basis until Phase III is implemented. The Law School building has been built. The parking plan provides for a total of 485 day-time and 785 night-time spaces for University use.

Phase II

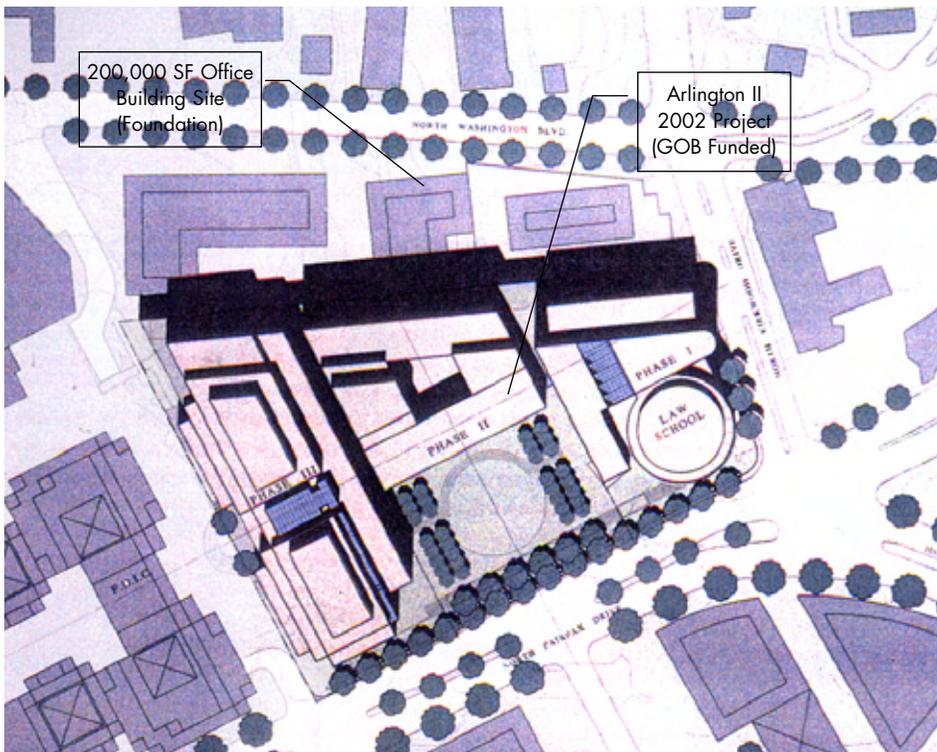
Phase II (Arlington II) will be developed on the site of the existing surface parking lot. Arlington II consists of a new 250,000 GSF building, a plaza, and two levels of below-grade parking. The parking plan provides for a total of 735 day-time and 985 night-time spaces for University use. Arlington II is included in the University's six-year capital budget for 2007.

Phase III

Phase III (Arlington III) involves the demolition of the Kahn building and its replacement with a 180,000 GSF building plus a 550-space below-grade parking deck. A total of 1,130 day-time spaces and 1,590 night-time spaces will be available upon completion of Phase III. Arlington III is also included in the six-year capital budget.



Existing Arlington building.



Skidmore, Owings and Merrill plan for the Arlington campus.

s i x *Acknowledgements*

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PARTICIPANTS IN THE PLANNING PROCESS

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Board of Visitors

Master Plan Committee

Faculty, Staff and Students