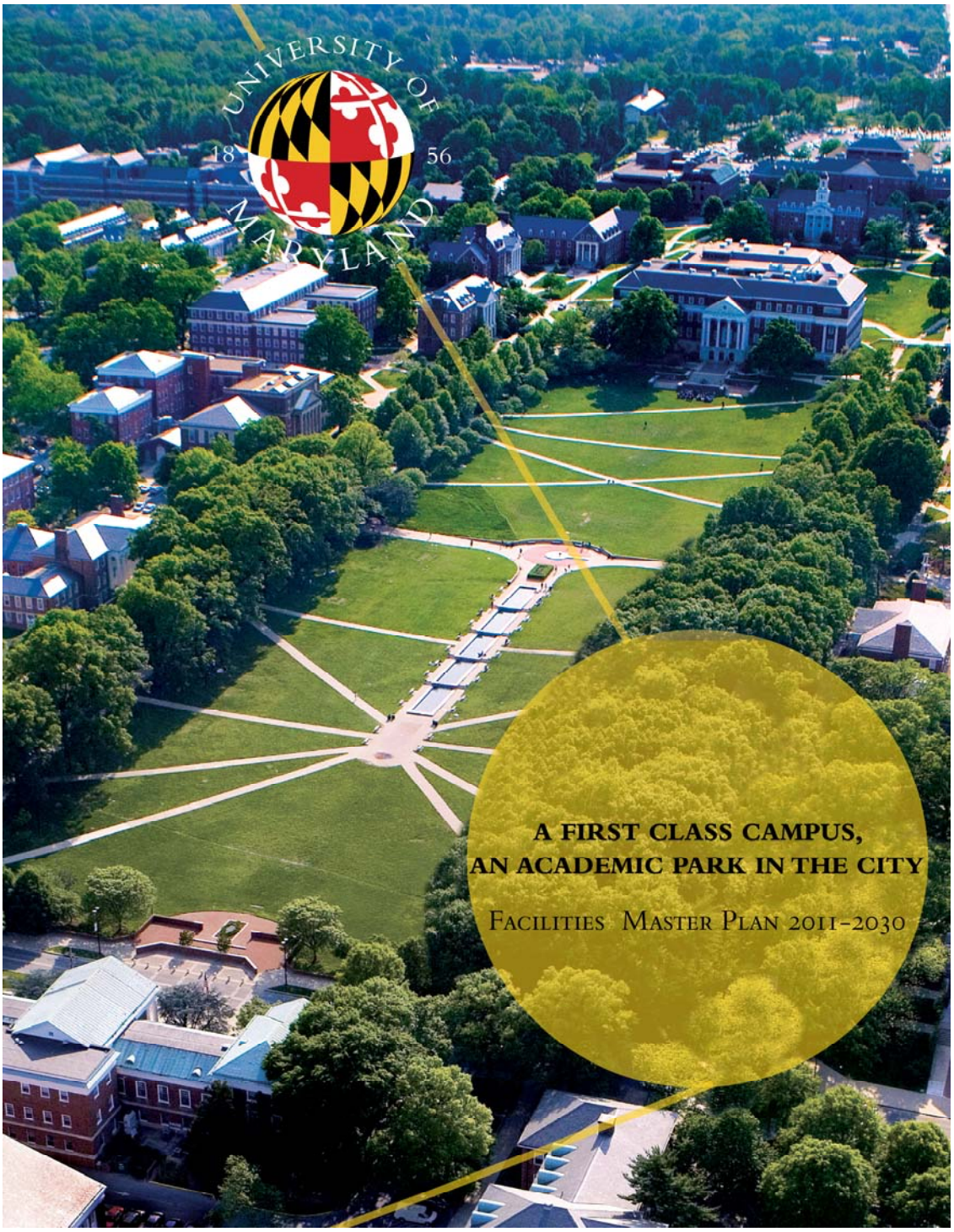
Draft

2011-2030
Facilities Master Plan
September 14, 2011



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2011-2030

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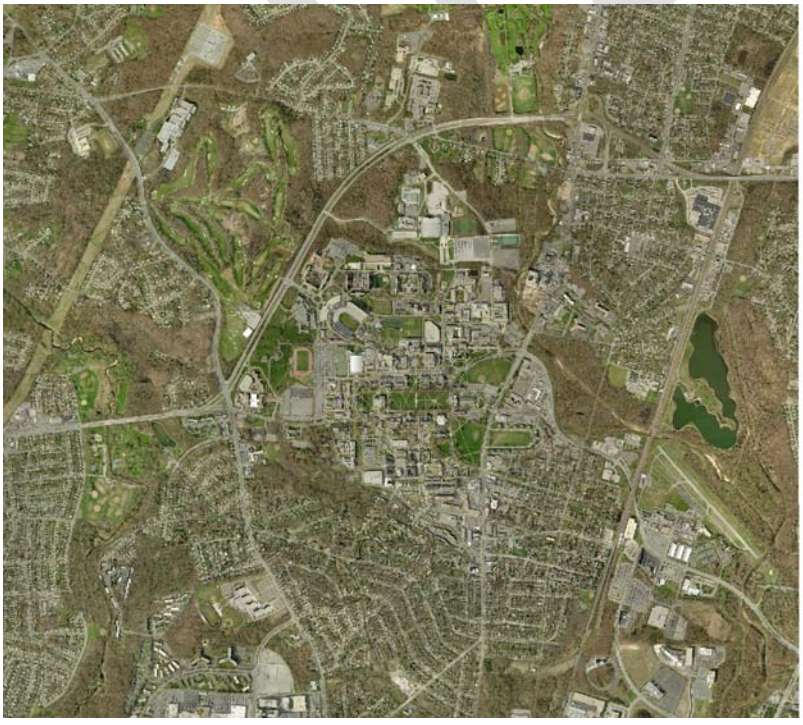
II. Introduction

A. A First Class Campus, An Academic Park in the City

The 2001-2020 Facilities Master Plan called for a "First Class Campus for a World Class University." The 2011-2030 Facilities Master Plan builds on the vision put forth in the 2001 Facilities plan and the advances that flowed from it in the last decade. The current plan continues and refines that vision and lifts the campus and facilities to a new level of beauty and function.

This Plan reaffirms the commitment to a campus that is first class, with state-of-the-art modern facilities to meet the needs of a dynamic world-class University. It envisions a campus with great aesthetic appeal, full of learning possibilities, reflecting our desire to protect the land, honor our traditions and historical roots, and contribute positively to the ecology and well-being of our community, the City of College Park, the state, and region. It sets forth a guide for building a green campus that is an appropriate and inspiring home to a great university, green in our pledge to excel in sustainability practices and environmental stewardship and green in the abundance of plants, trees, and open spaces that are a defining signature of the University of Maryland.



The 2001-2020 Facilities Master Plan marked a turning point in campus planning for the University of Maryland. It emphasized the University's role in environmental stewardship and proposed major new buildings for academics, arts, and athletics that changed the face of campus. It provided a guide for a campus built around a hierarchy of open spaces. The 2011 Facilities Master Plan follows this vision by installing buildings within open space frameworks and expanding open spaces and physical connections to the campus core. In addition, this plan brings a special focus on landscape and transportation. They are the context for implementing the development of the districts and successfully creating a cohesive whole.

The 2011 Plan presents a blueprint for a campus that is livable and special, park-like in its setting with a distinct sense of place. The campus will be an oasis of green in an urban corridor in the City of College Park, easy to reach and traverse, eminently walkable, a pleasant and attractive destination for students and faculty, alumni and friends, residents of the State and national and international visitors.

The Landscape

The Facilities Master Plan recognizes the landscape as a key component in building a unified campus. The landscape defines the flow of space across campus, reflects the changing character and typology between districts, and emphasizes campus boundaries for those on campus and those passing by the campus. The landscape is a major vehicle for realizing the University's commitment to environmental stewardship and sustainability. Landscape design elements contribute to student life with spaces for learning, relaxation, and connections to nature. Plans include adding to the Arboretum and Botanical Garden collections and gardens and creating a hierarchy of open spaces with connecting green corridors.

Vehicular and pedestrian circulation

Transportation, problems of congestion, conflicting needs of pedestrians, bicyclists, and automobile drivers are also major issues that this Plan addresses. The University is in the City of College Park located in an increasingly urbanized corridor. Some students live on campus but many more students, and all faculty and staff, commute from the neighborhood, the entire metropolitan region, and a wider five-state area. The plan recognizes that multi-modal transportation options and clear and accessible connections to and through the campus are essential to the campus's smooth functioning. Those living on campus or coming to the campus will have a variety of public transit options, find a culture that promotes walking and bicycling, and enjoy pleasant walkways and shuttle services for easy movement across campus. In this metropolitan corridor, transportation pressures seem sure to increase.

District Development

Projects for each district are designed to fill in around already constructed buildings within the open space frameworks established in the 2001-2020 Facilities Master Plan. Building locations, size, and height are planned to blend in with the character already established within each district. Development projects include renovating or constructing buildings to house expanded academic and research programs, completing a long-planned learning center, building new structures to add to the quantity of student housing on campus, renovating older residential buildings, and adding recreational and athletic facilities. A major initiative is the redevelopment of the East Campus.

B. Seizing Opportunities and Responding to Challenges

Opportunities and challenges have shaped the expanded vision of the campus and its facilities.

The primary challenge is the fact that the campus sits on a finite piece of land. Competition for multiple land use is keen and will increase. Programs are flourishing, enrollments are growing, needs have expanded. Land use plans must be judicious, responsible, and flexible.

Our land also represents our greatest opportunity. The protected and enhanced green spaces, tree canopies, small gardens, and open spaces give the campus a special, even unique, setting within the City of College Park. The campus is located in a region in which development is persistent and non-ending. We foresee a future in which the campus will be a green park in a densely-built metropolitan environment. The campus grounds and inviting setting are often listed as the second

attraction (after academic reputation and offerings) that recruits students. It is an asset this plan proposes to enhance and protect. We have the best of all possible worlds: a space that connects students to nature and a location that offers them the enormous benefits of life in a great metropolis that is home to the nation's capital.

Our campus is a valuable resource and also home to the Flagship institution of the State University System. The College Park Campus has been a major asset for the State of Maryland for 155 years. We recognize in the Master Plan three mandates conferred by our special status: 1) we have the obligation to sustain and care for our land; 2) we have the obligation to preserve and treasure the cultural and architectural heritage left by those who preceded us; and 3) we have the obligation to build for the future with creativity and dedication. According to the Strategic Plan of 2008, "The State of Maryland mandated that the flagship be a university equal to the best in the nation because the State's future depends on this resource." In partnership with the State, the City of College Park, and the surrounding communities we are building a first class campus and nationally top-ranked flagship university for the citizens of the State of Maryland.

Opportunities

In the past decade three special opportunities offer new promise and have influenced the shape of the 2011 Master Plan: the designation and management of the campus as an Arboretum and Botanical Garden; the advent of the Purple Line light rail system; and the mixed-use East Campus Development initiative.

The Arboretum and Botanical Garden. In one of the most exciting and significant developments of the past decade, in 2008 the campus received the designation of an Arboretum and Botanical Garden. Its motto is "A new look for the campus and a new way of looking at the campus." As an Arboretum and Botanical Garden, the campus can fulfill the educational mission that goes back to its Land Grant roots. Once predominantly farmlands and barns were used to educate students. Through the Arboretum and Botanical Garden we will use the land as an educational tool, promote a community that values a connection to the land, encourage sustainability measures and environmental stewardship, create a pleasant park environment, and promote social interaction and community activities.

*The Purple Line***.** The advent of the proposed Purple Line light rail system brings a welcome shift from a campus that is centered primarily on personal vehicular transportation to a campus in which alternative modes of transportation can be effectively promoted. The Purple Line will be complemented by new and improved campus corridors and linkages for pedestrians, networks for cyclists, and amenities and designs that foster a growing bicycle culture.

The East Campus Development. The East Campus Development initiative is another opportunity. Its design and placement are intended to highlight the linkage of the University to the surrounding community, an important theme of the Plan. The East Campus, with its retail and hotel opportunities, will be a bridge for revitalizing the College Park business and residential community. It is also an important example of the new relationship between the University and the City, with projects that recognize and support the porosity of boundaries between the campus and the surrounding neighborhoods.

Challenges

Challenges also help shape this plan. Three of the most important are new federal regulations regarding storm and waste water run-off; the compelling need to meet deficits in recreation spaces for students; and the pressures of proposed increases in enrollment. Finally, we recognize the constraints imposed by current budgetary limitations.

Stormwater and waste water regulations. The Maryland Department of Natural Resources has issued new regulations for stormwater pollution prevention that require a site to be treated as woods in good condition and all 1" storms to be treatable on site using environmental site design methods. Federal regulations regarding waste water and stormwater run-off, and the mineral content of gray water, must also be addressed. Projects that promote more efficient use of water and creative approaches to managing stormwater run-off are part of our landscape and building designs. As part of our commitment to leadership in sustainability, the University will meet and exceed applicable regulations on the environment.

A Deficit in Spaces for Recreation. A second challenge is the deficit of recreation spaces for students. Students are increasingly calling for more space for recreational activities. Studies have shown that the University space per student for recreation is significantly less than the recreation space provided by our institutional peers. To address this need and enhance the quality of life for students, the plan looks at creative ways to use our limited space for recreation. These include multiple use projects, for example, enhancing the front lawn of fraternity row, which is used for intramural sports. Small spaces will be targeted for appropriate recreational activities, garages and other buildings may have roofs that can be used for sports, and Recreational Services and Intercollegiate Athletics may share some venues.

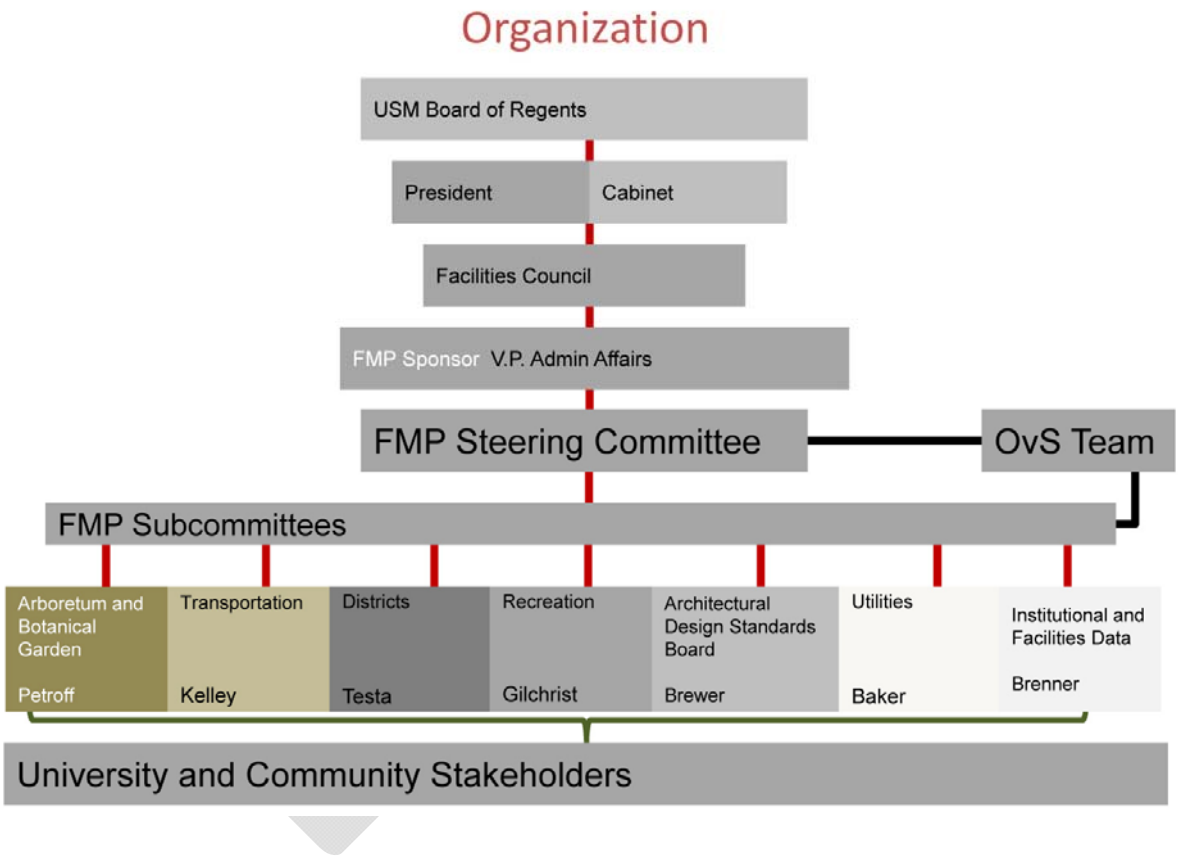
Increase in number of students, faculty, and staff. During the past decade, the enrollment remained fairly constant. Student enrollment is likely to increase in the future to meet State of Maryland goals and the national economic imperative to increase the number of college graduates. A more efficient use of buildings during all times of the day and creative admission policies that expand opportunities for students to attend classes will also increase the flow of people onto the campus. Growth in student activity will necessitate a corresponding increase in faculty and staff with greater pressure on campus facilities and infrastructure.

Funding Issues. The current fiscal constraints on the University constitute an overarching challenge. Many of the projects will be implemented slowly over time as funding allows. Partnerships will be sought with private entities and city, State, or federal agencies for funding of some goals. Transportation projects such as parking may require some selected increases in parking fees or the acquisition of grants. In addition, opportunities will be expanded for alumni and friends to leave their personal mark on the University by their support and contributions for trees, bushes, flowers, outdoor furnishings, irrigation systems, gateway enhancements, and any other projects that add to the beauty and function of their alma mater.

C. Process

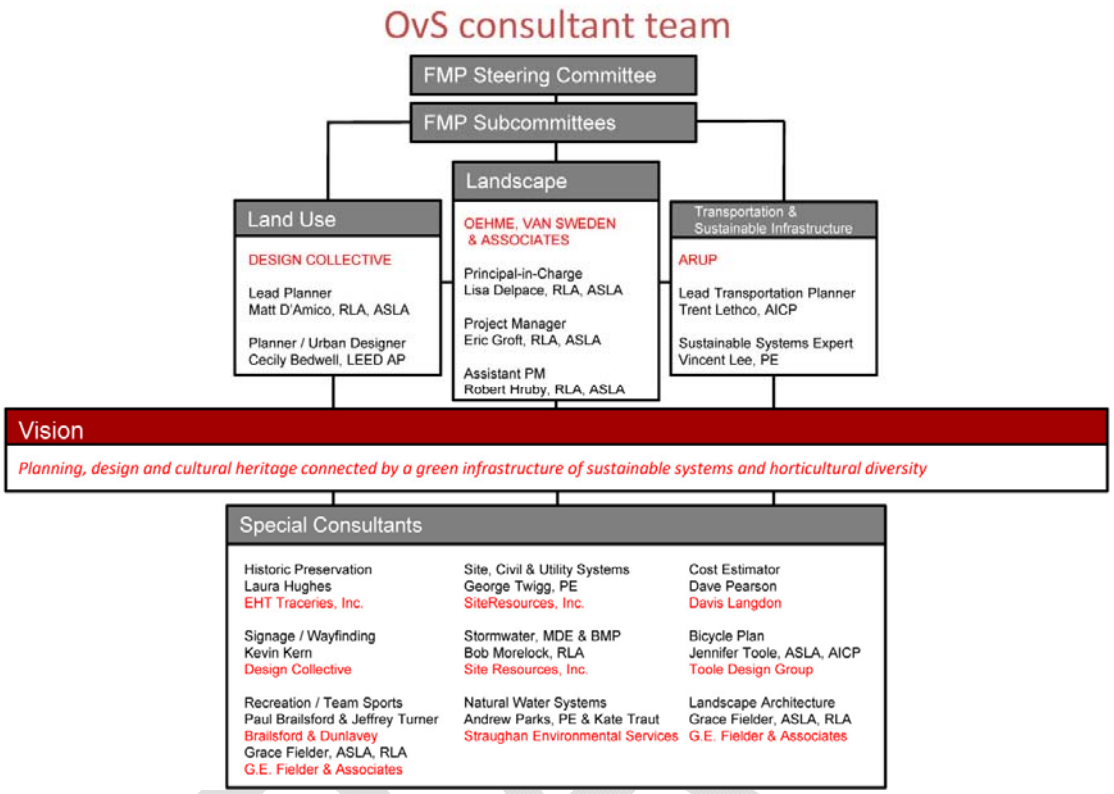
In the fall of 2009, the University of Maryland began a comprehensive effort to update the 2001-2020 Facilities Master Plan. The membership list of the committee appointed by then President Mote is included in the appendix of this document. The Facilities Master Plan Steering Committee met regularly during the fall semester, reviewed the current status and proposals for each of the campus districts, and discussed the facilities needs in the context of growing and planned academic programs and research activities. At the conclusion of the semester, committee members confirmed the major issues to be addressed in a new plan as the context for the siting of projected physical facilities.

The three areas of focus are environmental stewardship, landscape design and land use, and vehicular and pedestrian circulation.



As part of the process, consultants with expertise in areas addressed in the plan were charged to provide advice and proposals for dealing with these overlapping complex issues. The firm of Oehme, van Sweden, and Associates, a nationally-recognized planning and design firm specializing in landscape architecture, was selected as lead consultant on the project. The team they assembled included representatives from ARUP, a national transportation consulting firm from New York City; Design Collective, a major planning and architectural firm from Baltimore; and a host of local subconsultants specializing in specific topics relevant to this planning process. The consultants conducted surveys, met with stakeholders from across campus and the

community, analyzed the current state of the campus, and presented a vision of the campus and a series of recommendations to implement that vision.



Following many discussions of the consultants' recommendations, presentations to the City of College Park Council, the Student Government Association and the Graduate Student Government, and meetings with campus groups including the Campus Senate, the Facilities Master Planning committees worked with the university Department of Facilities Planning to craft a vision of the campus for the next twenty years. The draft plan was disseminated widely among the campus community and to the citizens of College Park. A final plan was submitted to the Campus Senate, the President and the President's Cabinet, and the Board of Regents for consideration.

This Facilities Master Plan presents a clear vision that is comprehensive in its scope. However, it is not a detailed implementation, operations, logistical or budgetary blueprint for projects. Planning is an ongoing process. The University will continue to improve and refine the Master Plan as a community-wide effort. As projects are carried out, university administrators and planners will be guided by the spirit and vision of this plan with its emphasis on creating a place of natural and architectural beauty, collegiality and community, and utility. The coordinating university agency for the Facilities Master Plan is the Department of Facilities Planning.

D. Timing

The base year established for this plan is Fall 2010. Time periods for the Facilities Master Plan are as follows:

- Planning Period 1: Projects that are planned to be completed or start construction from July 2011 to December 2021.
- Planning Period 2: Projects that are planned to start construction from January 2022 through December 2030 (the end of the timeframe of the Facilities Master Plan). All defined projects not in Planning Period 1 will fall into this period.
- Beyond: Projects planned to start construction from January 2031 and beyond. All potential footprints of undefined projects will be captured here.

Time required for full realization of the Facilities Master Plan will be determined separately as a result of annual reviews of the capital budget process.

III. University's Mission and Current and Future Characteristics

A. Mission and Role as Flagship Campus

Summary Mission Statement

Approved by the Board of Regents on February 1, 2006

The University of Maryland, College Park is a public research university, the flagship campus of the University System of Maryland, and the original 1862 land-grant institution in the State. It is one of only 63 members of the Association of American Universities, an organization composed of the leading research universities in the United States and Canada. The University of Maryland is committed to achieving excellence as the State's primary center of research and graduate education and the institution of choice for undergraduate and graduate students of exceptional ability and promise.

The University creates and applies knowledge for the benefit of the economy and culture of the State, the region, the nation, and beyond. As the flagship of the University System of Maryland, the University shares its research, educational, cultural, and technological strengths with businesses, government, and other educational institutions. The University advances knowledge, provides outstanding and innovative instruction, and nourishes a climate of intellectual growth in a broad range of academic disciplines and interdisciplinary fields.

The University counts among its greatest strengths – and a major component of its excellence – the diversity of its faculty, students, and staff. The University of Maryland, College Park is committed to equal educational opportunity and strives to hire a diverse faculty and staff of exceptional achievement through affirmative actions, to celebrate diversity in all of its programs and activities, and to recruit and retain qualified graduate and undergraduate minority students.

From the 2008 University Strategic Plan:

Mission

As a major asset to the State of Maryland, the University's mission is to foster the education, critical thinking, and intellectual growth of its students, the creation and application of new knowledge, the economic development of the State, and the effective engagement of its students, faculty, and staff with the surrounding world

Role of the State's Flagship Institution

The University of Maryland's role is to preserve and transmit the knowledge of the past, to illuminate the challenges of the present and contribute to their solution, and to shape the future. As the flagship, our task is to attract the most brilliant minds, advance the frontiers of knowledge, stimulate innovation and creativity, and educate those who will be leaders in all areas, including civic life, business, culture, and education. As the flagship, we have a special responsibility in Maryland to educate engaged and thoughtful citizens for life in a complex, vibrant, democratic society.

The University's role is to anticipate and prepare for the opportunities that will enhance the state's economic well-being and social and cultural vitality ten, twenty, and forty years from now. The University must create new opportunities and initiatives, in bioscience and biotechnology, conflict resolution, languages and culture, green energy, alternative agriculture, health and wellness, the humanities and arts, public policy, and myriad other fields that will reinforce and support Maryland as a state renowned for economic innovation and prosperity and acclaimed for a strong, culturally rich and vital social fabric.

B. Description of Institution

Current demographics, projected future demographics

Enrollments

Both the diversity of the student population and the quality of students has risen over time. The campus counts the diversity of its student body among its special strengths; as of fall 2010, 37% of undergraduates stated that they were either Hispanic, or claimed at least one minority racial/ethnic identity. The comparable statistic for graduate students was 21%. Moreover, approximately 23% of our graduate students are international. In addition, operating with the highest admission standards in the USM, the University of Maryland attracts to campus highly qualified students from all counties of Maryland, the other 49 states, and approximately 120 countries around the world.

The enrollment data in the projected years are predicated upon full-funding of the USM Strategic Plan for fiscal year (FY) 2013 and beyond. Moreover, the data represents, over the relevant time period, the campus contribution to meeting Governor O'Malley's goal of having 55% of Marylanders having a college degree by 2025. The data correspond to the University's 10-year

enrollment projections that are filed on an annual basis with the University System of Maryland Office.

Table 1: Headcount Enrollment

Headcount	2005	2006	2007	2008	2009	2010	2020	Net Change 2010 - 2020
Undergraduate FT	23,263	23,124	23,780	24,383	24,617	24,841	26,525	7%
Undergraduate PT	2,179	2,030	2,077	2,092	1,925	2,081	2,175	4.5%
Graduate FT	6,642	6,708	6,844	6,934	7,062	7,095	7,570	7%
Graduate PT	3,285	3,240	3,313	3,591	3,591	3,624	3,875	7%
TOTALS	35,369	35,102	36,014	37,000	37,195	37,641	40,145	7%

Source: UMD Office of Institutional Research, Planning and Assessments (IRPA)

Table 2: FTE Fall Enrollment

FTE Enrollment	2010	2020	Net Change 2010 - 2020
Undergraduate	25,396	27,171	7%
Graduate	6,622	7,138	8%
TOTALS	32,018	34,309	7%

Source: UMD Office of Institutional Research, Planning and Assessments (IRPA)

Faculty and Staff Size

Faculty and staff have absorbed significant burdens from the economic downturn, with layoffs, furloughs and increasing workloads. As noted in Dr. Loh's testimony before the General Assembly, state budget cuts have led to the layoff of 50 employees in FY 2011.

Consistent with the USM Strategic Plan and the state's goals to increase degree production and expand the economic base, the University System of Maryland intends to grow its student body and its research production significantly over the next decade. Meeting these goals will require additional faculty and staff. Hiring additional faculty and staff is dependent in turn on new resources from the state that may be available as the economy improves. The faculty and staff projections are based on an annual growth rate of 1%.

Table 3: Faculty Headcount

Faculty	2005	2006	2007	2008	2009	2010	2020	Net Change 2010 - 2020
Full Time	2,862	2,896	2,924	2,967	3,060	3,147	3,343	6%
Part Time	812	856	861	900	937	976	1,014	4%
TOTAL	3,674	3,752	3,785	3867	3,997	4,123	4,357	6%

Source: UMD Office of Institutional Research, Planning and Assessments (IRPA)

Table 4: Staff Headcount

Staff	2005	2006	2007	2008	2009	2010	2020	Net Change 2010 - 2020
Full Time	4,367	4,514	4,656	4,850	4,819	4,704	5,465	16%
Part Time*	4,247	4,188	4,227	4,352	4,266	4,330	4,904	13%
TOTAL	8,614	8,702	8,883	9,202	9,085	9,034	10,369	15%

* Official part time counts do not include hourly employees or student workers.
Source: UMD Office of Institutional Research, Planning and Assessments (IRPA)

C. Relevant Strategies and Mandates from Adopted University Guidelines and Plans

The 2011-2030 Facilities Master Plan is responsive to key University documents that govern natural resources, grounds, and facilities. The Plan reinforces and integrates elements from three documents in particular: Environmental Stewardship Guidelines, The University Strategic Plan, and the University of Maryland Climate Action Plan.

Environmental Stewardship Guidelines 2005

Following a commitment to environmental stewardship and management in the 2001-2020 Facilities Master Plan, an Environmental Stewardship Committee developed a set of Environmental Stewardship Guidelines for the University that was approved by the Facilities Council on May 19, 2005. These guidelines provide a framework and an incentive to faculty, staff, and students for responsible environmental management practices on the College Park Campus and encourage the development and implementation of an integrated environmental management system. The guidelines complement existing policies and procedures regarding regulatory compliance and are meant to inspire the University community to adopt practices and procedures that extend beyond compliance and foster long-term environmental stewardship and ecological sustainability. The 2011-2030 Facilities Master Plan has been developed with the Environmental Stewardship Guidelines in mind. The Guidelines continue to be valid, useful, and essential for ensuring that the campus community stays focused on the development of a healthy and environmentally sustainable campus.

The University Strategic Plan 2008

The Facilities Master Plan in particular addresses and incorporates the visions, goals, and strategies set forth in the current University Strategic Plan. “Transforming Maryland: Higher Expectations, The Strategic Plan for the University of Maryland,” was adopted by then President C. D. Mote, Jr., on May 21, 2008. The Plan calls for “resources and a physical and intellectual environment that inspires and supports excellence.” The excellence envisioned in the University Strategic Plan is also the goal of the 2011-2030 Facilities Master Plan.

The Strategic Plan sets forth a blueprint for a university whose educational and research programs have world-wide impact and enhance the economic, social, and cultural well-being of the larger community. Goals, strategies, and visions from the Strategic Plan that have facilities or landscape implications are listed below.

The Strategic Plan gives directives in three categories that are important for the Facilities Master Plan: the University will use facilities and infrastructure, including the landscape, 1) to support the goal of excellence in the educational experience and in research; 2) to encourage and initiate activities that transform the surrounding community; and 3) to create a model Green University that is a leader in environmental stewardship and sustainability.

The Strategic Plan's specific goals and strategies that have particular importance for the Facilities Master Plan are listed below.

1. Support excellence in the educational experience.

The University will expand available resources to renovate and improve classrooms, laboratories, libraries, computing facilities, and the information technology infrastructure. It will work to create additional departmental and community gathering spaces for informal meetings, study, and collaborative work. Finally, the University will aggressively pursue funds to build a state-of-the-art University Learning and Teaching Center within the next five years.

The University will increase the number of available undergraduate and graduate student beds as driven by student demand. The institution will support a combination of state-owned and public-private partnerships on campus and private projects off campus to increase the quality and amount of student housing.

The University will work toward the goal where M Square will total up to 2 million square feet of space containing state-of-the-art research, laboratory, and incubator facilities dedicated to bringing to the campus government and private sector enterprises who will benefit from being located close to the University and whose presence will simultaneously and substantially benefit the campus community.

The University will renew its physical infrastructure by building new facilities and substantially renovating existing ones and by renewing roads, utilities, fields, student housing, and information technology resources needed to support the University's mission.

2. Transform the surrounding community.

The University will help develop the surrounding physical and business environment into an attractive location for the academic community and for local residents and businesses.

Working with the City, County, and State, and using the U.S. EPA Smart Growth Implementation Assistance Report as a guide, the University will help transform U.S. Route 1 into a welcoming gateway and efficient transportation corridor.

The University will work to revitalize downtown College Park.

The University will increase housing opportunities and enhance the community as a place for faculty, staff, and students to live.

The University will support and promote efforts to increase transportation options in and around campus.

3. ***Create a model Green Campus that leads in environmental stewardship and sustainability***.

The University will become a model for environmental stewardship and sustainability. We will substantially reduce the use of energy, water, materials, and natural resources. Greenhouse gas emissions will be substantially reduced with concurrent advancement toward the goal of carbon neutrality.

In accord with the Facilities Master Plan, the University will preserve and enhance the architectural heritage of the campus through the continued development of open spaces, gathering places, vistas of green lawn and trees, and groupings of buildings that promote a sense of community. Plans for the built and natural environment will preserve the beauty of the campus and protect the environment as part of a Landscape Master Plan.

The University of Maryland Climate Action Plan: 2009

The Facilities Master Plan also reflects the University's commitment to carbon neutrality. Then President C. D. Mote, Jr., signed the American College and University Presidents Climate Commitment on May 22, 2007. In doing so he committed the University to develop an institutional action plan for becoming climate neutral, to implement this plan, and to publicly report on the progress. The 2008 Strategic Plan embraced the goal of carbon neutrality. In Fall 2009, the University of Maryland Climate Action Plan was finalized and endorsed by the University Senate and President Mote. This document presents a 40-year strategic plan for how the campus will become carbon neutral by 2050. The Plan sets forth goals and more than 40 strategies for institutional, technological, and behavioral changes to help reach that goal. The strategies include policy changes; mitigating emissions from power and operations, transportation, and solid waste; and opportunities to integrate climate change and sustainability into the curriculum and research.

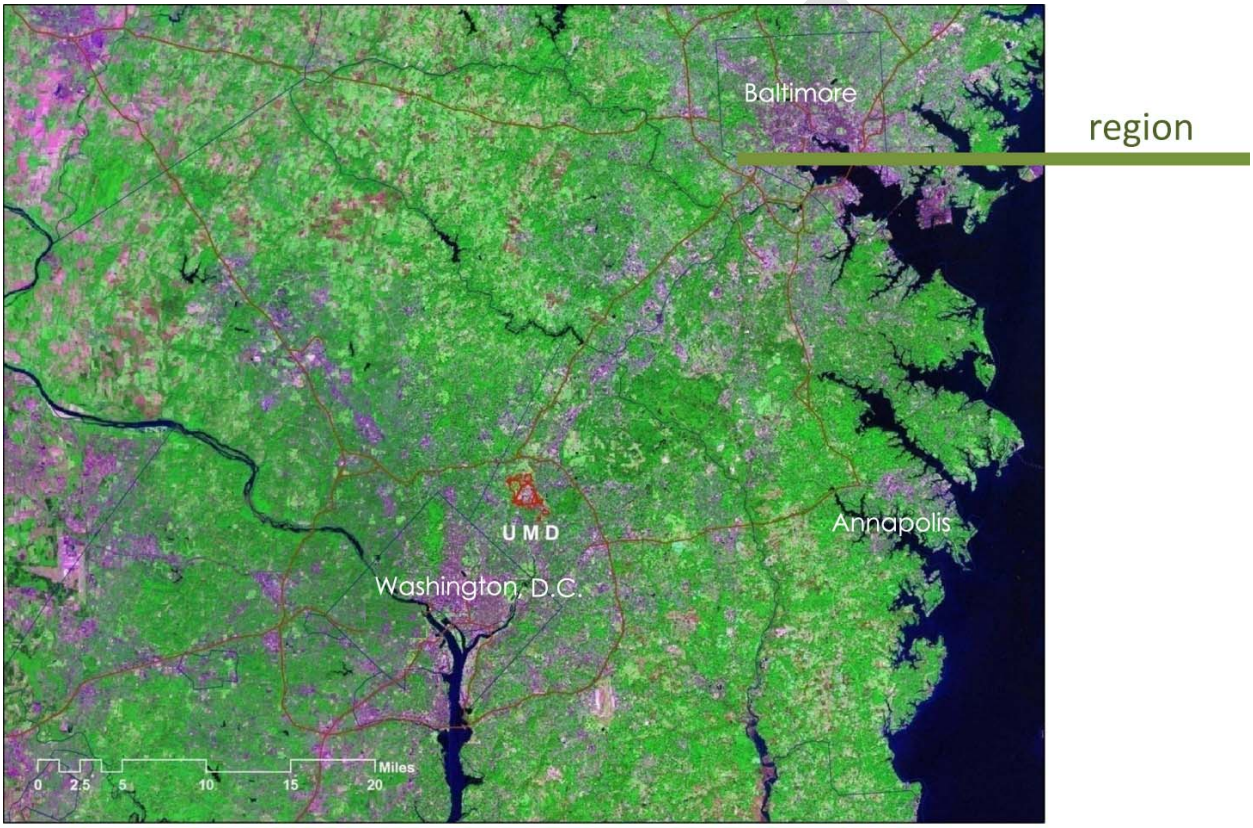
Five mandates in the Climate Action Plan that have implications for the setting of goals and strategies for the Facilities Master Plan are 1) retrofit existing buildings to reach the maximum level of energy efficiency and avoid construction of new buildings when possible; 2) construct necessary new buildings that are carbon neutral or as close as possible; 3) maintain all buildings to operate at maximum energy efficiency; 4) manage transportation in a way that minimizes and reduces carbon emissions to the extent possible; and 5) design, install, and maintain campus infrastructure to encourage and support responsible behaviors by the campus community, including recycling, composting, use of alternative modes of transportation, and reduced use of electric lighting and appliances.

Goals and strategies to meet these mandates are established throughout this plan.

IV. Land and Facilities Assessment

A. Existing Facilities and Acreage

The University of Maryland is located in the city of College Park, within Prince George's County. The campus is 30 miles west of Annapolis, 25 miles southwest of Baltimore, and 5 miles north of the border to Washington, D.C. The region's concentration of cultural, scientific, research, political, economic, and agricultural activities and facilities offers many unique advantages to the University's academic and research programs.



Interstates 495 and 95, located approximately three miles north of the campus, provide direct regional access to the College Park community and to the institution via Baltimore Boulevard (U.S. Route 1), a highly developed commercial corridor and a heavily traveled vehicular link between Baltimore and Washington. Main campus is bordered by University Boulevard, Campus Drive, Mowatt Lane, Knox Road, and Baltimore Boulevard. Main campus also includes a parcel of land east of Baltimore Boulevard, which is primarily developed as student housing and service functions. The University golf course is located to the west of University Boulevard**.** M Square, the University's research park, is located to the east of the main campus.

The University of Maryland's main campus consists of approximately 13.5 million gross square feet (GSF) in 263 buildings on approximately 1,250 acres. With the inclusion of off campus facilities, including leased facilities, the building inventory totals nearly 14.7 million GSF in 460 buildings on approximately 5,100 acres. As shown in Table 5, 53% of the main campus' total inventory is state-supported and approximately 39% is auxiliary.

Table 5: Fall 2010 Building Overview

Building Inventory	No. of Buildings	GSF	NASF	Percent of Total GSF
Main Campus				
State-Supported		7,690,817	4,674,796	53%
Auxiliary		5,772,517	2,621,873	39%
Subtotal	263	13,463,334	7,296,669	92%
Other Facilities*				
State-Supported		1,180,142	972,439	8%
Auxiliary		6,678	6,630	Less than 1%
Subtotal	197	1,186,820	979,069	8%
Total Inventory	460	14,650,154	8,275,738	100%

*Includes Maryland Fire and Rescue Institute (MFRI), Maryland Agricultural Experiment Station, the University of Maryland Extension and Leased Facilities.

Source: UMD Department of Facilities Planning

B. Assessment of Physical Condition of Buildings and Infrastructure

The advanced age and deteriorating condition of UMD facilities are major concerns. Many UMD buildings are underutilized because they are aged, obsolete and in disrepair. Twenty-seven percent (1,443,130 NASF) of UMD's state-supported space has not had major renovation for more than 40 years, and 16% (850,627 NASF) has not had major renovation for more than 50 years. As shown in Table 6, 57% of the main campus inventory is coded Condition Code 1 or 2 (requiring normal maintenance and minimal renovation) while 39% is coded Condition Code 3 and 4 (requiring either major updating and modernization or major remodeling of the building).

Table 6: Fall 2010 Building Condition Overview

Condition Code	No. of Buildings	GSF	NASF	Percent of Total GSF
Code 1 (Normal Maintenance)	115	6,237,108	2,718,721	46%
Code 2 (Minimal Renovation)	16	1,422,179	944,485	11%
Code 3 (Major Updating)	36	2,891,676	1,764,871	22%
Code 4 (Major Remodeling)	41	2,324,286	1,421,175	17%
Code 6 (Planned Termination)	55	588,086	447,417	4%
Total Inventory	263	13,463,334	7,296,669	100%

Source: UMD Department of Facilities Planning

Facilities renewal and deferred maintenance requirements continue to have a major impact

on our ability to meet our teaching and research mission and achieve University goals. Our deferred maintenance backlog is about $750 million (2011 dollars). Deferred maintenance also contributes substantially to energy consumption and limits our ability to reduce our carbon footprint. Given that our buildings are aging, expending 2% of replacement value annually will help avoid increasing the deferred maintenance backlog. But it will not reduce it. Our growing backlog can only be addressed by large special allocations of capital funding.

UMD facilities renewal needs are urgent and fall into two general categories:

Infrastructure Replacement

Much of our failing infrastructure (e.g., underground heating, cooling, water and storm drain piping and building electrical gear) is unseen, resulting in an "invisible crisis." Examples of impacts due to failing infrastructure include: Hornbake Library flooded in 2000 resulting in portions of the building not being usable for one year and a repair cost of over $1 million; an electrical panel exploded in the Physics Building in 2002 resulting in the tragic death of a maintenance employee, and there was $2.7 million of property damage; 1,200 student housing residents were without water or use of restrooms in 2010; and defective storm drain piping results in flooding in one or more of UMD's older buildings around McKeldin Mall almost every time there is a heavy rain. We have developed a seven phase, $132 million (2013 – 2019 dollars) plan to address this crisis.

Building Systems Renovations

Many of our buildings are decrepit and in dire need of renewal. Over $0.6 billion (2011 dollars) of our backlog is to renew buildings. We have prepared a document titled "Restore the Core," which describes the renewal needs of 17 buildings located in the historic core of campus. The average age of these buildings, adjusted for the date of major renovations, is 54 years. Many buildings outside the core are also in urgent need of renewal. Examples of impacts due to these building deficiencies include: the roof of H.J. Patterson Hall (built in 1937) failed requiring us to prop it up with wooden braces and relocate the research lab underneath it; a top researcher in the Toll Physics Building (built in 1950) went to another university, in part because electrical outages ruined his experiments more than once; and labs in our Chemistry Building (built in 1952) are significantly worse than labs in most Maryland high schools.

C. Utilization of Existing Facilities

Maryland Higher Education Commission's (MHEC) definitions for building types are used to categorize the building inventory. Approximately 44% of the space at College Park is concentrated in 80 academic buildings. Two main libraries, seven administrative buildings, 124 auxiliary enterprise facilities, and 50 non-academic buildings comprise the remainder of the space inventory.

Table 7: Fall 2010 Major Building Function

Building Function Code	GSF	NASF	Percent of GSF Total
Academic	5,980,038	3,543,912	44%
Administrative	218,688	144,486	2%
Library	636,331	450,981	5%
Auxiliary Enterprise	5,817,687	2,574,408	43%
Other – Non Academic	810,590	582,882	6%
Total Inventory	13,463,334	7,296,669	100%

Source: UMD Department of Facilities Planning

D. Assessment of Sufficiency, Functional Adequacy and Externally Mandated Program Standards

UMD suffers from a lack of sufficient quantity and quality of space, which are serious obstacles in sustaining the University's scholarly activities. Additionally, the lack of functionally appropriate or suitable space makes the fulfillment of the University's mission increasingly difficult. Emphasis on graduate level education, the increased technological requirement of instruction, externally mandated program standards (e.g., Association for Assessment and Accreditation of Laboratory Animal Care – AAALAC) and advances in research technologies all contribute to a growing need for renewal of existing facilities and the infrastructure.

E. Space Analysis

The use of state mandated Space Planning Guidelines are intended to assist the University and State in identifying the overall adequacy of types and amount of space. The Space Planning Guidelines Application Program report compares existing and proposed inventories to existing and proposed space allowances based on the Guidelines. The report is based on campus wide data and deals only with quantity, not quality, of space. The base year (Fall 2010) inventory reflects a total space deficit of 1.7 million net assignable square feet (NASF). All of the major room use categories (classroom, class laboratories, research labs, office, and study space) show deficits.

The deficits are projected to increase during the 10-year period in all major room use categories totaling more than 2.7 million NASF. Approximately $2.8 billion (2011 dollars) in capital funding are needed to alleviate the shortage. The research lab deficit is more than 40% of the campus wide space deficit. UMD has a strong research program, with $545 million of external research grants won by faculty in FY 2010. Continued strength in our research program is vital to ensure the State's continued economic growth and international competitiveness. Unfortunately, the research space shortfall severely hampers our research program. At times we are unable to accept large research grants that require substantial state-of-the-art space. The magnitude of the existing and projected deficits clearly indicates that the higher levels of capital funding are required from all sources.

Universities that are leaders in research are also drivers of economic development and prosperity. As the flagship campus of the State, the University of Maryland commits itself to achieving a level of excellence that places it among the world's great research universities in the 21st century.

The University Strategic Plan 2008 calls for the University to be a "world center for the creation, refinement, and dissemination of knowledge" that will "make major contributions to advancements in science and technology and . . . . Our strength in research and scholarly enterprises will bring greater national and international visibility to the University and the State of Maryland, and will promote the state's interests in a global economy. It will greatly leverage the state's investment by helping us to attract substantial funds in support of University activities. The University's commitment to innovation and entrepreneurship will support and enhance the state's leadership in the knowledge and high-tech economy."

To fulfill this vision and compete on a national and international basis for leading researchers, the University must develop and maintain the facilities necessary to support research of the highest caliber.

Table 8: Space Guidelines Application Program (SGAP)

Major Use Surplus/Deficit Comparisons

Major Room Uses	Fall 2010 Inventory	Fall 2010 Deficit/Surplus	Fall 2020 Inventory	Fall 2020 Deficit/Surplus*
Classrooms	368,394	(69,711)	392,306	(182,391)
Class Labs	360,180	(40,674)	358,994	(141,805)
Research Labs	786,722	(744,121)	843,695	(1,122,673)
Office	1,792,236	(233,934)	1,821,088	(597,328)
Subtotal	3,307,532	(1,088,440)	3,416,083	(2,044,197)
Study Spaces	402,366	(381,967)	422,586	(386,795)
Other Room Uses**	3,586,771	(242,264)	3,557,536	(338,457)
Total	7,296,669	(1,712,671)	7,396,205	(2,769,449)

* Deficits are based on projections predicated upon full funding of the USM Strategic Plan for fiscal years 2013 and beyond.

**Includes all Special Use, General Use and Support Spaces.

Source: UMD Department of Facilities Planning

F. Adequacy of Existing Land and Capacity for Future Development

Future development sites have been identified that could accommodate an additional 6.1 million GSF of new construction on the main campus, which consists of 4.4 million GSF in Planning Period 1 and 1.7 million GSF in Planning Period 2. Although the program demands for the 20-year period can be met on the main campus land, sites for new facilities are located further from the Campus Core. As opportunities exist, university functions that can be located on campus

edges and peripheral properties should be examined to keep the concentration of student and academic functions as close to the Campus Core as possible.

Future development sites have also been identified for beyond the 20-year period, most of which are in the West District which contains a large amount of surface parking and therefore provides ample opportunities for long-term future development. The site areas identified do not represent proposed building footprints. Rather, the identify parcels in which buildings could be located. If and when specific building programs are proposed on these parcels, the buildings will respect the open space framework developed for the area and be compatible with the setbacks, heights and massing of the surrounding existing buildings.

G. Recreation Space Special Needs

As Intercollegiate Athletics (ICA) and Campus Recreation Services (CRS) sports and programs are an integral part of the University, space for their competition and practice fields must be considered when undertaking landscape planning for the next 20 years. Fields for athletic and recreation usage are the largest area of dedicated outdoor space on campus. Given that both departments have demonstrated needs for additional/alternative field space in order to fulfill their mission, this Facilities Master Plan has made a strong attempt to site opportunities to meet these needs while taking into consideration all the competing priorities for existing outdoor space – parking, building sites, Arboretum and Botanical Garden projects, and various modes of transportation to and around campus.

In addition to the dedicated competitive field spaces, the Plan has considered smaller spaces throughout campus for alternative types of recreation. With an approximate 12,000 students living on-campus, there is a strong desire by these residents to have recreation and leisure activities available to them, close to their residence halls. While Eppley Recreation Center, LaPlata Field and the Outdoor Aquatic Center certainly meet this need in the Northwest District of campus, facilities such as these are absent from the southern portion of campus. This Plan process has taken a close look at the recreational needs of South District, which has experienced a large build-out of residence halls in the recent past, and will continue through Planning Period 1 of the Facilities Master Plan.

H. Parking Space Inventory and Projection of Needs

There are approximately 19,000 parking spaces on campus for faculty, staff, students and visitors. The demand for land to accommodate building projects, promote connectivity, and enhance sustainability across University environments will require reductions in surface parking and either replacement of these spaces in parking garages or reduction in the demand for parking. There are many factors that may affect the parking inventory. The following table identifies potential projects that will impact parking in the first planning period. The net loss will have to be replaced with parking garages, a reduction in demand, or a combination of both.

FMP Parking Impact (Planning Period 1)			
Planned New Construction Projects	**District**	**Lots Affected**	**Estimated Lost Spaces**
New Shuttle-UM Facility	N	4i	402
New Computer Science & Engineering Building	NE	XX5	12
Physical Sciences Complex - Phase II	NE	I*	29
New Fischell Institute of Biomedical Devices	NE	Paint Branch Visitor Lot	195
School of Public Health Building Addition/Conversion - II	NW	PP1	26
New Undergraduate Housing 1 (515 beds)	NW	2A	100
New Undergraduate Housing 2 (515 beds)	NW	2A	100
Lot 1 Road/Pedestrian Safety Improvements	W	1	451
Lot 1 Restriping (to increase width of each space)	W	1	450
East Campus Mixed Use Development Phase I	E	K1, K2, K*2, K*5, OO	440
University Learning and Teaching Center	CC	H1	103
Prince Frederick Hall (463 beds) and SCUB Expansion	S	U5, U6	277
Architecture Building Addition	S	O1 &/or O3	4
New Public Protection and Security Research Building	S	Lot A	43
New South Campus Recreation Building	S	U4	67
Purple Line	CW	1D, UMUC, 1B, Z, C1	615
Additional Demand Due to Enrollment Increase (2,000 new students = 1,500 commuters = 1,000 spaces)	N/A	Various	1,000
GROSS PARKING SPACE LOSS DUE TO PLANNED CONSTRUCTION/ADDITIONAL DEMAND			**4,314**
MITIGATING FACTORS			
Potential mitigation by disallowing freshmen/sophomore resident parkers			(1,010)
Purple Line will reduce parking demand which will mitigate some parking loss *			TBD
TOTAL MITIGATING FACTORS			**(1,010)**
NET PARKING SPACE LOSS DUE TO PLANNED ONSTRUCTION/MITIGATING FACTORS			**3,304**

* Potential mitigation has not been quantified.

NOTE: The draft FMP includes a 3,000 space garage in Period 1 to address the parking loss. This assumes that the Purple Line and other demand reduction strategies will reduce demand enough to address the 304 space remaining parking loss plus the approximately 600 spaces removed due to the footprint of the proposed garage.

An important goal of the Facilities Master Plan is to reduce the total demand for parking on the campus. Doing so has multiple benefits. Less congestion on and off the campus, lower greenhouse gas emissions means a reduced carbon footprint caused by campus users, fewer cars reduces the conflicts with other modes and thus enables the campus to be more pedestrian and bicycle friendly, and finally, lower demand for parking spaces frees up valuable land for other purposes without needing to replace those spaces in expensive garages.

Reducing the demand for parking will reduce the need to replace existing surface spaces with expensive parking garage spaces. A parking garage built on an existing parking lot costs about $25,000 per space. Multiple strategies should be pursued to reduce the demand for parking. Transportation alternatives such as using public transit, car and van pools, and bicycling should be enhanced. The campus should vigorously support the approval and funding of the Purple Line. Shuttle-UM should receive funding to enable significant expansion, particularly to neighborhoods within a few miles of campus. (For example, 46% of students, staff and faculty who responded to a transportation survey and live between 1 and 2 miles from campus usually drive a single occupancy car). With expanded Shuttle service these neighborhoods in turn may be designated areas of restricted parking access to campus. An aspirational goal would be to reduce overall parking demand sufficiently to eliminate the need to build a parking garage. However, any reduction will reduce the cost should a garage be needed.

Another important goal of the Plan is to provide convenient, efficient and safe multi-modal access to, and around, the campus. Single occupancy cars will remain an important transportation option for many faculty, staff, students and visitors.

Finally, we recognize that parking is an important resource in support of large University events. The largest athletic events use all available parking on campus. If surface spaces are shifted to garages to accommodate other valuable uses of land, strategies to support pre-game activities will need to be implemented. If the campus is successful in reducing the total number of spaces on campus then strategies such as episodic parking on green spaces (e.g., Chapel Lawn) as well as remote parking off-site with shuttle service to campus will need to be explored and implemented.

V. Plan Foundation and Framework

This section presents the foundation upon which the current plan is based. It begins with a brief overview of some of the changes that have shaped our campus, revealing the origins of the current mix of buildings, landscapes, and varying districts. The priorities that are the pillars of the Plan are listed next, followed by an explanation of the holistic approach to layered land use in the districts. This section concludes with the physical planning principles that guided the goals and recommendations.

A. University of Maryland's Changing Face and Heritage

Planning starts with the given: what is there. To understand the goals of this plan, it's useful to have a brief overview of how the campus changed and how some of the key features emerged that have shaped our current campus.

The University of Maryland campus has a rich history of landscape planning and architectural development. The face of campus has been shaped over its 155- year history by changing demographics and enrollment pressures, the demands of new academic programs and the explosion of research, a growing emphasis on athletics, and differing visions put forth in a series of master plans.

The campus has witnessed many changes since the University was initiated in 1856:

- Educationally: a recipient of the Morrill *Land Grant College Act of 1862,* followed by establishment of a post-Civil War agricultural experiment station and the formation of the extension service; transformation from an agricultural school into a major research university.
- Socially: development from an all-male military system into a co-educational institution; the modifications from barracks to dormitories to a predominantly commuter community to today's expansion of on-campus and nearby residential units.
- Culturally: Ante-Bellum agrarian interests; infusion of students via the *GI Bill of Rights*' guarantees of higher educational opportunities to veterans; commitment to developing a diverse faculty, staff, and student body following the Civil Rights movements.

The face of the campus has reflected many of these changes but certain key features remain. The original campus was 428 acres of rolling farm land donated by Charles Benedict Calvert. The dominant building pattern over the years was to place buildings on ridges and leave the valleys open. For example, the original Maryland Agricultural College was built on a knoll at the head of College Avenue and nicknamed the "Acropolis." The knoll with surrounding area is now known as Morrill Quadrangle, after Morrill Hall, the oldest remaining college building (completed in 1898). The environs of the initially modest campus were developed generally following trends of American campus planning.

A series of master planning efforts through the 1920's contributed still-recognizable patterns of development. A central academic core was proposed to be surrounded by men's, women's, and faculty residential quadrangles, and an expanded Agricultural Experiment Station. The men's residential communities, Calvert and Washington Quads, based upon English Collegiate models were completed by WWII. The plan of 1933 proposed a women's dormitory campus arranged in a horseshoe format surmounting the ridge of the valley that was to become McKeldin Mall.

In the 1930's farming, agricultural programs, and the Agricultural Experimental Station were relocated from the region surrounding Rossborough Inn to recently-purchased, rich farmland north of Campus Drive. McKeldin Mall, a large quadrangle surrounded by buildings, was established at that time and remains an iconic University space.

World War II and the subsequent emphasis on science and engineering led to many changes in the appearance of the campus. In contrast to the Colonial Revival style buildings that dominated the campus, more urban and contemporary looks were introduced. Expansion of the engineering programs was supported by the Glenn L. Martin Institute, designed by Skidmore Owings and Merrill (SOM). The Institute forms a continuous wall facing the Engineering Intramural Fields, centered on a domed building with pedimented portico.

The Institute's interconnected buildings contrast with the previous arrangement of individual buildings that outlined quadrangles. The contemporary plan for the science and engineering

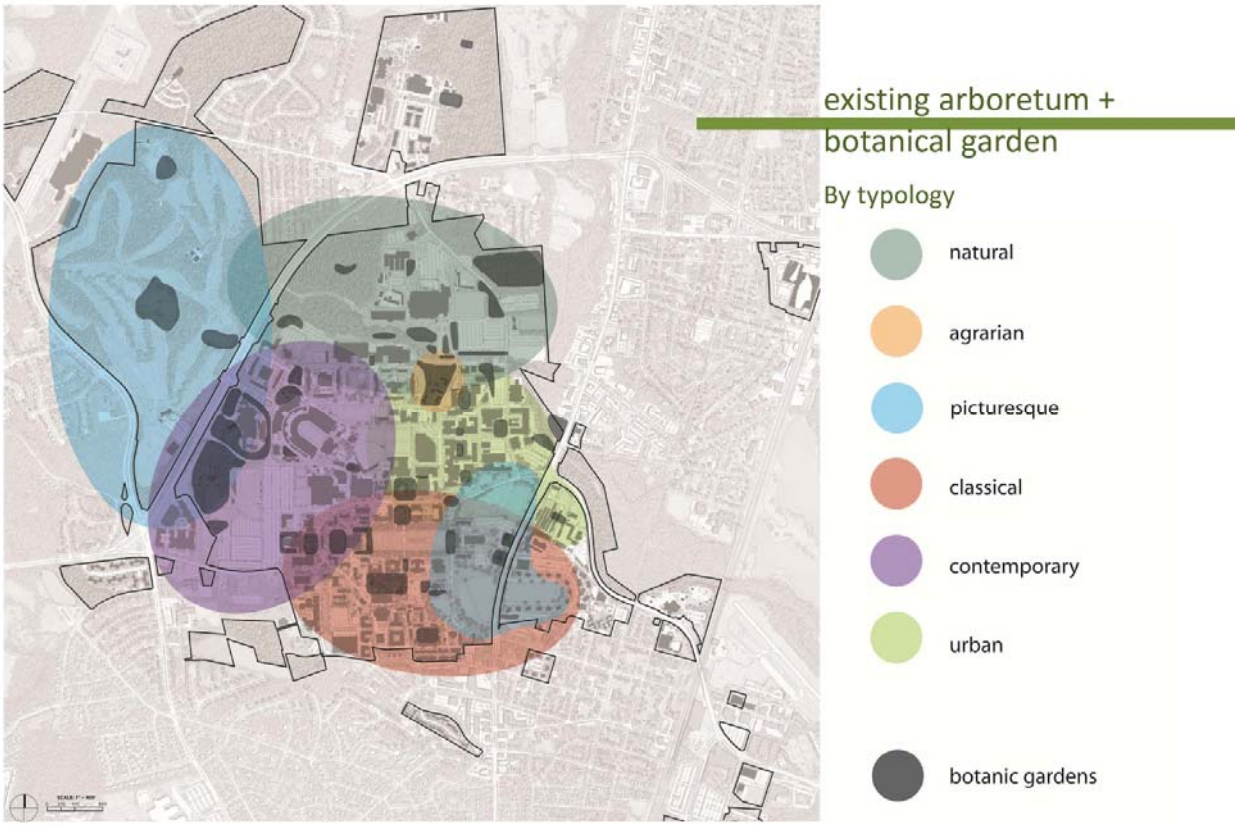
colleges formed a more-urban feeling grid. This build-out of the science-engineering district and the placement of Byrd Stadium, a dominating athletic facility, in the east-west valley between Stadium and Campus Drive, effectively consumed most of the agricultural land, and the Campus Farm became a remnant.

The GI Bill of Rights brought a three-fold increase in campus population: housing quantity issues were addressed via two differing avenues. Skidmore Owings and Merrill designed three residential communities of high-rise towers surrounding student service buildings (dining, community) to be interspaced with "fingers" of forested reserves stretching from Campus Creek south along a peninsula overlooking both the creek and athletics valleys. Secondly, Walton and Madden designed Greek Row, a horseshoe arrangement of independent, small-scaled residential fraternity facilities surrounding an athletic field with a view across Baltimore Boulevard that centers on Memorial Chapel.

The years following World War II also saw the construction of two other buildings that changed the face of campus: the University Memorial Chapel (1952-1953) that towers over the Chapel drill fields facing Baltimore Boulevard, and McKeldin Library (1955), a building that completes the current signature academic quadrangle of the historic core district.

The Facilities Master Plan of 2001-2020 brought significant changes to campus. While previous plans were willing to place buildings wherever space was available, the focus of the 2001 Plan was on coherent design that clustered academic buildings in reasonable distances, preferred parking garages over surface parking lots, and placed a value on open spaces that add to the beauty, appeal, and ease of movement across the grounds. With its emphasis on the protection of the environment, the Plan gave more attention to cultivating and nurturing the natural systems, the trees, streams, and land that are home to the University community.

Over the years, the campus expanded and changed but the emphasis on ridges with buildings and academic buildings around open spaces remains a dominant feature. The campus now has a mix of districts that cross six major landscape types common throughout the United States: natural (Paint Branch and Campus Creek); agrarian (farm remnants in Northeast District); classical, (McKeldin Mall and Hornbake Plaza); picturesque (Chapel Lawn and Golf Course); contemporary (Clarice Smith Performing Arts Center and Riggs Alumni Center); and the urban (Northeast District). The campus retains iconic open spaces such as McKeldin Mall, the engineering fields, the Memorial Chapel Lawn, and the lawn in the Fraternity Row horseshoe.



Following the trend established by the 2001 Plan, the Facilities Master Plan of 2011 builds on the best of the architectural heritage and important landscape typologies, respecting the past while accommodating the needs of the present and future.

What does this mean for an individual district? The impact and importance of good campus planning and administrative follow-through can be perhaps best illustrated by the transformation of the South District of campus (See Section VI. D. South District development for graphic illustrations of this area.). In the 1950's, the lowland of this district, known as the "Gulch," was covered by a field of wooden, temporary barrack-like buildings to accommodate student overflow caused by returning veterans. This scene morphed over the years into a valley with Van Munching Hall on the east side and the home of the School of Architecture Building on the west, surrounded by acres of paved parking lots, an impervious surface whose waste water run-off fed into Guilford Creek.

Following the 2001 plan, surface parking was replaced by structured parking, and asphalt was converted to green open space with pedestrian walkways. Mayer Mall was completed over the last decade in a quadrangle framed by academic buildings and pedestrian corridors linked the east-west parts of the district. The *Campus Commons* residential complex enclosed the earlier Calvert and Washington low-rise residential quadrangles with 6-story buildings and provided a consistent, defined University border overlooking the business district of the City of College Park.

Looking forward, this district will expand in pleasing shape to build a greater sense of an academic community of buildings, extending the green corridors and quadrangles surrounded by academic buildings. The 2011 Plan envisions academic buildings terracing down from the

Morrill Quad ridge to Mayer Mall, making it easier for students to move up to the South Dining Hall and onto the Campus Core. Pedestrian green corridors will extend north to an expanded Tawes Plaza that links Tawes and the renovated residential buildings across Campus Drive. From an unattractive bunch of barracks thrown up rapidly in a crisis, the South District is being transformed into an attractive, vibrant and major academic and residential community with connections to the districts that surround it.

This is the type of result we aim for with the district developments and goals and recommended actions set forth in Section VI. Protecting our original architectural and landscape heritages and creating new architectural successes is the goal of this Facilities Master Plan.

B. Priorities

Four strategic priorities cut across the global issues that are the heart of the Plan and inform the goals and recommended actions. These priorities are the pillars on which the Plan is built.

Excellence. The University has reaffirmed in all University official documents its commitment to excellence. In accord with this mandate, this Plan aspires to excellence in its vision of a campus serviceable for the next decades, confident and outspoken in its identity and treasured by alumni and friends. Though current fiscal and other challenges loom, the Plan will present a blueprint for future development that is visionary and realistic. The University is required to present a Plan that will guide the orderly development of the campus over the next decades. The aim of this plan is higher. Its goal is to imagine a campus that excels in beauty and functionality and creates the optimum environment in which the academic enterprise and the University family can flourish. Long-term development patterns, land use, redevelopment and renovation strategies will be designed to utilize and balance available land and financial resources effectively. Projected development patterns will be a model of smart growth.

Connectivity. Members of the University are part of a community within a natural and cultural context, and connections to the community are a significant part of the Plan. Goals and actions are recommended to facilitate and encourage connectivity on a variety of levels. Design and landscape patterns connect districts one to another and connect the campus to the mid-Atlantic ecology. Planning for all facilities and physical systems is designed to increase the sense of community among those on campus. The Plan recognizes that the campus's boundaries are porous and that interaction and connectivity to the region around us is an important goal. Thus, recommendations are included that strengthen connections to the surrounding neighborhood communities and to regional systems of transportation. The Plan positions the campus as an important and attractive destination for residents of the region and all citizens of the State

Sustainability. The University will continue its national leadership in sustainability. Sustainability initiatives and recommended actions are dealt with in a separate section (VI. A.) but they are spread throughout the Plan. They are a key component of landscape planning, underlie transportation initiatives, and influence the design and placement of buildings.

Stewardship. A priority in the Facilities Master Plan is stewardship, of the environment but also of our heritage. The University plays a significant role in protecting the environmental features that are of major importance to the regional ecology. The need to be sensitive to our impact on the environment is a theme reflected throughout the Plan. Our treatment of urban canopies, our attention to our interaction with natural features on campus boundaries and edges, and our care in the placement of structures, roads, and trails are a few examples of our commitment to being good stewards of the environment. We also have an architectural and cultural heritage to preserve and treasure. The University of Maryland campus has grown in a way that reflects the evolution of American campus planning since the 1850's. It has a distinct character that is worth protecting. Preserving our heritage means adding landscape designs and structures that are in harmony with the setting, that blend with past successes, and that set new standards for aesthetic appeal and functionality.

C. A Holistic Approach

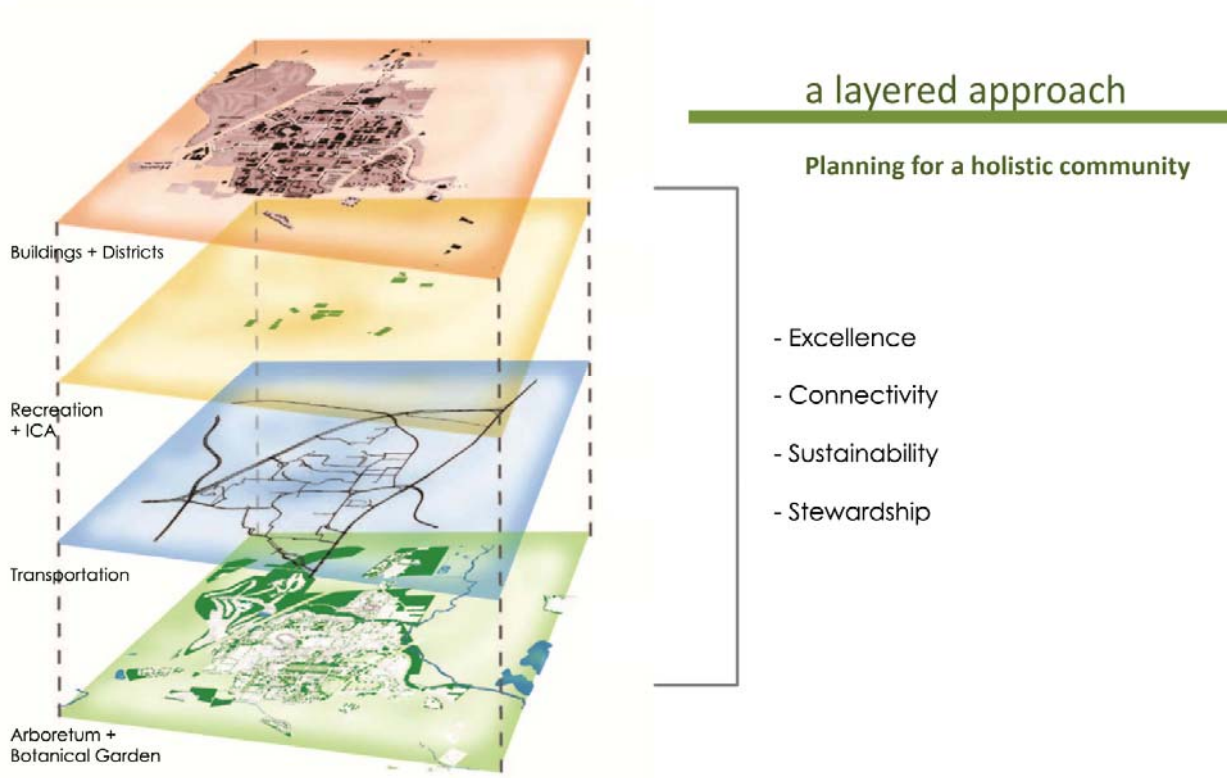
This Facilities Master Plan takes a holistic approach, looking at the campus as a fixed space (the main campus) that supports concurrently four layers of use.

1. The first layer considers the space in terms of the land, a tangible resource, which is home to the University of Maryland Arboretum and Botanical Garden. From this perspective, the Plan takes into account the ecological context of the setting, regional streams, waterways, urban forest canopy connections, etc. It considers the types of conservation, stewardship, tree collections, placement of gardens, and sustainability measures that will protect, preserve, and enhance this invaluable natural resource.

2. The second layer considers the campus as the base for a transportation network and system of roads, paths, and trails that permit pedestrian and vehicular circulation. Transportation issues focus on the routes of shuttle busses, internal circulation of commercial vehicles such as busses and the proposed Purple Line, pedestrian links and pathways, and bicycle paths. From this perspective, the Plan looks at ways to link more effectively campus systems to surrounding transportation and circulation systems.

3. The third layer considers use of the land for other than academic or residential purposes and includes plans for intercollegiate athletics fields and recreational spaces. Concerns at this level are the creative use of spaces that can accommodate formal or informal recreational and sports activities.

4. The fourth layer looks at the land in terms of its use for buildings that house research laboratories, classrooms, residence halls, event centers (performing arts, athletic, alumni center), and administrative offices and buildings. Concerns at this level are the projected placement of buildings over a two-decade term for effective land use.



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D. Physical Planning Principles

The 2011-2030 Plan updates, embraces, and follows the planning principles that were established in the 2001-2011 Facilities Master Plan.

Support the Institutional Mission

The land and other physical resources of the University of Maryland campus will be used to support the University's mission and programmatic needs and help achieve its strategic plan and academic aspirations.

Practice Environmental Stewardship in Landscape Design and Maintenance

The campus plan will protect and enhance existing natural environments (woodlands, wetlands, and floodplains) and create connections with adjacent habitats; new development will be guided by principles of smart growth and environmental stewardship.

Enhance Environmental Performance of Buildings and Utilities on Campus

Long-term environmental and economic sustainability will continue to be primary goals in the planning for new facilities, renovation of existing buildings and (the location of) supporting utilities and infrastructure. LEED silver certification will remain the campus' minimum standard

for new construction and major renovation; facility siting and development will maximize solar orientation and natural lighting, maximize energy efficiency, incorporate smart energy technologies, and minimize natural resource depletion and environmental degradation.

Encourage the Use of Transportation other than Personal Vehicles

Plans for development will reduce the number of automobiles on campus and encourage alternative modes of transportation -- shuttle busses, bicycles, new light rail or Metro line – in order to minimize vehicular congestion and support the Climate Action Plan and campus sustainability priorities.

Increase the Access and Appeal of the Campus for Pedestrians

Campus planning will encourage pedestrians to move easily and safely across the campus through appropriate design in and between campus areas and careful management of vehicular flow.

Strengthen Community Relations

Planning and design patterns will strengthen connections to the surrounding neighborhood communities and ensure the campus is an important and attractive destination for residents of the region and all citizens of the State.

Create an Attractive, Coherent Design for the Campus

Circulation patterns, a landscape framework, an open space network, and prescribed building placements will connect the spaces, corridors, and districts within a unified campus setting. The coherent campus design will recognize and reinforce natural environmental patterns, campus planning traditions, and neighborhood organizational patterns, and increase operational effectiveness.

Achieve Appropriate Development Patterns

Strategies for long-term development, land use, redevelopment and renovation will balance available land and financial resources effectively and respect the desire to create a coherent and sustainable campus. Projected development patterns will emphasize appropriate building densities and configurations, e.g. compact or spread out, that accommodate goals such as walkability, connectivity, community, and campus carbon neutrality.

Emphasize the Importance of Open Spaces

Campus design will affirm the essential importance of open spaces--natural areas, lawns, malls, plazas, patios, places to sit, etc.--to the image, organization, and quality of the campus environment.

Improve the Quality and Attractiveness of the Campus Landscape

Landscape plans will enhance the campus' Arboretum and Botanical Garden to bring aesthetic pleasure to the campus community and enhance the University's teaching and research missions.

Enhance Campus Security

Planning and design of all areas of campus will make personal safety and the security of public and personal property a priority.

Embrace Campus Traditions and Heritage

New development on the campus will use nationwide campus planning best-practices. Plans will respect historic and existing development patterns, affirm intrinsic cultural and social traditions, and reinforce important district-specific land use and physical characteristics.

VI. Plan and Major Recommendations

The recommendations of the 2010-2030 Plan are set forth under the headings of three primary issue areas: Sustainability and Environmental Stewardship; Landscape Design and Land Use; and Vehicular and Pedestrian Circulation Systems. Implementation of the recommended actions is then detailed for each of nine campus districts.

Global Issues: Environmental Stewardship and Sustainability; Landscape Design and Land Use; Vehicular and Pedestrian Circulation

A. Environmental Stewardship and Sustainability

For the past decade the University of Maryland has been recognized for its leadership in environmental stewardship and sustainability. Not content to merely follow regulations and recommendations, the University intends to be a model in innovation, consistency, and completeness of sustainability and stewardship measures. Projects and activities will be used to educate students, faculty, and staff and encourage a paradigm shift in the behavior and attitudes of members of the University family. The goals and objectives listed below emphasize control of carbon emissions and commitment to regional efforts to maintain low levels of pollutants in the water and air. They will advance the University's position at the forefront of institutions taking a proactive stance of efficient and judicious use of natural resources.

Goal 1: Transition to a campus of buildings and facilities that support the strategic goal of carbon neutrality.

Recommended Actions:

- Design new buildings and major renovations to be carbon neutral through a combination of energy-efficient design, appropriate and efficient on-site energy

technologies, or by offsetting emissions through purchase of Renewable Energy Certificates (RECs) from off-site projects.

- Reconcile all facilities design with existing policies on lighting levels, building temperatures, and environmentally preferable procurement.
- Increase on-campus renewable energy generation including the use of geothermal, micro-wind turbines, solar hot water and photovoltaics.
- Conduct feasibility study for a biogas combined heat and power facility. Build biomass as major priority on or off campus.
- Conduct study for an expanded geothermal program to support campus heating requirements.
- Reduce fossil fuel consumption by campus-owned facilities, vehicles, and equipment.
- Expand campus facilities to increase diversion of recyclable and compostable materials from the campus solid waste stream that goes to landfills.

Goal 2: Reduce total and per capita energy demand on campus.

Recommended Actions:

- Utilize Energy Performance Contracting to improve energy-efficiency of existing buildings.
- Implement energy conservation projects including relamping public spaces, hallways, classrooms, and offices.
- Install motion and daylight sensors to minimize indoor lighting.
- Relamp outdoor areas to energy efficient fixtures when technology is reliable.
- Expand energy submetering and encourage energy conservation behaviors by installing energy dashboards in major use buildings.
- Update building controls to reduce energy use during low occupancies use through remote operations.

Goal 3: Reduce total and per capita water consumption on campus.

Recommended Actions:

- Eliminate discharge of mechanical systems wastewater (i.e. condensate, blowdown, etc.) to storm sewers by maximizing the reuse of this water wherever feasible for beneficial purposes.
- Upgrade campus irrigation technologies to reduce water demand (match actual soil conditions).
- Install efficient fixtures in all buildings on campus.
- Develop a water and wastewater master plan that will review current and future water demand, specify strategies and goals for using alternative sources of water supply and reducing discharges to surrounding streams and the Washington Suburban Sanitary Commission.
- Conduct a feasibility study to identify opportunities to capture stormwater, grey water, and industrial wastewater for reclamation and beneficial reuse.

Goal 4: Incorporate Life Cycle Assessment into decision-making for all construction projects.

Recommended Actions:

- Assess environmental impacts of materials and products for new construction and major renovation and give preference to those that minimize environmental impacts and reduce total costs over the life of the building.
- Provide preference to the purchase of building materials and products that support local and regional businesses.
- Seek opportunities to minimize construction and demolition waste and divert all construction-related waste from landfills.
- Expand telecommuting and use of flexible schedules to address space constraints.
- Consolidate scheduled classes, office space and events to maximize potential of existing buildings and reduce the need for new buildings.

Goal 5: Design with educational opportunities in mind to maximize use of campus as a living laboratory of sustainability best practices and to become a model sustainable community**.**

Recommended Actions:

- Incorporate outdoor teaching spaces with integrated examples of sustainability best practices.
- Encourage engagement in projects and design through student, faculty, and staff participation.

Goal 6: Realize and reveal the ecosystem service potential of the urban landscape.

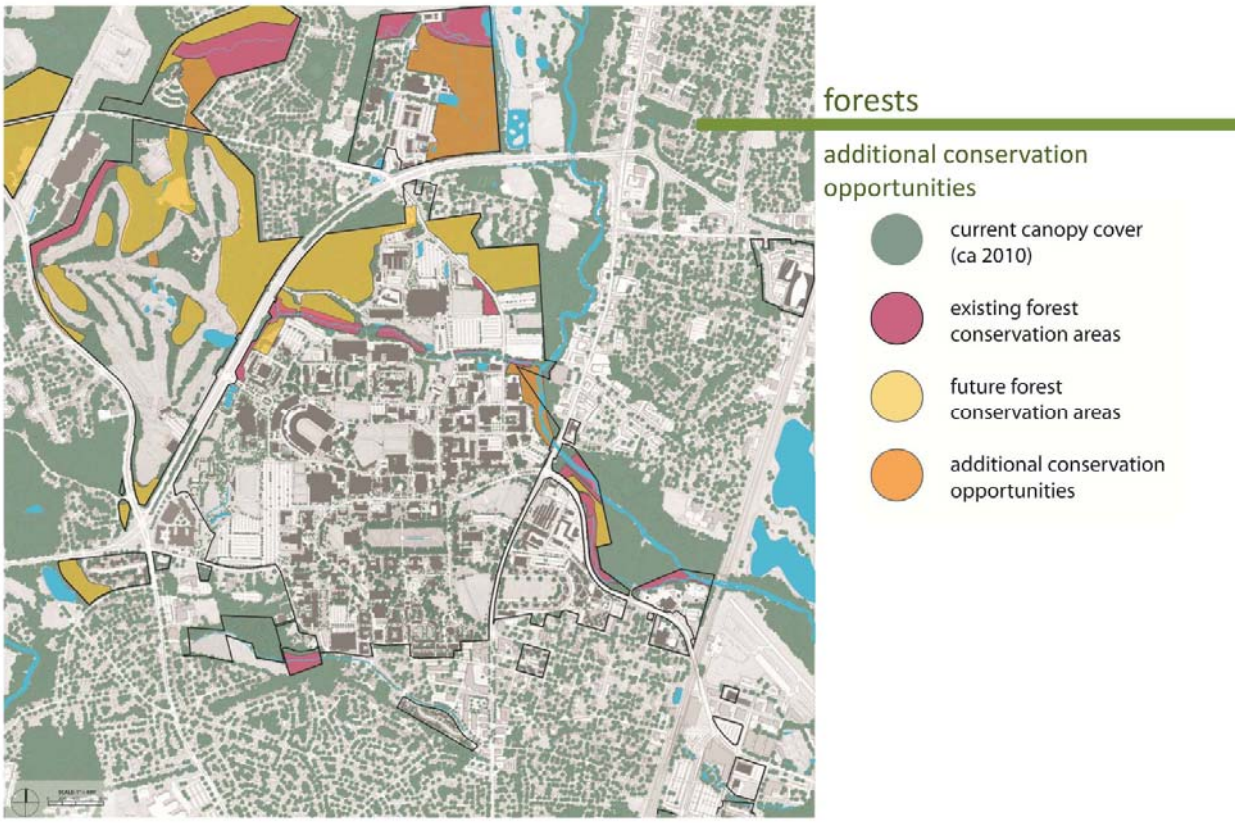
Recommended Actions:

- Maximize environmental benefits of urban tree canopy by increasing canopy coverage to 40%.
- Increase diversity of the urban understory layer and rainwater infiltration rate with intensified planting schemes in targeted areas as turfgrass replacement.
- Use exemplary landscape methods to mitigate urban environmental issues.

Goal 7: Conserve and interpret the campus forest as a key component of the Climate Action Plan.

Recommended Actions:

- Identify, quantify and map campus forest areas according to Department of Natural Resource definitions.
- Plan appropriate trail development to permit use of forest and wetland ecosystem resources in academic study.

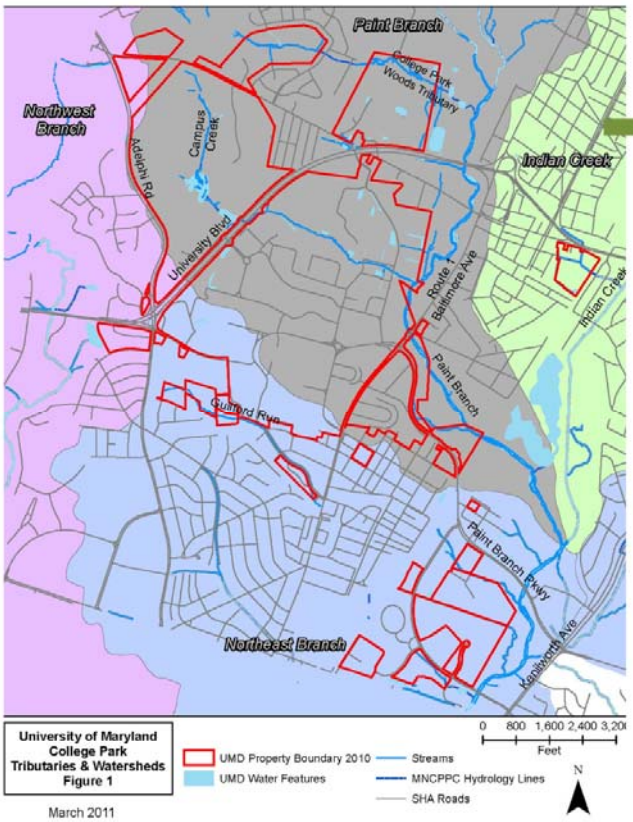


Goal 8: Increase the ability of the campus natural hydrologic cycle to deal appropriately with stormwater run-off.

Recommended Actions:

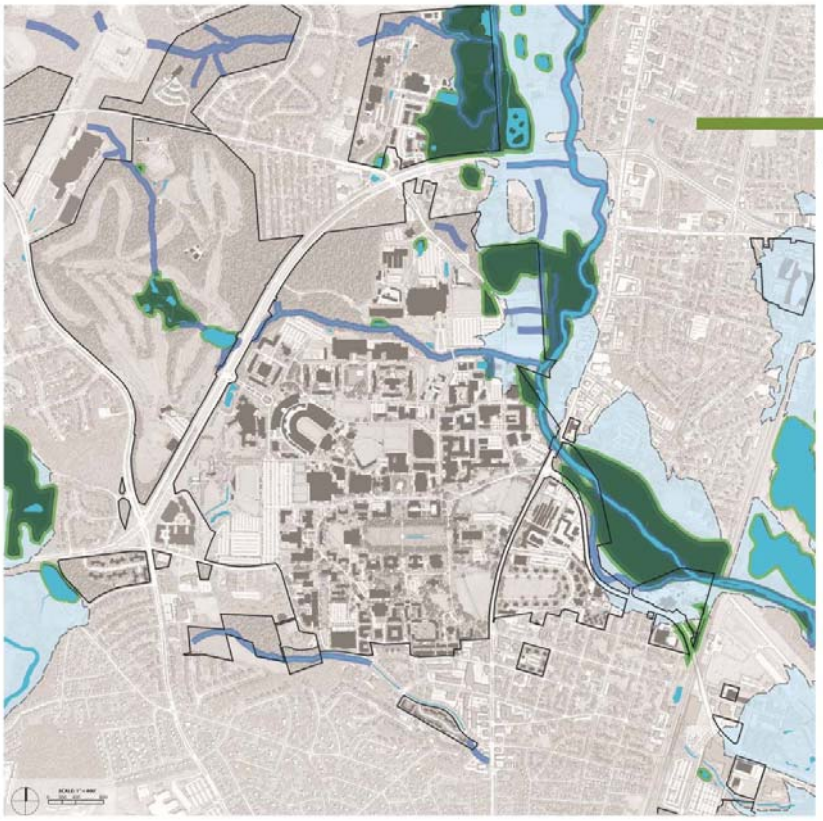
- Implement mitigation measures such as Low Impact Development (LID) and Environmental Site Design (ESD) projects to control 100% of the stormwater runoff from campus, exceeding the requirements of the Maryland Department of the Environment.
- Maximize use of stormwater as a stored resource for irrigation by capturing rainwater and stormwater through installation of cisterns and underground recharge facilities.
- Restore the University Golf Course ponds as needed to reduce potable water use for irrigation by 50 percent.
- Decrease the percentage of impervious surface on campus through pervious paving, green roof applications and appropriate landscapes not associated with construction.
- Convert appropriate lawns into meadow, forest, gardens, or other landscapes that more effectively manage stormwater.

regional watersheds



hydrology

stream buffers



- approximate 100-year Paint Branch floodplain
- current wetlands delineated by DNR + UMD
- current waterbodies
- riparian buffers (50')
- wetland buffers (25')

Goal 9: Plan and manage utility systems to avoid conflict with landscape and environmental improvements.

Recommended Actions:

- Incorporate stormwater into the landscape through Environmental Site Design and decorative features with interpretation.
- Identify and construct utility corridors to concentrate utilities into predictable and manageable systems, and maximize Botanical and environmental development where improvements can be sustained without utility disturbance.

B. Landscape Design and Land Use

The campus was designated as an Arboretum and Botanical Garden in 2008, and the University has used this special opportunity to create a comprehensive design for the entire campus. The landscape defines the campus as a unique and attractive place for students, faculty, staff, alumni, and visitors. It is the images of campus,-- the white oak on the Chapel Lawn, the tree canopies behind the residential high rises, the garden of memory and reflection, and myriad other settings -- that form a common bond for all those who have made the campus their home.

The aim of this plan is to organize landscape and open space, together with campus architecture, in ways that promote community and social interaction, facilitate outdoor learning, and provide spaces for recreation. Landscape design will be used to expand awareness of the natural contours, typologies, and ecological systems that surround us and our role in environmental stewardship. The existing and proposed gardens, urban forest canopy, natural forest stands, protected streams, and pedestrian walkways will increase the aesthetic appeal of the campus and preserve the space as an oasis in a complex urban environment. Finally, the strategies in this section are designed to conserve, preserve, develop and restore land in the best interests of the environment, the University community and the citizens of the region.

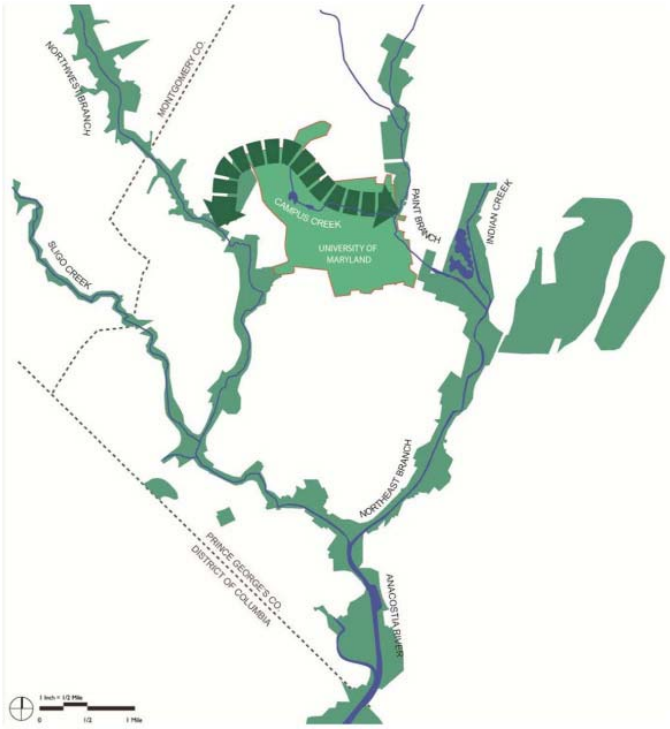
Goal 1: Identify, prioritize, fund and implement key environmental, open space and landscape projects as a critical part of the campus infrastructure.

Recommended Actions:

- Design and implement signature gateways to create a sense of arrival and welcome.
- Develop a diverse yet integrated campus network of open spaces.
- Establish a hierarchical and articulated network of primary accessible walkways, pervious wherever possible.

regional open space network

The University of Maryland completes a link in the regional network of green open space



campus open space framework

- Existing green network
- Existing campus open spaces
- Proposed network connections
- Campus corridors
- Proposed campus open space connections

Goal 2: Recognize and carefully assess the intrinsic natural value, the cultural value, the pedagogical value, and the commercial economic value of University land.

Recommended Actions:

- Maximize use of land and natural resources in education and research and coordinate awareness of this use through the Arboretum and Botanical Garden (ABG).
- Collect information on academic use of the land and landscape and incorporate into Botanical collection information while strengthening programmatic relevance of landscapes throughout campus.
- Inventory historical assets, including heritage tree designations, significant architecture and planning examples, and implement historic preservation policies.
- Evaluate and quantify the ecosystem services provided by natural resources.

Goal 3: Reveal campus heritage significance and develop strategies to preserve and enhance valued existing campus landscapes and plan and develop new open spaces and Botanical gardens.

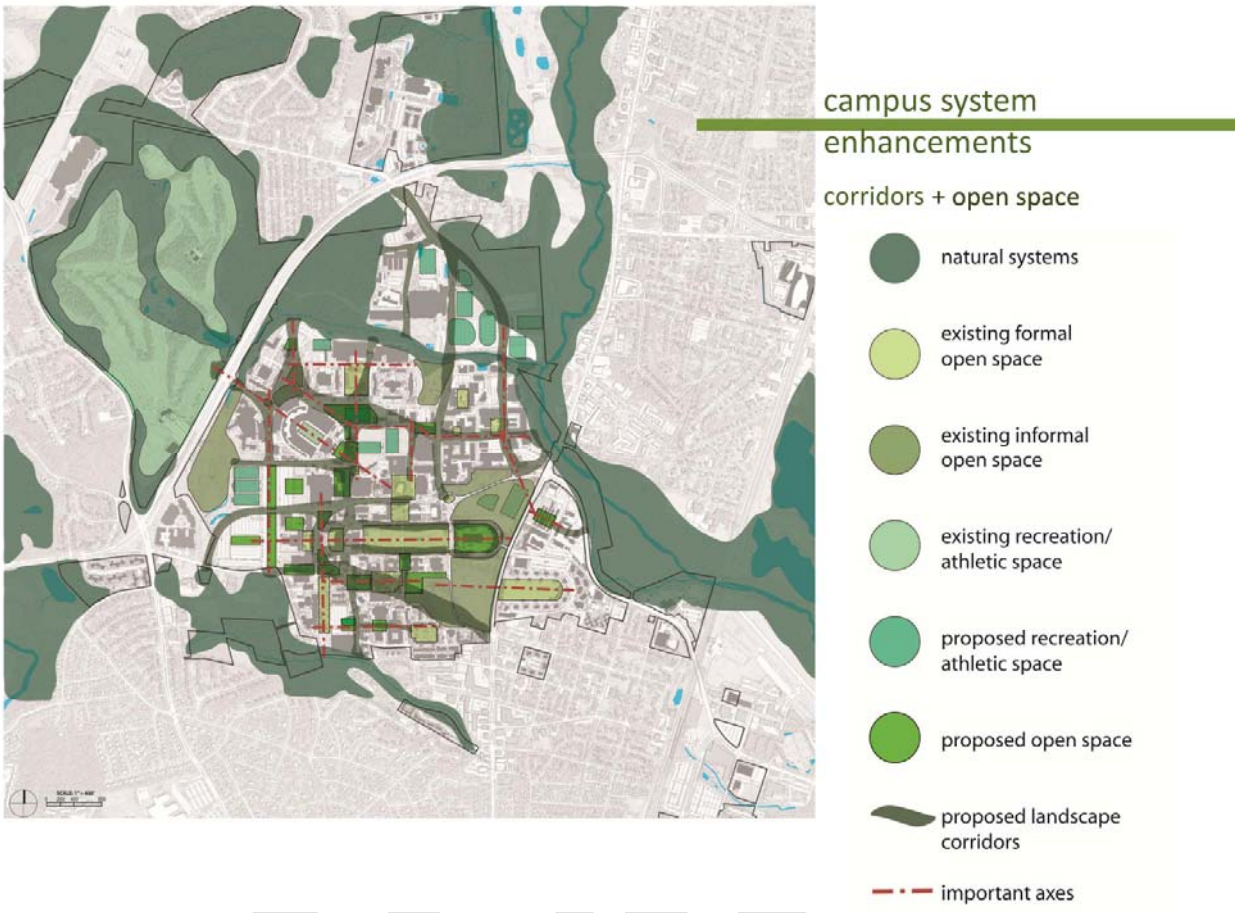
Recommended Actions:

- Inventory historical assets.
- Implement historic preservation policies.
- Interpret campus heritage through print, landmarks, and web sites.

Goal 4: Develop a landscape plan that uses the Arboretum and Botanical Garden to promote ecological awareness and celebrate and communicate a sense of place unique to the campus.

Recommended Actions:

- Use landscape interpretation and outreach to encourage human connectivity with the land, promote environmental awareness and increase understanding of the campus' relation to the region and the Chesapeake Bay.
- Establish a network of Botanical collections, representations and ecosystem replications which enhance the educational value of the ABG collection (teaching collection focused on mid-Atlantic native, adapted and appropriate non-invasive exotic vegetation of ornamental or environmental interest) while enhancing aesthetic appeal, wayfinding and campus identity.
- Design and construct a series of trails through natural areas to encourage academic study and understanding of these systems.
- Adopt a land stewardship plan to comprehensively monitor and manage environmental qualities such as degree of sedimentation, proliferation of invasive species, presence of wildlife, health of the forest canopy, as well as maintenance of Low Impact Development (LID) and Environmental Site Design (ESD) facilities.
- Update campus Tree Care Plan to strengthen protection for existing specimen trees.
- Strengthen design and construction standards to reflect arboretum collection policy and consistent environmental site design.
- Support the continued greening of the University Golf Course, including maintaining its certification as an Audubon International Cooperative Sanctuary, and its use as a natural laboratory for education and research.

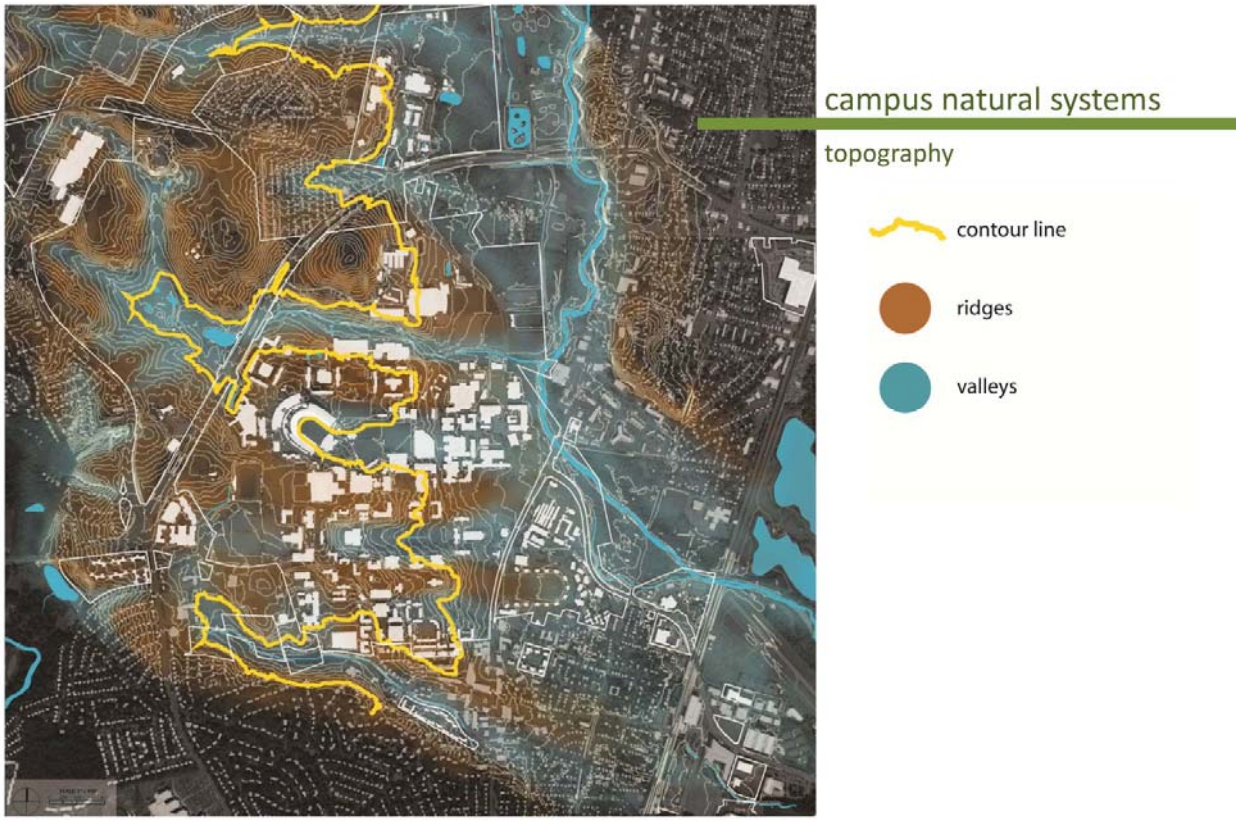


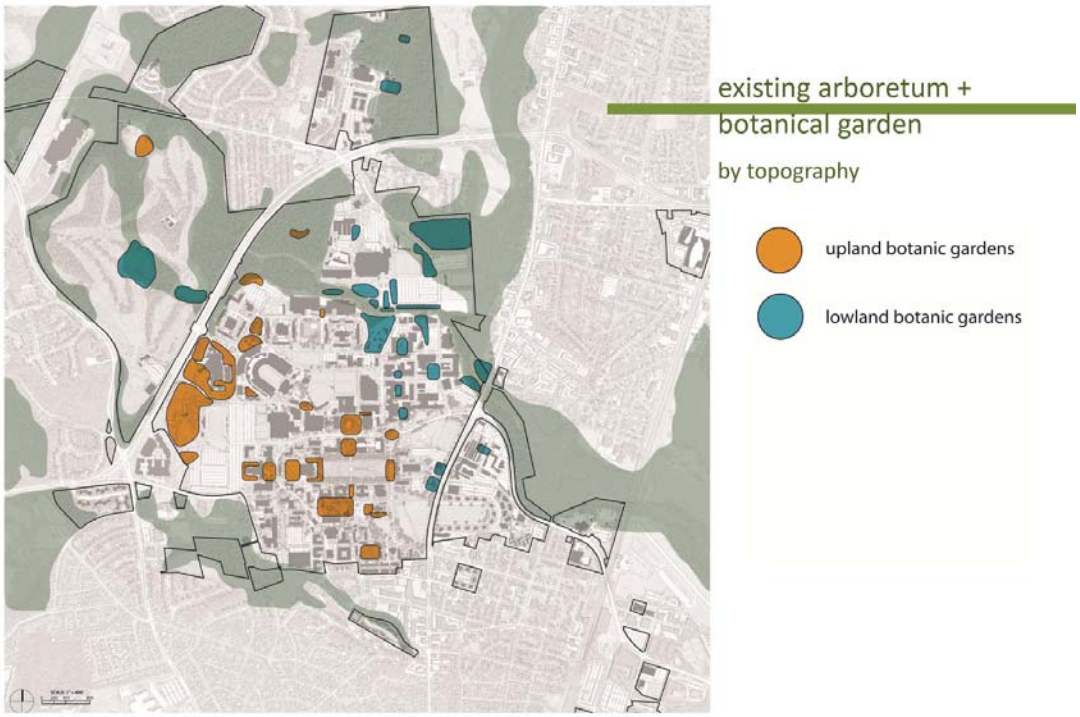
Goal 5: Establish the Arboretum and Botanical Garden landscape as inclusive and accessible space that celebrates the University heritage, enhances personal security, and brings aesthetic pleasure to all campus citizens and visitors.

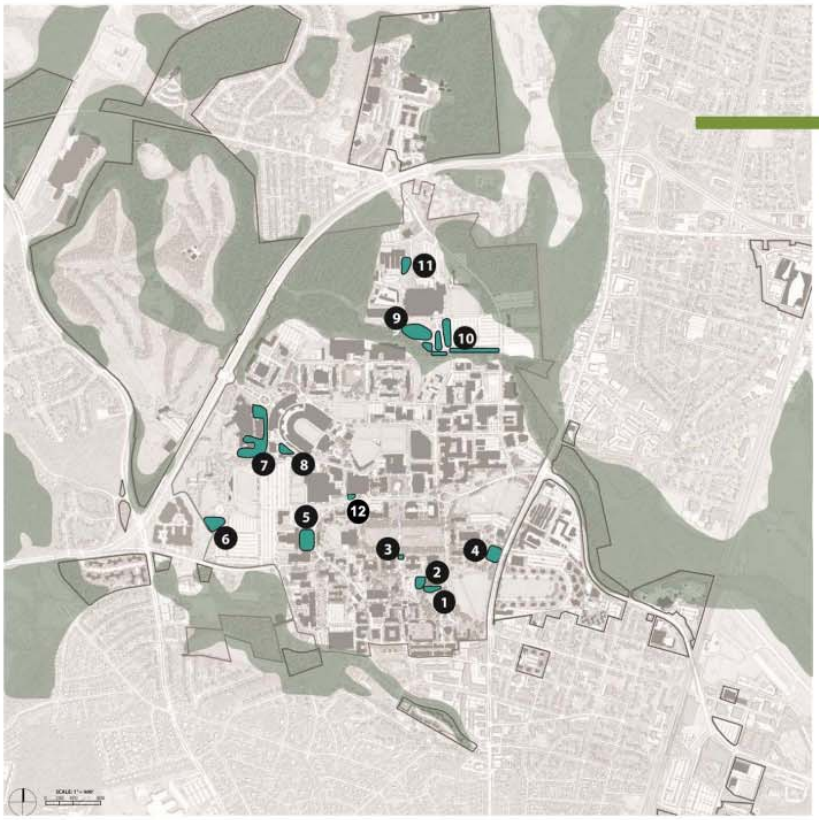
Recommended Actions:

- Use planning concepts such as gateways, districts, centers and edges, and campus landmarks to support wayfinding, connectivity and branding as well as to increase personal security.
- Develop a diverse, yet integrated campus network of open spaces that serve as gathering spaces with outdoor seating, appropriate lighting and programming to increase use and address security.
- Create landmarks, milestones and landscape features that attract and engage pedestrians including art, fitness goals and historical features and interpretations to improve the pedestrian environment.
- Incorporate streetscapes that physically separate modes of travel with barriers or vegetative buffers were space permits.
- Connect the North Gate Park pedestrian bridge to Regents Drive and the center of campus through a pedestrian and bicycle enhanced series of plazas and modified roadway along Stadium Drive from Paint Branch Drive to Regents Drive while retaining service access.

- Integrate into the landscape spaces opportunities for appropriate exercise and recreational activities of students such as recreational trails through woodlands and wetlands and along Campus Creek.







existing arboretum + botanical garden

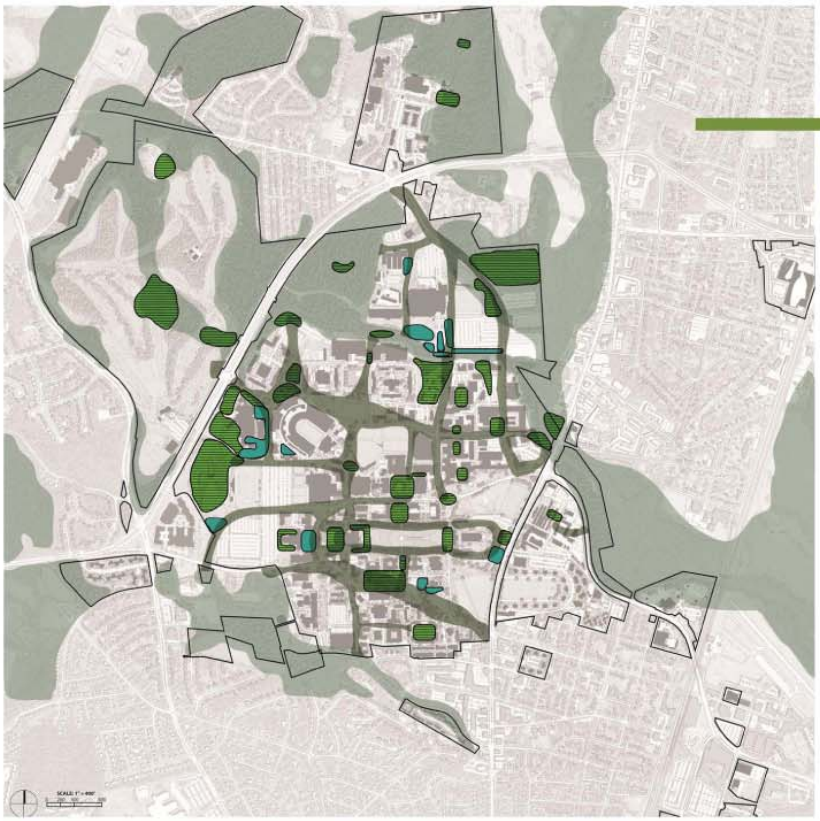
existing gardens

natural systems

existing botanical expressions

Existing Garden Names

1. Garden of Reflection + Remembrance
2. West Chapel Garden
3. McKeldin Native Shade Garden
4. Rossborough Gardens
5. Tawes Plaza
6. Garden of Peace + Friendship
7. The Garden Walk at CSPAC
8. Moxley Gardens
9. Comcast Native Meadows
10. Comcast Rain Gardens
11. Greenhouse Native Sun Garden
12. Henson Garden



existing arboretum + botanical garden

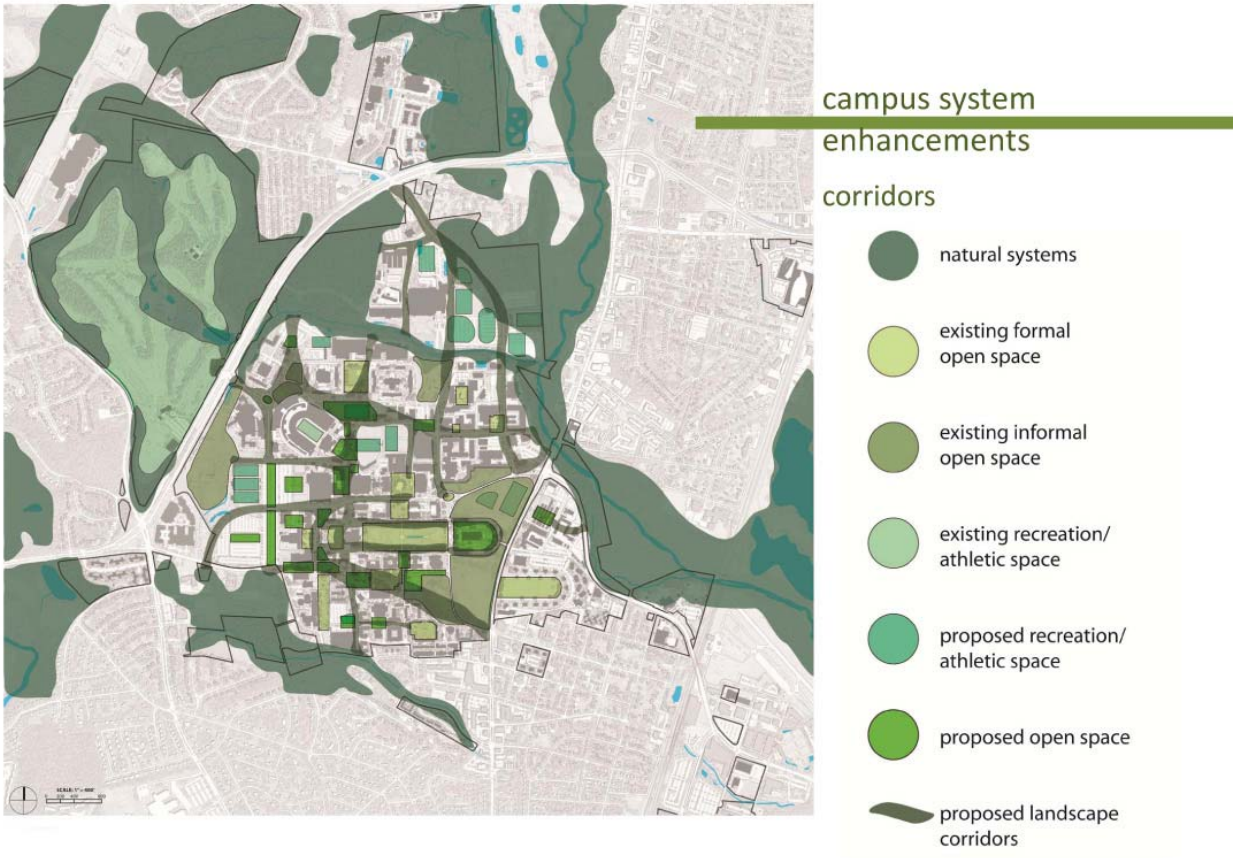
future corridors

natural systems

existing botanical expressions

future botanical expressions

proposed arboretum corridors



C. Vehicular and Pedestrian Circulation Systems

The University of Maryland is an urban campus with faculty, students, and staff who live both on campus and throughout a large metropolitan area. As a result, the University requires a multi-modal system of vehicle and personal circulation systems for those who need to access the campus and to move across it. Safe, pleasant, and efficient ways to move around the campus are a priority. Equally important is the integration of campus systems with the transportation systems that serve the neighborhood and surrounding communities. This plan calls for universally accessible walkways, campus roads, campus and transportation systems that create a positive experience for pedestrians, bicyclists, and those using scooters, motorcycles or automobiles. The goals below acknowledge the importance of all modes of transportation and suggest ways to improve their connectivity.

Goal 1: Support a campus-wide network of effective transportation.

Recommended Actions:

- Ensure a network of well-designed and maintained sidewalks, bicycle paths, bicycle lanes, and roads (considering grade, materials, and water run-off) which serve pedestrians, people with mobility-challenges, bicyclists, transit, scooters/motorcycles, cars, and service vehicles.

- Integrate transit with campus features to support seamless connections between transit (Shuttle-UM buses, regional buses, and the Purple Line), pedestrians, bicycles, and cars.
- Use consistent "wayfinding" signage throughout campus for pedestrians, bicyclists, transit users, and drivers.
- Redesign parking lots (e.g., Lot 1) to improve the safety, access, and comfort for pedestrians and bicyclists:
  - Implement speed reducing features
  - Ensure pedestrians and bicyclists have a designated pathway to travel
  - Accept reductions in the number of parking spaces when parking loss results in gains for pedestrians and/or bicyclists and/or as part of parking garage construction
- Explore demand for and feasibility of an intra-campus shuttle system to facilitate movement throughout campus.
- Ensure safe and convenient connections to East Campus development.

Goal 2: Provide a coherent network of road and traffic patterns using a whole-system approach.

Recommended Actions:

- Facilitate movement on and along Campus Drive to enhance the pedestrian experience, accommodate bicycles, and maintain access for vehicles.
- Extend Campus Drive through parking Lot 1 as part of the implementation of the Purple Line.
- Limit vehicular access on Campus Drive between Tawes and Anne Arundel Hall to support the pedestrian connections on campus.
- Implement restricted vehicular access on Stadium Drive between Regents Drive and Paint Branch Drive to enhance the pedestrian environment.
- Realign Stadium Drive by Byrd Stadium to accommodate indoor practice facilities.

Goal 3: Promote communication strategies that support a smooth system of transportation and movement across campus.

Recommended Actions:

- Reduce vehicular congestion on campus by directing and assisting drivers in arriving at their destination without traversing campus through the dissemination of travel information and signage describing alternative routes, parking locations, and transportation mode options.
- Inform the University community (including prospective students, employees, and visitors) about the University's interconnected campus transportation network: walking, bicycle, transit (Shuttle-UM, regional bus, Metrorail, and Purple Line) and vehicle options (scooters, motorcycles, carpools, vanpools, short-term auto rental, and cars).
- Develop campus 'rules of the road' which include a transportation right-of-way hierarchy for pedestrians, bicyclists, scooters, motorcycles, and cars; educate the campus community about the rules and enforce the rules consistently and continuously.
- Provide transportation information (pertaining to commuting and parking) to all new members of the University community: undergraduate, transfer, and graduate students, and employees. Provide information electronically and in other forms to all members of the University community (particularly during new student and orientations).

Goal 4: Collaborate with regional entities to enhance movement to and from campus.

Recommended Actions:

- Coordinate with the Washington Metropolitan Area Transit Authority (WMATA) regarding signage and wayfinding at off-campus WMATA stations.
- Collaborate with the Maryland State Highway Administration and other entities regarding access to campus and implications for pedestrians, bicyclists, and users of transit and private vehicles.
- Work with appropriate federal, state, and local agencies to find solutions to help alleviate Baltimore Boulevard congestion caused by traffic to and from campus.
- Collaborate with regional transit providers to implement a marketing campaign encouraging transit use by the University community.
- Share demographic and other data with regional transit providers to encourage the provision of service to the University community.
- Work with regional transit providers to eliminate service redundancies between Shuttle-UM and other services.
- Support a Purple Line alignment and locations of stations which facilitate connectivity on campus, encourage use of multimodal transportation, and serve the highest campus populations.
- Work with the Maryland Transit Administration (MTA) to modify existing roadways in support of the selected Purple Line alignment.

Goal 5: Support a more pedestrian-friendly campus that encourages and supports efficient, pleasant, and safe walking experiences.

Recommended Actions:

- Establish a network of pedestrian pathways and spaces connecting campus entries, parking lots, transit hubs, residential communities, and major campus destinations.
- Improve intersections (particularly Stadium Drive and Regents Drive intersection) to reduce conflicts between pedestrians, bicyclists, and vehicles through signage and consistent traffic control techniques, including recognized crosswalk and curb ramp design, pedestrian "table crossings" at high-volume crosswalks, narrowed vehicle lanes, and dedicated bicycle lanes.
- Implement physical changes in parking lots to improve safety and comfort for pedestrians.
- In conjunction with redevelopment of athletic facilities, redesign the north-south pedestrian pathway between the North Campus and the Stamp Student Union.

Goal 6: Ensure that campus walkways are appealing and comfortable places.

Recommended Actions:

- Improve pedestrian thoroughfares by providing a series of consistent design elements.
- Locate gardens adjacent to important thoroughfares and provide pleasant landscapes, gathering places, seating, and other amenities.

- Support initiatives to improve pedestrian safety and security on campus particularly after dark ensuring walkways are sufficiently lit, have adequate sightlines, and have security infrastructure.
- Widen and improve any shared-use paths so that pedestrians and bicycles can utilize them safely.
- Use landscaping along streets for traffic calming and as a buffer between pedestrians and other transportation modes.
- Use wayfinding elements of landscaping, lighting, sound, and art to support pleasant walking experiences.
- Use building design, land use, and open space design to facilitate community activity within the pedestrian network.
- Install bicycle dismount zones in pedestrian-dense areas, for example the front of South Campus Dining Hall, to decrease conflicts between bicyclists and pedestrians.

Goal 7: Reduce barriers for pedestrians and ensure sidewalk design and crosswalks are accessible to all, regardless of their abilities.

Recommended Actions:

- Provide paths from accessible (handicap) parking to accessible building entrances.
- Continue to reduce/remove barriers for wheelchairs on pathways.
- Ensure an appropriate number of accessible parking spaces are convenient to desired locations.
- Develop and maintain accessible path wayfinding for those using wheelchairs.
- Install in-road "Stop for Pedestrians" bollards where yielding to pedestrians has been problematic.
- Establish 11 foot vehicular travel lanes as the standard, preferred lane width throughout campus to reduce pedestrian crossing distances, minimize impervious surfaces, and provide traffic calming benefits.

Goal 8: Partner with adjacent jurisdictions to ensure paths, sidewalks, and roads in the surrounding communities facilitate walking to campus.

Recommended Actions:

- Support the installation of traffic signals that facilitate pedestrian crossings on Baltimore Avenue and University Boulevard.
- Enhance access to campus on the periphery by enhancing campus entry intersections: improve crosswalks, accommodate accessibility needs, create median refuges, and install signage and lighting.

Goal 9: Support the growth of a bicycle culture that entices more commuters to ride bicycles to campus.

Recommended Actions:

- Publicize direct, safe and attractive bicycle routes to and from campus.
- Partner with adjacent jurisdictions to ensure paths and roads in the surrounding communities facilitate bicycling to campus.
    - Identify preferred campus access points from the surrounding area for bicyclists.
    - Support the development of bicycle paths, bicycle lanes, and shared roadways adjacent to campus and in the region.
    - Support the inclusion of bicycle facilities in the design of the Purple Line.

- Provide a continuous network of bicycleways throughout the campus by installing shared roadways, bicycle lanes, bicycle paths, and shared-use paths which are multimodal yet segregated by mode and designated with appropriate signage.
- Provide wayfinding for bicyclists indicating ways of accessing and traveling through campus.
- Provide and promote bicycle-related programs (e.g., bicycle registration, limited-use car parking passes, contingency ride home programs, and initiatives allowing bicycles on transit).
- Support bicycle rental and bicycle sharing programs.
- Designate secure, protected, short- and long-term bicycle parking throughout campus that is accessible to bicycle routes and convenient to buildings and respectful of any bicycle dismount zones.
- Publicize services which facilitate bicycle use (e.g., Campus Recreation Services' pass for use of shower facilities).
- Ensure that bicycle thoroughfares include safety and security features, and are continuous, appealing, and comfortable for bicyclists.

Goal 10: As part of a multi-modal transit friendly campus, support a high quality Shuttle-UM system that provide service to and across campus.

Recommended Actions:

- Support the reconfiguration of existing Shuttle-UM routes and the implementation of new routes to serve the maximum number of people who currently drive cars to campus, particularly those people living within a 1-2 mile close-range of campus.
- Examine the residential locations of the campus community (faculty, staff, and students) living further than 1-2 miles from campus to determine transit service requirements.
- Implement a more efficient campus circulator system that takes passengers point to point.

Goal 11: Install infrastructure which supports and enhances the use of transit.

Recommended Actions:

- Ensure bus shelters complement campus aesthetics, protect from inclement weather, are comfortable and well lit, are pleasantly situated in the landscape, are sufficient in number and location, and have appropriate connections to pedestrian and bicycling routes.
- Enhance existing technology and install additional technology to support transit use including fare card machines, electronic schedules, real-time route tracking, and other services.

Goal 12: Provide programs and practices to encourage the use of transit, carpools, and other alternatives to single occupancy vehicles.

Recommended Actions:

- Expand the use and availability of convenient and cost-effective occasional parking permits.
- Publicize the use of pre-tax funds and payroll deduction for transit and parking at transit sites.

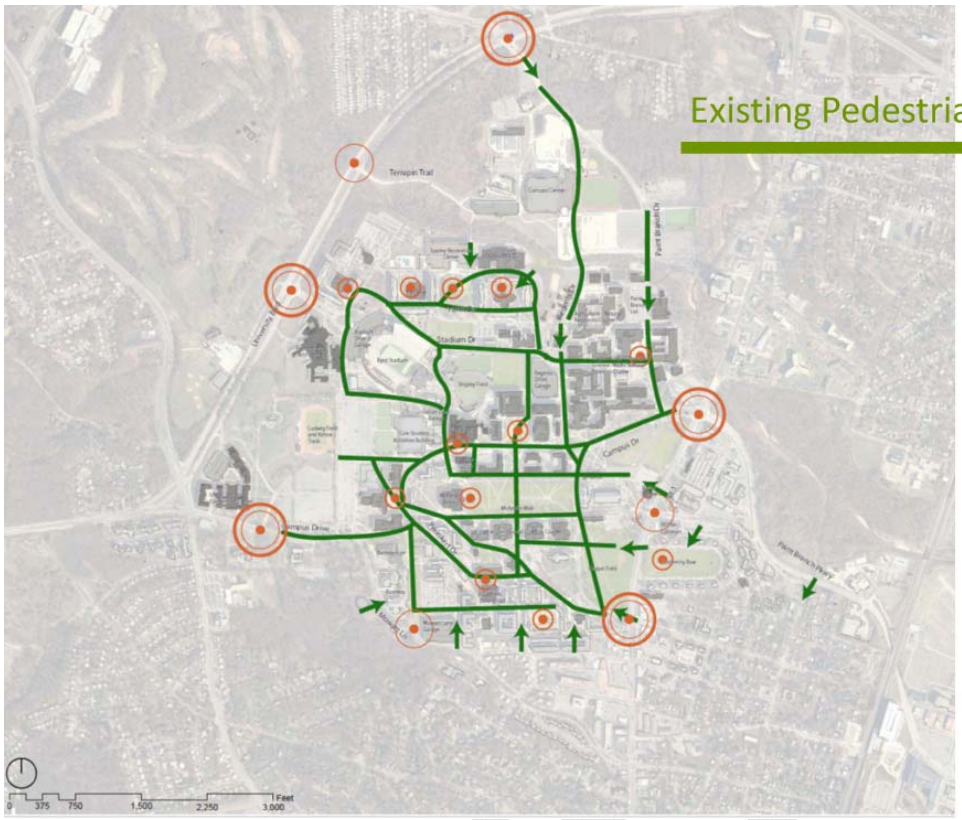
- Support flextime and teleworking as practical strategies for reducing vehicular congestion.
- Implement and encourage the use of incentive programs such as guaranteed contingency ride home programs and occasional parking passes.

Goal 13: Reduce personal vehicle congestion on campus.

Recommended Actions:

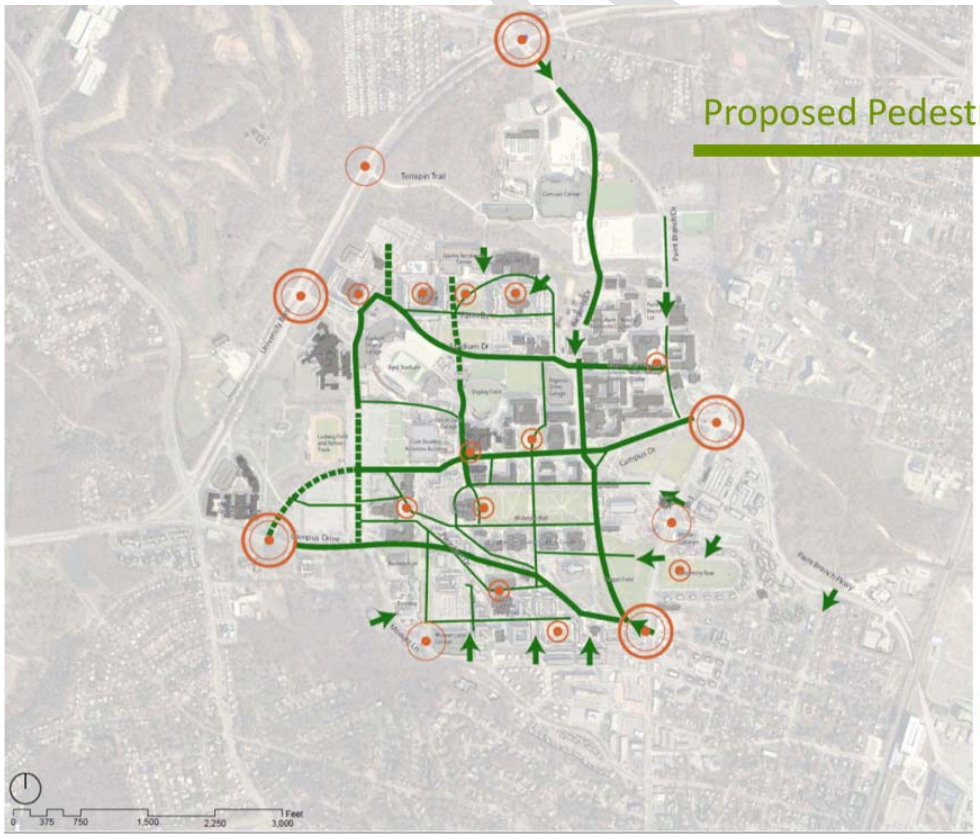
- Use parking policies and availability to reduce the need and ability to park on campus.
- Locate new garages on the periphery of campus to reduce vehicle traffic in the campus core.
- Continue and expand dedicated Shuttle-UM service to specific apartment and housing areas.
- Reduce surface parking from the center of campus to reduce vehicular traffic in heavily pedestrian areas.
- Utilize selected green areas to support episodic large scale parking needs at special events without requiring additional surface parking lots on campus.
- Encourage provision of chartered shuttle bus service to nearby hotels and parking areas during high volume visitation events.
- Implement existing policies restricting freshmen and sophomore students from having cars on campus.
- Maintain Union Lane Parking Garage on its current site or some similarly-located alternative parking opportunity to meet the exceptional needs for private vehicular access to nearby facilities (i.e., Stamp Student Union), the increased demand for parking if surface lots on the interior of campus are eliminated, and to serve as a location for bicycle parking.
- Communicate appropriate campus entrances for personal vehicle access to parking lots or destinations to minimize unnecessary cross-campus traffic.
- Support carpooling and vanpooling.
    - Develop and publicize a range of carpooling and vanpooling incentives including driver-rider matching systems, preferred parking locations, reduced parking permit fees, and pre-tax parking payments at park-and-ride facilities.
    - Explore feasibility of vanpools where demand for services exists and implement if possible.

Existing Pedestrian Networks

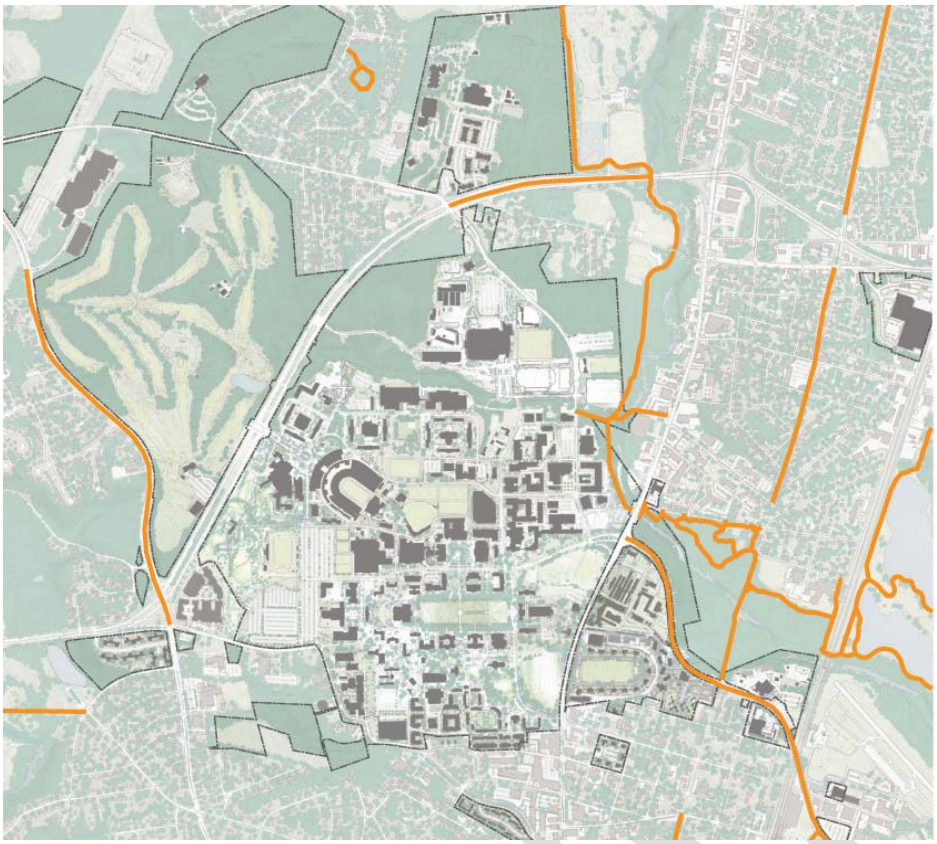


Nodes Into Campus
Activity Node
Primary Pedestrian Path

Proposed Pedestrian Networks



Nodes Into Campus
Activity Node
Primary Pedestrian Path



Existing Regional Bike Routes

REGIONAL BICYCLE ROUTES:
Existing Facilities

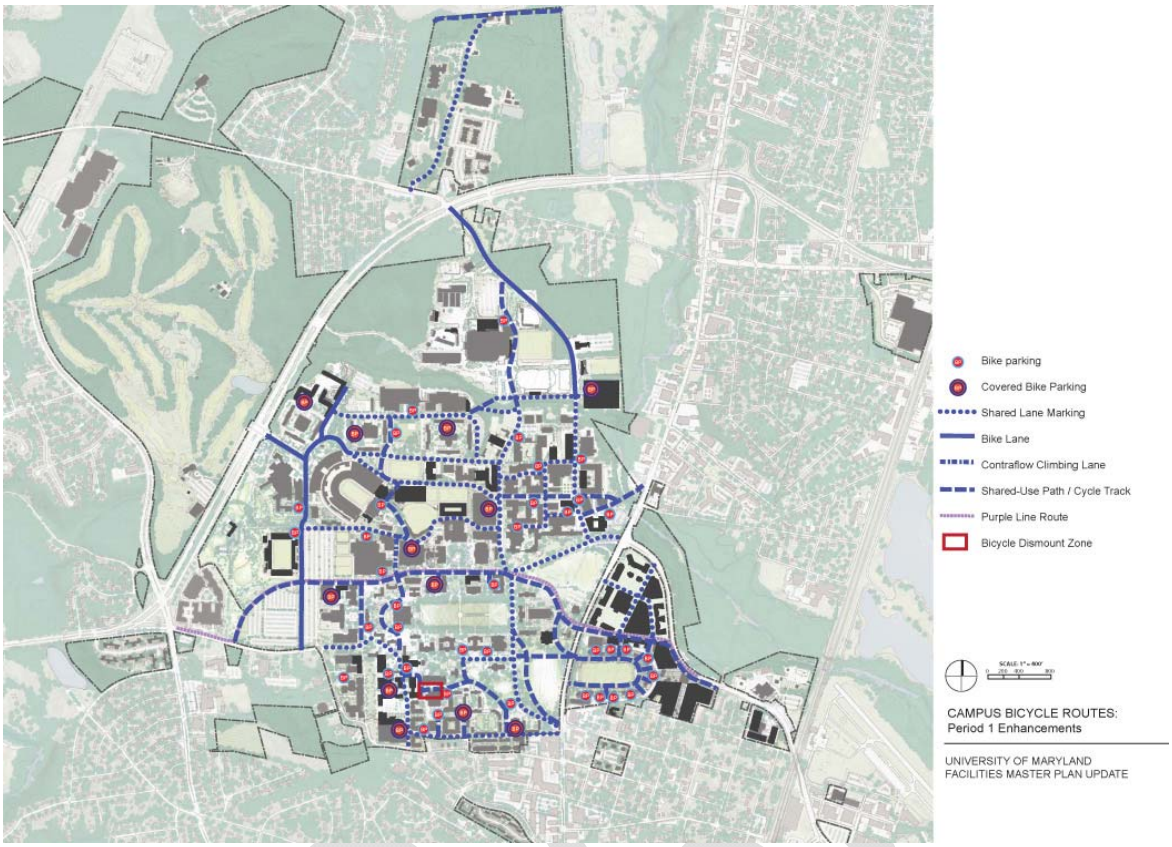
UNIVERSITY OF MARYLAND
FACILITIES MASTER PLAN UPDATE

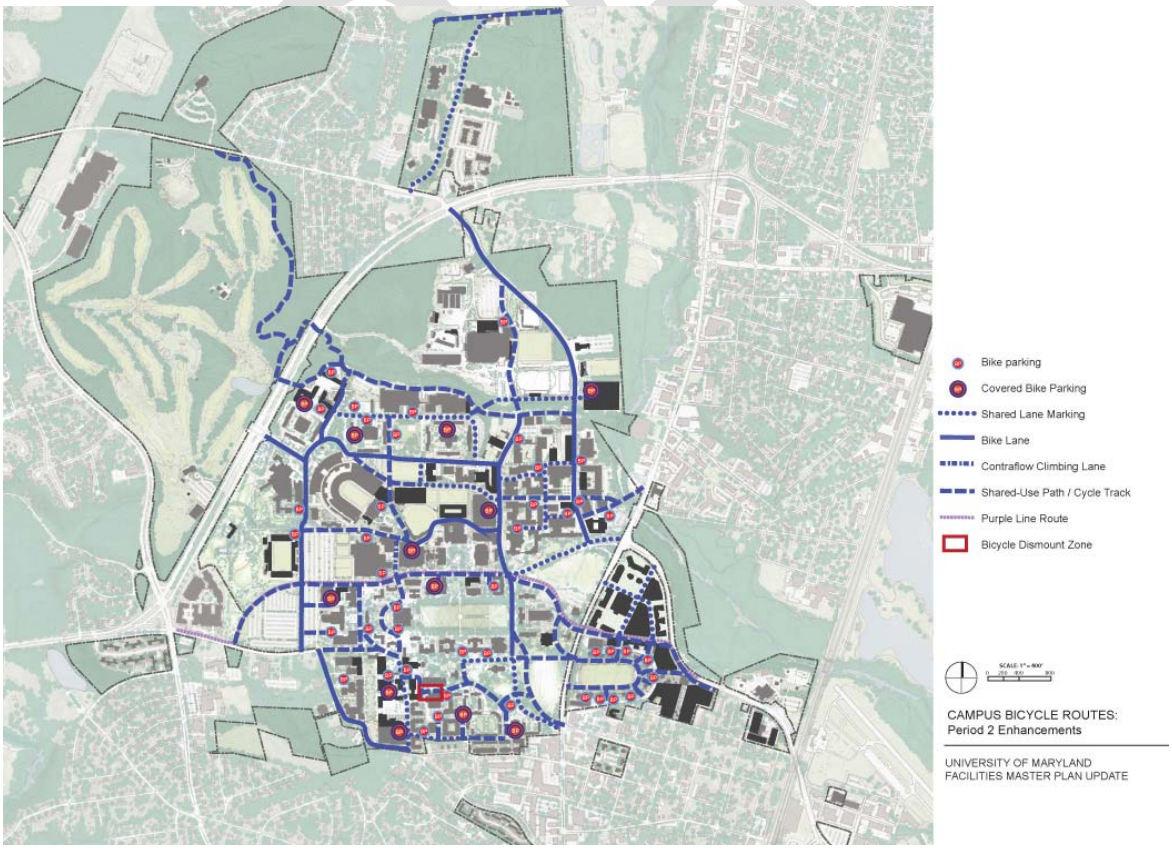
Existing Regional Bike Routes

Proposed Regional Bike Route Connections

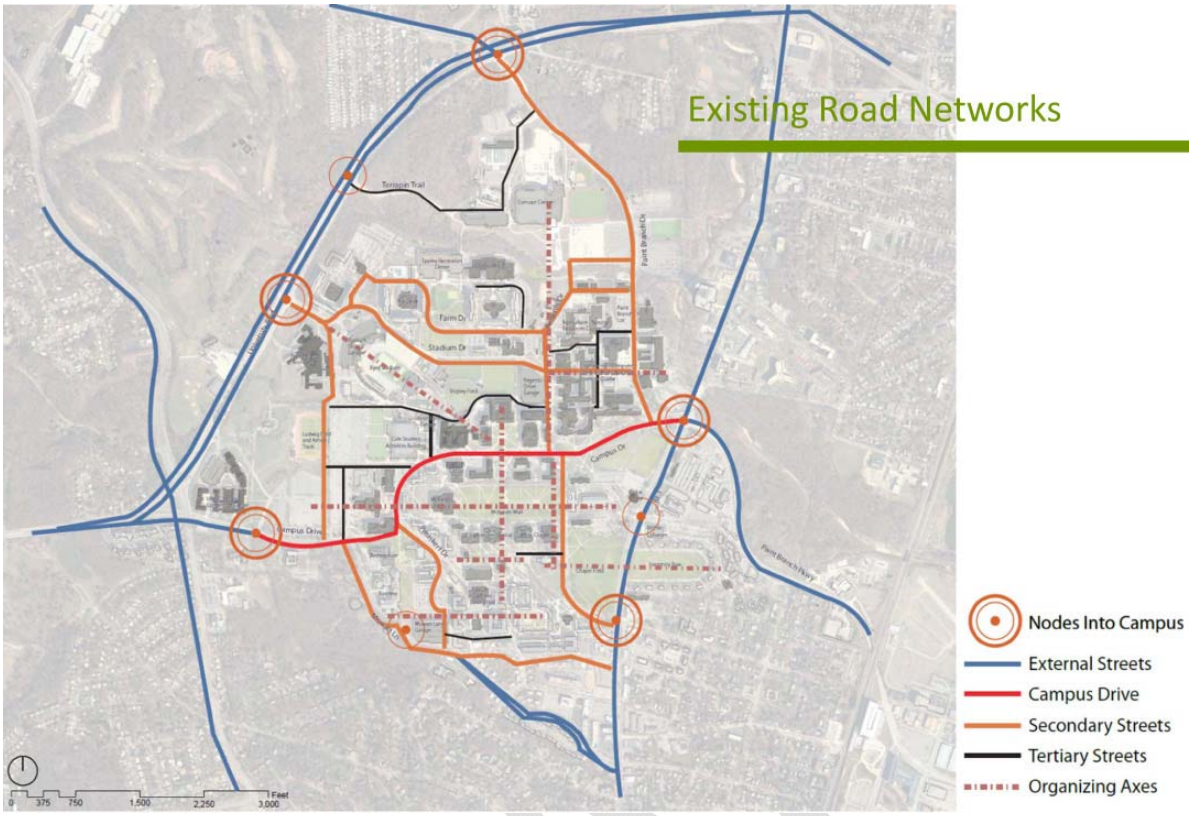
REGIONAL BICYCLE ROUTES:
Proposed Connections

UNIVERSITY OF MARYLAND
FACILITIES MASTER PLAN UPDATE

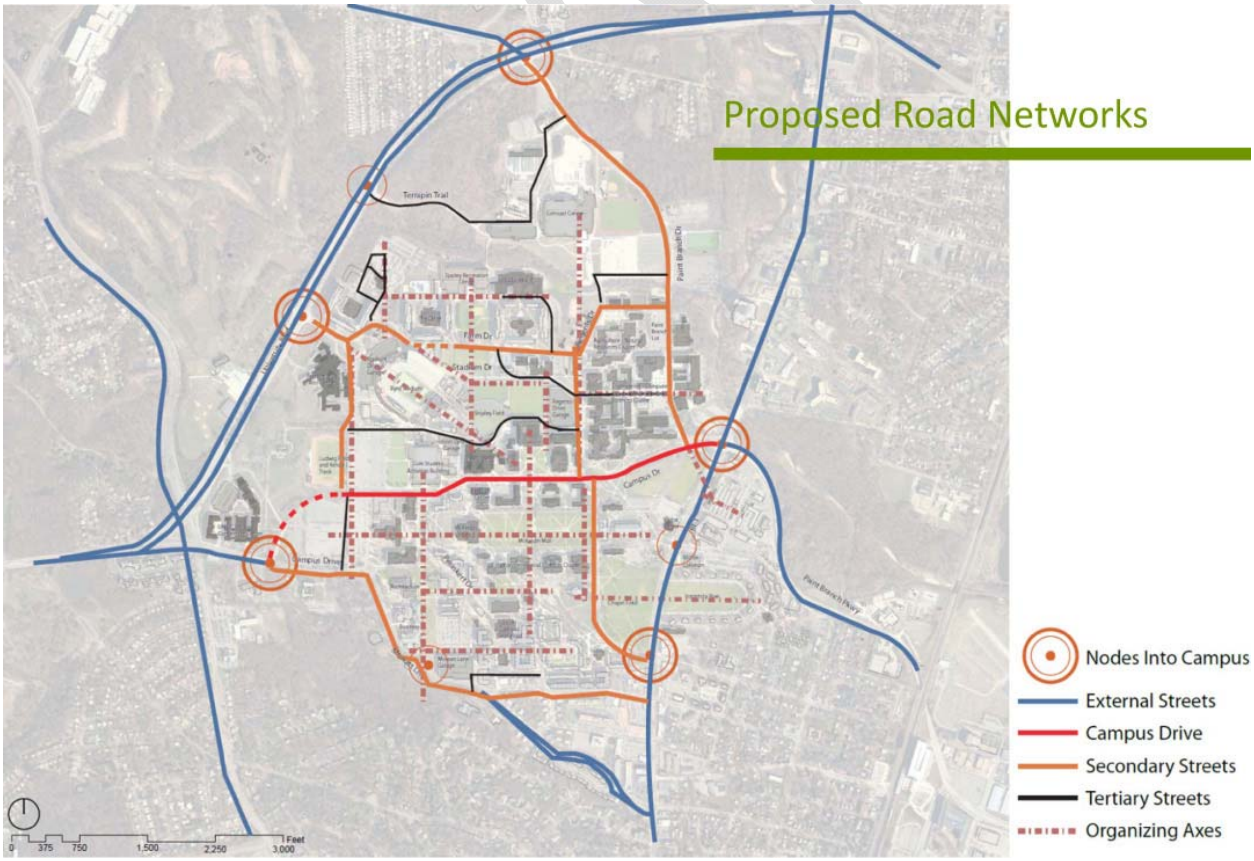

Bike parking
Covered Bike Parking
Shared Lane Marking
Bike Lane
Contraflow Climbing Lane
Shared-Use Path / Cycle Track
Purple Line Route
Bicycle Dismount Zone
CAMPUS BICYCLE ROUTES:
Period 1 Enhancements
UNIVERSITY OF MARYLAND
FACILITIES MASTER PLAN UPDATE

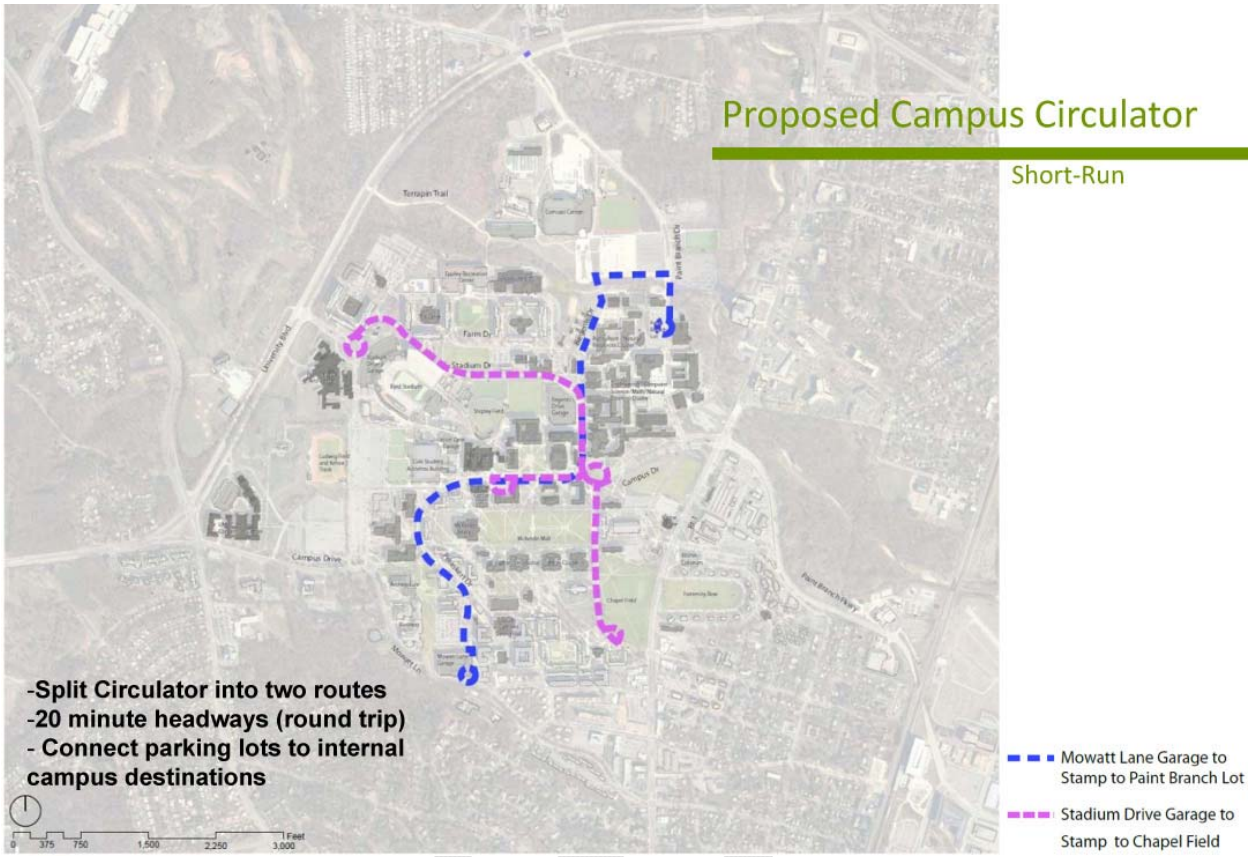

Bike parking
Covered Bike Parking
Shared Lane Marking
Bike Lane
Contraflow Climbing Lane
Shared-Use Path / Cycle Track
Purple Line Route
Bicycle Dismount Zone
CAMPUS BICYCLE ROUTES:
Period 2 Enhancements
UNIVERSITY OF MARYLAND
FACILITIES MASTER PLAN UPDATE

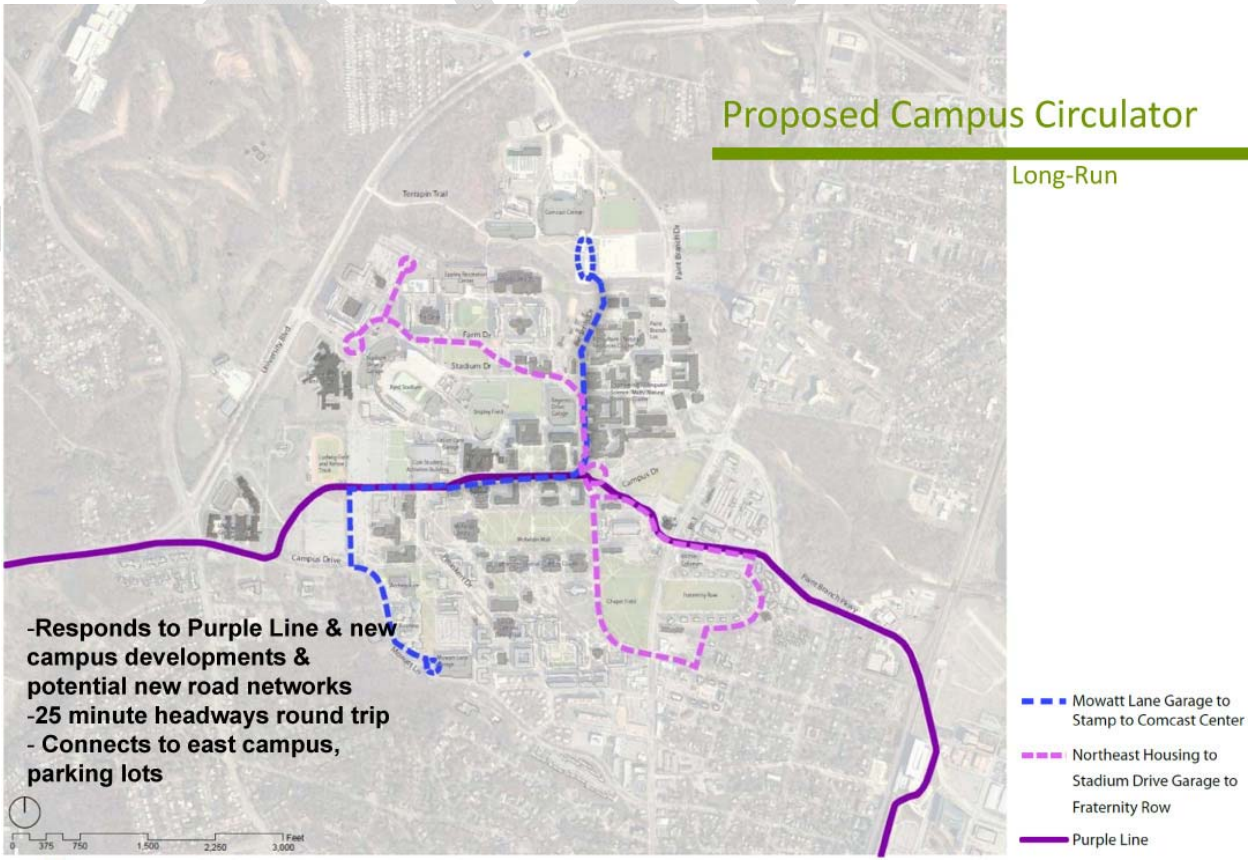
Existing Road Networks

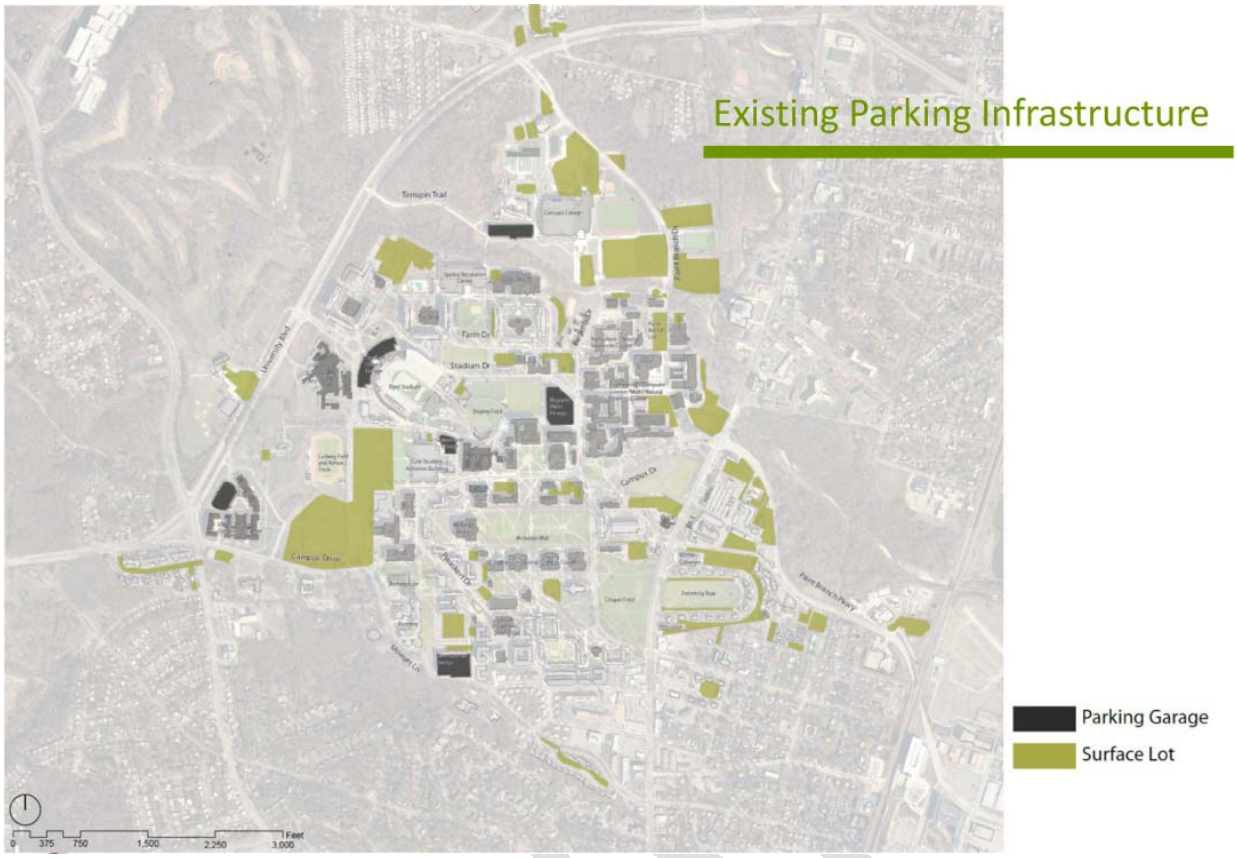


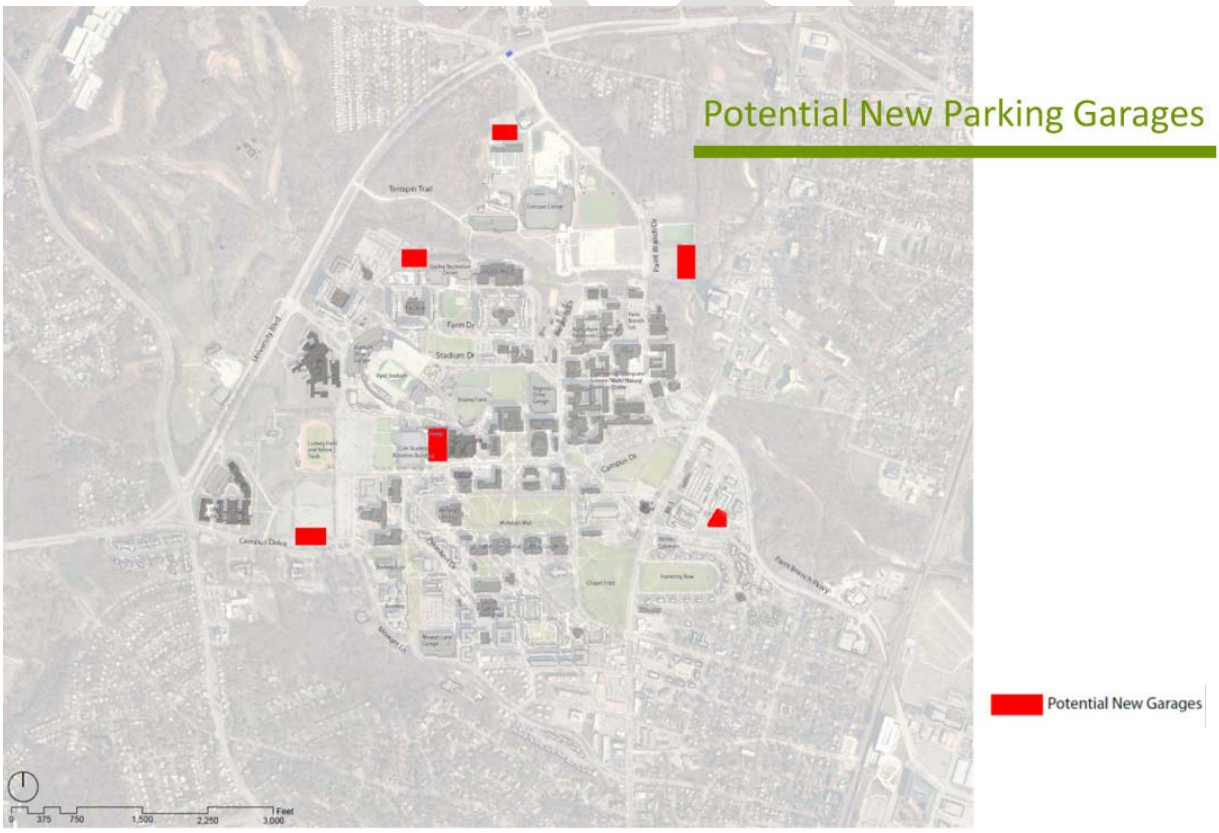
Proposed Road Networks



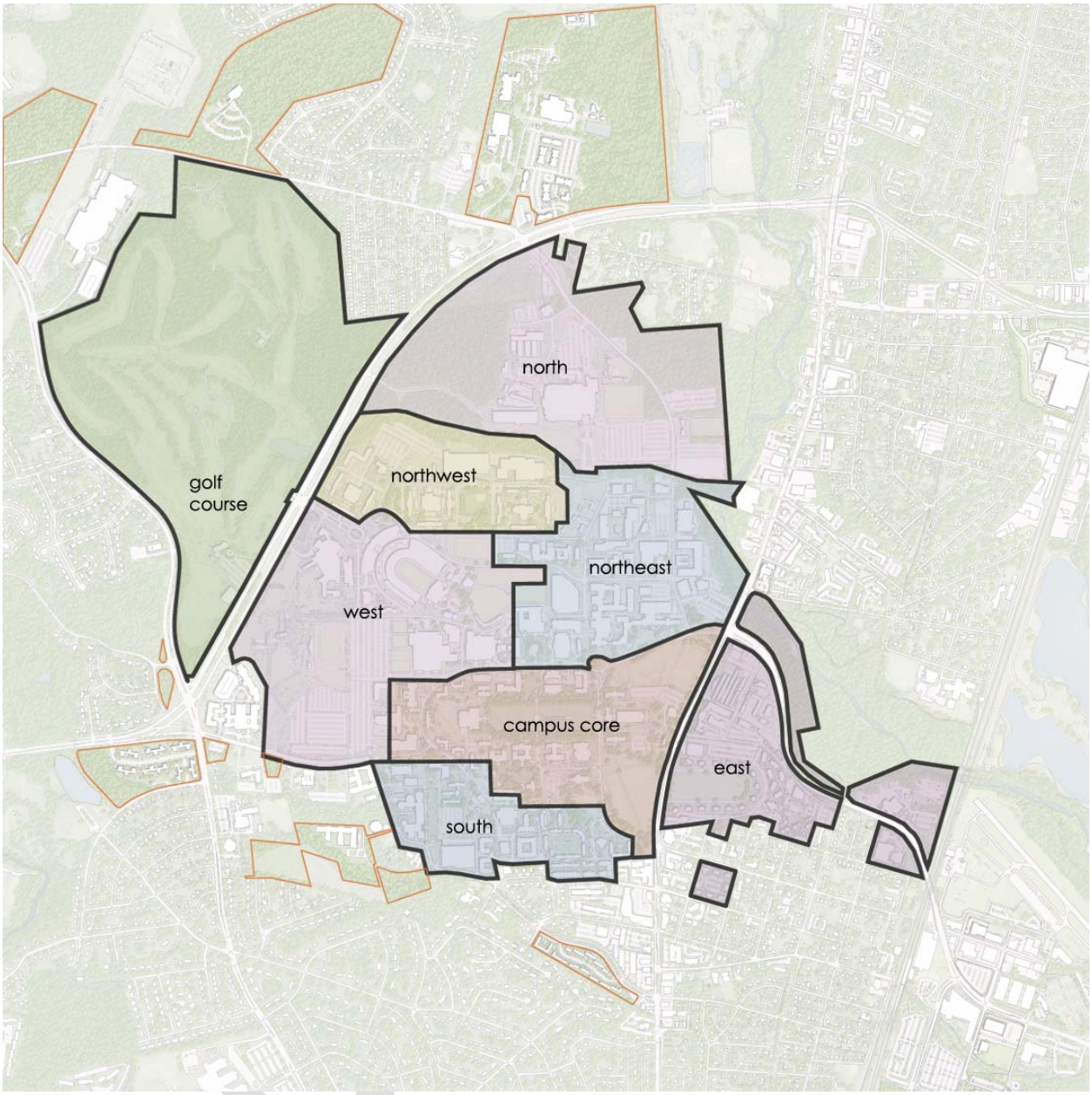

Proposed Campus Circulator
Short-Run
-Split Circulator into two routes
-20 minute headways (round trip)
- Connect parking lots to internal campus destinations
Mowatt Lane Garage to Stamp to Paint Branch Lot
Stadium Drive Garage to Stamp to Chapel Field


Proposed Campus Circulator
Long-Run
-Responds to Purple Line & new campus developments & potential new road networks
-25 minute headways round trip
- Connects to east campus, parking lots
Mowatt Lane Garage to Stamp to Comcast Center
Northeast Housing to Stadium Drive Garage to Fraternity Row
Purple Line


Existing Parking Infrastructure
Terrapin Trail
Farm Dr
Stadium Dr
Campus Drive
Campus Dr
Paint Branch Pkwy
Parking Garage
Surface Lot
0 375 750 1,500 2,250 3,000 Feet


Potential New Parking Garages
Terrapin Trail
Farm Dr
Stadium Dr
Campus Drive
Campus Dr
Paint Branch Pkwy
Potential New Garages
0 375 750 1,500 2,250 3,000 Feet

D. District Plans



The Campus Districts and Campus Growth: An Overview

The campus is comprised of eight districts on the main campus (Figure) plus outlying university-owned properties. The size of each district is defined by an approximately seven minute walk radius. The districts have developed over time, reflecting the history, growth, and evolution of the campus. The landscape has evolved from natural woodland and meadows, to agrarian fields, to the romantic and classical character of campus open spaces, to more "urban" areas, resulting in the general orthogonal street grid with greater density of buildings found in some areas.

Each district has its own culture and character, evidenced in the district's natural features, open spaces, building types, and their uses. Our plans are designed to recognize and celebrate the uniqueness of each district, embrace the most positive characteristics of the campus and extend them forward into the future.

Plans will support the identity of each district as defined by the landscape and architectural character, topography, use, and density. The districts' identities will be reinforced by emphasis on gathering spaces and significant buildings. Implementing the recommendations for landscape design and circulation patterns will improve the visual and physical connectivity of the districts and emphasize their relationship to surrounding landscapes and neighborhoods.

To enhance connectivity across campus we will create a more coherent and consistent signage system with appropriate hierarchy for pedestrians, bicycles, and vehicles. Signage and the wayfinding cues will be extended beyond the physical campus onto surrounding roads and included in websites. Plans call for more consistent streetscapes, including sidewalks, street trees, bioswales and rainwater infiltration and on-road bicycle lanes. To improve the sense of place and identity of the entire campus, plans are to improve the campus gateway image, particularly on University Boulevard, Campus Drive, and Mowatt Lane.

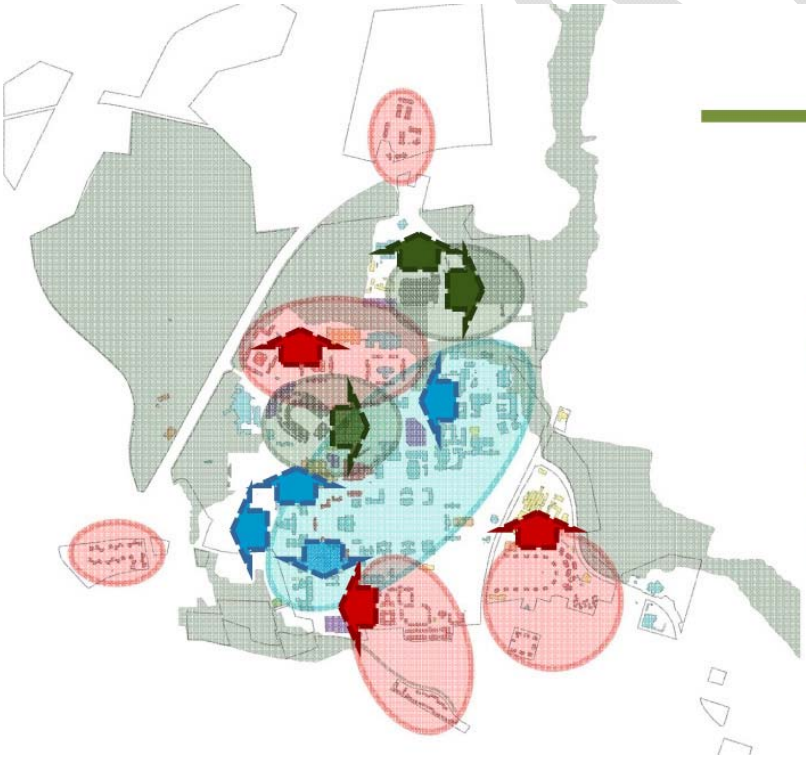
Campus growth will continue according to the established framework: when new programs demand growth, facilities will be located generally with 1) academic structures in the central area along the northeast by southwest diagonal; 2) residential and support services such as dining and recreation primarily in the northwest and south; 3) Intercollegiate Athletics and Campus Recreation Services in the north, northwest and west; and 4) parking at the perimeters.

campus

Existing Land Use

Key

- Academic
- Housing/Residential Serv.
- ICA Facilities (Athletics)
- Recreational Facilities
- Service
- Parking Garages



campus

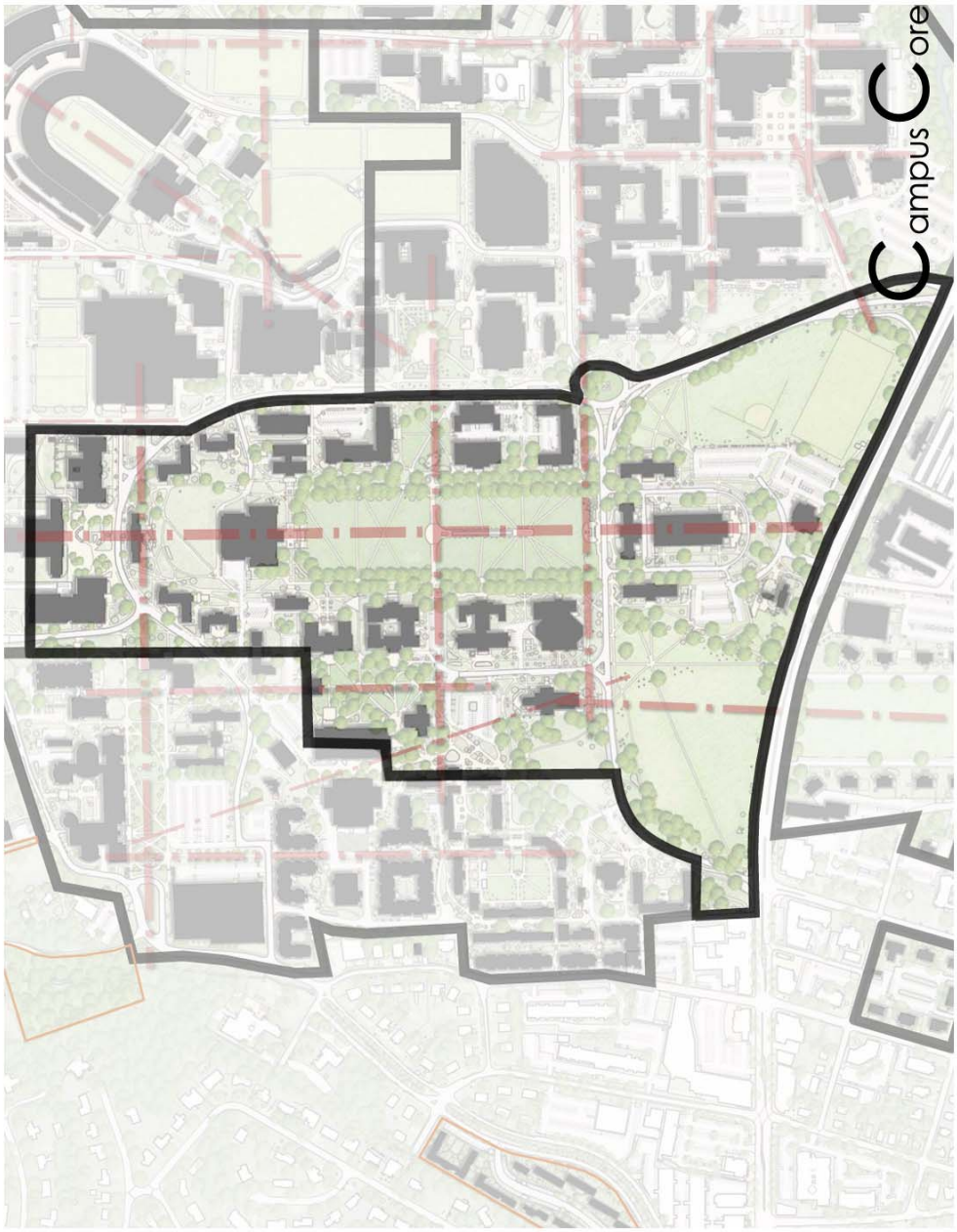
Land Use

Growth Pressures

Key

- Academic
- Housing/Residential Serv.
- ICA Facilities (Athletics)
- Recreational Facilities
- Service
- Parking Garages

1. Campus Core



Figure___

Existing District

The Campus Core comprises approximately 80 acres and is bounded by Campus Drive to the north; Baltimore Boulevard and a portion of Regents Drive to the east; and an imaginary line running through South Chapel Lawn, LeFrak Hall, and portions of Preinkert Drive and Campus Drive to the south; and, respectively, the South and West Districts.

Description

With its application of classical style planning ideals and pervasive Colonial Revival Architecture, the University of Maryland Campus Core is an outstanding example of one the most influential collegiate design concepts of the early 20th century America.

The Campus Core is a mixed-function district of academic, student residential, administrative, and public use buildings, bordered on one side by the heavily trafficked Baltimore Boulevard as the front door of the campus, it embraces three primary gateways to the campus: the "South Gate" at College Avenue (connecting with the City of College Park "Old Town"), the central threshold ("Class of 1910" pedestrian gate) to the district at Rossborough Lane, and the north Founders' Gate.

In this District the landscape and green spaces of campus are prominent, and many of the settings are the ones most closely identified with the campus. Included in the Campus Core are some of the largest open spaces and treasured views of the campus. McKeldin Mall, the Memorial Chapel Lawn, the Engineering/Intramural field, and Morrill Quad are all open spaces that have come to be defining images of the campus. They are used variously for campus gatherings of a serious or celebratory nature, spontaneous social interactions, recreational uses, and sports support (use of Memorial Chapel Lawn for the University Marching Band). The Campus Core District was selected for the first Tree Walk to highlight the extent and variety of the campus Arboretum collection.

Opportunities

Plans for the Campus Core District are focused on two areas: 1) the opportunity to renovate or build buildings to meet important academic goals and 2) the opportunity to use the Core Campus as a showcase for the benefits and pleasures derived from the campus's designation as an Arboretum and Botanical Garden. The Core district can highlight the potential of the Arboretum and Botanical Garden to contribute substantially to the quality of life on the campus.

The Facilities Master Plan 2011-2030 calls for a new building configuration of Holzapfel Hall and Shriver Laboratory to house a University Learning and Teaching Center. This addition to the Mall is a completion of a project proposed in the previous Master Plans.

Throughout the Campus Core District, opportunities exist to strengthen pedestrian corridors, to add to the gardens and collections of the Arboretum and Botanical Garden, and to create a model system of open spaces and connecting greenways. A plurality of spaces will lead us through this district and connect to other districts. New selections will be added to the tree canopy collection that spreads throughout the Campus Core from Morrill Quad, along the sides of McKeldin Mall, to Rossborough Inn. To connect the Mall to the surrounding area, landscape enhancements will be incorporated into existing features on all sides of McKeldin Library.

Improvements

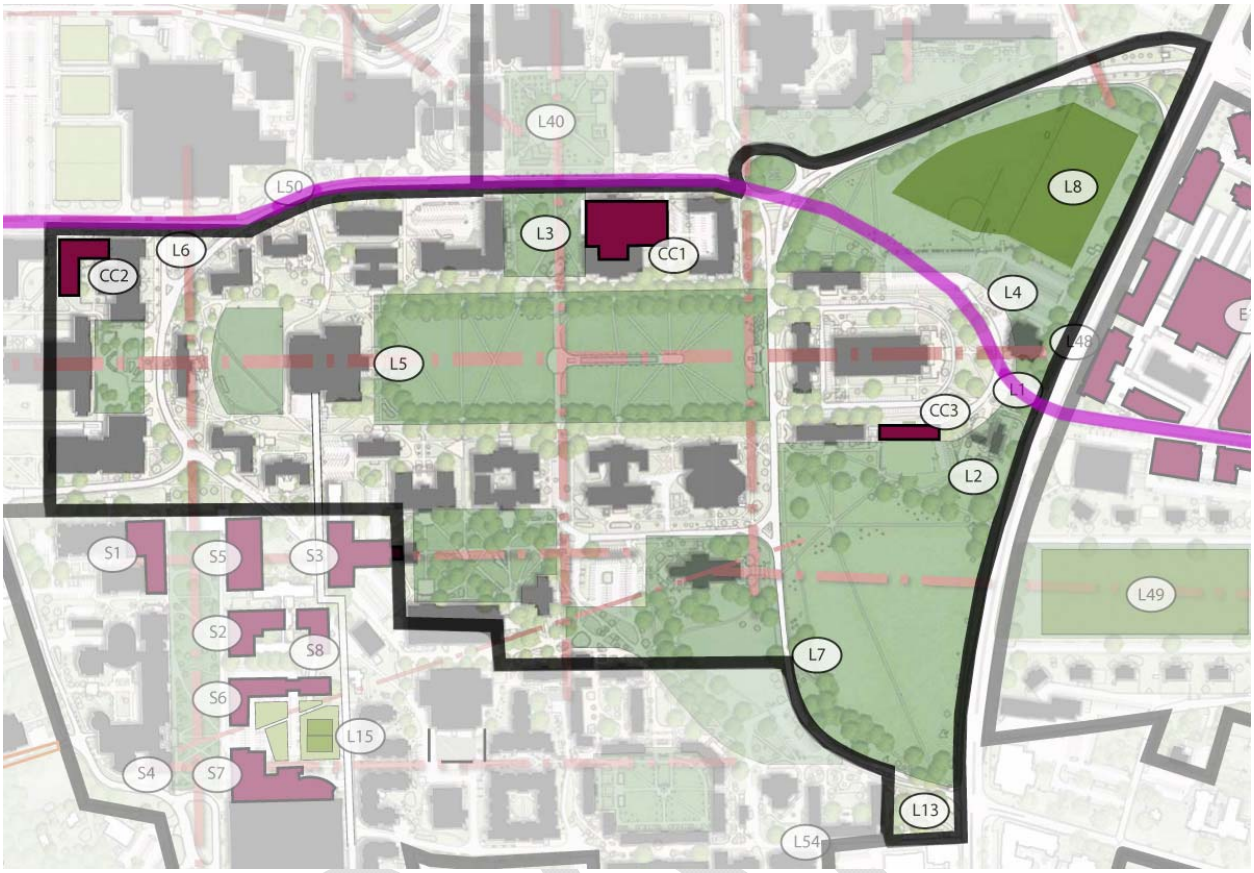
- Enhance campus/district gateways, with emphasis on improving the South Gate area.

- Create clear system of paths and routes for bicyclists.

- Integrate multi-modal circulation networks (Shuttle-UM, other buses, vehicles, bicycles, and pedestrians), integrating the Purple Line along the locally preferred alignment: Campus Drive to the Rossborough Lane-Baltimore Avenue intersection.

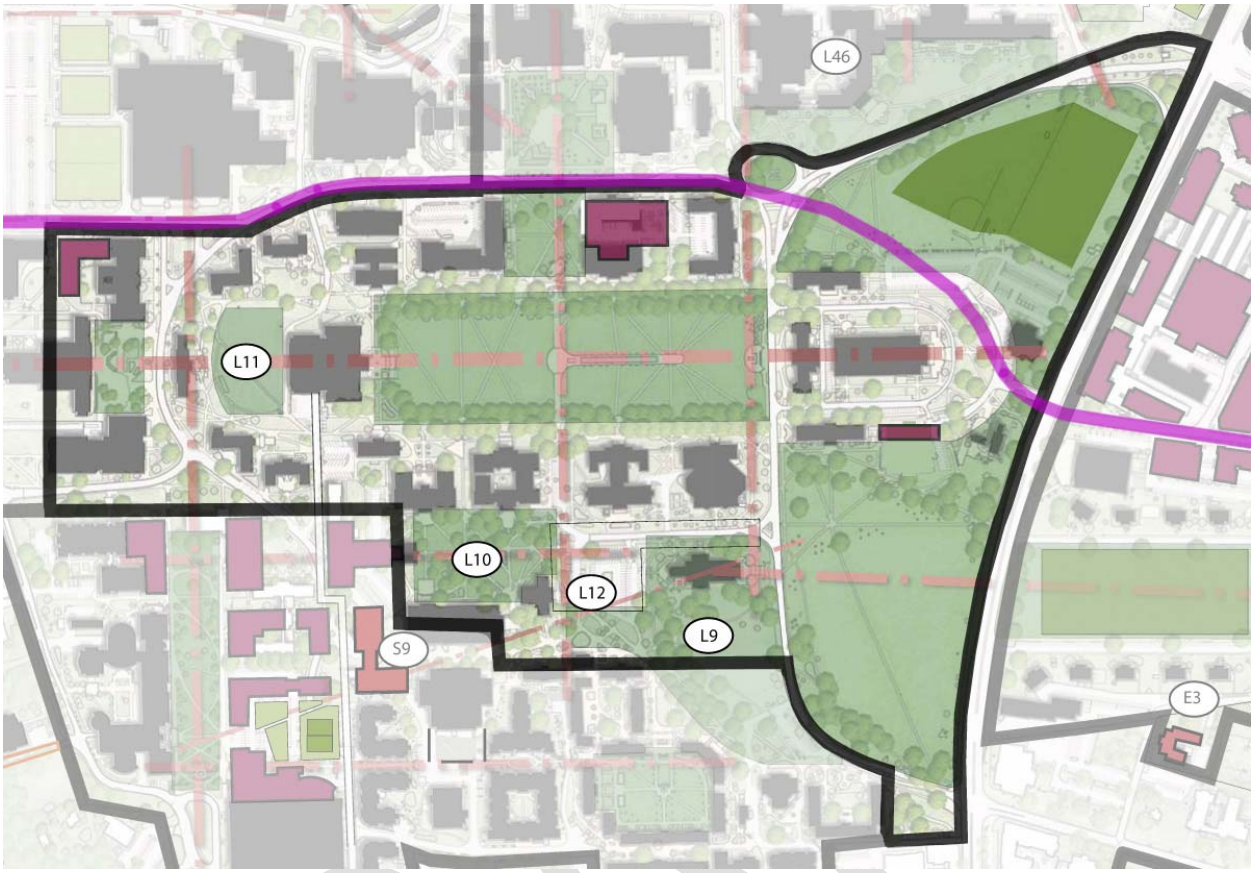
- At Parking Lot HH, enhance the area to allow for bus staging, sheltered bicycle parking and more open space for people to congregate.

- Build projects to accommodate program expansion, relocation achieved through renovation, renewal, and, as appropriate, adaptation of existing buildings for re-use: a new University Learning and Teaching Center and a proposed administrative office building.



Figure___

Planning Period 1



Figure___

Planning Period 2

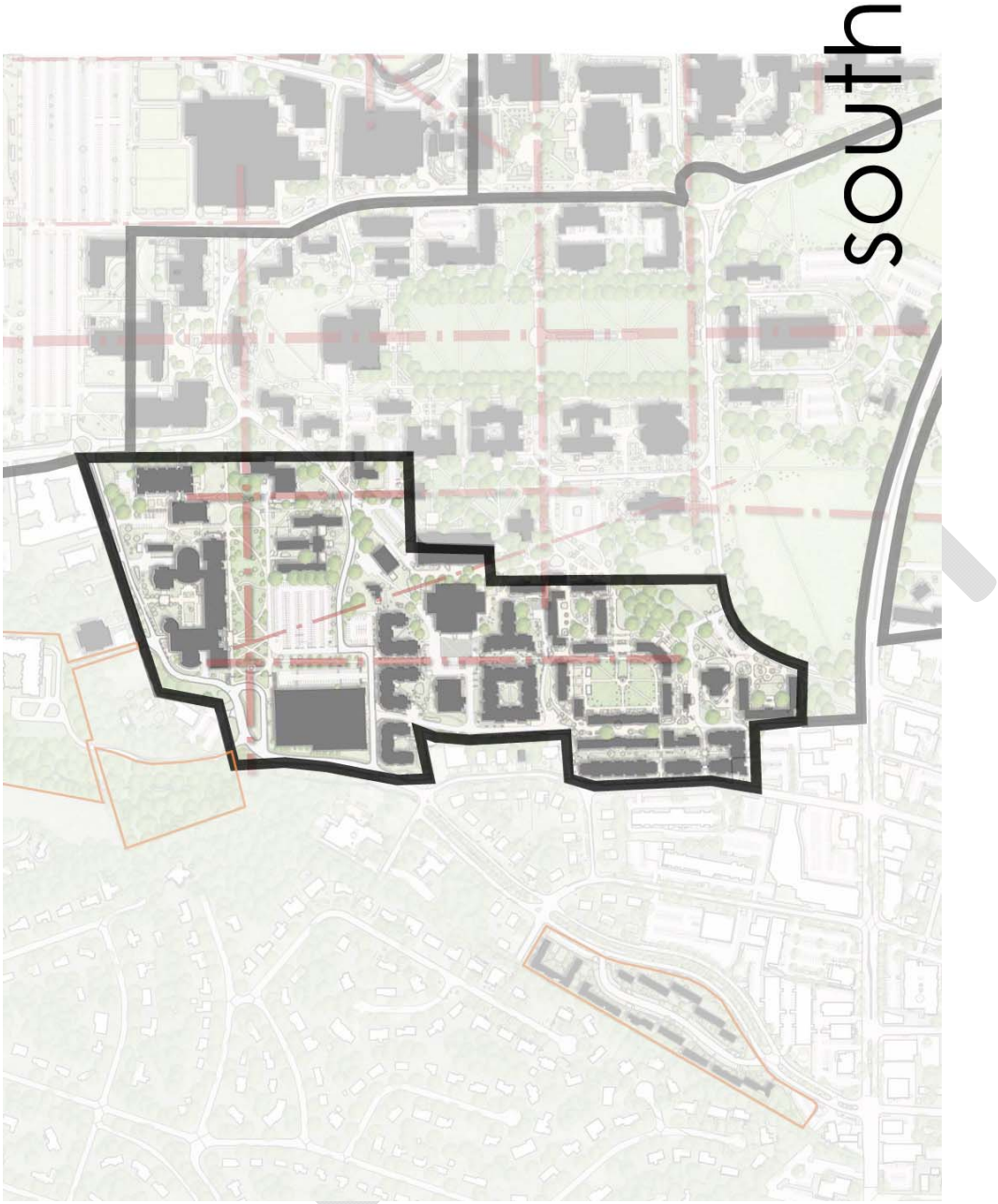
Buildings

Campus Core	Site	Project	Building Type	GSF	Floors
Planning Period 1	CC1	University Learning and Teaching Center and SCUB (addition/renovation of Holzapfel Hall)	Academic	68,400	3
	CC2	Benjamin Building Addition and Center for Young Children Replacement	Academic	95,700	5
	CC3	Administrative Office Building	Academic Support	57,600	4

Landscapes

Campus Core	**Site**	**Project**	**Project Type**	**Acreage**
Planning Period 1	L1	Route 1/Rossborough Lane Threshold Improvements	Landscape	
	L2	Rossborough Inn Gardens Improvements	Landscape	
	L3	H.J. Patterson Hall Quad Improvements	Landscape	
	L4	Visitor Center/Reckord Armory Landscape Improvements	Landscape	
	L5	McKeldin Library Garden	Landscape	
	L6	Topiary Testudo Improvements	Landscape	
	L7	Chapel Lawn and Fields Improvements	Landscape	
	L8	Engineering Fields Upgrades (artificial turf)	Athletic Field	
Planning Period 2	L9	Garden of Reflection and Remembrance Phase II	Landscape	
	L10	Morrill Hall Quad Improvements	Landscape	
	L11	Anne Arundel Green	Landscape	
	L12	Shoemaker Hall Quad Improvements	Landscape	

2. South



Figure___

Existing District

The South District comprises approximately 40 acres and is bounded by the Campus Core District to the north, Baltimore Boulevard and the East District on the east, Lehigh Road and Mowatt Lane with privately owned properties in the City of College Park and University Park to the south and west. This district and is part of the drainage area of Guilford Run and the Northeast Branch sub-watershed of the Anacostia River. The

District naturally sub-divides into two portions: the highlands on the east, and lowlands on the west.

Description

The current and proposed build-out of this district represents the completion of the framework set forth in the 2001-2020 Facilities Master Plan. Calvert and Washington Quads, among the early campus residential communities, were built along the ridge in the eastern half of this District. The recently constructed Campus Commons residential complex enclosed these earlier low-rise quadrangles with six-story buildings and provides a consistent, defined University border overlooking the business district of College Park. On the western half of the District, lowlands are being replaced by buildings that serve academic and service functions.

The Facilities Master Plan 2001-2020 proposed an open space / building network of academic and residential buildings bordering quadrangles. This continues to be the framework for FMP 2011-2030 proposals. Major components of the East-West Pedestrian Corridor (linking Washington Quad and Mayer Mall) and the Mayer Mall have been completed since 2001.

Small-scale residential structures, supplementing the North Hill crescent at the summit of McKeldin Mall, crown the highlands adjacent to the genesis of the campus, Morrill Quad.

Opportunities

A framework has been established that provides a coherent scheme for this district. The completion of organizing elements such as Mayer Mall, as well as the introduction of proposed large- and small-scale open spaces, will create a much stronger sense of place and better connect the South with the Campus Core districts.

The demand for buildable sites within the established open space framework is high in the western half of the district: competition between academic and residential facilities for the same land is considerable. The creation of zones of residential or academic use will help form communities and build upon and strengthen existing patterns. Greater density (closer, higher structures, similar to Campus Commons) replacing lower, sprawling buildings, makes better use of the district's valuable limited land, with the goal of inclusion of a variety of academic and residential programs adjacent to existing facilities within the district.

The framework gives an opportunity to complete and reinforce corridors in all directions: between South District and Washington Quad, between South District and Morrill Quad, between South District and McKeldin Mall.

A series of terraced landscape spaces can accommodate new academic buildings that step up to Morrill Quad, and the plaza between South Campus Dining Hall and LeFrak Hall. This design will give new pedestrian connections from the South District to the Campus Core.

A primary issue in the South District is the urgent need for additional recreation space to serve the expanded residential communities**.** Auxiliary and student support buildings need enhancement.

Improvements

- Consolidate service and screen loading areas on the south side of South Campus Dining Hall (SCDH). Improve the pedestrian walkway along the East-West Pedestrian Corridor connecting Mayer Mall with Washington Quad;

- Investigate relocation of SCUB II into lower level(s) of proposed academic or residential buildings that would free the current SCUB site for additional academic programs and could provide connections between SCDH-LeFrak Plaza and Mayer Mall;

- Reconfigure Preinkert Drive to accommodate proposed residential and academic facilities, and active- and passive recreation / open spaces, while providing service and delivery access;

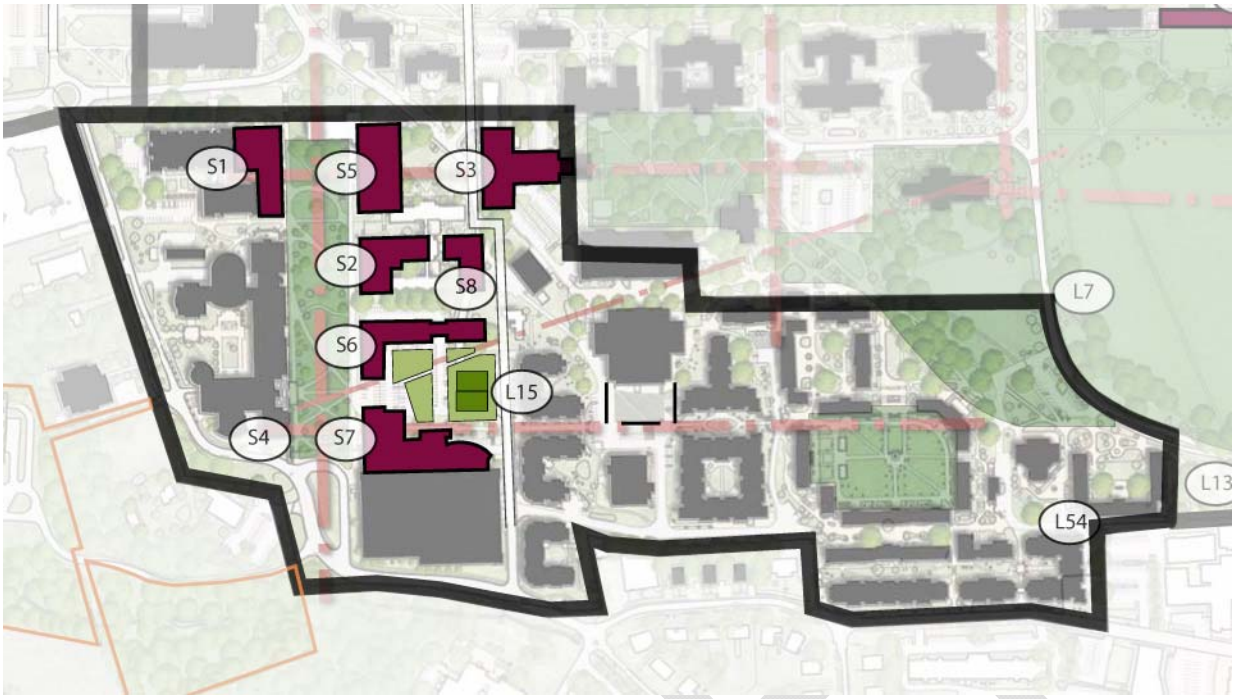
- Integrate and refine the open space and pedestrian and bicycle circulation from Campus Core to the South District, with the reconfiguration of Preinkert Drive;

- Locate proposed student housing and recreation buildings to form an open space quadrangle north of Mowatt Lane Parking Garage. Include recreation facilities, permeable surfaces for storm water infiltration, and a pavilion for gathering or accommodating pick-up / drop-off opportunities;

- Accommodate expansion of Behavioral and Social Sciences programs with proposed buildings adjacent to Tydings Hall; maintain the physical connection between Morrill Quad and Anne Arundel Hall;

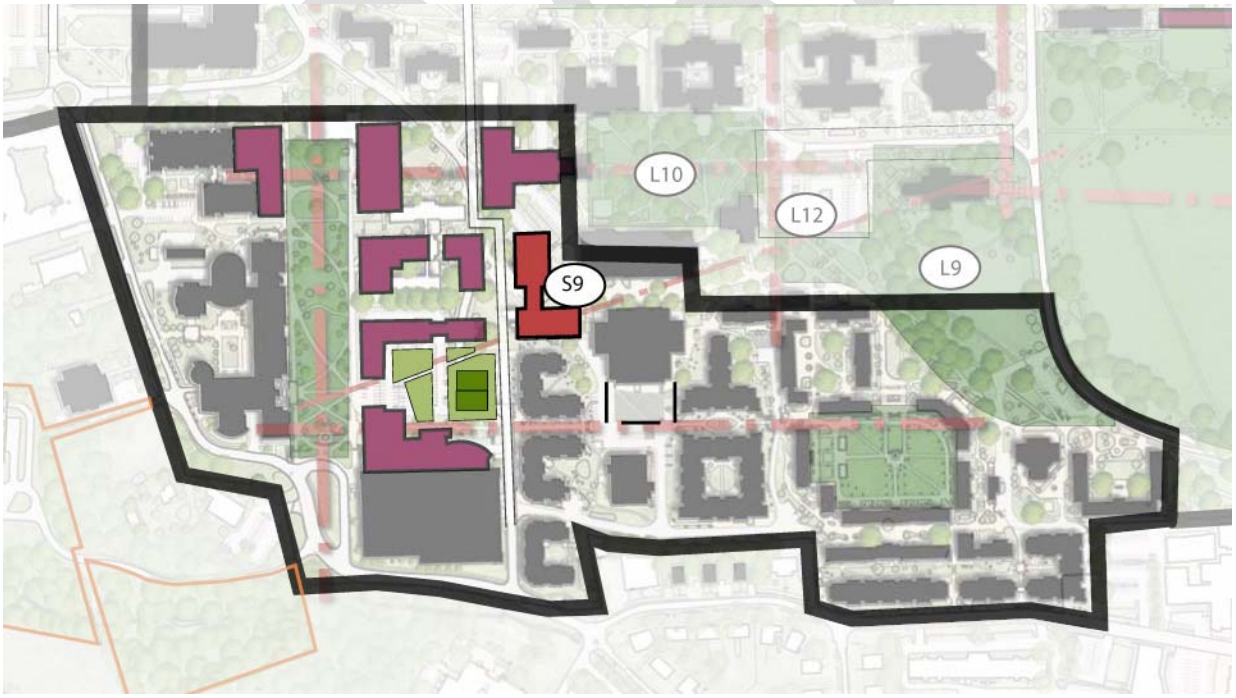
- Use expansion of buildings to house additional academic programs to create an academic quadrangle, a continuation of Morrill Quad terracing down to Mayer Mall;

- Reconfigure pedestrian circulation to provide access to mobility-challenged persons along the East-West Pedestrian Corridor and ascending the slopes from Mayer Mall to the Campus Core District.



Figure___

Planning Period 1



Figure___

Planning Period 2

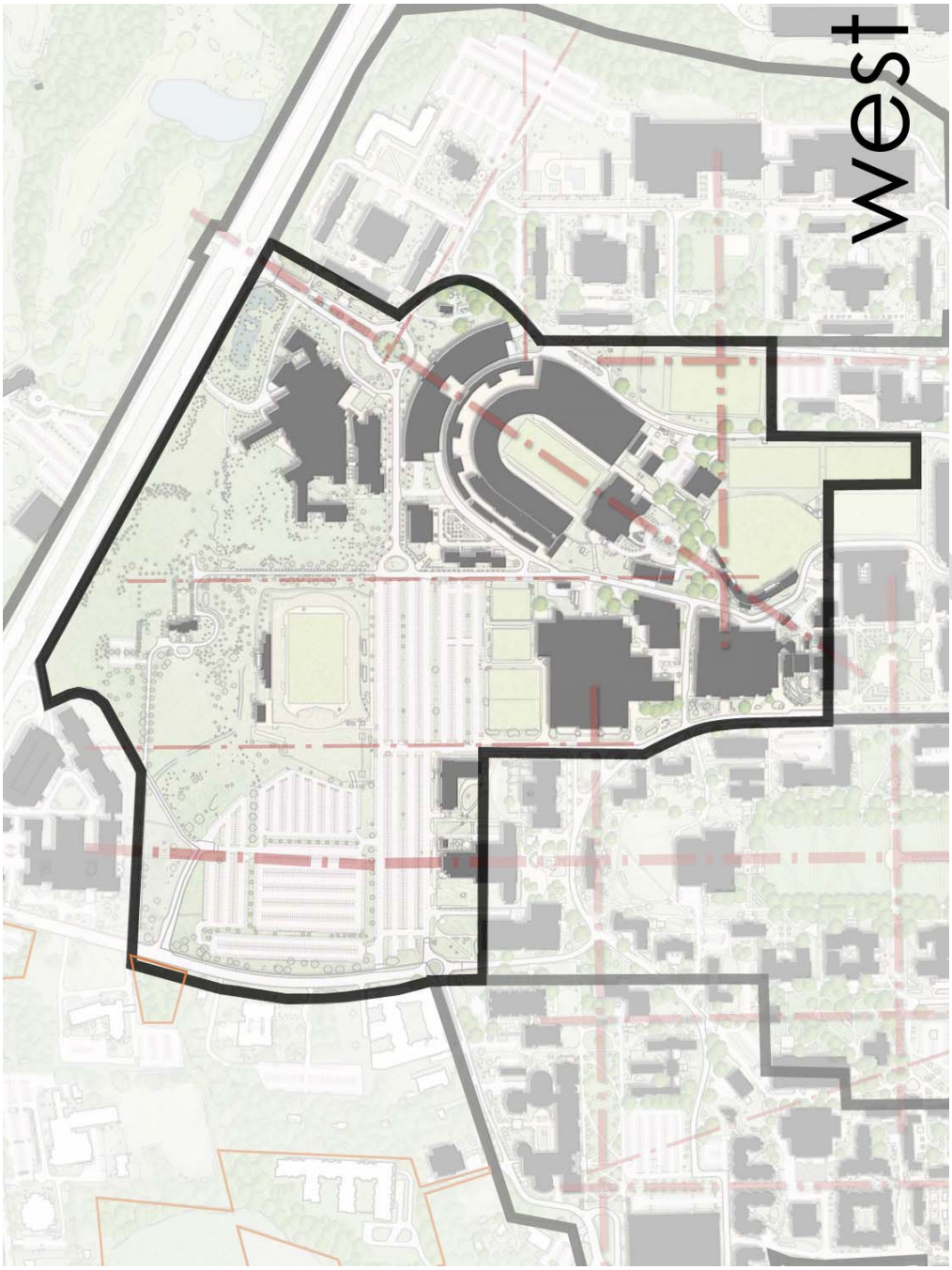
Buildings

South	Site	Project	Building Type	GSF	Floors
Planning Period 1	S1	Architecture Building Addition	Academic	122,250	3
	S2	School of Public Policy Building	Academic	74,800	4
	S3	Public Protection and Security Research Building and SCUB Expansion	Academic	134,000	5
	S4	Van Munching Hall Addition/Renovation	Academic	15,282	4
	S5	Visual Arts and Cultures Building	Academic	112,300	4
	S6	Prince Frederick Hall (463 Beds) and SCUB Expansion	Auxiliary	159,100	6
	S7	South Campus Recreation Building	Auxiliary	70,000	3
	S8	Worcester Hall Replacement (250 beds) and SCUB Expansion	Auxiliary	91,600	4
Planning Period 2	S9	Behavioral and Social Sciences Research Building	Academic	120,000	5

Landscape

South	Site	Project	Project Type	Acreage
Planning Period 1	L13	South Gate Landscape Improvements	Landscape	
	L14	Lehigh Road Gateway Enhancements	Transportation	
	L15	Volleyball Courts	Athletic Field	

3. West



Figure___

Existing District

The West District comprises approximately 134 acres, and is bounded by the predominantly high-rise residential communities of the Northwest District to the north; academic facilities that surround Tawes Hall and Cole Student Activities Building on the east, Campus Drive

bordering adjoining private properties and churches to the south, and University Boulevard and the Golf Course District to the west.

Description

This district is an area dominated by large, flat surface parking lots and bounded by University Boulevard. Academic buildings are mixed with major facilities that host sports, performing arts, or alumni events. The President's Residence and its grounds occupy the brow of a hill adjacent to University Boulevard, and is the site for a variety of University celebratory and social events hosted by the President.

Many of the University's major sports venues are located in the valley between Campus and Stadium Drives and form a barrier to convenient north-south pedestrian and vehicular access between districts. The district is also home to the University's primary performing arts venue, conveniently located by the University Boulevard entrance across from the Northwest residential high-rise neighborhoods. The University's Riggs Alumni Center, another major events location, occupies a site adjacent to the southern entrances of Byrd Stadium.

Given the purpose of the buildings in the district, it is not surprising that parking requirements for sporting and cultural events constitute a major factor in development discussions for the entire district.

The ridge-line upon which the President's Residence is located divides the district's watersheds: the northern portion flows past the Performing Arts Center into Campus Creek, and the southern portion into Guilford Run. It is the site of some of the earliest stormwater management projects. A major storm-water retention pond and drainage facility, located at the base of the President's Residence lawn, collects water from the southern portion of the district prior to delayed discharge into Guilford Run.

Opportunities

An opportunity exists to provide appropriate expanded space for ICA fields in this district associated with existing facilities. Success of the University's soccer and track and field programs has led to increased demand on the Ludwig Field and Kehoe Track facility, and proposed projects can address this issue. Relocation of the ICA practice fields east of Byrd Stadium is being investigated to permit expansion of science programs adjacent to the Bioscience Research Building.

The district is also a prime location for environmental projects that advance sustainability goals and extend the collections and gardens of the Arboretum and Botanical Gardens. The Peace and Friendship Garden was developed adjacent to the storm-water pond. The area surrounding the Performing Arts Center has been transformed into a series of intimately-scaled gardens. The former Apiary has been modified as a temporary headquarters and outreach center for the Arboretum and Botanical Gardens, which was established in 2008. Expansive lawns on gently sloping grades in this district provide excellent potential as a showcase for the Arboretum and Botanical Garden. Special collections of plants and trees around the new University House and Events Center and extending to the Clarice Smith Center will become major aesthetic and educational locations for the Arboretum and Botanical Garden.

Landscape and Arboretum and Botanical Garden enhancements and expansions will help create a more clearly defined edge for the campus by the Campus Drive gateway. The use of a triangular portion of University property at Campus Drive and Adelphi Road was accorded to University of Maryland University College (UMUC) for their headquarters. UMUC buildings at the ridge of a hill overlooking University Boulevard present a competing University System of Maryland facility's image at the major western entry to the campus. Planned gateway enhancements will form a connection from Campus Drive Gateway to the Clarice Smith Performing Arts Center.

The large parking lot that covers most of the surface of this district is greatly in need of new safety features. Short-term surface parking improvement strategies should reduce pedestrian and vehicular conflicts within the parking lots, along drive aisles, and adjacent roads, while preserving long-term strategies that provide a framework and flexibility for future facilities growth. As part of the game day experience, the land in the vicinity of Stadium Drive and adjacent to Byrd Stadium should be improved for attractiveness and functional use. Streetscape enhancements will improve pedestrian connections as well.

Improvements

- Improve Campus Drive and Stadium Drive gateways including landscape enhancements and adjustments that will clearly improve their statement as entrances to the campus.

- Create a collector north-south street and reconfigure parking spaces along the west edge of Lot 1 bordering Ludwig Field.

- Reconfigure parking spaces along the drive aisle west of Tawes Building to form a collector north-south street.

- Provide sustainable landscaped islands supporting and regulating pedestrian east-west travel.

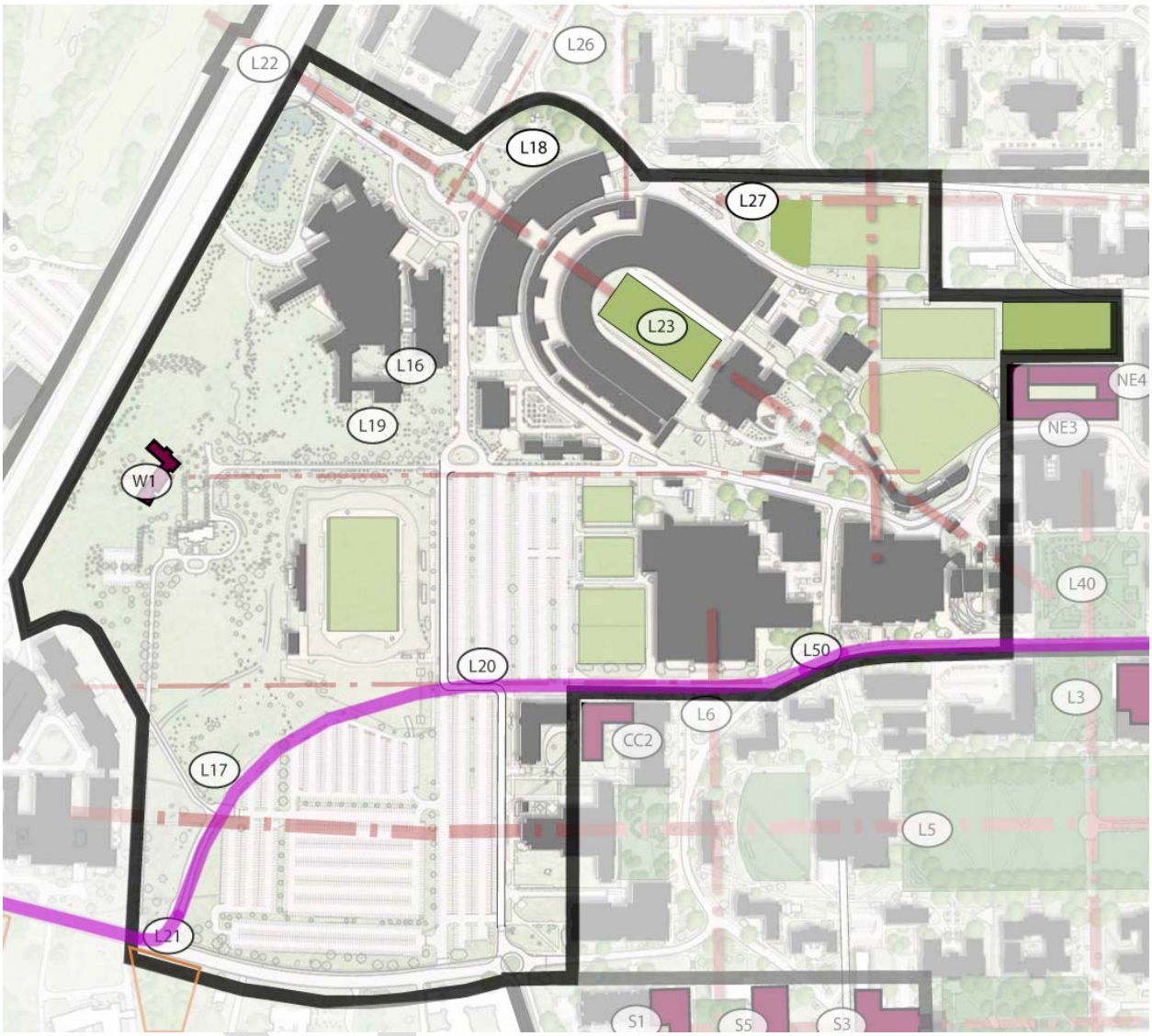
- Retain and enhance necessary surface parking to support the requirements for large campus events including support for football games.

- Collaborate with the MTA to establish planning and design principles for the construction of the surface light rail for the Purple Line:

  – Extend Union Drive east of Ludwig Field, connecting to Campus Drive between Adelphi Road and Mowatt Lane to accommodate the Purple Line alignment.

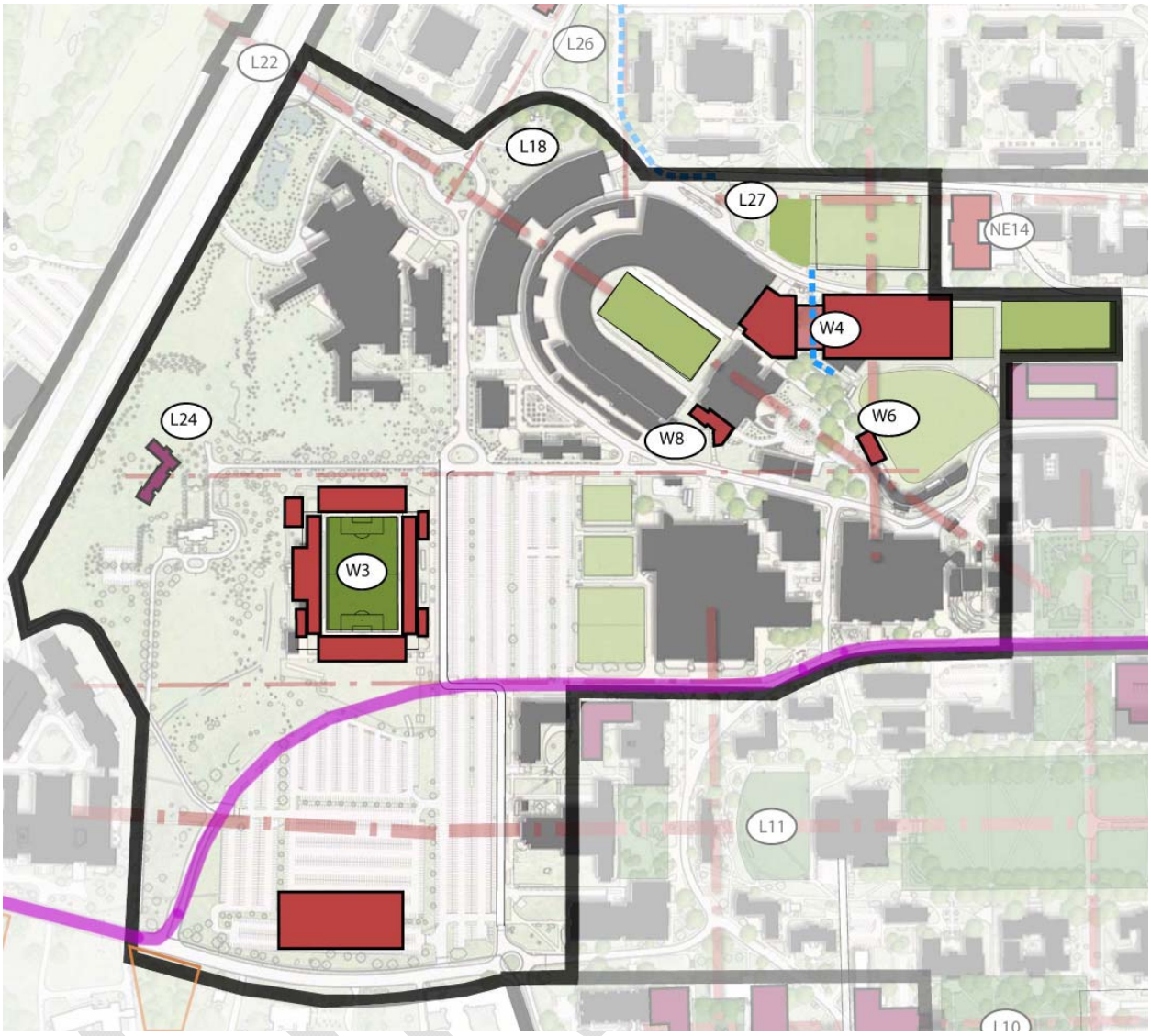
- Improve pedestrian and bicycle circulation and safety throughout; provide better access through ICA facilities, connecting the Northwest District with the rest of Campus.

- Consolidate surface parking into planned garages to enable use of land for other facilities, as required.



Figure___

Planning Period 1



Figure___

Planning Period 2

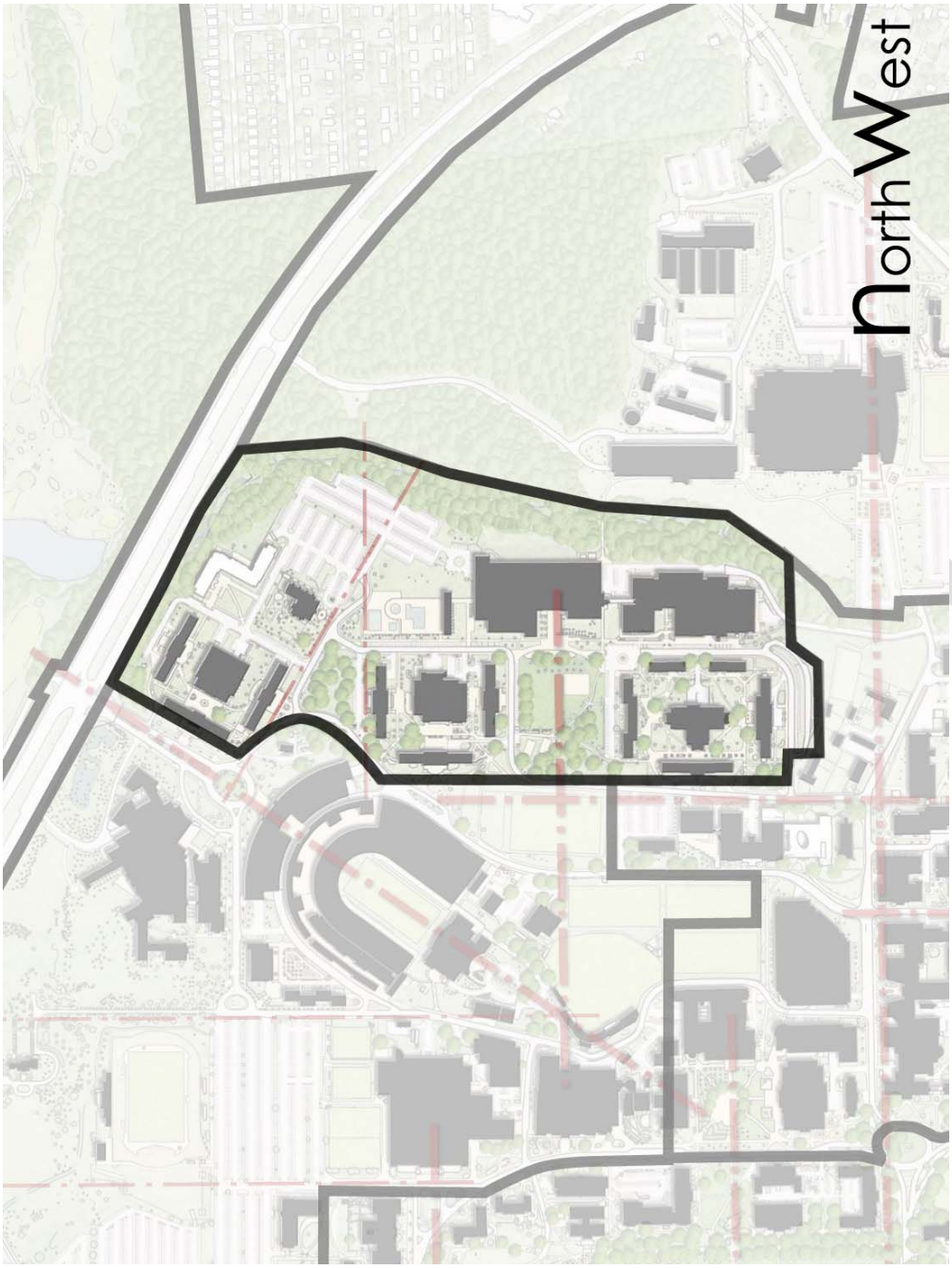
Buildings

West	Site	Project	Building Type	GSF	Floors
Planning Period 1	W1	University House and Events Center	Academic Support	12,600	2
Planning Period 2	W3	Ludwig Soccer Stadium Upgrades	Auxiliary	TBD	1
	W4	Varsity Team House and Indoor Practice Facility	Auxiliary	128,100	2
	W6	Shipley Field Upgrades	Auxiliary	16,900	1
	W8	Gossett Football Team House Addition	Auxiliary	7,500	1
	W9	Campus Drive Parking Garage (2,200 spaces)	Auxiliary	660,000	6 (5 story "read")

Landscapes

West	Site	Project	Project Type	Acreage
Planning Period 1	L16	Garden Walk at Clarice Smith Performing Arts Center	Landscape	
	L17	Garden of Peace and Friendship Phase II	Landscape	
	L18	Arboretum Outreach Center Landscape Improvements	Landscape	
	L19	Botanical Garden and Visitor Center Landscape Improvements Phase I	Landscape	
	L20	Lot 1 Road/Pedestrian Safety Improvements	Transportation	
	L21	Campus Drive West Gateway Enhancements	Landscape & Transportation	
	L22	Stadium Drive and Golf Course Gateway Enhancements	Landscape & Transportation	
	L23	Byrd Stadium Field Replacement (artificial turf)	Athletic Field	
Planning Period 2	L24	Botanical Garden Phase II	Landscape	

4. Northwest



Figure___

Existing District

The Northwest District comprises approximately 61 acres, and is bounded by Campus Creek and the North District to the north; the *Campus Farm* to the east; Stadium Farm Drives and the West District to the south, and University Boulevard and the Golf Course to the west. The District rides a west-east plateau that slopes on the north to Campus

Creek, the east through the Campus Farm towards Paint Branch, and the south into the valley holding Byrd Stadium and ICA sports practice fields.

Description

The District's primary features are residential neighborhoods, carved from forested areas extending from Campus Creek, comprised of four- to-ten-story high-rise student residential buildings surrounding dining and community facilities. Indoor and outdoor recreational facilities and the School of Public Health occupy the crest of the plateau overlooking Campus Creek. The Center for Young Children, an Education Department teaching laboratory, sits adjacent to high rise residence halls and surface parking lots.

Opportunities

This District provides housing to a large student population (4,913 of 8,231 beds on campus / 36,000 total student population). It is an appropriate site for additional student residential communities, potentially 1,750 more undergraduate beds in large-capacity buildings. The District will benefit from more effective and inviting connections to the rest of the campus by improved, safer, and more-obvious pedestrian and bicycle circulation routes. New routes will be carefully coordinated with similar improvements through the West District.

The stand of mature trees located between the Denton and Ellicott Communities and connected with the Arboretum Outreach Center, the recreational area of "LaPlata Beach," are part of a contiguous green corridor that has important potential for addressing environmental and stormwater management goals. They should be protected and enhanced.

Improvements

- Implement landscaping enhancement and better recreational facilities for the residential quadrangles.

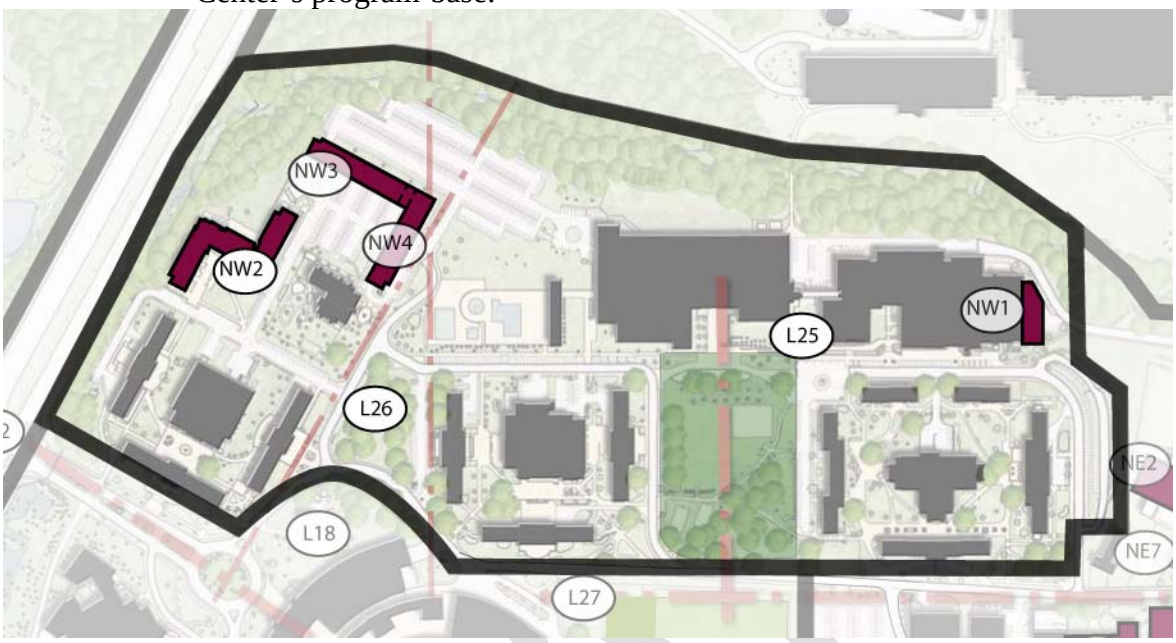
- Improve and celebrate connections to open space and natural areas including Campus Creek and the Wooded Hillock.

- Recognize and enhance the West / Stadium Drive entrance as a major campus entry through incorporation of improved landscaping, artwork and coordination with the entrance to the Golf Course.

- Improve pedestrian, bicycle and vehicular circulation both within the District and as it connects with other districts.

- Investigate relocation of the Center for Young Children when its site is required for a residential structure mirroring Oakland Hall, as previously proposed, and coordinate the location change with the Benjamin Building expansion.

- Consider incorporating the 520 spaces of surface parking that exist in the northwest lowlands of the District within garage requirements elsewhere on Campus. This change would free valuable land along Campus Creek and return it to a more natural state for recreation use, expanding Eppley Recreation Center's program-base.



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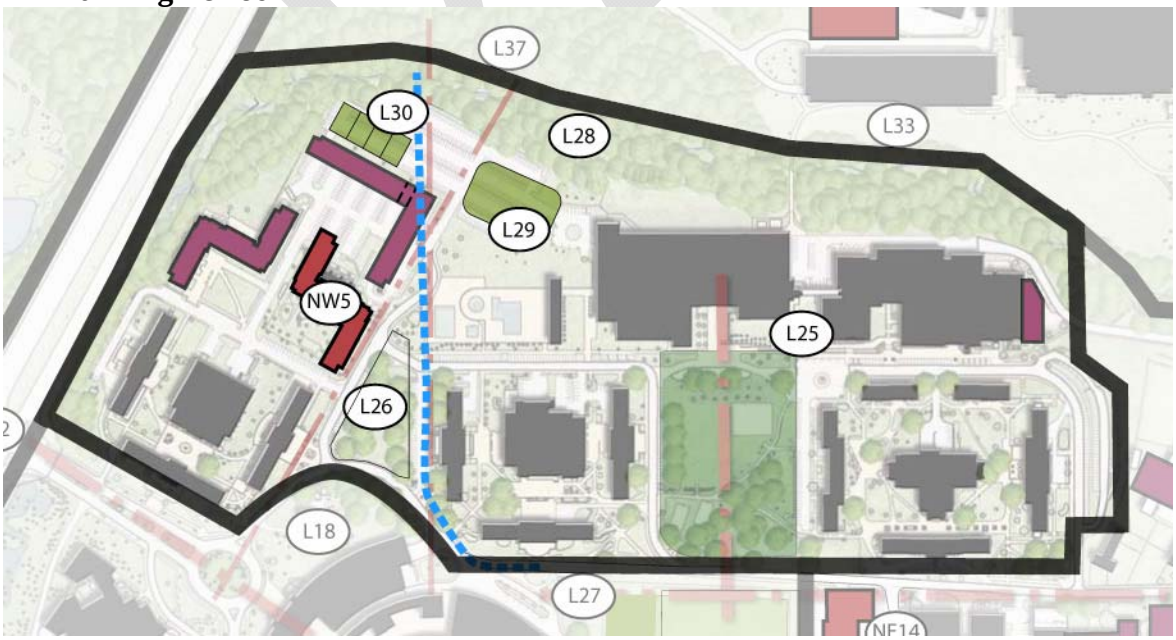
Planning Period 1



Figure___

Planning Period 2

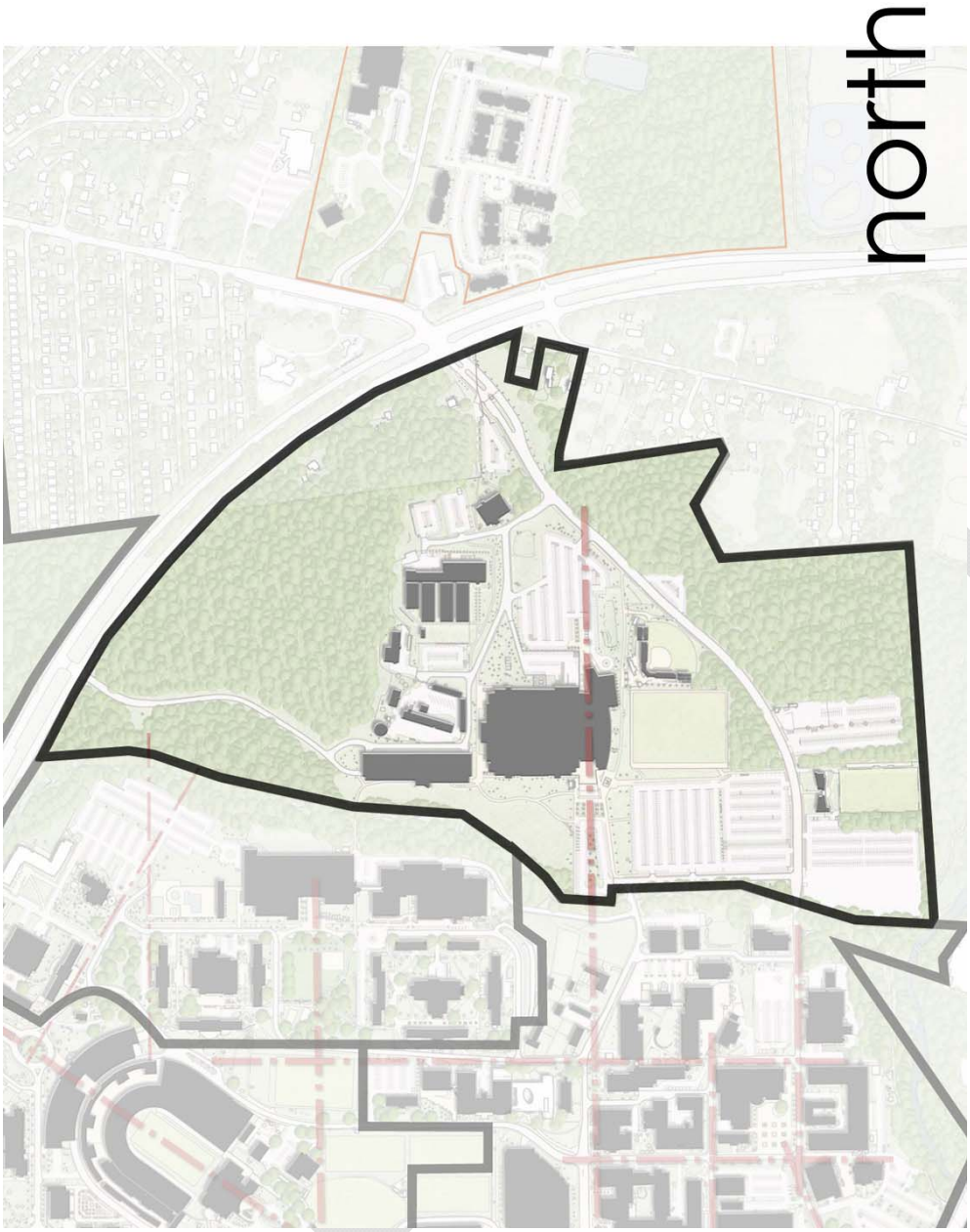
Buildings

Northwest	Site	Project	Building Type	GSF	Floors
Planning Period 1	NW1	School of Public Health Building Addition/Conversion - Phase II	Academic	27,299	3
	NW2	Oakland Residence Hall (711 beds)	Auxiliary	231,704	8
	NW3	Undergraduate Housing 1 (515 Beds)	Auxiliary	169,950	9
	NW4	Undergraduate Housing 2 (515 Beds)	Auxiliary	169,950	9
Planning Period 2	NW5	Replacement housing (650 beds) & Residential Facilities Relocation	Auxiliary	240,300	8

Landscapes

Northwest	Site	Project	Project Type	Acreage
Planning Period 1	L25	School of Public Health Building Garden	Landscape	
	L26	Hagerstown Hall Woods Improvements	Landscape	
	L27	Field Turf Extension	Athletic Field	
Planning Period 2	L28	Campus Creek Woodlands Garden	Landscape	
	L29	Flexible Recreation Field (220' x 150', artificial turf)	Athletic Field	
	L30	Volleyball and/or Basketball Courts	Athletic Field	

5. North



Figure___

Existing District

The North district comprises approximately 105 acres and is bounded by two important bio-habitats and corridors unique to the campus: Paint Branch and Campus Creek, part of the Chesapeake Bay Water Shed. The boundaries of the site are created by the Paint Branch, Maryland-National Capital Park and Planning property and a residential neighborhood to the northeast and east, Campus Creek to the South and University

Boulevard to the west and northwest. The majority of the eastern portion of this district lies within the 100-year flood plain of Paint Branch and Campus Creek and contains some jurisdictional wetlands.

Description

The strength of character for this district comes from its ability to bring athletics, recreation, and natural areas and weave them together in a harmonious setting. The North District and Wooded Hillock is one of the most environmentally diverse areas of campus with a full spectrum of natural environmental climates. The site boasts an upland forest, meadow, successional growth area, wooded riparian stream corridor, lowland forest, forested wetland, wetlands, ponds, rain gardens, Campus Creek and the Paint Branch, bio-swales, sand filters all which create a very complete environmental story that can be easily interpreted through the Arboretum and educational class programs.

The Wooded Hillock is one of our most environmentally rich areas of campus with a full spectrum of mature and regenerative forest environments. Located between the North and Golf Course Districts, the Hillock area's mature woodland quality is its greatest asset. It creates a contiguous natural environmental habitat corridor that connects to a larger environmental system in the Paint Branch and greater Anacostia River water shed. The Woodland helps to connect the North and Golf Course districts across University Boulevard both in a visual and aesthetic sense.

Nestled in the middle of this great bio-diversity are mixed-use areas of campus functions dominated by ICA facilities (Comcast Center, the Terrapin Softball Complex, Field Hockey and Lacrosse Complex) and parking lots. Other buildings include the Research Greenhouses and the Chesapeake Building, which houses administrative offices, the Building and Landscape Services complex, and ShuttleUM facilities.

Opportunities

This district has expansive bio-diversity and natural elements that are of educational quality and can be interpreted easily. Currently 12.28 acres of this district are in Forest Conservation easement and 11± acres are eligible for Forest Conservation Easement. On these 11± acres the University will install a trail system that will allow for maintenance and preservation, research, education, and interpretation and recreation. Once the trail system is installed, the system will be incorporated into forest conservation easements. Adding these areas to our forest conservation bank will allow us to maintain their value as a teaching and research tool while supporting the development needs elsewhere on campus.

The world class Comcast Center, Terrapin Softball Complex, and Field Hockey and Lacrosse Complex provide the catalyst for consolidating other ICA facilities. Plans call for the district to be unified by a new sports/athletics main street. It will begin at the south edge of the district at the Regents Drive Bridge over Campus Creek, continue north past current and planned sports venues and terminate at the Chesapeake Building.

Other advancements in this district will be the consolidation of parking into a future garage on lot 11b which will include a new CRS field facility as its top level, thus creating a recreation facility while maintaining the desired supply of parking spaces. This greening of the top level will increase the overall water quality and permeability of the district while supporting the needs of the sporting venues and campus community.

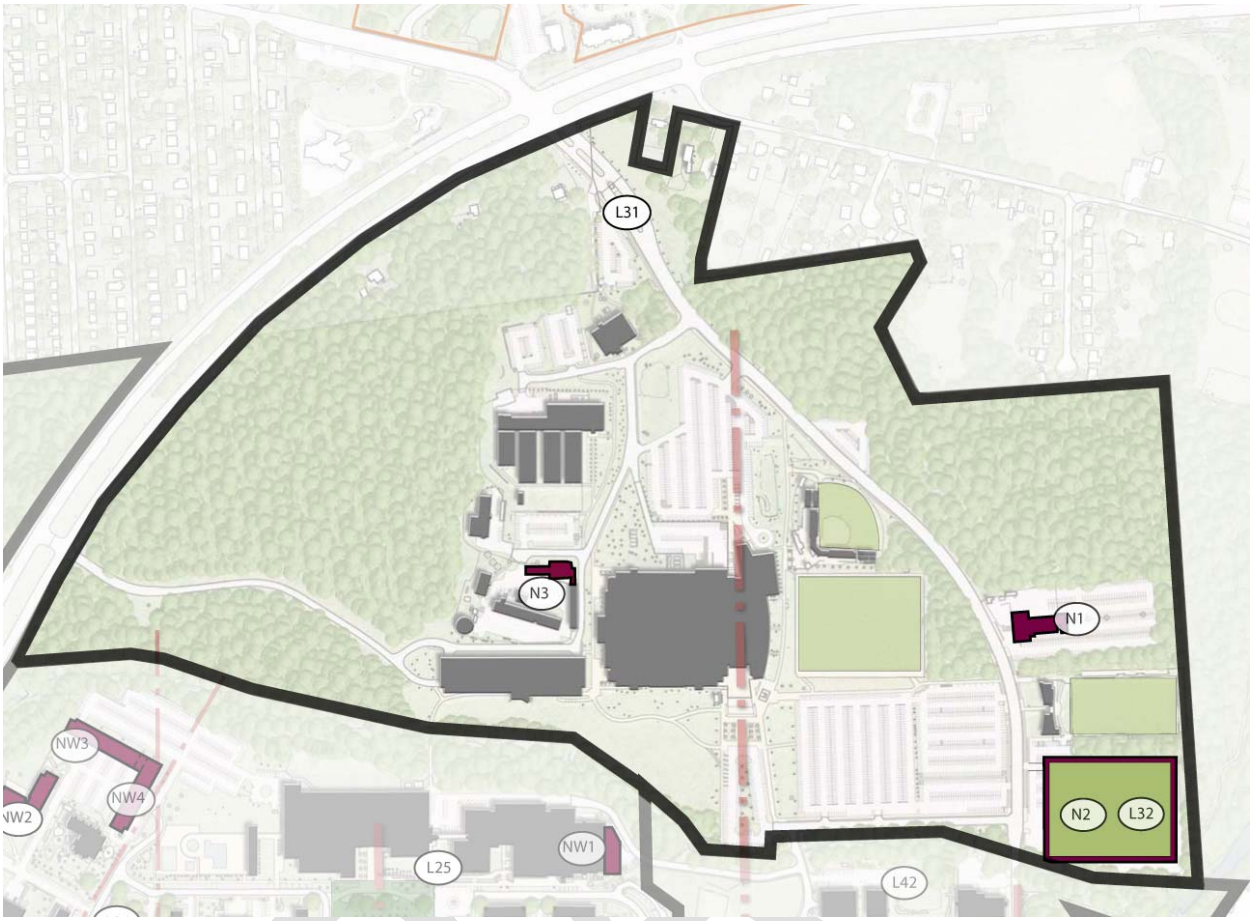
Improvements

- Develop a light recreation and bicycle trail system in the district that connects to the rest of campus and provides access to this district's natural areas.

- Improve the Campus Creek corridor by removal of invasive plant material and use of low impact construction methods for stream and channel stabilization.

- Improve ability to store and treat stormwater run-off prior to it reaching Campus Creek to reduce the degradation of the Creek's corridor.

- Plant edges with mixed understory and groundcover material that are consistent with a common plant palette on campus edges.



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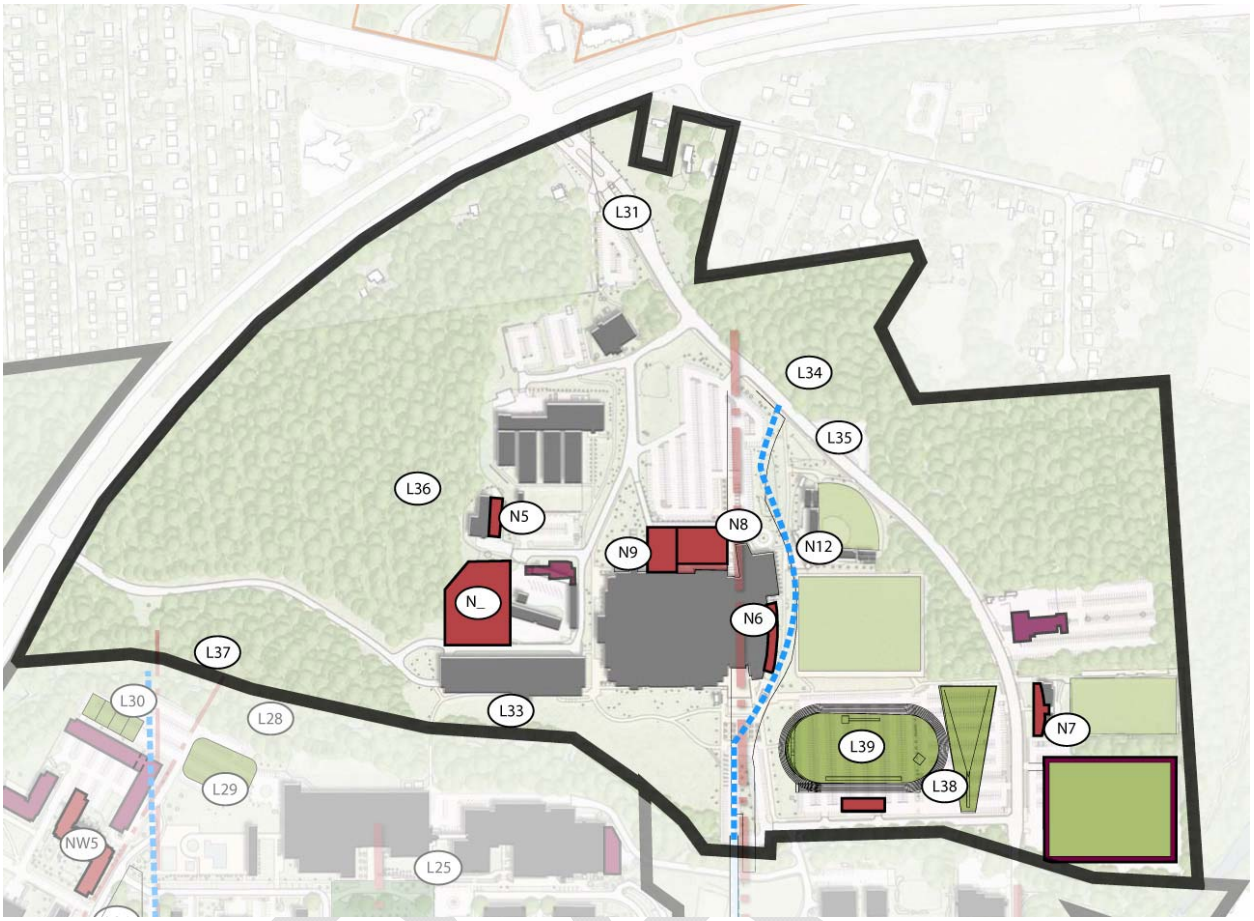
Planning Period 1



Figure___

Planning Period 2

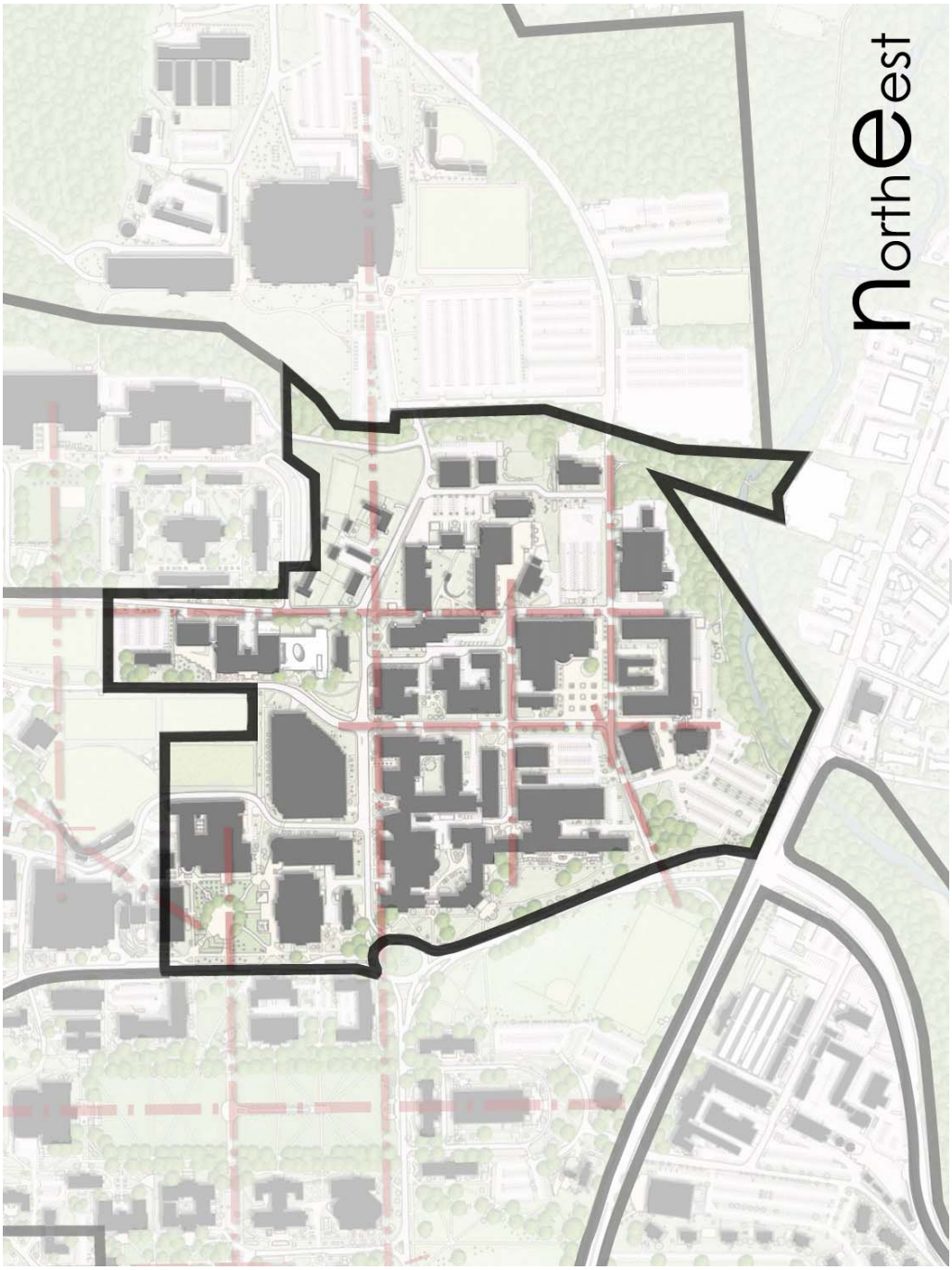
Buildings

North	Site	Project	Building Type	GSF	Floors
Planning Period 1	N1	Shuttle UM Facility	Academic Support	10,075	1
	N2	Paint Branch Parking Garage (3,000 spaces)	Auxiliary	900,000	5 (4-Story "Read")
	N3	Heavy Equipment and Lawnmower Repair Shop	Academic Support	6,708	1
Planning Period 2	N5	Environmental Service Facility	Academic Support	10,100	2
	N6	Comcast Center Office Expansion	Auxiliary	7,020	1
	N7	Field Hockey/Lacrosse Complex Expansion	Auxiliary	5,800	1
	N8	Comcast Center Addition (Basketball Practice Facility)	Auxiliary	22,500	1
	N9	Comcast Center Addition (Gymnastics Practice Facility)	Auxiliary	15,000	1
	N12	Robert E. Taylor Stadium Expansion (softball)	Auxiliary	2,640	1
		New Steam Plant and North Campus Electric Sub-station (confirm size/floors)	Utility	60,000	2

Landscapes

North	Site	Project	Project Type	Acreage
Planning Period 1	L31	Paint Branch Drive Gateway Enhancements	Landscape & Transportation	
	L32	Recreation Fields on Paint Branch Parking Garage Roof	Athletic Field	
Planning Period 2	L33	Terrapin Trail Retention Pond Improvements	Landscape	
	L34	Paint Branch Drive Wooded Wetlands Improvements	Landscape	
	L35	Anacostia/Paint Branch/Campus Creek Wetlands Center	Landscape	
	L36	Wooded Hillock Shade Garden	Landscape	
	L37	Anacostia Tributary Trail Improvements	Landscape	
	L38	Track and Throwing Area	Athletic Field	
	L39	ICA/CRS Field (Infield of Track)	Athletic Field	

6. Northeast



Figure___

Existing District

The Northeast District comprises approximately 38 acres. It is bounded by Campus Creek to the north, Paint Branch to the east, Campus Drive to the south, and an imaginary line passing west of the Campus Farm continuing south through the ICA Practice Fields and between Microbiology and Nyumburu buildings to the west. Paint Branch Drive,

Stadium Drive, Campus Drive, and Regents Drive are all major vehicular access routes to and through the District.

Description

In the Northeast District, agriculture, engineering, science, and technology colleges occupy all existing structures and compete for available buildable space. The Glenn L. Martin Institute forms a distinctive edge along Campus Drive. Though the predominantly-red brick buildings match the 3-4 story height of the majority of campus, this district has an "urban" feel not common to the rest of the campus due to building construction without the mediation of large green lawns. This district retains a remnant of the Campus Farm. Surface parking lots scattered throughout the district are valued as potential building sites.

Opportunities

Plans call for the district to remain an academic district that accommodates expansion of the University Science, Technology, Engineering, and Mathematics (STEM) programs. In-fill of parking lots with buildings, as required by pressing departmental needs, will reinforce the urban-block structure of the district.

The greatest need in this district is creative implementation of the NE District Plan to make the best use of the district's most valuable resource – limited, dwindling buildable land that is circumscribed by Campus Creek and the Paint Branch; thereby, balancing and integrating multiple urban design issues:

- Clarification and enhancement of pedestrian, bicycle and vehicle circulation;
- Need for landscape and artful storm water management design;
- Increased density via new infill buildings on available sites;
- Maintaining building services and access; and
- Long-range redevelopment of existing obsolescent engineering and science facilities at higher densities.

Open space dedicated to pedestrian use is severely limited within the district. A plaza at the primary district intersection of Paint Branch and Stadium Drives was installed as part of the Jeong H. Kim Building construction, and interconnected with a new plaza west of Computer Science Instructional Center. Several programs have developed courtyards within their buildings. A few pedestrian connections proceed through buildings, but most pedestrian traffic is accommodated on sidewalks immediately adjacent to streets or in alleyways.

Swaths of contiguous natural vegetation encase adjacent creeks north and east, but are not incorporated into daily life of the district occupants. The Recreation Intramural Fields afford ample recreational space adjacent to the district, but no active recreational space is located within the district.

Because of the Maryland State Highways Administration's creation of Paint Branch Parkway through an expanded Founders' Gate and the connection to Metzerott Road in the 1990's, the district experiences heavy traffic conditions and pedestrian-vehicular congestion on Paint Branch Drive. Congestion is also particularly heavy on Stadium and Regents Drives at change-of-class times. Service is available to all structures and programs through the only adequate alley-system on campus. Parking would be relocated in a proposed garage north of Campus Creek as part of the North District redevelopment.

Improvements

- Maintain primary axes and organizing framework:
  - along Paint Branch Drive, from recreation / intramural fields to Kim Plaza;
  - along Paint Branch Drive, from Kim Plaza to North District;
  - along Stadium Drive, from Paint Branch to Regents Drives.

- Evaluate the long-term potential demolition of small scale sprawling footprint buildings in favor of higher-density / smaller-footprint buildings that utilize the limited land more efficiently.

- Enhance or create appropriate open space development, streetscape improvements, and pedestrian and bicycle connections.

- Continue to support an academic and research land use for agricultural, engineering, scientific, and technological programs.

- Accommodate academic and research expansion; locations should contribute to overall urban / campus design principles for the district (i.e., define street edge, pedestrian connection paths, open space).

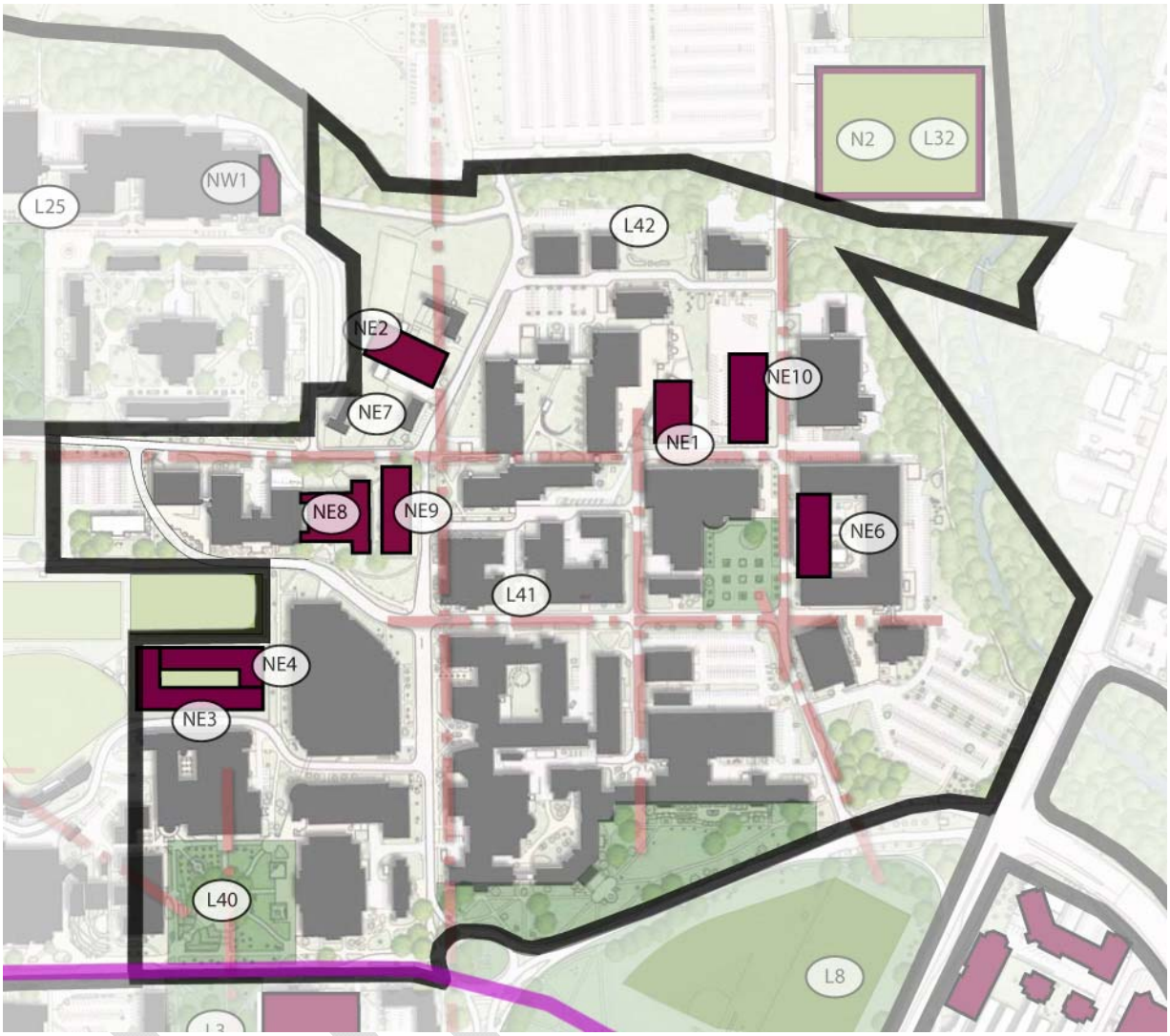
- Develop potential mixed-use facilities containing student / faculty services adjacent to the Stadium and Paint Branch Drives intersection; incorporate within proposed departmental programs, as appropriate.

- Demolish and replace existing under-utilized buildings scheduled to be removed.

- Initiate environmental enhancements, including artful storm water treatment projects, to establish stronger connections and reciprocal relationships with Campus Creek-Paint Branch.

- Enhance or create appropriate open streetscapes, open space development, and pedestrian and bicycle connections with the Paint Branch Hiker-Bicycler Trail system and adjacent residential communities along Baltimore Boulevard to strengthen alternate modes of access and help relieve vehicular congestion.

- Accommodate some student / faculty services in academic structures adjacent to the Stadium and Paint Branch Drives intersection.



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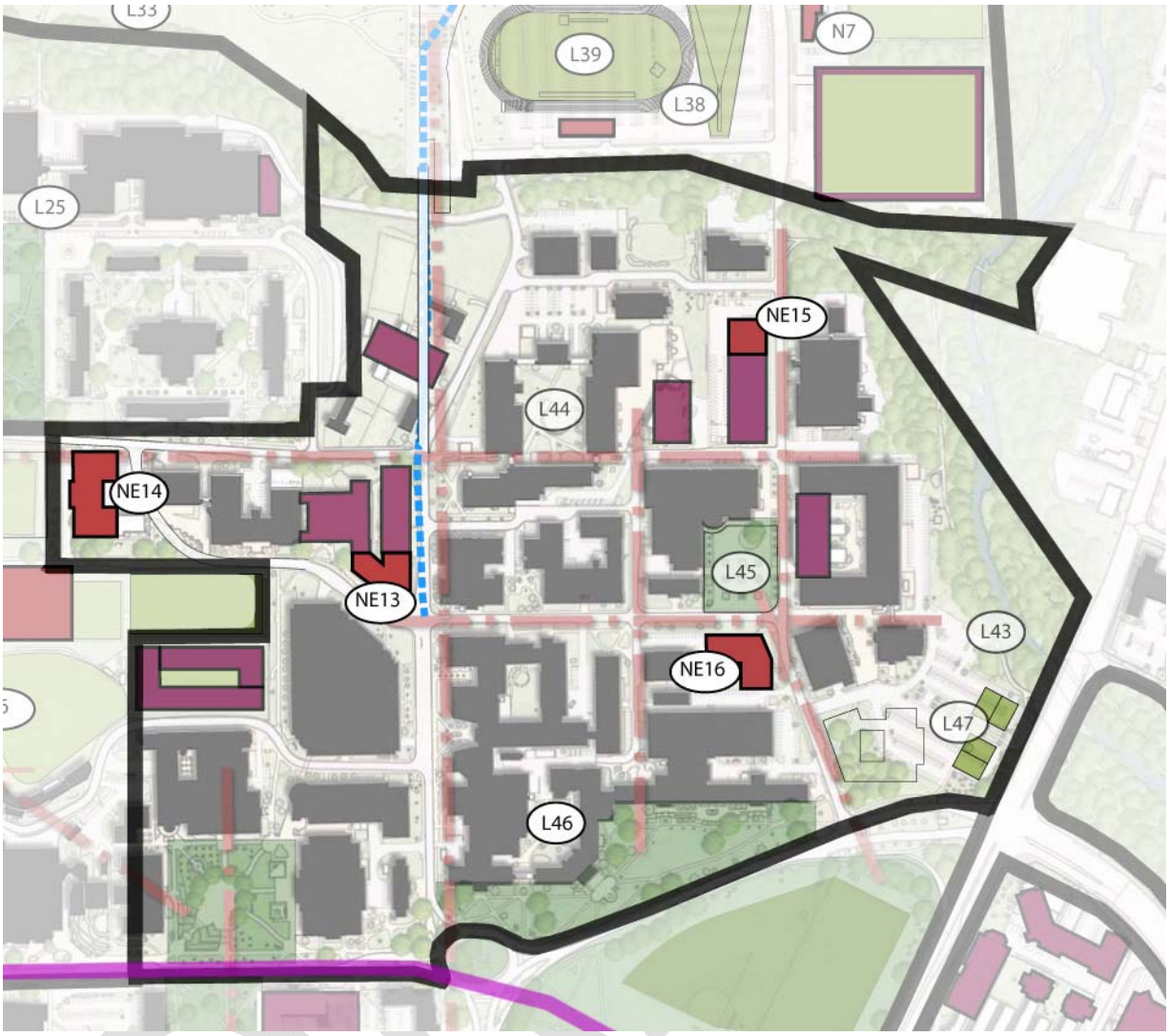
Planning Period 1



Figure___

Planning Period 2

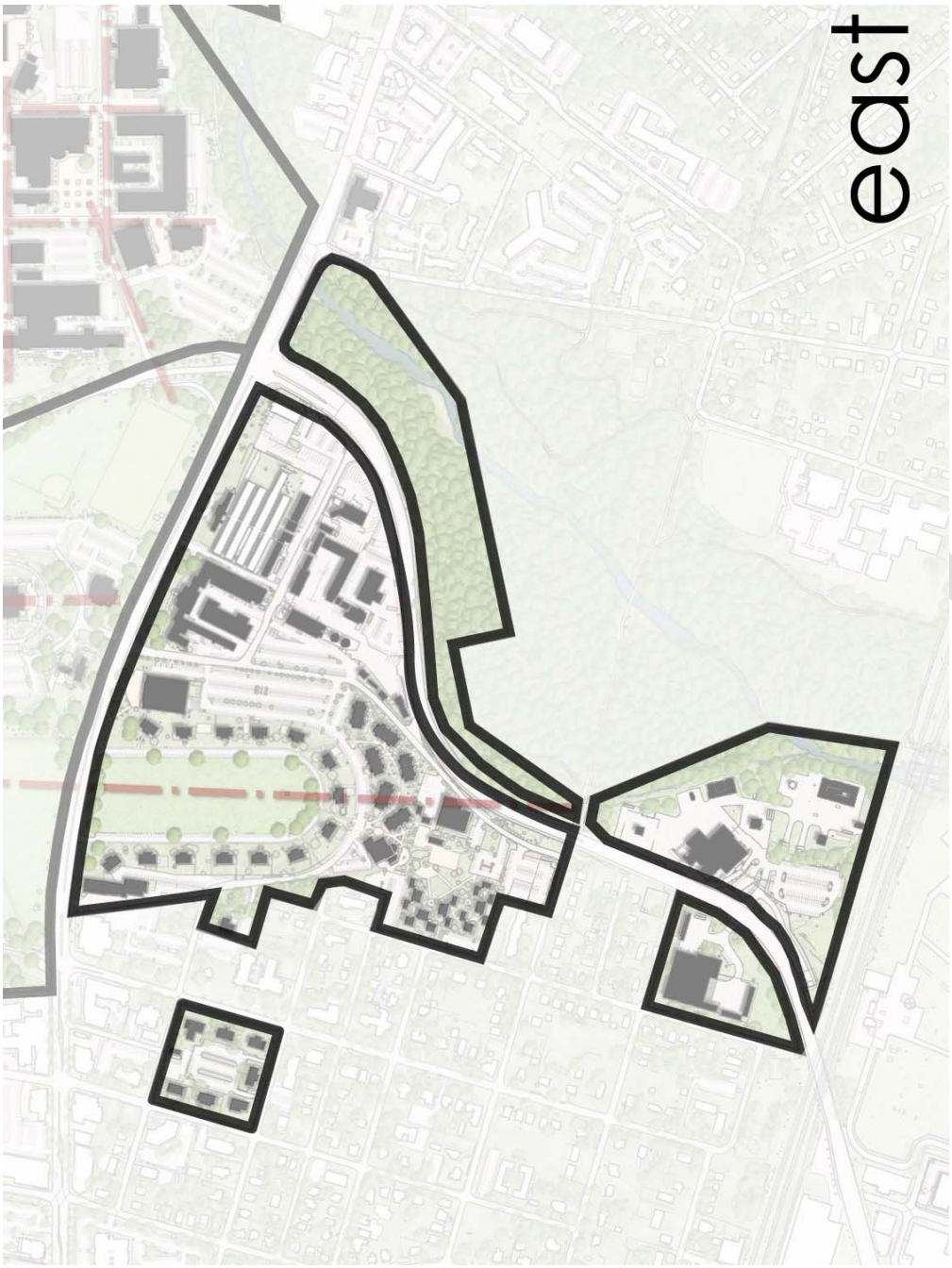
Buildings

Northeast	Site	Project	Building Type	GSF	Floors
Planning Period 1	NE1	Nutrition and Food Sciences Building	Academic	94,000	6
	NE2	Animal Science Consolidated Activities Pavilion	Academic	18,200	1
	NE3	Bioscience Research Support Facility Phase 1	Academic	126,000	5
	NE4	Bioscience Research Support Facility Phase 2	Academic	111,600	5
	NE6	Computer Science and Computer Engineering Building	Academic	182,000	9
	NE8	Physical Sciences Complex - Phase 1	Academic	160,064	
	NE9	Physical Sciences Complex - Phase 2	Academic	106,300	6
	NE10	Bioengineering Building -Phase 1	Academic	145,300	6
	NE13	Physical Science Complex - Phase 3	Academic	102,400	7
	NE14	New IT Building	Academic Support	100,000	4
	NE15	Bioengineering Building -Phase 2	Academic	54,500	6
	NE16	Gessow (Aerospace Engineering) Building	Academic	106,800	6

Landscapes

Northeast	Site	Project	Project Type	Acreage
Planning Period 1	L40	Hornbake Plaza Improvements	Landscape	
	L41	Chemical and Nuclear Engineering Building Rain Garden	Landscape	
	L42	Bioretention Garden Improvements (Technology Drive)	Landscape	
Planning Period 2	L43	North Gate Landscape Improvements	Landscape	
	L44	Animal Sciences Building Courtyard Improvements	Landscape	
	L45	Kim Engineering Building Plaza Improvements	Landscape	
	L46	Toll Physics Building Courtyard Improvements	Landscape	
	L47	Outdoor Volleyball Courts (4 sand or artificial turf, 50'x80' each, including buffer space)	Athletic Field	

7. East



Figure___

Existing District

The East Campus, totaling approximately 67 acres, is bounded by the Rhode Island Avenue, the Metro and railroad lines and Paint Branch Parkway extended to the east; the City of College Park, “Old Town” to the south; Baltimore Boulevard to the west; and, to

the north, the woodland stream area south of the Lakeland neighborhood in the City of College Park.

Description

The East District is comprised of four distinct land areas with distinct opportunities and plans for each: Forested Stream Buffer of the Paint Branch; Central Heating Plant and Campus Services Facilities; Ritchie Coliseum, Fraternity Row and Pocomoke Hall, and the Leonardtown Student Residential Community. The north-eastern half of East Campus developed over time to become the central compound for campus transit, postal and building services facilities.

East Campus is a university "gateway" site, strategically situated. It is at a transportation cross-roads with approaches to the university from the east (Paint Branch Parkway, south and north (Baltimore Boulevard). It is situated in the context of natural and cultural landscapes, respectively, the Paint Branch and its woodland stream buffer, Founders' (North) Gate, South Gate and the adjacent iconic campus open spaces, Memorial Chapel Lawn and the Recreation Intramural Fields. The East Campus is strategically located between the local commercial areas and neighborhoods – the City of College Park "Old Town" to the south and U.S. Route 1 "Commercial Strip" to the north.

The Forested Stream Buffer of the Paint Branch, located north of Paint Branch Parkway is held by the UMD (13.5 acre parcel) and the Maryland-National Capital Park and Planning Commission (M-NCPPC). A portion of the UMD parcel is set aside under a long-term forest conservation easement with the Maryland Department of the Environment.

Opportunities

This district will undergo more changes than any other on campus. Plans are to transfrom the industrial, service part of the district into a new face of the campus that links to the City of College Park. A public-private partnership has been proposed to build on the area between Paint Branch Parkway and Rossborough Lane a new "East Campus College Town Commons," a university town center with amenities appropriate to the urban setting. This mixed-use development will significantly improve connectivity between East Campus and the Campus Core and between the campus and the College Park Community. It will enhance the approach to campus and the attractiveness of the North gateway. New open spaces, vistas, including landscape enhancements and improved way-finding will mark one's procession to and arrival to campus.

The Leonardtown Student Residential Community is a residential community greatly in need of renovation. A major part of the transformation of the north-east section of the District will be the construction of new housing for graduate students in this area. The Fraternity Row will remain a residential community, with selected community services, providing connectivity to and physically mediating between the mixed-used urban scale of the East Campus Town Center and the modest residential character of "Old Town" College Park. The area offers a unique opportunity to be a mutual "zone of engagement"

between the University and the City of College Park, given the immediate adjacencies of property.

The Forested Stream Buffer of the Paint Branch will remain a conservation area, given the long-term forest conservation easement with the Maryland department of the environment. Planting understory native trees in this area will enhance the stream buffer and add seasonal color interest, providing an "arboretum" identity at this campus edge. Redevelopment initiatives will address environmental stewardship for forest conservation and storm water management, continuing its function as a Forested Stream Buffer for stormwater pumped from the Campus Core.

Fraternity Row visually links East Campus across Baltimore Boulevard to Chapel Lawn and Memorial Chapel and contributes to both the picturesque and neo-classical qualities of the Campus Core landscape. Additional opportunities exist to strengthen the visual connections from Paint Branch Parkway at Rhode Island Avenue trail to the Memorial Chapel within the Campus Core District.

Improvements

- Implement appropriate gateway development, with signage and aesthetic landscape plantings that serve to mark the procession along Paint Branch Parkway at the railway bridge, Rhode Island Avenue Trail-Pedestrian Crossing, and new open space at East Campus Redevelopment land parcels.

- Connect the Campus Core west of Baltimore Boulevard and the East Campus via multi-modal transit, including: light rail service – the Purple Line; WMATA bus, and the campus Shuttle-UM.

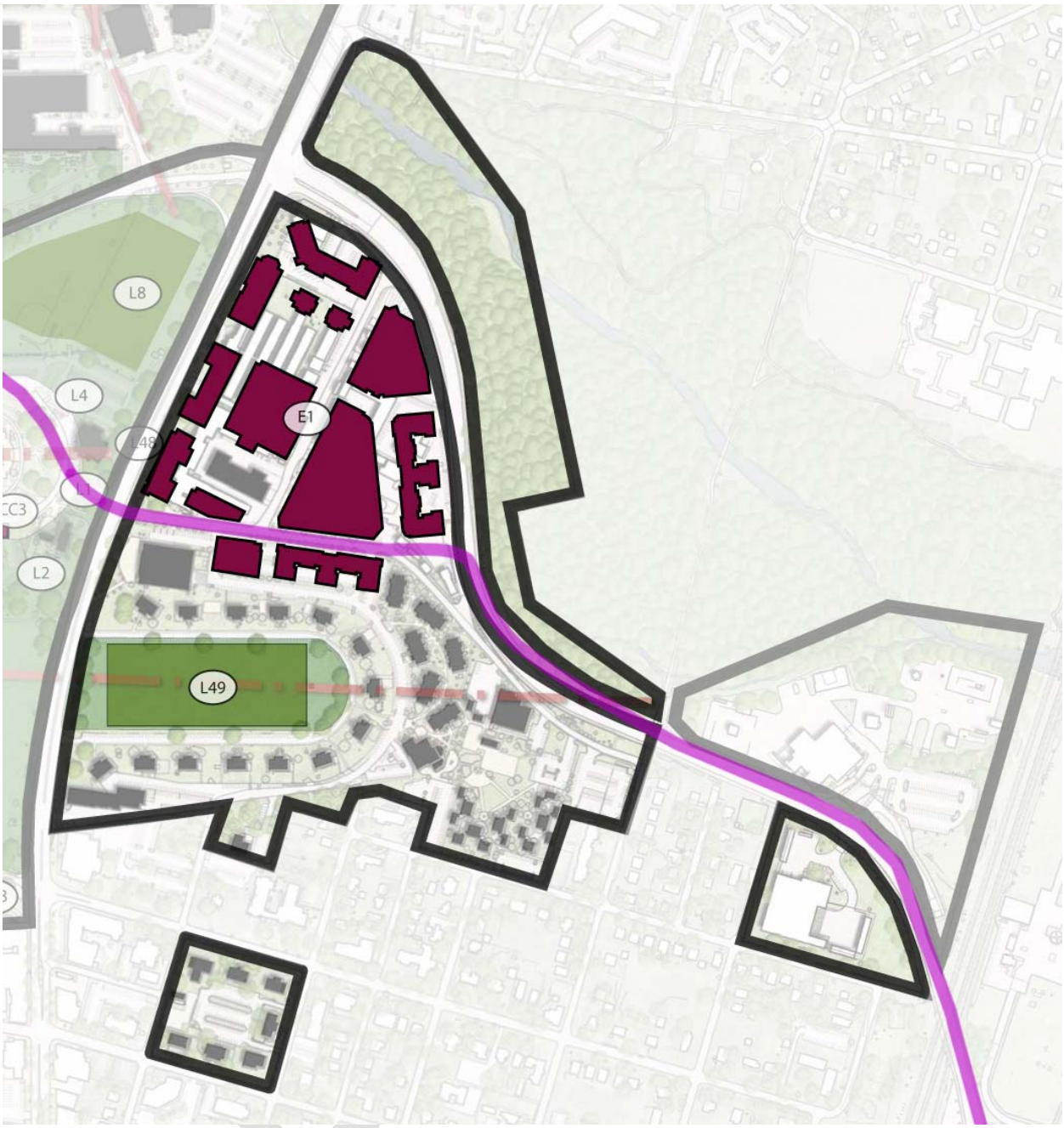
- Use planned bicycleways and ample pedestrian paths to link East Campus to the Campus Core and to "Old Town" College Park, and use the proposed town square as a focus and visual link across Baltimore Boulevard to the Recreation Fields.

- Enhance the landscape throughout and surrounding Fraternity Row.
  - relocate perimeter surface parking inside the Row, which will expand the width of the recreation field and improve flexibility for multiple simultaneous use;
  - enhance pedestrian opportunities to create the "Order of Omega Walkway", landscape;
  - develop outdoor pavilions at side yards, between each house for additional recreation and sheltered use;
  - develop integrated storage pavilions for sports field equipment as part of the landscape improvement;
  - enhance the landscape with plantings and exterior lighting.

Implementation of the East Campus Redevelopment Initiative

Phase I:
The project will be planned designed and implemented via a Public-Private Partnership. Plans call for the relocation of campus service units to make this area available for development: Reference: *East Campus-Phase I Design Guidelines*, September 1, 2010.

Phase II:
Implement additional projects that promote connectivity with the City of College Park, possibly including parks, new housing for graduate students, university and municipal neighborhood services and programs.



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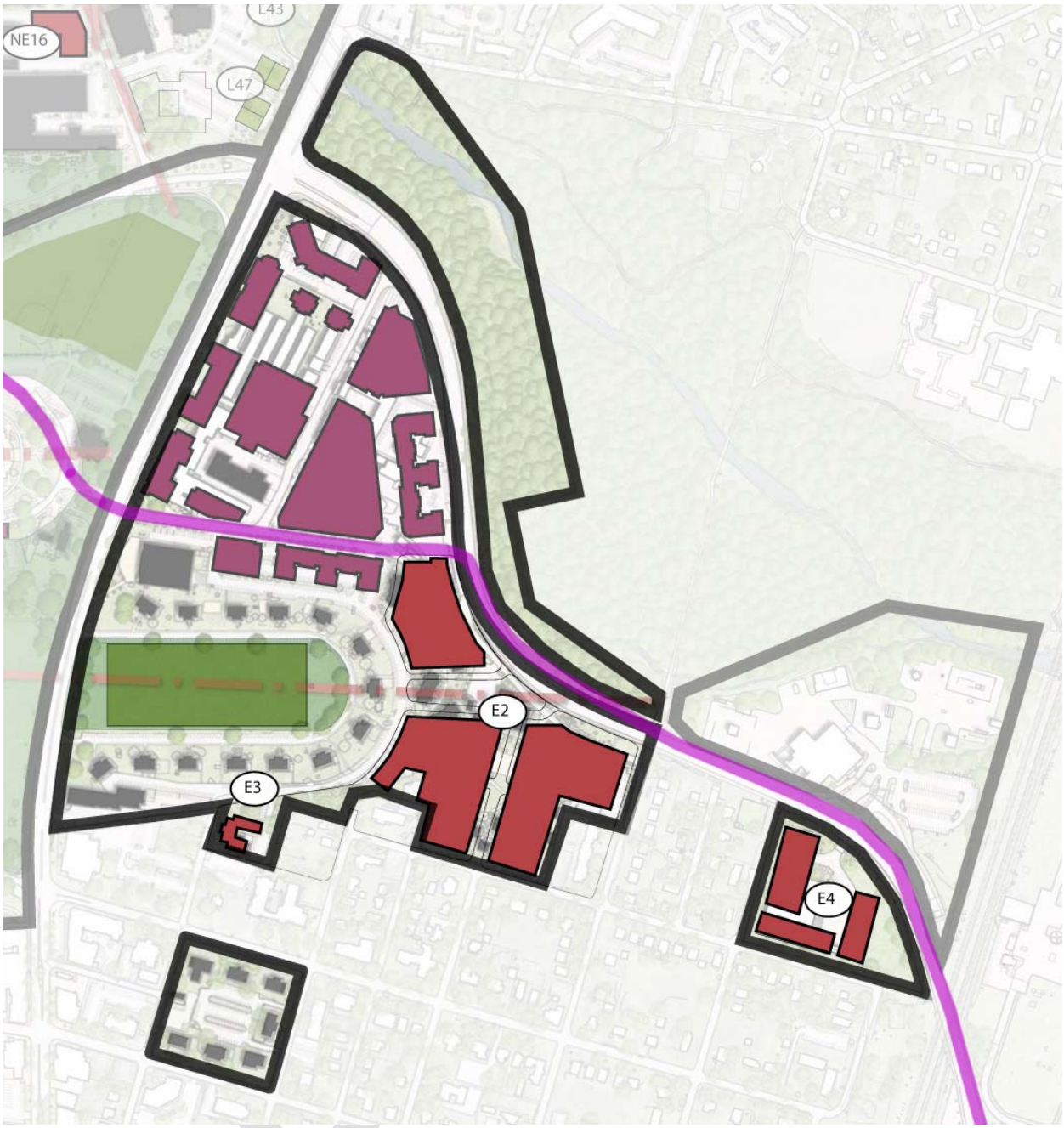
Planning Period 1



Figure___

Planning Period 2

Buildings

East	Site	Project	Building Type	GSF	Floors
Planning Period 1	E1	East Campus Mixed Use Development	East Campus	940,000	varies
Planning Period 2	E2	East Campus Mixed Use Development	East Campus	TBD	varies
	E3	Day Care Facility	Auxiliary	13,500	2
	E4	East Campus Mixed Use Development	East Campus	TBD	varies

Landscapes

East	Site	Project	Project Type	Acreage
Planning Period 1	L48	Route 1 Pedestrian Median Improvements (to be implemented by MD State Highway Administration)	Landscape	
	L49	Fraternity Row - multi-field layout, artificial turf (4 fields, 270' x 660' overall)	Athletic Field	

8. Golf Course

Figure___

Existing District

The Golf Course District comprises approximately 301 acres and is located to the west of the campus proper. University Boulevard bounds it to the east, Adelphi Road to the southwest, Metzerott Road and a single-family residential development within the City of College Park to the north.

Description

The Golf Course and its woodlands (7.68 Acres of which are in Forest Conservation Easement) are the upland areas of the Campus Creek headwaters and watershed and, thus, part of the watershed and wildlife corridor of Campus Creek and Paint Branch. The course was chartered as an Audubon Cooperative Sanctuary in 2002, and it has retained its Audubon Certification for the past nine years. The 150-acre Golf Course boasts over 27 documented species of trees, 11 different mammals, and 28 different birds, and there are plans to build upon this diversity.

The Golf Course has been named as one of golf's top 25 college courses (*Links* Magazine 2010). While the Golf Course is the dominate use for the district, it shares space with the ICA Holman Short Game Golf Facility, the Indoor Practice Facility, Metzerott Road Materials Storage Facility, a Recycling Center, the Astronomy Observatory, the National Archives II at College Park site, and the wooded Humphrey property with the Adelphi Road Office Annex.

Opportunities

The Golf Course actively works to preserve its natural attributes and is an established base for environmental and sustainability practices. The mature wooded areas that border all sides of this district are part of a contiguous mature woodland corridor that starts at the Humphrey property, moves along the frontage of Adelphi Road, crosses University Boulevard, goes through the Wooded Hillock and the Campus Creek corridor to connect to the even larger Paint Branch corridor.

Preservation of this mature woodland corridor is an important statement that we make as an Arboretum and that reinforces our commitment to the environment. The 2001 and the current 2011-2030 plans call for retaining, maintaining and enhancing the essential open space, landscape and ecological quality of this district. Use of a common planting palette on the wooded edges, in the Golf Course District and throughout campus, will increase the understanding of the campus boundaries and signify arrival on campus grounds.

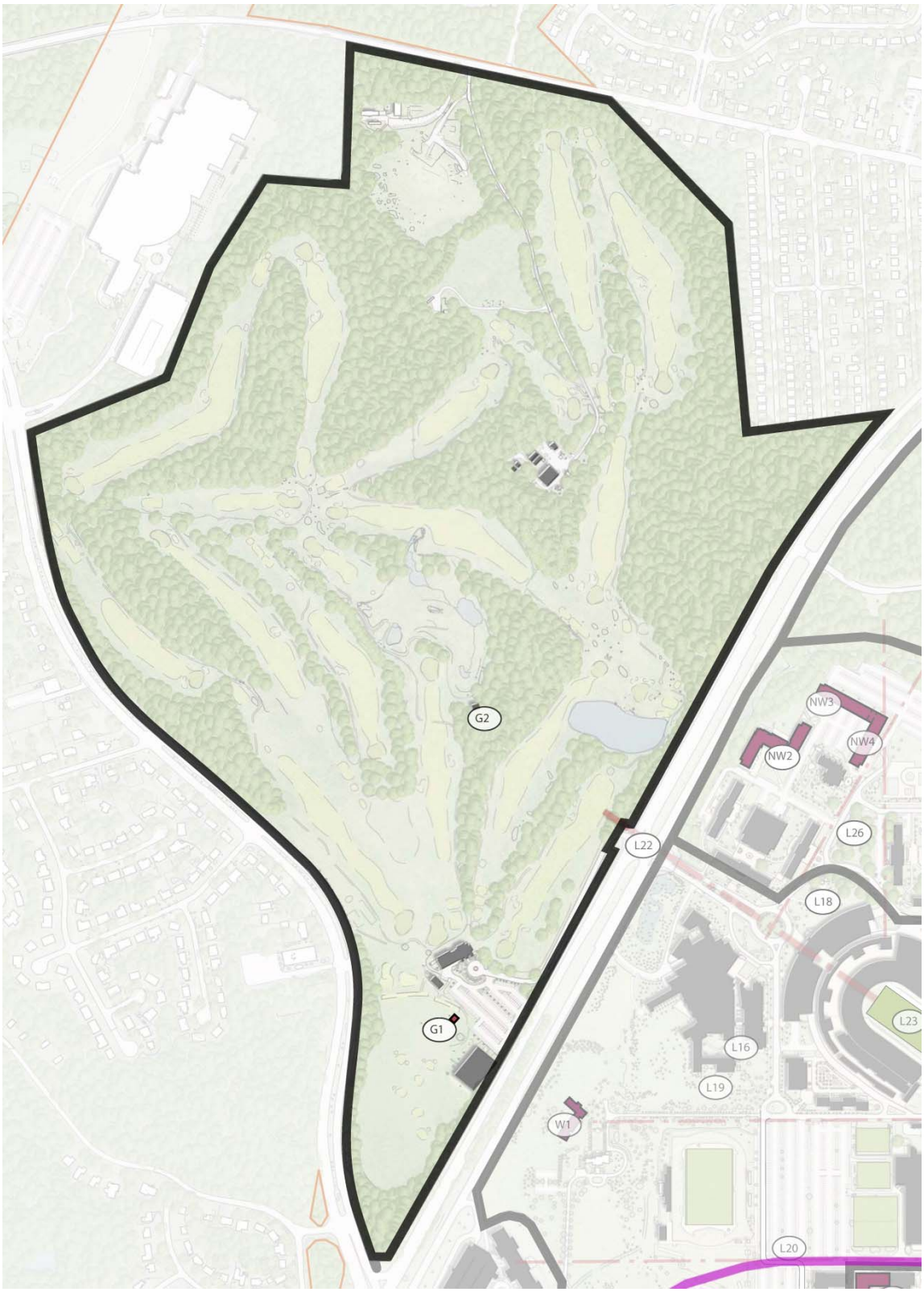
With its top 25 College Golf Course rating by *Links*, the Golf Course is a recognized district for significant athletic and recreational events. It was rated as the #1 renovation of the Year by *Golf Inc*. It provides opportunities for additional sports and recreational facilities and spaces.

While the landscape is internally and physically coherent in its organizational purpose and landscape character, the tract remains somewhat disconnected to the main campus due to the significant existing roadway-boulevard boundaries. This disconnection is a major issue that needs to be addressed to better integrate and enhance the value of this

district to the rest of campus. Several aspects of this site actually lend themselves well to creating this connection.

Improvements

- Build an Arboretum nursery research and holding facility for new, research, and replacement material at the Humphrey Property in conjunction with a forest conservation easement.
- Restore and improve existing wetland and pond, add new ponds on holes 3 and 7 to improve storm event storage and improve conditions on campus creek while minimizing potable water use for irrigation.
- Create turf and greens nursery for golf course repairs.
- Enhance the entry to the Golf Course at University Boulevard and Stadium Drive as part of Campus Gateway improvements.
- Plant edges with mixed understory and groundcover material as part of a common planted palette on campus edges.
- Convert Indoor Practice Facility back to three indoor tennis courts.
- Add a 1,000 GSF indoor driving facility.
- Build an outdoor pavilion structure and gardens for event functions.
- Create a perimeter trail network around golf course that connects back to the campus and surrounding communities.
- Build a new maintenance facility.



Figure___

Planning Period 1

Figure___

Planning Period 2

Buildings

Golf Course	Site	Project	Building Type	GSF	Floors
Planning Period 1	G1	Indoor Driving Range	Auxiliary	1,000	1
	G2	Golf Course Maintenance Facilities	Auxiliary	10,400	1

Landscapes

Golf Course	Site	Project	Project Type	Acreage
Planning Period 1	L51	Campus Tree Nursery	Landscape	
	L52	Holman Short Game Expansion	Athletic Field	
Planning Period 2	L53	Golf Course Ponds and Storm Water Management Improvements	Landscape	

9. Outlying Properties

Description

Due to the distinct nature of the separate properties, the OUTLYING PROPERTIES section describes a "confederation" rather than a "Campus District." These area properties may be grouped as follows:

- Baltimore Avenue (U.S. Route 1 Corridor)
- Knox – Guilford Neighborhoods
- West Campus Drive-Mowatt Lane
- Adelphi – Metzerott Gateway
- Metzerott Corridor
- Paint Branch Corridor and M Square

The various outlying University properties exist as either contiguous to campus edges or physically separate from the campus. The university will continue to explore the potential of public-private partnerships to help catalyze appropriate local economic and physical development and strengthen relationships with existing businesses and institutions.

There is no consistency of design, style, or materials within the Outlying Properties: autonomous entities have constructed facilities to serve their individual purposes. Other

properties have been purchased or leased and possess previously-constructed buildings. The veterinary and agricultural facilities in the Metzerott Corridor are a mixture of building types and styles; their construction and arrangement relate weakly to each other.

Opportunities

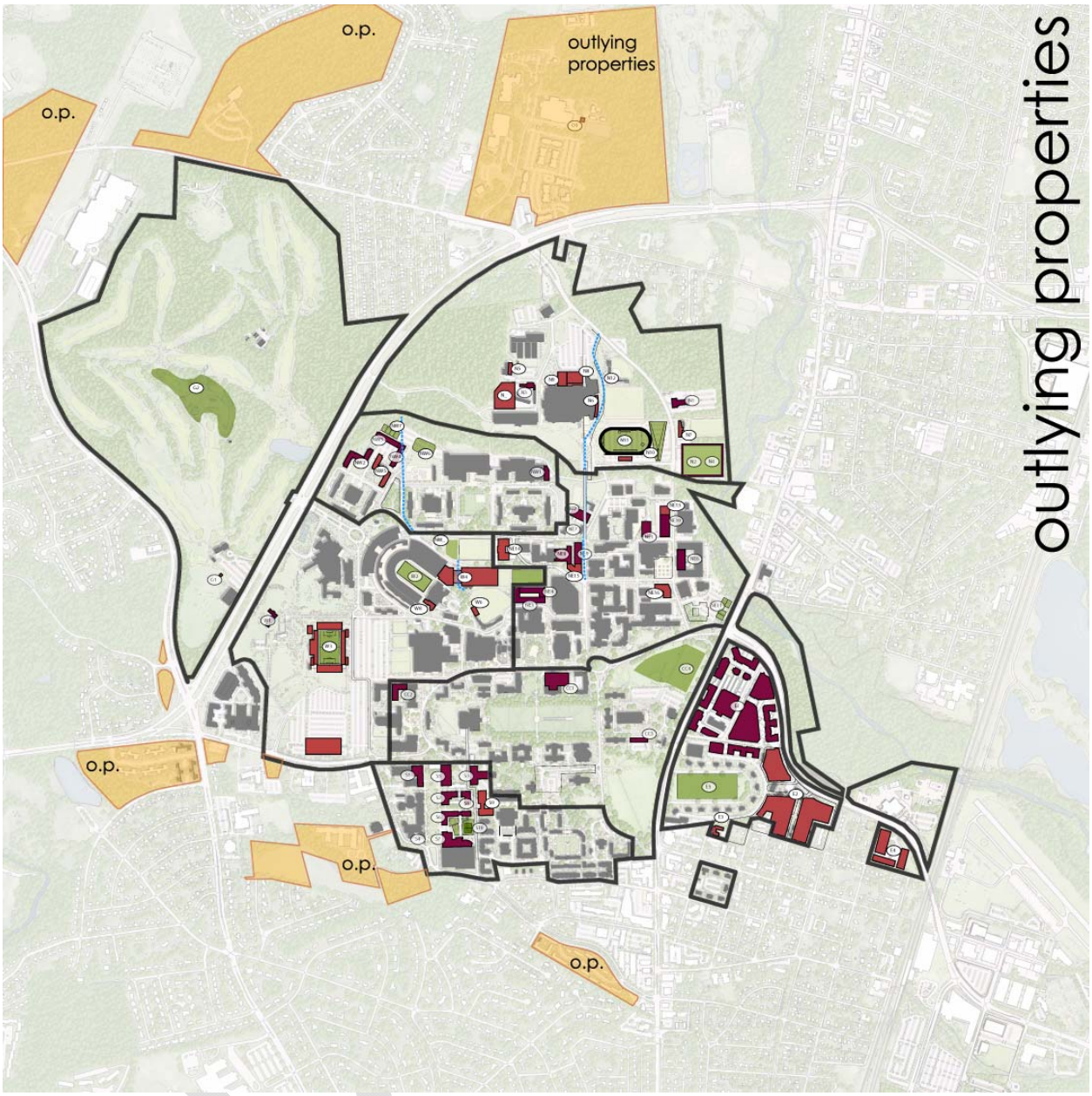
A variety of issues that will be specific to each property must be considered, investigated, and planned as renewal and improvement plans and projects arise. Two of the most important are reinforcement of their identity as University properties and environmental and sustainability opportunities and responsibilities.

Conservation and development guidelines will need to be developed for each parcel in light of the circumstances of each project. As throughout the contiguous campus, FMP principles, goals and objectives will apply to UMD outlying properties.

Improvements

- Appropriate signage, wayfinding, and landscaping will help identify the relationship of sites to the University.

- Forest buffers, conservation easements, and wetlands will be maintained.



outlying properties

Buildings

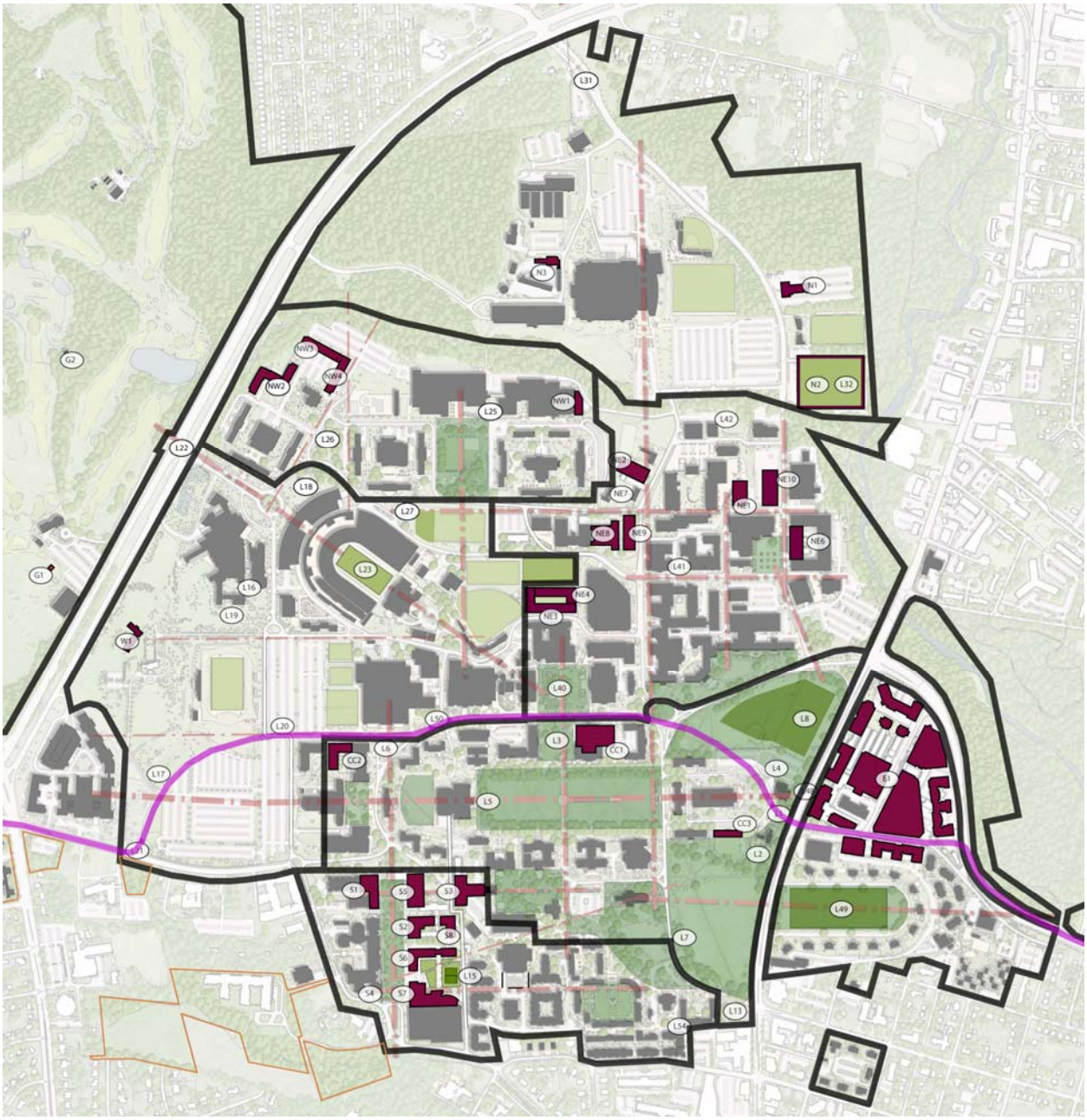
Outlying Properties	Site	Project	Building Type	GSF	Floors
Planning Period 2	O1	Chesapeake Bay Mesocosm (near Gudelsky Veterinary Medicine Center)	Academic	8,000	1

Landscapes

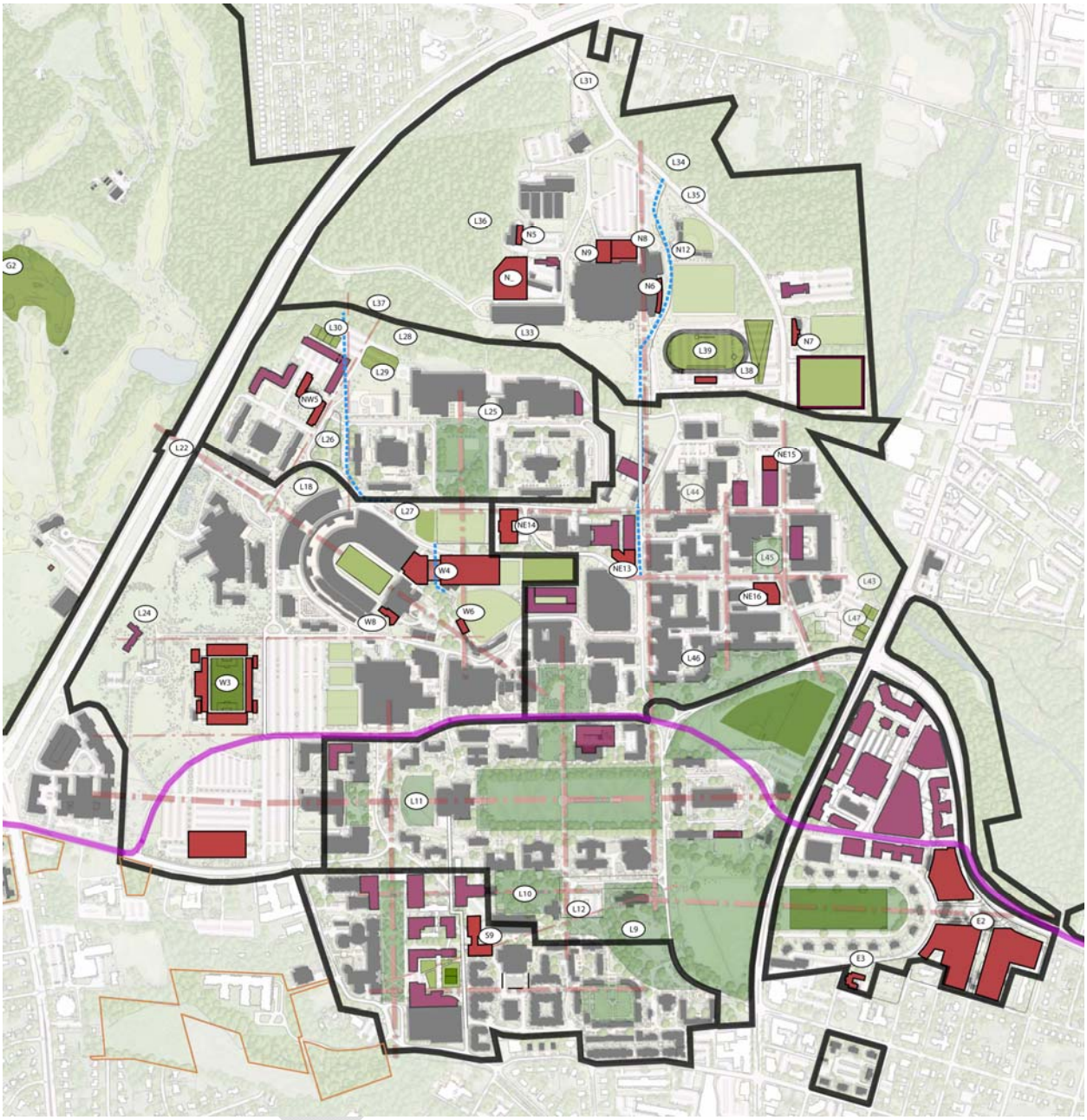
Outlying Properties	Site	Project	Project Type	Acreage
Planning Period 1	L54	Greenmeade Drive Gateway Enhancements	Transportation	
Planning Period 2	L55	Gudelsky Veterinary Center Retention Pond Improvements	Landscape	

VII. Implementation

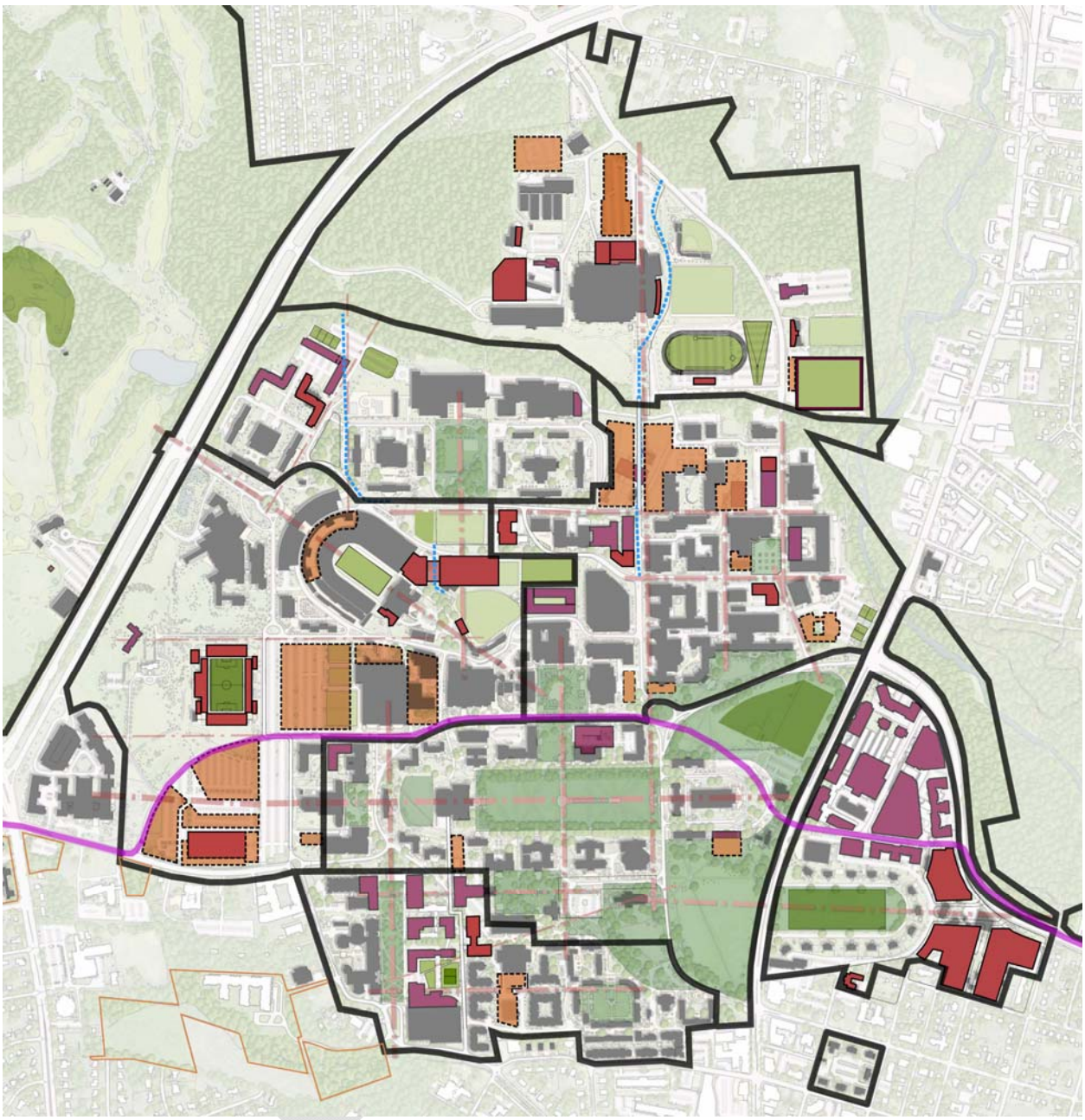
A. Planning Period 1



B. Planning Period 2



C. Beyond 2030



Framework plan: beyond 2030

VIII. Appendices

Appendix A

Building Demolitions Planning Period 1				
Bldg. #	**Building**	**District**	**GSF**	**Reason for Demolition**
075	Shriver Laboratory	CC	22,315	Site for new facility
065	Carroll Hall	S	17,411	Site for new facility
069	Wicomico Hall	S	17,974	Site for new facility
070	Caroline Hall	S	17,232	Site for new facility
054	Preinkert Field House	S	19,837	Site for new facility
066	West Education Annex	S	2,572	Site development project
124	Grounds Operations & Maintenance Building	N	3,157	Site for new facility
085	Institute for Physical Sciences & Technology	NE	17,669	Site for new facility
102	Agriculture Shed	NE	2,229	Incorporated in new Animal Pavilion
103	Animal Science Services Building	NE	1,026	Incorporated in new Animal Pavilion
119	Blacksmith Shop	NE	926	Incorporated in new Animal Pavilion
093	Engineering Annex	NE	8,329	Site for new facility
087	Central Animal Research Facility	NE	7,163	Site for new facility
002	Harrison Laboratory	E	56,246	East Campus Redevelopment
003	Service Building	E	59,049	East Campus Redevelopment
006	Plant Operations & Maintenance Building	E	15,405	East Campus Redevelopment
011	Motor Transportation	E	6,574	East Campus Redevelopment
012	Plant Operations & Maintenance Shop	E	11,832	East Campus Redevelopment
013	Shuttle Bus Facility	E	5,862	East Campus Redevelopment
410	Shuttle Bus Trailer	E	546	East Campus Redevelopment
020	Motorcycle Storage Bldg	E	360	East Campus Redevelopment
055	Plant Operations and Maintenance Storage	E	680	East Campus Redevelopment
100	Plant Operations & Maintenance Shop	E	1,829	East Campus Redevelopment
101	Plant Operations & Maintenance Shop	E	1,840	East Campus Redevelopment
112	Shuttle Bus Trailer	E	603	East Campus Redevelopment
210	Plant Operations & Maintenance Storage	E	499	East Campus Redevelopment
212	Plant Operations & Maintenance Shop	E	1,874	East Campus Redevelopment
215	Building Services Operations	E	3,342	East Campus Redevelopment
216	Heavy Equipment Building	E	3,267	East Campus Redevelopment
217	Solid Waste Storage	E	682	East Campus Redevelopment
343	Campus Mail Facility	E	4,225	East Campus Redevelopment
385	Pest Control Trailer	E	610	East Campus Redevelopment
	Total		**290,850**	

Building Demolitions Planning Period 2				
Bldg. #	**Building**	**District**	**GSF**	**Reason for Demolition**
067	Satellite Central Utility Building 2	S	13,664	Site for new facility
158	Varsity Sports Teamhouse	W	12,504	Site for new facility
369	Byrd Stadium Building	W	3,319	Site for new facility
381	Center for Young Children	NW	10,645	Site for new facility
344	Environmental Service Facility	N	6,090	Replaced by new facility
045	ITV Building	NE	2,735	Site development project
227	Jull Hall	NE	9,318	Site for new facility
201	Leonardtown Office Building	E	10,018	East Campus Redevelopment
116	Temporary Building (South of 201)	E	1,352	East Campus Redevelopment
204	Temporary Building (West of 201)	E	726	East Campus Redevelopment
207	Temporary Building (West of 201)	E	687	East Campus Redevelopment
208	Temporary Building	E	666	East Campus Redevelopment
238	Leonardtown Apartment	E	10,152	East Campus Redevelopment
239	Leonardtown Apartment	E	12,582	East Campus Redevelopment
240	Leonardtown Apartment	E	10,152	East Campus Redevelopment
241	Leonardtown Apartment	E	6,291	East Campus Redevelopment
242	Leonardtown Apartment	E	10,152	East Campus Redevelopment
243	Leonardtown Apartment	E	5,076	East Campus Redevelopment
244	Leonardtown Apartment	E	13,452	East Campus Redevelopment
245	Leonardtown Apartment	E	13,452	East Campus Redevelopment
246	Leonardtown Apartment	E	13,452	East Campus Redevelopment
247	Leonardtown Apartment	E	13,452	East Campus Redevelopment
248	Leonardtown Apartment	E	13,452	East Campus Redevelopment
249	Leonardtown Apartment	E	13,452	East Campus Redevelopment
250	Leonardtown Apartment	E	3,660	East Campus Redevelopment
	Total		**210,501**	

Appendix B

Building Renovations Planning Period 1				
Bldg. #	**Building**	**District**	**GSF**	**Comments**
059	Chincoteague Hall Renovation	CC	22,647	
047	Woods Hall Renovation	CC	24,055	
073	H. J. Patterson Hall Wing 1 Renovation	CC	56,600	
073	H. J. Patterson Hall Wing 2 Renovation	CC	62,372	
074	Holzapfel Hall	CC	27,400	Renovated as part of the University Learning and Teaching Center
034	Jimenez Hall Renovation	CC	63,200	
048	Francis Scott Key Hall Renovation	CC	24,804	Ground and first floors
064	Dorchester Hall Renovation	CC	35,436	
080	Rossborough Inn Renovation	CC	8,963	
076	Symons Hall Renovation	CC	54,753	Center and north wings
145	Architecture Building Renovation	S	67,163	
017	Cecil Hall Renovation	S	20,096	
026	South Campus Dining Hall Renovation	S	138,970	
098	Centreville Hall Renovation	NW	128,198	To provide air-conditioning
122	Cumberland Hall Renovation	NW	124,486	To provide air-conditioning
099	Bel Air Hall Renovation	NW	29,090	To provide air-conditioning
121	Chestertown Hall Renovation	NW	29,090	To provide air-conditioning
096	Cambridge Hall Renovation	NW	55,792	To provide air-conditioning
254	Elkton Hall Renovation	NW	114,118	To provide air-conditioning
253	Easton Hall Renovation	NW	115,533	To provide air-conditioning
256	Ellicott Hall Renovation	NW	118,303	To provide air-conditioning
258	Hagerstown Hall Renovation	NW	119,561	To provide air-conditioning
259	La Plata Hall Renovation	NW	132,943	To provide air-conditioning
082	Toll Physics Building South Wing Renovation	NE	74,733	
091	Chemistry Building Wings 1 & 2 Renovation	NE	200,550	
089	Engineering Lab Building Renovation (partial)	NE	5,800	
007	Pocomoke Building Alteration	E	30,346	Department of Public Safety
001	Upgrade Central Heating Plant	E	39,655	
810	Severn Building Conversion	OC	22,080	For remote library storage
810	Severn Building Conversion Phase I and IA	OC	53,677	For East Campus relocations
810	Severn Building Conversion Phase II	OC	49,230	For East Campus relocations
171	Sorority House Renovation	OC	10,445	
176	Sorority House Renovation	OC	11,833	
	Total		**2,071,922**	

Building Renovations Planning Period 2				
Bldg. #	**Building**	**District**	**GSF**	**Comments**
143	Benjamin Building Renovation	CC	112,505	
040	Morrill Hall Renovation	CC	16,277	
043	Taliaferro Hall Renovation	CC	47,870	
046	Marie Mount Hall Renovation	CC	114,757	
042	Tydings Hall Renovation	CC	101,945	
052	Mitchell Building Renovation (partial)	CC	19,840	
078	Reckord Armory Renovation (Ground Floor)	CC	35,541	Convert lecture halls to other use
009	Memorial Chapel Renovation	CC	25,776	
077	Main Administration Building Renovation	CC	41,299	
071	Lee Building Renovation (partial)	CC	20,662	
079	Turner Hall Renovation	CC	25,666	
039	Van Munching Hall Renovation (partial)	S	34,900	School of Public Policy wing
141	Tawes Theater Conversion	W	36,300	Includes infill floors
362	Byrd Stadium Concessions Building 1 Renov.	W	4,620	
363	Byrd Stadium Concessions Building 2 Renov.	W	2,663	
364	Byrd Stadium Concessions Building 3 Renov.	W	2,705	
365	Byrd Stadium Concessions Building 4 Renov.	W	11,193	
367	Byrd Stadium Concessions Building 5 Renov.	W	9,159	
379	Gossett Football Team House Renov. (partial)	W	TBD	
162	Cole Student Activities Building Renovation	W	248,809	
144	Biology-Psychology Building Renovation	NE	250,240	
082	Toll Physics Building North Wing Renovation	NE	163,093	
237	Geology Building Renovation	NE	24,390	
142	Animal Sciences Building Wing 1 Renovation	NE	62,462	
084	Mathematics Building Ground Floor Renovation	NE	25,981	For classroom upgrades
115	A.V. Williams Building Renovation	NE	236,015	
081	Wind Tunnel Renovation	NE	31,567	
147	Hornbake Ground and First floors Renovation	NE	30,018	For College of Information Services
231	Microbiology Building Renovation	NE	88,285	
309	Indoor Practice Facility (Tennis Bubble) Conv.	GC	20,963	Convert to multi-purpose practice
810	Severn Building Conversion Phase III	OC	38,900	For Physical Distribution Warehouse
	Total		**971,914**	

Appendix C

July 2, 2010

2011-2030 FACILITIES MASTER PLAN COMMITTEES CHARGE

STEERING COMMITTEE

Charge:
The objective is to develop a major update to the Facilities Master Plan (FMP) that will enhance the architectural heritage of campus through the continued development of open spaces, gathering places, vistas of green lawn and trees and groupings of buildings that promote a sense of community. Develop planning principles and physical framework for the built and natural landscape that will preserve the beauty of the campus and protect the environment.

The Vice President for Administrative Affairs will be the sponsor for the Plan and will consult with the President's Cabinet as the Plan is developed.

Scope Components:
The Committee will affirm and modify, as needed, the Physical Planning Principles from the 2002 Facilities Master Plan (FMP) and the 2007 FMP Update. Areas of focus will include analysis and recommendations for all determined FMP scope components.

FMP subcommittees will be integral to the FMP process and work with university staff and the FMP consultant team. The Steering Committee will consider the work and recommendations of the following advisory FMP subcommittees:

2011-2030 FACILITIES MASTER PLAN COMMITTEES

ARBORETUM AND BOTANICAL GARDEN STEERING COMMITTEE (ABG)

Charge:
In its affirmed mission for the university, the ABG Steering Committee's areas of focus will include analysis and recommendations for the campus environmental stewardship, open spaces and landscape enhancements and FMP scope components.

The ABG Steering Committee will receive and consider stakeholder input regarding the subject focus areas and coordinate with other campus entities, including, but not limited to: the other FMP Utilities and other FMP subcommittees, as applicable; the Office of Sustainability; selected members from the President's Climate Action Work Group; and, selected external environmental organizations and government agencies.

FMP Scope Components:
Environmental Stewardship

- Coordination and advancement of the Environmental Stewardship Guidelines and the University's Climate Action Plan
- Storm Water Quality and Quantity Management
- Campus Forest and Tree Canopy
- Campus Creeks, Ponds and Wetlands

Landscape Systems and Open Spaces: Renewal/Enhancements/New

- Campus Gateways
- Iconic Campus Spaces
- Streetscapes
- Wayfinding and signage
- Public Art
- Site Furnishings
- Plant Collections / Inventory / Methods

2011-2030 FACILITIES MASTER PLAN COMMITTEES

TRANSPORTATION SUBCOMMITTEE

Charge:
The Transportation Subcommittee's areas of focus will include analysis and recommendations for the FMP scope components for regional, local and campus transportation modalities and systems.

The Transportation Subcommittee will receive and consider stakeholder input regarding the subject focus areas and coordinate with other campus entities, including, but not limited to: the Department of Transportation Services; Department of Public Safety; and, selected external transportation organizations and government agencies. The Transportation Subcommittee will collaborate with the FMP Consultants and university staff to advise the FMP Steering Committee.

FMP Scope Components:
Pedestrian and Vehicular Circulation

- Light Rail, Metro Bus, UM Shuttle, Vehicle and Bicycle Circulation
- Car Pooling and Van Pooling
- Student, Faculty and Staff Parking (Surface & Structures)
- Pedestrian Circulation and Accessibility
- Exterior and Security Lighting
- Exterior Visual Identity and Way-finding

2011-2030 FACILITIES MASTER PLAN COMMITTEES

DISTRICTS SUBCOMMITTEE

Charge:
The Districts Subcommittee's areas of focus will include analysis and recommendations for the FMP scope components for land use and real property issues and integrated campus planning at the district scale, including: FMP building site selection, adjustments and refinements, per the current Capital Improvements Programs (C.I.P.) and System Funded Construction Program (S.F.C.P.); open spaces and landscape enhancements; and, pedestrian and vehicular circulation for the selected priority campus districts.

The Districts Subcommittee will receive and consider stakeholder input regarding the subject focus areas and coordinate with other campus entities, including, but not limited to: the Campus Senate-Independent Site Review Committee; and, selected external organizations and surrounding neighborhood groups. The Districts Subcommittee will collaborate with the FMP Consultants and university staff to advise the FMP Steering Committee.

FMP Scope Components:
Land Use

- Academic and Auxiliary (Per C.I.P. and S.F.C.P.) Buildings
- Open Spaces (Existing Iconic / New)
- Recreation and Team Sports
- Housing

Campus Districts

- Historic Core
- Southwest
- West
- Northwest
- North
- East
- Camus Edges, US. Route 1, and Outlying Properties

2011-2030 FACILITIES MASTER PLAN COMMITTEES

ARCHITECTURAL DESIGN STANDARDS BOARD (ADSB)

Charge:
In its affirmed mission for the university, the ADSB's areas of focus will include analysis and recommendations for the FMP scope components where design guidelines, systems components and design quality standards will be developed and determined as part of the 2011- 20230 FMP.

The ADSB will collaborate and coordinate with other FMP Subcommittees, as applicable; selected members of the Public Arts Committee; and, with the FMP Consultants and university staff to advise the FMP Steering Committee regarding the subject focus areas.

FMP Scope Components:
Campus Landscape Systems

- Concept plans for:
  - proposed streetscapes
  - proposed open spaces
  - existing iconic landscape enhancements
  - new gardens
- Standards for:
  - Exterior Lighting
  - Wayfinding and Signage
  - Paving Systems and Materials
  - Site Furniture
- Public Art
- Policy Recommendations for Accepting Gifts and Memorials to be placed on Campus Grounds

2011-2030 FACILITIES MASTER PLAN COMMITTEES

UTILITIES SUBCOMMITTEE

Charge:
In its affirmed mission for the university, the Utilities Subcommittee's areas of focus will include analysis and recommendations for the campus energy and utilities infrastructure utilities related to FMP scope components and coordinated with the university's Utilities Master Plan.

The Utilities Subcommittee will receive and consider stakeholder input regarding the subject focus areas and coordinate with other campus entities, including, but not limited to: the other FMP ABG and other FMP subcommittees, as applicable; the Office of Sustainability; selected members from the President's Climate Action Work Group; and, selected external environmental organizations and government agencies.

FMP Scope Components:
Environmental Stewardship

- Coordination and advancement of the Environmental Stewardship Guidelines and the University's Climate Action Plan
- Storm Water Quality and Quantity Management

Utilities Infrastructure

- Central Heating Plant and Satellite Central Utilities Buildings (SCUB) - Modifications/New
- Utilities Corridors

INSTITUTIONAL AND FACILITIES DATA SUBCOMMITTEE

Charge:
In its affirmed mission for the university, the Institutional and Facilities Data Subcommittee's areas of focus will include analysis and of pertinent campus databases and grounds, utilities and building mapping related to FMP scope components.

The Institutional and Facilities Data Subcommittee will collaborate with the FMP Consultants and support the work of the FMP subcommittees.

FMP Scope Components:

- Institutional Data
- Facilities Inventory
- Campus Tree inventory
- Utilities Systems Mapping

Appendix D

11/8/10

FMP Committee Member List

Ann Wylie	Cabinet Sponsor for the FMP

RFP Qualifications Committee

Frank Brewer	Chair and Assoc. VP for Fac. Management
Brenda Testa	Director, Facilities Planning
Karen Petroff	Assistant Director, Arboretum/Horticultural Services
Bill Mallari	Coordinator, Campus Development

RFP Qualifications Reviewers

Scott Munroe	Landscape Arch., Campus Development
David Allen	Director, Transportation Services
David Myers	Professor, Plant Science/Landscape Arch.

FMP Steering Committee

Frank Brewer	Chair and Assoc. VP for Fac. Management
David Allen	Director, Transportation Services
Jack Baker	Director, Operations & Maintenance
Kaye Brubaker	Professor, Civil & Environ. Engr.
Steve Cohan	Professor, Plant Science /Landscape Arch.
Carlo Colella	Director, Capital Projects
Randy Eaton	Assoc. AD for Business, ICA
Susie Farr	Executive Director, CSPAC
Jay Gilchrist	Director, Campus Recreation Services
Steve Hurtt	Professor, School of Architecture
Bob Infantino	Assoc. Dean, Life Sciences
Warren Kelley	Assistant VP, Student Affairs
Scott Lupin	Associate Director, Environ. Safety
Chuck Montrie	M-NCPPC representative
David Myers	Professor, Plant Sci./Landscape Arch.
Darryll Pines	Dean, A. James Clark School of Engr.
Joanna Schmeissner	Senior Writer
Terry Schum	Planner, City of College Park
Christine Stewart	Assistant Dean, BMGT
Harry Teabout	Director, Building Landscape Services
Brenda Testa	Director, Facilities Planning
Richard Weismiller	College Park Senate Representative Res. Associate, AGNR
Millree Williams	Director, Public Affairs
Debbie Kobrin	undergraduate student
Matthew Bernstein	undergraduate student
David Nelson	undergraduate student

Staff to the Steering Committee

Bill Mallari	Coordinator, Campus Development
Bill Monan	Assist. Director, Landscape Services
Scott Munroe	Landscape Arch., Campus Development
Karen Petroff	Assistant Director, Arboretum/Horticultural Services

Subcommittees to support the work of the FMP Steering Committee

Arboretum and Botanical Garden Subcommittee

Karen Petroff	Chair
Steve Cohan	Professor, Plant Sci./Land. Arch.
David Flumbaum	Asst. Director, Campus Recreation Services
Bill Mallari	Coordinator, Campus Development
Bill Monan	Asst. Director, Landscape Services
Robert Nichols	Asst. Director, Fraternity and Sorority Life
Scott Munroe	Landscape Arch., Campus Development
Bill Kenworthy	Professor, Plant Sci./Land. Arch.
Joan Patterson	Analyst, USM Foundation
Joanna Schmeissner	Senior Writer
Harry Teabout	Director, Building Landscape Services
Sara Tangren	Asst Prof, Plant Sci. & Landscape Arch.
Brenda Testa	Director, Facilities Planning
Mike Boeck	Graduate Student

Transportation Subcommittee

Warren Kelley	Chair
David Allen	Director, Transportation Services
Ray Cho	Planner, Campus Development
Laura Dyer	Captain - Special Events Commander
Cindy Felice	Associate Director, Resident Life
Dan Hayes	Planner, Campus Development
Mary Hummel	Assistant VP, Student Affairs
Maria Lonsbury	Project Specialist, Student Affairs
Alan Rucker	Asst. Director, Transportation Services
Terry Schum	Planner, City of College Park
Steve Glickman	Undergraduate Student
Matthew Popkin	Undergraduate Student
Barrett Dillow	Graduate Student

Districts Subcommittee
(FMP building site adjustments/refinements)

Brenda Testa	Chair
David Allen	Director, Transportation Services
Carlo Colella	Director, Capital Projects
Leland Comstock	Director, General Operating
Jon Dooley	Director, Residential Facilities
Randy Eaton	Assoc. AD for Business, ICA
Marino DiMarzo	Chair, Fire Protection Engineering

Marsha Guenzler-Stevens	Director, Campus Programs
Steve Hurtt	Professor, School of Architecture
Bob Infantino	Assoc. Dean, Life Sciences
Brian Lintz	Lieutenant, Public Safety
Bill Mallari	Coordinator, Campus Development
Bill Monan	Assist. Director, Landscape Services
Lori Owen	Director, Arts & Humanities
Andrea Thompson	Assoc. Director, Campus Rec. Services
Terry Schum	Planner, City of College Park

Architectural Design Standards Board

(FMP focus: standards for furniture, lighting, signs, etc.)

Frank Brewer	Chair
Jack Baker	Director, Operations & Maintenance
Carlo Colella	Director, Capital Projects
Lou Fisher	Assistant Director, Capital Projects
Gay Gullickson	Professor, History Department
Steve Hurtt	Professor, School of Architecture
Bill Mallari	Coordinator, Campus Develop.
Jack Sullivan	Associate Professor, Plant Sci.
Brenda Testa	Director, Facilities Planning
Jocelyn Joiner-Fleming	Manager, Capital Projects

Utilities Subcommittee

Jack Baker	Chair
Joan Kowal	Assistant Director, OFA
Arshad Mughal	Asst. Director, Facilities Planning

Institutional and Facilities Data Committee

Terry Brenner	Chair
Kyland Howard	Senior Research Analyst, OIRPA
Pamela Phillips	Assoc. Director, OIRPA

Recreation Subcommittee

Jay Gilchrist	Chair
Andrea Thompson	Assoc. Director, Campus Rec. Services
Dan Hayes	Planner, Campus Development
Barbara Aiken	Assoc. Director, Campus Rec. Services
Brent Flynn	Assoc. Director, Campus Rec. Services
Wallace Eddy	Assistant to Director, Campus Rec. Services
Carrie Tupper	Assoc. Director, Campus Rec. Services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MARYLAND
Facilities MasterPlan 2011-2030
was produced by the Deparment of
Facilities Planning. Full plan and related
documents can be found at
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Photographs by
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Facilities
Management