

2022 Facilities Master Plan Update



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INTRODUCTION

In 2017, the University of Maryland, Baltimore (UMB) published a comprehensive 10-year Facilities Master Plan.

Among the key themes promoted in the plan were further enhancing UMB's research profile through reinvestment in existing assets, support of collaborative and innovative initiatives across campus, and leveraging UMB's role as an anchor institution to promote local investment, social connectedness, and meaningful engagement with neighboring communities.

Since 2017 significant strides have been taken toward meeting objectives associated with these themes. Most conspicuously, the opening in Fall 2018 of the new 439,000-square-foot LEED Gold Health Sciences Research Facility III, and in Fall 2021 of the new 21,000-square-foot Community Engagement Center. The latter, housed in an historic neoclassical school building, marks an important step toward revitalization in the Westside Hollins Market community.

The Vision Statement and 8 "Key Themes" elaborated in the 2017 document remain relevant to this plan update.



Global Connections and Regional Catalyst

UMB is uniquely situated among peer research institutions as a tightly knit urban campus where partnerships and influence within international research communities are cultivated alongside a time honored tradition of training top health, law, and human services professionals for leadership in Maryland, the region, and beyond.

UMB occupies a dense urban campus on the west side of downtown Baltimore. In addition to furnishing cultural, entertainment, and recreational opportunities for the UMB community, the city represents a practical training ground, ideally suited to the University's core professional disciplines. This, along with many advantages of the Baltimore-Washington region, contributes to making UMB's location itself an institutional strength.

Nowhere is this more evident than in UMB's partnership with the University of Maryland Medical System (UMMS), whose flagship campus shares a direct physical connection with UMB.

The University campus encircles the hospital, and the two institutions' missions are likewise closely entwined.

UMB faculty and students play a vital role in the hospital's teaching mission, continued clinical excellence, and innovative care.

In close parallel, UMB's adjacency with University of Maryland BioPark complements the University's research prowess by providing collaborative opportunities and avenues to successful commercialization of medical technologies and therapeutics.

Opportunities to connect UMB with its neighbor communities are reflected in numerous initiatives that create partnerships and provide services through field-work in the various social, legal, and clinical programs.

These programs are also a training ground for many of Maryland's future

practitioners.

Clinics operated by the Law School and School of Social Work have earned both schools national distinction for their public service.

Research activity of the University's faculty and students contributed to \$1.1B in 2020 R&D awards, placing the UMB MPower partnership among the top ten public research institutions for the second year since formalization of the partnership in 2019. Research in life sciences fields, notably, representing over half of the award amount.

Together these institutional strengths actualize core values and strategic aims espoused by the institution. They are also foundational to present and future planning efforts.

Purpose of the Report and Description of the Planning Process

The planning effort for this 5-year update began during the COVID-19 pandemic. Thus, the report reflects a set of challenges that informed and influenced many of the traditional aims of a physical planning endeavor.

The 5-year Facilities Master Plan Update (hereafter the “plan update”) seeks to build-on the framework set out in the 2017 plan document by assessing the progress made in the years since its publication, and by modifying certain elements to recognize changes in institutional strategy. This document lists the foreseeable needs for the next the 10 years but also recognizes the unpredictable nature of future growth will require open development sites. Where needed, the update seeks to adjust course in the 2027 outlook established in the 2017 Plan, and looks beyond to envision future opportunities.

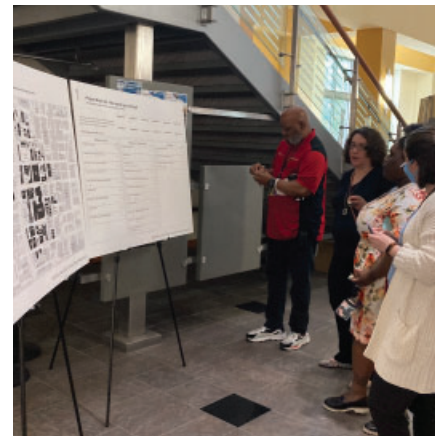
Many of the 2017 recommendations with respect to deferred maintenance, opportunity development sites, program locations, landscape and

open space networks, circulation, and campus infrastructure remain applicable, and will continue to influence prioritization of planning efforts and resource allocation.

KEY THEMES

Eight themes were identified in the 2017 plan, providing a broad framework for physical planning objectives. These continue to be a strong starting point for this plan update:

- Address Program Needs
- Support Innovation and Collaboration
- Renew and Reinvest
- Create a Vibrant 24/7 Environment
- Enhance Circulation and Connectivity
- Improve Transportation Elements
- Uphold UMB as an Anchor Institution for the Community

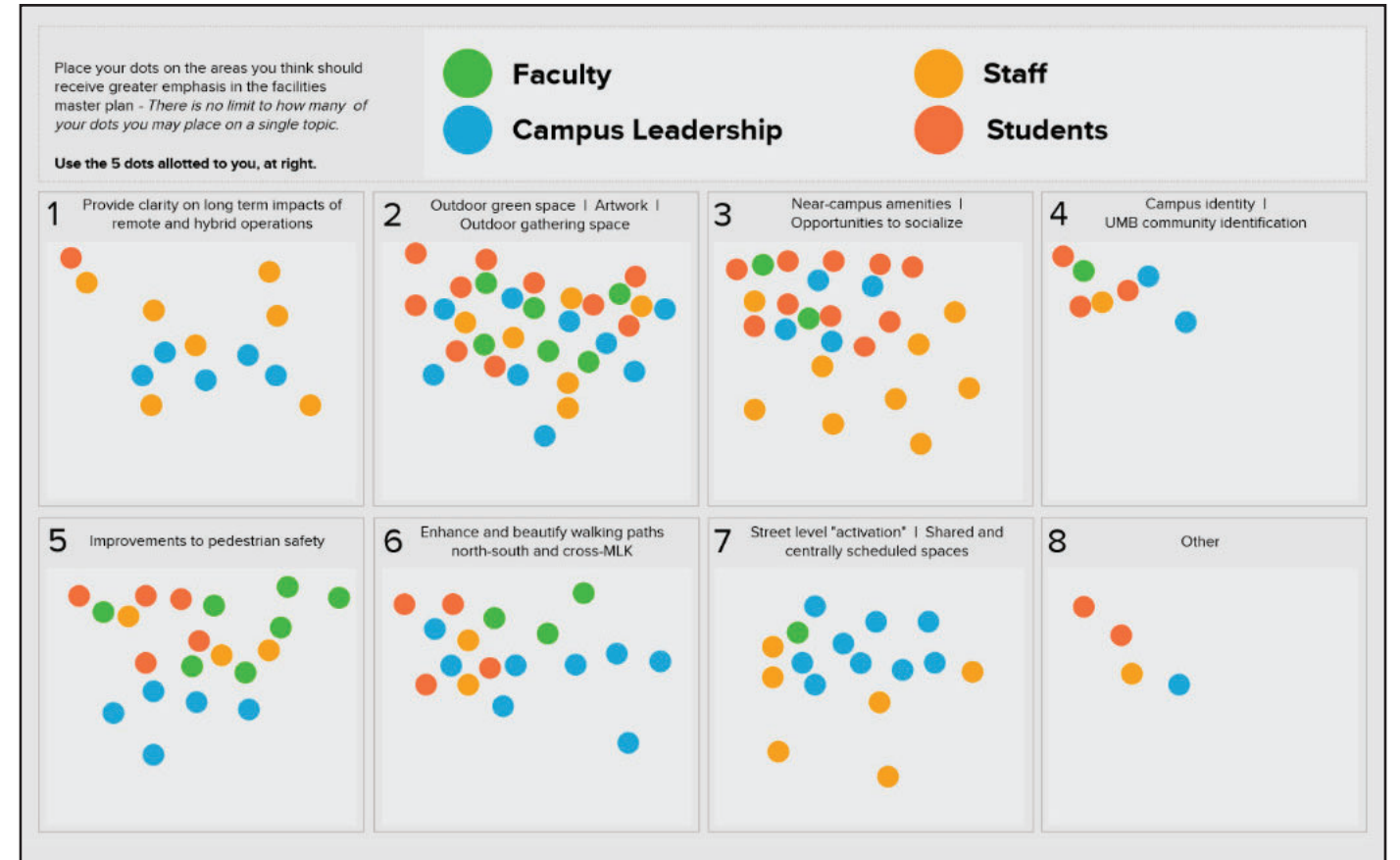


Spring 2022 Facilities Master Plan Open House

OUTREACH AND PROCESS

The update consisted of three work phases starting in Fall 2021. The outreach process was consistent with UMB’s Strategic Plan goals of inclusivity and engagement.

Phase 1 was the primary outreach phase and included data gathering and needs assessment for schools and administrative units. The



Phase 1 Engagement - Topics Dot Exercise

format of these engagements was questionnaire distribution followed by interviews with key representatives from each group. During this phase an Executive Committee was formed for the purpose of guiding the plan’s direction at three key milestones in the process. This phase also included three focus group workshops designed to engage students, faculty, and staff independently.

All Phase 1 outreach, including workshops requiring interactive, graphic, and written feedback

were conducted via remote and collaborative web-based media. This approach allowed for a higher degree of participation than might otherwise have been hoped for, given the operational constraints that existed throughout much of the process.

Phase 2 encompassed development of plan alternatives. This included a campus open house event held in the Campus Center, and several follow-up interviews and workshops.

Phase 1 and Phase 2 efforts included

roughly 30 separate meetings or group activities. The feedback that was provided coalesced around the concepts and recommendations articulated in this document, and also helped determine the prioritization and location options represented in the Plan Update.

Phase 3 consisted of final plan development and distribution of the draft document to the Executive Committee, partner institutions and community stakeholders.

UMB's mission is:

To improve the human condition and serve the public good of Maryland and society at-large through education, research, clinical care, and service.

Strategic Planning Framework

UMB completed a new Strategic Plan in 2022. This broad-ranging effort culminated with the articulation of six themes that will shape the University's commitment to its core mission, build on its reputation as a research and academic institution of global stature, and influence physical planning priorities on campus.

1. ACCOUNTABILITY AND INTEGRATION OF CORE VALUES

UMB will systematically integrate the core values into the organizational culture through education and demonstrated behaviors so that internal and external stakeholders clearly understand who we are as an organization and what we stand for.

4. INNOVATION AND REIMAGINATION

UMB will foster an agile, creative, and risk-tolerant learning environment, boldly capitalizing on new opportunities, technologies, and the power of collaboration to discover meaningful solutions to the complex problems impacting UMB, its schools, its strategic partners, and communities.

2. STUDENT GROWTH AND SUCCESS

UMB will design and implement collaborative, inclusive, respectful, and accessible academic learning environments that equitably support and develop students to become exemplary professionals and purposeful contributors to society.

5. COMMUNITY PARTNERSHIP AND COLLABORATION

UMB will formalize and embrace a Universitywide approach to community engagement.

3. UNIVERSITY CULTURE, ENGAGEMENT, AND BELONGING

UMB will create a sustainable, equitable, and inclusive culture of care that collaboratively engages and embraces all members of the University community, and the broader community, with respect and in a manner that fosters belonging, understanding, trust, and equity.

6. GLOBAL ENGAGEMENT AND EDUCATION

UMB will enhance its impact and reputation as a globally engaged institution committed to improving the human condition through engagement, education, and research.



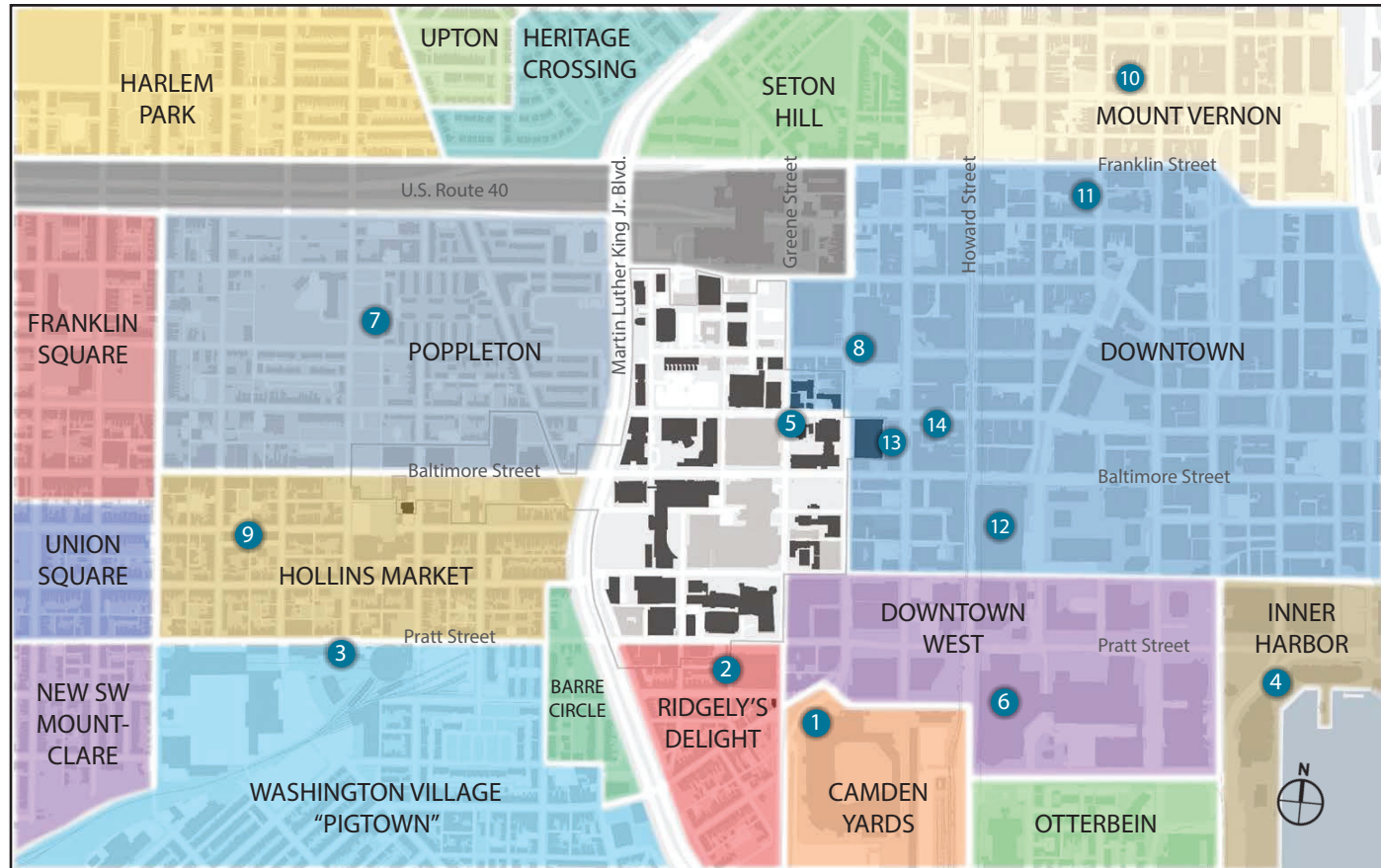
INSTITUTION DESCRIPTION

UMB's six professional schools and interdisciplinary Graduate School confer the majority of professional practice doctoral degrees in Maryland each year. As the state's public health, law, and human services university, UMB fulfills a vital role in meeting growing workforce demands within the state and region.

UMB also has impressive research and clinical operations, deriving almost 70 percent of its operating funds from combined research programs and clinical practices. Clinics operated by UMB schools serve almost 60,000 patients each year and provide almost 600,000 hours of pro bono services to residents of Baltimore and area communities.

These characteristics underpin UMB's Strategic Plan aim toward being a trusted regional partner while also continually enhancing its reputation of training and producing exemplary professionals in diverse and impactful fields of study.

The UMB campus occupies 65 acres, encompassing 6.5 million square feet in 57 campus buildings, of which 21 are academic or research buildings. In Fall 2021 the university enrolled 7,244 students across its 86 degree and certificate programs.



Campus Context

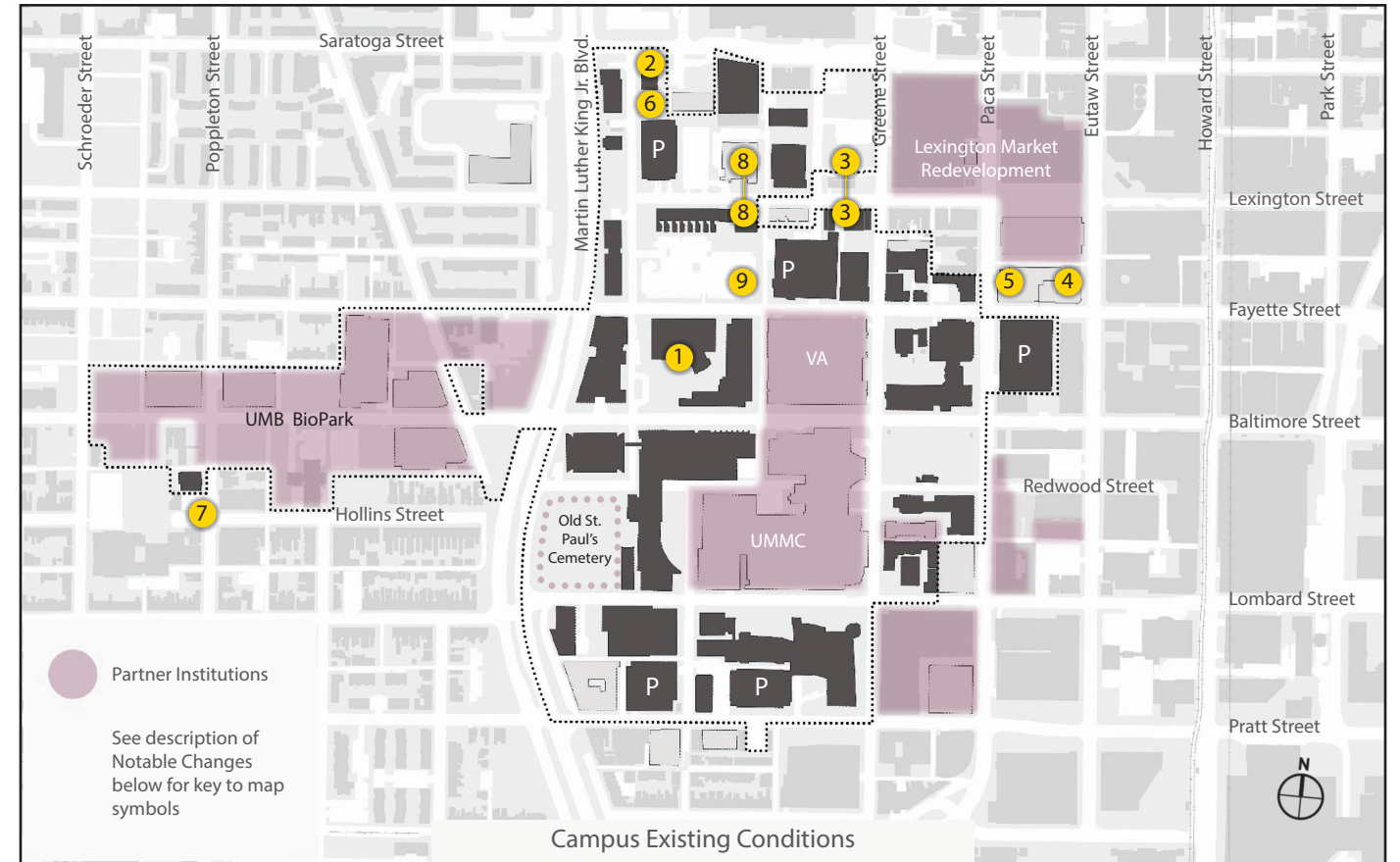
Located on the west side of downtown Baltimore, UMB is the largest anchor institution, by area, within the surrounding neighborhoods. UMB is joined by two major medical institutions, the University of Maryland Medical Center (UMMC) and the Veterans Affairs Medical Center (VAMC), which are in the heart of campus. The University of Maryland BioPark is also located just west of Martin Luther King Jr Blvd.

While separate in their governance, these institutions constantly collaborate and rely upon each other to achieve their educational, health care, service, and business goals.

The West Side of Downtown Baltimore is currently a transitioning neighborhood, benefiting from a steady stream of investments in real estate and public infrastructure. Much of this improvement can be attributed directly to the continuing growth and success of UMB and its partner institutions.

POINTS OF INTEREST

- 1 Oriole Park at Camden Yards
- 2 Babe Ruth Birthplace Museum
- 3 B&O Railroad Museum
- 4 Harbor Place and Inner Harbor
- 5 Westminster Hall
- 6 Baltimore Convention Center
- 7 Edgar Allen Poe Home
- 8 Lexington Market
- 9 Hollins Market
- 10 Walters Art Museum
- 11 Enoch Pratt Free Library
- 12 Baltimore Arena
- 13 Hippodrome Theatre
- 14 Everyman Theatre



Existing Conditions

UMB is a dense urban campus whose infrastructure and facilities share municipal rights-of-way.

The campus is not gated, and does not have discernable boundaries beyond those that are implied with signage, branding efforts, and consistent urban design elements.

The campus also has a unique urban geography that is closely intermeshed physically, as well as organizationally,

with two of UMB's partner organizations situated at its center.

ACCESS AND CIRCULATION

The university benefits from a highly accessible location well-served by several transit options. Scheduled last-mile solutions include three shuttle routes that link to nodes on the region's light rail, metro, and Marc train lines. These also connect to some of Baltimore's most sought after residential neighborhoods.

NOTABLE CHANGES SINCE 2017:

- 1 Health Sciences Facility III
- 2 Phase I Campus Electrical Infrastructure and Recycling Center
- 3 600 Block W. Lexington: Acquisitions and site clearing
- 4 Drover's Bank restoration and hotel development
- 5 Prosper on Fayette apartment development
- 6 Electrical Peaking Plant
- 7 Community Engagement Center
- 8 Hope Lodge / Ronald McDonald House Swap
- 9 New surface lot and pedestrian way



History and Demographics of the University

Chartered in 1812 as the University of Maryland, UMB is the oldest public university in the state. Maryland today attracts and develops a specialized workforce, ranking first nationwide in its concentration of PhD scientists. UMB accounts for 16-percent of all doctoral degrees in the Biological and Biomedical Sciences, and 54-percent of all professional practice doctoral degrees granted in the state.

During the nineteenth century, five Baltimore colleges - all pioneering their respective fields - were gradually knitted together to form the University of Maryland's founding campus.

In 1823 the School of Medicine established the Baltimore Infirmary, which would ultimately become the University of Maryland Medical Center. It was the first teaching hospital in the U.S. built by a public medical school. The hospital was later chartered as a separate private institution in 1984.

The Graduate School was added in 1918 to promote research and advanced studies. Shortly thereafter the Maryland General Assembly merged UMB and the Maryland State College of Agriculture (now University of Maryland College Park) together as a dual institution in 1920 - Both

would ultimately become part of the University System of Maryland, created in 1988.

In 1961 a School of Social Work was added, expanding the University's service mission to encompass training for care focused toward communities and populations.

DEMOGRAPHICS

UMB today reflects the diversity of the region. Representation of women and minority students is high campuswide: 73-percent of the Fall 2021 class are women, and 45-percent are minority, of which 18-percent are African American. In medicine, UMB's female enrollment is 61-percent and Asian American enrollment is 29-percent, exceeding the national averages of 55 and 22-percent respectively (AAMC).

CURRENT AND FUTURE ENROLLMENTS BY SCHOOL - FTES¹

	Fall 2015 Actual	Fall 2020 Actual	Fall 2021 Actual	Fall 2031 Estimate	FY 2021– FY 2031 % Change
School of Dentistry	719	710	715	713	-0.3%
Carey School of Law	778	818	887	753	-15.1%
School of Medicine	1,351	1,361	1,374	1,396	1.6%
School of Nursing	1,456	1,908	1,931	2,023	4.8%
School of Pharmacy	948	1,114	1,143	996	-12.9%
School of Social Work	1,110	1,075	969	1,112	14.8%
Graduate School (Unaffiliated Only)	57	145	212	266	25.5%
UMB CAMPUS TOTAL ²	6,419	7,131	7,231	7,259	0.4%
Shady Grove Programs	453	773	791	906	14.5%
Fully Online Programs	123	444	528	723	36.9%

CURRENT AND FUTURE ENROLLMENTS BY SCHOOL - HEADCOUNT

	Fall 2015 Actual	Fall 2020 Actual	Fall 2021 Actual	Fall 2031 Estimate	Fall 2021– Fall 2031 % Change
School of Dentistry	638	633	628	639	1.8%
Carey School of Law	706	753	813	701	-13.8%
School of Medicine	1,307	1,247	1,234	1,287	4.3%
School of Nursing	1,728	2,086	2,130	2,185	2.6%
School of Pharmacy	842	1,231	1,316	1,177	-10.6%
School of Social Work	1,000	966	877	1,005	14.6%
Graduate School (Unaffiliated Only)	108	221	246	400	62.6%
UMB CAMPUS TOTAL ²	6,329	7,137	7,154	7,394	2.1%
Shady Grove Programs	499	958	1,104	1,031	-6.6%
Fully Online Programs	235	815	934	1,191	27.5%

¹ Subsequent FY data is representative of prior calendar year Fall enrollment

² UMB Campus Total excludes off-premises UMB enrollment



Educate professionals, conduct research that addresses real-world issues affecting the human condition, provide excellent clinical care and practice, and serve the public with dedication

UMB INSTITUTION WIDE EMPLOYEES (FACULTY & STAFF) - FTE

	Fall 2015 Actual	Fall 2020 Actual	Fall 2021 Actual	Fall 2031 Estimate	Fall 2021– Fall 2031 % Change
Faculty FTE	2,047	2,328	2,363	2,484	5.1%
Staff FTE*	3,826	4,213	4,207	4,340	3.2%
UMB TOTAL	5,873	6,541	6,570	6,826	3.89%

UMB INSTITUTION WIDE EMPLOYEES (FACULTY & STAFF) - HEADCOUNT

	Fall 2015 Actual	Fall 2020 Actual	Fall 2021 Actual	Fall 2031 Estimate	Fall 2021– Fall 2031 % Change
Faculty Headcount	2,721	3,068	3,154	3,316	5.1%
Staff Headcount*	4,398	4,688	4,701	4,850	3.2%
UMB TOTAL	7,119	7,756	7,855	8,167	3.97%

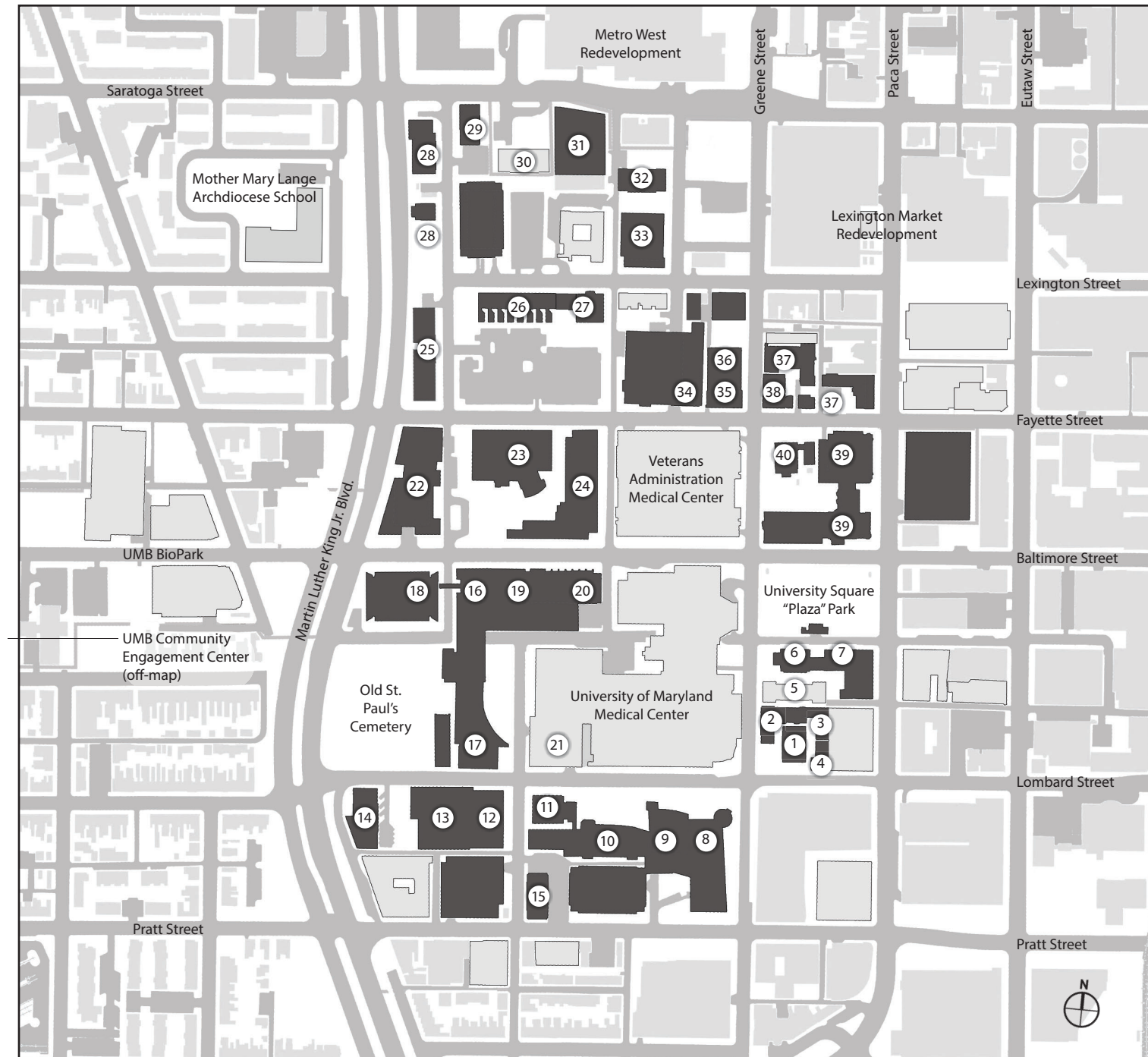
Key to Campus Locations:

SOUTH CAMPUS

- 1 Davidge Hall
- 2 National Museum of Dentistry
- 3 George Gray Hall
- 4 East Hall
- 5 Harry and Jeanette Weinberg Office Building (UMMC)
- 6 School of Social Work - West
- 7 School of Social Work - East
- 8 Health Sciences and Human Services Library (HSLS)
- 9 Southern Management Companies Campus Center (SMCC)
- 10 School of Nursing - East
- 11 School of Nursing - West
- 12 Allied Health Building
- 13 Institute of Human Virology (IHV)
- 14 737 W. Lombard St.
- 15 Biomedical Engineering and Technology Research Building
- 16 Health Sciences Research Facility I (HSRF I)
- 17 Health Sciences Research Facility II (HSRF II)
- 18 Medical School Teaching Facility (MSTF)
- 19 Howard Hall
- 20 Bressler Research Building (BRB)
- 21 R Adams Cowley Shock Trauma Center (UMMC)

NORTH CAMPUS

- 22 Pharmacy Hall
- 23 Health Sciences Research Facility III (HSRF III)
- 24 School of Dentistry
- 25 Pharmacy Learning Center
- 26 Pascault Row (Student Housing)
- 27 Former Ronald McDonald House Building
- 28 Pine Street Station / Pine Street Annex
- 29 Recycling Center / North Switching Station
- 30 Veolia Energy Steam Generation Plant
- 31 Saratoga Garage and Office
- 32 Downtown Baltimore Childcare Inc.
- 33 Lexington Building
- 34 Operations & Maintenance Office
- 35 100 N. Greene St. - "Swiss Steam Laundry Bldg."
- 36 Biomedical Research Facility
- 37 University Suites at Fayette Square
- 38 Maryland Bar Center - "Poe School Bldg."
- 39 Nathan Patz Law Center / Thurgood Marshall Law Library
- 40 Westminster Hall and Burying Ground



Campus Locations

Space Needs

The 2017 Facilities Master Plan, and its subsequent implementation, have made great strides toward enabling UMB's next phase of growth.

The University is focused on renewing existing facilities and creating a vibrant neighborhood. In terms of space, this means focusing on how existing facilities and property can be updated or built out to meet the goals articulated in the plan.

While each School and major administrative unit had their own specific needs, the most common concerns expressed were about the condition, design, or locations of existing spaces, not on the need for substantial additions. One notable exception to this theme was in research, where continued growth is expected.

In the category of residential space, UMB has found the scale of operations is not supportive of direct ownership, management, and financial exposure to housing. Furthermore, the ample

capacity of local privately owned and developed properties to absorb the demand for student housing has enabled UMB to make a strategic shift out of direct ownership.

QUALITATIVE NEEDS

Qualitative issues often centered on a desire for more connection.

Participants in the planning process expressed feeling that they were siloed, separated by school, department, and role. Students, faculty, and staff sought opportunities to connect, both on campus and in nearby neighborhoods, in places that foster an atmosphere of collegiality, camaraderie, and community.

Furthermore, the COVID-19 pandemic drastically altered how the University operated and provided several lessons. Schools frequently spoke of how office, teaching, and research spaces needed to be redesigned so that they could become more useful in an increasingly digital world.

UMB 2021 SGAP SPACE NEEDS¹

MARYLAND STATE SPACE NEEDS CALCULATIONS

Space Description	Existing Inventory	Current Allowance	Current Surplus/ (Deficit)	Change to Inventory	Ten Year Projection (2031)		
					Projected Inventory	Projected Allowance	Projected Surplus/(Deficit)
Classroom & Class Lab	218,000	218,000	-	(4,000)	214,000	227,000	(13,000)
Research Lab	640,000	1,144,000	(504,000)	-	640,000	1,215,000	(575,000)
Office	844,000	1,120,000	(276,000)	10,000	854,000	1,184,000	(330,000)
Study/Library	129,000	116,000	13,000	-	129,000	116,000	13,000
Athletics	-	68,000	(68,000)	-	-	73,000	(73,000)
Animal Quarters	67,000	67,000	-	-	67,000	67,000	-
Assembly & Exhibit	34,000	32,000	2,000	4,000	38,000	34,000	4,000
Food	6,000	6,000	-	-	6,000	6,000	-
Lounge	77,000	121,000	(44,000)	79,000	121,000	(42,000)	
Rec & Meeting	77,000	77,000	-	5,000	82,000	82,000	-
Central Services*	92,000	69,000	23,000	3,000	95,000	69,000	26,000
Health	70,000	2,000	68,000	-	70,000	3,000	67,000
Residential	171,000	171,000	-	-	171,000	0	-
TOTAL²	2,494,000	3,165,000	(806,000)	112,000	2,419,000	3,325,000	(949,000)

TABLE KEY

■ Significant SGAP space needs

* Central Services excludes Parking Garages (740/745 Vehicle Storage)

¹ Space types rounded to the nearest 1,000 NASF

² Total excludes Unclassified and Leased Out Spaces

Space Needs by School

Individual space needs were assessed for each school through interviews with school leadership and facilities staff. This outreach augments the quantitative SGAP calculations with qualitative feedback relating to the nature of each facility's present use, and to goals driven by initiatives particular to each school.

CAREY SCHOOL OF LAW

Housed in the Nathan Patz Law Center, bordering University Square "Plaza" Park to its south, the school is the academic focal point for law students, and also their de facto social hub. The location of the facility relative to shared campus amenities and thoroughfares contributes to this tendency for the school to be perceived, and used as, a self-contained campus. This has limitations and is not inherently supportive of efforts to build a strong campuswide identity.



400 block of West Baltimore Street has quality of life implications for the law school's students, faculty, and staff. Successful follow-through of the Lexington Market revitalization currently underway would also benefit the school's location on the campus' east boundary.

Although school enrollment is projected to be consistent with the designed capacity of the existing

facility, recent classroom use-cases suggest improvements or modest expansion may be needed to "right-size" classrooms for appropriate seating density.

Increases in the level and types of services available to students, coupled with the in-person nature of supported operations, place pressure on the available office space inventory. Moreover, the recent success in growing grant-funded projects and legal centers has created a significant need for more office space specific to these programs.

Managing demand for office space has also led to various practice area legal centers being interspersed throughout the building. Investment in new office space would create greater opportunity for collaboration

University Square "Plaza" Park and Francis King Carey School of Law



and collegiality between these groups.

In particular, the school's clinical law spaces are in need of modernizations to better respond to changes in technology and the increasingly collaborative nature of law practice.

The Thurgood Marshall Law Library, which occupies the northeast corner of the Patz building, would benefit from additional study rooms and open seating areas, but the stack space cannot be reduced any more

than it has been to-date. Evening hours use, especially use after dark, is constrained due to the relative lack of evening activity around campus and associated safety concerns. Improvement in these external factors could eventually allow the library to operate as a 24/7 facility.

SCHOOL OF NURSING

The School of Nursing is situated at the campus' south boundary, remote from campus administrative functions but optimally located with respect to student services, local housing

options, and other resources. Notably, the school also borders the hospital to its north.

Home to the largest population of undergraduates on campus, as well as the largest student population overall, the school has seen rapid Fall Enrollment growth from the 2015 level that is projected to continue at a moderated rate through 2031.

The instructional needs of two programs in particular (BSN Upper Division and MSN Clinical Nurse

Leader entry programs) exceed the available capacity of academic space in the building. The flexible instruction setting required for these programs would be best accommodated in one flat floor classroom with capacity for 120 students that is located in close proximity to the school. Part of the rationale for this project would be to purpose the classroom for use by other schools.

Curriculum changes being implemented through 2024 are also likely to drive a need to reconfigure existing classroom spaces in ways that are more conducive to team-based learning.

Additionally, an increased emphasis on improving predictive quality through simulation-based learning, and a concurrent decrease in access to hospital spaces, has created a need to repurpose existing spaces for clinical learning.

A small addition to the north side of the school, due to be occupied in Spring 2023, will add much needed student gathering spaces, and

promises to improve visibility and student access to services supportive of academic and career success.

The school also has challenges managing demand for office space that have been somewhat relieved through remote and hybrid operations. Partial measures such as implementing hoteling workspaces and introducing technology supportive of hybrid meetings are being considered as part of longer term solutions. However, the quality of in person interactions and collaboration that results from having people physically present on-site is recognized as integral to the school's operations, culture and long term desired outcomes.

The nursing school's semi-enclosed courtyard is a well loved and broadly used outdoor gathering space that contributes much to the vitality of south campus and of the Lombard Street corridor. It is in many ways a prototype for a shared campus amenity that also functions very well for its primary users.

SCHOOL OF PHARMACY

Pharmacy Hall, the school's principal campus location, forms a distinctive architectural gateway along Martin Luther King Jr. Boulevard to its west. To its east, the school shares a major campus plaza with the new Health Sciences Research Facility III, Baltimore Street School of Medicine complex, and School of Dentistry building. Together these facilities constitute the research core of UMB's campus.

The school also occupies roughly 30-percent of the HSRF II Building across two floors, a portion of the Nuclear Magnetic Resonance (NMR) Suite, and one third of the office space in the Saratoga Building. These scattered locations often make in person interactions challenging.

A major 2010 addition to the building provided those School of Pharmacy users located in Pharmacy Hall with ample student lounge areas. These make Pharmacy Hall a welcoming presence that contributes activity and character to the new HSRF III plaza and Pine Street pedestrian route. Pharmacy Hall's high quality



gathering spaces have potential to be an even greater campus asset if dining, catering, and carryout food options existed in closer proximity to the building. Instead, from their location near the northwest corner of campus, pharmacy students, faculty, and staff are more remote than most UMB campus users from the Campus Center and from private establishments gathered around Camden Yards and Baltimore Street. Options to the west of MLK are fewer in number, but also not fully utilized, due to the challenging pedestrian

environment prevalent along MLK Boulevard. Some combination of food services closer to Pharmacy Hall and enhanced event planning at the campus level were among the top qualitative needs raised by the school's users.

Notwithstanding its growing emphasis in online course delivery, the school anticipates adding a joint PharmD/PA degree which will require additional renovations to existing space. The school also has a current need for renovations to adapt existing

spaces to meet changes in teaching methods. Notably, the PharmD program's increased reliance on demonstration space. Additionally, a new on-site Pharmaceutical Sciences master's program is expected to need space adapted for student rotations and specialized classes.

Investments in renovation projects to increase the flexibility of existing academic spaces can also somewhat position Pharmacy Hall as a hub for interdisciplinary initiatives in the future and create opportunities

for experiential on-site learning to augment traditional and online programs.

The Pharmacy Learning Center annex (PLC) located on Pine Street is targeted for major interior renovations to accommodate a new initiative with major donor backing. The “Prototype Community Pharmacy of the Future” will complement telehealth and Innovative Pharmacy Solutions already located in the building.

The school plans to relocate displaced programs to the 5th Floor of Pharmacy Hall South, which needs major renovations. The relocated IT, Educational Technology, and AV departments will provide much needed training and workroom space, a recording studio, and office space, to facilitate growth of online programs.

In research, trends such as computational modeling and high-throughput technologies are expected to reduce traditional wet lab needs and increase the need for more flexible lab space over time.



School of Social Work - West

Ever increasing needs for lab density in instruments and support equipment will, as a general effect, drive needs for mechanical modernization projects.

In addition to its core academic and research missions, the school also has important community health initiatives and clinical partnerships. The administrative presence for most of these is housed on the 12th floor of the Saratoga building.

SCHOOL OF SOCIAL WORK

Facility constraints identified in the 2017 document continue to be a challenge for the school’s operations in its present home at 525 West Redwood Street, to the south of Plaza Park,

These space needs are being addressed, starting in 2024, with construction of a new 129,000 GSF School of Social Work Building on north campus. To be situated on the 600 block of West Lexington Street, one block west of the revitalized Lexington Market, the school will be UMB’s first major academic presence north of Fayette Street.

The project represents a serious commitment by USM, and the State, to the continued success of UMB’s social work programs. It also represents a major investment in Baltimore’s Westside, by replacing vacant and blighted properties with a new state of the art facility where the school’s 900 students and 500 faculty and staff will work and engage with the surrounding community.



Health Sciences Research Facility (HSRF) III (L) and School of Dentistry (R)

SCHOOL OF DENTISTRY

The School of Dentistry occupies a central campus location. The school’s clinical practices are integral both to its academic curricula and to its mission to have a direct positive impact through oral health services in the community. The school’s close proximity to the Pearl Street parking facility underscores the importance of access to clinical operations. Future improvements to campus wayfinding signage, and possibly to pedestrian streetscape, have the potential to enhance the dental clinic’s

accessibility for elderly and mobility-impaired patients.

The new HSRF III plaza presents an outdoor amenity to the school that has yet to be fully exploited. Although it has been used for honors convocation and similar ceremonial events, there is an expectation that better functional adjacency can be developed with expanded foodservice and lounge areas. Dental school students, faculty, and staff would directly benefit from continued improvements here and at other north

campus opportunity sites such as the former Carter Center lot to the north.

Dentistry, due to its clinical aspect, continued many in-person operations with COVID precautions throughout the pandemic. This experience highlighted the relative lack of informal lounge space in the building available to students and faculty in particular. The clinical schedule dictates a short break time that effectively requires dental faculty and students working in clinic to stay on-site for their break. This contributes to

a high lunchtime demand at the cafe, and to an associated high demand for seating areas conducive to quiet relaxation, informal collaboration, or socializing.

Investments in gathering spaces and other types of flexible meeting spaces can also help to enable hosting cross-campus interprofessional education initiatives within the building.

The school's recent success attracting funding for research (ranking it 3rd among dental schools in NIH funding) is growing its need beyond the present inventory of standard procedure rooms and vivarium facilities.

Managing the demand for office space is also an ongoing related challenge. As program accreditation requires PhD residents to have space, office sharing among faculty has been partially relied upon to meet this need.

Future partnerships with public healthcare providers within communities being served will help

to reduce the need for clinical space by the school's pre-doctoral program within the building, allowing it to be used for other needed clinical activities. There are also significant opportunities in expanding capabilities of on-site clinical space to focus on ER diversion procedures and sedation dentistry which often are not available in underserved communities.

SCHOOL OF MEDICINE

The School of Medicine is widely dispersed throughout the UMB campus and has by far the greatest space needs. Of these needs, the primary driver on campus is the school's research mission and the need for administrative space to support this mission. The school's clinical mission is predominantly housed in buildings controlled by the University of Maryland Medical Center (UMMC) or the University of Maryland Faculty Physicians, Inc. (FPI). Patient care occurs across the State of Maryland.

The school's historic core centers around Davidge Hall just southeast of the UMMC complex, and in close

proximity to the FPI practice locations along Redwood and Paca Streets. Its administrative, academic, and research core is anchored at the northwest corner of UMMC, from where it forms a roughly cruciform site occupied by six core buildings lying between UMMC and MLK Boulevard. Because much of the School of Medicine complex is interconnected by internal circulation, large portions of the school facilities constitute an internal campus of sorts. Much of the school's space feels disconnected from campus open spaces and pedestrian routes.

The Baltimore Street agglomeration of buildings forming the east-west axis of the complex (inclusive of the Bressler Research Building, Howard Hall, Health Sciences Research Facilities [HSRF] I and II, and the Medical School Teaching Facility) contains over 63-percent of the school's research space. This complex, combined with the new HSRF III building to its north, centralizes roughly 80-percent of School of Medicine's research labs, and the bulk of the school's teaching operations.



Health Sciences Research Facility (HSRF) II

A majority of the administrative and research space is over thirty years old.

The physical bulk of these buildings constitutes a barrier between south campus and all of campus to the north of the School of Medicine. For this reason, long term opportunities should be sought to develop visually open and welcoming street level spaces that purposefully exploit north to south campus connections, especially those capable of making best use of the Health Sciences Research Facility II (HSRF II) forecourt

and lawn, with its proximity to School of Nursing and other shared campus amenities.

The HSRF III opened in 2018. Key scientific adjacencies were created as part of that move. This building is nearly fully occupied with funded researchers and expansion will continue with the completion of the shelled 5th and 6th floors. One of the floors will be the hub for the recently approved Maryland Institute for Neuroscience Discovery (MIND) and other growth programs.

Notable satellite research locations on campus include the Biomedical Research Facility on north campus, the Allied Health Building opposite School of Nursing, and the Institute of Human Virology on Lombard Street.

The Veterinary Resource (VR) operation will need to relocate its storage space from the shell floors of HSRF III to make way for a temporary Anatomy classroom space and ultimately for lab fitout. This will result in a near-term need for 5,000 square-feet of storage space. Additional space

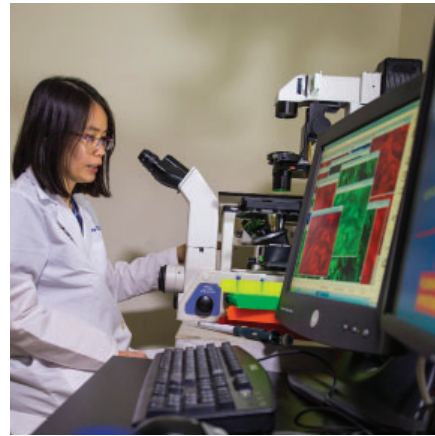
is also expected to be required in the future relating to the program's resilience planning. This will help to ensure uninterrupted operations in the event of supply chain disruptions or weather emergencies.

SOM leadership is also investigating on-campus and BioPark based solutions to relocate the Maryland Psychiatric Research Center (MPRC) from the Spring Grove Campus in Catonsville. The State of Maryland has announced a multiyear closure of the programs on that campus.

Future initiatives include the establishment of an Addiction Center, and of a Clinical Trials Center, as well as addition of campus spaces to support collaboration with University of Maryland College Park:

The Addiction Center will join the school's faculty with other UMB faculty whose research focuses on the many biological and developmental aspect of these diseases.

A location for a highly coordinated Clinical Trials Center which could



support the Center of Vaccine Development and other clinical units continues to be a strategic need. Under Dr. Gladwin's leadership, the school will be embarking on the next SOM Strategic Plan, which will further inform the space and capital plan.

Continued and renewed collaboration with University of Maryland, College Park programs, including the areas of artificial intelligence, bioengineering, and large biodata computing will require yet to be determined expansion space.

With recent operational impacts of the pandemic, the school is following the current campus guidelines regarding hybrid on-campus work. Office

hotelings has only been accomplished on a limited basis. The incremental effect of these policies may ease demand for office space, especially among support functions long term. However, a shortage of office space for researchers was noted as a shortcoming, even in HSRF III where research postdocs are filling offices originally intended for faculty. The presence of writeup desks in labs does not meet this need. Instead, future lab renovations should be planned to accommodate small or common office areas immediately adjacent to labs where postdocs have assigned spaces.

Two significant education classroom projects are underway on the first floor of Howard Hall. This project will create a replacement of a Graduate Program in Life Sciences (GPILS) large classroom and a contemporary classroom for use predominately by the Epidemiology and Master of Public Health program. The school will continue to follow the general plan of keeping the education space on floors one and two of our buildings. Innovations in the medical education curricula, under the banner of UMSOM



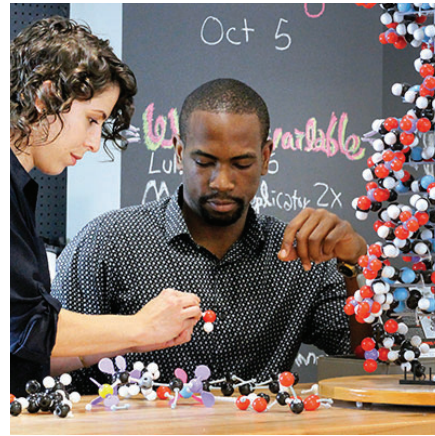
Renaissance Curriculum, have recently driven targeted projects in academic spaces including the Maurice N. Reid, MD Collaborative Learning Space. This new teaching space incorporates team-based learning (TBL) concepts being developed with support of UMB's Faculty Center for Teaching and Learning.

Recently announced modernization of anatomical learning facilities will furthermore allow integration of systems-based learning and clinical focus with state-of-the-art anatomical

studies. Other planned enhancements to student spaces include locker rooms and an atrium collaboration space anticipated for inclusion in the Medical School Teaching Facility (MSTF) building renovation project.

Traditional lecture halls, where didactic learning still needs to occur, would benefit from renovations with flexible furnishings capable of accommodating smaller scale collaborative interactions within the same space and updated IT technology. Also noted, the fixed

seating capacity of lecture halls effectively limits expansion of medical school class size.



GRADUATE SCHOOL

The Graduate School is unique among UMB's schools as an inherently interprofessional program with a breadth of reach mirroring the University at large. The School's enrollment cultivates a diverse community of students across nearly 60 fields of study, with a focus on biomedical, health, and human service sciences.

In addition to a legacy of discovery that has produced top researchers, the School offers pioneering online degree and certificate programs that make cutting-edge studies more accessible to a diverse range of adult learners. Notable programs include, the Health Professions PhD program,

which is among the largest in the country, as well as the MS in Diversity and Inclusion Leadership

Growth projections for Graduate School enrollment are expected to be higher than was projected at the time of the 2017 document. Notably, the unaffiliated FTES cohort in Fall 2021 increased to nearly fourfold the 2015 enrollment. Driving this growth, the Graduate School has developed over 20 new academic programs since 2014, with an additional five anticipated to launch in Fall 2023.

The enrollment growth combined with the present dispersed state of the school's programs argue for a need to consolidate the school's growing operations at one location. This will not only promote operational efficiencies and collaboration among units, but just as importantly help to create an identity for the school that is differentiated from other schools on campus.

An important clinical program with growing space needs is the Physician Assistant (PA) program. This rapidly



growing program fills a critical role in addressing healthcare provider shortages by improving access especially in urban and rural underserved areas of Maryland

Presently the PA program is divided between three locations that are not expected to fulfill the long term needs of the program. These include administrative offices in the Maryland Bar Center Building, leadership and the student lounge "Graduate School Commons" in the Lexington Building, and classrooms and skill labs

in Pharmacy Hall. This last location includes reliance on the Pharmacy School's OSCE suite for patient simulation training, which is often not a convenient scheduling option.

The Bar Building, which has the capacity to accommodate the PA program's planned technical skills training lab, is a facility in need of substantial modernization if it is to become part of a long-term solution for Graduate School programs.

The success of the PA program has

also led to the establishment of its Physician Assistant Leadership and Learning Academy (PALLA). This statewide training academy will need access to campus space to support workshops, training programs, symposiums, and event programming for future and current PA educators from across the state.

Graduate School's Geriatrics and Gerontology Education and Research (GGEAR) program, launched in 1987, facilitates educational outreach programs for professionals and family

caregivers, as well as interprofessional clinical education for health and social care professional students. The program's dedicated campus space is currently limited to a shared Director's office, and it must rely on dispersed, shared locations for its campus activities.



Through its partnership with the School of Medicine's Center for Research on Aging, GGEAR also supports interprofessional research opportunities for faculty and students among UMB's six professional schools in addition to Graduate School. To support its existing broad-based campus activities including case conferences, student and faculty panels, and the Geriatric Interest Group Lecture Series, the program requires a dedicated campus location for staff offices and storage. It also requires convenient access to flexible spaces suitable for workshops, training programs, symposiums, and event programming.

The Health Professions Education (HPE) program needs similar flexible spaces to facilitate research and

collaboration between HPE graduates and other faculty members. HPE events improve teaching practice by operationalizing evidence based practices in support of Graduate School's strategic plans for innovation and reimagination of the educational experience.

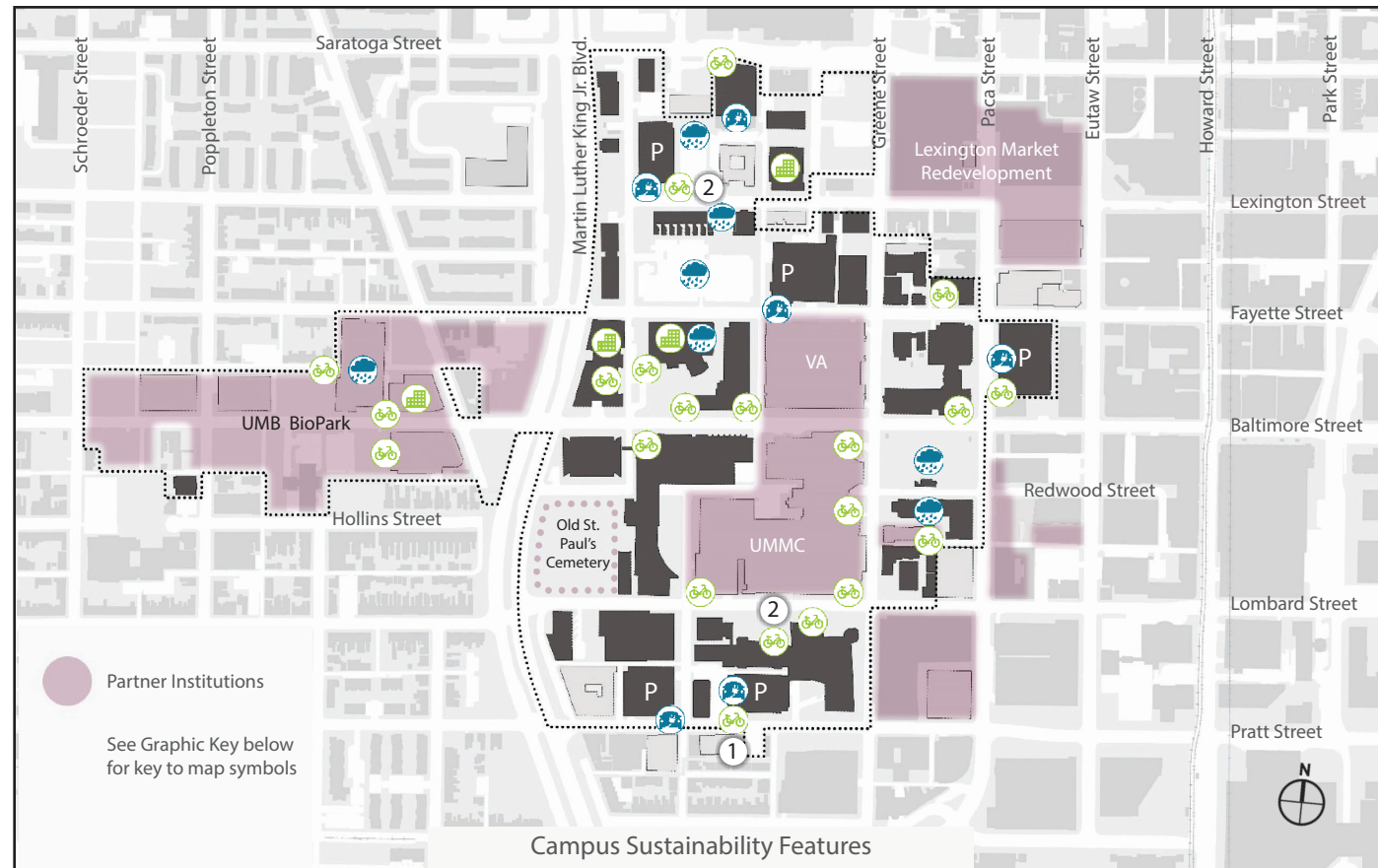
UMB's innovation hub, The Grid, is operated by the Graduate School on the 3rd floor of the Health Sciences and Human Services Library (HSHSL) on south campus. This resource, which nurtures student entrepreneurship through an array of events and programming, including the annual "Grid Pitch," is well located near other campuswide student services.

Due to its interdisciplinary nature and numerous campus affiliates, access through and around campus is especially important to Graduate School students and faculty, who are more likely than students of the six professional schools to have interactions at several campus places throughout their day. This highlights the importance to Graduate School students, of coherent campus accessibility and other environmental factors on and near campus.

The school's principal location on north campus is, however, not close to campus amenities and is served by very few private establishments. The School would benefit from a single location to converge and further forge its potential.

As north campus develops into a home for academic and research activities, including the Graduate School, it will be important for the University to consider ways to provide services to the new north campus both directly through planning initiatives and indirectly through partnerships and investments.





Sustainability

Colleges and universities are well-positioned to provide leadership in adopting progressive approaches to energy consumption and sustainable operations. UMB has embraced this role and the unique challenge it poses for an energy intensive research campus.

In early 2022, the Sustainability Office published a Strategic Plan focused on setting achievable milestones toward a 2045 carbon neutrality

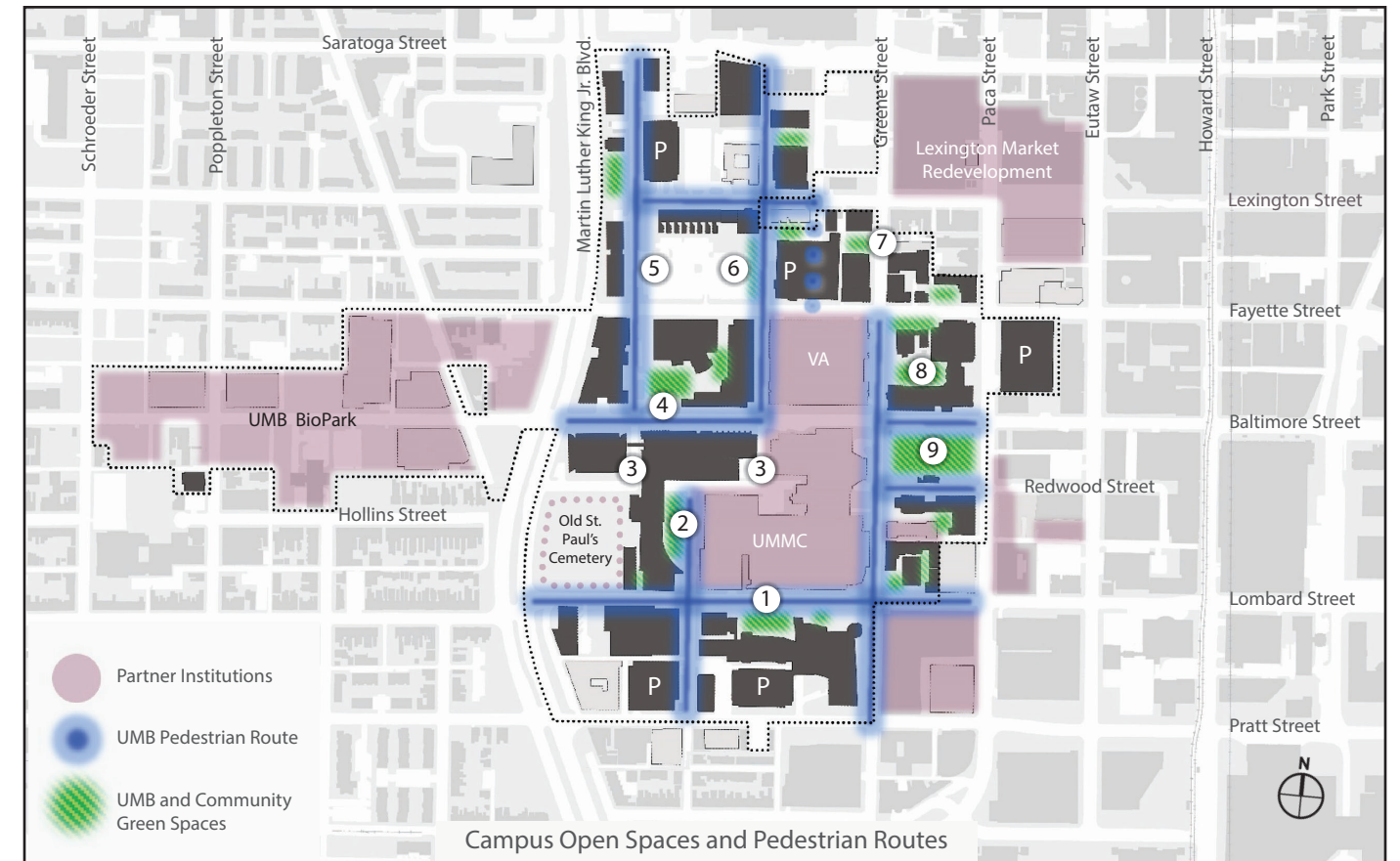
goal. These include achieving a 60-percent reduction in greenhouse gas emissions by 2031 from a 2006 baseline. The plan also addresses broader aims that include reducing UMB’s environmental footprint through water conservation, minimizing waste, stormwater runoff mitigation, and transportation infrastructure such as amenities for bicycle commuters.

Implemented sustainability features relating to the execution of these goals can be seen on the map above.

Sustainable campus features often have the added benefit of beautifying the campus environment. Rain gardens and bioswales that divert contaminants from the Chesapeake Bay watershed are also designed to include beneficial native flora.

GRAPHIC KEY:

- Stormwater Features
- LEED certified facility
- Electric Vehicle Charging Station
- Bike Facility
- ① Bike Cage - secure / shower access
- ② Bike repair station



Open Space and Pedestrian Routes

Parklike outdoor gathering spaces and convenient, attractive pedestrian routes help to create a coherent, welcoming campus environment. A vibrancy results from the social and collegial interactions these encourage.

OUTDOOR GATHERING SPACES

Since the 2002 Master Plan, UMB has worked toward creating a “Green Belt” of interlinked open spaces. Though

this concept is well developed on the south side of campus, there remain opportunities on east and north campus to develop and improve outdoor spaces. Associated UMB streetscape enhancements and partner projects will continue to be needed to effectively link these amenities and unify them with a common UMB identity.

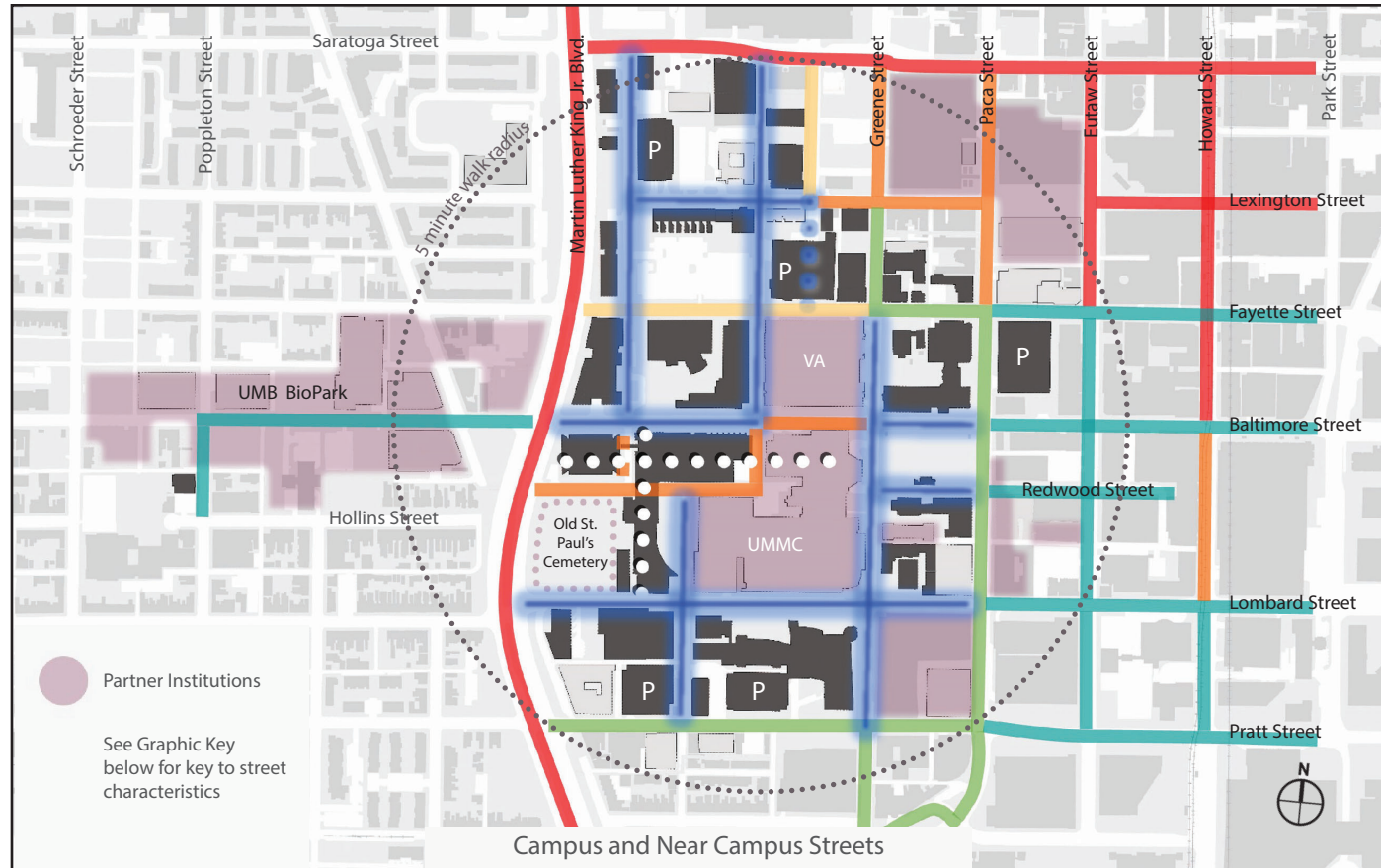
PEDESTRIAN ROUTES

A network of UMB streets extend in all directions around the hospital. On north campus, a pedestrian loop

connects the administrative quarter to the Baltimore Street research core.

KEY TO LOCATIONS:

- ① School of Nursing Courtyard
- ② HSRF II Courtyard
- ③ Pine and Arch Streets (discontinuous N-S routes)
- ④ HSRF III Plaza
- ⑤ Pine Street
- ⑥ Arch Street (pedestrianized)
- ⑦ Greene Street Pocket Park
- ⑧ School of Law Courtyard
- ⑨ University Square “Plaza” Park



Streets and Edges

Although UMB's core campus lies within the diameter of a ten minute walk, it also encompasses two separate institutions, diverse street typologies, and a resulting heterogeneous urban character that can vary widely block-by-block.

QUALITATIVE FACTORS

There are qualitative factors that impact UMB's walkability: streets on and around UMB fall into six categories summarized below:

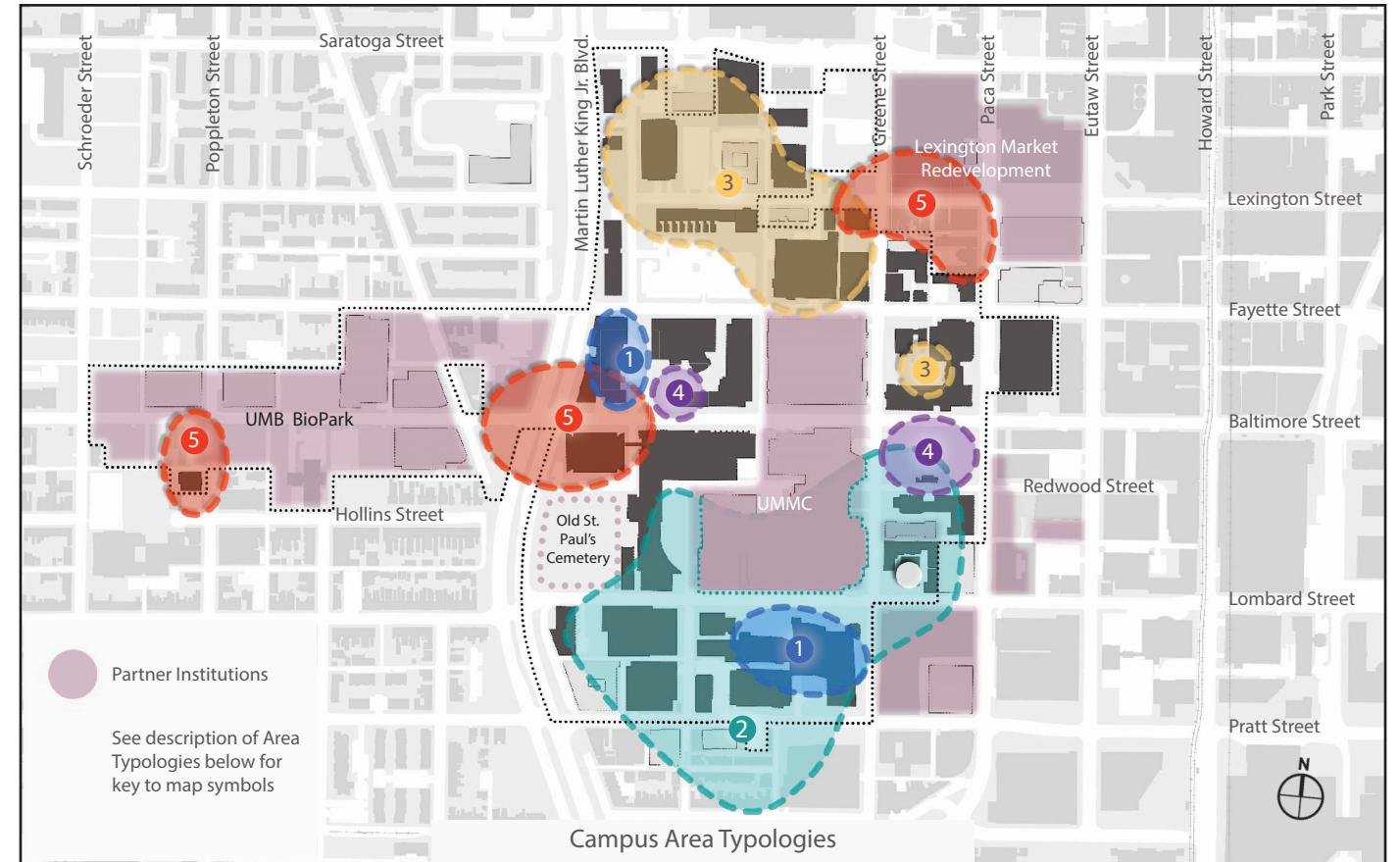
GRAPHIC KEY:

- Campus Street: █ (pedestrian oriented)
- Campus Boundary: █ (pedestrian oriented)
- Access Street: █
- City Street 1: █ (commercial / mixed-use)
- City Street 2: █ (lacking key characteristics to encourage pedestrian use)
- City Street 3: █ (perceived as a barrier)

CENTRAL CAMPUS

The geographical center of campus, at Baltimore and Arch Streets, has a physical character largely shaped by the Hospital and VA medical center. South of Baltimore Street, the School of Medicine complex functionally constitutes an internal campus whose interdependence with the hospital relates more closely to this internal circulation than to external campus pedestrian routes and open spaces.

This dynamic is two-fold: First, the pipeline of training and research from



school to clinical practices, is central to UMB in terms of both geography and institutional identity. Second, the internality of the School of Medicine complex as a mass of buildings is not well integrated with north-south pedestrian routes, and instead forms a substantial barrier to north-south circulation on campus.

For these reasons, central campus would benefit from coordinated improvements to buildings and streetscape that enhance desired north-south pedestrian routes.

The engaging, shared, street level spaces that result can contribute to a broader campus identity and a vibrant urban gathering space.

AREA TYPOLOGIES

There are five distinct types of areas that constitute the campus and impact the quality of pedestrian experience at UMB. These areas, described at right and diagrammed above, are of major significance to pedestrian use of campus and contribute greatly to campus perception.

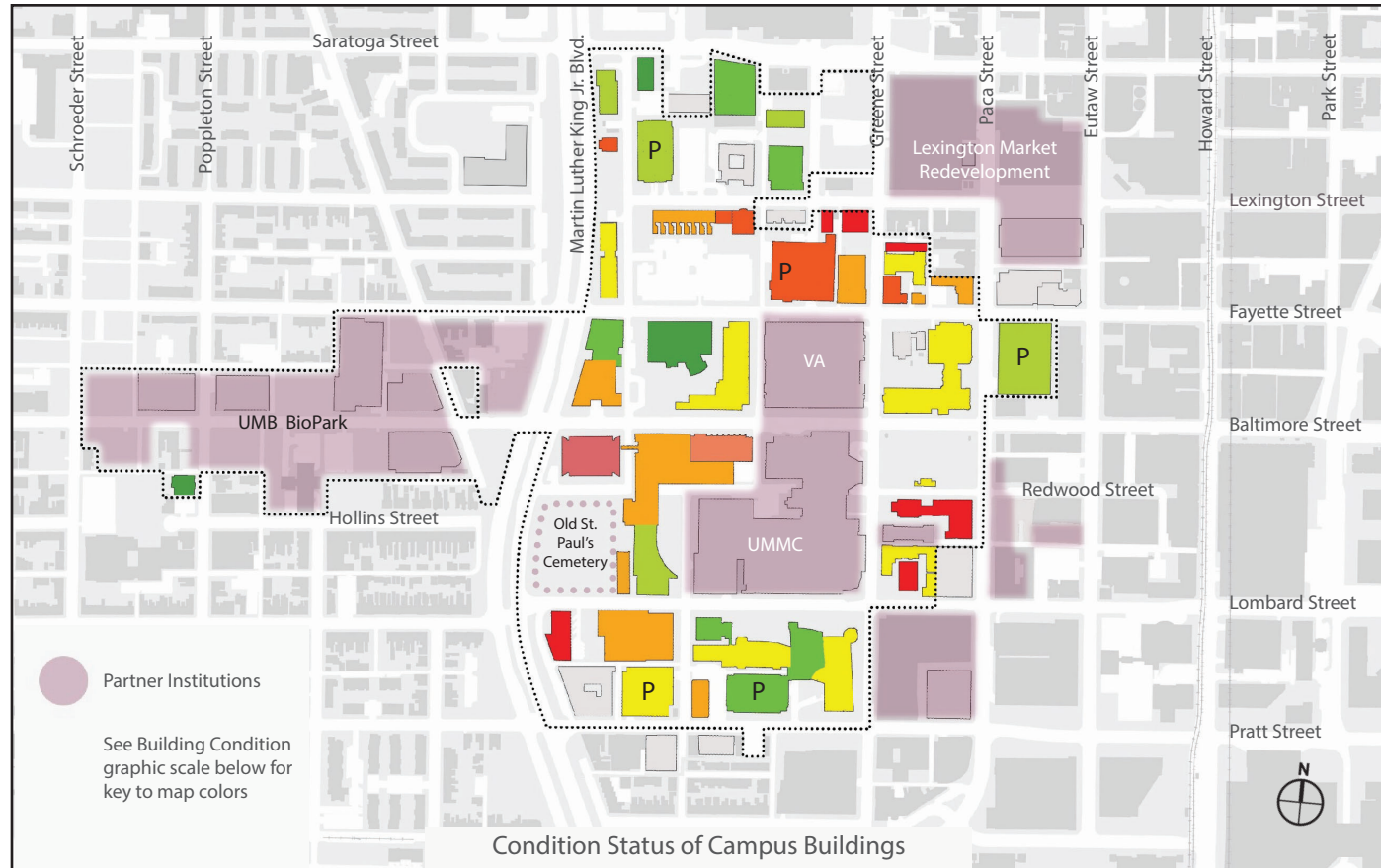
TYPE 1 Favored by UMB users and inviting to the entire UMB community.

TYPE 2 Favored campus areas closely integrated with surrounding neighborhoods.

TYPE 3 Functional for target UMB users, but isolated from UMB campus and City

TYPE 4 Open to broader community, but underutilized.

TYPE 5 Significant barriers exist to inviting a broader UMB community.



Building Condition

Maintaining and successfully adapting aging facilities to meet the demands of contemporary learning, research, and work environments is a sizable challenge for the University.

Alternatives for major renovation projects must carefully balance future needs against budgetary constraints and disruption to present operations within the affected work areas.

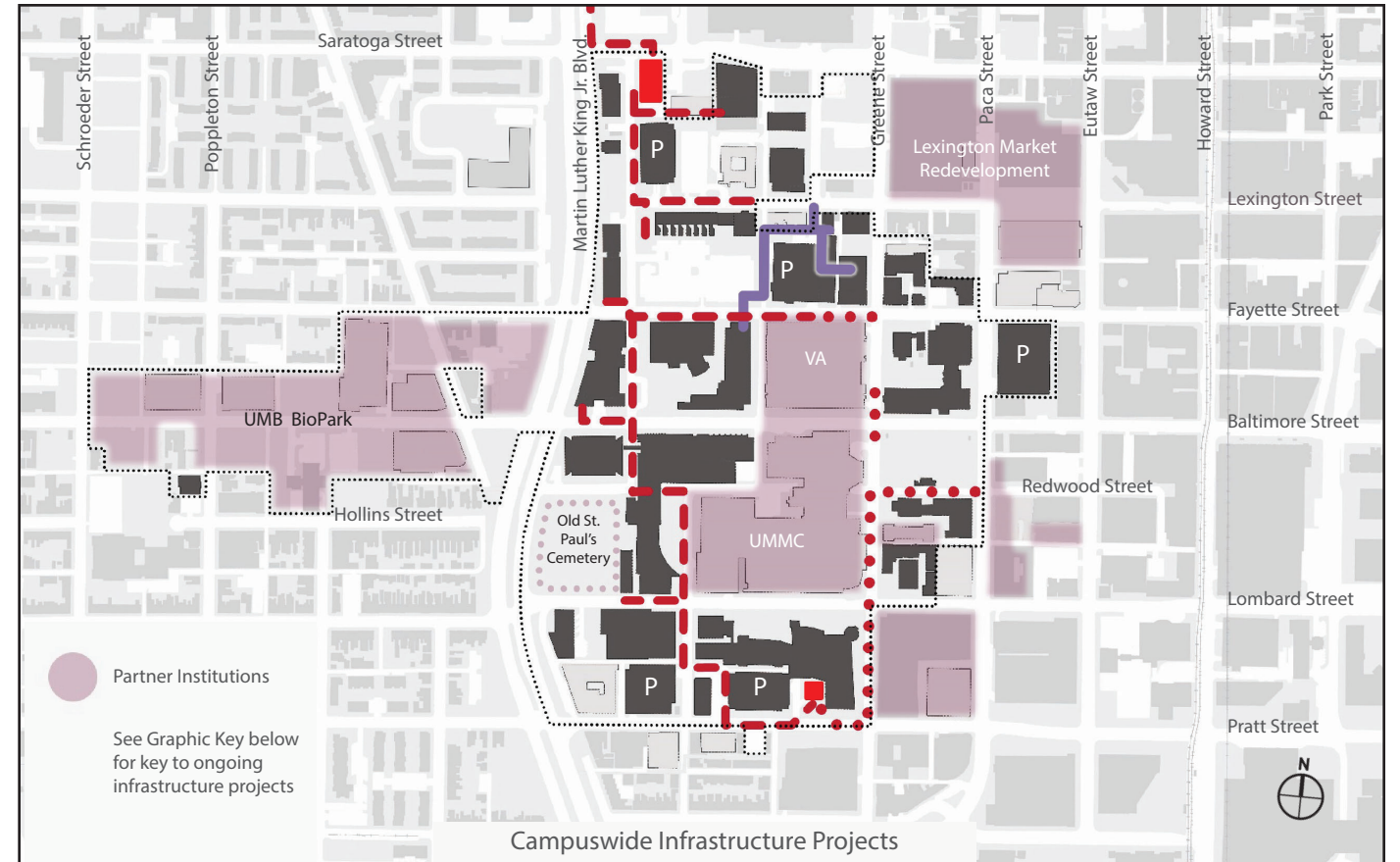
AGING BUILDING STOCK

Twenty UMB buildings are greater than 50-years old and an additional nine are greater than 25-years old. These include nine facilities where life-sciences research labs operate.

Older lab spaces tend to have a frequent need for modifications to HVAC, specialized exhaust systems, and utilities that can have scope and cost implications beyond the primary project site. Utilities at (or past) the end of their life-cycle are costly to maintain, but more importantly can

cause damage and outages that disrupt daily operations. Furthermore, out of date facilities can contribute to recruitment and retention challenges for the schools.

BUILDING CONDITION



Infrastructure

As an integrated urban campus, UMB relies heavily on Baltimore City for roadways, sidewalks, potable water, and sewer; and on Baltimore Gas and Electric (BGE) for natural gas lines and primary electrical service. However, the institution has also developed its own network of steam lines, electrical duct bank, fiber optic runs, chilled water lines, and redundant power generation for its dedicated use. In addition, campus and neighborhood sidewalks, light poles, and roadbeds

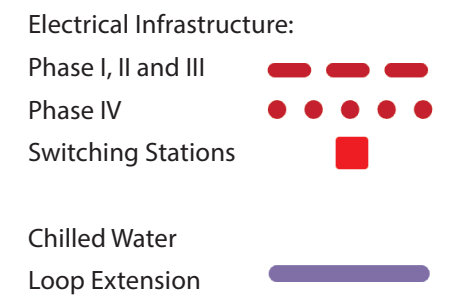
are often improved directly by the University, with the permission of the City, in order to maintain a high standard of repair.

CURRENT INITIATIVES

Currently the campus is underway with a \$83M capital improvement to replace its 50+ year old sole electrical substation with two new separately fed substations and a series of duct banks. This projects, along with corresponding building component upgrades, will substantially improve the reliability and resilience of

the campus' electrical service. Furthermore, the UMB is continuing to expand its chilled water loops so that fewer chillers are needed to cool campus buildings.

GRAPHIC KEY:





Historic Resources

The UMB campus borders several Baltimore City districts of historic importance and includes a diverse range of historic properties within its building inventory. The university has made a rich contribution to the history of Baltimore since the early 19th century, when it ranked as the third most populous city in the nation. Several historical eras are represented:

URBANIZING A YOUNG REPUBLIC

Davidge Hall first occupied in 1812, only twenty-four years after ratification, is emblematic of the optimism, strife, and idealism that characterize the era. Shortly after the establishment of the College of Medicine here, Baltimore City responded to rapid population growth by expanding its boundaries on the Poppleton Plan. And in 1819 Louis Pascault built the row of federal style houses that today bear his name.

INDUSTRIAL BOOM TOWN

Warehouses and manufacturing lofts testify to industrial Baltimore's importance as a port. The Swiss Steam Laundry building on central campus, a fine loft example in the Romanesque style, provided services to the district's thriving garment industry and today houses School of Medicine offices.

DEMOCRATIZING EDUCATION

Male Grammar School No. 1, better known as the "Poe School," was built in 1880 to re-house one of Baltimore's first three public schools, formed in 1829. Its eccentric Queen Anne style marks the corner of Greene and Fayette Streets. Six blocks west, the stately 1917 parochial school pictured at left, now home to UMB's Community Engagement Center, is an early design of prominent Baltimore architect Frederick V. Murphy.

PAST IMPERFECT

The first major court victory of Thurgood Marshall, and a civil rights milestone, came in 1935 on behalf of Donald G. Murray, who was seeking admission to the School of Law, then located at the Redwood Street building. Murray had been denied on the basis of his race.



Davidge Hall



Poe School (Maryland Bar Center)



Swiss Steam Laundry Building



Old Law School, Redwood Street



Pascault Row



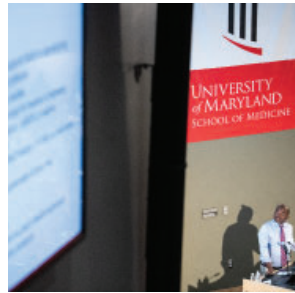
CAMPUS PLAN UPDATE

Since publication of the 2017 document, UMB has completed Health Sciences Research Facility III, the Community Engagement Center, the first phase of campuswide electrical infrastructure project, and several real estate acquisitions assembling all parcels needed to constitute future north campus development sites.

The first of these developments will be a new School of Social Work building. This project is currently included in the Capital Budget and will break ground in 2024. It will be the first major academic building north of Fayette Street, and will be the largest step to date in realizing the north campus revitalization goals identified in the 2017 plan.

Many of these accomplishments have taken place amid significant challenges to established operational norms in higher education, brought about through the pandemic response. Most notably, assessing how durable the evident trend toward hybrid operational settings may prove to be, and what impact that trend will have on campus planning long term.

Continuity of Key Themes



ADDRESS PROGRAM NEEDS

Academic, research, and workplace settings are changing at an accelerating pace, and in ways that do not always align with conventional expectations of space needs. The campus will increasingly become a place that brings people together through virtual gatherings that must work seamlessly with its more traditional learning, laboratory, and office environments.



SUPPORT INNOVATION AND COLLABORATION

UMB brings people together in environments that invite and accommodate the sharing of knowledge across all fields of study represented at the university. Expanding UMB's state of the art lab facilities provides a setting for new innovative initiatives. Exploiting opportunities to interconnect campus places in ways that are welcoming and broadly accessible to the UMB community fosters campuswide collaboration and culture.



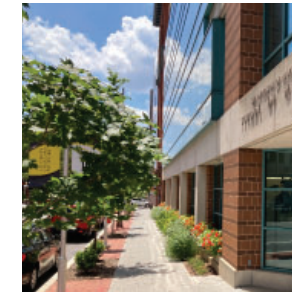
RENEW AND REINVEST

Investment in UMB's older building stock modernizes capabilities and continues a tradition of stewardship and sustainability. The architectural variety on the UMB campus makes significant contributions to the cityscape of Baltimore, underscoring UMB's importance as an anchor institution.



CREATE A VIBRANT 24/7 ENVIRONMENT

Campus culture at UMB is highly interdependent with the street fabric of its adjacent neighborhoods and what activities and development occur there. A successful plan will identify opportunities to partner with the local business community, as well as neighboring communities, associations, and institutions.



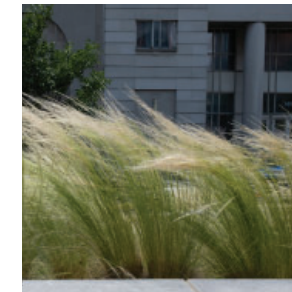
ENHANCE CIRCULATION AND CONNECTIVITY

UMB embraces its identity as an urban campus by remaining permeable and interwoven with the Baltimore street grid. Pedestrian routes should not only be safe, but should also incorporate elements that create a clear identity for the University. Opportunities exist to improve existing infrastructure that will provide benefit for the UMB community, its neighbors, and partners.



IMPROVE TRANSPORTATION ELEMENTS

UMB is well served by public transit, which it seeks to augment with targeted shuttle routes and localized incentive programs. The potential for existing services and programs to improve community and campus connections merits continued study. The campus will seek to model conditions that encourage bike commuting in a manner that variously extends and anticipates city led efforts.



UNIFY ALL ASPECTS OF PLANNING THROUGH SUSTAINABILITY

UMB's sustainability and resiliency goals require changes to both facilities and operations. Green spaces must be renewed and expanded where possible to include native plantings and to optimize stormwater benefits. Open spaces that relieve heat island effect, properly conceived, will also offer natural places of respite. Building and infrastructure projects must aim for the lowest greenhouse gas emissions possible.



UPHOLD UMB AS AN ANCHOR INSTITUTION FOR THE COMMUNITY

Students, faculty, and staff routinely share their knowledge, expertise, talents, and time in the communities of West Baltimore. Development of the north campus presents exciting new opportunities to expand and support the ties that continue to develop between the institution and its neighbors. Just as importantly, each development site represents a tangible way for UMB to lead in revitalizing the city.

1 *Outdoor Gathering Places*

Promote outdoor green spaces, outdoor gathering spaces, and artwork

Campus Amenities

Promote near-campus amenities and opportunities to socialize, including new UMB community spaces as part of the development of north campus

2

Campus Continuity and Pedestrian Experience

Continue to make improvements to help address pedestrian safety concerns.

3

Enhance and beautify north-south and cross-MLK pedestrian connections

Campus Identity and Welcoming Places

Foster identification with UMB at large

4

Introduce street level uses to UMB buildings that are inviting and available to the entirety of the UMB community or the public

5

Remote and Hybrid Impacts

Anticipate campus needs relating to remote and hybrid academic and workplace settings

Concepts and Recommendations

Participants in the planning process expressed a desire to study, teach, research, and work on a safe and vibrant campus that offers park-like opportunities for respite, invites daily collegiality among the UMB community, and provides high quality venues for school and campuswide events. This feedback coalesced around five distinct areas of interest.



South Campus, Health Sciences and Human Services Library (L) and Southern Management Companies Campus Center (R)

photo credit: Alain Jaramillo



School of Nursing Courtyard

1

Outdoor Gathering Places

Create high quality outdoor green spaces that are purposefully shared with our city neighbors, visitors, and partner institutions while retaining a clear UMB identity.



PURPOSEFUL SPACES

Significant additions to campus open space present challenges as well as opportunities. These spaces need to be thoughtfully designed so they do not unduly increase the operational burden related to their upkeep and maintenance. They also need to be thoughtfully located so as to maximize their benefits to UMB users, justify the land use premium, and responsibly account for long term campus growth needs.

From this perspective, it is sensible to prioritize ways of maximizing the utility and beauty of existing campus green spaces by making coordinated design interventions and planning new facilities where they will best make use of existing improved outdoor spaces.

New campus open spaces should be considered where densely populated new and existing facilities are not situated conveniently to other such amenities. UMB land parcels that have low development potential due to their size, adjacency, or configuration, also present opportunities.

SUCCESSFUL PRECEDENTS

Participants in the planning process expressed a strong desire for more campus open spaces that feature greenery as a purposeful relief to campus' dense urban context. Successful examples of these spaces include the courtyards located at School of Nursing and School of Law.

The first is a well-delineated UMB space that is welcoming to many UMB campus users by virtue of its adjacency to the campus center, and the fact that the School of Nursing itself has a large daytime population. This space is a well-loved focal point that serves south campus well.

The second is a secluded space that is only accessible from the interior of the Law building. It is a much used and well-loved amenity for Law students but few others. The Law courtyard is an excellent campus space that also demonstrates the tendency of UMB's schools to silo within their own facilities.

SHARED CAMPUS IDENTITY

One benefit of providing more

campus open spaces, and of improving existing ones, is the notion that they provide opportunities to gather in ways that inherently help to break down silos and cultivate a stronger campuswide and institutional identity.

They can serve also variously to inspire, to invigorate, and to invite contemplation, when enhanced by artwork or designed in a way to accommodate programmed events, exercise groups or other extracurriculars.

These planning goals align closely with UMB's Strategic Plan orientation toward cultivating a culture that fosters a sense of belonging for a broad community.

DURABILITY AND UPKEEP

These campus places will function best when they are conceived with life-cycle issues in mind from the outset. It is detrimental to create outdoor environments that lose their utility and aesthetic appeal over time because they are too costly or too difficult to maintain.

Green spaces that minimize the need for watering, seasonal planting, and frequent gardening care will help to manage the operational effort required to maintain them in well-kept and welcoming appearance. Additionally, environmental design features that take the unique challenges of an urban environment into account can provide ecosystem services and mitigate the urban heat island effect.

VERSATILITY

Partially covered locations are one way to add programmatic versatility to a space by accommodating events that may be sensitive to inclement weather

Convenient outdoor access to utilities for events, food vendors, and performers can also help to encourage high utilization in existing and newly planned spaces.



HSRF III Plaza - Arcade



Plaza Park - Market Day



Plaza Park - Vendor Cart

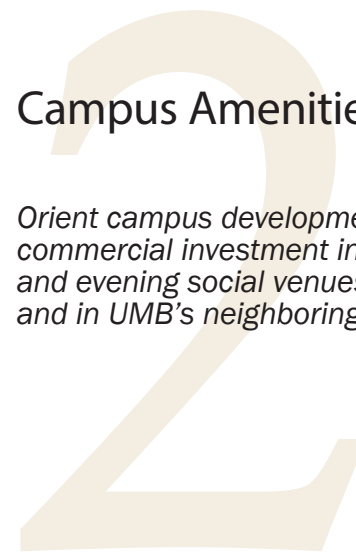


Tuesday Farmer's Market, East Entrance to Plaza Park

2

Campus Amenities

Orient campus development efforts towards supporting more commercial investment in establishments offering food, daytime and evening social venues, and housing options; both on campus and in UMB's neighboring communities.



COLLEGIAL ENVIRONMENTS

Collaborations are often formed and strengthened when colleagues meet and socialize outside their traditional work or study venues. Places that invite these interactions can be informal gathering spots on campus or private establishments located within a neighboring community off campus.

The availability of other amenities beside social venues - common residential services like grocery stores, dry cleaners, merchants offering home and specialty goods - create everyday occasions of social mixing and enhance the university's ties with its neighbors.

SEEKING LOCAL COMMERCE

As the UMB campus has very little street level space built for mercantile uses, this need largely should be addressed in campus' neighboring underinvested communities. Blight, crime, and the recent suppression of local economic activity associated with the pandemic have held back private investment. However, some of the city blocks most suitable for

merchants that cater to campus users are showing slow and steady progress. Direct interventions by UMB need to be made to improve the momentum of these changes.

However, merchants require large stable populations to thrive. This would be best supported by a growth in residents in the surrounding area. While UMB lacks the economy of scale to run a robust housing operation, it should leverage its real estate assets, and neighborhood improvement initiatives, to promote future residential developments.

BRANCHING WEST AND EAST

West of MLK these same issues are compounded by the fact that services already existing within walking distance of campus are little used by the UMB community due to both perceived and real safety concerns. Here, the impact of MLK and its status as a major traffic artery is impossible to overemphasize – Yet west of MLK lie residential neighborhoods with local business owners eager to include members of the UMB community among their patrons.

Strengthening the pedestrian connection between main campus, the BioPark, and the Community Engagement Center would be a good step in knitting together the larger Community Campus. Offering free or low-cost UMB parking options geared to CEC visitors would be another measure, perhaps particularly well suited to encouraging members of the UMB community to linger in the Hollins Market / Poppleton neighborhoods and discover some of the local offerings.

East of campus there exist intermittent challenging pedestrian environments that will benefit from investment in streetscape improvements through partnership with the city. These kinds of incremental investments will signal UMB's commitment to Westside revitalization and help create a fertile ground for private investment. Strategically leaning into private partnerships may be essential in a post-COVID environment where access to capital is impaired and developments in the neighborhood are still seen as high risk.

Such levered UMB investments, both east and west of MLK Boulevard, have the potential to tap pent up demand among the UMB community for new housing, services, amenities, and social venues.

Creating a sense of safety is paramount in the success of any such plans. UMB must leverage its campus police force, and investments in public infrastructure, to create an environment that is safe and welcoming for all. Improvements to lighting, crosswalks, sightlines, and an elimination of hidden public spaces, will be important capital improvements to meet these ends. To date these challenges are largely consolidated on the north campus and surrounding blocks.

Partnership development goals dovetail with the strategic plan aim to integrate the knowledge, experience, and expertise of community members through relationship building. Such investments likewise promise to make UMB's campus a place where innovation and collaboration continue around the clock.



400 Block W. Baltimore St. - Facing Law School



400 W. Fayette "Prosper on Fayette" - Apartments



400 Block W. Redwood - Facing Abell Apartments



UMB streetscape and environmental graphics along Lombard Street

3

Campus Continuity and Pedestrian Experience

Continue to invest in streetscape improvements, environmental graphics, and wayfinding elements emblematic of the UMB brand and campus identity both within and beyond the campus boundary.

Exploit incremental investments and major capital projects as opportunities to enhance and beautify pedestrian routes, especially connecting north to south campus and UMB to BioPark and the CEC area of influence west of MLK.

POINT A TO POINT B

Planning discussions frequently touched on the experience of getting from Point A to Point B for purposes of conducting daily in-person campus business: with the 2021 return-to-campus, it seemed many participants looked with “fresh eyes” at the ways in which they interact with and use campus.

What emerged as a shared experience for many was the sense of pedestrian routes that were discontinuous with respect to the campus character. Ways of traversing campus that did not always get them to their destination directly if they followed their preferred path.

These interactions suggested the theme of continuity should be front and center when directing resources to campus projects. Opportunities should be sought when planning new building sites, or when substantially altering existing ones, to include streetscape improvements, UMB environmental graphics, and wayfinding elements that extend and enhance existing pedestrian routes.

NORTH TO SOUTH

The notion of enhancing north-to-south campus routes was prominent in these discussions. Participants expressed a desire to create more direct connections between the central administration core on north campus to the academic and research operations to the south.

Student presence on north campus is already growing due to programmatic additions by the Graduate School. Through its affiliate programs the Graduate School embodies the idea of a stronger campuswide identity and the unique potential of multidisciplinary ventures. Both qualities that benefit from greater campus mobility.

But the most significant increase in student presence will come in 2027 with the opening of the new School of Social Work at the 600 block of West Lexington Street. This conspicuous investment adjacent to the Lexington Market redevelopment will cement the need to make student services and resources more accessible from the campus’ north side.

STREET CHARACTER

Street blocks that lack frontage of UMB buildings or that fall outside campus boundaries are still places that UMB students, faculty and staff must often walk to take full advantage of campus and neighboring destinations. This was a matter of discussion with participants who live or park in locations remote from campus destinations, or have frequent interactions in BioPark and Community Engagement Center. The lack of visual interest and “eyes on the street” created by blank ground floor spaces was largely seen as uninviting.

However, the most dominant theme in these conversations was that real and perceived issues of hazardous traffic conditions, street crime, litter, and social nuisances were the greatest barriers for the campus community to venture throughout campus and into the surrounding neighborhoods. In this theme, pedestrian improvements to the MLK corridor were one of the most suggested projects.

Reluctance to venture beyond campus streets also inhibits use of amenities

located off campus where local merchants welcome or even depend on UMB patrons. The very types of daily interactions that help to support UMB’s status as an anchor institution.

AN URBAN CAMPUS THAT IS DEMARCATED AND PERMEABLE

Notwithstanding these challenges, most planning participants made a point to express a desire for UMB’s campus to continue developing as an integrated, identifiable, and beautiful campus district within West Baltimore. In particular, they expressed a desire for UMB to take advantage of its role as an anchor institution to revitalize surrounding communities.



Baltimore Street at Arch - Facing East



Arch Street at Baltimore - Facing South



Pine Street - Facing North toward Howard Hall



SMC Campus Center - bookstore and lounge photo credit: GWWO Architects

4

Campus Identity and Welcoming Places

Seek opportunities to design new street level spaces and to repurpose ground floor spaces in existing UMB buildings in ways that invite communal gathering for informal campuswide associations and other collegial activities.



STREET LEVEL CAMPUS

Planning participants frequently suggested modifications at the street level of UMB buildings to transform them into welcoming and shared spaces. This was often discussed as another way to ameliorate the tendency of UMB's schools to silo themselves.

Although little of this space would be conducive to housing food establishments or shops, the presence of inviting, accessible, and attractive street front spaces for lounging between classes, meeting with extracurricular groups, or viewing exhibitions, could do much to enliven campus streets. These spaces can help to sustain the myriad types of informal interactions that together make a campus vibrant and keep city streets feeling activated and safe.

CAMPUS PRECEDENTS

The best example of an existing indoor shared campus space is the SMC Campus Center. By functioning as the centerpiece situated between (and interconnected with) School of Nursing and HSHSL, the campus

center provides many of the features expected of a shared campus space. It is convenient to nursing students, and to many medical students, and is directly connected to favored study locations in HSHSL. But this complex of street level spaces serves south campus more successfully than the growing north campus.

North of Baltimore Street the campus lacks these kinds of spaces. The most central of food service options on campus resides in the Dental School building and predominately serves the school's internal population. The space is isolated from the street and is highly limited in its ability to welcome passers-by on Baltimore Street who might otherwise choose to linger in the adjacent HSRF III plaza. The plaza is also elevated above the street, but has the potential through thoughtful programming to become a lively hub for north campus.

The School of Medicine and hospital complex to the south of Baltimore Street occupies the longest uninterrupted block of street frontage on campus. The formally closed

nature of the block contributes to the circuitous circulation pattern many pedestrians choose when traveling north to south. This is an important factor to consider when evaluating the challenge of developing more unifying, welcoming, and shared campus spaces.

OPPORTUNITIES

As new campus buildings are constructed, their siting should take advantage of available outdoor spaces. Their planning should evaluate the potential benefits of devoting street level interior spaces to programming that is oriented toward campuswide or public uses. This means committing early in the planning process to identifying, locating, and designating, shared amenity spaces to invite in a broad population. Similar opportunities exist with major renovations of existing buildings. Among these, of particular note, are the aging School of Medicine buildings that occupy a key strategic position between north and south campus, as well as gateway presence at Martin Luther King Jr. Boulevard.



HSRF III Plaza - Facing South toward: Howard Hall (left) and HSRF I (right)



HSRF II Lawn - Facing North toward Howard Hall with Pine Street UMMC loading area (right)



Team-Based Learning Classroom - Maurice N. Reid, MD Collaborative Learning Space

5

Remote and Hybrid Impacts

Adjust expectations of space utilization for those categories demonstrating a durable shift toward remote or hybrid operations.

Exploit opportunities to improve accessibility to programs, to integrate alternative modes of collaboration, and to realize savings from responsible use of non-renewable resources.

Balance operational change with campus vitality.

A NEW TYPE OF “FLEXIBLE”

Although flexibility has long been an important concept when considering how best to address campus’ most common space needs, many recent planning conversations have emphasized its importance in a new way. This involves thinking as much about how people study and work away from campus as on campus.

This need to find complementary on-site and remote ways of collaborating appears to be a durable trend.

Not immune to this, academic spaces had already started to see a shift away from traditional needs toward a focus on flexible features within existing spaces. Interactions have started to become less site specific and rely ever more on “virtual” spaces. While these do not add a need for volumetric space, they nevertheless require thoughtful physical planning solutions. A seamless hybrid environment that serves all users equally well, relative to their chosen site and “platform,” is the emerging model.

Across the schools there was an acknowledgement that though existing traditional classrooms and lecture halls still have a role (especially when augmented with new technology) there is no growing need for these spaces. Tiered lecture halls in particular, while essential for orientations, introductory lectures, and testing of large cohorts in some schools, are becoming underutilized spaces. Emphasis was instead placed on making best use of flat floor spaces capable of accommodating flexible furniture layouts responsive to pedagogies centered on group-based learning, and conducive to integrating technology supportive of hybrid learning environments.

FUTURE OF WORK

This new emphasis on hybrid environments featured even more prominently in discussions of staff and collaborative spaces on campus. The question commonly stated as, “how will we define what a workplace is?” tended throughout Phase I Planning interactions to insinuate broader, more provocative questions concerning the physical campus, its

use, its future growth patterns, and what qualitative implications may emerge.

WEIGHING THE BENEFITS

This suggests examining the potential benefits and disadvantages of hybrid operations.

Among the potential benefits noted were: Reduced carbon footprint, operational cost savings in campus buildings, enhanced accessibility characteristics for certain activities (e.g. academic instructional time), transformation of commute time into productive time and/or enhanced work-life balance among employees, and employee recruitment and retention.

Potential disadvantages noted were: Diminished campus vitality, less beneficial foot traffic on campus and near-campus streets, less patronage of local services, excess capacity in certain auxiliary services (e.g. parking), variability of on-campus policy among units, and the weakening of school and workplace culture.

Efforts to balance these facets of hybrid operations will figure integrally into future facility planning decisions.

ADDING LANES TO THE INFORMATION SUPERHIGHWAY

As hybrid operations remove mileage from roadways, they conversely add digital traffic to the communications infrastructure. This aspect of the hybrid trend accelerates UMB’s network growth, which has already outpaced the capacity of campus data centers.

The trend only intensifies the emergence of, and rapid movement toward, computational and advanced AI assisted research methods in life-science research fields.

In research, the necessity to safeguard intellectual property and to implement enterprise safeguards is not unique, but is especially prominent. One challenge ahead is for UMBs information scientists to collaborate on migration to secure, reliable off-site cloud solutions.

UMBs Center for Information Technology Services (C.I.T.S.) is already piloting a virtual desktop cloud migration with two UMB research enterprises. The SASS cloud solution provides a user interface similar to what researchers are accustomed to, incorporates IP protections, and provides an improved endpoint security by relying on fewer points of connection to UMB networks than traditional data center solutions.

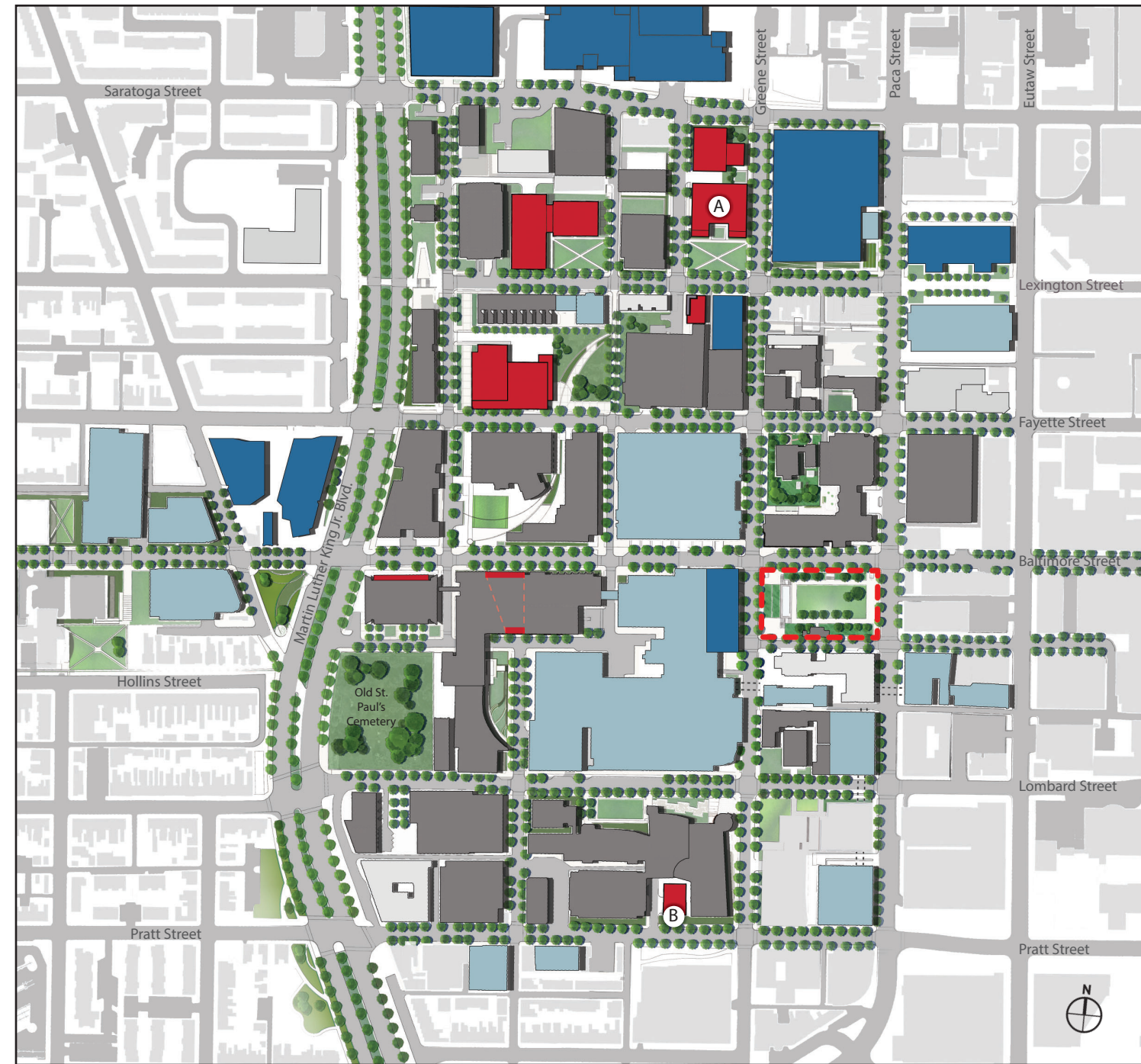
PRESERVING CAMPUS VITALITY

Reducing daytime population is a de facto result of any large scale commitment to remote and hybrid operations. But negative impacts to campus vitality are not inevitable. Promoting a broad diversity of development types within the surrounding area would stabilize and potentially grow the neighborhood population.

Specifically, much potential for invigorating campus life resides off campus, where private housing developments and local services have the potential to keep students and staff near campus around the clock.

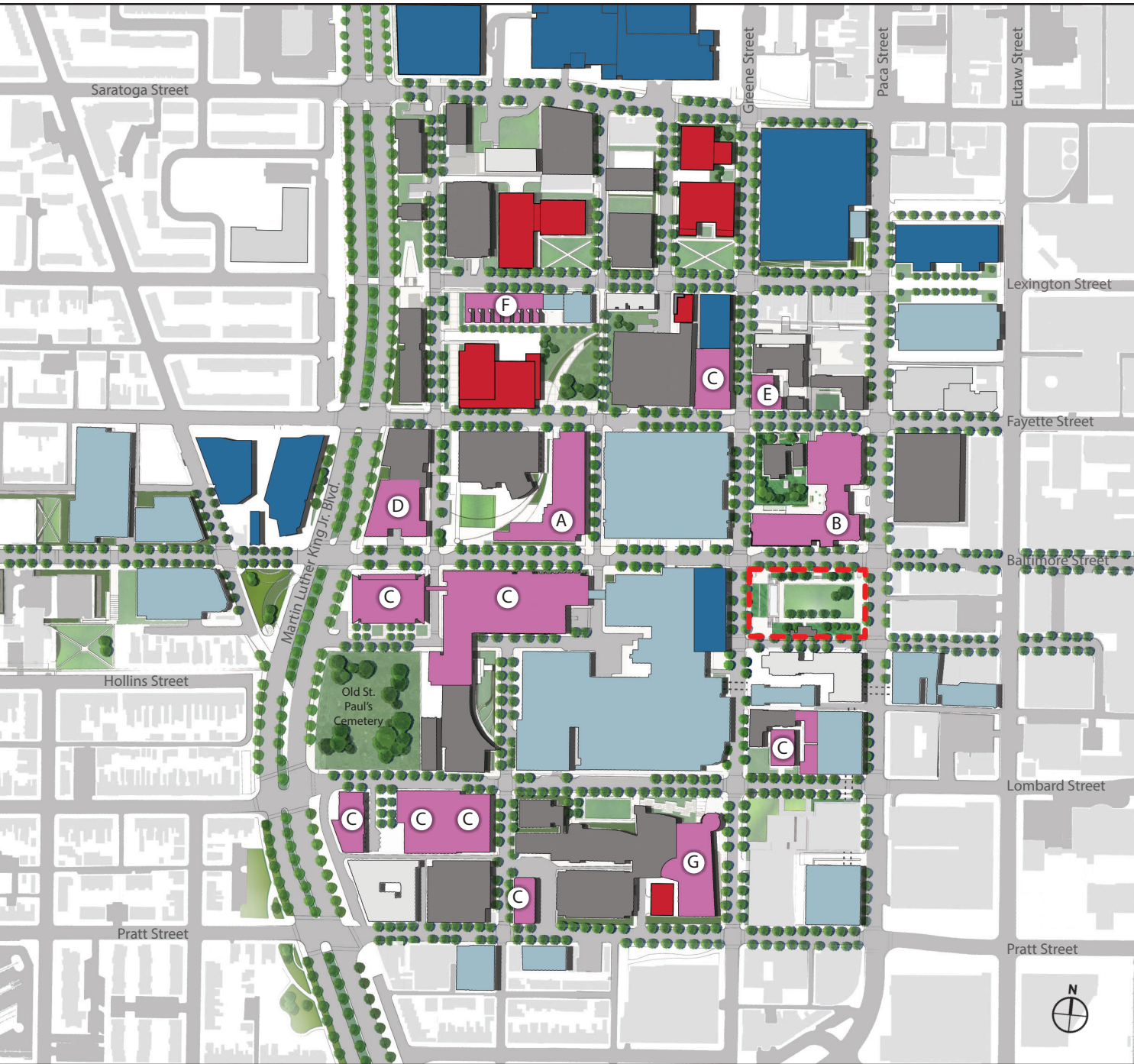
The Facilities Master Plan Update seeks continuity with the 2017 Plan by identifying new and infill project sites optimally suited to develop capacity for future growth, by maximizing the value of existing facilities through renewal projects, and by leveraging these projects to strengthen campus connections both internally and with UMB's neighbors.

Among the objectives emphasized are those that present opportunities to cultivate welcoming, versatile campus places. Places so conceived will reach their full potential when interconnected and readily accessible via a coherent network of footpaths that is likewise enhanced by qualities characteristic of the UMB campus.



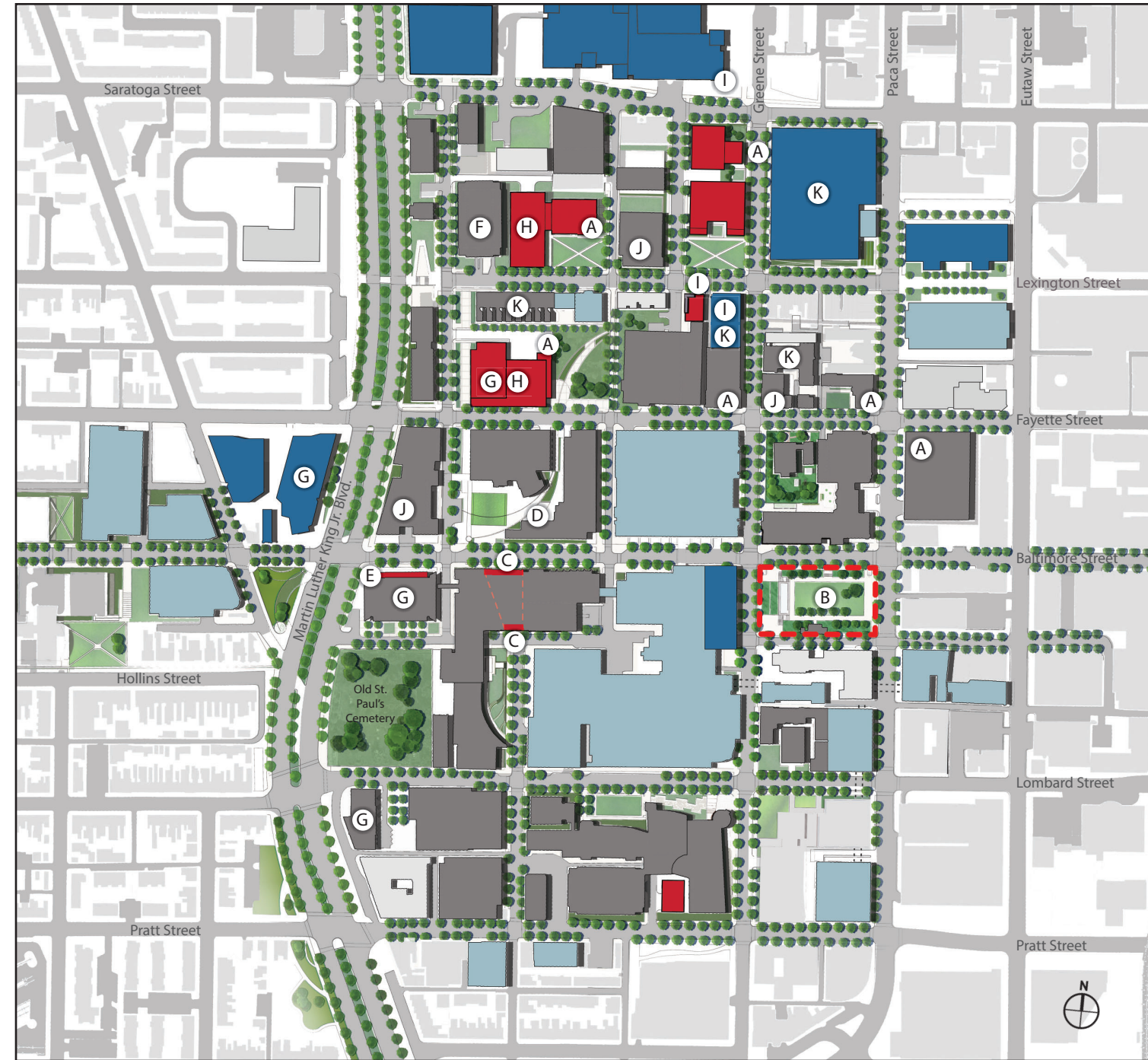
Master Plan Update

- | | | |
|-------------------------|------------------------------|---------------------------------|
| FUNDED PROJECTS: | | ■ UMB Existing |
| Ⓐ | Future School of Social Work | ■ UMB Proposed Project Sites |
| Ⓑ | Future South Campus | ■ Existing Partnerships |
| | Electrical Switching Station | ■ Proposed Partnership Projects |



Facilities Renewal

- A School of Dentistry
- B School of Law
- C School of Medicine (and affiliates)
- D School of Pharmacy
- E Maryland Bar Center Building
- F Pascault Row
- G Health Science and Human Services Library



Potential Project Sites

- A Campus Ctr. North / Social Hub
- B Plaza Park Reconstruction
- C Howard Hall Renovation
- D HSRF III Plaza Cafe'
- E MSTF - Gut Renovation
- F Lexington Garage Shell Space
- G MPRC - Relocation
- H HSRF IV
- I U.S. Post Office Relocation
- J Graduate School
- K Housing



Pine Street - Facing South



Pine Street at Baltimore - Facing South



Redwood Street - Toward UMMC Ambulance Bays

Campus Character and Place-Making

Locations of new UMB and Partner projects are selected for their potential to add new capabilities and functions befitting the highest and best use of each site.

They are also evaluated for their potential to make better urban and campus connections that build on existing (and future) strengths on and around campus.

FEET ON THE STREET

UMB's pedestrian population, though influenced by daytime campus population, is also a function of whether there are conspicuous, inviting destinations connected by a coherent network of outdoor spaces via diverse modes of travel.

A campus adorned with well-designed outdoor places that are interconnected in this way will invite activities that extend well beyond the functional needs they were built to address.

Simply put, it will more-and-more become a place people want to be.

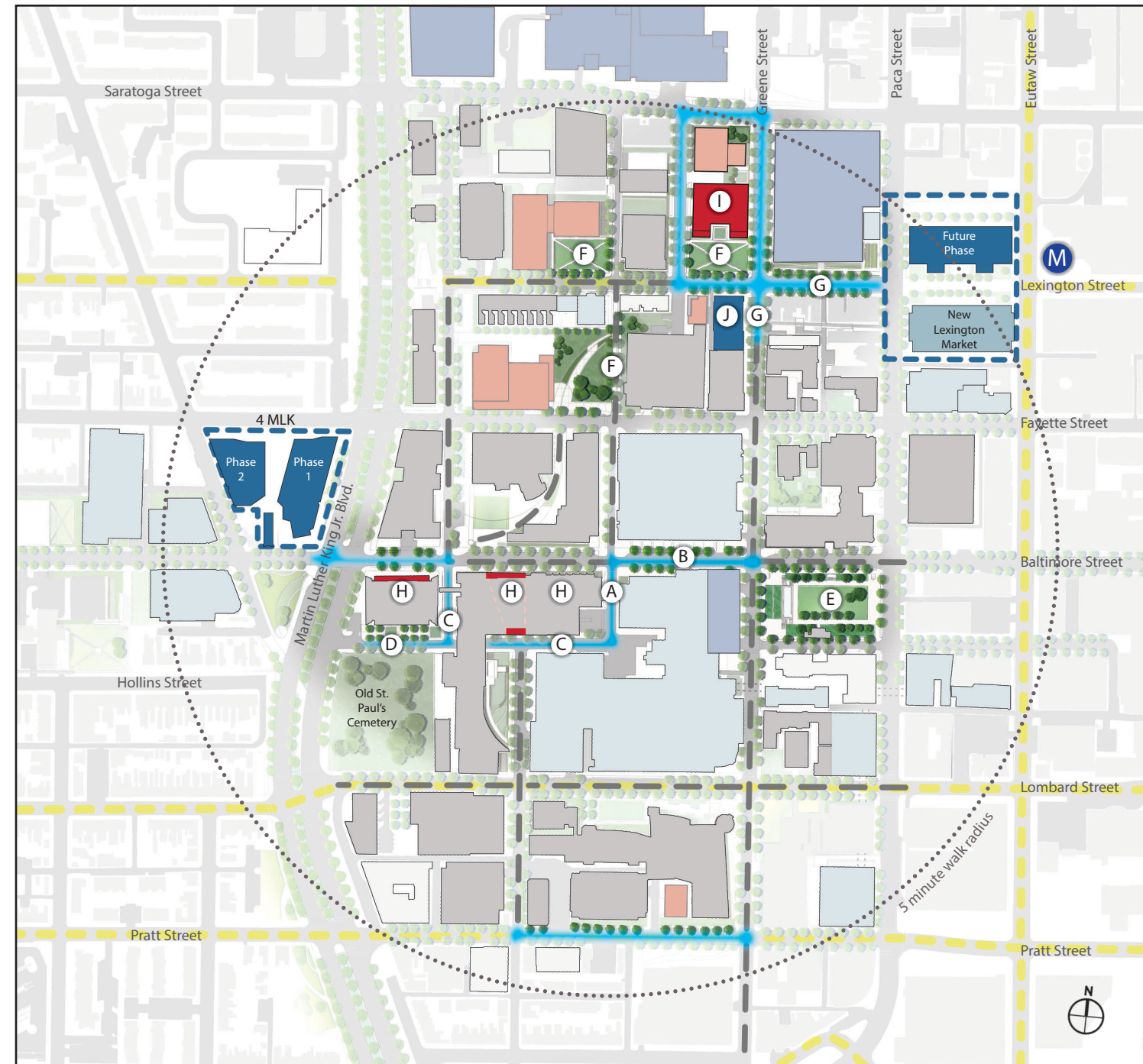
In the new Lexington Market and the planned BioPark gateway project, 4MLK, UMB is fortunate to have two outstanding partner projects that will benefit from well-developed routes branching from campus.

KNITTING STREETS

By knitting together UMB's two principal developed street networks the pedestrian routes illustrated at right will also help to unify north and south campus and support future investment in developing University Square "Plaza" Park as an amenity.

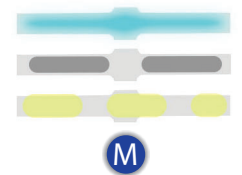
KEY TO LOCATIONS:

- (A) Arch Street Alley
- (B) 600 Block W. Baltimore Street
- (C) Redwood Street
- (D) Redwood - Pocket Park
- (E) Plaza Park Reconstruction
- (F) North Campus Green Spaces
- (G) 500 Block W. Lexington Street and 100 Block N. Greene Street
- (H) UMB Street Level Spaces
- (I) School of Social Work
- (J) Partner Development Project



Campus Open Space and Public Realm Opportunities

UMB / Partnership Streetscape Project
 Existing UMB Pedestrian Route
 Future City Bike Lane (Phase I)
 Baltimore Metro Stop



Implementation

The projects below are priorities for the next 10 years:

SITE SPECIFIC INVESTMENTS

- Ongoing deferred maintenance / facilities renewal
- Medical School Teaching Facility (MSTF) renovation and infrastructure upgrades
- Davidge Hall Restoration
- University Square "Plaza" Park reconstruction
- Howard Hall renovation
- Bressler Research Building (BRB) renovation
- HSRF III plaza cafe'
- Lexington Garage Shell Space

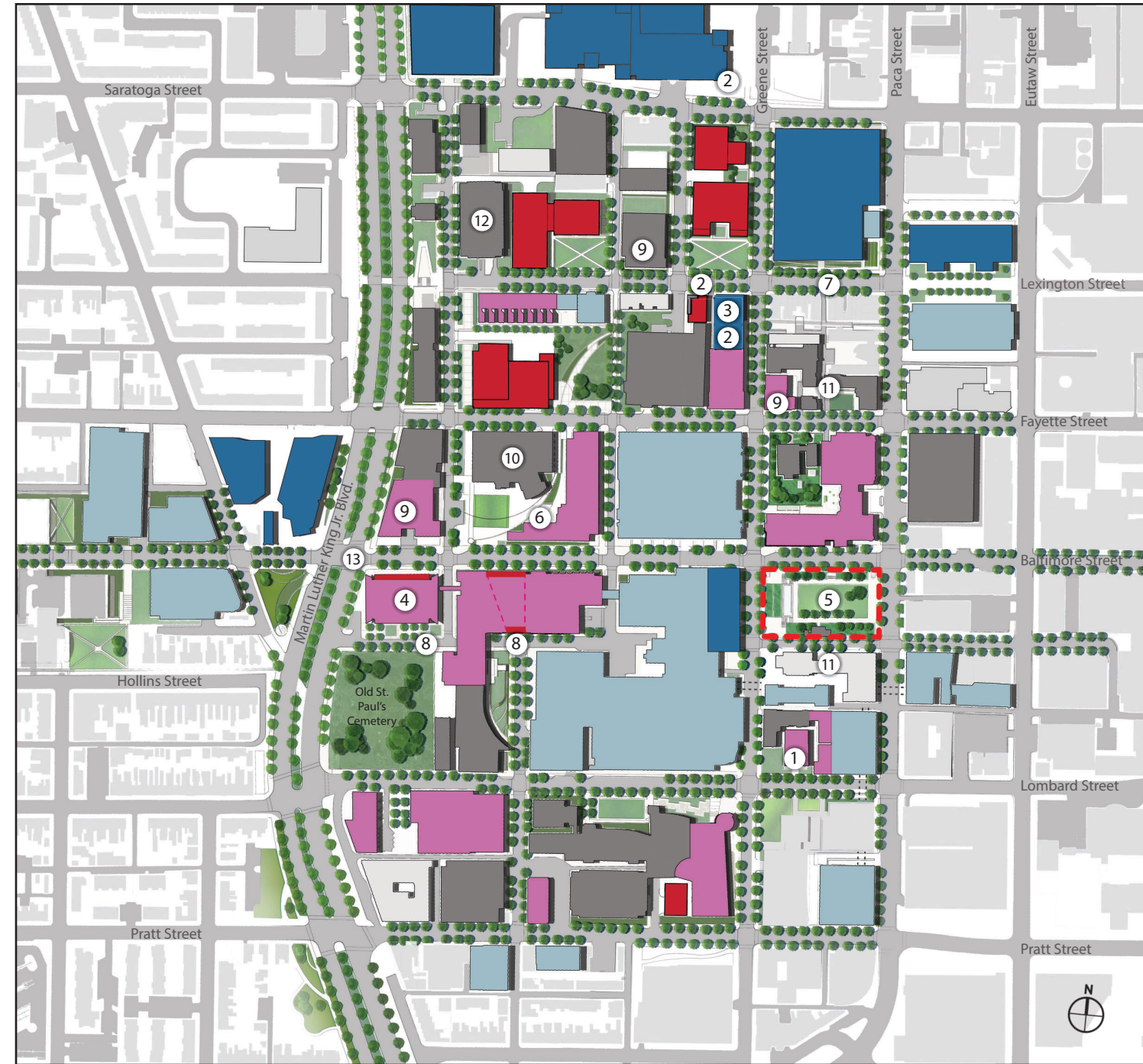
MULTIPLE-SITE OPTIONS

- Campus Center North / Social Hub
- Maryland Psychiatric Research Center (MPRC) relocation
- Health Sciences Research Facility (HSRF) IV
- U.S. Post Office relocation
- Graduate School
- Housing
- Campus streetscape and open space enhancements

NEAR-TERM PROJECTS

Of these, the following projects, represented on the map (facing page), are considered near-term priorities:

- ① Davidge Hall Restoration
- ② U.S. Post Office Relocation
- ③ 601 W. Lexington Partnership Project
- ④ MSTF - Gut Renovation
- ⑤ Plaza Park Reconstruction
- ⑥ HSRF III Plaza Cafe'
- ⑦ 500 Block W. Lexington Streetscape
- ⑧ Redwood Streetscape
- ⑨ Graduate School
- ⑩ Completion of HSRF III Shell Floors
- ⑪ Disposition of Fayette Square Apt's and Current SSW Building
- ⑫ Lexington Garage Shell Space
- ⑬ MLK and Baltimore Street Intersection Improvements
- ⑭ Revitalization of existing buildings (campuswide-not labeled on map)
- ⑮ Renovation or disposition of 300 W. Russell Street (beyond limit of map)



Master Plan Update / Near-Term Projects

- UMB Existing
- UMB Proposed Project Sites
- Facilities Renewal Needs
- Existing Partnerships
- Proposed Partnership Projects



Office of Real Estate,
Planning, and
Space Management