



Introduction 03

Planning context 27

Guiding principles 43

A shared vision for the future **103** 



# $|| \mathsf{N}| \mathsf{T}| \mathsf{R} \odot \mathsf{D} \mathsf{U} \subset \mathsf{T}|| \odot \mathsf{N}|$

# THE ONE VCU MASTER PLAN

At Virginia Commonwealth University, we're connected with the world around us and are uniquely integrated within our city's urban culture. The work we do makes a difference because we're out there on the ground, a part of the community, actively involved in improving lives any way we can. That's how we make it real.

Together, VCU and VCU Health System serve as a premier urban, public research university and academic health center dedicated to advancing knowledge, student success and patient experience through engaging learning environments, health care that preserves and restores health for all people, research that expands knowledge, interdisciplinary collaborations that solve global challenges, sustainable partnerships that support the community, and a climate of diversity and inclusion. Centrally located in the city of Richmond, Virginia, VCU's unique architecture, natural resources and culture help shape a notably diverse campus community.

4

The ONE VCU Master Plan is the framework designed to support this important mission and aligns VCU's physical environment with the VCU strategic plan, Quest 2025: Together We Transform, and the VCU Health System strategic plan, Vision by Design. The master plan identifies common goals and provides a shared, evidence-based vision for development to guide physical campus investments.

The first master plan in VCU's history to set a unified vision for all VCU properties, the ONE VCU Master Plan is guided by the following six principles:



#### Student success

ensure student success and well-being through high-quality and appropriate teaching, learning, study and living spaces

#### **Patient experience**

design and develop spaces, facilities and amenities that allow for enhanced safety and patient experience in both inpatient and outpatient settings

#### **Program synergies**

advance a culture of interdisciplinary collaboration and discovery by developing shared spaces that inspire community, partnerships, research, innovation and creativity



#### Placemaking

celebrate and enhance VCU's unique urban setting and rich history



#### Mobility and safety

promote a walkable, accessible, safe campus which is easy to navigate for the entire VCU community: students, patients, faculty, staff, alumni, neighbors and visitors



#### Unify the campus

strengthen the heart of each campus and the collective VCU identity through strategies that connect the campuses to each other and to the city of Richmond





#### Proposed Master Plan

#### KEY



VCU LEASED BUILDING

EXISTING VCU BUILDING

# **A TRANSFORMATIVE, BOLD VISION**

In addition to the guiding principles, the five following bold moves provide the foundation for the ONE VCU Master Plan:

#### 1. Reimagine campus front doors

VCU competes at the highest level for students, patients, faculty and staff. First impressions and wayfinding matter — there is a profound and positive relationship between the built environment and student recruitment and retention (Reynolds & Valcik, 2007). A priority for the ONE VCU Master Plan was identifying the front doors for VCU and producing a vision that will improve first impressions, strengthen the arrival experience and wayfinding around campus, and enhance VCU's overall sense of place and identity. Though there are distinct differences between the scale and operations of the Monroe Park and MCV campuses, it is important that the elements utilized to identify the front doors are consistent. Issues of mobility and safety are heightened on the MCV Campus, where patients and their families are often navigating the streets and sidewalks on their way to treatment — intuitive wayfinding and parking at the point of service are important and reduce patient and family stress (Ulrich, Quan & Zimring, 2004). A combination of markers, intersection improvements, streetscape amenities and architectural elements are proposed to improve wayfinding and enrich the VCU experience on both campuses. When these components come together, they have a transformative impact.

#### 2. Redefine the core of each campus

ONE VCU envisions iconic greens at the Monroe Park and MCV campuses, each supporting a new center of activity with a mix of uses that tie into an urban network of open spaces. Bookended by Cabell Library and a new student commons, the proposed iconic green on the Monroe Park Campus is an opportunity to realize an open space that is uniquely VCU in scale and character. The demolition and replacement of the existing Commons and Temple Building not only addresses deferred maintenance and programmatic needs, but also provides a window of opportunity to realize an iconic open space not previously possible. The new iconic green facilitates movement between student life resources and the library to the north, the new student center and Cary Street Gym to the south, and academic buildings to the east and west. This central space will serve as a hub for collaboration, events, passive recreation and circulation.

At the heart of the MCV Campus, the Plan recommends expansion and enhancement to the existing green space located at East Clay Street and North 11th Street. The new green is central to campus, surrounded by a renovated McGuire Hall and a new Interdisciplinary Health Sciences Building on the Wood Memorial Building, Lyons Dental Building and McGuire Annex site. The central green provides much-needed open space and creates a new heart to campus that will serve as a gathering place for patients, visitors, students, faculty and staff and will facilitate eastwest movement through campus.







 Conceptual rendering of the proposed front door landscape enhancements at Broad and Belvidere streets

### 3. Improve, advance and connect VCU Health System assets

Academic health centers are complex. The density of the MCV Campus makes orientation, movement and development even more challenging. Incorporating the existing VCU Health System facilities plan and collaborating on the future of the MCV Campus, the ONE VCU Master Plan improves the patient experience, advances interdisciplinary collaboration and discovery, and provides greater connectivity between buildings and open spaces. The Plan consolidates adult outpatient services, provides parking at the point of service and achieves all private inpatient rooms. New patient drop-off and vehicular circulation patterns provide easier access for patients. Improved pedestrian connections, both at the street level and above-grade, enhance safety and wayfinding for patients, faculty, staff and visitors. Enhanced open spaces, specifically the new central green, and

streetscape improvements provide a sense of place for the MCV Campus. New interdisciplinary teaching and research facilities bring colleges and schools together by concentrating activity. Improving adjacencies encourages collaboration between disciplines.

## 4. Create an arts and innovation hub at Broad and Belvidere

National prominence is a key focus area for Quest 2025. Establishing an interdisciplinary hub of development that showcases some of VCU's premier programs at the intersection of Broad and Belvidere streets not only displays national prominence, but also connects the campus to the greater Downtown Richmond Arts District. Complementing the recently completed Institute for Contemporary Arts' (ICA) Markel Center at the southwest corner of Broad and Belvidere streets, the new Arts and Innovation Building on the southeast corner will consolidate art and innovation and provide a front door for community engagement. Additionally, the proposed student gallery adjacent to the Markel Center will provide much-needed exhibit space for students in a location that is accessible to the larger VCU and Richmond community. Redevelopment of the current Honors College site with a new interdisciplinary art building will improve adjacencies between departments and will accommodate additional space needs for the School of the Arts. The programmatic synergies proposed at this key campus intersection will address priority space needs, reduce fragmentation of programs, tie into the city's PULSE BRT (bus rapid transit) system, better connect the campus to Downtown Richmond and transform a key front door to campus.

#### 5. Revitalize historic Franklin Street

Extending on axis from Capitol Square, Franklin Street originally developed as the prominent residential corridor of Richmond. It connects neighborhoods and major public parks and hosts a dedicated downtown bike lane. The historic houses along tree-lined West Franklin Street are synonymous with the heritage of VCU's Monroe Park Campus. Although abounding with character, the buildings present circulation, accessibility and programmatic challenges. The ONE VCU Master Plan sets a vision for modernizing and revitalizing the VCU buildings along Franklin Street while preserving their historic character. Building renovations that include rear additions across multiple houses will provide circulation, elevator access and new program space not otherwise possible. West of the Office of the President, 910 West Franklin St., the plan identifies an opportunity to convert the existing buildings back to residences for faculty and student apartments, creating an active faculty and student community on Franklin Street.

# **ONE VCU OUTCOMES**

ONE VCU is a new plan and a call to action to implement a transformative vision for a unified campus. Analysis and engagement early in the planning process identified five primary challenges that the plan needed to address. The ONE VCU Master Plan addresses these challenges with projects that achieve a balance of financial feasibility, meet programmatic needs and realize open space opportunities. Every proposed project is complementary to a long-term vision closely aligned with the guiding principles.

#### **Deferred maintenance**

The physical campus environment has direct impact on recruitment, student success and patient experience. Two-thirds of prospective students view facilities as important to deciding where to go to college, and more than half say an attractive campus is essential (Reynolds & Valcik, 2007). Facilities also shape perceptions of intangible college choice elements such as the quality of the faculty, the value of the education and the safety of the campus (White, 2016). The quality and condition of facilities not only affects perception and recruitment but also impacts the ability to optimally use a space for its intended purpose. Like most universities across the country, VCU has a number of buildings built between 1950 and 1990 that are overdue for revitalization.

Currently VCU has a backlog of \$127 million in costs associated with maintenance for academic, administrative and research facilities alone. Over a 10-year period, an additional \$397 million of renewal is needed resulting in a total maintenance renewal need of \$524 million (not including student life, athletics, health system and residential buildings). The Plan identifies projects to meet deferred maintenance needs and address obsolete facilities. Implementation of the ONE VCU Master Plan will reduce total maintenance renewal costs by an estimated \$204 million and address 61 percent of the current backlog over the same period through a strategic combination of renovation, repurposing, demolition and new construction. Deferred maintenance issues addressed through the ONE VCU Master Plan will better position VCU's facilities to meet current and future needs and increase efficiencies.

#### Quantitative needs for the university

The quantitative needs for the university were established through two planning studies — the 2016 Space Needs Assessment and the 2018 Undergraduate Housing Demand and Market Study. The outcomes of these studies determined the targeted needs for the ONE VCU Master Plan to address. The space needs assessment determined that an additional 1.4 million gross square feet of space is needed to realize the strategic and programmatic goals of the university. The largest needs are for teaching labs, research space, and recreation and athletics space. These findings were confirmed through stakeholder interviews during the ONE VCU process. The update to the undergraduate housing demand and market context found that there is demand for an additional 700 to 1,000 beds on campus.

The ONE VCU Master Plan identifies projects that will address 82 percent of the space need during the planning timeframe. These projects not only meet programmatic needs but also present an opportunity to redefine areas of campus, create new connections and accommodate growth in key strategic areas. One hundred percent of the housing demand is accommodated with new residence halls primarily located along the Grace Street corridor. Given the correlation between academic achievement and on-campus living, accommodating additional housing was an important goal for the ONE VCU Master Plan (Virginia Commonwealth University, 2017).

#### Quantitative needs for the health system

The VCU Health System is committed to improving human life and providing the highest-quality, most comprehensive care. The physical environment plays an important role in achieving these goals and ensuring a high-quality patient experience. Facilities have been shown to reduce patient and family stress and accelerate healing through intuitive wayfinding, parking at the point of service, access to nature and natural lighting, and reduced noise levels (Ulrich & Zimring, 2004). Facilities also play an integral role in reducing staff exposure to infectious agents and other hazards potentially present in the healthcare environment (Jiang et al., 2003). Two of the greatest space challenges identified by the VCU Health System that are addressed in the ONE VCU Master Plan are the percentage of private patient beds and the overcrowded and inefficient clinic facilities. Currently, 35 percent of patient beds are semi-private, and 65 percent are private. Given the fact that private patient rooms reduce length of stay, health care-acquired infections, patient movement and operating costs (Chaudhury, Mahmood & Valente, 2009), providing 100 percent private beds was a critical goal for the Plan. ONE VCU incorporates VCU Health System's plan for a new Inpatient Hospital and Children's Hospital that will provide 100 percent private patient beds and increase the number of inpatient beds by 14 percent to accommodate the projected inpatient volume growth.

The ONE VCU Master Plan addresses the inefficiency and overcrowding of existing clinical facilities with the construction of the Adult Outpatient Facility and by renovating and repurposing existing facilities to achieve more efficient clinical layouts and provide much needed office space. These plans include enhanced access to linear accelerators, imaging and operating rooms. The Plan accommodates a 20 percent growth in clinic space by 2025.

#### **Open space quality**

Green space and urbanism are both positively associated with student retention and satisfaction (Hajrasouliha & Ewing, 2016). Unfortunately, many of VCU's front doors, open spaces and streetscapes are poorly defined and inconsistent in quality, with 24 percent of the overall campus open space being in poor or below-average condition. The ONE VCU Master Plan includes 7,450 linear feet of streetscape improvements along with two new greens that will serve as anchors for each campus. VCU will work closely with the city to implement streetscape improvement projects. VCU's location in Richmond is also an opportunity for partnerships with the city to clarify campus front doors and coordinate key transit assets and streetscape improvements.

#### Parking

At present, driving constitutes 83 percent of all travel to the Monroe Park and MCV campuses by students, faculty and staff, with a higher rate of drive-alone trips by faculty and staff. Providing the appropriate amount of parking for visitors, students, faculty and staff is an important planning component. The amount and location of parking also needs to be supported by alternative forms of transportation, such as bike and public transit.

Parallel to the ONE VCU planning process, VCU conducted the VCU and VCU Health System Parking and Transportation Study to determine the demand and appropriate distribution of parking on campus. At the time of the study, VCU had an inventory of 12,370 parking spaces, with an additional lease of 2,550 spaces. The study determined that existing capacity on the Monroe Park Campus can be managed to meet future needs. In contrast, expected rapid growth on the MCV Campus will require an additional 2,700 parking spaces.

The ONE VCU Master Plan accommodates recommendations from the VCU and VCU Health System Parking and Transportation Study by increasing the number of patient and visitor parking spaces from 980 to approximately 3,100, and locating those spaces at the points of service. VCU will continue to look for ways to accommodate additional parking, coupled with implementing a new alternative transportation initiative aimed at encouraging students, patients and employees to consider alternatives to driving alone. VCU and VCU Health System will offer incentives to employees who ride the bus, carpool, walk or bike to work.

The location of parking is important to prioritizing pedestrian activity in the core of campus. The Plan relocates parking facilities and patient drop-offs away from major pedestrian thoroughfares. The proposed Adult Outpatient Facility, Inpatient Hospital and Children's Hospital shift vehicular circulation away from the core of campus, thus enhancing the patient and visitor experience on their arrival to campus.

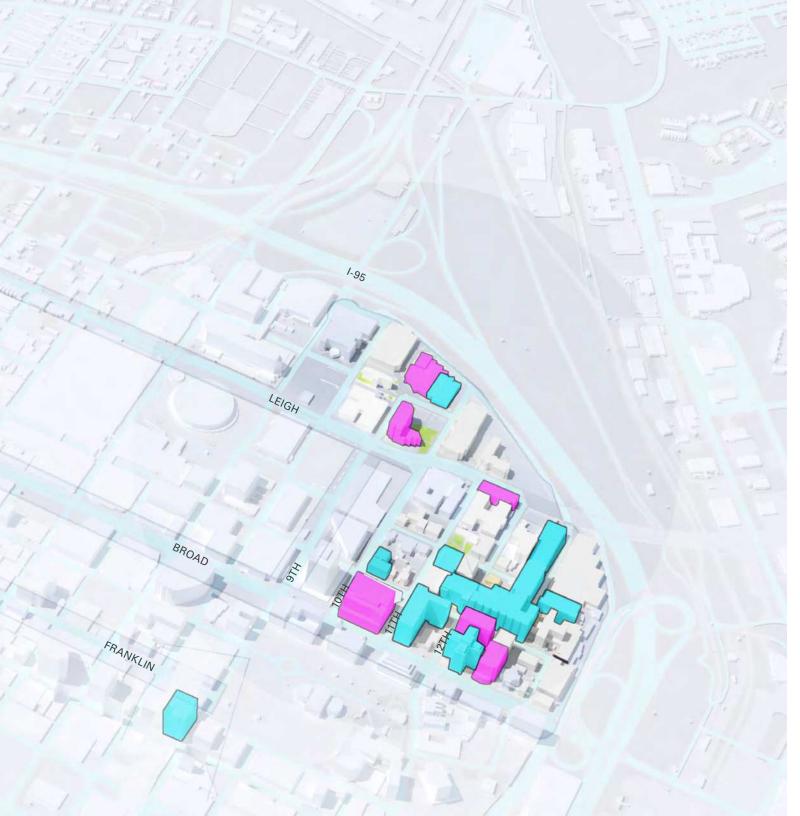
#### Summary

Implementation of the ONE VCU Master Plan will transform VCU's physical campus in a way that supports the strategic direction of both the university and VCU Health System. The plan calls for 5.2 million net new gross square feet of renovation and new construction to meet VCU's needs over the life of the plan. Between 2009 and 2018 VCU invested in more than 5.3 million gross square feet of renovation and new construction. Some projects, such as the renovation of and addition to Cabell Library, have been transformational. Other projects addressed deferred maintenance and programmatic needs. VCU will continue to invest in its physical campus to advance its national recognition as a premier urban, public research university and academic health center. The ONE VCU Master Plan provides recommendations that address the challenges currently facing the physical campus. The projects not only support the guiding principles but also address deferred maintenance, quantitative needs, the quality of open space, connectivity and parking in a coordinated and transformative way. Project implementation will be guided by VCU priorities, funding and phasing over the life of the Plan.

The Children's Hospital of Richmond at VCU is the largest and most advanced outpatient facility dedicated to children in the region







#### Recent capital investment projects: 2009 - 2018







#### ONE VCU proposed renovations & new construction



# **CURRENT CHALLENGES**

DEFERRED MAINTENANCE	QUANTITATIVE NEEDS	OPEN SPACE
<b>\$127M</b> current backlog <b>\$397M</b> 10-year renewal need *excludes student life, athletic, health system and residential buildings	<b>\$1.4M GSF</b> non-residential space need <b>700–1,000 BEDS</b> 2018 net new housing demand	<b>24%</b> of the open spaces on campus are in poor or below average condition
PATIENT BEDS	CLINIC FACILITIES	PARKING FACILITIES
35% semi-private beds 65% private beds	OVERCROWDED & INEFFICIENT clinical layouts	<b>980</b> patient/visitor parking spots

# MASTER PLAN OUTCOMES

DEFERRED MAINTENANCE	QUANTITATIVE NEEDS	OPEN SPACE
\$204M reduction in total renewal need 61% of current backlog addressed *excludes student life, athletic, health system and residential buildings	82% of the space needs addressed in the ONE VCU Master Plan 100% net new housing demand met	7,450 LINEAR FEET of streetscape improvements 2 new iconic greens
PATIENT BEDS	CLINIC FACILITIES	PARKING FACILITIES
100% private beds 15% inpatient beds matching growth in projected inpatient volume	20% growth in clinic space accomodated through 2025 EFFICIENT convenient clinic layouts including enhanced access to Linear Accelerator,	<b>3,100</b> patient/visitor parking spots

Imaging and Operating Rooms, etc.



# PLANNINN NIFEXT

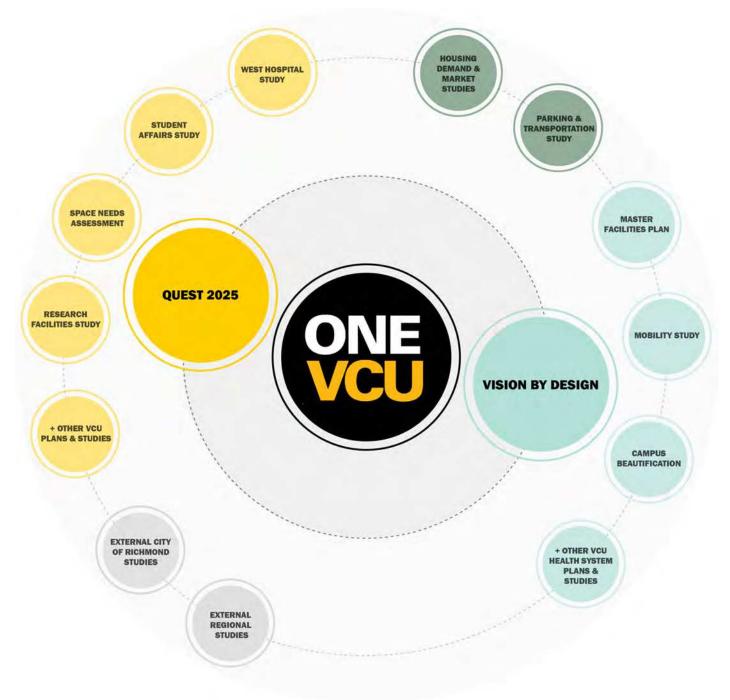
# **PLANNING CONTEXT**

The goal of the master plan is to align the physical campus with the mission and strategic goals of VCU. Master planning coordinates where physical campus investments are made. It does not set the strategic direction of the university or health system, nor does it provide a funding mechanism for projects. If a project has a physical component, however, the master plan sets the framework for locating and phasing the project. Together with the strategic plan and capital plan, the master plan provides a shared vision that guides development and implementation.

Through a collaborative process, a master plan makes recommendations for investments that best reflect shared values, strategic initiatives and ambition for national distinction. Master plans are evidence-based and utilize facility data, previous studies and emerging ideas to inform future projects. A successful plan is a financially feasible roadmap to meet priority space needs, address deferred maintenance and realize transformative projects. Recommended projects are funded and realized through university and health system capital planning. A flexible framework for decision making, a master plan anticipates change but may require periodic updates to account for new evidence, circumstances and opportunities.

Previous VCU master plan efforts in 1993 and 2004 guided periods of significant institutional growth. The 2013 VCU 2020 Master Site Plan Update revised the recommendations from 2004, including planning for additional research facilities, new meeting and gathering spaces, and additional on-campus student housing.

The ONE VCU Master Plan continues the ethos of planning but forges a new direction. A deliberate holistic approach to planning for all of VCU — the VCU and VCU Health System teams worked in close collaboration to coordinate planning activities and develop the ONE VCU Master Plan which supports both Quest 2025 and Vision by Design. Informed by significant research (34 internal VCU studies, 15 city and regional studies, academic evidence) and advised through a higher level of VCU and community engagement than in the past, the result is a community-involved, evidence-based VCU roadmap that is transformational.



# PROCESS

The ONE VCU Master Plan is the result of a five-phase process with facilitated, interactive workshops that engaged members of the VCU and surrounding community in dialogue, fact-finding and decision-making. The workshops included interview sessions, walking tours, community open houses and concept development that contributed to the evolution of the plan. The planning team was led by Ayers Saint Gross, a national design firm with expertise in planning for higher education and included a broader consultant team local to Richmond with diverse expertise in campus heritage, landscape architecture, civil engineering, cost estimating and financial feasibility.

At the onset of the planning process, VCU established that the following governance committees would guide the ONE VCU Master Plan:

• VCU Board of Visitors (BOV): VCU's governing body. The BOV provided input and direction on the ONE VCU Master Plan and have the ultimate authority for its adoption. The BOV also approves individual university capital projects.

- VCU Health System Authority Board of Directors (BOD): VCU Health System's governing body. They provide input and direction and have oversight for VCU Health System projects in the ONE VCU Master Plan. The BOD approves VCU Health System capital projects.
- Executive Sponsors: Executive Sponsors are composed of the members of the VCU President's Cabinet including the provost and vice presidents, VCU Health System leadership and University Counsel. The Executive Sponsors provided input at regular intervals, established high-level priorities and rendered decisions. A subset of this group formed the Executive Sponsors Prioritization Subcommittee, which provided frequent and swift guidance to the process.

#### • Facilities Planning Steering Committee (FPSC):

The FPSC is a representative group of leaders from the university and VCU Health System covering every major area of operations, and includes student, faculty and staff members as well as board representatives. The committee provided input and guidance at their bi-monthly meetings, and streamlined decisions for the Executive Sponsors. • Master Plan Working Group: This is a facilities planning leadership workgroup with representation from across the university and VCU Health System, including student representatives, that provided key insights and guidance to the FPSC.

Throughout the planning process, the planning team met with smaller focus groups to gather more detail about certain units and aspects of VCU, including the Council of Deans, Faculty Senate, Staff Senate and Student Government Associations among others. Additionally, nine public open houses were held at key points in the process to ensure engagement with the wider VCU and Richmond community, as well as meetings with local neighborhood associations.



Walking tour during the design phase of the Master Plan process

Schedule									
	2017				2018				
	SEPT	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	
	PROJECT KICK-OFF	ENVIRO	NMENTAL	SURVEY	THEMES -	+ ISSUES	UES DESIG		
		2							
	Kick-off Meetings	Campus Tour + Interviews + Listening Sessions		Campus Analysis + Draft Analysis Summary	Draft Program Themes	Principles + Concept Framework Plan		Design Workshop	
Working Group	Х			Х	Х	Х		Х	
Facilities Planning Steering Committee Executive Committee	х			х	х	х		Х	
Facilities Planning Steering Committee		х			х				
Executive Sponsor Prioritization Sub-Committee	х	х		Х	х	х		Х	
Executive Sponsors		Х						Х	
Board of Visitors				Х			Х		
Health System Authority Board of Directors									
Key Engagement		Х				Х			

**ENVIRONMENTAL SURVEY:** assessment of the existing conditions and engagement with campus stakeholders to determine the opportunities and challenges on campus. The planning team toured campus and reviewed, coordinated and synthesized recent and ongoing studies.

**THEMES AND ISSUES:** the synthesis and summary of findings from the Environmental Survey and the identification of priorities and principles that informed planning and design efforts.

**DESIGN:** the active exploration of individual solutions, systemwide improvements or integration, and scenario modeling to collectively assess potential campus development.

**DRAFT PLAN**: the synthesis of interrelated planning solutions identified by the stakeholders as a cohesive, supportive campus and facilities response to VCU's priorities and strategic direction.

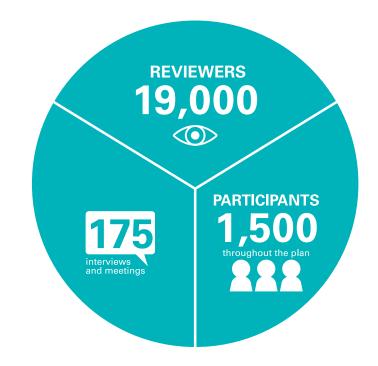
			2		2019					
MAY	JUN	JULY	AUG	SEPT	ОСТ	NOV	DEC	JAN	FEB	MAR
DE	SIGN		DRAFT PLAN		FINAL SOLUTIONS + IMPLEMENTATION					
							12			
Design Workshop	Design Workshop		Draft Plan	Updated Draft Plan	Final Draft Plan		Final Plan Review + Board Presentations			Final Plan Approval + Roll-out
Х	Х		Х	Х	Х					Х
Х	х		Х	Х	Х		х			х
	х			×						Х
Х	Х		Х	Х	Х		х			Х
	Х			Х			Х			Х
							Х			Х
							Х			
				Х						Х

**FINAL SOLUTIONS AND IMPLEMENTATION:** the final plan that represents a comprehensive fabric of campus development solutions, coordinated and presented to those who participated in the planning process and charged with its implementation.

# ENGAGEMENT

The ONE VCU Master Plan was developed in conjunction with frequent engagement through a variety of tools and mediums. Public open houses, interviews, workgroups and presentations allowed for in-person discussion sessions and one-on-one time with stakeholders. Some workshops included interactive components where participants identified locations on a map or wrote comments on graphic boards that were compiled and analyzed for use in the next project phase. Over 175 meetings were held with more than 1,500 participants throughout the plan.

Digital communication through a website and social media accounts complemented in-person sessions by providing easy access to presentation materials and a contact forum for stakeholders and community members who were unable to attend in-person sessions or wanted additional information. Throughout the planning process the website included blog posts with additional information and timely plan updates. Comments received through both in-person and digital mediums were a vital part of the planning process, as they helped to shape and refine the plan. Throughout the planning process the website logged over 19,000 unique visits.





Students, faculty, staff, and the community participating in an open house held at the Larrick Student Center

# **ALIGNMENT WITH STRATEGIC PLANS**

The purpose of ONE VCU is to align VCU's strategic initiatives and mission with its physical environment. ONE VCU is guided by two strategic plans: VCU's Quest 2025: Together We Transform and VCU Health System's Vision by Design. The key themes identified in each plan served as the foundation for ONE VCU's guiding principles.

### **Quest 2025: Together We Transform**

Quest 2025: Together We Transform defines flexible, realistic, strategic and operational priorities to achieve collective goals for the university. The plan responds to the broad challenges facing many public institutions today: rising costs and access to an affordable education, growing cynicism of allocating resources to public higher education, and increasing competition for national prominence. The strategic plan outlines a six-year initiative with implementation focused on four themes:

- **Student success:** transform the lives of our distinctive and diverse student population through a university culture that supports every student's success through inquiry, discovery, innovation, civic engagement and creative expression
- **National prominence:** distinguish VCU as a preeminent urban public research university by growing areas of strength as researchers, innovators and educators
- Urban and regional transformation: mobilize VCU's human capital and economic resources, collaborating with the community to address social and health inequities
- Diversity driving excellence: translate our value philosophy of diversity and inclusion into practices related to excellence and success

### VCU Health System Strategic Plan: Vision by Design

Vision by Design is a strategic plan for the VCU Health System and VCU health sciences college and schools to improve operational efficiencies and adapt to changes in an evolving health care system through a variety of strategies, or vision pathways. The strategic plan provides pathways to preserve, sustain and advance the tripartite mission of the VCU Health System, which was established to preserve and restore health for all people, to seek the cause and cure of diseases through innovative research, and to educate those who serve humanity. The three strategic themes and imperatives from Vision by Design are:

- Education, research and innovation: focus clinical and population health innovation and research; enhance education
- **Top performance:** optimize value equation, achieve top level performance, embrace top quality for clinical delivery, and continue the High Reliability Organization journey
- Care for the commonwealth: focus strategically on population health and value, expand access, grow reach through partnerships and network development, and develop services and patient experiences that meet the needs of our community

# SUSTAINABILITY

VCU has maintained a strong commitment to sustainability since 1991 with the signing of the Talloires Declaration followed by the Second Nature Climate Neutrality Commitment (formerly the American College and University Presidents' Climate Commitment) in 2008. The signing of this commitment spurred the creation of the Office of Sustainability and the creation of the VCU Sustainability Committee that oversees the Climate Action Plan (CAP) implementation, recommends greenhouse "gas (GHG) emissions reduction projects, and communicates and engages with internal and external stakeholders to further the objectives of the CAP. As signatories to the Second Nature Climate Neutrality Commitment, VCU aims to neutralize greenhouse gases emitted on the campus and become carbon-neutral with no net GHG emissions, a goal VCU is striving to a reach by 2050. To align with the goals established in the VCU Sustainability Plan 2015-2020, the ONE VCU Master Plan further reinforces VCU's commitment to building to LEED standards, upgrading fixtures to sustainable alternatives, reducing greenhouse gas emissions, and supporting more sustainable means of transportation to, from and within the campus.





The Cabell Library addition (LEED Silver)

### **LEED** certification

VCU is committed to reducing its environmental footprint through new construction and renovation that meets the standards of Leadership in Energy & Environmental Design (LEED) certification. LEED certification provides independent verification of a building's sustainable and regenerative qualities whether relating to design, operations or maintenance. The ONE VCU Master Plan proposes new construction and renovation to at a minimum achieve LEED Silver Standards.



### **Energy and greenhouse gas emissions**

The ONE VCU Master Plan calls for a net increase of 5.2 million square feet of space. To respond to the increase, future construction and renovation will need to address and emphasize strategies that reduce greenhouse emissions to support VCU's mission of achieving carbon neutrality by 2050. This could include the utilization of efficient buildings systems and fixtures, improving aging on-campus infrastructure and relying on alternative energies.

Green roof on the Pollak Building

### **Alternative transportation**

As part of the master planning process, VCU completed a comprehensive parking and transportation study that identified tactics to mitigate future parking demand. To meet parking demand now and into the future, VCU and VCU Health System are working together to encourage students, patients and employees to consider alternatives to driving alone. In addition to the regular cost and environmental benefits of using alternative forms of transportation, VCU and VCU Health System will offer incentives to employees for turning in their VCU parking permit. A dedicated website will consolidate resources offered at VCU, VCU Health System, the City of Richmond and GRTC, the city's transit system, so employees can explore what works best for them.

VCU is committed to integrating bus and bike needs with the larger city network. VCU will seek partnerships to reduce redundant bus lines and offer easy and efficient connections for the VCU community. Enhanced streetscapes will also create walkable, accessible and safe environments for individuals. Coordinating with the city in its effort to implement proposed bike routes will continue to better connect campuses.



**GRTC Pulse bus rapid transit station** 



# ГПЛ $(\bigcirc)$

# **GUIDING PRINCIPLES**

The ONE VCU Master Plan is informed by six guiding principles. Together the guiding principles provide a long-term roadmap for the university and health system to transform the physical campus in a way that makes it more accessible, sustainable, welcoming and uniquely VCU. Shaped by a large cross-section of stakeholder engagement sessions, each principle guides and supports the plan to achieve the goals of the strategic plans Quest 2025: Together We Transform and Vision by Design.

44



#### Student success

ensure student success and well-being through high-quality and appropriate teaching, learning, study and living spaces



#### **Patient experience**

design and develop spaces, facilities and amenities that allow for enhanced safety and patient experience in both inpatient and outpatient settings



#### **Program synergies**

advance a culture of interdisciplinary collaboration and discovery by developing shared spaces that inspire community, partnerships, research, innovation and creativity

The strategies and projects that support each principle are described in the following sections.



#### Placemaking

celebrate and enhance VCU's unique urban setting and rich history



#### Mobility and safety

promote a walkable, accessible, safe campus which is easy to navigate for the entire VCU community: students, patients, faculty, staff, alumni, neighbors and visitors



#### Unify the campus

strengthen the heart of each campus and the collective VCU identity through strategies that connect the campuses to each other and to the city of Richmond

# 700-1,000 NEW BEDS

### RENOVATION / REPLACEMENT OF EXISTING LABS

# **STUDENT SUCCESS**

# Ensure student success and well-being through high-quality and appropriate teaching, learning, study and living spaces.

Student success is a key focus area for Quest 2025. VCU strives to establish an inclusive campus environment that removes barriers to graduation, fosters community engagement and provides interdisciplinary spaces that bring people together. Facilities play a role in attracting students and ensuring they have the appropriate spaces to learn and live so they can make an impact today while preparing for tomorrow. On-campus living is strongly associated with student retention and graduation rates (Hajrasouliha & Ewing, 2016). Freshman students at VCU who live on-campus consistently outperform those that live offcampus with grade point averages .31 higher than those that do not. Similarly, fall semester-to-fall semester persistence rates at VCU are better among students who live on-campus (84 percent) as opposed to students who live off-campus (79 percent) (Virginia Commonwealth University, 2017). Providing facilities and spaces that meet the academic, research, student life, athletic and engagement needs is critical to support VCU's mission.

The new and renovated facilities proposed in the ONE VCU Master Plan will create high-quality spaces that reinforce the campus cores and main streets as inclusive centers of activity between students, faculty and the greater Richmond community. Research shows that the student center carries significant weight in the perception of the university's quality, accounting for 26 percent (White, 2016). Other facilities that students consider when deciding to enroll include: facilities related to a student's major; classrooms; residence halls; libraries; and exercise/recreation facilities (Reynolds & Valcik, 2007). A new commons and wellness center is a priority need for VCU and will provide modern spaces to support the entire VCU community and advance student recruitment, wellness and success. Proposed housing on Grace Street will enhance the corridor as a residential street, adding 700 net new beds. Additional facilities including the proposed interdisciplinary health sciences building and interdisciplinary classroom and lab building will improve the quality of teaching space on the Monroe Park and MCV Campuses. Development of high-quality landscapes and hardscapes campus-wide will provide much needed open spaces for living, working, learning and playing.

# **A NEW FIRST IMPRESSION**

### MORE ON-CAMPUS RECREATION SPACE

# **PRINCIPAL STRATEGIES**

**CAPITALIZE** on VCU's urban location with an academic health center to promote real world experiences that prepare students as global citizens and leaders.

**LOCATE** formal and informal student spaces throughout campus to support creativity, interdisciplinary collaboration, studying and teamwork.

**PROVIDE** high-quality and appropriate teaching, learning, research, study and living spaces that accommodate modern instructional pedagogies, participation in research, and support living and learning goals.

**RENOVATE AND RE-PURPOSE** buildings and sites for the highest and best use, recognizing that not all spaces can serve all uses.

**MODERNIZE** student support spaces, student commons and wellness facilities to ensure student success and well-being.

**BUILD** new space strategically when existing space cannot satisfy the program or is better suited to meet other needs.





# Student Success







Conceptual rendering of the proposed student commons and wellness facility and future academic buildings and on the new iconic green

# **KEY PROJECTS**

### Student commons and wellness facility

A new integrated student commons and wellness facility on Cary Street addresses the programmatic needs identified in the 2017 Student Affairs Facilities Study for additional meeting spaces and overall demand for space that is modern and of high quality. The facility, located on the current Thalhimer Tennis Center site, allows for adjacencies to other studentcentered facilities such as Cary Street Gym and Fields, Cabell Library, Shafer Court Dining, and undergraduate residence halls. The co-location of programs places wellness at the center of university life and communicates the priority placed on holistic well-being. The existing undersized University Student Commons will be demolished once construction of the new facility is complete. Thalhimer Tennis Center will be relocated.

### **Recreation facility**

Accommodating indoor and outdoor recreation space on an urban campus with a student population as large as VCU is a challenge. The ONE VCU Master Plan identifies opportunities to accommodate additional recreation space on campus. A turf field is proposed on the top of West Main Street Deck to provide additional outdoor field space. The proposed fieldhouse on the 500 Academic Centre site will provide much needed court space and group exercise space to supplement existing facilities at the Cary Street Gym and Larrick Student Center. VCU will continue to explore other opportunities to accommodate club sports and recreation leagues on or near campus.

### **Student housing**

ONE VCU identifies multiple sites for new undergraduate housing with the goal of accommodating 700 to 1,000 new beds. Placing new housing on the Grace Street corridor enhances vibrancy and activity along the campus main street. Additional housing sites include wrapping the West Main Street Parking Deck and the corner of Harrison and Broad streets. One of the first housing projects will likely be a new residence hall on the 700 West Grace St. site. This project will accommodate approximately 470 beds, replacing the honors housing in the Honors College building. The building will engage the street with an active ground floor. Space currently in the Facilities and Financial Services Building needs to be relocated to allow the new residence hall to be built.

### West Hospital renovation

The future of West Hospital has been a topic of conversation for many decades. It currently houses office space for the university and health system but has an inefficient layout with challenging building systems and is in need of revitalization. Based on a concurrent detailed study focused on West Hospital, the ONE VCU Master Plan recommends the building be renovated for housing and office space.



Conceptual rendering of the proposed STEM teaching facility Credit: Ballinger / Quinn Evans

# Science, Technology, Engineering and Math (STEM) Building

The highest priority for the College of Humanities and Sciences is additional instructional labs. The college needs additional labs to meet their instructional needs and major renovation or replacement of the existing labs in the Oliver Hall – Physical Sciences Wing. Demolition of the Franklin Street Gym will allow for a new STEM teaching facility on Franklin Street. The program includes instructional wet and dry labs and classrooms for teaching chemistry, biology, physics, math, psychology and kinesiology.

### Franklin Street additions and renovations

Although abounding with character, the buildings along Franklin Street present circulation, accessibility and programmatic challenges. Office and academic uses require ADA accessibility, although there are exceptions permitted for the adaptive reuse of historic structures. On a case-by-case basis, some of the Franklin Street houses have been marginally improved with a ramp to the first floor, and a select few have been retrofitted with an elevator. It is a priority for VCU to provide accessibility and, at the same time, maintain the historic character of the adapted homes. A building addition that provides circulation and elevator access via the rear of multiple adjacent houses is an efficient approach for meeting accessibility needs while minimizing the impact to the historic character of Franklin Street.

ONE VCU includes two solutions for the historic homes along Franklin Street. The first is restoring them to residential, an ideal solution for the homes west of the Office of the President as many of the existing offices will be accommodated elsewhere in the plan. Residential use minimizes the impact to the historic structures while taking advantage of existing accessibility improvements. Additionally, the unique characteristics of the original living spaces, such as fireplaces, become desirable attributes as opposed to layout challenges.

The second solution functionally unifies the historic homes along Franklin Street across from the new STEM building. The new bar-shaped connector will be set behind the historic houses in place of the existing additions, outbuildings and garages to the rear. It will provide modern classroom and laboratory space for the College of Humanities and Sciences conveniently adjoined to the corresponding departmental offices. The project will incorporate careful restorations to the historic façades of the buildings. This project, in concert with the STEM building, modernizes and revitalizes the academic use of Franklin Street while preserving the historic character and iconic streetscape of the university's heritage.

### **Student gallery**

The 2016 Space Needs Assessment indicated a need for more exhibit and gallery space on campus. The recently completed Institute for Contemporary Arts' (ICA) Markel Center at the southwest corner of Broad and Belvidere streets brings the most important, cutting-edge contemporary art exhibits in the world to campus and the city of Richmond. The ONE VCU Master Plan recommends building a student gallery adjacent to the Markel Center to provide much-needed exhibit space for students in a location that is accessible to the larger VCU and Richmond community.

# Future academic buildings on the iconic green

Construction of a new commons and wellness building enables demolition of the existing commons building and construction of a new iconic green on the Monroe Park Campus. The iconic green will be anchored by the Cabell Library to the north and new commons and wellness building to the south. The east and west sides of the green include sites for future academic space. The interdisciplinary classroom and lab building will enable the demolition of the Temple Building and the replacement of the Physical Sciences Wing of Oliver Hall. The remaining sites, including Oliver Hall, have been identified as ideal sites for interdisciplinary teaching, learning and student space.

### **Oliver Hall renovation / replacement**

The Physical Sciences Wing of Oliver Hall needs major renovation or replacement. The existing labs require modernization and can be renovated or relocated to the new interdisciplinary classroom and lab building. If they are relocated, the Oliver Hall site is ideal for interdisciplinary teaching, learning and student space.

### **Welcome Center**

VCU's existing Welcome Center is located on Broad Street. While there is proximate garage parking, the location does not provide the best first impression of campus or provide a natural starting point for a campus tour. Redevelopment of the Singleton Center site will co-locate the Welcome Center, Admissions and Alumni meeting spaces in a single building with capacity for additional programs. Its central location will enhance the visitor, alumni and prospective student arrival experience and there is the opportunity to provide proximate parking on the site.

### **Athletic Village**

During the ONE VCU planning process, VCU Athletics conducted their own planning study to relocate and consolidate facilities. An off-campus site will accommodate a new tennis center, practice fields, a baseball stadium and field house.

# 1,000+ PARKING SPACES

# **RENOVATED FACILITIES**

# PATIENT EXPERIENCE

# Design and develop spaces, facilities and amenities that allow for enhanced safety and patient experience in both inpatient and outpatient settings.

A patient experience that is welcoming, pleasant and intuitive is vital for a leading medical center. Open space, streetscape and front door improvements will enhance the overall safety and wayfinding for patients and visitors navigating the campus. Similarly, addressing the demand for parking and locating it at points of service will enhance both patient and visitor convenience. After reputation, convenience is the highest consideration when choosing a clinic for patients of all age groups (Graham et al., 2015). New inpatient and outpatient facilities will allow for backfill and renovation opportunities of existing buildings to improve programmatic adjacencies and overall quality of space. The Adult Outpatient Facility and associated parking consolidates the majority of adult outpatient clinics on Leigh Street, a major thoroughfare, with clear drop-off and an easily accessible parking garage. The Inpatient Hospital and Children's Hospital will provide all private inpatient rooms for greater privacy and comfort. The facilities will meet present needs of VCU Health System patients while providing the flexibility for future patient care methods.

### 100% PRIVATE ROOMS

# **PRINCIPAL STRATEGIES**

**CONSOLIDATE** adult outpatient clinics to improve environments, support clinical care models and provide for team member integration/collaboration.

**PRIVATIZE** all inpatient rooms in the new towers resulting in 100 percent private inpatient rooms for all health system facilities.

**DESIGN** space that will meet the present needs of VCU Health System patients and providers, ensuring the space is flexible for redesign based on future care models.

**UTILIZE** core principles related to work integration, research, education and collaboration for the design of all new spaces.

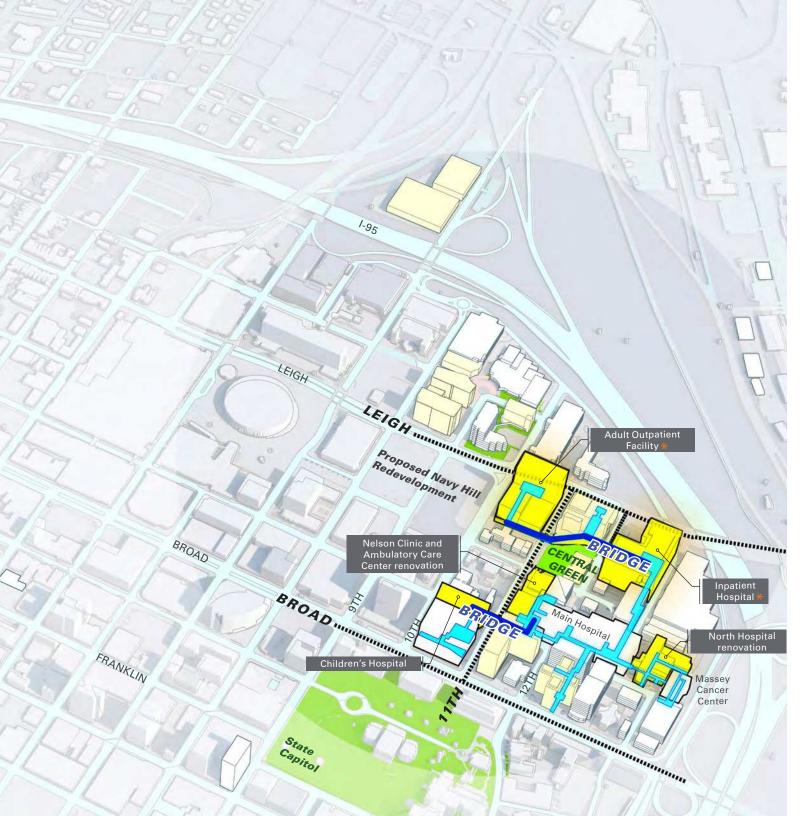
**ENHANCE** wayfinding throughout the outpatient experience.

**DETERMINE** back-fill options for vacated space throughout campus, particularly North Hospital, that support the VCU Health System and university operations and enhance the patient experience.

**PLACE** parking at the point of service while adding to the current space allotment and accommodating future patients, visitors and staff parking needs.

**ENHANCE** and support the Children's Hospital experience and support the needs of the Massey Cancer Center patients by providing new state-of-the-art facilities.





# Patient Experience



# **KEY PROJECTS**

### **Adult Outpatient Facility**

Redevelopment of the former Virginia Treatment Center for Children (VTCC) site, at the corner of 11th and Leigh streets, into a hub for comprehensive outpatient care will transform the VCU Health System and the MCV Campus. A new building, the Adult Outpatient Facility (AOF), provides consolidation of adult outpatient clinics to improve environments, support clinical care models, and provide for team member integration and collaboration. The AOF includes a new parking structure with more than 1,000 parking spaces, and enhanced ease of access at points of service. At 15 levels, the building acts as a welcoming gateway and marker for the MCV Campus from the northwest. In addition to the building itself, the redevelopment of the VTCC block will improve the public realm with street trees, wide sidewalks and an inviting ground floor.

### Nelson Clinic and Ambulatory Care Center renovation

The opening of the AOF provides the opportunity to decant, renovate and backfill the Nelson Clinic and Ambulatory Care Center (ACC). Renovated facilities will serve health system needs: Pauley Heart Center, swing space, landing space, office space and other needs. It could also be used as flex space as spaces across the MCV Campus are redeveloped, renovated and revitalized.



 Conceptual rendering of the proposed Adult Outpatient Facility Credit: HDR



Draft conceptual rendering of the proposed Children's Hospital of Richmond expansion Credit: HKS

### **Children's Hospital**

Expansion of the Children's Hospital of Richmond (CHoR) on the Marshall Street Pavilion site will complete VCU's comprehensive, integrated health care facility exclusively for children's inpatient and outpatient care. The new facility will replace the existing pediatric inpatient unit with private rooms and also will provide new operating rooms, imaging capacity, emergency services and family amenities — all dedicated to children and their families. The expansion will provide 86 patient beds with the option to add, as required in the future, additional patient beds. This project also includes shelled space above the CHoR Pavilion. The Children's Hospital expansion will have connectivity into the CHoR Pavilion on several levels and will utilize the same lobby and drop-off. The building is proposed at 16 levels above grade and four levels below grade with additional parking to support the complex. Bridge connections into the building will cross over 11th Street, run alongside Sanger Hall, cross over Marshall Street and connect into the Gateway Building.

### **Inpatient Hospital**

Redevelopment of the Patient and Visitor Parking Deck allows for a new Inpatient Hospital and expands patient care units as well as clinical, public and support services. The new Inpatient Hospital will contain all private rooms, resulting in 100 percent private inpatient rooms for all health system facilities. It will connect directly into the Critical Care Hospital to the south and, because of its proposed massing, will be seen from Interstate 95 as a gateway and marker for the campus from the northeast. A new, expanded patient care drop-off will be off Leigh Street at 12th Street, allowing more direct access, space for queuing and additional open space. A new parking structure will provide over 2,000 parking spaces and enhanced ease of access at points of service. It will require the demolition of the Strauss Research Lab, the Tompkins-McCaw Library, and the Patient and Visitor Parking Deck.

### **North Hospital renovation**

Similar to the AOF enabling the renovation of Nelson Clinic and the ACC, the Inpatient Hospital will allow for the renovation of North Hospital. All inpatient beds will be relocated to the new Inpatient Hospital, eliminating all inpatient stays in the North Hospital. The VCU Health System will evaluate the backfill program based on future needs.

### FLEXIBILITY FOR FUTURE GROWTH

# NATIONAL PROMINENCE

# **PROGRAM SYNERGIES**

# Advance a culture of interdisciplinary collaboration by developing shared spaces that inspire community, partnerships, research, innovation and creativity.

The Master Plan promotes VCU's culture of collaboration, innovation and creativity by prioritizing projects that strategically improve and form new connections between programs. Projects identified in the ONE VCU Master Plan are interdisciplinary in nature, bringing together different programs and schools to improve adjacency, reduce fragmentation, and foster collaboration and discovery. New facilities for arts, innovation and engagement located adjacent to the Institute for Contemporary Arts and the city of Richmond's Arts District, will consolidate arts functions, create new opportunities for community interaction, and incorporate innovation and engagement components. New interdisciplinary facilities can include interprofessional space, shared simulation space and collaboration areas that serve as campus-wide resources.



**Collaborative research space at VCU** 

### BRINGS TOGETHER ACADEMIC AND STUDENT LIFE PROGRAMS

# **PRINCIPAL STRATEGIES**

**ENSURE** programs and facilities support innovation, collaboration and transformative learning and discovery outside of college or departmental boundaries.

**CONCENTRATE** activity and improve critical adjacencies to strategically support healing and prevention, creative expression, interdisciplinary research and interprofessional education, scholarship and practice.

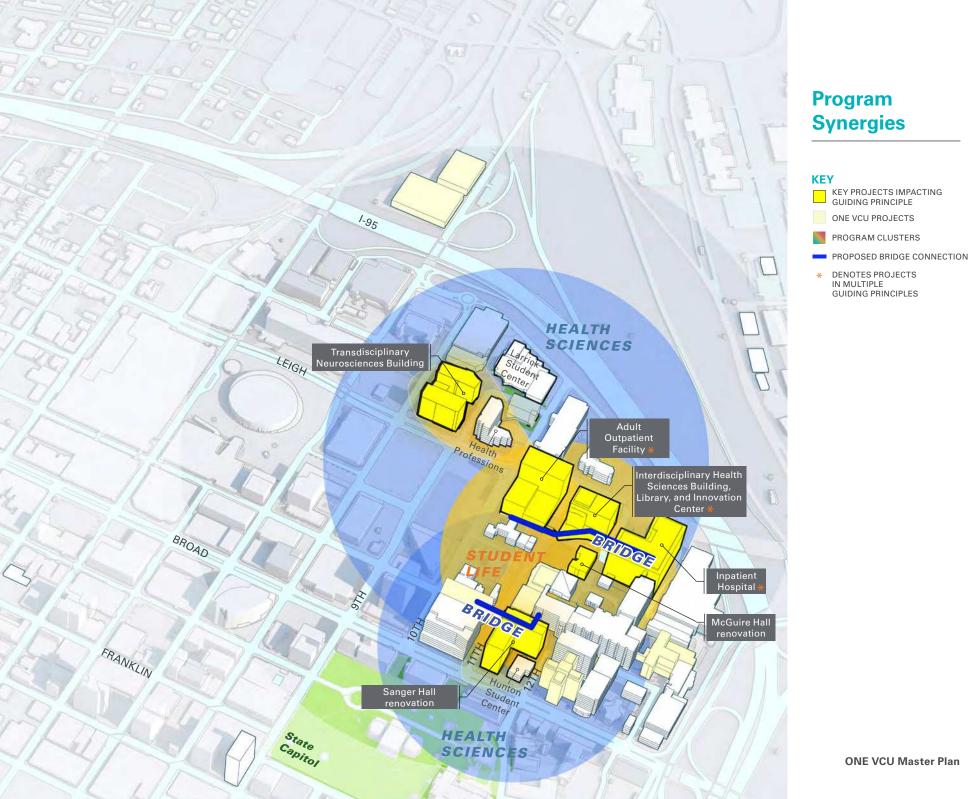
**PRIORITIZE** infill development opportunities and projects to densify campus and fulfill multiple clinical, academic and facility goals.

**BALANCE** the need for stronger physical relationships between research and clinical functions with the need for program growth.

**CREATE** spaces that are flexible to meet the needs of specific functions, not specific departments.

**MAXIMIZE** the impact of research programs by enhancing existing research infrastructure support (core facilities, building systems, utility infrastructure).





### Program **Synergies**



# **KEY PROJECTS**

### **Transdisciplinary Neurosciences Building**

Neurosciences research is critical to achieving VCU's goals for national prominence. However, neuroscience investigators across both campuses reside in more than 20 different locations that comprise over 200,000 square feet of space. This makes collaboration challenging and reduces efficient use of shared resources and equipment. Moreover, these facilities are outdated, unable to accommodate even current needs, and are not viable options (either functionally or financially) for continued expensive renovations. A new building for transdisciplinary neuroscience is critical to recruitment and retention of top talent to promote collaborative, interdisciplinary research. It will provide space to co-locate neuroscience research, provide flexibility for future growth, help decant space in Sanger Hall and McGuire Annex, and serve as near-term swing space to facilitate redevelopment of the Wood/Lyons site. This building needs to be in proximity to clinical services and the hospital to fully embrace its role in facilitating translational research at VCU.

### Interdisciplinary Health Sciences Building, Library and Innovation Center / Perkinson Building renovation

Redevelopment of the Wood Memorial Building, Lyons Dental Building and McGuire Annex site will be transformative for the MCV Campus. Wood, Lyons and McGuire Annex have outlived their useful life as academic and research buildings, are not the highest and best use of the land, and are ideal candidates for demolition. With the AOF to the west and the proposed inpatient hospital to the east, the block can support additional density. The new building will be a central hub for the MCV Campus and a connector between the new clinical buildings to the east and west through an expanded bridge system supporting interaction between education, research and patient care. This new building will connect into Perkinson and have a front door on the central green at 11th and Clay streets. Redevelopment of this site also allows for improved streetscape conditions and an active ground floor along 10th and 11th streets. The program elements proposed in the Interdisciplinary Health Sciences Building, Library and Innovation Center include the health sciences schools of Dentistry and Pharmacy as well as interdisciplinary space for all health sciences colleges and schools to come together. Its central location on the MCV Campus makes it an ideal place for collaborative functions and shared spaces. Collaboration and serendipitous interactions are further enhanced through the proposed bridge system and the relationship of the building to the proposed central green. Interdisciplinary program elements might include additional interprofessional education space, simulation space, classrooms and shared cores. The final and critical program element for the interdisciplinary building is a new, 21st century health sciences library and innovation center with food and coffee, providing academic resources, study space, meeting space and offices.

#### **McGuire Hall renovation**

Included in the revitalization of the Wood, Lyons and McGuire Annex site is the renovation of McGuire Hall, a historic building on the MCV Campus. Due to its size, original construction and internal layout, the recommended renovation is conversion to office space. The rear of the building, where it connects to the McGuire Annex, will need to be reconstructed after demolition of the Annex. This is a unique opportunity for stronger connectivity between McGuire Hall and the new central green to the west and the proposed Interdisciplinary Health Sciences Building, Library and Innovation Center to the north.





Conceptual rendering of proposed Transdisciplinary Neurosciences Building and landscape improvements at 9th and Turpin streets

### **Sanger Hall renovation**

Sanger Hall, the largest research building on the MCV Campus, is a gateway to campus from 11th Street. It also houses academic and administrative offices and centrally scheduled classrooms and lecture halls. While there are complex challenges with the building, significant investment has already been made to renovate labs and improve infrastructure. The ONE VCU Master Plan recommends a phased approach for continued renovation.

### **Interdisciplinary Arts Education Building**

The School of the Arts is spread across 28 buildings, limiting efficiency and collaboration. Many of the buildings also have significant deferred maintenance that needs to be addressed. Redevelopment of the Honors College site provides a new building to meet the 150,000 assignable square feet of need and reduce the fragmentation of departments. The proposed site places the interdisciplinary building near other art facilities as well as innovation, humanities and sciences, and student housing reinforcing a new hub of activity. The new building will allow space in the Pollak Building to be vacated, freeing the site for future development.

### Interdisciplinary classroom and lab building

The new iconic green on the Monroe Park Campus should be surrounded by diverse programmatic uses. The green serves as a nexus of programmatic synergies bringing together academic and student life programs in the center of campus. After the University Student Commons is replaced, a new interdisciplinary classroom and lab facility can be constructed along the iconic green. The building will include teaching space that will serve the entire campus including the replacement of outdated labs in Oliver Hall Physical Sciences Wing and space in the Temple Building to meet the needs of humanities and sciences.

#### Future engineering building

With the expected growth of the College of Engineering, particularly in computer science, information systems and data science, as well as computer and software engineering, a new interdisciplinary building will accommodate current needs of the school and address demand for the foreseeable future. This will satisfy the need for additional office, classroom and research space. It will also provide a space where students and industry can come together and collaborate by providing studio and innovation space.

#### **Future arts facility**

The corner of Leigh and Belvidere streets is a prominent arrival route to campus from Interstate 95. The site is ideal for a programmatic use that showcases VCU's prominence and connects with the greater Richmond community. The ONE VCU Master Plan identifies the site for future art programs that will accommodate the needs of multiple School of the Arts departments and benefit the local community.

### **Johnson Hall conversion**

Johnson Hall will require significant renovation to maintain the quality of housing desired to support student success. If housing demand can be accommodated on other sites in a more efficient and financially sustainable way, Johnson Hall can be renovated for another use. If the building cannot accommodate modern academic space, is can be converted to office space for faculty, staff and administration. This central location will improve adjacencies for units that are spread across multiple buildings and provide a more accessible location for units currently in Franklin Street houses.



# A SENSE OF ARRIVAL TO CAMPUS

# **OPEN SPACE THAT IS UNIQUELY VCU**

# PLACEMAKING

78

# Celebrate and enhance VCU's unique urban setting and rich history.

Placemaking is the art and science of creating public spaces where people want to gather (Walljasper, Fried & Project for Public Spaces, 2007). As an important element in the appeal of an institution, a successful campus should have a strong, coherent sense of place, recognized through the design and materials of buildings and outdoor spaces which communicate its values. As an urban university, placemaking creates engaging and welcoming spaces that emphasize VCU culture and identity within the vibrant, historic context of the city of Richmond.



VCU students utilizing Linden Street Commons on the Monroe Park Campus

# A NEW CENTRAL GREEN

# **A NEW PEDESTRIAN-ORIENTED PLAZA**

# **PRINCIPAL STRATEGIES**

**ENSURE** the physical campus results in a sense of pride from the VCU and Richmond community.

**DEVELOP** and clarify the "front doors" of campus with a consistent character that communicates wayfinding and the VCU identity.

**OPTIMIZE** green space on both campuses and connect to citywide parks and resources.

**ACTIVATE** campus street corridors and open spaces.

**IDENTIFY** iconic places on each campus that should be celebrated and preserved.

**DESIGN** welcoming places that accommodate a broad range of experiences and users: patients, students, visitors, employees, faculty, staff, alumni and neighbors.

**CREATE** a cohesive network of landscapes throughout campus that are inviting for patients, students, visitors, faculty, staff, alumni and neighbors.





# Placemaking







Conceptual rendering of intersection enhancements at Broad and Belvidere looking south towards the proposed Arts and Innovation Building and the VCU Institute for Contemporary Art

# **KEY PROJECTS**

### **VCU Front Doors**

The ONE VCU Master Plan identifies eight new primary vehicular front doors, or thresholds, six secondary vehicular front doors and five new pedestrian front doors. The design and construction of these front doors will provide a clear sense of arrival to campus and aid in campus wayfinding for pedestrians, bicyclists and vehicles. These front doors are identifiable markers for VCU and are not intended to separate VCU from the city or act as a barrier in any fashion. Front door locations will apply consistent use of campus materials through a variety of features including landscapes, seat walls and intersection improvements.

### Monroe Park Campus iconic green

Bookended by Cabell Library and a new student commons and wellness center, the proposed iconic green on the Monroe Park Campus is an opportunity to realize an open space that is uniquely VCU in scale and character. The new iconic green facilitates movement between student life resources and the library to the north, the student commons and wellness center and Cary Street Gym to the south, and academic buildings to the east and west. This space will serve as a hub for collaboration, events, passive recreation and circulation. Construction of the iconic green requires the redevelopment of the University Student Commons and Temple Building sites.

### **MCV Campus central green**

The MCV Campus is densely developed, which makes the need for attractive and welcoming open spaces even more important. While the intersection of East Clay and 11th streets currently has green space, it is not heavily used because of its function, design and adjacencies. Through a commitment to preserve and renovate McGuire Hall, the opportunity to redevelop three existing buildings sites, and the need for better east-west movement through campus, the East Clay Street and North 11th Street intersection is the perfect opportunity to expand and enhance the existing green space to create a new central green. The new Interdisciplinary Health Sciences Building, Library and Innovation Center will front this central green space, activating the area and creating a new heart to campus.

### **Plaza at 9th and Turpin streets**

With additional development extending north of Leigh Street and the recent completion of the strong pedestrian corridor adjacent to the College of Health Professions Building, the intersection of 9th and Turpin streets is prime for a new pedestrian-oriented plaza. The proposed demolition of Cabaniss Hall will provide for a strong pedestrian connection from 8th Street, while a main entrance from the proposed Transdisciplinary Neurosciences Building will help activate the new pedestrian plaza.

#### **Grace Street 'Campus Main Street'**

The Grace Street corridor between Harrison and Belvidere streets will be enhanced to emphasize both VCU and publicoriented mixed-use development, with retail, restaurant and service amenities on the first floor and housing on the upper floors. The streetscape of Grace Street will emphasize pedestrian-friendly spaces, including small pocket parks, and furnishings to encourage informal gathering and outdoor dining.

### **Clay Street 'Campus Main Street'**

Similar to the Grace Street corridor, Clay Street will emphasize the pedestrian experience and will offer convenient, direct and pleasant access to significant buildings on campus. The enhanced corridor will extend from the historic block between 10th and 11th streets and will connect with the new central green and continue into the proposed Navy Hill redevelopment area. The Navy Hill project proposes to reopen Clay Street between 5th Street and 10th Street, which will enhance connectivity to the MCV Campus.

### Harrison streetscape

As the western edge of the Monroe Park Campus, there is an opportunity to develop streetscape improvements on Harrison Street while also better defining the western edge of campus. Streetscape improvements on the east side of the street are proposed to include broader sidewalks, seating areas, improved lighting and streetscape planting, all scaled to be compatible and sensitive to the residential Fan District to the west.

### **Presidential residence**

Currently, VCU doesn't have a presidential residence. During the planning process, models at other urban institutions were studied. Most residences are located on the edge of campus and the programmatic uses vary from strictly a residence to a residence with event space. Using these models as a starting point, the ONE VCU Master Plan recommends further study to determine the best location and program for a presidential residence at VCU.



Proposed streetscape improvements on Harrison Street

# ACCESSIBILITY AND SAFETY IMPROVEMENTS

## A STRONG RELATIONSHIP BETWEEN VCU, GRTC AND THE CITY OF RICHMOND

# **MOBILITY AND SAFETY**

Promote a walkable, accessible, safe campus which is easy to navigate for the entire VCU community: students, patients, faculty, staff, alumni, neighbors, and visitors.

With two well-established campuses one mile apart, the ONE VCU Master Plan promotes safe and accessible routes between and within each campus. Focus areas will improve the walking experience within each campus core and additional multi-modal initiatives will establish more direct and intuitive means to connect between the two campuses. Broad, Grace, Marshall and Clay streets are the focus for enhanced pedestrian, walkable streetscapes serving both the VCU community and the larger Richmond community.



**RVA BikeShare and GRTC Pulse Bus on Broad Street** 

# IMPLEMENTATION OF THE PROPOSED BIKE NETWORK

# **ALTERNATIVES TO DRIVING**

# **PRINCIPAL STRATEGIES**

**CLARIFY** the arrival experience to campus with improved signage and wayfinding and ensure visitor and patient destinations are easily accessible and identifiable.

**CREATE** a healthy and active campus supported by consistent and reliable transit.

**WORK** with the city to expand the bike share system and bicycle infrastructure throughout Richmond.

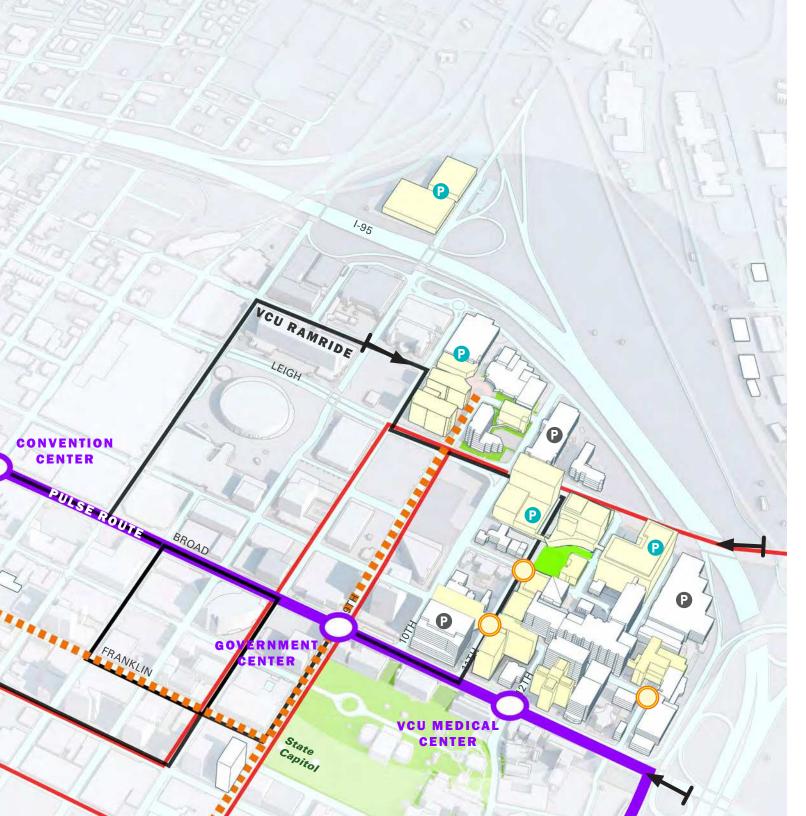
**RETAIN** vehicular access and parking at the campus edges.

**IMPROVE** walkability and mobility between all areas of campus by enhancing dedicated pedestrian and bike routes.

**PROVIDE** accessible and inclusive facilities on campus that accommodate all users.

**PROMOTE** personal and pedestrian safety through clear sightlines and distinct intersections and crosswalks.





# Mobility and Safety







Conceptual rendering of proposed intersection improvements at Franklin and Shafer streets

Credit: Waterstreet Studio

# **KEY PROJECTS**



Proposed intersection improvements at Main and Linden streets Credit: Waterstreet Studio

#### Intersection improvements

The ONE VCU Master Plan targets 11 intersections in need of pedestrian-oriented accessibility and safety improvements. The priority locations for improvements are the intersections at Franklin and Shafer streets, Main and Linden streets, and 11th and Marshall streets. They are heavily traversed pedestrian routes with frequent vehicular movement. Intersections will be retrofitted to provide safe, effective pedestrian crossings. Adjacent underutilized space on campus will be revitalized as convenient, informal gathering spaces.

### **Bus transportation**

Working closely with the city of Richmond's own planning efforts and recent infrastructure improvements, VCU is integrating their bus and bike needs with the larger city network. Partnering with the Greater Richmond Transit Company (GRTC) offers the opportunity to eliminate redundancy in transit services, widen the service area for VCU campus users, and strengthen the relationship between VCU, GRTC and the City of Richmond. Leveraging the new GRTC services should be investigated, allowing VCU to support its future growth, primarily on the MCV Campus.

### **Bike infrastructure**

VCU is committed to supporting efforts that implement the proposed bike network developed as part of the city of Richmond's Bicycle Master Plan. The established Floyd Avenue Bike Boulevard and the Franklin Street Cycle Track connect through the Monroe Park campus, creating the need for safe shared corridors for both pedestrians and cyclists. Furthermore, a north-south bike lane along 9th Street would improve connections to the MCV campus.

### **Parking**

New buildings, such as the Welcome Center, 8th Street Parking Deck expansion, new parking deck at the I-Lot, Adult Outpatient Facility, Children's Hospital and Inpatient Hospital will provide convenient parking at the perimeter of the campuses. The VCU community will be encouraged to park in these locations and walk, bike or use the bus network to get to their destinations. To meet parking demand now and into the future, VCU and VCU Health System are working together to encourage alternatives to driving alone. In addition to the regular cost and environmental benefits of using alternative forms of transportation, VCU and VCU Health System will offer incentives to employees for turning in their VCU parking permit.

# ART AND INNOVATION

### STRENGTHENS THE HEART OF EACH CAMPUS

# **UNIFY THE CAMPUS**

# Strengthen the heart of each campus and the collective VCU identity through strategies that connect the campuses to each other and to the city of Richmond.

ONE VCU strengthens the heart of each campus by enhancing open spaces encompassed by academic, student life and clinical buildings while looking outward to integrate the campus with the city. Potential partnerships should be explored to provide direct, timely and reliable transit between campuses, eliminate redundancy, widen the service area and strengthen collaboration. Improved bicycle infrastructure will encourage alternate means of travel, and leveraging partnership opportunities will help strengthen VCU, the city and the community. ONE VCU suggests continuing to locate select outward-facing programs between the campuses that bring people together to increase collaboration and connectivity.



The Franklin Street Cycle Track improves connectivity between campuses

# **COMMUNITY ENGAGEMENT**

# **REVITALIZES DOWNTOWN RICHMOND**

# **PRINCIPAL STRATEGIES**

**TRANSFORM** the indoor and outdoor environment to create a distinct, recognizable heart of each campus.

**INTEGRATE** VCU's setting to a growing city rich in technology, innovation, finance, research, government and health care.

**CONNECT** VCU resources with partners to address communityidentified needs and opportunities.

**LOCATE** programs strategically between the campuses that serve both campuses and the community, and bring people together to increase collaboration and connectivity.

**CAPITALIZE** on partnership opportunities to improve the character and quality of development and streetscapes between the campuses.

**ENSURE** direct, timely and reliable transit connections between campuses.





# Unify the Campus



# **KEY PROJECTS**

### **Arts and Innovation Building**

Art and innovation are two areas of national prominence for VCU. They also tie into the larger Richmond community. Locating these programs on the edge of the Monroe Park Campus, towards downtown, helps to unify the campuses and increase access to these programs. The proposed Arts and Engagement Building will be located on the southeast corner of Broad and Belvidere streets, consolidating arts and innovation programs in a single location. Included within this space will be a community engagement element to support faculty, staff and students. Along with the Institute for Contemporary Arts' Markel Center, the building will enhance the Broad and Belvidere front door and provide a link to the Downtown Richmond Arts District. The new space will relocate programs from the Singleton Center for the Performing Arts so that the site can be redeveloped in the future.

### **Proposed Navy Hill redevelopment**

The proposed Navy Hill redevelopment calls for a new mixeduse development that will revitalize downtown Richmond with retail, housing and other program elements. VCU and VCU Health System support the project and are exploring potential partnerships that are consistent with the six guiding principles in the ONE VCU Master Plan.





# ענ חר

# **A SHARED VISION FOR THE FUTURE**

The ONE VCU Master Plan is a framework for transformational change. The first of its kind in VCU's history, the plan is a holistic and collective vision for the university and VCU Health System.

The guiding principles for the ONE VCU Master Plan are not exclusive to the Richmond campuses. Aspects of the principles translate to VCU's branch campuses and satellite locations as well. These locations are critical to the mission of VCU and VCU Health System. They expand patient care in the community and offer unique learning opportunities in different settings. While the ONE VCU Master Plan did not include detailed planning for these sites, they are part of the physical environment that contributes to VCU's identity.



Conceptual rendering of the proposed Interdisciplinary Health Sciences Building, Library and Innovation Center on the new central green.



Walter L. Rice Education Building at the Rice Rivers Center

The branch campuses and satellite locations include:

- Southwest Virginia Higher Education Center
- VCUarts Qatar
- VCU Health System satellite locations
- VCU Rice Rivers Center
- VCU School of Medicine Inova Fairfax Campus
- VCU School of Pharmacy Inova Campus
- VCU School of Pharmacy University of Virginia Division

The planning team conducted a site visit to the Inger and Walter Rice Center for Environmental Life Sciences (VCU Rice Rivers Center) during the ONE VCU process to understand the unique resource the Center provides for VCU and the facility needs for the site. Located 15 miles southeast of Richmond on the James River, the 494 acres Rice Rivers Center is dedicated to experiential instruction, environmental research and community engagement. Currently, the Walter L. Rice Education Building provides teaching facilities, including a conference room, laboratories and administrative space, and functions as a hub of field-based academic instruction and K-12 educational programming. The Inger Rice Lodge provides accommodations for up to 22 visiting researchers, students and other groups to work at the center and environs for days or weeks. The site has capacity to add additional lodging facilities in the future to accommodate growth as needed. The center's mission is also

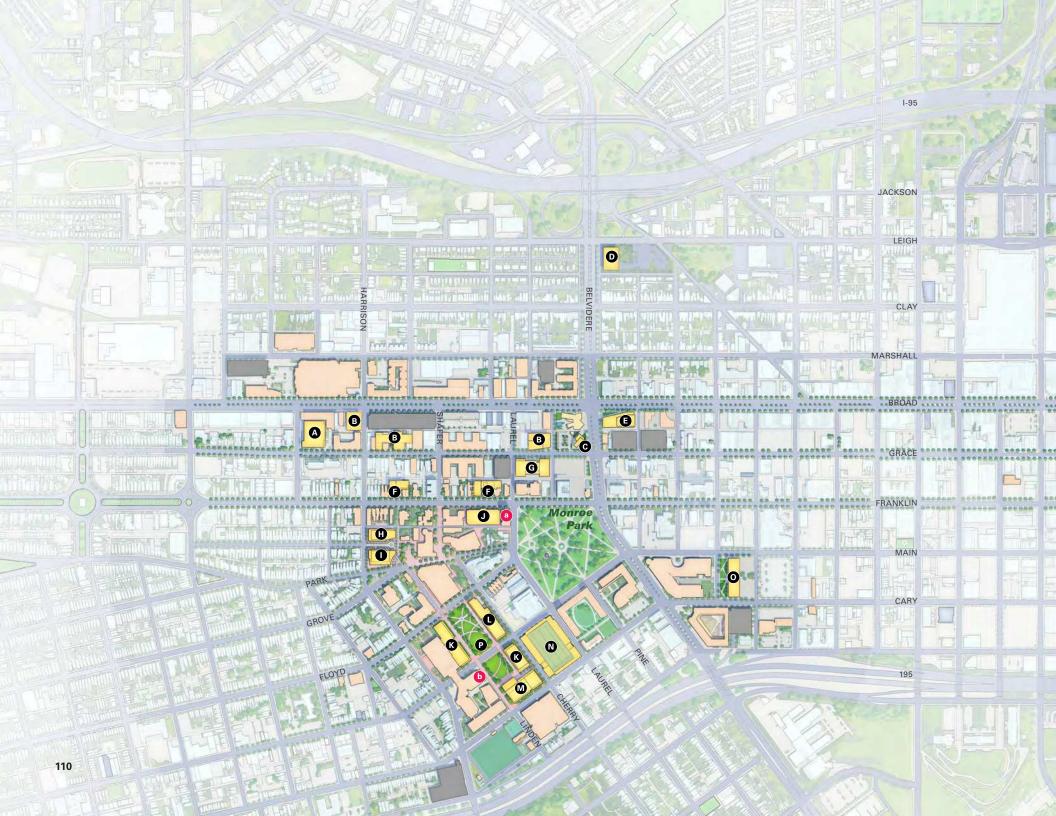
supported by auxiliary facilities including a boat house on the James River, a restored nature cabin and the Kimages Wetlands Pavilion. In 2018, the center hosted nearly 200 events, ranging from VCU field classes and technical symposia to family days for VCU faculty and staff. The highest priority for the Rice Rivers Center is a planned research laboratory complex, which will break ground in the summer of 2019 and take a year to complete. The 14,000-square-foot laboratory and office space will dramatically enhance researchers' ability to conduct their work on-site and will facilitate new collaborations. Researcher teams will gain needed space and support facilities such as an environmental chemistry analysis laboratory and a geospatial data analysis laboratory. Meeting space also will be provided for idea-sharing and regular lectures by guest scientists and environmental managers.

# LOOKING FORWARD

The ONE VCU Master Plan provides a roadmap for the physical campus that will help VCU achieve national recognition as a premier urban, public research university and academic health center. Through an open and inclusive process, key principles and metrics were identified that address major challenges and align with VCU's strategic goals. This shared vision will guide implementation of over 5.2 million gross square feet of proposed renovation and new construction. The plan recommends a combination of major facility investments, targeted demolitions, and strategic enhancements to existing infrastructure that will help transform the physical campus. Recommended projects will be incorporated into VCU's regularly updated capital plan and will be funded through a variety of potential sources including general funds, university debt, auxiliary funds, VCU Health System, fundraising and public-private partnerships. The ONE VCU Master Plan creates a vision where innovation and achievement will continue to bring the university and health system into the national spotlight. The Monroe Park and MCV campuses — enhanced, reimagined, transformed — will be exciting, thriving spaces for expanding the boundaries of knowledge and creative expression, improving the quality of health care and furthering civic engagement. While unanticipated development opportunities and needs may inevitably arise, ONE VCU's six guiding principles and associated strategies provide the flexibility to ensure new projects align with the VCU and VCU Health System strategic mission and vision. From buildings, green space, walkways and other physical campus features, the ONE VCU Master Plan provides a collective vision for experiencing VCU and ensures a space for anyone who wants to create, heal, learn or serve.

VCU Master Plan 109

310





#### KEY

- PROPOSED BUILDINGS
- OPEN SPACE
- VCU EXISTING BUILDINGS
- VCU LEASED BUILDINGS
- PARKING STRUCTURE

#### **NEW CONSTRUCTION**

- A. Recreation facility
- B. Student housing
- C. Student gallery
- D. Future Arts facility
- E. Arts and Innovation Building
- F. Franklin Street additions and renovations
- G. Interdisciplinary Arts Education Building
- H. Future academic building
- I. Welcome Center
- J. STEM Building
- K. Future academic buildings on the iconic green
- L. Interdisciplinary classroom and lab building
- M. Student commons and wellness facility
- N. Student housing and recreation facility
- O. Future engineering building
- P. Monroe Park Campus iconic green
- Q. I-Lot parking deck
- R. 8th Street Parking Deck expansion
- S. Transdisciplinary Neurosciences Building
- T. Future academic/research building
- U. Adult Outpatient Facility
- V. Interdisciplinary Health Sciences Building, Library, and Innovation Center
- W.Inpatient Hospital
- X. Children's Hospital
- Y. Plaza at 9th and Turpin Streets
- Z. MCV Campus central green

- RENOVATION
- a. Johnson Hall renovation
- b. Oliver Hall renovation/ replacement
- c. Perkinson Building renovation
- d. McGuire Hall renovation
- e. Nelson Clinic and Ambulatory Care Center renovation
- f. North Hospital renovation
- g. Sanger Hall renovation
- h. West Hospital renovation

# ACKNOWLEDGMENTS

### ONE VCU CAMPUS MASTER PLAN TEAM

#### **ONE VCU EXECUTIVE PROJECT SPONSOR**

• Dr. Meredith Weiss

#### **ONE VCU PROJECT MANAGER**

• Jeff Eastman

#### **CONSULTANT PLANNING TEAM**

- Ayers Saint Gross Campus Master Plan
- Brailsford & Dunlavey, Inc. Financial Feasibility
- Draper Aden Associates Civil/Stormwater Engineering
- Glave & Holmes Architecture Campus Heritage
- Waterstreet Studio Landscape Architecture and Urban Design

#### **VCU BOARD OF VISITORS**

- Alexander McMurtrie Jr.
- Dr. Carol Shapiro
- Colette McEachin
- Edward McCoy
- G. Richard Wagoner Jr.
- Dr. Gopinath Jadhav
- H. Benson Dendy III
- Jacquelyn Stone
- John Luke Jr.
- Keith Parker
- Phoebe Hall
- Dr. Robert Holsworth
- Ronald McFarlane
- Dr. Shantaram Talegaonkar

- Steve Worley
- Stuart Siegel
- Todd Haymore
- Rev. Tyrone Nelson
- William Ginther

### VCU HEALTH SYSTEM AUTHORITY BOARD OF DIRECTORS

- Dr. Arline D. Bohannon
- Dr. Bruce E. Mathern
- George P. Emerson Jr.
- Dr. Gopinath Jadhav
- James P. Massie III
- John A. Luke Jr.
- Keith Parker

- Dr. Lisa Ellis
- Lisa M. Hicks-Thomas
- The Honorable M. Kirkland Cox
- May H. Fox
- The Honorable Marilyn Tavenner
- Dr. Marsha D. Rappley
- Dr. Michael Rao
- Dr. Michelle Whitehurst-Cook
- The Honorable Ryan T. McDougle
- Dr. Shantaram Talegaonkar
- Steven A. DeLuca
- Timothy A. McDermott
- Dr. Wilhelm A. Zuelzer

#### **EXECUTIVE SPONSORS**

- Dr. Aashir Nasim
- Dr. Charles Klink
- Ed McLaughlin
- Dr. Gail Hackett
- Jay Davenport
- Karah Gunther
- Karen Helderman
- Karol Gray
- Dr. Marsha Rappley
- Matthew Conrad
- Dr. Meredith Weiss
- Mike Melis
- Dr. Michael Rao

- Pamela Lepley
- Dr. Srirama Rao

**Bold** denotes members of the Executive Sponsors Prioritization Subcommittee

#### FACILITIES PLANNING STEERING COMMITTEE

- Alex Henson
- Catherine Porzio
- Dr. Cathy Howard
- Dr. Charles Klink
- Christopher Brown
- Clayton Harrington
- Dr. Clive Baumgarten
- Crystal Coombes

- Dr. Curtis Erwin
- David Goodwin
- Dr. Deborah Noble-Triplett
- Diane Reynolds
- Ed McCoy
- Erin McClinton
- Erin Stanforth
- George Emerson
- H. Benson Dendy III
- Heidi Crapol
- Holly Dean
- Jay Bonfili
- Jeff Eastman
- Jim Fiorelli
- John Less

- Chief John Venuti
- Keith Hayes
- Dr. Kevin Harris
- Kevin Sullivan
- Larry Little
- Mary Boyes
- Mary Cox
- Dr. Meredith Weiss
- Michael Newsome
- Michael Porter
- Mitzi Lee
- Dr. Pamela Lawton
- Patricia Perkins
- Richard Sliwoski
- Samantha Marrs

- Dr. Scott Gronert
- Dr. Shanaka Wijesinghe
- Tim Graf
- Dr. Tim Lampe
- Tom Briggs
- Tom Papa
- Vivek Kurvilla

**Bold** denotes members of the Facilities Planning Steering Committee Executive Committee

#### **MASTER PLAN WORKING GROUP**

- Carlos Brown, Executive Director
- Catherine Porzio
- Dr. Curtis Erwin

- Demetrius Shambley
- Desmond Smallwood
- Diane Reynolds
- Erin Stanforth
- Heidi Jack
- Jeff Eastman
- Keith Hayes
- Keith Van Inwegen
- Lisa Webb
- Mary Cox
- Mitzi Lee
- Dr. Tim Lampe
- Tito Luna

In addition to the VCU Health System representatives who served on the governance committees, Melinda Hancock, Chief Administrative and Financial Officer for VCU Health System, played a crucial role in this collaborative process.

Throughout the process, the planning team met with smaller focus groups to gather more detail about certain units and aspects of VCU, including the Council of Deans, Faculty Senate, Staff Senate and Student Government Associations among others.

Special thanks are extended to the following student and community groups who provided their feedback and guidance:

#### **STUDENT GROUPS**:

- Joint Student Government Association
- Master of Urban and Regional Planning students
- Residence Hall Advisory Council
- Urban and Regional Planning undergraduate students
- Vice President's Student Advisory Council

### **COMMUNITY GROUPS:**

- Carver Area Civic Improvement Council
- Fan District Association
- Historic Jackson Ward Association
- Monroe Park Conservancy
- Monument Avenue Preservation Society
- Oregon Hill Neighborhood Association
- Prestwould Association
- Randolph Neighborhood Association
- The PACE center
- West Avenue Improvement Association

The university and VCU Health System would like to thank the more than 1,500 individuals from VCU and the community who engaged in person in the ONE VCU Master Plan process, the more than 19,000 unique visitors who engaged with us through our website and countless others who followed along through social media

## REFERENCES

- Chaudhury, H., Mahmood, A., & Valente, M. (2009). The effect of environmental design on reducing nursing errors and increasing efficiency in acute care settings: A review and analysis of the literature. *Environment and Behavior, 41*(6), 755-786.
- Graham, L., Nanda, U., Nejati, A., Spria, P., & Sekanwagi, S. (2015). Clinic 20XX: Designing for an ever-changing present. *Center for Advanced Design Research and Evaluation. Retrieved from http://www.cadreresearch.org/projects/ clinic-20xx/.*
- Hajrasouliha, A. & Ewing, R. (2016). The relationship of student retention and degree attainment to campus design. *Planning for Higher Education, 44*(3).
- Jiang, S., Huang, L., Chen, X., Wang, J., Wu, W., Yin, S., et al. (2003). Ventilation of wards and nosocomial outbreak of severe acute respiratory syndrome among healthcare workers. *Chinese Medical Journal*, *116*(9), 1293-1297.

- Reynolds, G., & Valcik, Nicolas A. (2007). The impact of facilities on recruitment and retention of students. *New Directions for Institutional Research*, (135), 63-80.
- Ulrich, R. & Zimring, C. (2004). The role of the physical environment in the hospital of the 21st century: A once-in-alifetime opportunity. *Report to the Center for Health Design for the Designing the 21st Century Hospital Project.* Retrieved from https://www.healthdesign.org/system/files/Ulrich\_ Role%20of%20Physical\_2004.pdf.
- Virginia Commonwealth University. (2017). *Student Affairs Office* of Assessment.
- Walljasper, J., Fried, Benjamin, & Project for Public Spaces.
  (2007). The great neighborhood book a do-it-yourself guide to placemaking (Canadian electronic library. Books collection).
  Gabriola Island, B.C.: New Society.
- White, D. (2016). *The College Choice Study. Advent.* Retrieved from http://adventresults.com/2017/04/college-choice-study/.



For more information, please visit https://masterplan.vcu.edu

Published March 2019