



LANDSCAPE
FRAMEWORK
PLAN

2019

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UNIVERSITY OF VIRGINIA

Michael Vergason Landscape Architects, Ltd.

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I. INTRODUCTION

A. EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

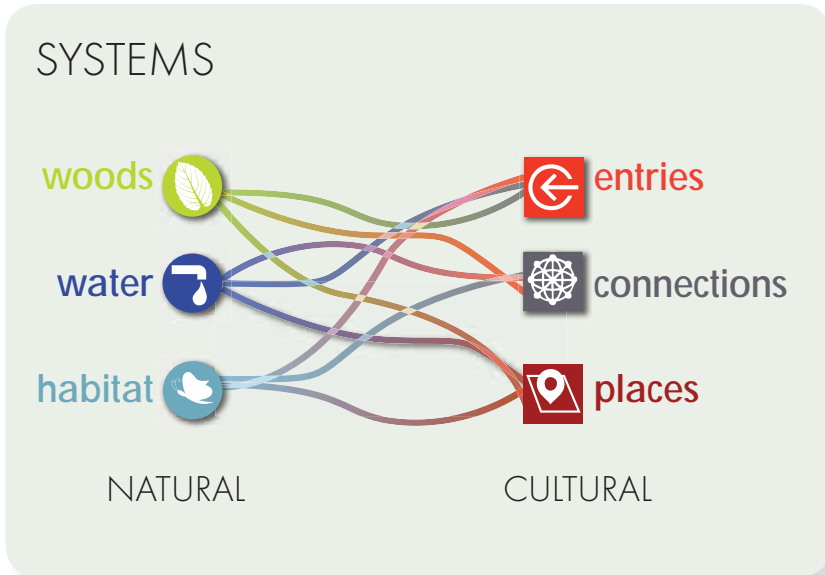
Thomas Jefferson's vision for the University of Virginia's "Academical Village" has served as a model of American academic planning, demonstrating that the physical environment for living and learning is critical to the success of higher education. The site was designed to be a balance of buildings and landscape in a continuous layering of space from outside to inside. Yet probably the most important component of the site's plan is its attention to the human scale. As the University grows, tensions between the natural and built systems challenge the delicate integration of landscapes with built form. Careful stewardship of these systems is necessary to maintain a successful balance.

The Piedmont landscape has served as an essential part of the University's identity and should continue to provide a foundation and setting for the most essential intellectual and social pursuits. In the face of programmatic growth and building expansion, the University landscape should continue to figure prominently in the lives of members of its community.

Landscape provides a cohesion to the expansive Grounds. This Landscape Framework Plan (LFP) builds on the University's planning traditions and considers numerous planning studies that anticipate additional programmatic growth in the Health System, Arts and Sciences, transit, athletics, recreation, and residential life, as well as shifts in parking priorities. This evolution will place pressure on the existing landscape fabric and the value, quality, and function of the outdoor spaces—yet it also presents great opportunities.

FRAMEWORK GOALS

- Reinforce the landscape as essential to the University experience and reputation.
- Preserve and protect historic and cultural landscapes.
- Assimilate pedagogy into outdoor spaces.
- Integrate natural and cultural systems to create engaging places.
- Bolster the University's capacity for resilience, biodiversity, and long-term maintenance.
- Ensure and improve safety, security, and accessibility.



CULTURAL AND NATURAL SYSTEMS

At a Grounds-wide scale, a balance of cultural and natural systems is vital to the University’s future. Each of the systems adds value to the quality and character of the place. The interconnectedness of the cultural systems of Entries, Connections, and Places to the natural systems of Water, Woods, and Habitat gives richness and allows the systems to reinforce one another.

The more design projects combine program priorities and integrate cultural and natural systems, the more viable, fundable, and enriching the results.

THREE PRECINCTS-THREE STRATEGIES

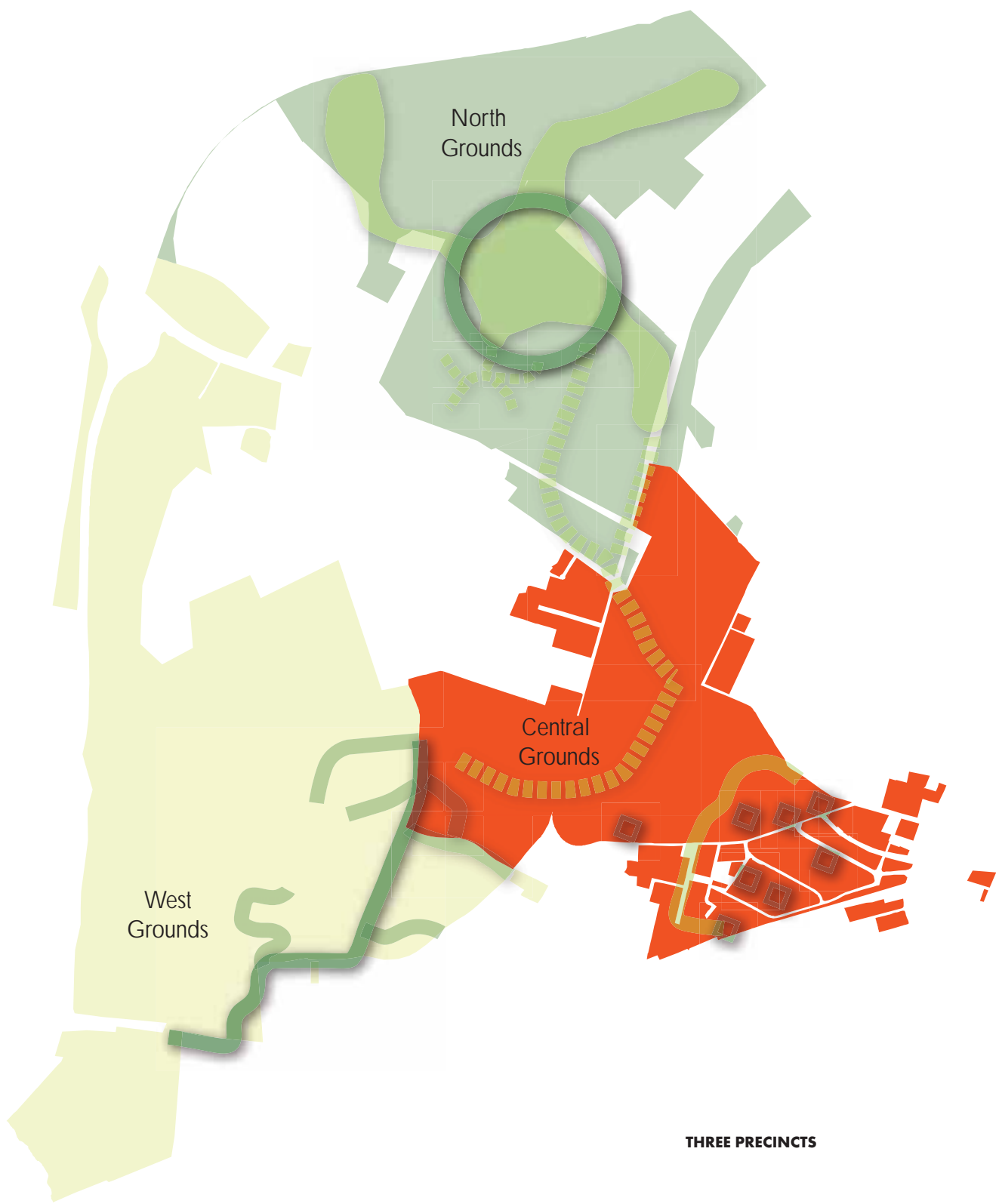
The University of Virginia has evolved over time into three distinct precincts: North Grounds, West Grounds, and Central Grounds. Design issues and development pressures are unique to each precinct.

The LFP broad conceptual proposals for each precinct are:

North Grounds: Create a central woodland place with improved connections and a multimodal hub to redefine the identity of this suburban enclave.

West Grounds: Establish a green spine and green ribs to civilize streets and provide a landscape network with gathering places to enliven the precinct.

Central Grounds: Design green streets and corridors to enhance the pedestrian experience and identify landscape pockets to bring landscape into the Health System.



THREE PRECINCTS



LFP SUMMARY DIAGRAM

CULTURAL SYSTEMS

Landscape is the primary fabric of Grounds, and its framework can help guide a future vision for the University.

The LFP is structured by three primary cultural systems: Entries, Connections, and Places. Recommendations for each of these systems provide direction for outstanding development issues:

ENTRIES

Strengthen planting and landscape features at portals and arrival zones, so that the distinctive landscape continues to be a defining University characteristic. First impressions made at points of entry shape long-term perceptions of the University.

CONNECTIONS

Stitch together and complete disparate circulation systems to reinforce a pedestrian-dominant network, reducing dependence on vehicles.

PLACES

Prioritize landscape places as integral to campus life with outdoor rooms that vary in program, size, and planting structure.



ENTRIES

- Choreograph arrival sequences as an unfolding landscape experience.
- Distinguish between entry sequences by building on their unique characters.
- Define campus entries with identifiable University landscape elements.
- Create clear visitor arrival destinations for orientation.



CONNECTIONS

- Provide a finely woven and comfortable path network tied to a variety of places, reducing both physical and perceived distances.
- Improve connection legibility by filling in incomplete circulation network.
- Identify vibrant multimodal places to link precincts and reduce vehicle use.
- Define dominant pedestrian corridors around stormwater and stream corridors.
- Support safe, accessible bicycle use throughout Grounds.
- Designate a hierarchy of green streets (shared and managed) that prioritize pedestrians.



PLACES

- Define new central green places and activity nodes in North and West Grounds and in the Health System to encourage gathering and precinct identity.
- Identify and connect a network of supplemental places to support diverse needs and flexible outdoor programs.
- Integrate placemaking with site-specific sustainable design and recommend strategies for attaining University environmental and development objectives.
- Bring Distillery Branch, Moore’s Creek, Observatory Hill, and the North Grounds Woods into the campus fabric so that their value as natural resources can be realized.



NOTE: This LFP Plan Diagram combines recommendations from three precincts into a Grounds-wide diagram for reference only. The information included is more appropriately scaled and conveyed in each precinct section.

ENTRIES

- central grounds edge
- entry improvement
- multimodal hub
- arrival node
- threshold

CONNECTIONS

- Rivanna Trail
- new road
- bike-ped connection
- pedestrian connection
- ▲ opened views

PLACES

- shared street
- managed street
- improved pedestrian
- pedestrian bridge
- improved bus stop
- key intersection
- gathering space
- environmental amenity
- UVA property line

LFP PLAN DIAGRAM



North Grounds

Central Grounds

West Grounds

— UVA property line

LFP PLAN RENDERING

B. OBJECTIVES AND PROCESS

OBJECTIVES AND PROCESS

LANDSCAPE AND KNOWLEDGE

It is critical that the lessons of Thomas Jefferson's "Academical Village" continue to guide planning and development for University projects. Jefferson envisioned an academic community in which social and intellectual ideals would be inseparable from its spatial forms, giving equal value to landscape and buildings.

In the 1980s, UNESCO designated the Academical Village a World Heritage Site, securing its status as one of the most significant historic landscapes in the world. Yet the University Grounds is not static. The entire University is a cultural landscape—that is, the characteristics of the place have uniquely influenced the people who inhabit it, and the people have shaped the landscape to fit their unique needs. Therefore, while some characteristics are iconic, such as the rolling hills or the stands of Piedmont forest, the University Grounds are constantly evolving.

CULTURAL LANDSCAPE

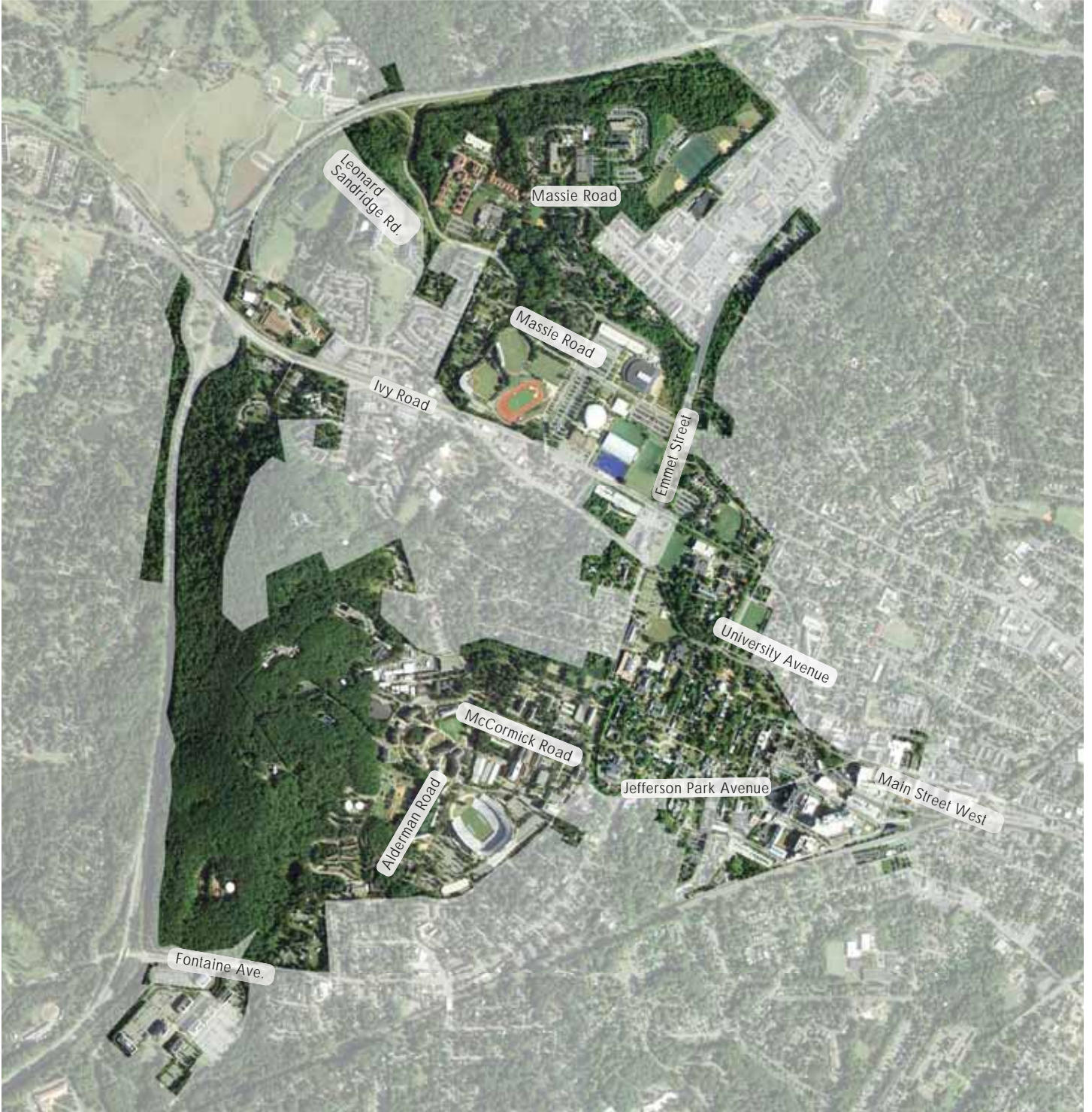
Viewing the entire Grounds as a cultural landscape helps in understanding the ways technological evolution, population growth, and environmental pressures shape the University's Entries, Connections, and Places and these in turn shape the experience of Grounds.

To maintain the University as a place with a legible planning legacy where landscape and architecture are coequal, the planning process requires diligence and vision. This LFP aims to exercise due care in building on the University's legacy while preparing it for the challenges to come.

PURPOSE

The objective of the LFP is to reinforce the University's enduring commitment to creating a vibrant learning environment that supports a collaborative, diverse community, with a dedication to excellence and affordable access.

The LFP supports the equilibrium between landscape and buildings and offers a lens for understanding University Grounds in context. It provides guidance, highlights opportunities and landscape priorities, and defines next steps to strengthen the landscape armature around which the University grows.



UVA PROPERTY CONTEXT

VISION

This LFP is an update to the *UVA Landscape Master Plan (1998)*, which organized content into Natural Systems, Circulation, and Open Space. This update continues to reinforce the landscape as valued and integral to the legacy and the future life of the institution, setting a course for the next 25 years. This LFP addresses content in a revised structure that weaves the natural and cultural systems together in an interdependent whole.

The LFP builds upon positive patterns of University Grounds and addresses the cultural landscape, landscape diversity, conservation, sustainability, pedagogy, and stewardship of the University over time. Woodland and stormwater management are critical components, intended to fortify green infrastructure within the broader campus framework. A focus on the connections of natural systems to the social and cultural life of the University helps give meaning and potency to Grounds planning over time.

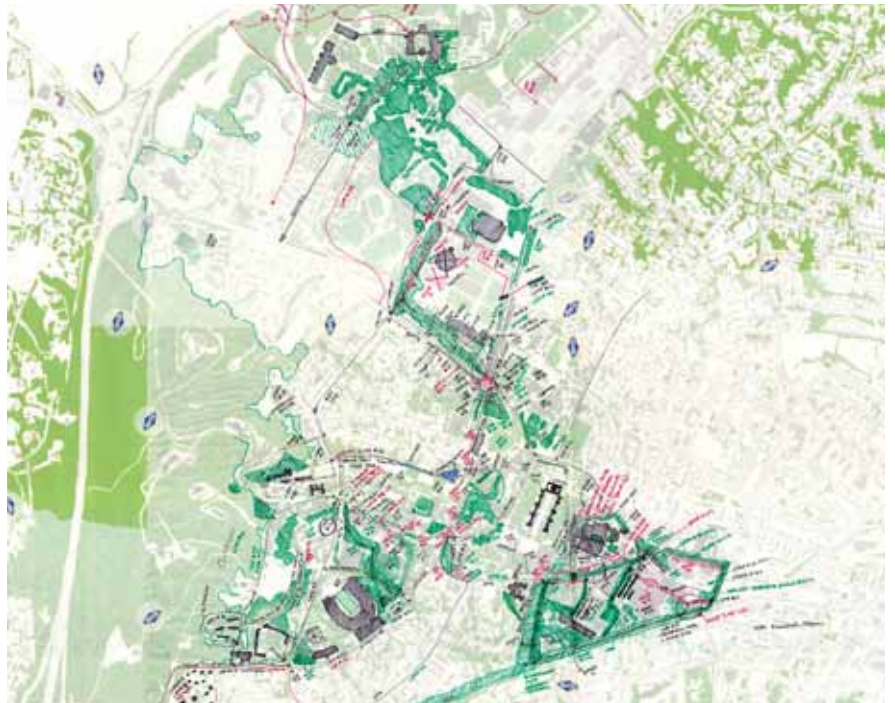
In an effort to strengthen campus identity, preserve the ecological health of Grounds, and enhance the campus community, this effort addresses and ties together these cultural and natural systems:

- *Entries*, including natural thresholds with the surrounding community and features that distinguish the University's character;
- *Connections*, including mobility systems prioritizing pedestrian and bicycle networks;
- *Places*, including campus greens, gardens, and courtyards in the context of broader natural systems.

Historic patterns provide a foundation for these three organizing themes. Insights and conclusions drawn from the University's *Academical Village Cultural Landscape Report (2013)* and the *Historic Framework Preservation Plan (2007)* were considered and integrated into this structure.



MULTIPLE UNIVERSITY PLANNING STUDIES



MAPPING OF RECOMMENDATIONS FROM MULTIPLE REPORTS

PARTICIPANTS

This LFP is led by the University's Office of the Architect and Michael Vergason Landscape Architects, Ltd. (MVLA). It recognizes and incorporates numerous University planning efforts and reports, distilling them into a single long-range vision.

The LFP Steering Committee participants include the University Architect, Alice Raucher, University Landscape Architect, Mary Hughes, and University Senior Landscape Architect, Helen Wilson; other planners and architects within the Office of the Architect (OAU), and Senior Vice President for Operations, Colette Sheehy; Facilities Management's Chief Facilities Officer, Don Sundgren, Director of Energy and Utilities, Cheryl Gomez, Landscape Superintendent, Rich Hopkins; and Chair of the Arboretum and Landscape Committee, Worthy Martin and a faculty member of the Landscape Architecture Department, Nancy Takahashi.

Engagement and contributions also came from user group participants from the University's Facilities Management, Office for Sustainability, Housing and Residence Life, Student Affairs, Intramural - Recreational Sports, and Parking and Transportation divisions, as well as the UVA Medical Center, and the nursing and medical schools. Further assistance came from Charlottesville's bicycle and pedestrian coordinators.

Design team support came from Meliora Inc. for natural systems and water infrastructure. The Schulze and Grasso firm's advice broadened the team background on public space and mobility.

METHOD AND STRUCTURE

To achieve a balanced vision of natural and cultural systems, the LFP team began with two days of meetings with user groups. The planning effort focused on multidisciplinary discussions including a comprehensive review of existing University studies, proposals, and plans. MVLA presented finding updates to the LFP Steering Committee throughout the process.

The result is a report that is organized into chapters focused on existing condition analysis and recommendations, structured around three primary themes: Entries, Connections, and Places. The diagrams throughout provide context for better understanding the final LFP plan through these themes in its main two sections:

- Grounds-wide systems chapters identify areas of need and principles and recommendations for natural and cultural systems for the entire campus.
- Precinct-focused recommendations highlight priority areas in North Grounds, West Grounds, and Central Grounds, including the Health System, for future projects to accomplish the landscape goals of the LFP.



EARLY SKETCH EXPLORES THE ROLE OF LANDSCAPE IN THE IDENTITY OF ENTRIES, CONNECTIONS, AND PLACES

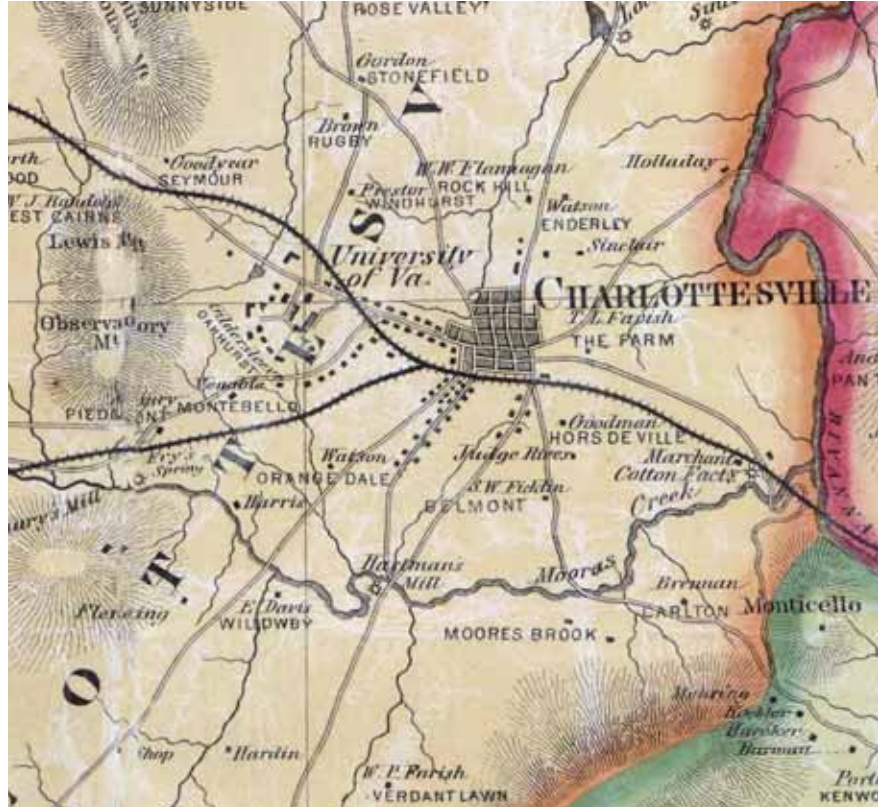
C. HISTORIC FRAMEWORK

HISTORIC FRAMEWORK

The University of Virginia site, on a ridge within a pastoral valley bounded by wooded mountains, determined the specific attributes of Grounds that remain hallmarks of its identity. These include long views of the Southwest Mountains, the mixed deciduous and coniferous wooded slopes on Observatory Hill and in North Grounds Woods, and rolling hills.

Jefferson sited the Academical Village of the new university on the ridge line dividing Moore's Creek watershed to the south from the Meadow Creek watershed to the north, one mile west from Charlottesville's commercial core.

Growth pressures and development patterns since then, illustrated in accompanying diagrams, are explained in terms of the three primary cultural systems of Entries, Connections, and Places. Questions about planning strategies arise naturally from this framework.



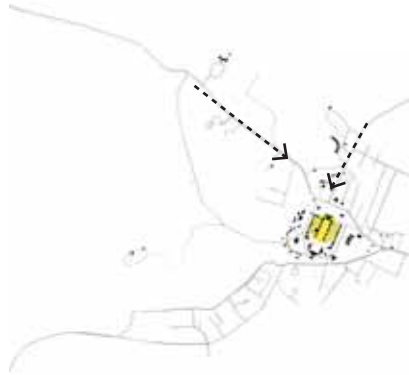
1875 PEYTON MAP

MAP SHOWS THE UNIVERSITY SITUATED BETWEEN THE CITY OF CHARLOTTESVILLE AND THE RIVANNA RIVER TO THE EAST AND LEWIS MOUNTAIN AND OBSERVATORY TO THE WEST.

1819–1920
THE ACADEMICAL VILLAGE



1920–1965
MODERN UNIVERSITY



1965–2005
SUBURBAN UNIVERSITY



2005–PRESENT
CONTEMPORARY UNIVERSITY



ENTRIES: GROWTH PATTERNS

Historically, entry and arrival to the University was characterized by a landscape-dominant experience of gently rolling Piedmont forest and agricultural lands. Because the University was built on a ridge, arrival from all directions involved an upward climb. Ascending the terrain to the Rotunda and entering the Lawn brought a true sense of physical arrival, as it does presently.

Over time, the experience of arrival evolved with the expansion of academic and athletic programs in the North and West Grounds and the expansion of Charlottesville and Albemarle County. While arrival from the west and south maintains some of the original pastoral experience, the north and east entries now present more urban or suburban character.

- How can the once-defining landscape-dominant character be strengthened at all University entries?
- What are the elements that signify threshold and arrival to a vibrant, contemporary university?
- What characteristics support a pedestrian-dominant landscape?

CONNECTIONS: GROWTH PATTERNS

Jefferson's Academical Village fit within a comfortable five-minute walk. The interior was necessarily pedestrian-focused, with an orthogonal, hierarchical path network connecting living quarters, classrooms, and the library. Allees of trees extended the building colonnades, connecting inside and outside spaces and providing shade and comfort.

The University maintained its compact, pastoral character until the mid-1940s. The post-WWII and G.I. Bill enrollment boom, as well as the popularity of low-density, suburban development in the midcentury, resulted in vehicle-dependent development patterns in North and West Grounds.

Today's University has expanded well beyond the original five-minute walk. While Central Grounds maintains its compact, pedestrian-dominant character, connections in North and West Grounds rely heavily on multiple mobility modes: automobiles, transit, and bike. At present, critical planning strategies such as path hierarchy and complete path networks with enhanced planting to connect outdoor and indoor space have not been employed to their best effect in these parts of Grounds.

- How can North and West Grounds better connect to Central Grounds?
- Where can pedestrian path density in North and West Grounds better emulate Central Grounds?
- How can natural systems be connectors rather than separators?

1819–1920

THE ACADEMICAL VILLAGE



1920–1965

MODERN UNIVERSITY



1965–2005

SUBURBAN UNIVERSITY



2005–PRESENT

CONTEMPORARY UNIVERSITY



1819–1920
THE ACADEMICAL VILLAGE



1920–1965
MODERN UNIVERSITY



1965–2005
SUBURBAN UNIVERSITY



2005–PRESENT
CONTEMPORARY UNIVERSITY



PLACES: GROWTH PATTERNS

The Academical Village was designed as an intimate, interdisciplinary space for living and learning. Terraced landscape views opened to the south, connecting the insular life of the University with the surrounding Piedmont countryside. Jefferson intentionally mixed uses, with residential and academic areas planned alongside one another on the Lawn. An intentional spatial hierarchy, however, separated professors and students from the work yards and other service spaces that managed the daily operations of the University.

Outside the historic core, with extensive development, the University has lost much of the village-like character that supports a sense of community. New construction has not always reinforced the importance of outdoor space and its connection to interior, resulting in disparate building-focused developments.

Today, stormwater regulations and commitments to sustainability are challenging the University to incorporate environmental design best practices into the development of rich, diverse, and beautiful places.

- Can mixed-use programming of central green spaces unify and enliven the character of West Grounds and North Grounds?
- How can remnant woodlands and natural areas become valued destinations and welcoming places that help stitch together, rather than separate, the precincts?

DEVELOPMENT TIMELINE

The development timeline shows the evolution of the University from the central core of the Academical Village to outward expansion into three distinct precincts: Central Grounds, West Grounds, and North Grounds.



1819–1860 THE ACADEMICAL VILLAGE

Jefferson’s plan defined a human-scaled, multiuse core for living and learning. The first superintendent of buildings, William Pratt (1858-65), envisioned a pedestrian landscape circling the core with a romantic park. Arrival of the railroad in 1850 constrained boundaries, yet by 1860 the University population had tripled in size.



1946–1963 MIDCENTURY/POSTWAR GROWTH

Post-World War II expansion of the student population and Cold War funding for science and engineering initiated a series of building projects. Landscape updates included new trees on the Lawn and West Pavilion and East Garden renovations. A new multistory hospital was built facing outward to the Charlottesville community.



1964–1987 EXPLOSIVE ENROLLMENT AND SATELLITES

Acquisition of property in North Grounds began in the second half of the twentieth century for the University’s business and law schools and the U.S. Army’s Judge Advocate General (JAG) School and University Hall, increasing dependence on vehicles. National recognition of the Academical Village as a historic site focused attention on preservation measures and ultimately led to the Academical Village’s designation as a World Heritage site, elevating landscape to a treasured historic element in University’s built fabric.



1861–1894 THE CIVIL WAR

The Civil War halted development, with open spaces devoted to the war effort and a Confederate hospital. The University proctor took over postwar planning, targeting infrastructure improvements including water reservoirs, a sewage system, and gas lighting.



1895–1920 BEAUX ARTS AND TOWN GROWTH

This period saw expansion of Charlottesville’s street grid and the introduction of the streetcars, improving travel between town and the University. The Rotunda fire (1895) initiated architectural work with McKim, Mead & White and the enclosure of the south end of the Lawn. Landscape architect Warren Manning (1906) began focusing on broader urban design connections.



1921–1945 WWI AND EXPANSION WEST

A new University Architectural Commission in the first half of the twentieth century led planning for Memorial Gymnasium and the development to the west. New academic buildings along McCormick Road stimulated growth south and west of the central core.



1988–2005 SUBURBANIZED GROWTH

Late-century expansion challenged connectivity, focusing attention on a series of small, self-sufficient residential and academic villages and infill projects (Bryan Hall and additions to Newcomb Hall, Monroe Hall, and Gilmer). Expansion of the Health System with a new hospital built south of Jefferson Park Avenue created a dense, urban-scale edge to the neighborhood. A masterplan by Sasaki, Walker and Associates, Inc. (1994 Update) focused on a ten-minute walking radius and streets for pedestrians and vehicle circulation, and parking moved to the campus exterior. These principles continue to be explored.



2005–PRESENT INFILL AND MULTIDISCIPLINARY DEVELOPMENT

In recent years, the mixed-use model of the Academical Village continues to be extended and re-envisioned. Infill development supports knitting the three precincts together and using University resources more efficiently. With more sustainable solutions and regulatory demands and a focus on water and natural systems, planning now values environmental, working landscapes as an integral and enriching part of the University experience and a vital part of the fabric of Grounds. In addition to the infill, there is expansion south of Jefferson Park Avenue, including South Lawn and Brandon Avenue, developed with these integrated landscape strategies.



II. GROUNDS-WIDE SYSTEMS



A . NATURAL SYSTEMS

NATURAL SYSTEMS

The University of Virginia's signature landscape defines the character and experience of the place and provides invaluable ecosystem services for the University community. With combined University holdings of over 1,150 acres, there are numerous opportunities to improve woodlands, and expand the tree canopy as well as bolster riparian corridors and gain the economic and social benefits of green infrastructure.

As the University's population rapidly increased over the last half of the twentieth century, sprawling development, especially in North Grounds and West Grounds, altered both the experiential quality of the landscape and its ecological function.

The University has acknowledged the importance of improved stewardship of its resources—including land, water, and woods—to bolster its ecological resilience and placemaking. In 2008, the Office of the Architect's *Grounds Plan* established a long-range sustainable land-use plan guiding campus growth through 2025. Supporting this is the *University of Virginia Greenhouse Gas Action Plan (2017)* which sets a target goal of 25 percent carbon reduction by 2025.

Complementing The *Grounds Plan* are the *Biodiversity Analysis and Conservation Assessment*, the *Strategic Plan for Water Resources Management*, *Environmental Footprint Reduction Plan (EFRP)*, and University commitments to stormwater management. In addition, the 2016 *Chesapeake Bay TMDL Action Plan*, specifying total maximum daily loads of pollutants, provides targets that are supported by this LFP.

NATURAL SYSTEMS INTEGRATION

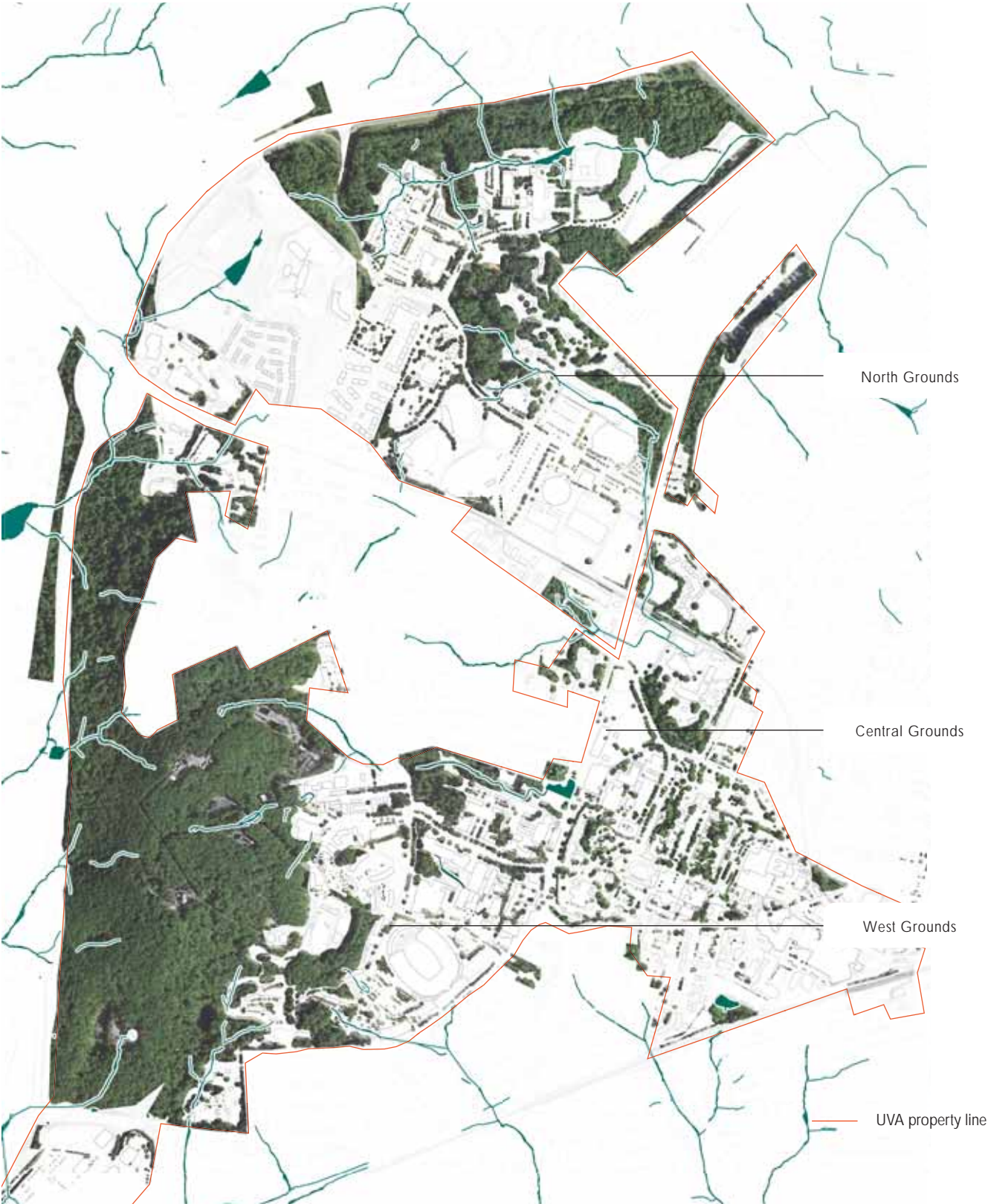
Natural-systems stewardship is integral in every new placemaking opportunity, with the recognition that connection with ecological systems fosters a sense of place and nurtures bonds with a landscape.

The University has shown demonstrable leadership in enhancing natural systems throughout the Grounds and adjacent University of Virginia Foundation lands. The recommendations in this LFP are designed to support and advance current practices as well as identify further opportunities for responsible stewardship of natural systems.

Five areas for implementation are part of LFP natural systems recommendations and ultimately are part of the specific project recommendations in the precinct chapters, including:

- carbon sequestration with increased tree plantings,
- expanded tree canopy coverage with shade tree plantings,
- increased tree species diversity with broad species selection,
- improved stormwater quality with increased planting in bio retention areas,
- reduced stormwater quantity with more vegetated roofs and planting to slow down runoff.

The LFP emphasizes that effective management of woodlands and stream corridors as green infrastructure is an intrinsic component of campus culture and the future of the University.



North Grounds

Central Grounds

West Grounds

UVA property line

WOODLAND AND STREAMS

WOODLANDS

The University sits within the Virginia Piedmont between the Blue Ridge Mountains and the coastal plain. The landscape character is defined by gently rolling hills, clay soils, and an eastern deciduous forest.

The University has two significant woodlands: Observatory Hill Woods and North Grounds Woods. Together these woodlands constitute over a quarter of the entire area of Grounds.

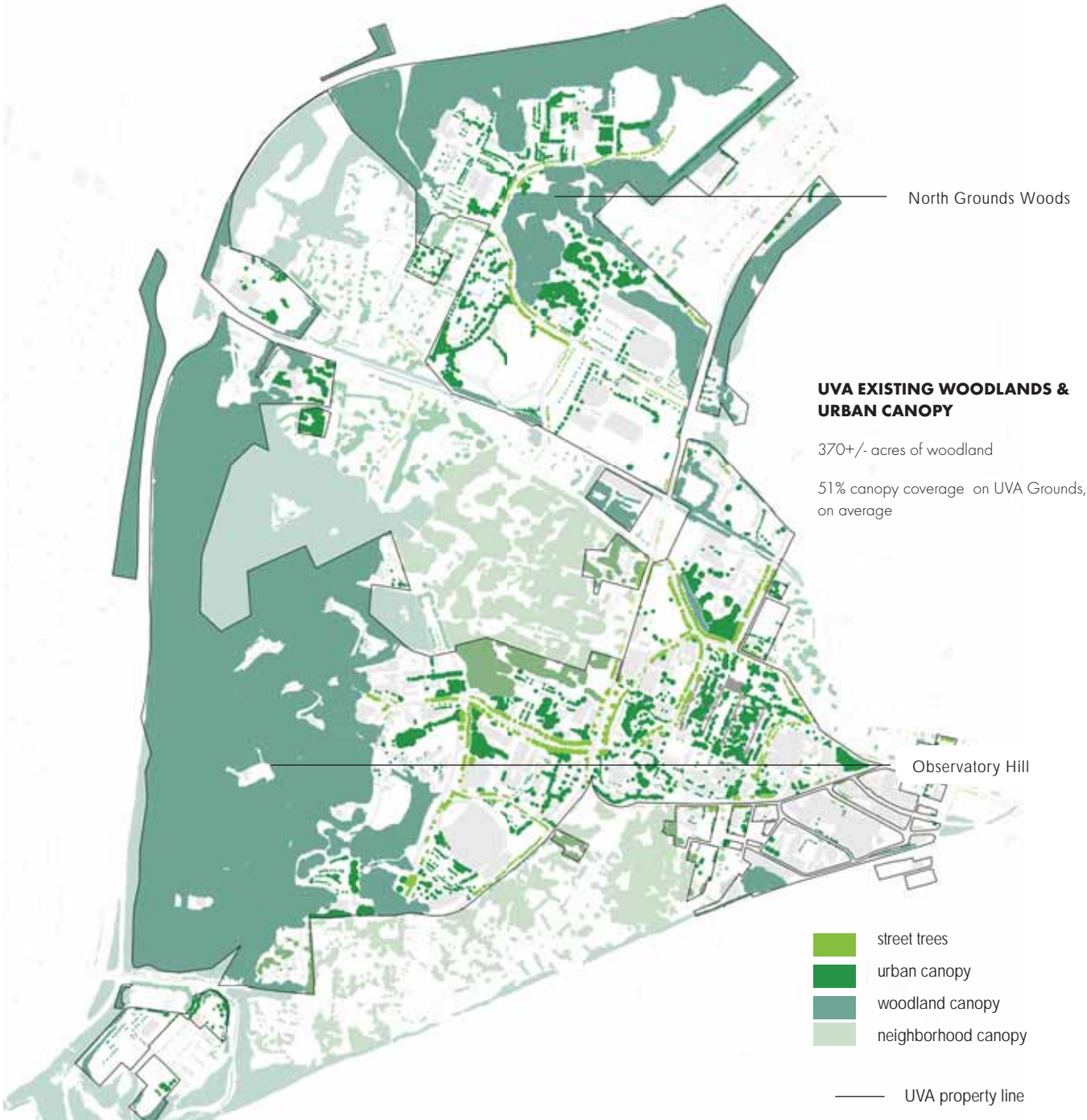
The University's *Sustainability Plan 2016--2020* identified a target goal of reducing the University's carbon footprint 25 percent by 2025. Given that one acre of woodland sequesters 3.3 metric tons of carbon annually, the University's broader landholding, which includes 1,150 acres and approximately 370 acres of woodland on University property, is its greatest tool for ensuring that it meets that goal.

OBSERVATORY HILL

- *History.* The hill was originally acquired in 1817 to provide the University with natural resources-water, timber, and clay.
- *Landform.* Steep slopes create a western physical boundary to the University.
- *Environmental.* "O-Hill" is the largest natural area on Grounds with approximately 300 acres. Forested slopes are critical to the health of the headwaters for Moore's Creek and Meadow Creek.
- *Trees.* Canopy trees of Tulip tree, Red, Black and White oaks, Post oak, Spanish oak, and Chestnut oak cover the hill towards the summit.

NORTH GROUNDS WOODS

- *History.* The buffer to the US-29/US-250 bypass consists of 50 acres of remnant woodland.
- *Land form.* A cove with stream valleys runs through the Copeley Housing and along the US-29/US-250 bypass.
- *Environmental.* Woodlands are located along stream valleys, providing ecological benefits including air-quality and soil support.
- *Trees.* Three mature tree groups are found on the upper slopes: Oak-beech and Poplar-oak; The understory consists of red maple, black gum, American holly, and dogwood.



EXISTING TREE CANOPY COVER

TREE DIVERSITY

Increasing tree diversity on University Grounds is a critical component of expanding the University's rich woodland resource. Different species are susceptible to different pests and damage, so the more tree variety, the less vulnerable the overall urban forest will be to invasive species, climate change, or severe weather. Natural forest areas do not have a uniform height; a diversity of heights and ages is important in the urban canopy, too. Variation is also important to sustaining diverse habitats for forest animals and insects.

For the Grounds landscape, it is important to consider the appropriate diversity by location and scale. In the woodland areas, good management plans will help to balance a mix of species. In the developed areas, larger canopy trees should continue to be the trees of choice for a clear landscape framework for enduring streetscapes and comfortable outdoor places. Smaller understory trees should be used in building frontages and gardens, but not for streetscapes and primary walks or places. Understory trees impede the sense of place and scale when used in place of canopy trees in street corridors. Environmentally, the tree diversity and scale help with carbon sequestration and canopy coverage.

GIS

Geographic information systems (GIS) reveal the University tree quantities and show that there is a predominance of oaks across Grounds, with North and West Grounds having less diversity than Central Grounds. The scale of smaller managed gardens in the historic core helps explain the broader diversity there. The proportion of evergreens to deciduous trees on Grounds is small, but their relative visual impact is disproportionately large, especially at entries and edges, because of their visual contrast with deciduous trees and their sculptural character.



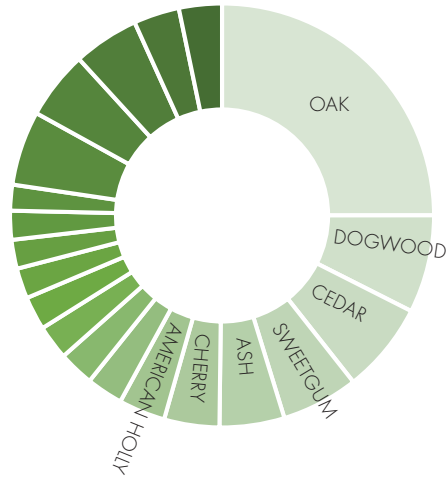
McCORMICK ROAD'S MATURE TREE CANOPY



ALDERMAN ROAD'S LACK OF TREE CANOPY



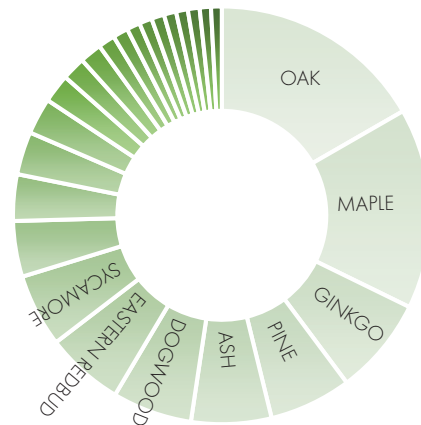
NORTH GROUNDS WOODLAND



- 24% OAK
- 7% DOGWOOD
- 7% CEDAR
- 6% SWEETGUM
- 5% ASH
- 4% CHERRY
- 3% AMERICAN HOLLY



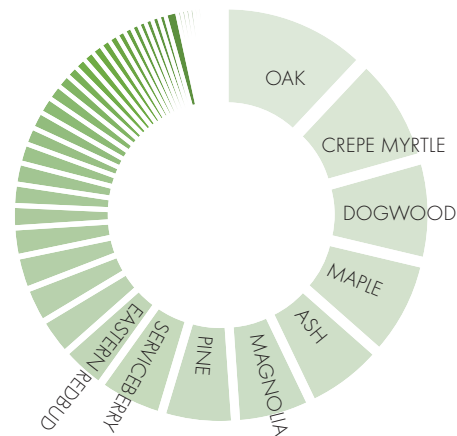
WEST GROUNDS OBSERVATORY HILL



- 17% OAK
- 16% MAPLE
- 8% GINKGO
- 6% PINE
- 6% ASH
- 6% DOGWOOD
- 6% EASTERN REDBUD
- 6% SYCAMORE



CENTRAL GROUNDS ACADEMICAL VILLAGE GARDEN



- 12% OAK
- 9% CREPE MYRTLE
- 8% DOGWOOD
- 8% MAPLE
- 6% ASH
- 6% MAGNOLIA
- 6% PINE
- 5% SERVICEBERRY
- 4% EASTERN REDBUD

TREE CANOPY

The University's landscape character is defined by a robust tree canopy. Yet as more development is planned, the tree canopy is challenged. Trees provide valuable shade for comfortable walking and help save on cooling costs by lessening the "heat island" effect. The tree canopy at the University moderates hot summer temperatures by 5 degrees to 9 degrees Fahrenheit. Trees also help to retain 45 percent of stormwater on site and infiltrate 15 percent to 20 percent into the ground. The University's urban canopy and its neighboring woodlands retain up to 220 tons of sediment per year from streams and rivers.

The University earned a 2018 *Tree Campus USA* designation for promoting healthy trees and engaging students and staff in the spirit of conservation. The University's tree canopy covers 51 percent of total Grounds. While this number designation is good by most campus standards, not all areas of Grounds are equal. Many areas have exposed paths, making walking less desirable in the warmer seasons. Most of these open corridors are found in the North and West Grounds precincts; interestingly, the two precincts with significant woodlands. Alderman Road in West Grounds and Massie Road around the athletic fields in North Grounds stand out as particularly exposed areas. Increasing the tree canopy along these corridors could have significant environmental and social benefits, encouraging walking and biking. It will also help the University towards the goal of a 25 percent carbon reduction by 2025 (*University of Virginia Greenhouse Gas Action Plan* (2017)).

Trees provide net positives in the forms of carbon sequestration, rainwater storage, rainwater and air pollution removal, and energy savings. For the University, the benefit-to-cost ratio of 2.4 means that for every \$1 spent on tree care, \$2.40 in benefits are created.



STREET TREES-CENTRAL GROUNDS

WOODLAND RECOMMENDATIONS

- **CANOPY.** Increase overall tree canopy coverage in the next ten years on Grounds by expanding tree planting and replacements; study locations for canopy expansion to mitigate the “heat island” effect; focus on exposed corridors such as Alderman and Massie Roads to make a more pleasant pedestrian experience.
- **RESOURCE MANAGEMENT.** Develop resource management plans for both Observatory Hill and North Woods to create strategies for preservation and to incorporate potential academic, recreational, and club programming, to increase their value to the community.
- **WOODLAND MANAGEMENT.** Develop a woodland-management plan to help manage invasive species, improve habitat, and increase stormwater infiltration, reducing the total maximum daily load of pollutants headed for the Chesapeake Bay and to achieve additional carbon reduction.
- **PLANT INVENTORIES.** Document woodland areas to determine forest species, diversity, and problematic invasives. Continue to develop a comprehensive tree survey for developed areas of Grounds as a baseline and enter into the University’s GIS database. Tree information to be recorded should be species, overall health rating, and commemorative or historical status.

WATER

UNIVERSITY HYDROLOGY

The original land set aside for the University sits on a ridge that separates the Meadow Creek and Moore's Creek watersheds and includes their headwaters on Observatory Hill. As the University grew, both streams were relegated to underground pipes in some locations and channelized in others; both have suffered impaired water quality.

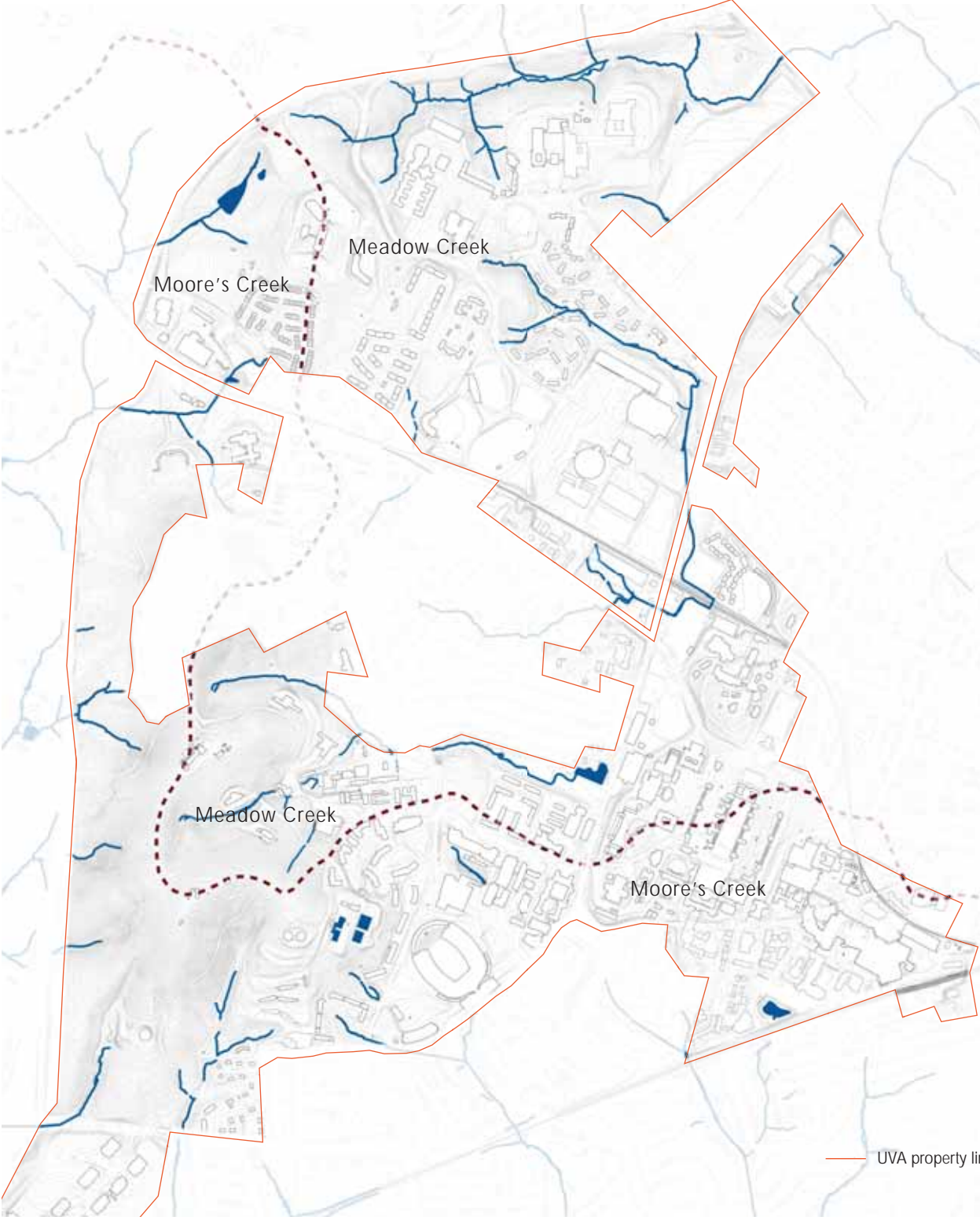
The *Landscape Master Plan* (1998) advocated the creation of a ribbon of riparian recreation associated with Meadow Creek improvements from Observatory Hill through the lowlands of the University. Additionally, it recommended stream restoration as an opportunity to highlight the temporal function of water in the outdoor spaces. Several projects resulted from these recommendations, including the restoration of Meadow Creek at the Dell, a highly successful landscape project that has proven the ability to link stormwater objectives with the enrichment of place at the University.



● University of Virginia

JAMES RIVER WATERSHED

The University is situated at the headwaters of the Meadow Creek and Moore's Creek watersheds. Both of these streams drain into the Rivanna River. East of Charlottesville, the Rivanna flows into the James River, which ultimately discharges into the Chesapeake Bay.



WATER

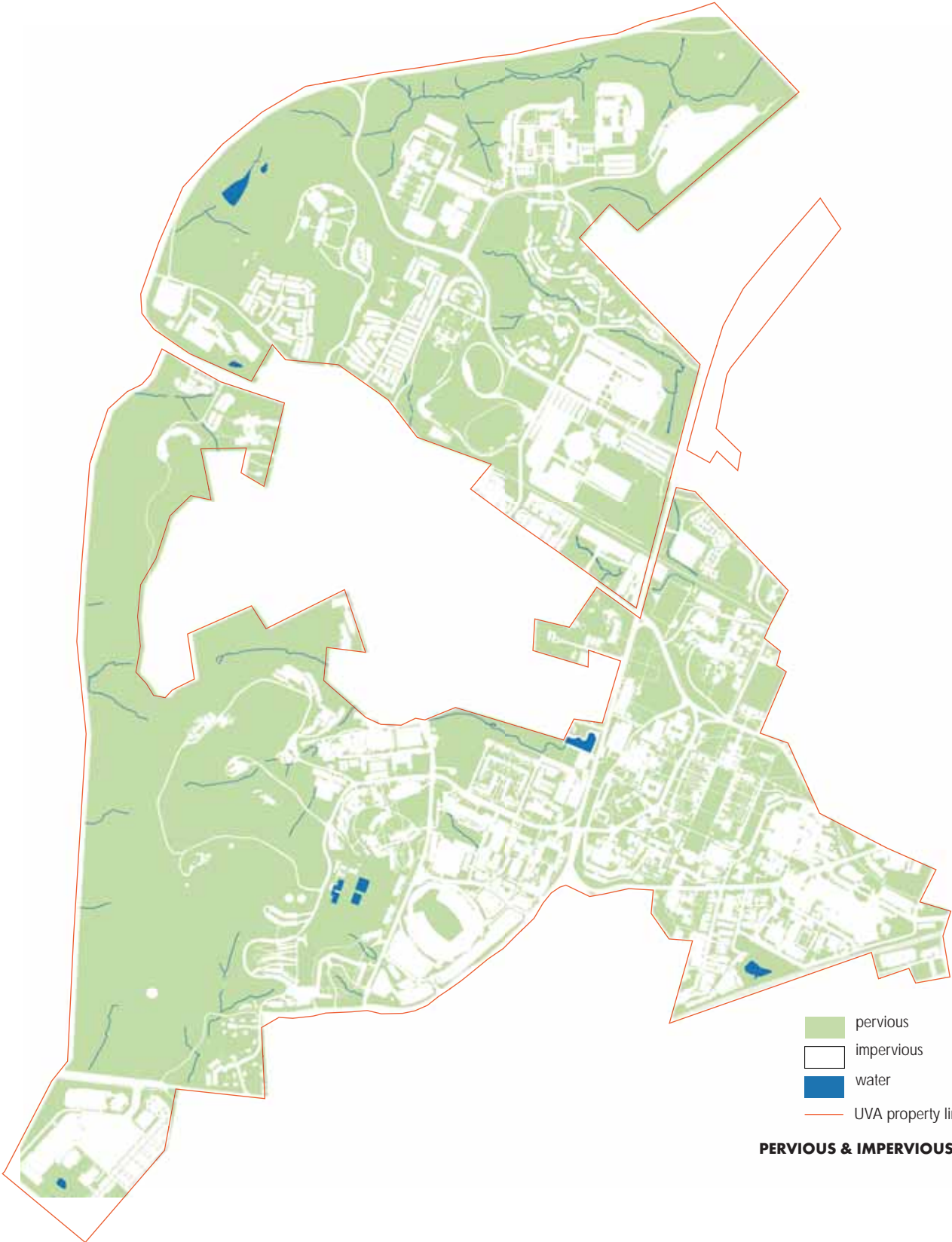
TMDL ACTION PLAN

In 2010, the EPA established the Chesapeake Bay Total Maximum Daily Load (TMDL), defining a historic and comprehensive “pollution diet” aimed at restoring clean water to the Chesapeake Bay watershed. The University’s TMDL Action Plan requires that it design and implement best management practices (BMPs) that will lower pollution levels in stormwater (quality) and reduce erosive velocities of stormwater discharge (quantity).

STORMWATER QUANTITY/QUALITY REDUCTION

Current University stormwater policy has two key components: regional stormwater facilities and on-site best management practices used with each new development project. Regional facilities address both quality and quantity issues by retaining water, allowing pollutants and sediment to settle out. These regional facilities are sized to address more runoff than the University generates and serve in a “bank” capacity. Within the Meadow Creek watershed, the University has available capacity; Moore’s Creek watershed capacity has been reached. The regional facilities, combined with the MS4 Permit and TMDL Action Plan, push the University toward state-mandated MS4 permitting with the ability to infiltrate or reuse most water with site-specific BMPs.

Site-specific stormwater solutions (best management practices and low impact developments) will continue to be required components of the University’s landscape plans. The Grounds already have numerous BMPs, but many are difficult to maintain and are not always beautiful, or integrated. The University should continue to develop integrated solutions, such as those at the Dell and John Paul Jones Arena, to deliver ecological, economic, and social benefits. Streams in North Grounds, such as Distillery Branch, deserve focus. An important measure of the success of these solutions will be the creative integration of water management with landscape and social gathering places in projects planned for the Ivy Corridor and Brandon Avenue Housing.



PERVIOUS & IMPERVIOUS SURFACES

QUALITY IMPROVEMENTS

The University's TMDL Action Plan identifies three methods for improving stormwater quality in the landscape: stream restoration, rainwater harvesting, and structural best management practices (BMPs), including permeable pavers and green roofs. Implementation of these recommendations has already resulted in significant reductions of nitrogen, phosphorus, and suspended solids in the Meadow Creek watershed since 2009.

STRUCTURAL BIORETENTION AND BIOFILTRATION

Bioretention areas improve stormwater quality by removing pollutants. The Dell, Emmet-Ivy Garage, and John Paul Jones Arena bioretention basins treat 65 acres of impervious area and remove 172 pounds of phosphorus on University property from the Meadow Creek watershed per year.

STREAM RESTORATION

Over the years as the University grew, its streams were buried in pipes. Daylighting streams and restoring their corridors enhances surface water quality, reduces flooding, and provides critical ecological and human health benefits. Examples include the Meadow Creek stream restoration at the Dell, stormwater improvements at Lambeth Field Apartments, installation of a stream buffer at Carr's Hill Field.

PERMEABLE PAVING

Permeable paving, another BMP, is effective. The paving installation on the North Terrace of the Rotunda improves infiltration with a permeable system. This strategy is most beneficial in areas where roots of existing trees are not affected by the required depth of the paving section. Proper maintenance of permeable systems is important; sediment can clog and compromise the function.



JOHN PAUL JONES ARENA BIORETENTION AREA



THE DELL STREAM RESTORATION



UVA HOSPITAL GREEN ROOF

WATER RECOMMENDATIONS

- **BIOSWALES AND BIORETENTION.** Increase opportunities for rainwater infiltration to reduce costs of University compliance with total maximum daily load requirements.
- **STREAM CORRIDORS.** Evaluate all streams for condition and need for improvement or restoration; identify opportunities for additional stream daylighting and improved vegetated stream buffers along waterways owned by the University; preserve wooded headwaters to help improve the quality and quantity of water flowing to the creeks.
- **PERVIOUS SURFACES.** Assess Grounds for opportunities to remove underutilized impervious surfaces. Replacing an impervious surface with a planted bed can reduce runoff by more than 60 percent. Install pervious paving when appropriate and establish maintenance regimes.
- **VEGETATED ROOFS.** Use rooftops to reduce runoff by storing up to half an inch of rainfall. Green roofs can also provide significant temperature-insulating benefits. (Examples include the UVA Hospital green roof.). Expand green roof inventory with new construction and assess existing roofs for green roof opportunities; in all cases, maintenance access should be part of the decision-making process.
- **WATER REUSE/HARVESTING.** Determine opportunities for rainwater capture in cisterns for reuse and irrigation as well as for process uses such as make-up water in University chilled-water plants, which have the highest water consumption of any buildings on Grounds.
- **OLDER STORMWATER FACILITIES.** Retrofit and improve older stormwater management facilities to increase and enhance performance; upgrade visual integration and diversity of plants in the landscape.
- **EDUCATION.** Establish outreach programs, as required by the MS4, to the University community about stormwater pollution prevention; evaluate outreach opportunities and look for ways to integrate pedagogy into the design of new rainwater projects.

B. CULTURAL SYSTEMS

CULTURAL SYSTEMS

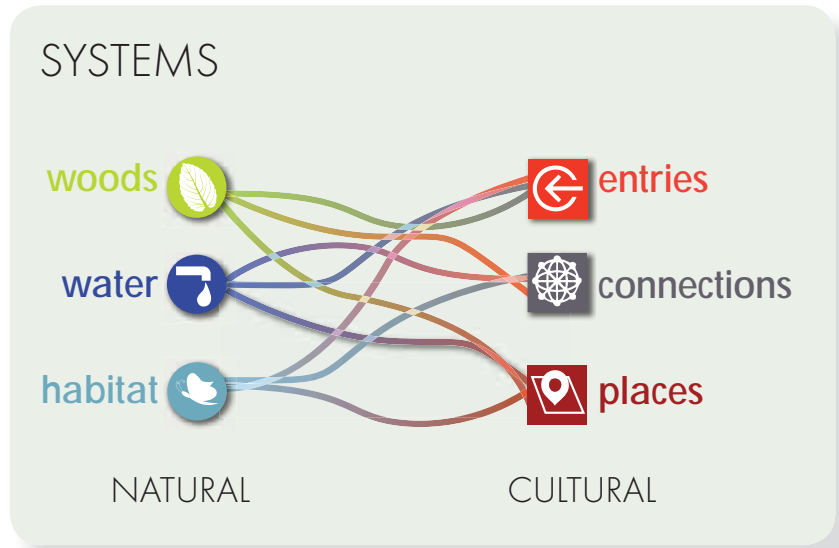
Like natural systems, cultural systems are composed of interdependent components that together give meaning and of values that shape interactions between people and their settings. Numerous cultural systems work together to distinguish the University of Virginia Grounds; this LFP focuses on three defining cultural systems: Entries, Connections, and Places. This plan examines each system and determines which of its features are successful and which features are not, and identifies potential improvements.

The LFP focuses on these cultural systems because of:

- the erosion of the notable University arrival experiences (Entries);
- the need for better mobility networks within precincts and across Grounds (Connections), particularly for the pedestrian;
- the need for more diverse memorable outdoor places throughout the University Grounds (Places).

Together, these three systems create a framework to help to identify meaningful future projects and establish principles for development to link them together.

This chapter concludes with recommendations for Grounds-wide improvements, which complement the precinct's project recommendations at site scale, suggesting ways natural systems and cultural systems can together achieve a more cohesive campus landscape.





PLACES



CONNECTIONS



ENTRIES

PEOPLE, PLACES, AND MOBILITY

One measure of a strong campus landscape is its perceived ease of mobility. Good mobility goals focus on people and places as much as or more than on mobility modes. The system should welcome all users, be they young or old, able-bodied or not, whatever their backgrounds.

Walking is critical to campus life, and the design of streets and walks needs to encourage people to do so. Planning at the human scale of the body helps to define optimal distances between events or features, creating the ability to draw someone along a path and to shorten perceived distances with interest along the way.

In a city, one might argue, short distances between doors and windows, of 20 to 40 feet, help to activate the visual walking experience. On a campus, breaking a walk into 200- to 400-foot increments is recommended. Opening views to active ground-floor uses helps enliven pedestrian corridors. Comfortably shaded streets with street trees and furnishings invite people to engage and linger, encouraging multiple forms of human interaction.

Even when destinations are spread across distances, human-scaled activation nodes draw pedestrians, helping to reduce the perceived walking experience and to encourage social engagement.



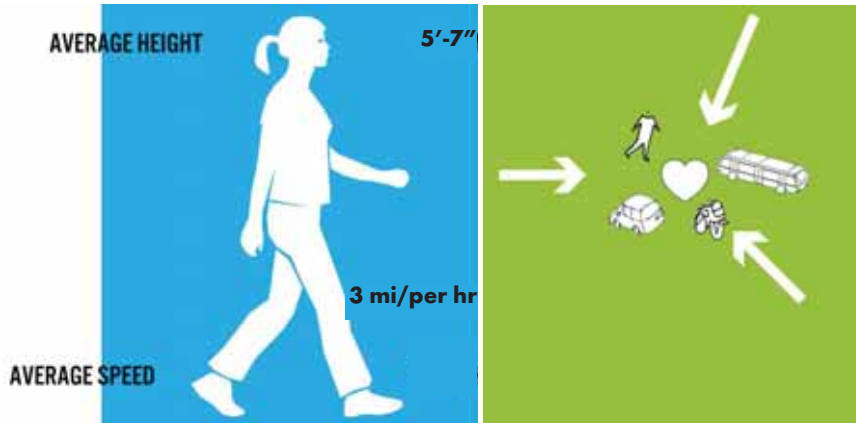
MOBILITY AND COMMUNITY

Prioritizing pedestrians, the more vulnerable users, over vehicles supports the activation of stronger community and better outdoor places. Broadening the definition of mobility to include the overall user experience helps to develop mobility systems that are both engaging and memorable, and contribute to lively placemaking.

When designing mobility systems and transit hubs, it is important to design mobility transfer points that are desirable places in addition to being efficient. Multiuse places help to create an engaging campus life as well as a strong mobility system.

Typically, good mobility is defined by efficiency: moving large numbers of people with short wait times. In addition to efficiency, the more broadly defined mobility entails the following goals in service of great placemaking:

- *Legibility.* Create a system that is easy to understand and use. This includes signage as well as a streamlined logical structure for use.
- *Accessibility.* Design a system that supports accessibility and is convenient for all users, including those with special needs.
- *Safety.* Ensure that the system doesn't mix modes in close proximity.
- *Connectivity.* Use the opportunity to connect people to places and to encourage interaction and dialogue between people.



To encourage walkability, streets should be designed to prioritize the pedestrian, allowing meeting, and gathering, and the exchange of information. A focus on distances between activities can define a rhythm that pulls people along, and makes distances feel less. These corridors can play a significant role in contributing to the character of the areas that they connect.



ENTRIES: OBSERVATIONS

ENTRY VARIATION

There is an imbalance in the quality and cohesiveness of the University's various entry corridors. As the University has grown, development has diluted the clarity and the sense of arrival. To date, there is no clear place where visitors arrive and orient, transitioning from a car to walking.

The access roads to the University, historically through a rural context, have evolved as both the University and the town of Charlottesville have grown. In the 1800s, the primary arrival was from the east via what is now called West Main Street/University Avenue. Arrival from the south and the north was enabled by US-29/Emmet Street in the 1930s. More recently, additional exits from the US-250 bypass allow arrival from the northwest along Leonard Sandridge and Ivy Roads.

Traditionally, landscape has defined the approaches to the University. Stands of mature tree canopy and areas of turf are a characteristic indication of arrival to Grounds.

ENTRY STUDIES

MVLA conducted a study in 2014 for the Emmet Street entry corridor, specifically, the *University-Emmet-Ivy Entry Corridor Study, Landscape Guidelines* (2014), and the recommendations from it are still valid. Fundamental to the recommendations is the concept that arrival is not defined as a threshold but a layered experience of Approach, Entry, and Arrival. Each of the three has associated goals and expectations which apply to all five primary entries to the University.

The existing entry experience is composed of:

- *Approach*: first indications of approaching Grounds.
- *Entry*: passage through a series of thresholds, which signal University Grounds.
- *Arrival*: the point at which the visitor has a clear sense of being on Grounds.

EDGE CONDITIONS

Having evolved organically from its center at the Academical Village, the University has significant interface with Charlottesville city neighborhoods at its edges. Unlike universities that have distinct campus perimeters, such as Houston's Rice University, the University of Virginia has irregular edges, interwoven into adjacent residential and commercial areas. Using more landscape markers such as planting, stone walls, paths, and furnishings would help to signify University arrival.

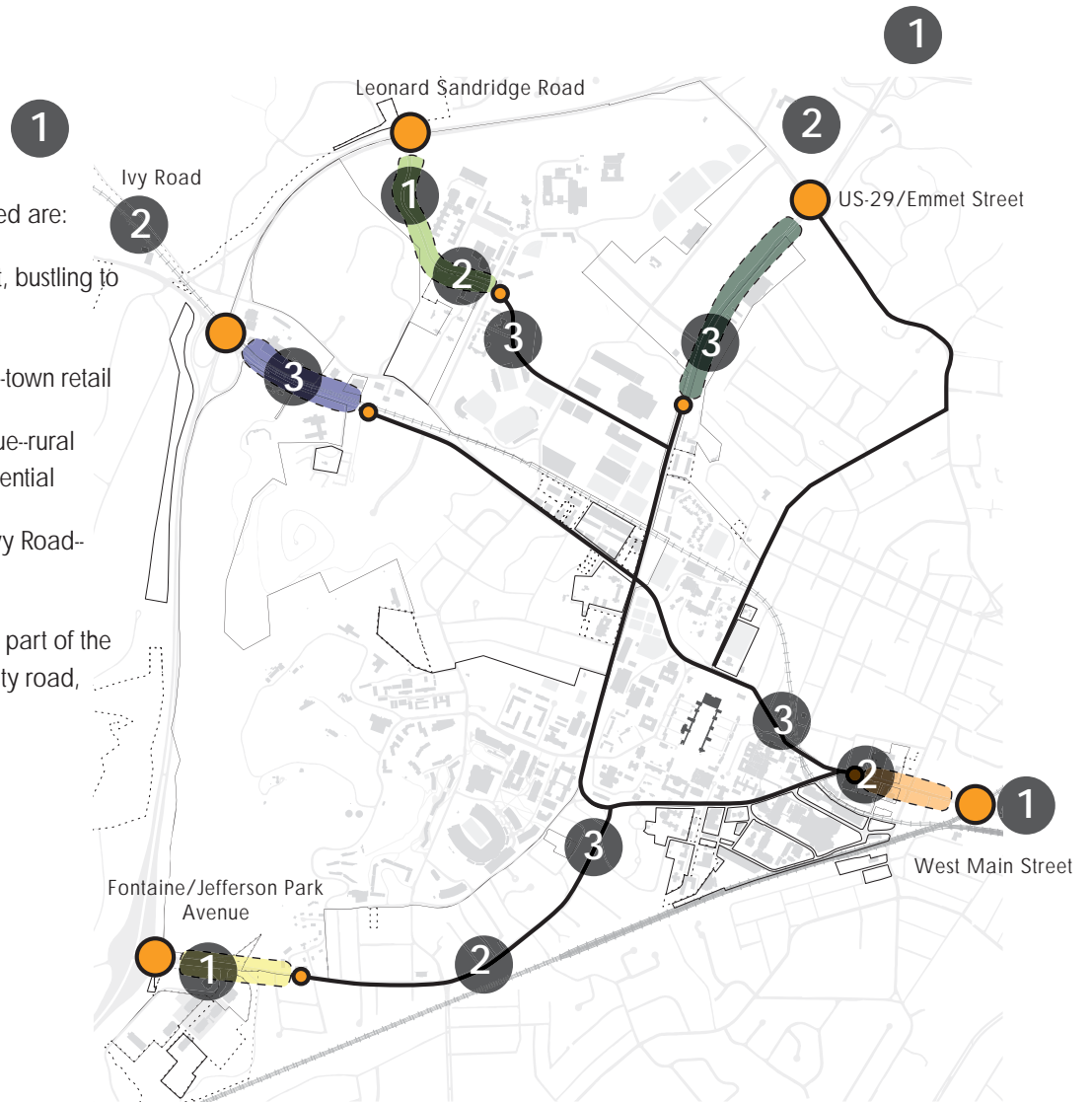


ENTRIES: OBSERVATIONS

ARRIVAL EXPERIENCE

Existing general conditions observed are:

- US-29/Emmet Street-big, built, bustling to University
- West Main Street-city to small-town retail
- Fontaine/Jefferson Park Avenue-rural highway to boulevard to residential
- US-29/US-250 bypass and Ivy Road-rural to small town retail
- Leonard Sandridge Road (not part of the UEI Corridor study)-new county road, suburban parking



1



APPROACH VIA US-29/ EMMET STREET



APPROACH VIA IVY ROAD



APPROACH VIA JEFFERSON PARK AVENUE



APPROACH VIA WEST MAIN STREET



APPROACH VIA LEONARD SANDRIDGE ROAD

2



3



ENTRIES: RECOMMENDATIONS

ARRIVAL EXPERIENCE

At its best, the experience of arrival at the University is landscape dominant, distinguished by passing through a series of green thresholds. There is a gradual sense, rather than single moment, of arrival, supported by elements of the landscape. Enhancement and amplification of familiar landscape elements would enrich the University identity and reinforce a cohesive sense of place.

PLANTING

Woodland/Tree Canopy. Robust woodland edges and tree canopy exist along Emmet Street North, Ivy Road, and parts of University Avenue. They act as important thresholds and should be maintained and improved where possible. (See "Natural/Undisturbed Landscapes" in *UVA Landscape Typologies and Standards*.)

Evergreen/Deciduous Canopy. Evergreens and mixed deciduous canopy trees are concentrated at the entry points to the University at Clark Park and University Avenue and are a distinct part of the arrival experience. They should be maintained and expanded as appropriate.

Turf and Trees. The turf-and-trees typology surrounds the Rotunda and is dominant on University Grounds, particularly at Central Grounds. As Grounds develop, there will be a shift as turf landscapes are replaced with functional, working landscapes. (See "Woodland and Grove" in *UVA Landscape Typologies and Standards*.)



WOODLAND EDGE AT EMMET STREET NORTH



EVERGREEN TREES AT THE CORNER OF UNIVERSITY AVENUE, EMMET STREET AND IVY ROAD



TURF AND TREES IN FRONT OF ROTUNDA AT UNIVERSITY AVENUE



STREETSCAPE ON UNIVERSITY AVENUE



STONE WALL AROUND THE PERIMETER OF THE HISTORIC CORE



STONE WALL ON MCCORMICK ROAD

STREETSCAPE/PATHS

A regular pattern of street trees has been established along the eastern edge of Emmet Street near Carr's Hill Field. This model should be replicated in all entry corridors. Walks should be widened to at least 6 feet, for comfort and accessibility. Brick, which is an emblematic paving material for the University, should be used in gathering and public places when possible. (See "Streets/Pedestrian Corridors" in *UVA Landscape Typologies and Standards*.)

STONE WALLS

Stone walls are also emblematic of the University of Virginia, acting as edges around the historic core and tying University property to the surrounding rural Virginia context. However, not all current walls are stone: most walls are fieldstone, but some are made of brick or concrete. To enhance cohesiveness, stone walls within the entry corridors should be implemented. As is possible, concrete walls (e.g., the Ivy Road retaining wall) should be replaced with stone.

Stone walls should be a minimum 18 inches wide and seat height where possible, particularly in areas with bus stops. Fieldstone should be locally sourced, in a roughly rectangular pattern with a dry-laid appearance, similar to the walls on McCormick Road at the West Range.

WATER

Water is an integral part of the campus landscape, with Meadow Creek making appearances along Emmet Street and the Dell pond. A substantial portion of Meadow Creek remains piped underground, however; additional opportunities for daylighting should be explored for enhanced environmental and aesthetic benefit. One possibility for further extending daylighting of Meadow Creek is Nameless Field.

Planners should consider the opportunities water offers for enriching the pedestrian experience, allowing paths to meander near areas of streams. In addition, they should introduce riparian plantings where appropriate. (See "Stream Wetland" standards from *UVA Landscape Typologies and Standards*.)

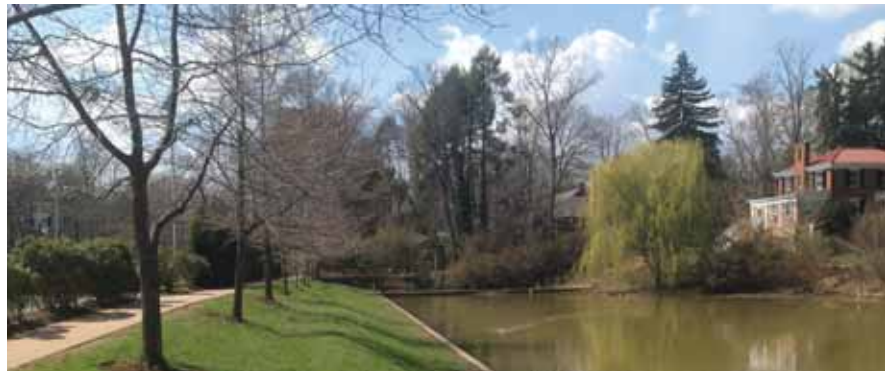
UTILITIES, LIGHTING, SIGNAGE, AND FURNISHINGS

The use of consistent materials can support the desired quality and character of place. The entry corridors currently lack cohesive details to unify them. A family of furnishings, lighting, and signage drawn from campus standards and conforming to established aesthetics will identify University entry corridors.

The following recommendations cover a number of elements that have the capacity to improve the cohesiveness of the entry corridors. All recommendations should be coordinated with the *UVA Landscape Typologies and Standards*.



DAYLIGHTED PORTION OF MEADOW CREEK ALONG EMMET STREET NORTH



THE DELL POND



THE DELL PLANTING



KING EDGEWATER LIGHT FIXTURE AND POLE



HYDE PARK TEAK BENCH FROM KINGSLEY BATE



VICTOR STANLEY IRONSITES RECEPTACLE, BIKE-ARCH BIKE RACKS

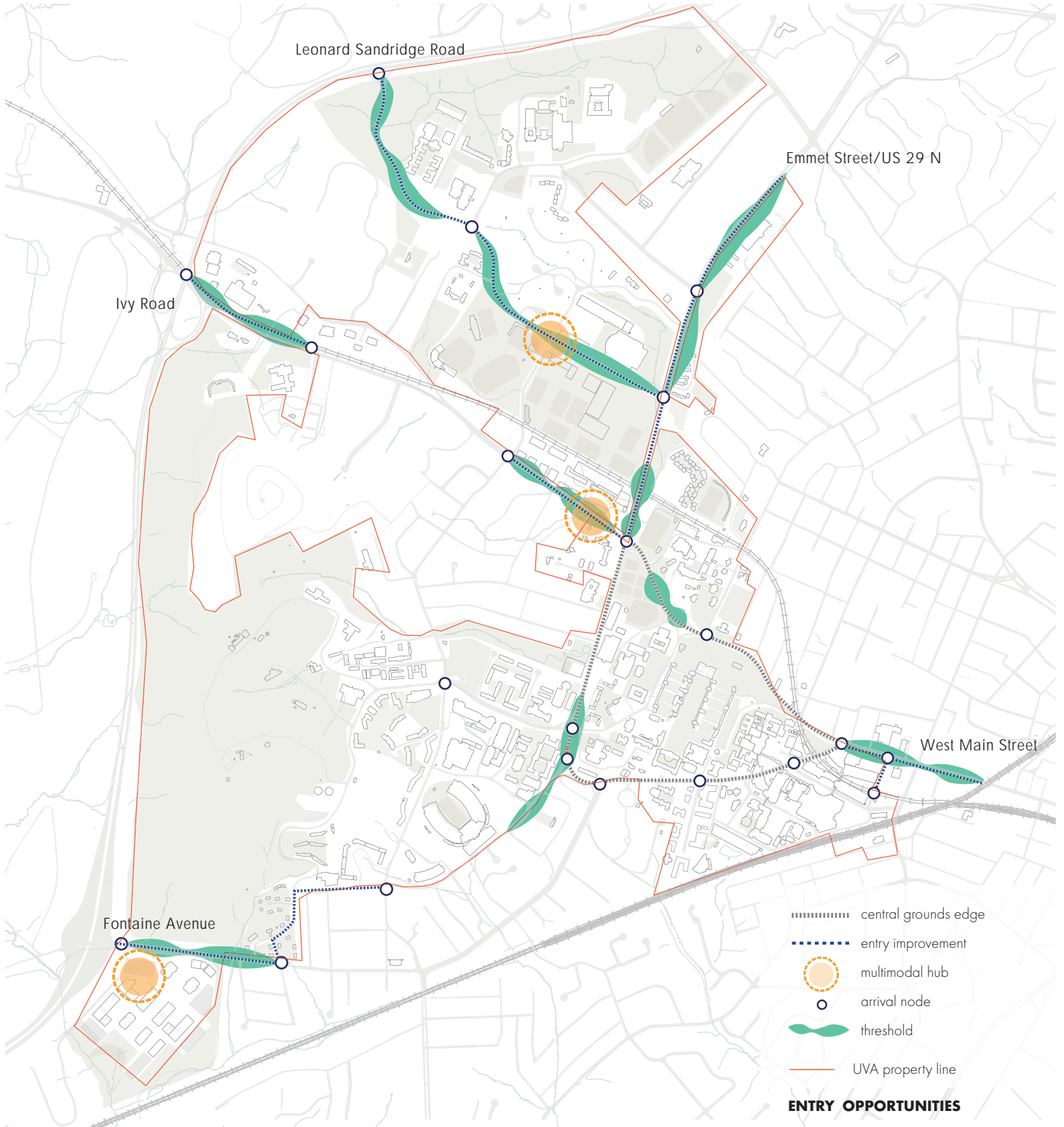
Utilities. Moving overhead utilities underground would dramatically improve the quality and character of the threshold corridor as well as open up opportunities for significant street tree plantings.

Lighting. Installing King Edgewater light fixtures would provide pedestrian-scale lighting and help identify the University precinct. Such lighting improvements would need to be coordinated with the city.

Signage. University Signage Standards should be used in addressing wayfinding within the entry corridor. Entrance gates or walls, used occasionally to define and identify a precinct, center, or school, must relate to adjacent buildings and be designed as part of the overall landscape plan.

Furnishings. University bench styles should be installed to support the activation of places and encourage people to linger. Depending upon context, use the Kingsley Bate Hyde Park teak benches or the Santa & Cole Neoliviano by Landscape Forms.

Receptacles and Bicycle Storage. Victor Stanley Ironsites waste and recycling receptacles should be provided at high-pedestrian-traffic areas. Bicycle culture on Grounds should be supported by the installation of bicycle racks near entrances to buildings and near athletic facilities and fields. Note that pedestrian safety must be considered in siting. Designs should include an integrated plan for seating, gathering, and bicycles, using seatwalls and planting to screen bicycle parking.



ENTRY RECOMMENDATIONS

- **TRAFFIC CALMING.** Introduce a combination of such traffic-calming techniques as raised crosswalks, broad sidewalks, and plantings to bring human scale to the street and cue drivers that they are arriving into an environment friendly to people on foot.
- **THRESHOLDS.** Reinforce planted portals and accentuate overhead bridges as thresholds to the University.
- **LANDSCAPE ELEMENTS.** Use familiar landscape elements including planting, stone walls, furnishings (lighting), water, and sidewalks to signify arrival to University.
- **ENTRIES.** Define entry within each context, making each campus approach a unique unfolding experience using familiar landscape elements.

CONNECTIONS

PEDESTRIAN OBSERVATIONS

The University Grounds covers a large area with varied topography. Walking is a preferred way to move in the areas where there are fine-grained path networks with path choices, such as Central Grounds. Much of the academic core is reachable within a ten-minute walk from the Lawn. However, within the densely built Health System, paths and places are limited, or marginally functional, making navigation hard and walking less desirable and less comfortable. Steep slopes create topographical barriers, and busy roads like Jefferson Park Avenue influence whether people choose, or have the option, to walk.

Walking from the Lawn to North Grounds is less common despite its being approximately a 20- to 30- minute endeavor. Steep slopes, limited path options, and large pockets of inaccessible woodland make walking a less desirable travel mode than bicycle, bus, or car. *The Ivy Corridor Study* and the *2018 Athletics Plan* both support improved walkability and street comfort in this precinct, adding to the grain of the network, and offering more circulation options. *The Distillery Branch Study* proposes completing path networks along Massie Road and addressing stormwater problems as well.

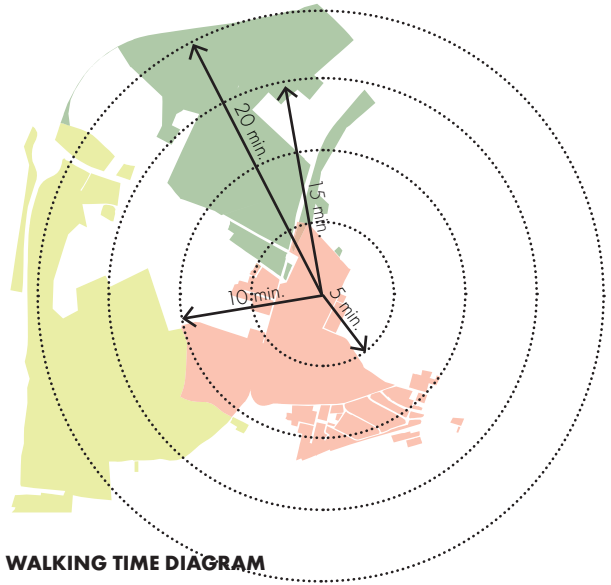
In West Grounds, paths are merely functional, often too narrow (less than 6 feet), and not designed as places to contribute to social and campus culture. During class changes, the narrow sidewalks and huge pedestrian volumes result in unsafe conditions for all modes along McCormick Road. Service corridors are used as people look for shortcuts. The *McCormick Road West Corridor Study* offers proposals for widened sidewalks and a narrower street section.



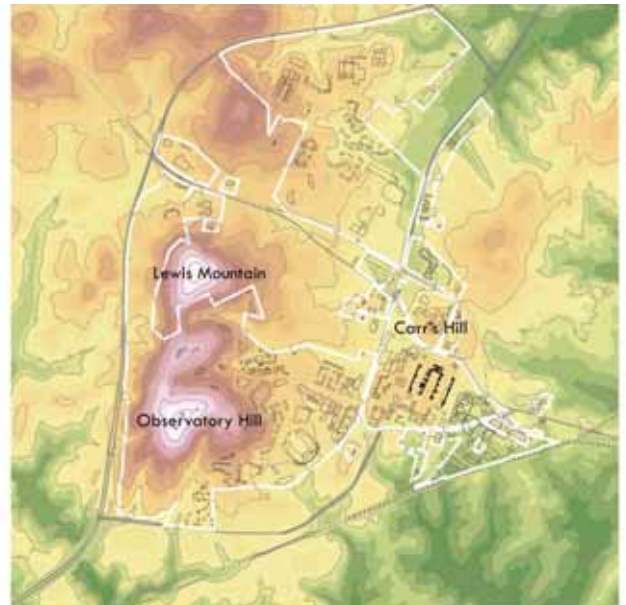
JEFFERSON PARK ROAD



MASSIE ROAD



WALKING TIME DIAGRAM



TOPOGRAPHY, GROUNDS PLAN 2008

PEDESTRIAN NETWORK OBSERVATIONS

Areas of the highest pedestrian volumes are concentrated around academic buildings and student residences in Central and West Grounds. Path widths and number of path options have not kept pace with the increases in student population and the popularity of University special events. Pressures on the network are increasing safety concerns as walking becomes more dangerous, with people choosing to walk in the roadbed and off the paths near service and private vehicles. These conditions challenge accessibility as well as ease of movement. In addition, pedestrian volumes are compromising the adjacent landscapes as walkers cut across and move through planting beds and turf.

The highlighted areas of largest volume also face the most pressures from other transit modes as bicycles and scooters compete for spaces in the system, most particularly in the historic core. Pedestrian infrastructure is insufficient in areas of highest volume (e.g., McCormick Road) and is entirely lacking on portions of University property along Jefferson Park Avenue, Emmet Street, and Massie Road. Design focus areas should address the highest pressure areas first to improve the network overall.

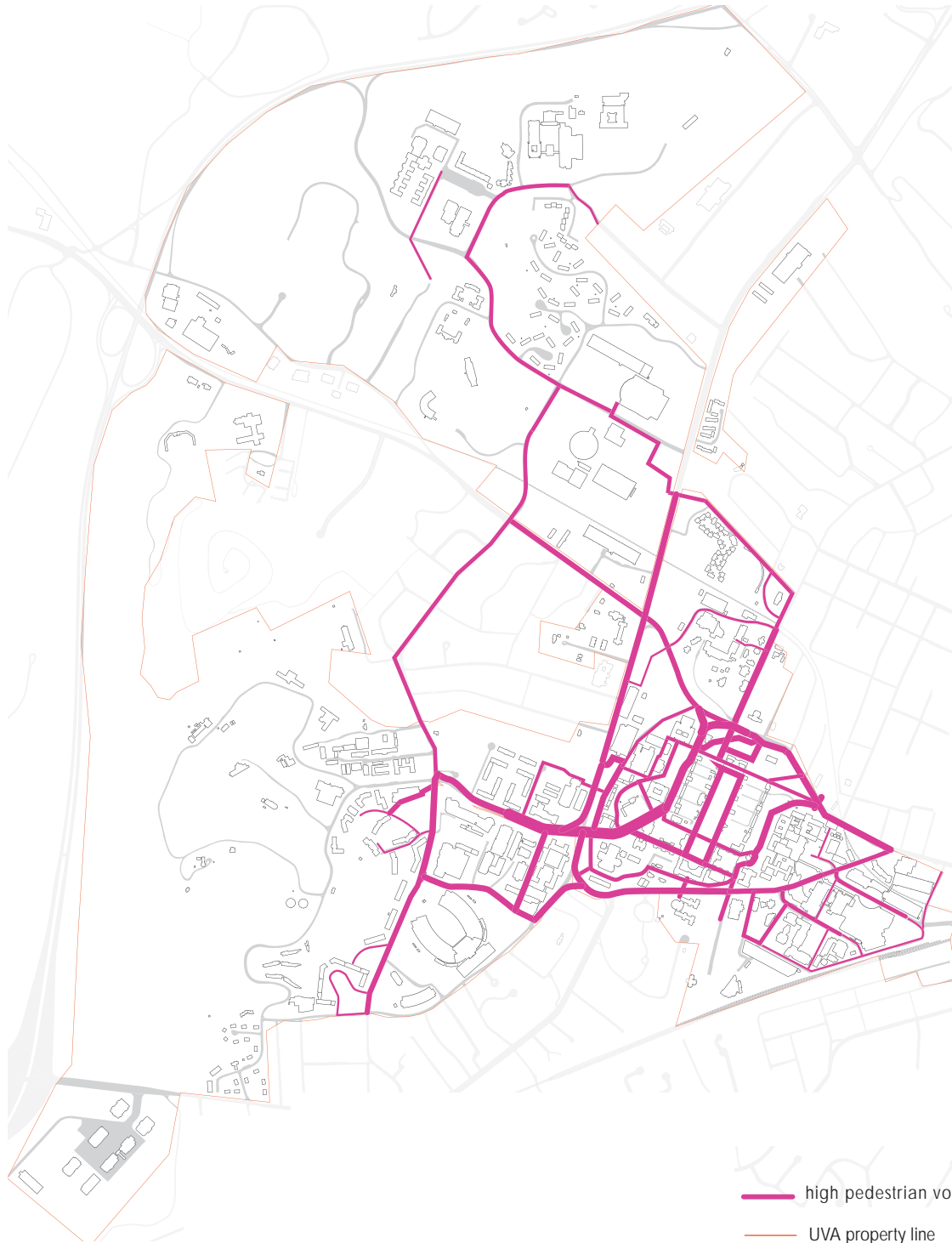
It is important to balance increases in path and hardscape against reductions in planting where possible. Curb-to-curb dimensions should be reduced to give priority to pedestrians by expanding sidewalks. In addition, enhancements should use thoughtful design that blends well with the historic character of the beloved Grounds. Increased accommodation for pedestrians and walking will help to improve intimacy with and care of the valued landscape for all users.



McCORMICK ROAD



JEFFERSON PARK AVENUE



— high pedestrian volumes

— UVA property line

EXISTING PEDESTRIAN VOLUMES

PEDESTRIAN OPPORTUNITIES

To create an overall campus environment where walking is desirable and comfortable, enhancements in the pedestrian network should focus on areas stressed by the greatest volumes and those not well connected in the system. While many areas could be improved, the LFP identifies priority areas.

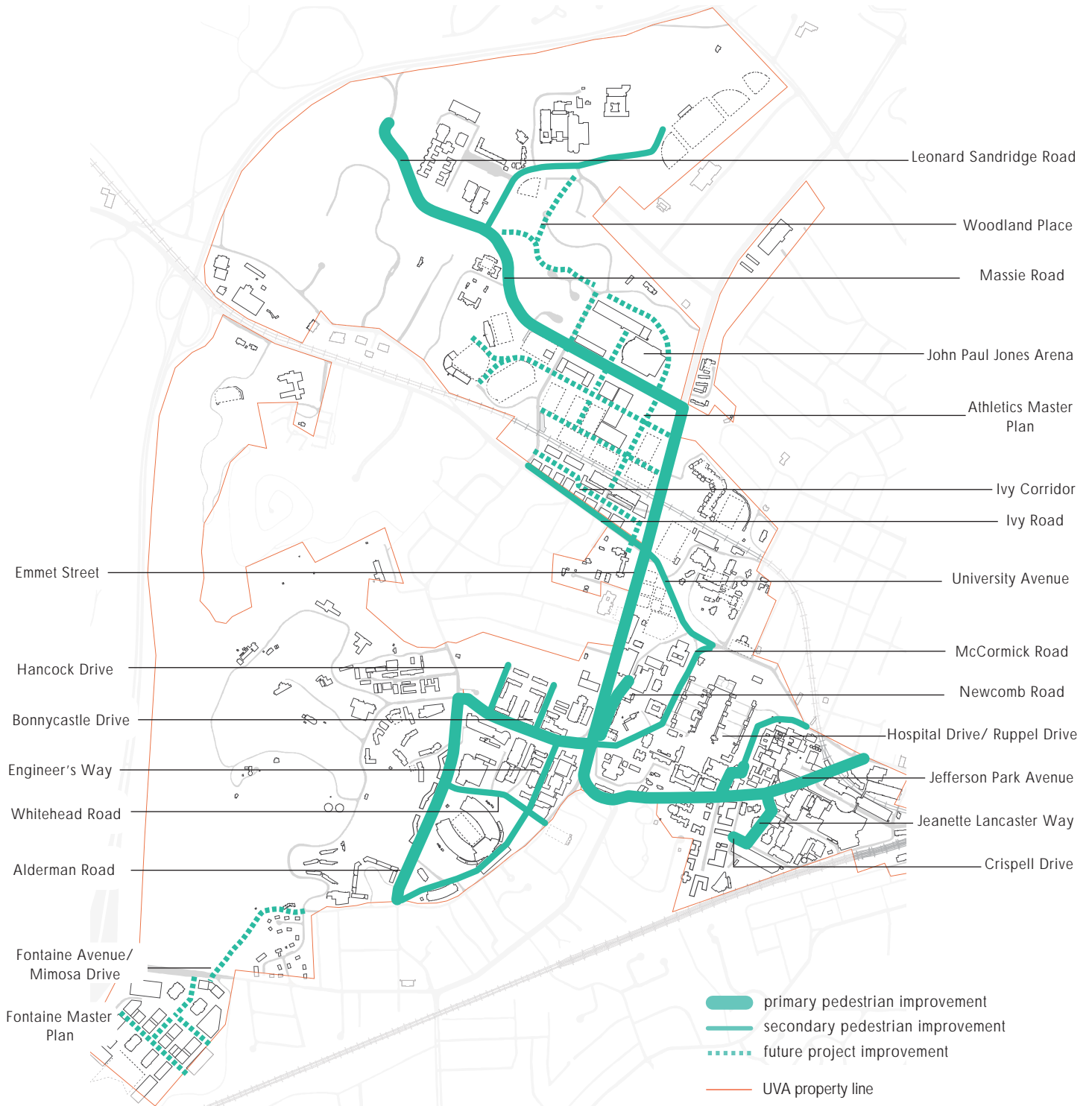
Both streets and pedestrian corridors should be designed with generous walking zones. Overall guidance on pedestrian paths suggests that all walking paths be a minimum width of 6 feet to ensure that two people can walk comfortably side by side. Broader paths of 10 feet or 12 feet may be desirable in high-density areas. An example described in *McCormick Road West Corridor Study* shows 70 percent of the total pedestrian volume occurs on the south side of one corridor, on a narrow sidewalk. Proposals for enhancements would broaden the sidewalk by reducing the road bed widths.

Paving materials depend on context. Brick should be used for pedestrian corridors in the historic core, and largely concrete elsewhere; but special pavers, including porous pavers, brick and concrete combinations, and asphalt pavers may be used, depending on application and context.

Existing mature trees should be taken into account in the widening of paths and installation of permeable systems; these enhancements can compromise existing plantings. Variable path widths can be used to protect existing planting, as necessary. Trees should be planted in lawns or pits to optimize root growth and drainage. Canopy trees are preferred over understory trees for planting along corridors to provide shade and comfort.



GENEROUS SIDEWALKS



PROPOSED PEDESTRIAN ENHANCEMENTS

CYCLING OBSERVATIONS

Existing bicycle routes serve Grounds in a network that stitches together the city/county roads with the University system. The majority of streets are either city or county; University cycling routes are inextricably woven into the city and county network.

The system consists of two types of bike routes: streets with bike lanes and streets with signage or shared streets. Within the University system there are nearly equal numbers of both. The city has an up-to-date map that identifies the routes and their amenities. The adjacent map distills the city map, the Charlottesville Bicycle and Pedestrian Map, to identify the primary routes as they run through Grounds.

Investments in bicycle infrastructure benefit both the University and Charlottesville community. One significant benefit is safety. Additionally, creating more miles of high-quality connected bicycle infrastructure would increase numbers of cyclists, draw a wider cyclist demographic, and decrease vehicle use. An increase in cyclists has proven to equate to an increase in safety.

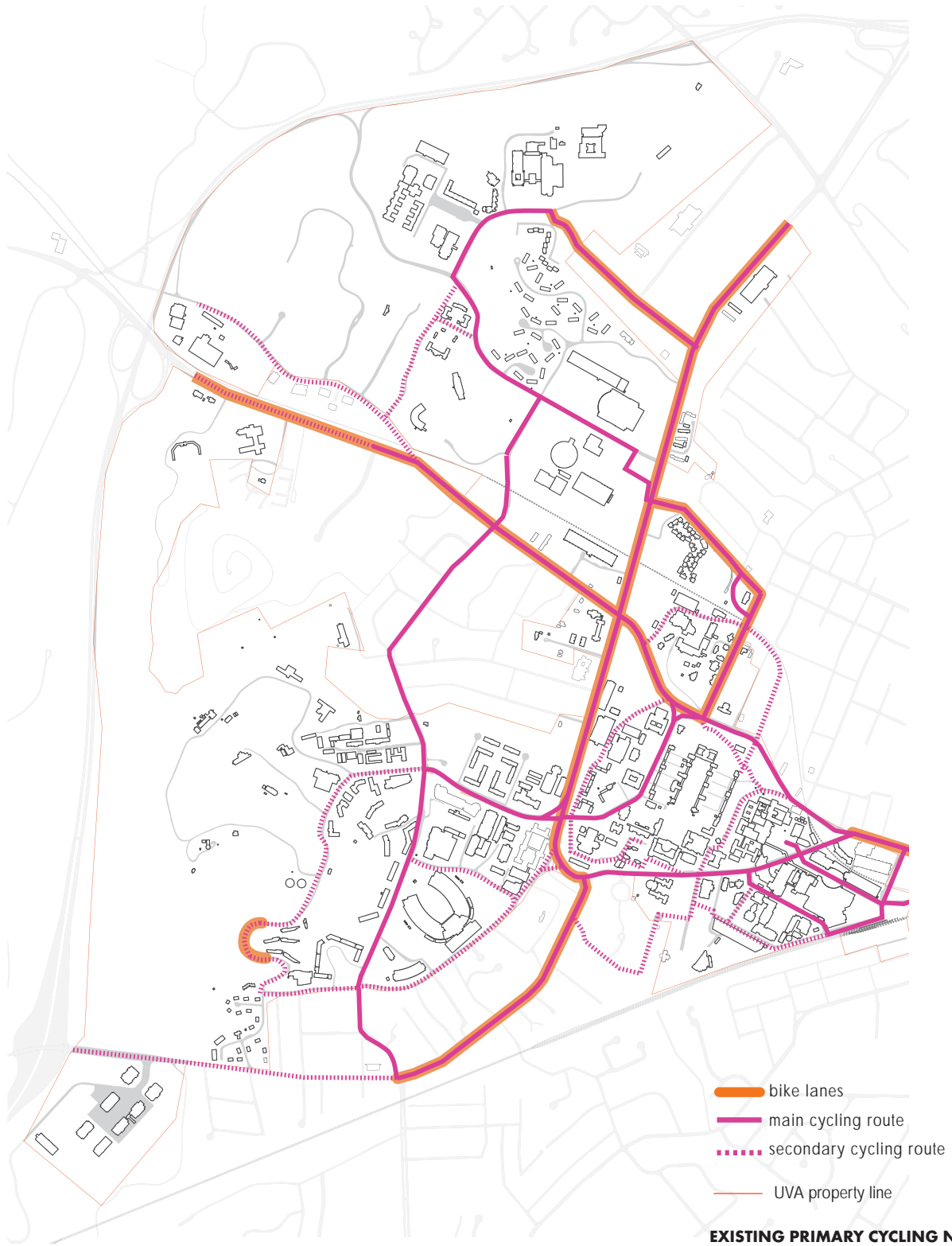
Use of bicycles and other modes of wheeled transport, such as scooters, continues to increase on University Grounds. Connecting the fractured segments of the system would encourage more users to move continuously and safely along these corridors. Providing safe and direct cycle paths is essential to creating an infrastructure that will encourage cycle use and an interconnected campus.



ENGINEER'S WAY

The University's bicycle-path system needs to remain consistent and legible as it grows. In addition to expanding the network, the University should support its U Bike, bikeshare and repair stations to expand user groups, and expand its communication initiatives to promote benefits of cycling for all users at each new academic year.

The University of Virginia is listed as one of the Top 40 Bike-Friendly Campuses by Best College Values. The benefits of constructing a more human-scaled urban fabric are far broader than a simple reduction in transit and car journeys. The improvements in quality of life, increased social interaction, and enhancement of the public realm create real and lasting value to the University community.



CYCLING OPPORTUNITIES

There continue to be additions and improvements to the entire local bicycle network, including support for the University's U Bike program. Increases in pedestrian texting magnify the need for additional visual cues for cyclists in areas where the different modes mix. Therefore areas where high pedestrian volumes overlap with active bicycle ridership are the most critical zones for needed streetscape improvements. Focusing on design details and the mixing of the travel modes is essential to supporting a safe, human-scale landscape.

Bike zones may be integrated into walking areas provided enough room is available for bikes and pedestrians to coexist safely. Designated bike zones within pedestrian areas encourage speeding and entitlement and are therefore discouraged. Bike lanes should be accommodated within streets, unless streets are limited access.

The adjacent map identifies areas where the combination of pedestrian volumes and cycling is particularly difficult. Specific attention should be paid to design enhancements in these focus areas.

One of the most challenging aspects of creating bicycle- and pedestrian-friendly environments is locating space for convenient and attractive bicycle parking. At Washington University in St. Louis, bicycle parking is corralled in parking courts with low seat walls with interior plantings. At Stanford University, bicycle parking is interspersed with planting. Integrating bicycle parking with gathering places outside buildings is desirable near primary building entries.



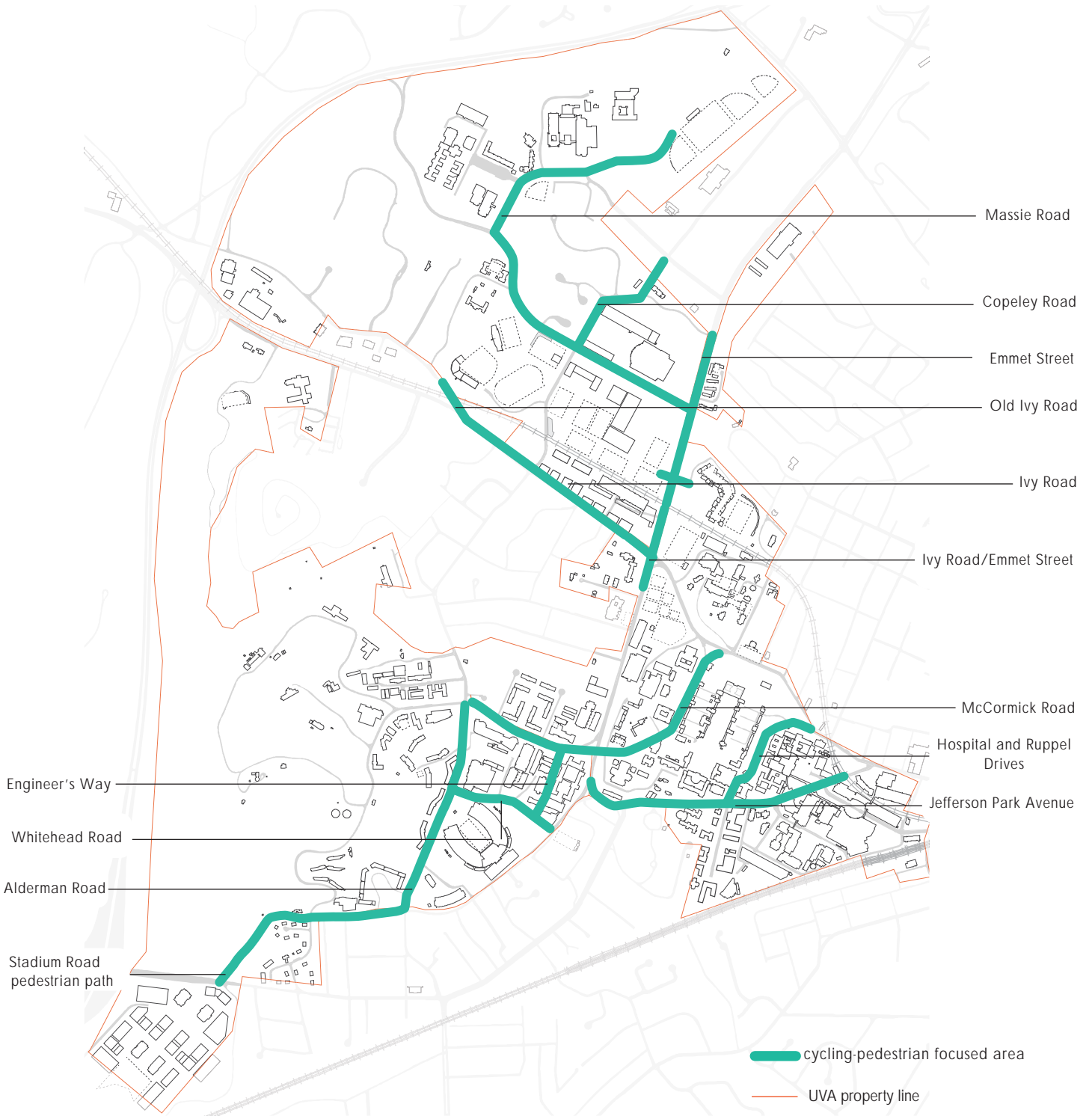
BICYCLISTS, UNIVERSITY OF CALIFORNIA, DAVIS



BICYCLE PARKING, WASHINGTON UNIVERSITY IN ST. LOUIS



BICYCLE PARKING, STANFORD UNIVERSITY



PROPOSED CYCLING PRIORITIES

STREET OPPORTUNITIES

University corridors should focus on human-scale details and management strategies that preserve a sense of place through traffic-calming measures and designs that prioritize people on foot.

MANAGED STREETS

A managed street functions with segregated modes and is designed for flexibility. For example, service or transit vehicles may be necessary on a primarily pedestrian corridor. Flexibility may be required when there are limitations in the right of way or street section due to steep topography or utilities. Other examples include special or seasonal events that shift the priority from vehicular to pedestrian traffic. Managed street designation also can be a test, a way for a managed street to begin to shift to reduce vehicles to a more pedestrian-dominant street and ultimately a shared street.

Managed streets should encourage slower vehicle speeds and volumes, and are designed to maximize pedestrian priority through details such as broad sidewalks, legible walking surfaces, and shade trees. They are operationally managed as flexible streets.

Streets on Grounds recommended for managed street designation include:

- McCormick Road
- Jeanette Lancaster Way
- Culbreth Road



IMPROVED PEDESTRIAN ACCOMMODATION

A street with improved pedestrian accommodation has widened sidewalks, new sidewalks where none currently exist, improved paving, and consistent canopy street tree planting.

Streets on Grounds recommended for improved pedestrian accommodation include:

- Whitehead Road
- Alderman Road
- Massie Road
- Emmet Street
- Jefferson Park Avenue
- Copeley Road
- University Avenue

SHARED STREETS

A shared street designation is appropriate in places where pedestrian activity is high and vehicular volumes are low or discouraged. A shared street includes a zone where pedestrians and bicyclists mix and private vehicles are restricted. Shared streets offer pedestrians freedom of movement, expanded accessible walking areas, more space for amenities, and improved safety due to reduced vehicle speeds or limited (or no) vehicular access. They are places that attract more people, and can therefore support activities like concerts, and special events.

Shared streets lack design elements that prioritize vehicles and include elements prioritizing the function of the street as a place for gathering, seating, events, and art.

The more shared streets that can be introduced into Grounds, and permit parking areas reduced or relocated, the more opportunities there will be for improved pedestrian access and community building.

Streets on Grounds recommended for shared street designation include:

- Treehouse Lane
- Newcomb Road (South)
- Hospital Drive
- Ruppel Drive
- Hancock Drive
- Bonnycastle Drive



PROPOSED PEDESTRIAN PRIORITY STREETS

TRANSIT OBSERVATIONS

An overview of the University transit system reveals that there is variation in the quality of experience at some points in the system. The concept of the “last mile” focuses on arrival, placemaking, and transitions between modes of travel. Amenities within the system can improve the time spent traveling.

TRANSITIONS AND THE LAST MILE

Opportunities are identified for improvements in transitions between transit modes and the ease of completing the “last mile” of a commute. It is important to look at the integration of the systems of parking, bus riding, and bike parking in relation to the pedestrian experience. Efficiency and convenience are paramount, but these transfer points should also be legible in the landscape, safe, connected, and pleasant. Providing a desirable “place” at transfer points supports commuters and optimizes the time they spend traveling. Making transfer points memorable and desirable with additional services, such as coffee, food, and wayfinding, improves the travel experience and strengthens community.

BUS PATRON AMENITIES

Bus shelters and seating are important amenities at busy transit stops. Shelters are desirable for comfort and protection from summer sun and winter winds. Adequate space should be provided so that patrons are not blocking sidewalks or standing in landscape.

TRANSIT-MULTIMODAL POINTS

At present, there are no fully developed interceptor points on the University Grounds that bring together commuter parking, transit, and bicycles in a designed place. There are stops that bring some of the systems together, but there are not intentionally designed points that streamline the multimodal experience.

Potential locations for multimodal points include the intersection of Massie and Copeley Roads in North Grounds; the intersection of Fontaine Avenue and Ray C Hunt Drive in West Grounds; and the Ivy Road Parking Garage in Central Grounds.



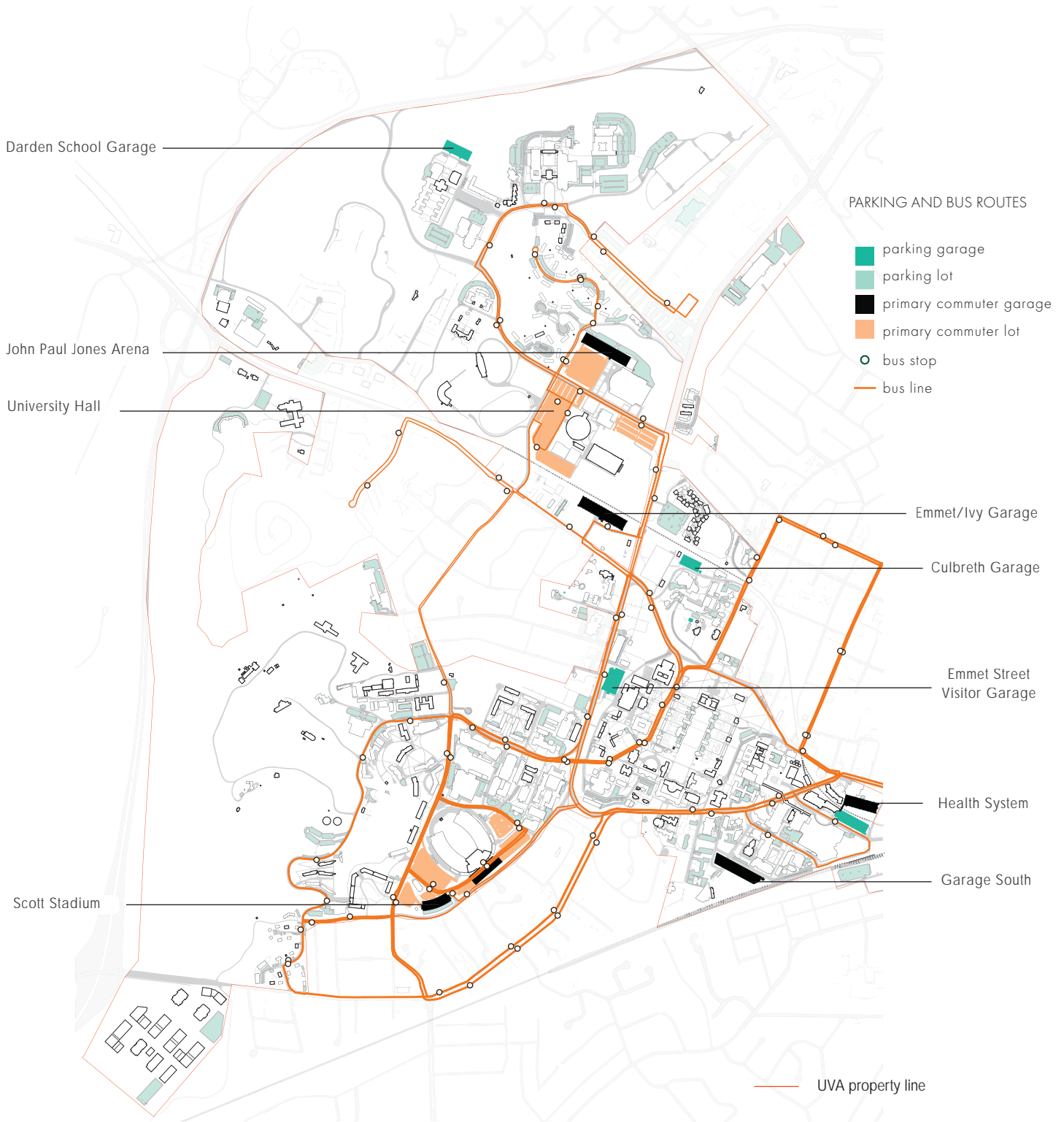
NORTH GROUNDS: MASSIE AND COPELEY ROADS



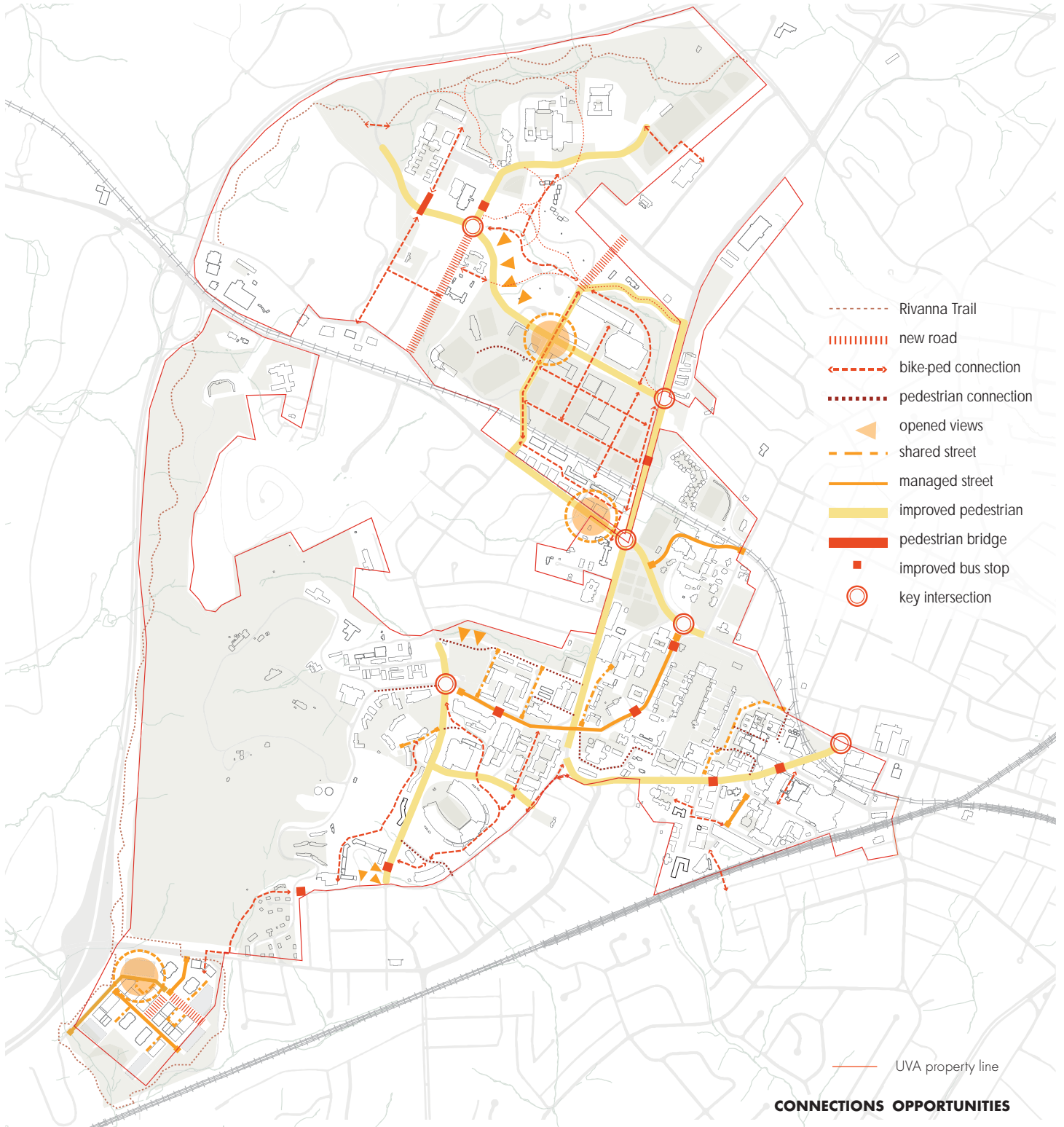
WEST GROUNDS: FONTAINE AVENUE AND RAY C HUNT DRIVE



CENTRAL GROUNDS: IVY ROAD PARKING GARAGE



EXISTING COMMUTING LANDSCAPE



CONNECTIONS OPPORTUNITIES

CONNECTION RECOMMENDATIONS

- **PEDESTRIAN.** Complete pedestrian network where sidewalks are missing along major roads like Massie and Jefferson Park Avenue. Continue to develop a fine-grained network of pedestrian paths, increasing the quality of paths to offer choices and variety. Use paths to knit together places, reducing perceived distances between destinations.
- **PEDESTRIAN-BICYCLE.** Focus on expanding bicycle routes in high-volume pedestrian areas and provide streetscape design with signage, shared lanes, and traffic-calming devices for all travel modes. Continue to increase convenience of bike parking in locations adjacent to the path network and primary building entries.
- **STREETS.** Consider opportunities for improved walkability in street design with broad sidewalks, shade trees and planting, and new garden pockets along paths to allow gathering and seating out of the pedestrian flow. Expand numbers of managed and shared streets, and focus on traffic calming to prioritize pedestrians.
- **TRANSIT–MULTIMODAL POINTS.** Design multimodal transfer points in North, West, and Central Grounds. Connect to major commuter parking garages and provide additional services such as coffee, cafe, or grab-and-go. Provide bike parking hubs. Designs should include raised platform for transit to load and offload 50-person surges (optimally 60 feet long) without making the riders cross traffic. Manage volumes for efficient transitions of four to five minutes, reducing “dwell time.” Transfer points should be legible in the landscape, safe, and pleasurable to experience. Provide adjacent outdoor green gathering places with shade for comfort and convenient seating. Integrate systems of parking, bus stops, and bicycle parking in relation to the pedestrian experience.
- **BUS STOPS.** Create desirable “places” or gathering spaces adjacent to mode transfer points. Evaluate each stop for comfort and protection from the elements. Where volumes warrant, provide amenities such as bus shelters, seating, and bike parking.

PLACES

OBSERVATIONS

The University landscape offers opportunities and value for cultural life. Landscape use has a profound influence on whether the University is perceived as engaging, lively, welcoming, comfortable, and safe. Social interactions, both structured and spontaneous, that occur in a rich variety of well-designed environments contribute to a positive impression of University Grounds.

Mapping outdoor places throughout the Grounds shows a variety of landscape uses and types, from the iconic Lawn in Central Grounds to the woodlands of Observatory Hill in West Grounds. Newer landscapes, such as the Dell in West Grounds, enhance social and environmental engagement and support academic uses. The new Contemplative Sciences Building planned adjacent to the Dell will complement programs in a way that could not have been imagined before completion of the Dell. The planned Ivy Road Development in North Grounds and the new Brandon Residential Project in Central Grounds both promise to further broaden the University's landscape uses, treating the landscape as connecting environmental fabric for experience rather than a backdrop for buildings.

Even with these new additions, a clear system and hierarchy of well-defined gathering spaces is still lacking for North Grounds, West Grounds, and the Health System of Central Grounds.

Existing conditions include:

North Grounds:

- broad distances between landscape places,
- no memorable central landscape place,
- small-scale outdoor places limited to professional schools,
- athletics and parking-dominant landscape types,
- riparian landscapes that are not optimized.

West Grounds:

- residential landscapes that lack shade and vegetation to reinforce gathering areas,
- most residential buildings facing away from Observatory Hill rather than engaging it,
- predominantly impervious paving (stadium parking lot),
- stormwater facilities that are neither celebrated nor integrated,
- entries to Aquatics/Fitness Center and Observatory Hill Dining that are not well activated with gathering.

Central Grounds:

- limited furnishings and places for gathering in the dense academic corridors, and
- minimal green places and gardens in Health System.



COURTYARD: UVA LAW SCHOOL



PLAZA: NEWCOMB HALL PLAZA



GARDEN: PAVILION GARDEN



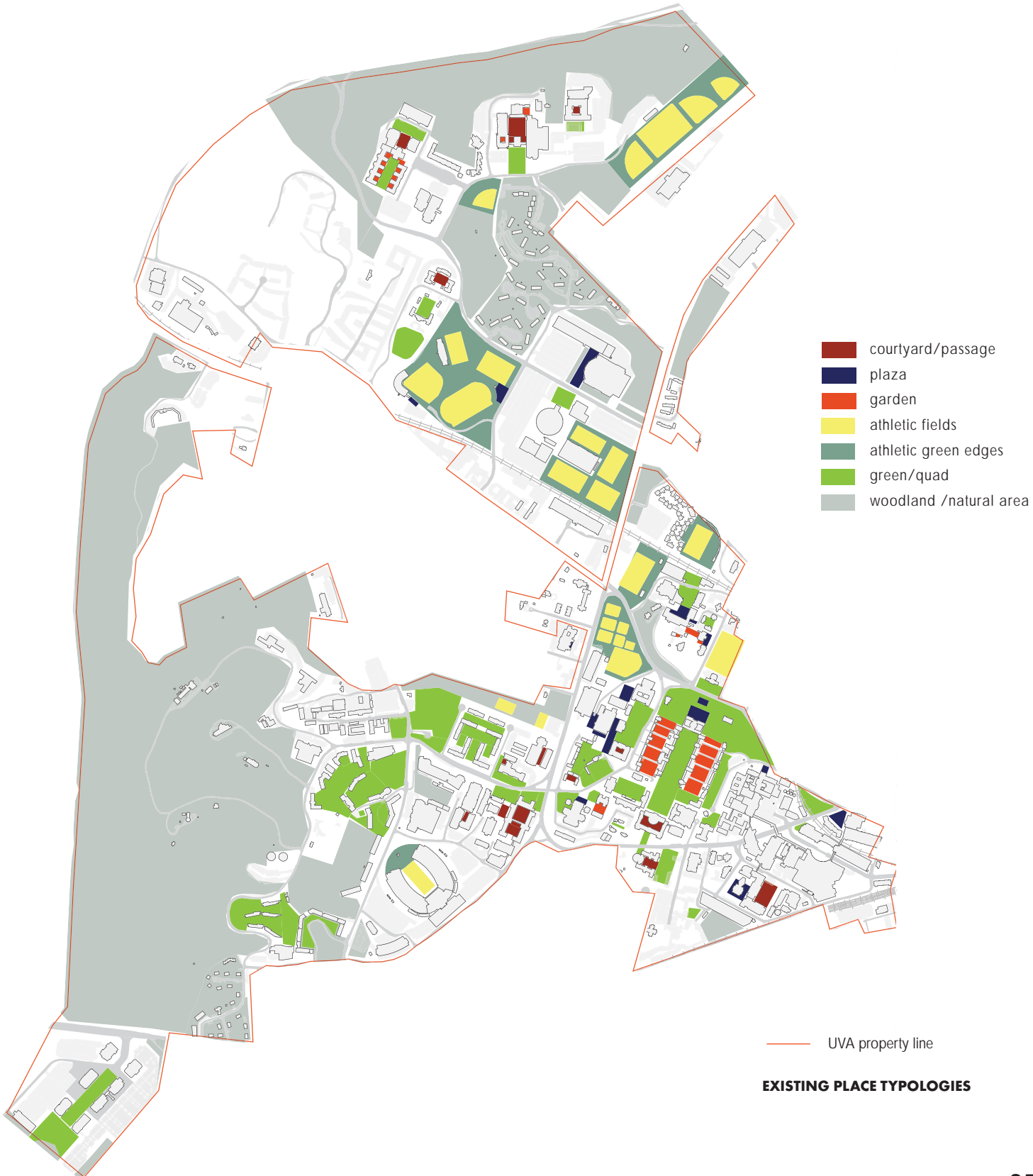
ATHLETIC: LAMBETH RECREATION FIELD



GREEN: BROOKS HALL LAWN



WOODLAND: OBSERVATORY HILL



OPPORTUNITIES

Updates to the Existing Places Typologies (p.85) diagram should aim to diversify landscape types in each precinct, especially in North and West Grounds. Rather than identify all placemaking opportunities in each precinct, the LFP proposes ways to expand future placemaking with hybrid landscapes that serve multiple roles in the campus, with classifications of “environmental places” and “gathering places.” Examples include investing and reinvesting in environmental amenities, particularly woodland and stormwater places, expanding the definition of street corridors as gathering places, focusing on gathering places at building entries, and updating existing Health System places as green pockets.

HYBRID LANDSCAPES

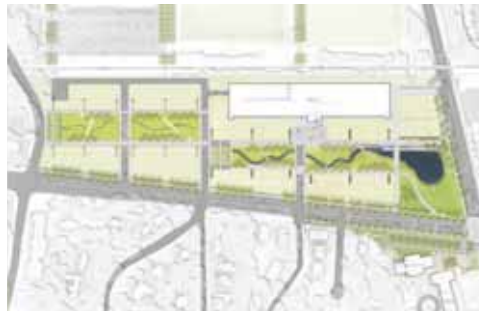
The University has numerous precedents of places that serve environmental as well as social, recreational, and cultural functions. The Dell is the largest example of this. As more bioretention basins and site-specific water management is addressed on a project-by-project basis, there will be more opportunities to enrich Grounds at multiple scales. Both the future Ivy Road Development and the new green street on Brandon Avenue are planned with environmental “working” landscapes as centerpieces. Some stormwater basins, like the facility behind Gilmer Hall, are purely functional and should be readdressed as placemaking opportunities to better engage adjacent program and path systems. Investing in multifunctional places is a good use of resources, as well.



BRANDON AVENUE GREEN CORRIDOR



IVY ROAD CENTRAL GREEN CORRIDOR



IVY ROAD GREEN CORRIDOR



BRIGHTON, UNITED KINGDOM



SEOUL, SOUTH KOREA



UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA



UNIVERSITY OF PENNSYLVANIA BICYCLE PARKING

STREETS AS GATHERING PLACES

The LFP diagram proposes that active street corridors be described both as “connections” and “places.” To expand the definition of street from conduit for mobility to “gathering place” would benefit the character, identity, and safety of Grounds. The active corridors, such as McCormick Road, Alderman Road, and Hospital Drive, are vital to campus life. Designing the street corridors with places for meeting, sitting, events, celebrations, and bringing the inside outside helps to create safe places for seeing friends or encountering others. The more the primary thoroughfares in the interior of Grounds become identified as “places,” the more enriching the social and cultural character of Grounds. Whether any of these streets functions as a great public place is measured by people’s willingness to linger along it.

ENTRIES AND EDDIES

One of the best places to bring the inside outside is at building entries, where numerous people coming and going could benefit from places to sit, to study, or to watch for someone. These “eddy” areas can be designed with integrated seating, lighting, and vegetation. Designs should incorporate convenient bicycle or scooter parking beside the main pedestrian flows, ensuring the bicycle parking is safely and corralled within green places.

GREEN POCKETS

Updating green places in the Health System is significant for the health and wellness of visitors and employees. (See *Central Grounds Recommendations* for details, p. 165.)



PLACE RECOMMENDATIONS

- **LANDSCAPE.** Prioritize landscape as integral to campus life with places that vary in program, size, and planting structure. Design a range of communal spaces to encourage gathering that offer movable seating, shade/sun, and planting. Promote a consistent University identity with paving, furnishings, lighting, and signage.
- **GREEN CENTRAL PLACES.** Define new central green places and activity nodes in North and West Grounds and the Health System to provide gathering places and precinct identity. Design central green spaces adjacent to multiuse building programs, to ensure lively and vital activity throughout the seasons. Renovate existing spaces to increase opportunities for meaningful social and academic use by attracting people and fostering interaction. (See recommendations for each precinct for specific design direction.)
- **SUPPLEMENTAL PLACES.** Identify and connect supplemental places to support diverse needs and flexible outdoor programs. Design thoughtful and expanded outdoor social spaces to relieve overcrowding in primary pedestrian corridors. Supplemental places, ideally adjacent to building entries, can act as “eddies” and green pockets along these corridors to disperse people along crowded pathways.
- **WOODS AND WATER.** Enhance Distillery Branch, Moore’s Creek, Observatory Hill, and the North Grounds Woods as part of the campus fabric as places valued for their natural resources and social and cultural benefits. Development plans should recognize the role of these natural systems at a Grounds-wide scale and at a site-specific scale.
- **PLACES AND SUSTAINABILITY.** Integrate placemaking with site-specific sustainable design and recommend strategies for attaining University environmental and development objectives. Use water management as a driver for design details and placemaking. Optimize existing riparian and woodland landscapes as resources for site enhancement and for pedagogical enrichment.
- **TREES.** Increase shade and canopy cover in areas that are open and exposed to reinforce comfort and placemaking.
- **STREETS AS PLACES.** Define active street corridors as linear places with a consistent University identity and character. Explore ways to give the busiest corridors a sense of cohesiveness. Prioritize pedestrians in these corridors to improve comfort, accessibility, and safety.



North Grounds

Central Grounds

West Grounds

UVA property line

ENTRIES

- ⋯ central grounds edge
- ⋯ entry improvement
- multimodal hub
- arrival node
- 🌿 threshold

CONNECTIONS

- ⋯ Rivanna Trail
- ⋯ new road
- ⋯ bike-ped connection
- ⋯ pedestrian connection
- ▶ opened views

PLACES

- ⋯ shared street
- ⋯ managed street
- ⋯ improved pedestrian
- pedestrian bridge
- improved bus stop
- key intersection
- gathering space
- environmental amenity
- UVA property line



North Grounds

Central Grounds

West Grounds

— UVA property line

A. LFP PROPOSED IMPROVEMENT DIAGRAM (left)
B. LFP PLAN RENDERING (right)



LD IVY

LD IVY

KD

ALDERMAN

LD IVY

HEREFORD

ALDERMAN

STADIUM



III. PRECINCT RECOMMENDATIONS

A. NORTH GROUNDS

NORTH GROUNDS

North Grounds primarily supports graduate programs and athletics. The Darden School of Business and the School of Law built their own suburban campuses as “oases” away from the historic core and continue to be highly dependent on car or transit. Precinct development has not focused, until recently, on a connective public realm or the spaces between destinations. New projects like the *Ivy Corridor Strategic Planning Study* (2016)/Emmet Ivy Development (2019) and the *Virginia Athletics Master Plan* (2018) envision placemaking and better pedestrian links in an effort to improve daily and event walkability. Currently, the isolation and lack of a significant central outdoor place in North Grounds affect perceptions of the precinct as being separate, with minimal collective University community identity.

At the center of the precinct is the Copeley Hill Housing complex for graduate students and families, set within a mature woodland with the Distillery Branch stream corridor in its lowland. The site’s dense woodland edges are a barrier rather than a welcoming threshold due to a lack of views across and limited paths and places within. As the Copeley Hill buildings age, it is unlikely they will be rebuilt in this same manner; which offers an opportunity for this environmentally diverse area.

North Grounds LFP recommendations would boost the existing natural resources and focus on the development of an active public realm at Copeley Hill Housing. At the center should be an environmentally rich destination, which can improve connections through a focus on pedestrians and help shift from the dependence on vehicles. Locating a multimodal hub adjacent to this new place would concentrate the energy of the precinct and create a new community destination.

GOALS

CONSERVATION

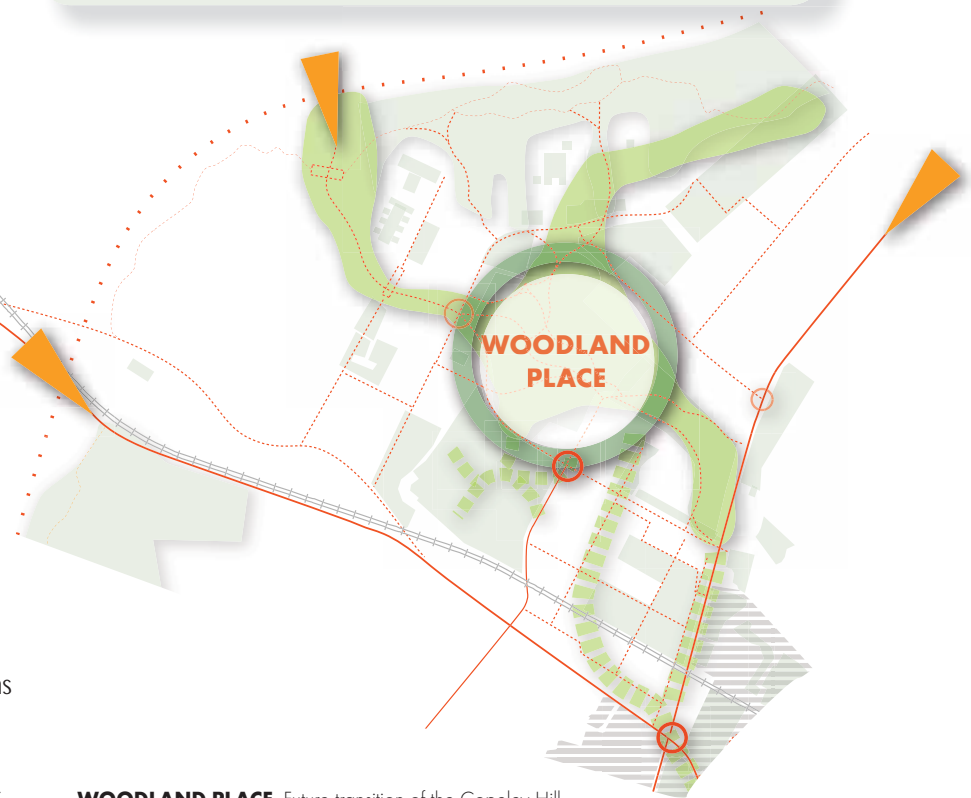
- Highlight woodland place.
- Enhance environmental amenities.
- Improve recreational health.

CONCENTRATION

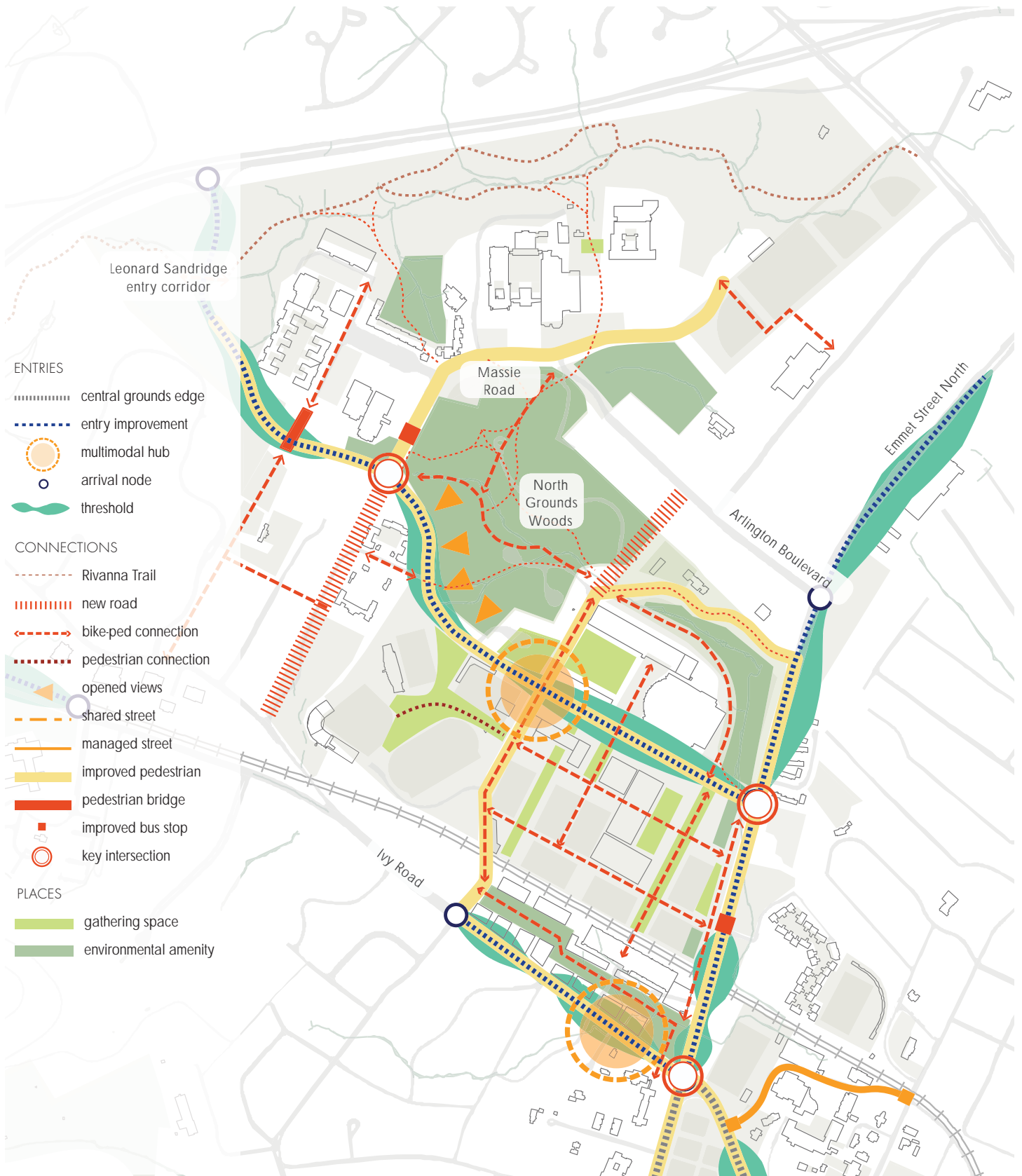
- Increase activity nodes.
- Activate day-to-day vibrancy.

CONNECTION

- Expand and diversify connections.
- Create multimodal transportation hub.



WOODLAND PLACE Future transition of the Copeley Hill Housing site to a recreational and natural amenity would transform its role in its precinct to a connector rather than a separator.



LFP NORTH GROUNDS PROPOSED IMPROVEMENT DIAGRAM

LANDSCAPE CHARACTER

The North Grounds Woods have a strong mixed deciduous canopy, and some of the surrounding streets are vehicle-dominant. Expanding the tree canopy cover to include a shaded streetscape would both increase plant diversity in the precinct and help to civilize the circulation system for pedestrians. Planning for the new athletics area should include a strong canopy cover in the pedestrian circulation areas and gathering places to ensure comfort for athletes, visitors, and staff during games and events.

Focusing on woodland conservation and restoration should improve the health of the North Grounds canopy and enhance the undervalued Distillery Branch corridor. In addition, the stormwater basin north of Darden School of Business could be improved to better integrate it with the natural landscape, increasing its value and function as a site amenity.

In the same way that the Dell has become an environmental centerpiece of the Central Grounds, the North Grounds woodland stream corridors can be enhanced to serve multiple roles as recreation destinations, ecological resources, and community builders. The landscape of North Grounds should feature the dominant Piedmont woodlands with a park-like, natural landscape.



NORTH GROUNDS WOODLAND



NORTH GROUNDS WOODLAND



LEONARD SANDRIDGE AND MASSIE ROADS

The Leonard Sandridge Road is an arrival corridor to North Grounds for the business and law schools and for events from the US-250 bypass. Currently, the corridor has no shade and little indication of arrival to the University, especially for visitors. The use of standard University landscape elements would signal University arrival with familiar and welcoming components.

ARRIVAL CORRIDOR

Defining the corridor as part of University arrival would improve perceptions of North Grounds' connection to the broader University. A number of methods could be used to improve the corridor's identity, including new University signage, lighting, and stone walls. The welcoming aspects of the corridor can be improved with increased tree planting, where appropriate. Extending the sidewalk along the corridor to the Rivanna Trail would encourage walkability, biking, and use of natural resources of the Rivanna Woodland, which has already been highlighted with a crosswalk between trails.

An overhead pedestrian bridge to connect the North Grounds Recreational Center and Darden to the south could serve as a University threshold and provide direct, safe crossing over Leonard Sandridge.



LEONARD SANDRIDGE ARRIVAL CORRIDOR



MASSIE STORMWATER BASIN



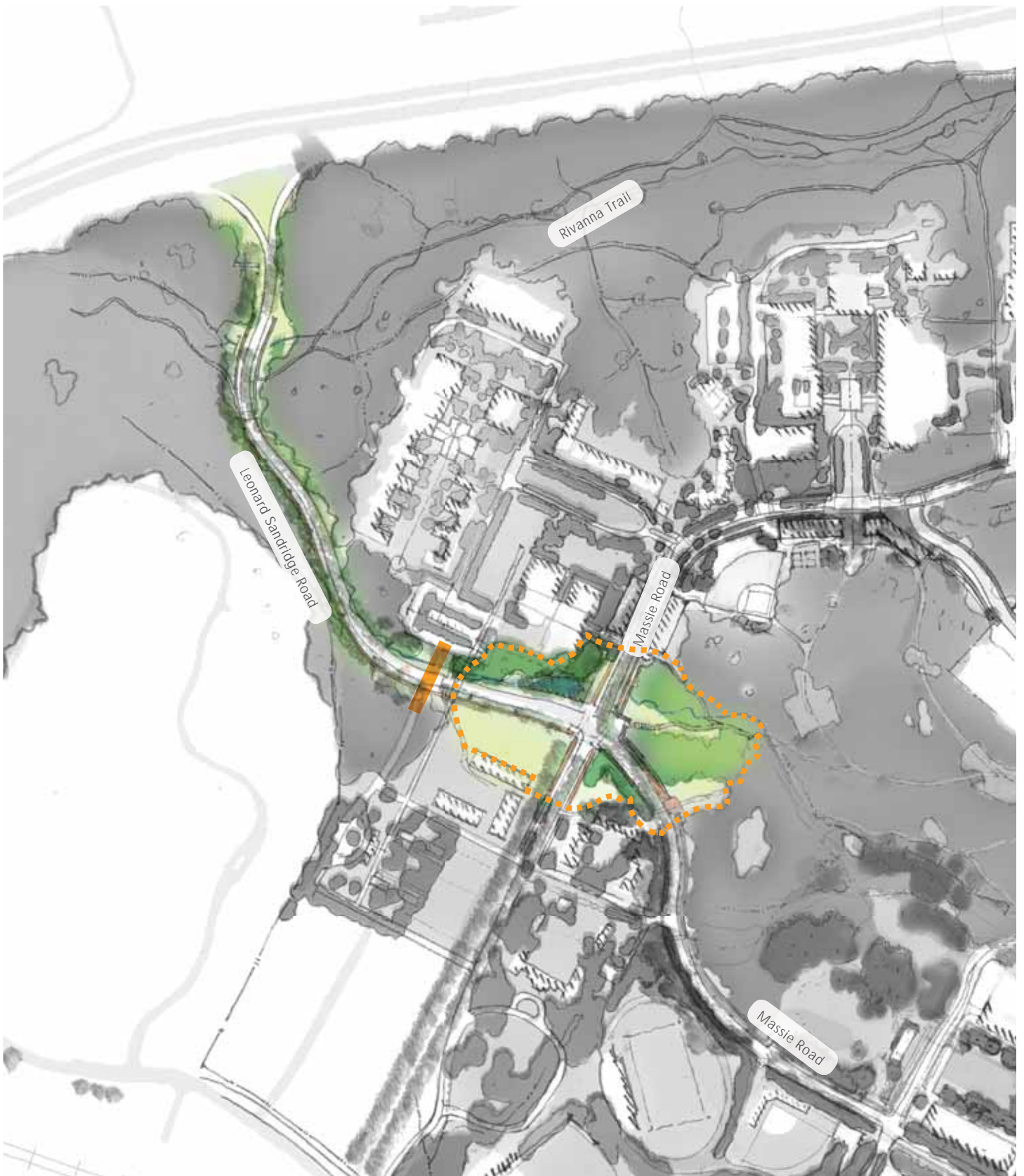
LEONARD SANDRIDGE AND MASSIE ROADS INTERSECTION

INTERSECTION

The intersection at Leonard Sandridge and Massie Roads offers an opportunity for orientation and transition from interstate speeds to the slower speeds of a campus street.

To the east, limbed-up lower branches of the mature trees at the corner should visually open into the woodland. Woodland restoration and maintenance and selective clearing would brighten the views and encourage people on foot and on bicycle to travel through the woodland.

Another corner improvement should address the function and presentation of the existing stormwater basin at the northwest corner. Enhancements would improve the appearance and make it a place to linger, combining function with a welcoming planting aesthetic.



MASSIE ROAD MIXED-USE NODE

To increase street activity and aggregate the energy from the North Grounds Recreational Center, a mixed-use node combining graduate residential with service uses should be created. A benefit and goal of mixed-use is creating more urban, less suburban streets. Views and connections to the woodland make the site an attractive development location.

MASSIE ROAD STREETScape

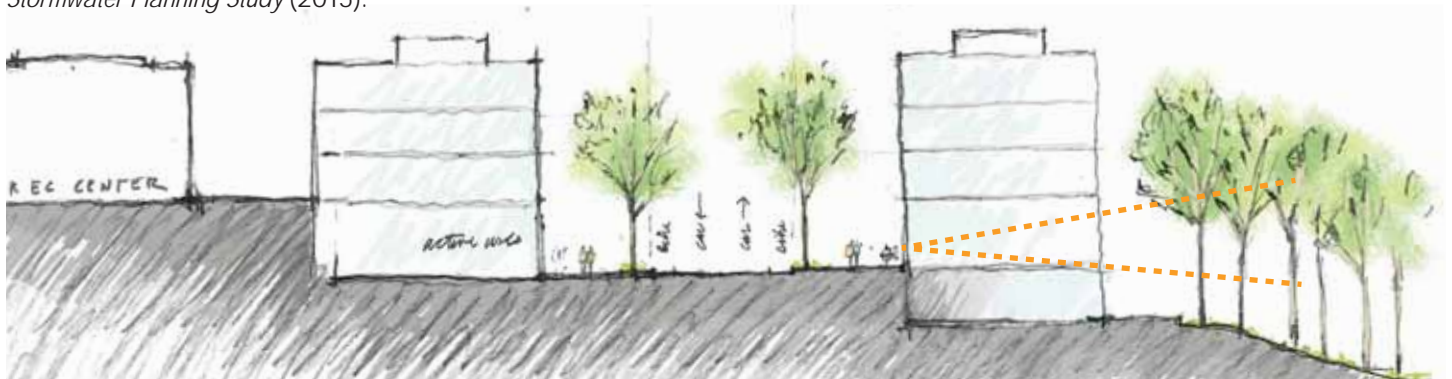
The Massie streetscape should comprise a tree-lined two-lane street with trees limbed up for woodland views. Broad sidewalks, lighting, and a low stone wall for erosion control and woodland demarcation would encourage walking. A series of places and crossings at 300 foot intervals would meter the street and shorten perceived distances. Work should support the *Distillery Branch Stormwater Planning Study* (2015).



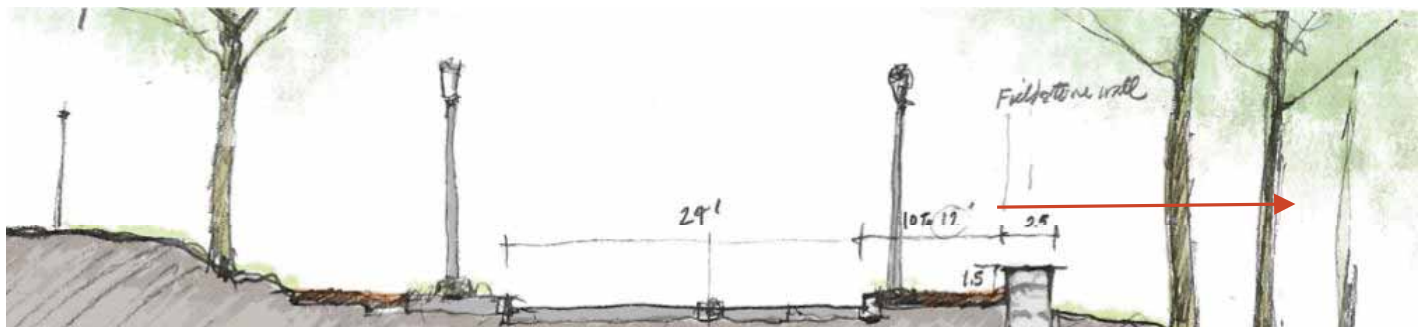
PRECEDENT FOR OPENING TO WOODLAND AT BUILDING BASE



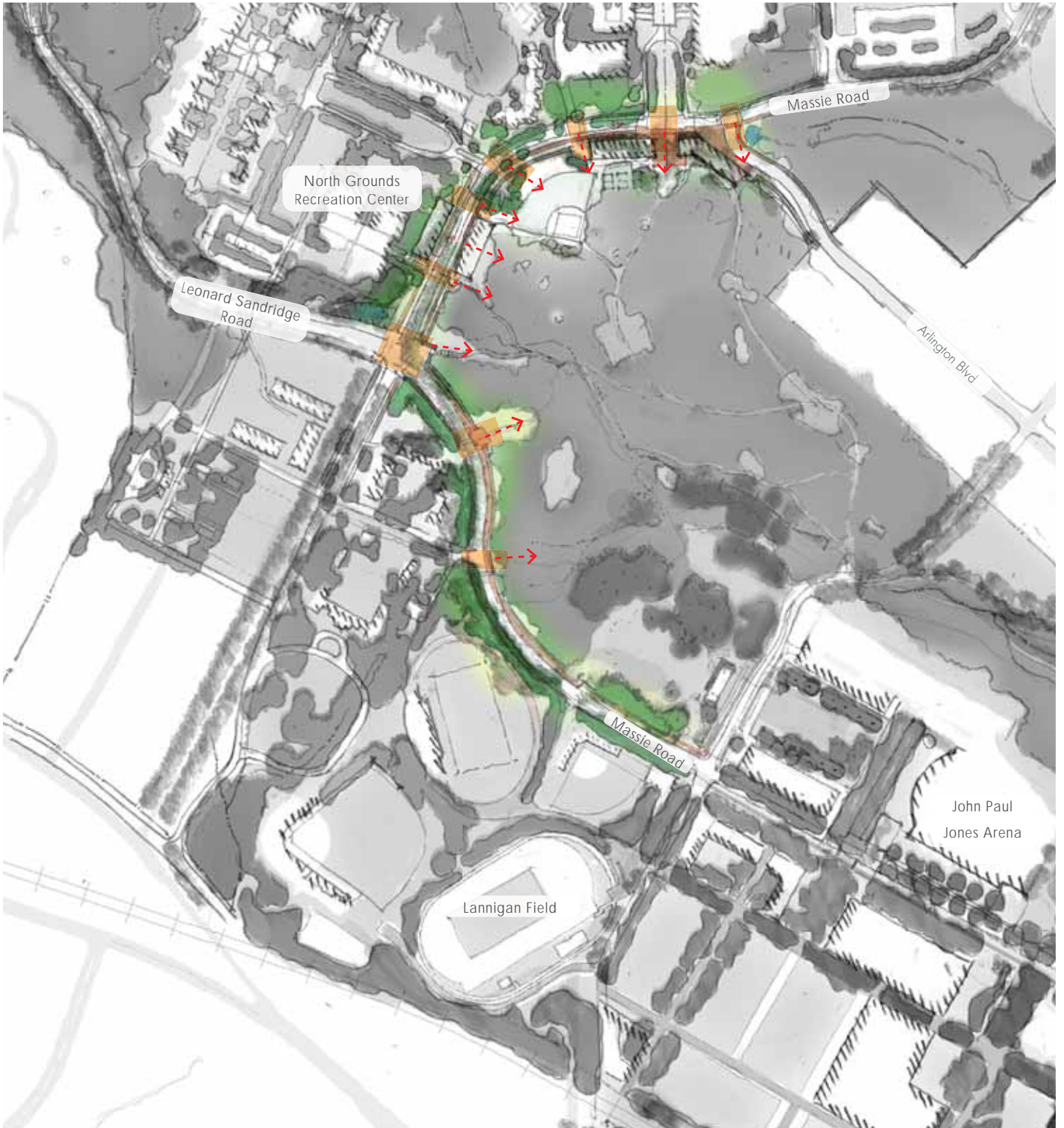
CROSSING AND ACCESS



MASSIE STREET SECTION AT MIXED-USE STREETScape



MASSIE STREET SECTION AT WOODLAND



WOODLAND PLACE

The Copeley Hill Housing site has the potential to transition from a residential district to a community-building centerpiece for North Grounds. Re-visioning this parcel as the heart of North Grounds allows it to become a connector. A few specific ways to achieve this result include:

DIVERSE PROGRAMMING

Explore programming that uses canopy and woodland trails for recreation and both academic and community education.

PATH NETWORK

Develop a pathway network that provides variety and choice and includes converting existing Copeley drive corridors into the new network. Design high and low pathways that follow contours and the meander of Distillery Branch, including one all-weather bike/pedestrian lighted trail. Integrate bridges to connect paths across topography.

ENSEMBLE OF PLACES

Look for opportunities to create an ensemble of places at multiple scales. Locate places at entry points and pathway crossings. Selectively limb up trees for improved views within woodland for wayfinding and safety. One of the featured places could be a flexible, park-like green in the southeast corner of the block.

NATURAL SYSTEMS INTEGRATION

With all work in this woodland, continue to restore the Distillery Branch so that it rivals the Dell in value to the community. Expand on existing Piedmont ecological woodland associations in forest restoration.



LOW PATHS AND TREES SELECTIVELY LIMBED UP



HIGH PATHS



RECREATIONAL OPPORTUNITIES



FLEXIBLE GREEN



WOODS MAINTAINED FOR RECREATION



WOODLAND PLACE AND HUB PLAZA

In the southeast corner of Woodland Place would be a park-like destination with a multipurpose pavilion. A new pavilion could be a destination where University and local community members gather for a mix of programming, including outdoor concerts, seasonal gatherings, recreation, and classes. A playful design of this pavilion would allow it also to serve as the head house of a “family” of picnic pavilions sited in the woodland, offering opportunities for grilling and gathering. Access to the green would be provided from a connected path network including a terraced landscape stair, directly across from the open plaza. Design for this corner should allow and integrate park uses with small site for future mixed-use development as a companion to activity across the street.

HUB PLAZA

Fronting on Copeley Road would be a mixed-use plaza, an active outdoor gathering space in front of the John Paul Jones Arena. This space should be able to accommodate large outdoor gatherings, special event managed parking, and permit parking if necessary. The Hub should provide flexible seating for those using the multimodal system.

Design for the plaza requires integrated and thoughtful stormwater design details that build upon the existing biofiltration gardens at the plaza and parking lot. As a low point, the John Paul Jones Arena site is critical to the health of the local waterways; water flows from there into Meadow Creek and ultimately into the Rivanna River.

MULTIMODAL POINT

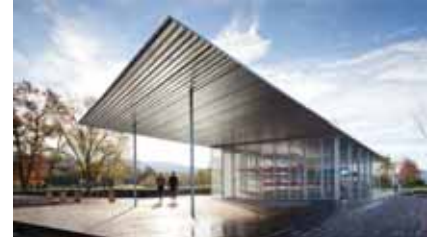
The corner of Massie and Copeley Roads has the opportunity to become a lively mixed-use hub with active ground-floor uses. Entrances to a new mixed-used building should be centered around views to the Hub Plaza, with access on both sides of the building. Focus should favor placemaking and the pedestrian experience as primary.

MIXED-USE HUB FOR VEHICLES, TRANSIT, AND BIKESHARE

To improve the experience of commuter’s “last mile” and to provide a memorable and easy transit experience, a new parking garage with multimodal hub and services is recommended.

General guidelines include:

- raised platform to load and offload 50- person surges, (60 feet long) without making the transit users cross traffic;
- shade for comfort, with convenient seating; and
- a design that allows volumes for efficient transitions of four to five minutes.



PAVILION



PICNIC PAVILIONS



ACTIVE GROUND FLOOR



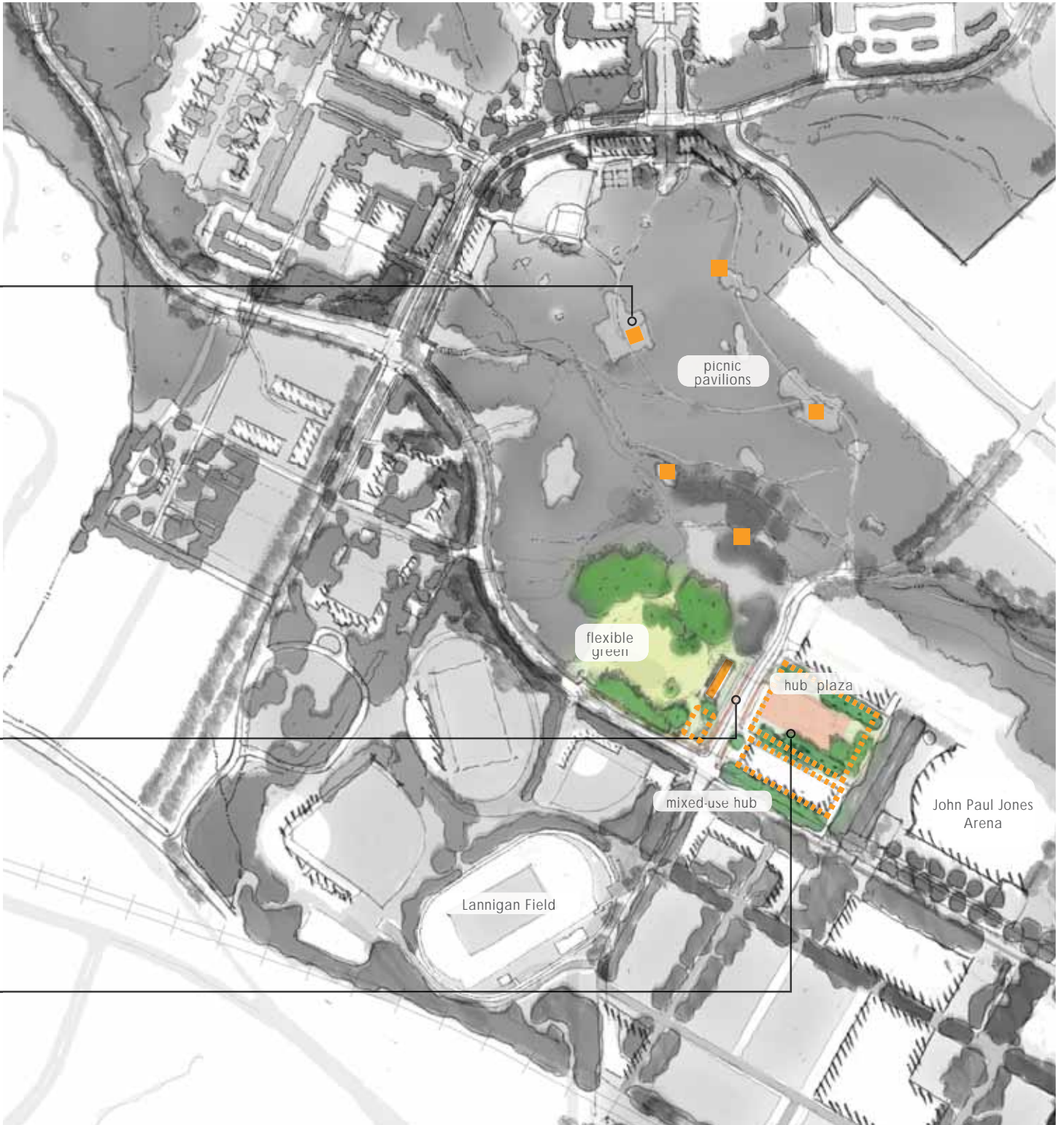
TERRACED STEPS



COMFORTABLE GREEN SPACE



BIOFILTRATION AT ARENA



MASSIE ROAD AND EMMET STREET

Emmet Street North is a busy vehicle route with few pedestrian comforts, and its sidewalks are tight to the road. The City's Smart Scale project planned for the west side of Emmet will greatly improve passage for pedestrians and bicycles, yet the broader path improvements will still need to be coordinated to ensure that upgrades are woven into the broader vision for the corridor.

The planned development for the new Football Operations Center and Olympic Sports Center makes this intersection even more valued, as an important threshold for University events and athletics. Specific recommendations for the area include:

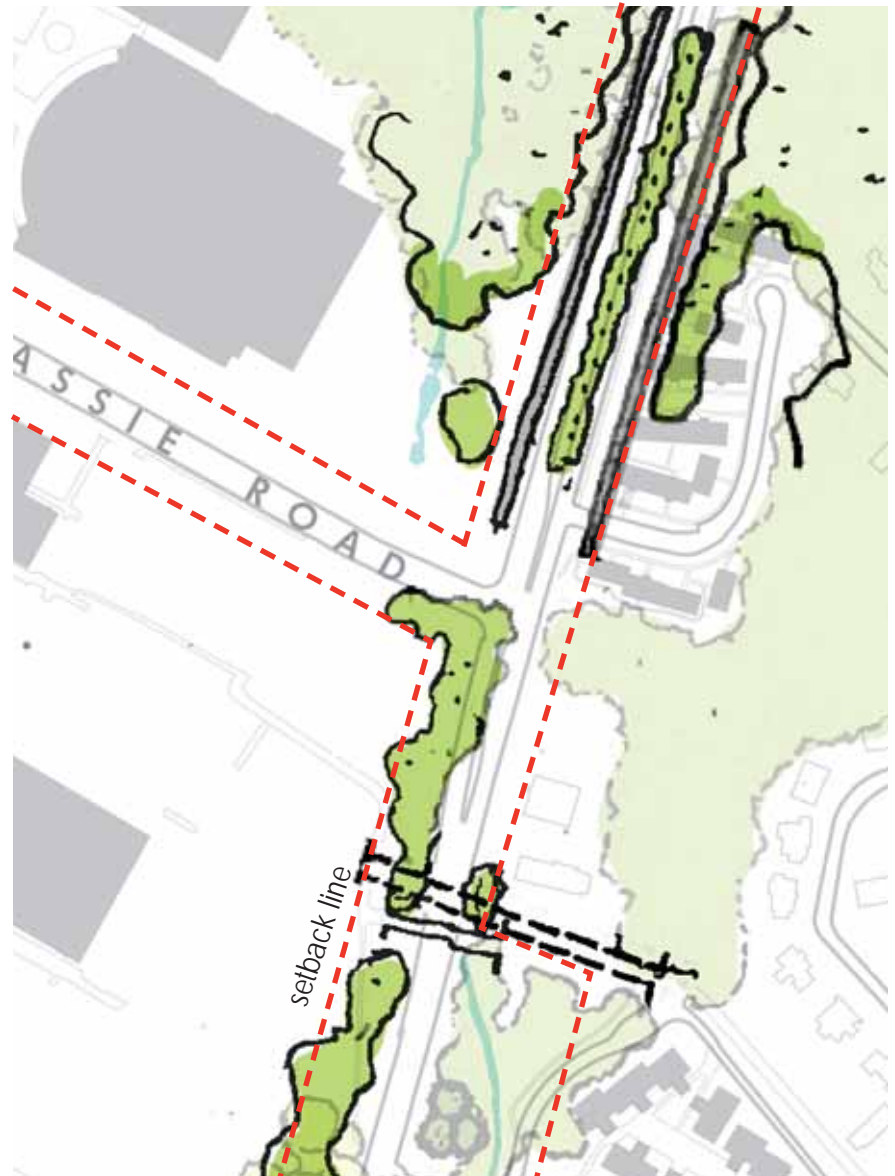
- protect and maintain woodland along either side of Emmet North to create a strong green threshold at Massie and Emmet;
- extend stone walls and move sidewalks away from the road, and widen the walks to 6 feet at a minimum;
- plant a median on Emmet Street between Copeley (to the north) and Massie Roads, with native shade trees underplanted with low groundcover, both compatible with adjacent woodlands;
- use planting to blend the Goodwin pedestrian bridge into the surrounding landscape with trees and shrubs; and
- provide access to the planting with new paths in the existing stormwater basin on the northwest corner to connect it to the Distillery Branch restoration.
- as former hotel site is redeveloped, consider adding gateway treatment and screen surface parking at SW corner.



EMMET STREET AND MASSIE ROAD



NORTH CORNER, EMMET STREET AND MASSIE ROAD



CONCEPT SKETCH FOR MASSIE ROAD AND EMMET STREETS





NORTH GROUNDS PROJECT RECOMMENDATIONS LOCATIONS

NORTH GROUNDS PROJECT RECOMMENDATIONS

1. LEONARD SANDRIDGE ENTRY CORRIDOR.

Develop a plan to improve arrival corridor to: include a more functional interchange at the bypass with University signage; integrate stormwater as part of the arrival experience; expand the tree canopy; introduce stone walls; define safe paths and crossings, including a pedestrian bridge to North Grounds Recreation Center and the Darden School of Business.

2. LEONARD SANDRIDGE AND MASSIE ROADS INTERSECTION.

As part of future Woodland Place improvements and street corridor upgrades, design an intersection plan to: open woodland views; develop a green intersection with improved pedestrian and planting details; invite access to the woods with a new path system; introduce walls as defining edges for entry identity and erosion control; and add a vehicle/pedestrian connection to the south.

3. MASSIE ROAD STREETScape IMPROVEMENTS.

Develop a plan with the recreation center, business and law schools, and new multimodal hub at Copeley Road to: improve the street corridor with traffic-calming and pedestrian details that encourage walkability; complete sidewalk infrastructure in association with Distillery Branch studies; capture and manage street stormwater; provide pedestrian access points into the woodland; use stone walls to edge and define the woodland and slopes; and facilitate the redevelopment vision from Copeley Road to Emmet Street with tree-lined streets with generous sidewalks and future buildings that lend definition to street edges and signal a welcoming University.

4. NORTH GROUNDS WOODLANDS PLACE.

Develop a feasibility and a phased woodland-restoration and recreation plan to: define a trail network including bike connections; identify programming for recreation, social, and academic support; and integrate Distillery Branch stream restoration and stormwater management into a valued environmental amenity.

5. MASSIE ROAD AND COPELEY PARK PLACE/PAVILION.

Develop a park program with a flexible, multiuse pavilion adjacent to an open park green to: encourage recreation and club use of the Copeley Hill Housing site; activate existing natural resources with a network of picnic pavilions; make path connections that expand on those in the Distillery Branch study; design seat steps for access from Copeley Road, and as a meeting place; and design and location should allow for small, mixed-use building site at corner to support park program and activity of multimodal hub.

6. MASSIE ROAD AND HUB PLAZA/MULTIMODAL HUB.

Develop a coordinated site/feasibility study of a flexible green plaza to: create an outdoor place, Hub Plaza, at John Paul Jones Arena at the Massie and Copeley intersection; design to be flexible with managed parking, lighting, planting, and gathering along edges; coordinate with a multimodal mixed-use building program with active ground floor and services; include generous patron amenities such as a pedestrian and bicycle hub; develop a vibrant streetscape to support the new multimodal program; connect to a planned park place at Copeley corner; plan for a bus lay-by.

7. MASSIE ROAD AND EMMET STREET INTERSECTION

Establish University identity and mark visitors' arrival with upgrades to intersection using fieldstone walls with new plantings; screen any surface or structured parking with planting so that parking is not prominent at this important entry; use arrival elements like planting and furnishings to identify University entry.

8. ATHLETICS GREEN CORRIDORS

Coordinate planting and path network for the Virginia Athletics Master Plan (2018) to: consider visitor and athlete comfort and experience; develop green pedestrian corridors that encourage lingering and picnicking; include canopy tree species that require minimal maintenance impact.

B. WEST GROUNDS

WEST GROUNDS

West Grounds offers multiple opportunities to expand on the vibrancy of existing student residences; academic programs, including science and engineering; teaching and research facilities; athletics and events at Scott Stadium (61,500 capacity); the planned Fontaine translational medical campus; and the natural features of Observatory Hill, as the largest remnant woodland on Grounds. With such disparate uses, the identity of the precinct can benefit from a strong landscape structure to give it coherence and better relate it to Central Grounds.

The LFP's strategy recommends creating an active green "spine," Alderman Road, with intermittent green "ribs" to strengthen pedestrian and bicycle connections and the sense of place. The enhancement of existing stormwater facilities along the "spine's" "ribs" along streets and in stadium parking lots would increase the planting and create gathering nodes and places.

The LFP recommendations would clarify and enhance the existing landscape fabric, refine the arrival experience and edges, improve connections to the rest of Grounds, create more outdoor gathering places, and, where the opportunity exists, connect natural systems more directly to stormwater resources and the woodlands of Observatory Hill.

WEST GROUNDS GOALS

CONNECTIONS

- Focus on pedestrian and bicycle network

PEDESTRIAN PRIORITY

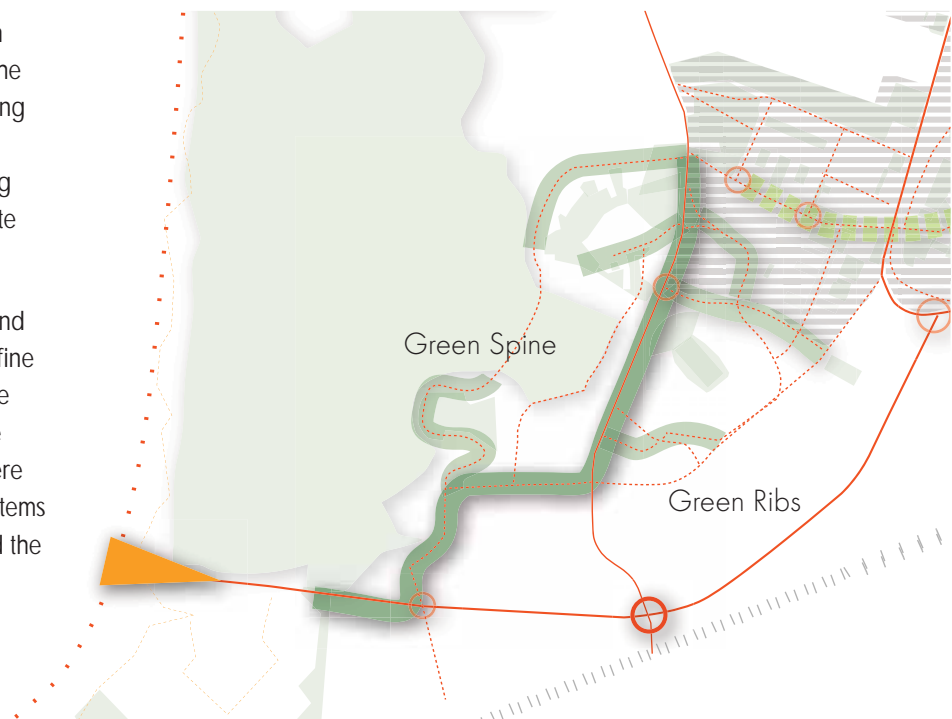
- Develop Alderman Road as a green spine

LIVELY PLACES

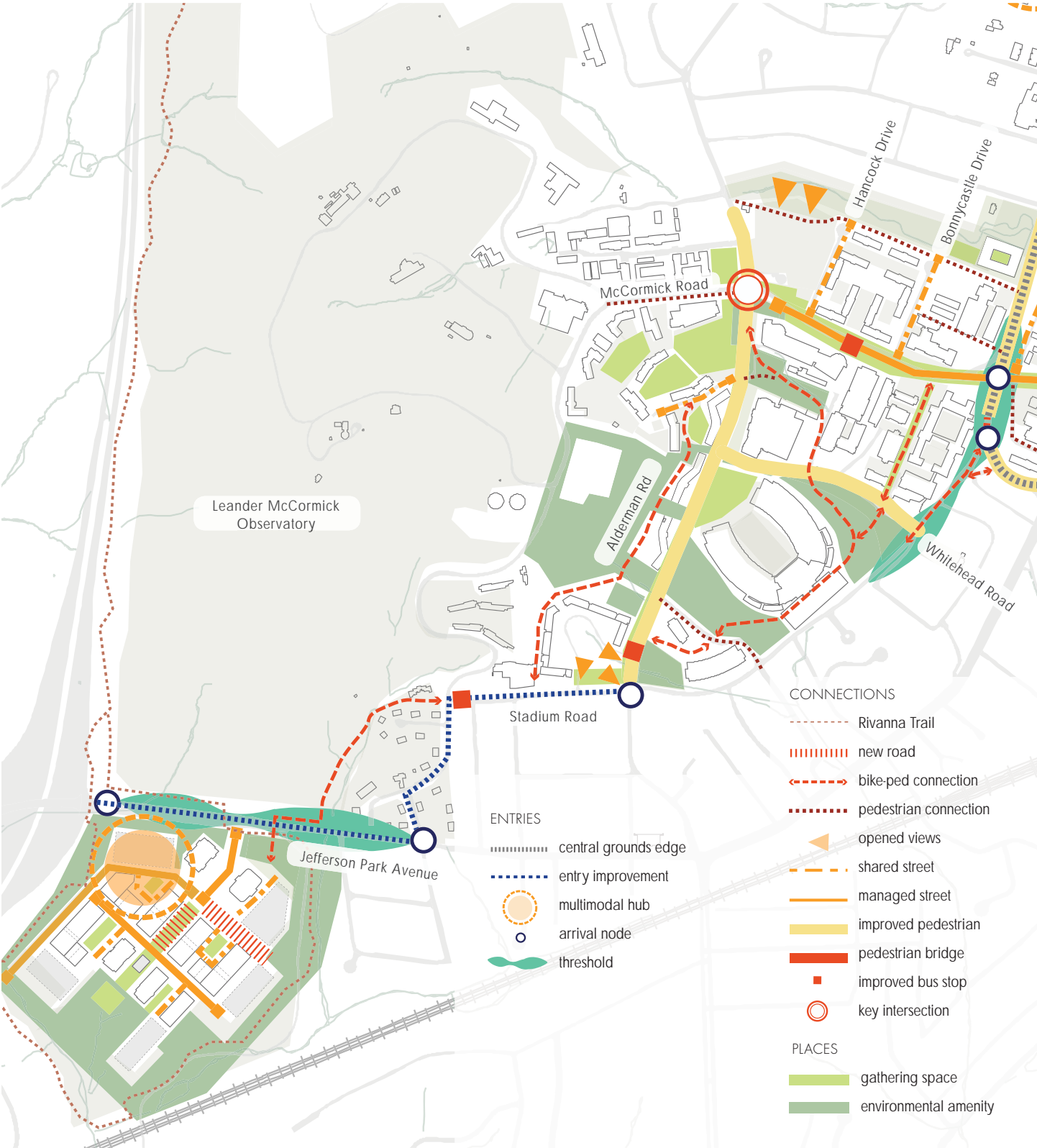
- Create a rhythm of places
- Develop multimodal hub

ECOLOGICAL LANDSCAPES

- Integrate places with sustainable landscapes



GREEN SPINE AND RIBS Alderman Road would become a green spine for West Grounds with an upgraded pedestrian corridor with shaded and widened sidewalks bridging athletics and residential life. Green ribs would extend from the spine, connecting exterior corridors and places in a finely woven network of entries, gardens, and rain gardens.



LFP WEST GROUNDS PROPOSED IMPROVEMENT DIAGRAM

LANDSCAPE CHARACTER

West Grounds is edged by the slopes of Observatory Hill and Lewis Mountain and bisected by the busy vehicle corridors of Stadium, Alderman, Fontaine, and McCormick Roads. Less cultivated than Central Grounds, the landscape of this precinct is rolling with steep slopes, southern and eastern views, natural landscapes like the Observatory Hill woodland and the Dell, large deciduous trees, and intersections with mixed stands of evergreens and other native vegetation. The Scott Stadium parking lots and the open, sparsely planted landscapes of the new residential buildings contrast greatly with the precinct's otherwise strong, green landscape character.

The Observatory Hill woodland and trails offer a vital resource that can connect users to corridors and gathering places and to the interstitial spaces at Alderman Road Housing on the north and Gooch Dillard on the south. A focus on walkability and planting would shift the landscape details and character in these areas from vehicles to pedestrians. In addition, an increase in canopy street tree planting along Whitehead Road would improve shade and comfort for pedestrians and cyclists and encourage walking from Central Grounds. Tree House Lane has buried-utility constraints, but can also be a green "rib" in the system, connecting to the central "spine" of Alderman Road.



O-Hill Woodland

Currently, Alderman Road from Stadium Road to McCormick Road is frequented by pedestrians, because it connects residential to academic buildings, even though it is an exposed corridor with minimal shade and narrow sidewalks. The walking experience is hot in the warm months and lacks interest; distances feel far. Improving the landscape character of this corridor would give it a cohesive identity and greatly improve the pedestrian experience.

Shade and planting are both lacking around Scott Stadium, where large surface parking lots occupy significant territory. Introducing more planting with bioretention details would benefit pedestrians and the natural systems of the precinct whose paths and connections are dominated and disrupted by the large presence of the stadium and parking lots.

Engineer's Way, which connects McCormick and Whitehead Roads, feels like a service corridor between the engineering buildings of Thorton, Materials Science, Olsson, and the new Rice Hall. Plans for a new chemical engineering building and for building upgrades create an opportunity to increase the planting, gathering, and academic and social energy of this corridor.



FONTAINE AVENUE

Arrival along Fontaine Avenue transitions from the US-250 bypass to an open “cultured” parkway with a green median and shifts to a shaded “natural” threshold as one moves east. The existing sidewalk on the southern side of Fontaine provides pedestrian and bicycle connection along the route. Planted slopes mask the Fontaine Research Park from view. The corridor shifts to denser, natural planting after crossing over a stream corridor, and denser development begins at Mimosa Drive, shortly after the city line.

Plans for a Virginia Transportation Smart Scale Project will upgrade the Fontaine Avenue corridor beginning at the city line. Upgrades will continue to Maury Avenue, improving pedestrian and bicycle facilities as well as traffic flow.

ARRIVAL CORRIDOR

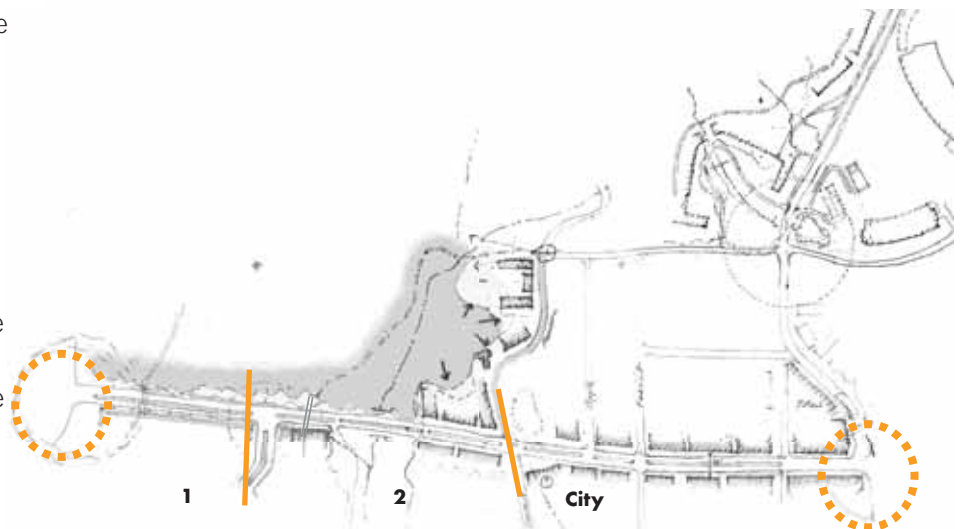
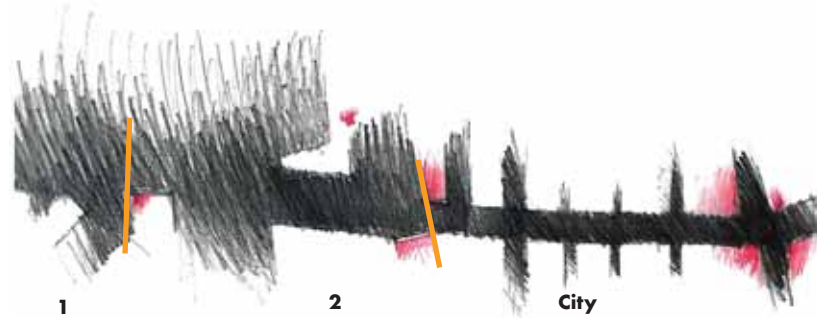
There are strategies that can be implemented to improve the University identity, along the Fontaine Avenue entry: Increasing canopy tree planting and introducing low fieldstone walls would unify the appearance of the approach with those of other precincts, as would using campus-standard lighting and replacing the concrete walls at Fontaine Research Park with fieldstone walls. In addition, the Fontaine Research Park signage should be improved, and University monumental signage should be added. Design strategies should encourage the development of a more vibrant street edge as an indication of a welcoming community. For increased connection north of Fontaine through Piedmont to Stadium Road, consider a bicycle and pedestrian bridge for access to Fontaine Research Park. This bridge could serve as an arrival portal to the University.



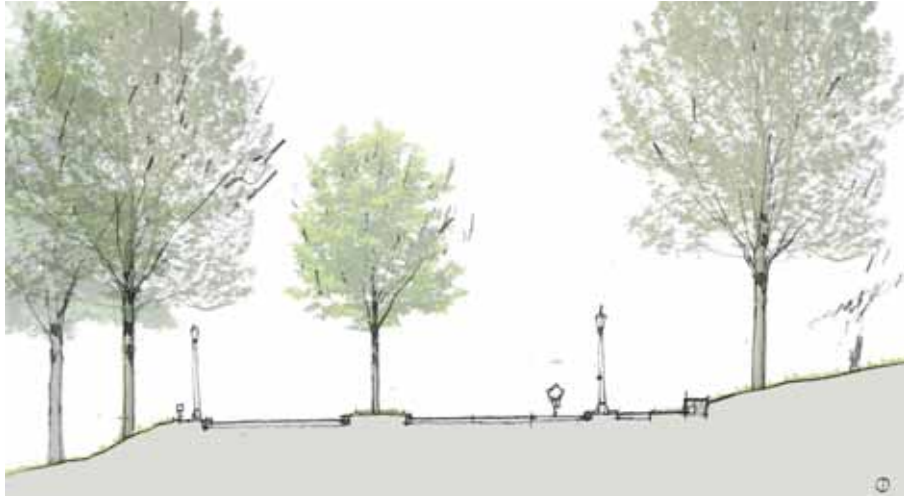
EXISTING, ARRIVAL CORRIDOR 1



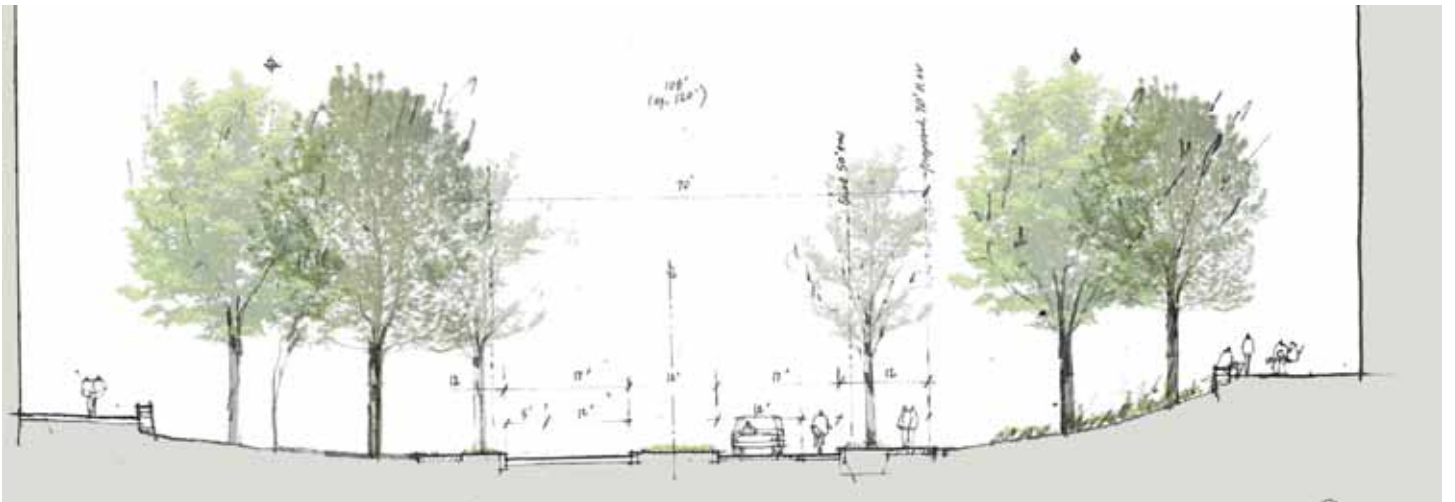
EXISTING, ARRIVAL CORRIDOR 2



SEGMENTS OF FIVE-MINUTE WALKS



FONTAINE AVENUE—PROPOSED SECTION 1



FONTAINE AVENUE—PROPOSED SECTION 2

FONTAINE MEDICAL CAMPUS

The *Fontaine Master Plan* (2018) studied options for future expansion of the translational medical campus for the University Health System on the existing Fontaine Research Park site. MVLA reviewed the phased development plans from that plan to coordinate planning of the LFP. The team studied diverse issues around land use, patient care, transportation, infrastructure, and ecological planning.

The team recommended: Both a strong landscape identity and pedestrian priority should tie the Fontaine precinct to Central and West Grounds; mixed-species woodland should characterize open spaces; green streets should manage stormwater with a diverse, riparian plant palette. Naturalistic garden courts should be designed as healing landscapes to distinguish the neighborhoods of the plan.

This LFP identifies specific features for the new medical campus, as marked in the concept sketch on the facing page.

1. ENTRY PORTALS & EDGES

- Plant mixed-species canopy to define thresholds.

2. ENTRY DRIVE

- Introduce mixed species for arrival through a woodland.
- Welcome pedestrians with new pedestrian walks.
- Eliminate the median to open the views to the mountains to the south.



GARDEN COURTS DEFINE "NEIGHBORHOOD" IDENTITY



HEALING LANDSCAPES

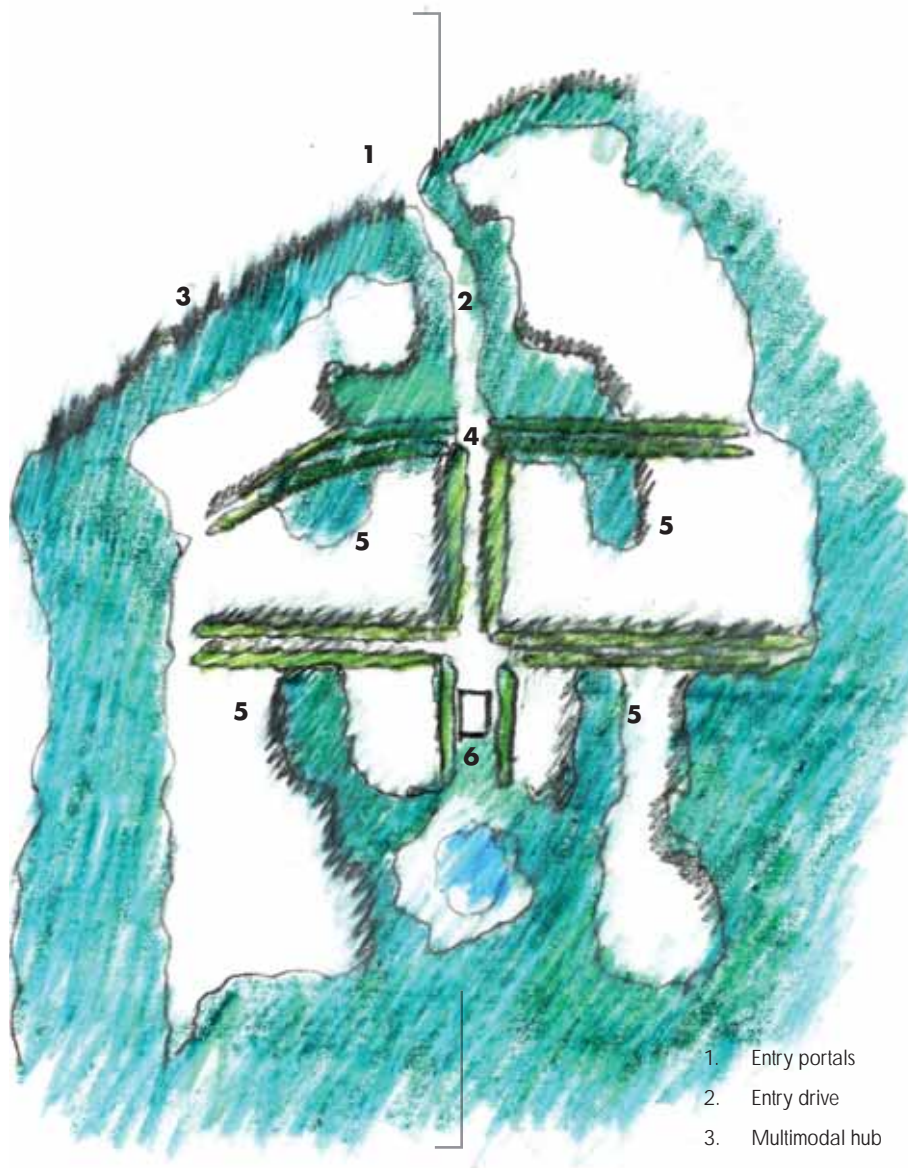


PAVILION



WETLAND WALK





1. Entry portals
2. Entry drive
3. Multimodal hub
4. Central street
5. Garden courts
6. Pavilion and walk

FONTAINE MEDICAL CAMPUS CONCEPT SKETCH



CENTRAL STREET SECTION-TOPOGRAPHY

3. MULTIMODAL HUB

- Locate a multimodal hub to support Grounds circulation.
- Design the hub as a lively outdoor place linked to new mixed-use building program and amenities.

4. CENTRAL STREET

- Frame views with a green street corridor and paths that encourage walkability.
- Treat roofs and site's stormwater with riparian planting.
- Coordinate entries and finished floor elevations with street slopes.
- Site active ground-floor programs along a new central street.
- Establish seating and amenity zones at building entries.

5. GARDEN COURTS

- Distinguish textured garden plantings for healing at the neighborhood arrival courts.
- Prioritize pedestrians and ease of vehicle transitions through the landscape.
- Provide seating to encourage lingering and outdoor meetings.

6. PAVILION AND WETLAND WALK

- Create a restorative, therapeutic garden destination at the terminus of the central street axis, associated with the pavilion.
- Design a small-scale amenity building to preserve mountain views with a walking/recreational circuit around a restored stormwater basin.

FONTAINE CENTRAL GREEN STREET

A new central street would replace the broad green lawn that currently serves as the center of the Fontaine Research Park. The existing green, which is rarely active, sets up long views to the mountains; a redesign of this axis to a green street would preserve these views and help to structure the new space, drawing visitors and patients outside to walk around the district.

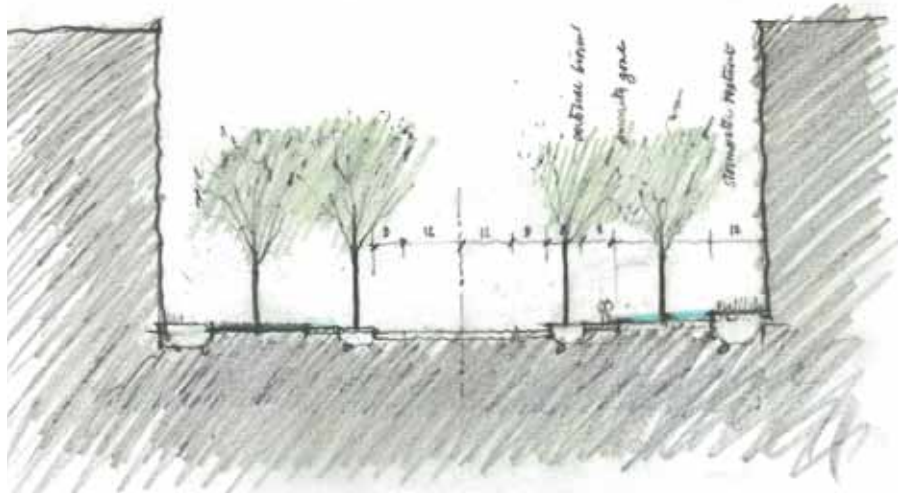
Planning for the translational medical campus is structured around developing a healthy landscape, featuring water management, bioretention, and BMPs, as central to the new landscape. Broad sidewalks, a double allee of street trees, and outdoor furnishings would encourage people to gather and linger in the shade, especially outside the primary entries at the middle of the block. Active ground-floor uses would help to bring vitality to the streetscape. Topography and grades will require coordination to be sure that entries match street grades.



EXISTING CONDITIONS ENTRY DRIVE AND VIEW



PROPOSED BIORETENTION OF NEW CENTRAL STREET



CENTRAL STREET CONCEPT SECTION



MULTIMODAL PRECEDENTS



TRANSIT STOPS AND PLACES



GATHERING AREAS



FONTAINE MULTIMODAL HUB

The mixed-use multimodal hub at the Fontaine translational medical campus would be modelled on the other interceptor points on Grounds to be both an efficient transit hub and a great place. As a hub, it would aim to make transferring from a car to transit or a bike easy and enjoyable. In addition to serving the transit needs, it should incorporate planting, seating, and additional programming to be a lively and safe place.

The multimodal hub should be mixed-use, providing a range of functions and services in addition to including a commuter parking garage. Ground-floor uses of the garage can be reserved for convenience services such as food and coffee, so it can be lively throughout the day and evening. Pedestrian street crossings should make it easy to move from the hub to other Fontaine destinations.

General transit guidelines include:

- a raised platform to load and offload 50-person surges (60 feet long) without making the transit users cross traffic,
- shade for comfort, with convenient seating,
- a design to manage volumes for efficient transitions of four to five minutes.

ALDERMAN ROAD

Existing conditions in West Grounds need only be enhanced for an enriched campus landscape. Creating clear and desirable destinations at either end of Alderman Road would help reinforce the concept of a strong landscape “spine.”

To the north, with the Observatory Hill Dining Hall at Alderman and McCormick Roads, there is significant foot traffic and reason to boost this location with a more lively outdoor destination. The resulting energy would enliven the area, activating it as a gateway to student life.

At the southern end of Alderman, at Stadium Road, there is an opportunity to enhance an existing stormwater facility with a new park-like destination adjacent to the existing bus stop. This natural place would work with improved transit amenities to combine rainwater management and gathering. The pedestrian bridge built for crossing over the stormwater facility across from the Scott Stadium parking lot is a good example of a way to engage the setting experientially.

ALDERMAN AND McCORMICK ROADS

The Observatory Hill Dining Hall should expand its outdoor cafe seating to the east side of building to create a visible, people-focused destination on Alderman Road. Using a variety of seating types, including long communal tables, would create a place for community members to see and be seen. Shifting the bicycle parking would make room for this seating; the bike parking could move closer to the intersection or shift around southern corner, convenient to the building entries adjacent to the green. This bicycle parking area may require expansion south with integrated planting.

At the stormwater swale on the west side of Alderman, downhill from the sidewalk, existing plantings should be upgraded and expanded with large trees and low plantings that open views and could be limbed up, rather than the current shrubs that enclose the area. Similarly, tree planting at the perimeter of the Observatory Hill green should be expanded. Loose groupings would create shaded places under the canopy; understory planting should be avoided.

ALDERMAN AND STADIUM ROADS

The existing stormwater treatment facility could become a usable outdoor park-like amenity and destination. Building on its location as a terminus to Alderman Road, the new destination should feature lush plantings as part of placemaking. Design of this natural, environmentally enriching space should be coordinated and linked to those of the Student Activities Building at George Welsh Way and any future transit in the Scott Stadium lot.

Transit amenities in the Scott Stadium parking lot could be improved to help create an active place that functions well and is enlivened daily as well as during special and athletic events. In addition, pathways and improvements to Alderman Road bus stop should connect to the new place at the corner of Alderman and Stadium Roads.



EXISTING CONDITIONS



ACTIVE CORNER



INTEGRATING PLACE AND WATER



ALDERMAN ROAD-EXISTING CONDITION



ALDERMAN ROAD-PROPOSED

ALDERMAN ROAD

Landscape strategies that transform Alderman Road into a green “spine” would improve the walking experience, better connect people to the site’s natural systems, and reduce the perceived distances between the residential and academic areas. Strategies for creating the spine include planting entry thresholds and connecting green places and corridors for an improved walkable rhythm.

The Alderman corridor has buried utilities and infrastructure that will require coordinating walkway improvements and increased planting. Improvements should prioritize pedestrians and walkability over vehicles. The LFP plans for Alderman Road support traffic calming, currently implemented on event and game days, widening sidewalks, and planting large trees. Alderman Road is identified for improved pedestrian accommodation (see p. 78). It may be desirable to manage the vehicle flow for some events in an effort to reduce the priority given to vehicles and shift the identity of the corridor.

PLANTED ENTRY THRESHOLDS

Plantings at the intersections of McCormick and Alderman Roads and Stadium and Alderman Roads should be improved to bolster the two ends of the green spine. Park-like gathering places should be developed near the intersections on Alderman, making use of enhancing the existing stormwater basins and plantings.

GREEN SPINE

To create the green spine, tree spacing should be tightened along the west side of Alderman Road. This measure, which should include a species review, would increase shade and comfort along the corridor. In addition, broadened sidewalks and ground plane planting, especially on the west side of Alderman, would encourage walkability and emphasize the corridor’s green identity.

Similarly, planting and texture should be increased at locations of cross circulation and connections, the green ribs. The canopy mix in areas between larger spaces should be thickened to connect landscape and paths. The planting character of Observatory Hill and Gilmer Wetland can serve as a green connecting framework.

WALKABLE RHYTHM

A series of nodes along the corridor at approximately 200-foot to 300-foot intervals would modulate the 2,500-foot distance, or 15-minute walk, from Stadium Road to McCormick Road. Such nodes can be green outdoor places tied to building entries, bus stops, views, or other site attributes. An example would be a shaded gathering place with seating in front of the Aquatic and Fitness Center’s south entry, with upgrades to the terrace on Whitehead Road.



MCCORMICK AND ALDERMAN ROADS



FLEXIBLE GATHERING PLACE



NODES ALONG CORRIDOR



BUS STOP



GATHERING AT BUILDING ENTRIES



WEST GROUNDS LFP PLAN RENDERING

MCCORMICK ROAD WEST

McCormick Road is the busiest pedestrian corridor on Grounds. Not only does it have heavy pedestrian traffic, particularly at class changes, it also supports the University transit system and bike traffic. Conflicts regularly arise between modes of traffic, with visitors in cars, students on foot and on bicycles, and staff in service vehicles.

The corridor is designed for vehicles, with pedestrians relegated to the narrow, insufficient sidewalks. Upgrades to this corridor could have a lasting benefit to student, staff, and visitors' experience of Grounds. The *McCormick Road, West Corridor Study* (2015) explored changes to improve efficiency, management, legibility, planting, safety, and the pedestrian experience.

The corridor transitions from West Grounds, with its residential and academic circulation, to Central Grounds at the McCormick Bridge. Managed vehicle access would profoundly improve the pedestrian experience and change the character and identity of the street.

This LFP supports the direction of the previous study with the following recommendations for McCormick Road West: Narrow curb-to-curb widths to widen walks, where possible; design details to integrate concrete paving and brick paving; create an asymmetrical cross-section, with a broader pathway on the south/east to support larger pedestrian volumes; preserve large trees; plant shade trees to create a pleasing street-tree canopy, reducing or eliminating smaller trees.



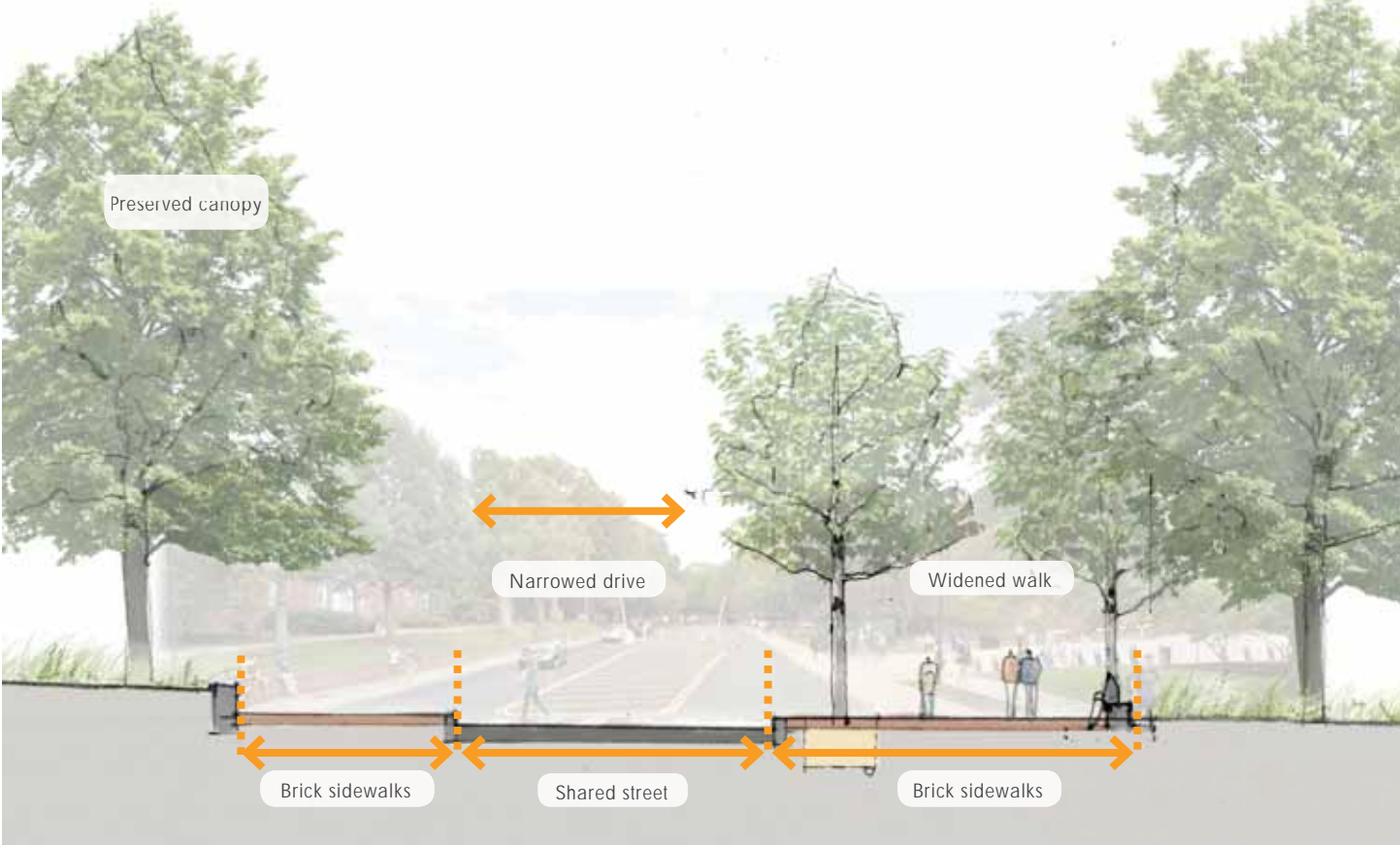
NARROW DRIVE TO WIDEN WALKS



PRESERVE LARGE TREES



MCCORMICK ROAD-EXISTING CONDITION



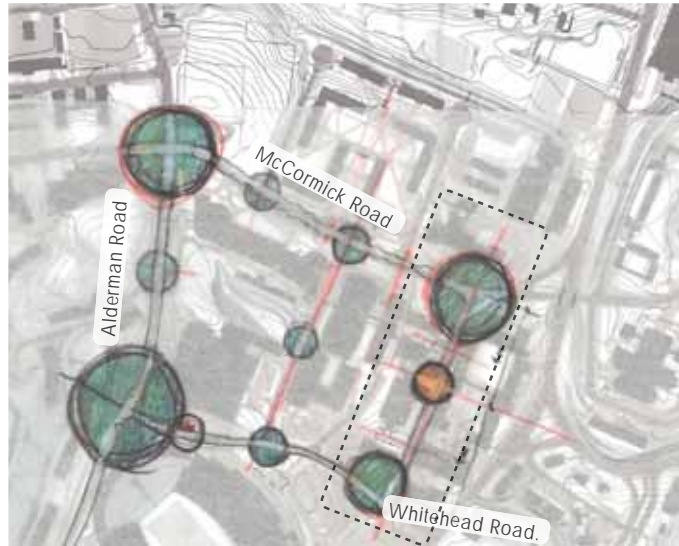
MCCORMICK ROAD WEST-PROPOSED

ENGINEER'S WAY

South of McCormick Road is the School of Engineering and Applied Sciences complex, which has an outdoor corridor, Engineer's Way. Upgrades to this corridor have the opportunity to enrich the circulation network of West Grounds while also creating a discipline-focused outdoor center for students, faculty, and staff.

A separate School of Engineering and Applied Science (SEAS) ISP (2018) study focused on future building expansion in this corridor, concurrent with this LFP. The SEAS planning was coordinated with the principles of the LFP. In addition to upgrading the corridor for access and improved grading, the team identified comfortable garden spaces for classrooms tied to engineering pedagogy.

The design process for Engineer's Way included design diagrams for portals, connections, places, furnishings, the "bar" (a linear bench/wall/planter), views, and water. The diagrams prioritized design principles.



CONTEXT AND GREEN PORTALS



CONCEPT SKETCH



PORTALS

Enhance green entries with a mix of evergreen and deciduous trees:

- North: connect across McCormick Road to mature tree canopy.
- South: plant along Whitehead Road at Engineer's Way terminus to reinforce a green threshold.



CONNECTIONS

Develop a hierarchy of paths:

- Help break down large blocks and improve connections.
- Improve porosity of the block with cross axes and offer path choices.



PLACES

Articulate social/interdisciplinary gathering at primary entries:

- Enliven walk with a series of places 100 feet apart to complement the building program.
- Create a central place with seating and study tables that can serve as the heart of the corridor.



BAR

Design "bar" as a unique multiuse infrastructure element and gathering place:

- Use the Bar to adapt to slopes, offering different ways to engage and occupy the corridor.
- Define the Bar as a connector and center of the corridor.



VIEWS

Value the views out and in:

- Maintain views with the expansion of building programs.
- Use long views to bring light to the narrow corridor and connection to outside.



WATER

Tie stormwater to engineering pedagogy:

- Collect water and demonstrate water function as central to an engineering-on-display narrative.
- Tie the pedestrian experience to stormwater collection in the design of paths and places.

ENGINEER'S WAY

The existing Engineer's Way is a busy corridor within the School of Engineering and Applied Science. It also serves as a shortcut to travel south on foot to Scott Stadium and to student residences. Improving the corridor with a central "place" would give engineering an outdoor heart. Trees, plantings, and lighting would add comfort and texture to this gathering place. One parameter that constrains this effort is an existing steam tunnel that limits soil volumes and grading.

THE BAR

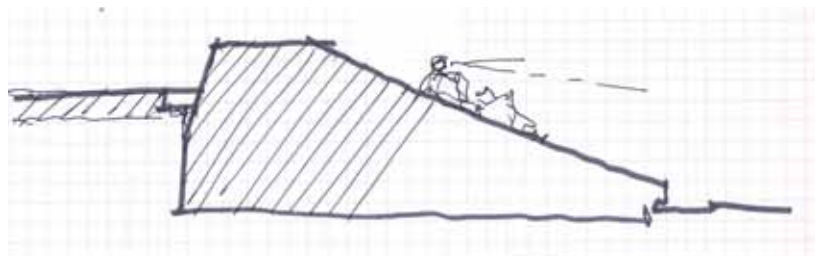
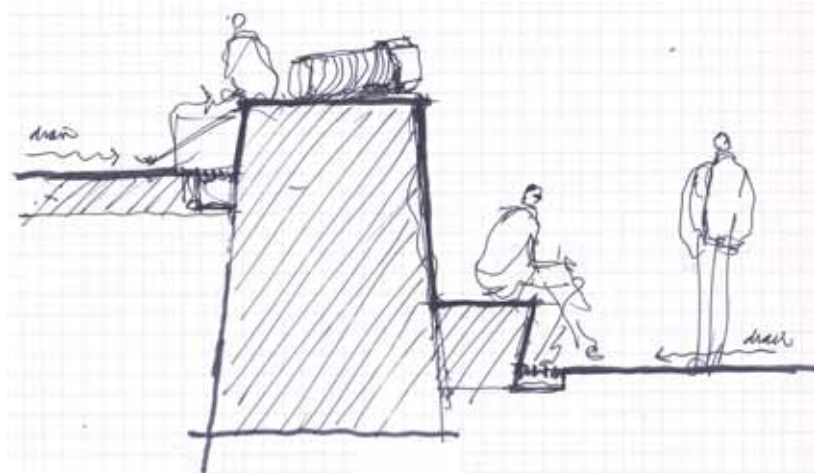
The LFP recommends using a design element, the "Bar," that is adaptable to the extant conditions.

The Bar element would run down the corridor above the tunnel, changing in profile as the site requires. The Bar could be a planter at one end, for example, and shift to a bench for gathering or lounging, depending on the site conditions. The Bar form should be designed to be flexible but distinct, bringing a unified identity to the precinct.

The Bar would connect north and south with varying forms and plantings as appropriate for: walking, sitting, lounging, studying, and teaching.



BAR PRECEDENT: CAN FRAMIS MUSEUM GARDENS, BARCELONA



SKETCH STUDIES OF THE BAR



STORMWATER



PLANTING ALONG CORRIDOR



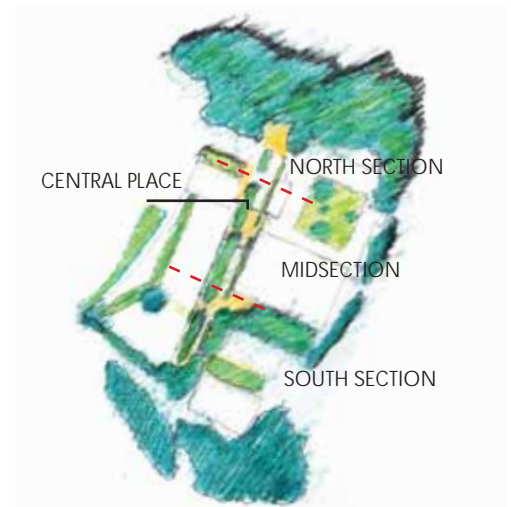
EDGES



WORKYARDS



GATHERING PLACE



Recommendations for the corridor's structure and function vary along its axis:

NORTH SECTION

- Use the Bar as placemaker and as infrastructure with seating.
- Add trees, plantings, and lighting for comfort and texture.

MIDSECTION

- Design a central "place" as the heart of the engineering district.
- Expand trees, planting, and lighting at this gathering place.

SOUTH SECTION

- Reserve places between buildings for workyards for engineering on display.
- Update paving and planting with Central Grounds palettes.
- Emphasize the southern green threshold with a mix of shade trees at Whitehead Road.
- Strengthen views in and out of the corridor with plantings.



WEST GROUNDS PROJECT RECOMMENDATIONS LOCATIONS

WEST GROUNDS PROJECT RECOMMENDATIONS

1. ALDERMAN AND McCORMICK ROADS INTERSECTION AND STREETScape.

Develop a thoughtful and integrated planting plan with a refined mixed canopy for each corner of the Alderman/McCormick intersection; create a strong green northwest corner with options for better integration of student gardens into the larger landscape to make a desirable student gathering place; and enhance pedestrian accommodation for large pedestrian flows at all corners and along McCormick Road to the bridge.

2. ALDERMAN ROAD/McCORMICK PLACE AND STORMWATER PLANTING UPGRADES.

Study options for expanded outdoor seating at the Alderman entrance to Observatory Hill Dining; explore options for relocating bicycle parking; expand canopy tree planting around outdoor green spaces and improve planting in the stormwater swale along the Alderman sidewalk to open views to the green space; and enhance seasonal interest of plantings to create an intentional green street.

3. ALDERMAN ROAD STREETScape Develop a plan for an improved green streetscape to include widened sidewalks and street trees, coordinated with University lighting and utilities; introduce stone walls to ease slopes for planting; create a series of nodes for gathering and activity focusing on traffic calming; increase walkability in the precinct; and replace or infill canopy trees in corridors to strengthen canopy coverage.

4. WHITEHEAD ROAD. Develop a plan for an improved pedestrian streetscape at Whitehead Road with canopy trees, lighting, and furnishings; study options for expanded tree planting and stormwater design along corridor and at building entrances and edges.

5. ENGINEER'S WAY. Develop a cohesive design for the engineering corridor that connects McCormick Road to Whitehead Road; define a series of places structured around a central "Bar" with plantings and seating to increase the sense of community; and coordinate improvements with building additions, new buildings, and renovations.

6. ALDERMAN ROAD PLACE AND TRANSIT.

Coordinate a new streetscape with design and upgrades of landscape around the Student Activities Building for improved usability and outdoor gathering; explore making an activity node south of the building with seating, planting, and lighting; coordinate design with an enhanced transit stop with amenities in the parking lot; improve and connect Alderman Road bus stop; connect all upgrades to a new riparian garden at the terminus of Alderman Road at Stadium Road; integrate and upgrade existing water management facility into the design; use University standard lighting and fieldstone walls to define the edges; plant for seasonal interest; and connect to the improved Alderman streetscape.

7. BICYCLE/PEDESTRIAN PATH TO FONTAINE MEDICAL CAMPUS.

Develop a bicycle and pedestrian path connection from West Grounds to the Fontaine medical campus that would: include a bridge or improved at-grade connection at Fontaine Avenue; connect an accessible path to a planned multiuse building; create safe, lighted, and improved connections through Piedmont to Stadium Road.

8. FONTAINE AVENUE ENTRY STREETScape.

Design a streetscape plan for Fontaine Avenue that uses University arrival elements and improved planting to signal entry to the University and coordinates with the city's Smart Scale design and goals.

9. FONTAINE PLAN.

Develop a plan for the redevelopment of the Fontaine medical campus that ties it back to Central Grounds in details and general character: create a clear street network and gathering places that connect to the public building program; encourage walkability and make visitors and staff want to linger outside; design memorable, healing gardens at each neighborhood; develop a multimodal hub with services; and use stormwater design to help with function and to diversify planting.

C. CENTRAL GROUNDS

CENTRAL GROUNDS

Landscape is visually robust within the historic core around the Academical Village. Mature trees and plantings and diverse outdoor spaces elevate the landscape experience of Central Grounds. LFP recommendations in Central Grounds focus on arrival and orientation, connections within the precinct, the Health System upgrades, and small-scale design interventions to help create a more coherent pedestrian landscape fabric. The concept diagram identifies “stitches” and “pockets” of green as connection and placemaking strategies.

Arrival and orientation are essential to the entry experience in the historic core and in the Health System, where visitors may not be familiar with the University.

Central Grounds is predominantly pedestrian-focused. To expand walkability and connections, the LFP supports the expansion of pedestrian improvements for some vehicle streets, such as McCormick Road, Jeanette Lancaster Way, and Hospital Drive. Prioritizing pedestrians would help to civilize these corridors.

Green “pockets” in the Health System introduce respite and healthy landscapes into building-dense settings. Guidance in these areas can, to some extent apply to all areas of Grounds where residual and small landscape places can bring relief, pause, and calm.

CENTRAL GROUNDS GOALS

VISITOR ARRIVAL

- Clarify wayfinding patterns

PEDESTRIAN EXPERIENCE

- Complete the pedestrian network
- Expand shared, managed, and green streets

GREEN GARDEN POCKETS

- Create small garden places



LANDSCAPE STITCHES AND POCKETS The densely built Health System introduces new green streets, “stitches,” and garden “pockets,” which will incrementally improve the comfort and overall experience in Central Grounds.



LFP CENTRAL GROUNDS PROPOSED IMPROVEMENT DIAGRAM

LANDSCAPE CHARACTER

The dominant landscape character of Central Grounds is highly cultivated, exemplified by the iconic landscapes of the Lawn and Pavilion gardens. It should be no surprise that the plant diversity in this area exceeds those in other precincts.

Recent landscape additions in Central Grounds include a broad palette of resilient plantings at the Children's Medical Center and the seasonal palette proposed for green street plantings along Brandon Avenue and the Health and Wellness Center.

The courtyard garden at New Cabell Hall is a strong example of how a residual space can be transformed into a destination and site amenity. Especially beneficial is the way riparian plantings serve a sustainability goal and provide diversity to this space. This garden demonstrates that a clear vision and thoughtful palette of landscape materials can elevate a forgotten space. The University Health System "pockets" will be well served to use these precedents as a model for landscape character.

Central Grounds landscape "stitches" should focus on the pedestrian-scale walks and streets. Attention to creating a cohesive shade canopy will increase comfort and contribute to the overall canopy cover. In these pedestrian-priority corridors, it is important to develop a vocabulary for green campus streets that also improve stormwater management at the street scale.



NEW CABELL HALL



NEW CABELL HALL



UVA CHILDREN'S HOSPITAL BATTLE BUILDING



CHILDREN'S HOSPITAL BATTLE BUILDING WITH CLARK PARK



UNIVERSITY AVENUE /IVY ROAD

The intersection at Emmet Street and Ivy Road/University Avenue is a pivotal point in the campus arrival sequence, one that many consider the primary entry into the University. This area has been the focus of the *Ivy Corridor Strategic Planning Study* and the *Emmet Ivy Task Force Report* (2019).

At Emmet and Ivy, the views of Carr's Hill Field to the east and the tennis courts to the south present a promising backdrop. However, the pedestrian environment in this zone is uncomfortable. The traffic island is an eyesore, with its jumbled array of utilities and lack of planting. Recent upgrades to the northwest corner with Carr's Hill Field include new planting and a stone wall.

Additional improvements to the intersection at Emmet Street and University Avenue could include a dense stand of tall deciduous canopy trees to allow views below canopy to the fields beyond. Currently, the shrubs at this corner are less desirable; they block views of the activity on the fields and do not present a strong green threshold. The corner needs to establish a green threshold to the historic core and should present the best of the University's landscape identity.



EMMET AND UNIVERSITY-EXISTING CORNER



EMMET AND IVY-EXISTING CORNER



EMMET AND IVY-IVY CORRIDOR STUDY RENDERING, DUMONT JANKS



EMMET STREET-IVY CORRIDOR STUDY RENDERING, DUMONT JANKS



EMMET-IVY PLAN



EMMET-IVY VIEW

EMMET IVY DEVELOPMENT

Development planned for north of Ivy Road at Emmet Street will bring significant vitality to this crossroads and clarify the central arrival point for the University. It will host innovative programming and University-wide curricular and research collaborations. It is being described as being open to and inviting to the entire University and Central Virginia community.

The area as redeveloped will have a strong landscape framework with a central environmental green space. The transformed riparian corridor has the potential to be an active research and learning laboratory, a vibrant student-life zone. The central green space will enable best-practice stormwater management while providing significant new ecosystem services for the campus.

University arrival will be improved with the creation of a multimodal transit point tied to the Ivy commuter parking garage. It will support services, amenities, and wayfinding to promote a vital and welcoming arrival, especially for visitors.

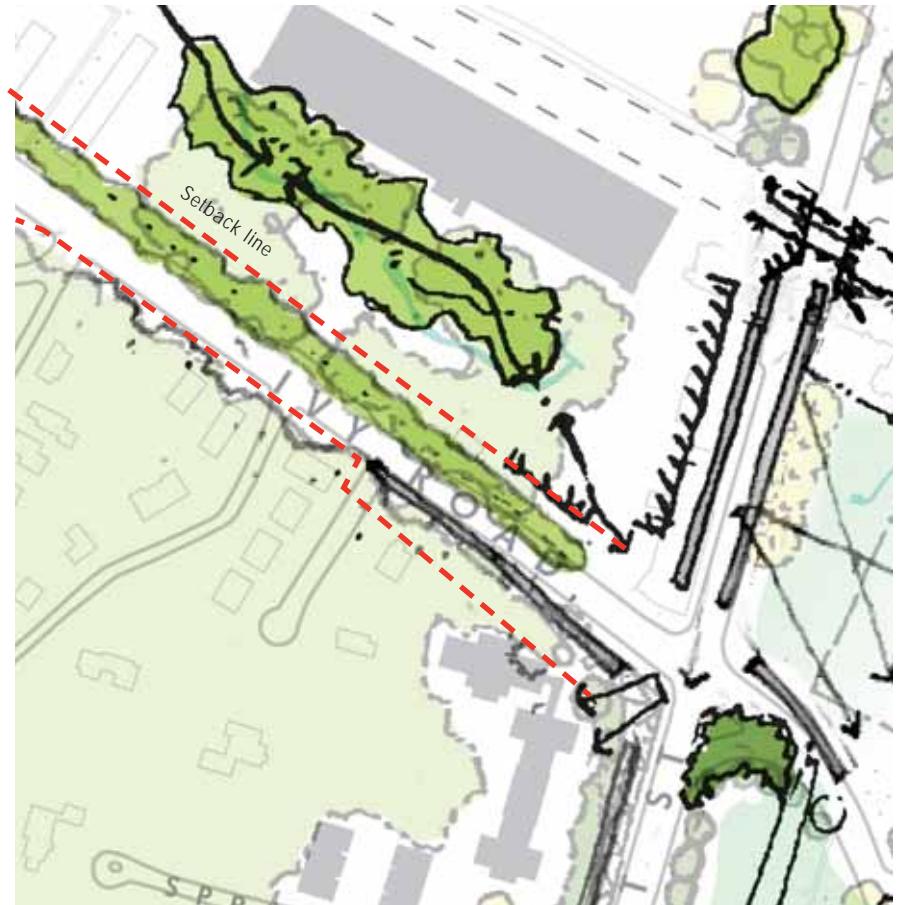
IVY ROAD

This zone is marked by its generous forested edge, particularly as one nears the University Avenue and Emmet Street intersection. However, the pedestrian routes are tight to the road as one approaches the intersection and street trees are lacking.

With the development of the Emmet Ivy Development, it is desirable to weave familiar University details into the exterior public spaces of the project.

Recommendations:

- Provide a generous setback (40 feet) to allow comfortable pedestrian passage and social space.
- Organize buildings to define an interior, riparian woodland and Meadow Creek daylighting area in the central green corridor of the Emmet Ivy development.
- Develop a generous streetscape that transitions from the bucolic character of Ivy Road to the urban character of Emmet Street.



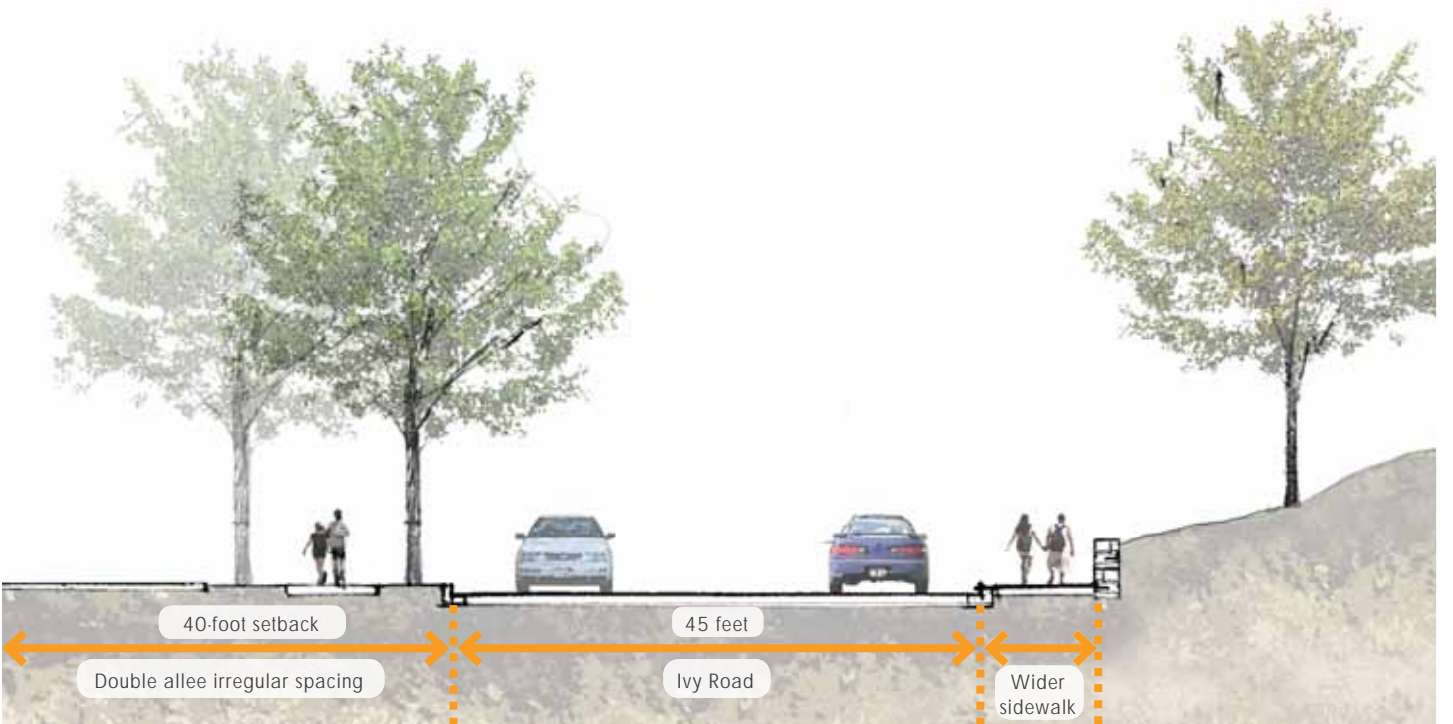
IVY CORRIDOR DIAGRAM



CENTRAL GREEN CORRIDOR-IVY CORRIDOR STUDY RENDERING, DUMONT JANKS



IVY ROAD—EXISTING CONDITION



IVY ROAD—PROPOSED

UNIVERSITY AVENUE

Arrival moving up the hill on University Avenue from Emmet Street is very pleasant, with a veiled view to Nameless Field and the University buildings beyond. The gentle rise in grade provides a sense of anticipation as one ascends to the Rotunda. The popular destination for most visitors arriving at the University is the Rotunda, itself. The primary issue with this area is the extremely long crosswalk at the intersection of Newcomb Road and University Avenue and the need for orientation before arriving at the Rotunda.

Recommendations for University Avenue include:

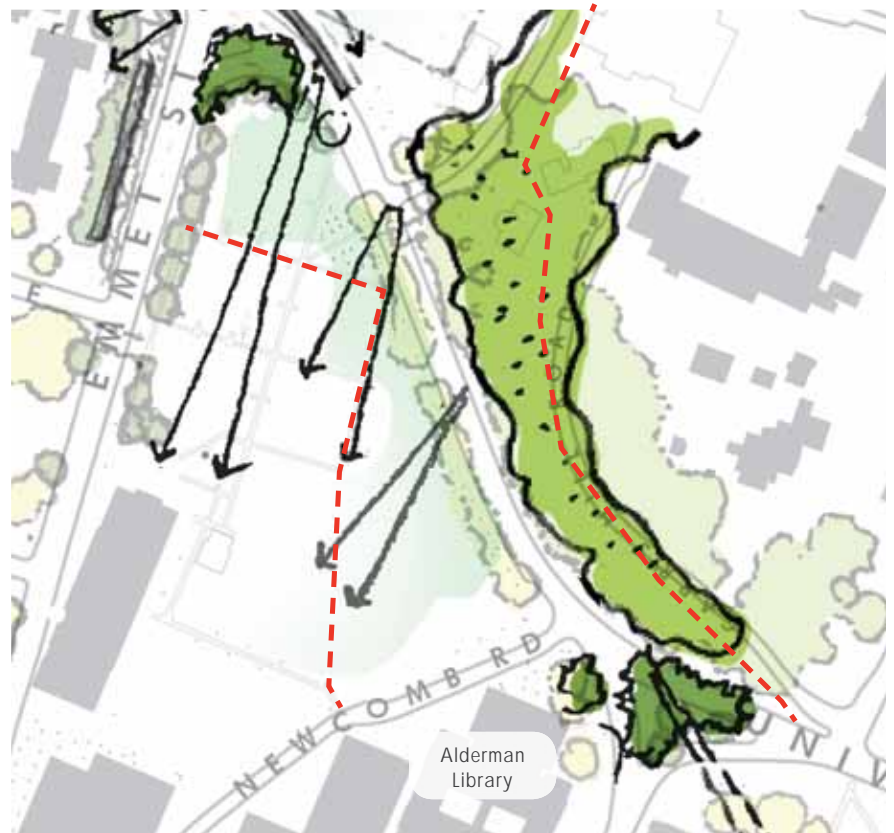
- Maintain views to Nameless Field and the University buildings (including Memorial Gym) beyond.
- Preserve the woodland on Carr's Hill.
- Develop "bumpouts" at the Newcomb Road and University Avenue intersection to enable a shorter crosswalk and easier pedestrian passage.



EMMET AND UNIVERSITY EXISTING CORNER



UNIVERSITY AVENUE AND McCORMICK ARRIVAL



UNIVERSITY AVENUE DIAGRAM



UNIVERSITY AVENUE—EXISTING CONDITION



UNIVERSITY AVENUE—PROPOSED

McCORMICK ROAD EAST

McCormick Road East is one of the busiest pedestrian corridors on Grounds. Not only does it have heavy pedestrian traffic, specifically at class changes, it also supports the University transit system and bike traffic. Conflicts regularly arise between modes of traffic with visitors in cars, students on foot and on bicycles, and staff in service vehicles. Visitors pose a particular challenge in this historic area adjacent to the Academical Village.

The corridor transitions from West Grounds, with residential and academic circulation, to Central Grounds, adjacent to University of Virginia Admissions, the Alderman Library, the University Chapel, and the Academical Village. Upgrades to this corridor could have a lasting benefit to the way students, staff and visitors experience Grounds at the McCormick Bridge. The corridor is designed for vehicles, with pedestrians relegated to the narrow, insufficient sidewalks. Existing stone walls and large trees restrict sidewalk expansion. A recent expansion of the West Range walk is a good example of an expanded pedestrian zone with new stone walls that should be replicated.

Wayfinding and circulation for visitors should also be a focus in this corridor. *The McCormick Road Streetscape Design Concept* (2006) explored phased options for the corridor including a control point to assist with orientation and wayfinding at the east end. Further explorations should look at location and function for a control point to improve safety and limiting private vehicles from McCormick Road. Plans for updates to the Alderman Library show improved plantings and sidewalks that could be coordinated with a control point across the street.



WIDEN WALKS



PRESERVE LARGE TREES



PROPOSED NORTH FRONT ALDERMAN LIBRARY



NEWCOMB ROAD SOUTH

Newcomb Road South is frequently used by pedestrians moving between Central Grounds and West Grounds. Service access along Newcomb Road is important for the Brown College residential complex. Newcomb Road South is not a through street; the Newcomb Hall West terrace is not accessible to vehicles, although firetruck access is required through to Newcomb Road North.

An accessible, elevated walkway bridge is planned to connect across Emmet as part of the planned future Contemplative Sciences Center. With this new bridge, Newcomb Road South may have more pedestrian traffic as a connector to places in West Grounds such as the Dell, the Curry School of Education, and the future Contemplative Sciences Center.

Recommendations for transitioning Newcomb Road South to a shared street to give pedestrians preference and improve the walking experience include:

- Designate it as a shared roadway, with brick or other special paving for the shared section.
- Create a linear trench drain to demarcate the walking zone on the west side.
- Locate a planter along the bottom of the Brown College terrace wall, creating an asymmetrical cross-section and keeping pedestrians under the canopy of the existing trees on the opposite side of the corridor.
- Preserve trees for shade and comfort.



SHARED STREET PRECEDENT: DENMARK



SHARED STREET PRECEDENT: DENMARK



SHARED STREET PRECEDENT: UK



SHARED STREET PRECEDENT: UK



NEWCOMB ROAD SOUTH-EXISTING CONDITION



NEWCOMB ROAD SOUTH-PROPOSED

HOSPITAL DRIVE

Hospital Drive is a seam between the historic core of the Academical Village and the eastern part of Central Grounds adjacent to the Health System. As such, it is frequented by pedestrians; it is a convenient and pleasing way to travel to and from the Corner or between the Lawn and the Health System. A pedestrian-focused green street with a featured bioretention design would offer strong opportunities for the phased adaptive reuse of Hospital Drive's existing clinics. Future redevelopment should explore entries that engage the street rather than keeping entries topographically separated.

This street is designated as a shared street, so it can be both a pedestrian circulation corridor and have gathering places along its length.

Recommendations for transitioning Hospital Drive to a shared street include:

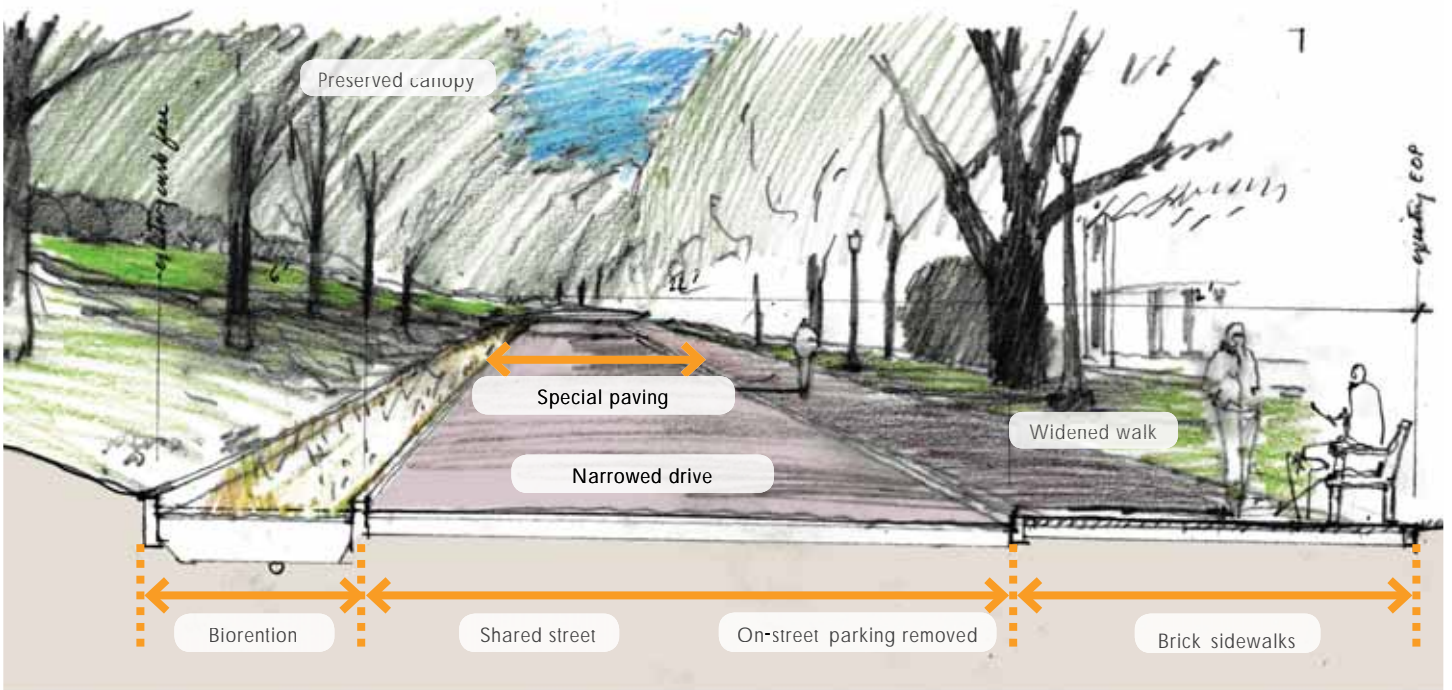
- Demarcate the shared roadway with special paving to match the pedestrian path.
- Create a narrowed asymmetrical road cross-section.
- Create a bioretention planter at the toe of the slope with intermittent seating.
- Install a broad brick sidewalk on the east side.
- Do not allow street parking.
- Realign the road to be centered on Cobb Hall.
- Preserve and expand trees.



BIORETENTION



HOSPITAL DRIVE-EXISTING CONDITION



HOSPITAL DRIVE-PROPOSED

JEANETTE LANCASTER WAY

Jeanette Lancaster Way is a corridor busy with pedestrians, cyclists, and automobiles that connects the Claude Moore Nursing Education Building and the School of Medicine while providing a major link to the South Garage. Connections across the street are frequent as students, faculty, and staff move between buildings.

Formalizing the pedestrian priority for this street would help to slow vehicles and create an activity node for meeting, socializing, and studying.

Designating the street as a managed street would help to civilize it, changing its role in the precinct. As a managed street, it could have flexibility as to whether vehicles would be limited at certain times of day. Traffic movement in the area is desired to access the garage at Crispell Drive. Design details should focus on traffic calming to lessen the impact of the vehicles and to improve the human scale and placemaking of the block.

Recommendations for transitioning Jeanette Lancaster to a managed street include:

- Use traffic calming techniques such as textured paving to signal slower vehicle speeds.
- Connect raised table crossings to create terrace-scale crossing and special paving to tie together landscapes on each side of road.
- Broaden sidewalks and connect to adjacent seating areas.
- Plant more trees to create a shade for comfort to pedestrians, encouraging people to linger and to feel comfortable outside building entries.



PEDESTRIAN PRIORITY-PORTLAND DOWNTOWN



Narrow concrete sidewalk

Crossing

Carrow concrete sidewalk

JEANETTE LANCASTER WAY-EXISTING CONDITION



Special paving

Brick sidewalks

Managed street

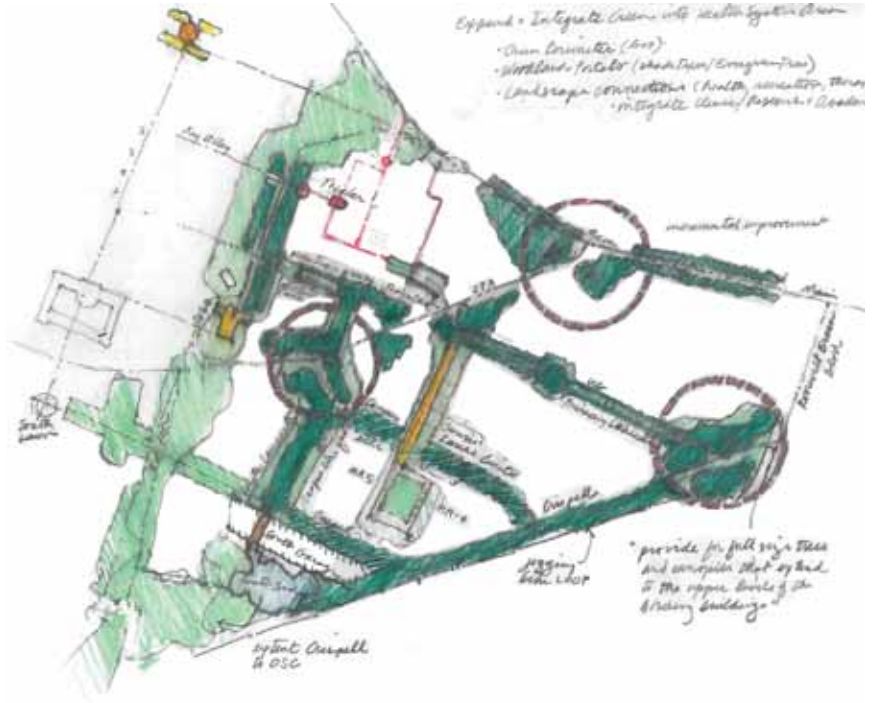
Brick sidewalks

JEANETTE LANCASTER WAY-PROPOSED

HEALTH SYSTEM CONNECTIONS

As one of the most densely built areas of Grounds, the Health System has limited landscape. The visitors, staff, and students within this part of Central Grounds are moving between buildings and offices and could benefit from more planting to soften the medical environment. Landscape at all scales is desirable both for healing and for community.

A number of proposals would improve connections, “stitching” between the Health System and the rest of Central Grounds, including the Brandon Avenue Green Street redevelopment and South Pond, which is slated for enhancements. Each of these projects would make significant contributions to the broader landscape vision of University Grounds.



CONCEPT SKETCH OF GREEN FRAMEWORK IN HEALTH SYSTEM

The topography, narrow walks and the speed and frequency of vehicles on Jefferson Park Avenue are challenging for the connections from the historic core to the Health System.

Recommendations for the Health System include:

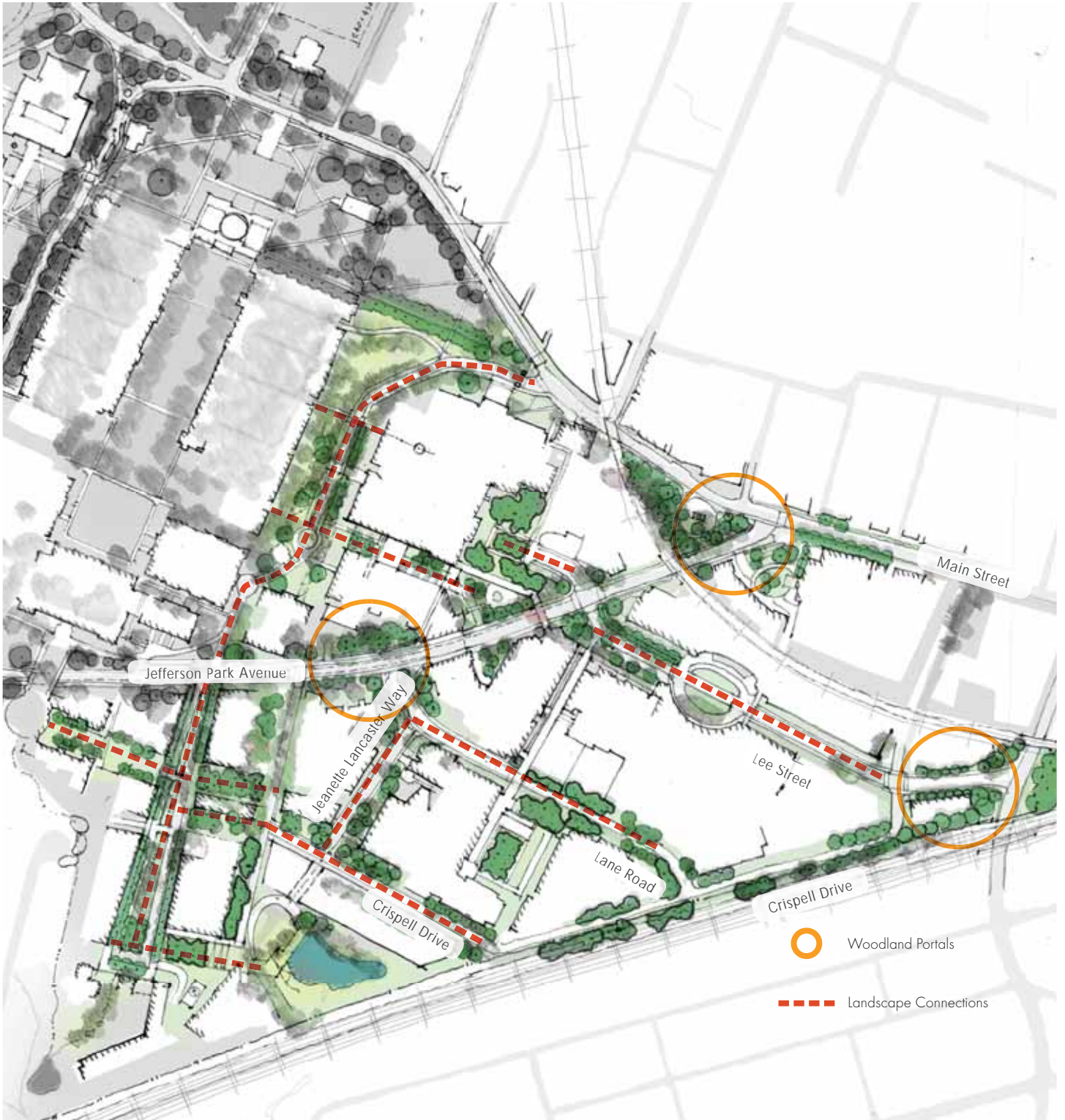
- Improve plantings at thresholds to create a clear, mixed-canopy arrival.
- Reinforce University identity with University-standard arrival amenities, including planting, fieldstone walls, and furnishings.
- Design green circulation corridors with a mix of plantings to increase canopy cover and comfort for walking.
- Complete pedestrian network along JPA and provide generous crossings. (See JPA-Emmett St. Corridor Study, 2017).



WOODLAND PORTALS



GREEN CORRIDORS, GROUNDS PLAN SKETCH, BILL JOHNSON



LFP CENTRAL GROUNDS PLAN STITCHES

LANDSCAPE POCKETS

The dense development of the University Health System lacks green space and outdoor amenities. A series of green places, or “pockets,” should be created to improve the Health System experience for patients, visitors, faculty, and staff, providing outdoor places for respite, relief, and restoration. The precedent projects pictured on the adjacent page show desired landscape character.

Pockets can be created through renovation and finding new opportunities to increase planting and placemaking at small scales. Garden places should be designed for patients, visitors, and staff to experience the outdoors. Designers should also focus on all opportunities to design green pocket gardens to be enjoyed from the interior of buildings.

The majority of the locations identified in this LFP are existing outdoor places that need enhancement; others are new. Recognizing that there is value in green spaces that can be occupied, as well as those that are only seen, designers should explore all opportunities to introduce planting for healing and health benefits.

The following recommendations may prove helpful:

- Identify existing outdoor pathways and pedestrian edges for “garden pocket” locations.
- Design gardens that have visual, seasonal, and olfactory appeal.
- Aim for plantings that can subsist on appropriate soil volumes in green roofs and roof gardens, including use of pots.



CHILDREN'S HOSPITAL OF PHILADELPHIA, PHILADELPHIA, PA



CHILDREN'S HOSPITAL OF PHILADELPHIA, PHILADELPHIA, PA



BOSTON CHILDRENS HOSPITAL ROOFTOP, BOSTON, MA



ISABELLA STEWART GARDNER MUSEUM, MONK'S GARDEN, BOSTON, MA



RICE UNIVERSITY, BROCHSTEIN PAVILION GARDEN, HOUSTON, TX



LEGACY EMANUEL CHILDREN'S HOSPITAL GARDEN, PORTLAND, OR



TAHARI COURTYARD, MILLBURN, NJ



UNIVERSITY OF VIRGINIA, CHILDREN'S MEDICAL CENTER



UNIVERSITY OF VIRGINIA, LAW SCHOOL GARDEN

SELECTION OF POCKET OPPORTUNITIES

1. *Area adjacent to McKim Hall.* Improve space with more articulated garden planting, large trees, and more group tables and seating. If surrounding buildings are replaced, reserve space for gardens in site planning.

2. *Stepped landscape at Crispell Drive and Jeanette Lancaster Way.* Improve streetscape with a landscape space for sitting and respite across from garage. Provide trees for shade and perennial plantings for seasonal interest.

3. *Plaza at West Complex Entry.* Improve arrival and gathering spaces with taller green edges to create a more intimate, shaded space. Future building planning should reduce parking and increase shade tree planting at parking edges.

4. *Pinn Hall Entry and Terrace.* Update planting, paths, and furnishings to encourage gathering outside. Address accessibility deficiencies with improved grading and arrival experience.

5. *Lane and JPA Corridor.* Increase canopy trees at the intersection and along the corridor to increase the green threshold at the Health System.

6. *McLeod Hall Nursing School Green.* Extend the canopy trees on the lawn and create an outdoor place/classroom to support program needs.

7. *Lane Road Service.* Provide more articulated planting along Lane Road at service and ramps to the MR4 (Medical Research Building 4) courtyard.

8. *Courtyard at MR4.* Upgrade the largest Health System over-structure green space. The courtyard should be a destination with flexible seating and a lushly planted healing garden. Add shade with umbrellas or a pergola.

9. *Dining Courtyard.* Coordinate new furnishings and potted plantings to brighten the courtyard and improve the space for dining both inside and outside on terrace.

10. *South Pond.* Implement restoration plans to create a needed natural resource and retreat in the densely built Health System.



OUTDOOR SPACE ADJACENT TO MCKIM HALL



CRISPELL DRIVE AND JEANETTE LANCASTER WAY



PLAZA AT UVA WEST COMPLEX ENTRY



PINN HALL ENTRY AND TERRACE



LANE ROAD AND JPA CORRIDOR



MCLEOD HALL NURSING SCHOOL GREEN



SCREEN SERVICE AT LANE ROAD



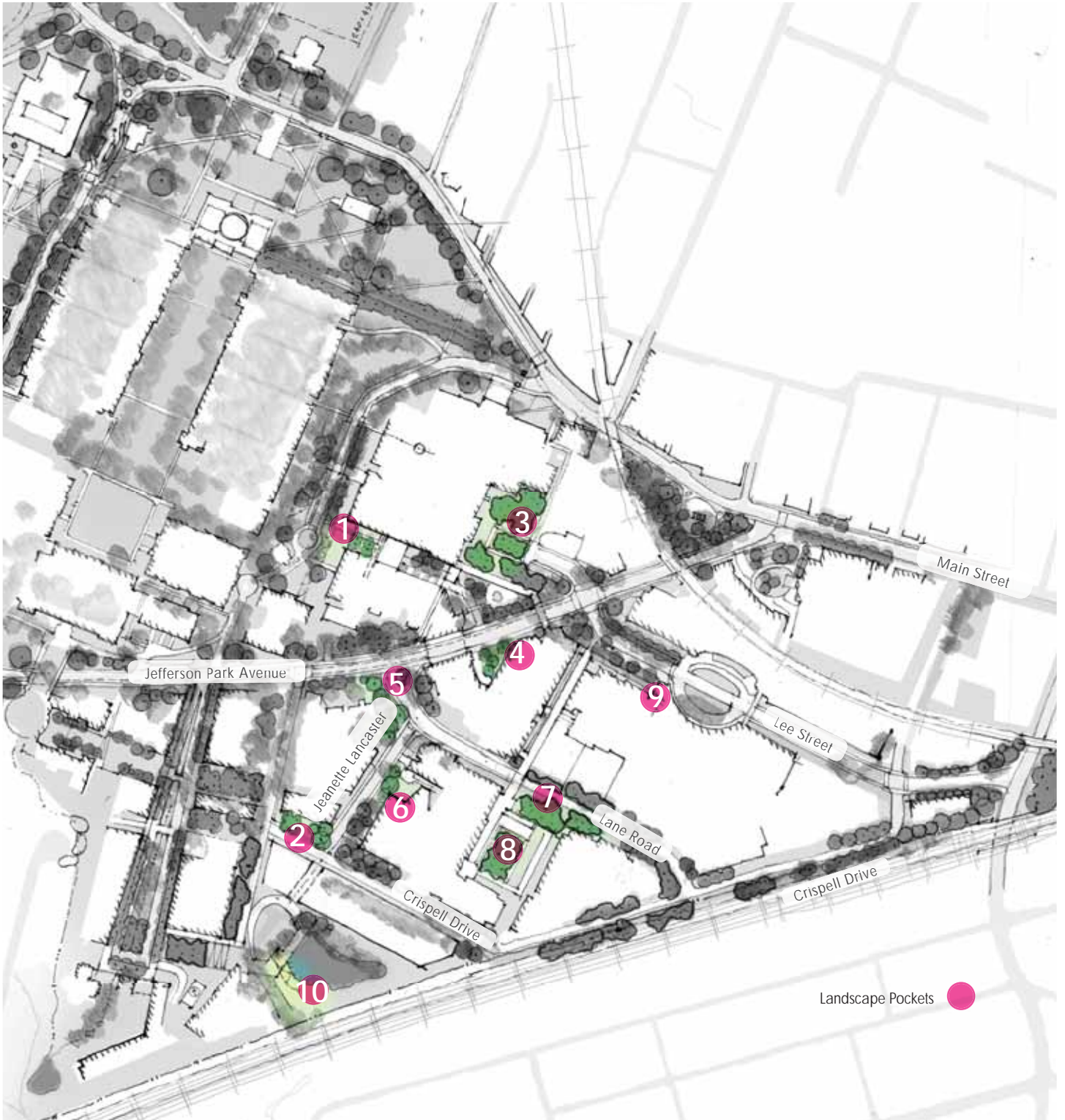
COURTYARD AT MR4



DINING COURTYARD



SOUTH POND





CENTRAL GROUNDS PROJECT RECOMMENDATIONS LOCATIONS

CENTRAL GROUNDS PROJECT RECOMMENDATIONS

1. McCORMICK ROAD. Implement a managed street design for McCormick Road East that reduces and restricts vehicular traffic and a streetscape with shade trees spaced to create a continuous canopy; expand walks for improved pedestrian accommodation; and design and locate a control point for orientation, greeting, and management of the street.

2. NEWCOMB ROAD SOUTH. Develop a streetscape plan for a shared street with unified paving; tie in to plans for pedestrian bridge crossing at Emmet Street.

3. HOSPITAL DRIVE. Design a street plan for Hospital Drive that realigns with the center of Cobb Hall; incorporate bioretention and seating and a single broad sidewalk for improved frontage for future buildings along the corridor; develop a tree-preservation plan; and improve connections to the Corner, to the Lawn, across Jefferson Park Avenue to the Health System, and to the new residential district on Brandon Avenue.

4. JEANETTE LANCASTER WAY. Develop a streetscape plan for a managed street with unified paving for sidewalks and roadway; improve the raised crosswalk with special paving to connect the entrances of the Claude Moore Medical Education and the Nursing Education Buildings; and expand and enhance existing streetscape plantings to introduce more shade for comfortable gathering with canopy trees where possible, especially at McLeod Hall.

5. HEALTH SYSTEM GREEN SPACE PLAN. Identify potential garden/green space locations for improvement in the Health System; design a series of pocket gardens, at grade and on roofs, to be enjoyed by patients, staff, and visitors. Locations to consider include the outdoor space adjacent to McKim Hall, the stepped landscape at Crispell Drive and Jeanette Lancaster Way, the entry plaza at West Complex, the Pinn Hall entry and terrace, the Lane Road and Jefferson Park Avenue corridor, the McLeod Hall Nursing School green, the service lane at Lane Road, the courtyard at MR4, the dining courtyard at UVA Medical, and the South Pond.

6. UNIVERSITY AVENUE. Continue to make upgrades at University Avenue and Emmet Street with canopy tree planting; consider upgrades to the Newcomb Road North and University Avenue intersection to improve welcome and walkability.

7. EMMET IVY DEVELOPMENT. Develop a central multimodal transit and orientation point for Grounds at the commuter parking lot of the Emmet Ivy Development; implement central environmental amenity based on stormwater, sidewalk widening, and street tree planting; connect perimeter streets and paths to this future hub to support a vital new heart and orientation point for the University.



4. CONCLUSIONS & REFERENCES



CONCLUSIONS

At the University of Virginia, landscape is an essential part of the University experience. This LFP outlines fundamental principles that distill the character of University arrival, and it describes ways of improving connections and increasing the variety and scale of green places that can enrich the memorability of the place.

Numerous University reports and planning studies identified similar themes related to campus growth and landscape. There is comfort in knowing that such ideas as improving perceived distances, connectivity, and planting more canopy trees are reinforced and repeated by consultants' efforts over the years. Time, patience, and funds allow certain goals to come to fruition while others need to wait for their time.

In the arc of the University planning, 2019 represents a time of great integration of landscape and building programs, a time of strong University design vision, and a time when interdisciplinary academic and programmatic goals are interwoven in all building and landscape projects. It also is a time when sustainability and natural-systems goals are assimilated and fundamental to the success and reception of building projects, from the standpoints of both the users and the University. There is a recognition that making the Grounds more walkable, safe, and vibrant is the task of all design teams that work on Grounds. The historic Academical Village model continues to be a guiding inspiration for design at the University, not purely for its form but more essentially for its creation of multiuse spaces for living, learning, and working at the human scale. Landscape has always been valued at the University of Virginia, and its legacy is clear.



FALL ON THE LAWN



EVENT ON THE LAWN



MIX OF CANOPY TREES IN CENTRAL GROUNDS



LFP SUMMARY DIAGRAM

REFERENCES

The following University reports were used for preparing this report.

General

- *Charlottesville Area Transit Plan: Fiscal Years 2012-2017*
- *Charlottesville, Streets that Work, Design Guidelines, 2016*
- *Chesapeake Bay TMDL Action Plan, 2015*

General- University

- *Energy and Utilities Master Plan and Cogeneration Study, 2015*
- *UEI Entry Corridor Study, 2014*
- *University of Virginia Precinct Plans, 2011*
- *University of Virginia Health System Area Plan, 2010*
- *Grounds Plan, 2008*
- *Transportation Demand Management Plan, 2007*
- *University of Virginia Bicycle Master Plan, 2007*
- *Landscape Master Plan, 1998*

Standards

- *Landscape Management Plan, 2017*
- *Facility Design Guidelines, 2014*
- *Design Guide & Material Palette, 2013*
- *Vegetated Roof Standards, 2013*
- *Landscape Typologies + Standards, 2011*
- *Exterior Lighting Study Final, 2011*

History

- *University of Virginia Academical Village, Cultural Landscape Report, 2013*
- *From the Monacans to Monticello and Beyond: Prehistoric and Historic Contexts for Albemarle County, Virginia, 1995*

Natural and Cultural Systems

- *UVA Sustainability Plan, 2016-2020*
- *UVA Sustainability Assessment, 2006*
- *UVA Sustainability Guidelines, 2005*
- *Strategic Plan for Water Resources Management, 1999*

North Grounds

- *Virginia Athletics Master Plan, 2018*
- *North Grounds Strategic Planning, Athletics Plan, 2017*
- *Ivy Mountain Master Plan & Musculoskeletal Center Programming Study, 2017*
- *Ivy Corridor Strategic Planning Study, 2016*
- *Distillery Branch Stormwater Planning & Green Infrastructure Retrofits Project, 2015*
- *Moore's Creek Stormwater Management Plan v1/v2, 2003*
- *West Side Stormwater Management Master Plan v1/v2, 2002*

West Grounds

- *Fontaine Master Plan, 2017*
- *McCormick Road Realignment, Schematic Design Basis of Design Narratives, 2016*
- *McCormick Road West Corridor Study, 2015*
- *McCormick Road Bridge Replacement Feasibility Study, 2010*
- *Science and Engineering Research Initiative LMP, 2008*
- *Alderman Road Residential Redevelopment Plan, 2007*
- *Midmont to Piedmont Area Study, 2004*

Central Grounds

- *Emmet Ivy Task Force Report, 2019*
- *Brandon Avenue Green Street Plan, 2019*
- *JPA/Emmet St Corridor Study, 2017*
- *Brandon Avenue Master Plan, 2016*
- *Academical Village East Range Stormwater Master Plan, 2016*
- *East Range Stormwater Management Master Plan Phase 1, Existing Conditions, 2016*
- *Newcomb Road Landscape Design Report, 2009*
- *McCormick Road and Pavilion Alleys Improvement Project, Conceptual Design Phase, 2007*
- *McCormick Road Corridor and Pavilion Alleys Historic Landscape Study, 2006*
- *McCormick Road: Phase 1, Streetscape Design Concepts, 2006*
- *Lee Street Study and Guidelines, University of Virginia Health System, 2006*
- *Emmet/Ivy Parking Garage Traffic Study, 2003*

Acknowledgements

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