## THE UNIVERSITY OF VIRGINIA BRANDON AVENUE DIS TRICT DESIGN GUIDELINES

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August 2018

## **BRANDON AVENUE DISTRICT DESIGN GUIDELINES**

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## Introduction

Location and Context Brandon Avenue Master Plan Brandon Avenue Green Street Design



Bioretention Basin
South Lawn Extension

SOUTH LAWN BRIDGE

ACC ...

411

SOUTH LAWN il.

ſ,

3

EEG

SHEA HOUSE

34

+1-11

FUTURE PARK (TBD)

1.00

SOUTH GARAGE

OPSC

87

SOUTH POND

1.00

+ + + + +

THE MONROE

4

436

E

*(future)* STUDENT HEALTH AND WELLNESS CENTER

PRIVATE

EUNOIA

A

B

**C**1

**C2** 

BICE

1

D

(future) PPERCLASS HOUSING

KITTY FOSTER HISTORIC SITE Sr.

- 3 Brandon Avenue Plaza
- 4 Brandon Avenue Plaza
- 0 50 100 FT

Defined as a redevelopment zone in the 2008 UVA Grounds Plan, Brandon Avenue is now ready for its transformation into a vibrant, mixed-use, sustainable district that links the Health System to Central Grounds.

#### **Location and Context**

Brandon Avenue is a single block street located south of Jefferson Park Avenue (JPA), within a short walking distance of the Academical Village. The street and the abutting development parcels connect with South Lawn to the west and with the Health System to the east.

#### **Brandon Avenue Master Plan**

In 2016, Perkins+Will worked closely with University staff and stakeholders to develop an urban design vision to guide the transformation of Brandon Avenue into a new district within the University Grounds. The resulting master plan document is available on the Office of the Architect for the University website at <u>http://www.</u> officearchitect.virginia.edu/pdfs/BrandonAveMasterPlan. pdf.

The master plan calls for the transformation of Brandon Avenue into a "Green Street"—a working streetscape with a bioretention median that processes stormwater from adjacent new development while providing usable public spaces for the district. A series of parklets connect the Green Street to the adjacent South Lawn complex and to the Health System.

The master plan provides an optimized development portfolio for the new district that accommodates University needs while maintaining the integrity of the urban design vision.

The development vision includes a distribution of academic, research, and residential uses within the district based on adjacencies, context and site constraints; accompanying existing buildings on two privately owned parcels—Eunoia Creative Community and The Monroe apartment building. The proposed build-out includes:

- ± 445,000 GSF new construction; (including new student housing)
- ± 500 new on-Grounds beds; and,
- ± 220 new permit parking spaces.

The long-term master plan vision is illustrated on the opposite page.



## **Brandon Avenue Green Street Design**

Brandon Avenue sits on a ridge line. Today, stormwater falling on the west side of Brandon Avenue drains towards Valley Road while stormwater falling on the east side of the street drains towards Monroe Lane. Both flows contribute to two tributaries of Rock Creek that have been heavily impacted and are piped through the railroad berm. University-owned stormwater facilities located on Valley Road and Monroe Lane—the bioretention basins at South Lawn (2010), and the Health System retention pond



Before / After: Stormwater Districts Serving Study Area

Existing Terrain Analysis Higher Lower



Before / After: Brandon Avenue District Drainage

(South Pond, 1990s)—also receive stormwater flows from impervious surfaces on Brandon Avenue.

The 2015 Campus Energy and Utilities Master Plan recommended that redevelopment on Brandon Avenue exceed stormwater volume and quality treatment requirements to provide UVA credit towards the stringent Chesapeake Bay Total Maximum Daily Load (TMDL) requirements. Towards this end, and to protect the Rock Creek watershed, the Brandon Avenue master plan calls for the treatment and infiltration of stormwater on-site, within the redesigned streetscape. The "green street" design is built around a bioretention median that will reduce stormwater pollutants (sediment and nutrients) and volumes from the street, adjoining hardscape surfaces and rooftops (see diagram below). A promenade and stairs located alongside the bioretention basin will provide students, faculty and staff opportunities to sit and relax next to this beautiful working landscape.



#### A MULTI-PURPOSE GREEN STREET

While the master plan increases pervious surface, it provides for on-site management and treatment of every drop of water that falls on the street and adjacent buildings. It is a working landscape that is designed to be efficient, attractive, and easy to maintain.



In 2017, Perkins+Will was hired by UVA to further develop the design for the Brandon Avenue Green Street and utility infrastructure to enable construction of first phase projects. The work was informed by the parallel design efforts for the new Upperclass Housing (Building D) and early programming efforts for the Student Health and Wellness Center (Building E). The design team completed Preliminary Design (PD) documents for the public realm at large, and construction documents (CDs) for the streetscape and utility infrastructure. The final green street design, which is illustrated at left, is largely consistent with the overall master plan vision. Key design updates incorporated into the CDs are summarized as follows:

- The layout of upper Brandon Avenue is modified as shown to enable construction of the streetscape while accommodating current conditions at the top of the street.
- To accommodate fire safety needs, the one-way loop is widened from 16 feet to 20 feet, and on-street parking is eliminated. The new design reduces the visual impact of the asphalt by changing the road surface to concrete pavement along the median.
- The removal of on-street parking enabled the addition of a denser array of street trees.
- The tree preservation plan is updated to accommodate grading, stormwater, and infrastructure needs. (One specimen tree was also lost due to storm following the completion of the master plan).
- A new building (Building F) is shown in place of 436 Brandon Avenue, which was purchased by UVA after the master plan.
- The terraced lawn on The Quad is replaced with a switchback ramp.
- Actual footprint is shown for Building D / upper class housing.

This updated plan is the basis for these Design Guidelines.

## **Development Guidelines**

General Development Guidelines Active Ground Floor Building A Building B Building C Building D Building E Building F Building G

## **GENERAL DEVELOPMENT GUIDELINES**

#### **Dimensional Requirements**

The University of Virginia is not mandated to but aims to align with the City of Charlottesville zoning in this neighborhood. The dimensional requirements of the multi-family R-UHD "University High Density" zoning district, which applies to all parcels within the study area, were among numerous criteria considered during the planning process for Brandon Avenue. The heights and massing recommended in the master plan, which are illustrated and summarized on the opposite page, are within the maximums allowed by right or by special permit for buildings located in R-UHD. The master plan vision also provides the required side and rear setbacks between UVA-owned parcels, and other parcels and public right-of-ways. The front setback requirement is modified from the zoning minimum to achieve urban design goals for the new streetscape. (See "Active Ground Floor" on page 16).

During the planning process, the design team worked with University staff and stakeholders to identify optimal siting and dimensions for future buildings on Brandon Avenue to meet program and urban design goals. The buildings are sited and sized to frame and activate Brandon Avenue, and a network of open spaces that link precincts within the UVA Grounds. Buildings along the western side of Brandon Avenue and along JPA are lower and smaller to provide for appropriate transitions to the Oakhurst-Gildersleeve Neighborhood Historic District, the Kitty Foster Historic site, and the historic UVA Grounds. Taller and larger structures are recommended for parcels between Brandon Avenue and Monroe Lane to transition to the higher density environment of the adjacent Health System area.

#### **Development Zones in Context**

College and Graduate School On-Grounds Housing of Arts and Sciences McIntire School of Commerce Buildings owned by UVAF Health System

Other UVA Buildings

### **Building Uses**

The master plan divides the study area into five zones based on context, adjacencies, parcel depths, and ease of access / parking. The recommended uses, which are illustrated below and on the opposite page, are intended to provide for clusters of like-uses within an overall mixed-use environment on Brandon Avenue. Academic and research uses are located closer to Central Grounds and the Health System at the top of the street. Residential uses are clustered around Bice House. The parcel overlooking South Pond is selected for its size, location and parking capacity for the future Student Health and Wellness Center, which is currently located at the top of Brandon Avenue. The adjacency of the new Center to upperclass housing and open spaces, as shown, is intended to highlight a growing focus on wellness programs.





ID	BUILDING USE	TOTAL GSF <sup>1</sup>	# FLOORS <sup>2</sup>	# PARKING SPACES <sup>3</sup>	# BEDS <sup>4,5</sup>	TYPICAL FLOOR (GSF)	ACTIVE GROUND FLOOR (GSF) <sup>6</sup>
Α	Academic Mixed-Use	17,100	3 (bldg)	-	-	5,700	5,700
В	Academic Mixed-Use	31,700	3 (bldg) + 1 (podium)	30	-	10,565	10,565
С	Residential	90,200	4 (bldg) + 1 (podium)	80	180	22,545	22,545
D	Residential <sup>7</sup>	140,247	6 (bldg) + 2 (podium)	131	313	23,919	10,446
Е	Student Health	75,600	3 (bldg) + 2 (podium)	140	-	25,200	included in program
F	Academic Mixed-Use <sup>8</sup>	57,150	3 (bldg) + 1 (podium)	40	-	19,050	9,500
G	Academic Mixed-Use	107,200	3 (bldg) + 1 (podium)	110	-	35,740	20,245

#### Notes /

- 1 Excludes podium parking levels.
- 2 If built by a non-UVA entity, Building D will require a special use permit for height shown.
- 3 New parking spaces are expected to replace 292 permit parking spaces currently located on Brandon Avenue parking lots.
- 4 Number of beds is based on residential test fits with typical 4-bedroom units. Where possible, ground floors facing Brandon Avenue are set aside for community uses (active ground floor). GSF/bed ratios vary per building based on building efficiency (a factor related to site shape and orientation) as well as the percentage of total GSF allocated to community uses. Number of beds will increase with smaller units and residential use of ground floors.
- 5 Bed count provided here does not account for ~250 off-Grounds beds lost to the demolition of 400, 500, and 600 Brandon Avenue apartments.
- 6 Estimated allocation based on the extent of frontage on Brandon Avenue.
- 7 Actual numbers provided by the design team for upperclass housing. Total GSF including podium parking levels is 208,119. These numbers are closely aligned with those recommended in the master plan.
- 8 An alternative configuration of Building F for residential use would yield about 160 beds in a 4-story, 62,500 GSF structure with 5,700 GSF set aside for active ground floor uses.

#### **Building Design Requirements**

New buildings and renovations on the UVA campus are subject to the <u>Virginia Uniform Statewide Building Code</u> and its referenced standards. Compliance with the <u>UVA</u> <u>Facility Design Guidelines</u>, which is maintained and administered by the Office of the University Building Official (UBO), is also required. In addition, the following requirements are set forth for new buildings and major renovations within the Brandon Avenue district.

While the new streetscape for Brandon Avenue is designed to create a unified look and feel for the District, the individual buildings will also contribute greatly to the overall character of the place through their massing, orientation, architectural expression and choice of materials.

The design of a building often reflects the programmatic requirements of the uses that are housed within, as well as the regulatory requirements that are applicable to those uses. A well-balanced urbanscape is achieved not by restricting this variety, or its assorted architectural expressions, but by knitting each building into the fabric of the unified public realm. The Active Ground Floor requirements, which are outlined below, are intended to achieve this goal. In addition, buildings on Brandon Avenue must meet the following requirements:

 Building heights and massing shall be aligned with master plan recommendations and active ground floor requirements (see opposite page).

- 2. The exterior design of buildings should be compatible with the existing or planned character of surrounding areas (refer to diagram on page 14):
  - Buildings located in Development Zones 1 and 2 shall be of a transitional character and include facade elements and materials and roofscapes that demonstrate affinity with nearby historical structures within Grounds.
  - Buildings located in Development Zones 3, 4, and 5 can include more contemporary facade elements and materials.
- Facade designs shall take into account perspectival views along Brandon Avenue, and long views from the Central Grounds.
  - Rooftop appurtenances shall be screened from view or integrated into the building design to minimize visual impacts and provide visual interest.

#### **Active Ground Floor Requirements**

The master plan calls for ground floor spaces facing Brandon Avenue to provide a mix of dynamic and community-oriented uses that activate the street. These spaces should ideally be accessible to the broader University community, and have open / flexible layouts that enable changing of uses over time. The mix of ground floor uses can be "curated" to create a uniform distribution of foot traffic and activity. See table on opposite page for a list of potential uses.



The following general requirements apply to all buildings to ensure the creation of a cohesive and active streetscape on Brandon Avenue:

- Locate a minimum of 80% of building frontage at the edge of the proposed sidewalk to provide a sense of enclosure to the streetscape. Building frontage, as define for this calculation, shall include the length of street-facing courtyards or breezeways. Setbacks up to 15 feet can be allowed for threshold or patio spaces for abutting active uses.
- 2. Where possible, locate the primary building entrance on Brandon Avenue.
- Provide active ground floor uses, as described above, along the entire length of Brandon Avenue frontage.
- Provide a public, pedestrian entryway every 100 feet or less along the entire length of the Brandon Avenue frontage. These can include doorways into

#### POTENTIAL ACTIVE GROUND FLOOR USES:

- Entrance lobbies
- Small café venue or similar
- Study spaces / classrooms
- Collaboration / meeting spaces
- Pan-Institute touch-down / exhibit space
- Satellite fitness center / group exercise rooms
- Media / sound production studio
- Makerspaces
- Music practice rooms
- Student art gallery
- Flexible performance spaces
- Spaces that enable students to be creative outside the classroom
- Student Health and Wellness Center uses:
  - Student Disability Access Center
  - Office of Health Promotion
  - Pharmacy
  - Teaching Kitchen

active ground floor spaces that are also accessible from the interior of the building.

- 5. Locate campus standard building signs along the Brandon Avenue frontage.
- Provide transparent glazing for at least 80% of the ground floor at pedestrian level (measured between 3 feet and 8 feet) to enable views into active ground floor spaces.
- Provide a floor-to-floor height between 14 feet 8 inches (minimum) and 20 feet on the ground floor to provide flexibility for changes in use.
- Service entrances shall not be located on Brandon Avenue, with the exception of Building A.

#### Sustainable Building and Site Design Requirements

All future buildings on Brandon Avenue must comply with UVA Green Building Standards, which outline UVA's minimum expectations for aligning University-wide sustainability goals with building design, construction, and maintenance. UVA also requires all major construction and new buildings to achieve a minimum of a LEED Certified rating upon completion.

Sustainability is one of the guiding principles of the Brandon Avenue master plan, which calls for a districtscale, on-site solution to stormwater management (see page 8). Towards this end, the following requirements apply:

- Stormwater flows from all building roofs and site hardscapes (except for Building D) shall be directed to the bioretention median for treatment and volume reduction\*.
- Strategies for stormwater reuse must be approved by UVA Facilities Department to ensure that sufficient water is being directed to the median to maintain landscape plantings.

<sup>\*</sup> Depending on the condition of upper Brandon Avenue at the time of its construction, Building G may need to provide additional measures such as green roofs or stormwater reuse to meet stormwater requirements.

## **BUILDING A**

## **Location and Context**

Building A is located on the western side of Brandon Avenue, near South Lawn. It is flanked to the north by the privately-held Eunoia Creative Community parcel and abuts the historic Foster site (NRHP'16) to the west. To its south is the proposed "South Lawn connector," which serves as an ADA-compliant east-west route between South Lawn, Brandon Avenue, and the Health System.

## **Building Use**

Academic mixed-use is recommended based on the site's proximity to South Lawn and the Academical Village.

## **Development Suitability**

Typical Floor	Floors	Estimated Building
(GSF)	(#)	Area (GSF)
5,700	3	17,100

There is an opportunity to create a larger building footprint by merging Building A with Building B. An ADAcompliant passage, open 24/7, will be required through the building in that scenario.

## Parking

There is no on-site or podium parking provided for Building A.

## **Circulation and Access**

Building A is primarily accessed on foot due to its constrained location and context.

- <u>Pedestrian Access</u>: Pedestrian access shall be provided from Brandon Avenue. Depending on building design, pedestrian access can also be provided at an upper level to facilitate access from South Lawn and the Kitty Foster site.
- ADA Access: An ADA-accessible pedestrian entrance shall be located along the ADAcompliant path that travels past the southern edge of the building between South Lawn and Brandon Avenue (see page 48 for district-wide ADA routes).

- <u>Active Ground Floor</u>: Provide active ground floor uses facing Brandon Avenue (see page 16 for details).
- <u>Fire Access</u>: Fire truck access is provided from Brandon Avenue (see page 62 for district-wide fire access map).
- Service Access: The building's constrained location and context does not allow a dedicated service dock. However, a discrete service door located on Brandon Avenue could be used to take out trash for weekly pick-up. The 20 ft width of the one-way Brandon Avenue loop also accommodates service vehicles to temporarily park curbside to access Building A.



**Building A / Plan view** 



Building A / Perspective view showing grades and entrances

## **BUILDING B**

## **Location and Context**

Building B is located on the western side of Brandon Avenue, near South Lawn. It is south of the historic Foster site (NRHP'16) and the proposed "South Lawn connector," which serves as an ADA-compliant east-west route between South Lawn, Brandon Avenue, and the Health System.

## **Building Use**

Academic mixed-use is recommended based on the site's proximity to South Lawn and the Academical Village.

## **Development Suitability**

Typical Floor (GSF)	Floors (#)	Estimated Building Area (GSF)*		
10,565	3 + (1) podium parking	31,700		
× 1 1 1.				

\*excludes podium parking levels

There is an opportunity to create a larger building footprint by merging Building A with Building B. An ADAcompliant passage, open 24/7 will be required through the building in that scenario.

## Parking

One parking level provides potential capacity for approximately 30 cars, and is accessed from the west or south.

## **Circulation and Access**

Building B is easily accessible on foot or by car.

- <u>Pedestrian Access</u>: Pedestrian access shall be provided from Brandon Avenue. Depending on building design, pedestrian access can also be provided at an upper level to facilitate access from South Lawn and the Kitty Foster site.
- <u>ADA Access</u>: An ADA-accessible pedestrian entrance shall be located along Brandon Avenue. (See page 48 for district-wide ADA routes.)
- <u>Active Ground Floor:</u> Provide active ground floor uses facing Brandon Avenue (see page 16

for details).

- <u>Fire Access</u>: Fire truck access is provided from Brandon Avenue, along the service drive to the south, and from the service court to the west (see page 62 for district-wide fire access map).
- <u>Service Access</u>: Service is provided at the parking level, and accessed from the west or south.



**Building B / Plan view** 



Building B / Perspective view showing grades and entrances

## **BUILDING C**

## **Location and Context**

Building C is located on the western side of Brandon Avenue, between Building B and Bice House. It shares a parcel boundary with residential structures along Valley Road.

## **Building Use**

Residential mixed-use is recommended based on the site's adjacency to the existing residential neighborhood to the west and proximity to Bice House and new Upper Class Housing.

## **Development Suitability**

Typical Floor (GSF)	Floors (#)	Estimated Building Area (GSF)*
22,545	4 + (1) podium parking	90,200

\*excludes podium parking levels

## Parking

One parking level provides potential capacity for approximately 80 cars, and is accessed from the west.

## **Circulation and Access**

Building C is easily accessible on foot or by car.

- <u>Pedestrian Access</u>: Pedestrian access shall be provided from Brandon Avenue and Bice Access Drive.
- <u>ADA Access</u>: An ADA-accessible pedestrian entrance shall be located along Brandon Avenue (see page 48 for district-wide ADA routes).
- <u>Active Ground Floor:</u> Provide active ground floor uses facing Brandon Avenue (see page 16 for details).
- Fire Access: Fire truck access is provided from Brandon Avenue, along the service drive to the north, and along Bice Access Drive (see page 62 for district-wide fire access map).
- <u>Service Access</u>: Service is provided at the parking level, and accessed from Bice Access Drive.

## Courtyards

There is an opportunity to provide landscaped courtyards on top of structured parking for the use of building residents.



Accessible route

Fire lanes within project scope Other fire lanes in vicinity



Building C / Perspective view showing grades and entrances along Bice Access Drive



Building C / Perspective view showing grades and entrances on Brandon Avenue

## **BUILDING D / FUTURE UPPERCLASS HOUSING**

## **Location and Context**

Building D is located at the visual terminus of Brandon Avenue. Its residents will have access to green spaces within the building courtyard, as well as the Plaza and the Quad on Brandon Avenue. The building footprint, which is shown at right, was modified from the master plan concept during the building design phase. The current footprint enables the creation of shared circulation and open spaces between Bice House and Building D.

## **Building Use**

Residential mixed-use is recommended based on the site's adjacency to Bice House.

## **Development Suitability**

Typical Floor	Floors	Building	
(GSF)	(#)	Area (GSF)*	
23,919	6 + (2) podium parking	140,247	

\*excludes podium parking levels

## Parking

Two podium parking levels provide capacity for approximately 140 cars, and are accessed from the east or south.

## **Circulation and Access**

Building D is easily accessible on foot or by car.

- <u>Pedestrian access</u>: Pedestrian access shall be provided from Brandon Avenue and Bice Access Drive.
- <u>ADA access</u>: An ADA-accessible pedestrian entrance shall be located along Brandon Avenue (see page 48 for district-wide ADA routes).
- <u>Active Ground Floor</u>: Provide active ground floor uses facing Brandon Avenue (see page 16 for details).
- <u>Fire Access</u>: Fire truck access is provided from Brandon Avenue, and along the service drive.

 <u>Service Access</u>: Service is provided at the first parking level, and accessed from Building D service drive.



488+ BICE P2 +468

Building D / Plan view

Accessible route Fire lanes within project scope Other fire lanes in vicinity Building D / Perspective view showing grades and entrances along Bice Access Drive



Building D / Perspective view showing grades and entrances on the service drive

## **BUILDINGS E & F / FUTURE STUDENT HEALTH AND WELLNESS CENTER**

## **Location and Context**

The site for Buildings E and F is planned to house the future Student Health and Wellness Center, which is currently located at the intersection of JPA and Brandon Avenue. The site is located on the eastern side of Brandon Avenue, with primary vehicular access from Monroe Lane. Building E can be programmed and designed to provide access to, and activate adjacent open spaces: the Quad and the Overlook Park.

## **Building Use**

Student Health is recommended based on the site's proximity to the existing outpatient surgery center and the Health System. Connections to the Overlook Park and South Pond also bolster wellness programming.

## **Development Suitability**

## **Building E**

Typical Floor Floors		Estimated Building		
(GSF) (#)		Area (GSF)*		
22,200	3 + (2) podium	75,600		

## **Building F**

Typical Floor	Floors	Estimated Building	
(GSF)	(#)	Area (GSF)*	
19,050	3 + (1) podium	57,150	

\*excludes podium parking levels

An alternative configuration of Building F for residential use would yield about 160 beds in a 4-story, 62,500 GSF structure with 5,700 GSF set aside for active ground floor uses. The two footprints can also be combined into a single structure that hosts the Student Health and Wellness Center and other uses.

## Parking

In Building E, two parking levels provide potential capacity for approximately 140 cars, accessed from Monroe Lane. Building F has capacity for 40 cars on a single level, accessed from Monroe Lane. Combining the parking podiums for the two buildings can yield more parking spaces, with greater options for access points along Monroe Lane.

## **Circulation and Access**

The future Student Health and Wellness building is easily accessible on foot or by car.

- <u>Pedestrian access</u>: Pedestrian access shall be provided primarily from Brandon Avenue and at the southeast corner at Monroe Lane.
- <u>ADA access</u>: ADA-accessible pedestrian entrances shall be located along Brandon Avenue and at the southeast corner on Monroe Lane (see page 48 for district-wide ADA routes).
- <u>Active Ground Floor</u>: Provide active ground floor uses facing Brandon Avenue and the Quad (see page 16 for details).
- <u>Fire Access</u>: Fire truck access is provided from Brandon Avenue, and along Monroe Lane.
- <u>Service Access</u>: Service is provided at the P1 parking level, and accessed from Monroe Lane.



Accessible route

Fire lanes within project scope Other fire lanes in vicinity



Buildings E & F / Perspective view showing grades and entrances along Monroe Lane



Buildings E & F / Perspective view showing grades and entrances on Brandon Avenue

## **BUILDING G**

## **Location and Context**

Building G is located on the eastern side of Brandon Avenue, between the Monroe and Jefferson Park Avenue.

## **Building Use**

Academic mixed-use is recommended based on the site's proximity to South Lawn and the Academical Village.

## **Development Suitability**

Typical Floor (GSF)	Floors (#)	Estimated Building Area (GSF)
35,740	3 + (1) podium	107,200

\*excludes podium parking levels

## Parking

One parking level provides capacity for approximately 110 cars, and is accessed from the Monroe Lane.

## **Circulation and Access**

The future Building G is easily accessible on foot or by car. A transit stop located in front of the building on JPA is served by local and University routes.

- <u>Pedestrian Access</u>: Pedestrian access shall be provided primarily along Brandon Avenue, at the northwest and southwest corners of the building. Secondary access will be from Monroe Lane.
- <u>ADA Access</u>: ADA-accessible pedestrian entrances shall be located along Brandon Avenue and possibly also from all four sides. (See page 48 for district-wide ADA routes.)
- <u>Active Ground Floor</u>: Provide active ground floor uses facing Brandon Avenue and Jefferson Park Avenue (see page 16 for details).
- <u>Fire Access</u>: Fire truck access is provided from Brandon Avenue, Jefferson Park Avenue and along Monroe Lane (see page 62 for districtwide fire access map).
- <u>Service Access</u>: Service is provided at the P1 parking level, and accessed from Monroe Lane.

## Courtyards

There is an opportunity to provide landscaped courtyards on top of structured parking for the use of building users.



Accessible route

Fire lanes within project scope Other fire lanes in vicinity



Building G / Perspective view showing grades and entrances on Monroe Lane



Building G / Perspective view showing grades and entrances on Brandon Avenue

## Public Realm Guidelines

Part I: Key Landscape Spaces

Green Street / Bioretention Median South Lawn and East Connectors The Plaza and The Quad South Lawn and The Overlook Park

## **GREEN STREET / BIORETENTION MEDIAN**

### Intent

Brandon Avenue redevelopment is an opportunity for the University to advance its leadership in sustainable stormwater management by implementing innovative green infrastructure solutions. The bioretention basins build on design precedents throughout the campus for stormwater infrastructure that mitigate negative impacts, such as pollution and sedimentation, while also providing landscape space for connections and passive recreation.

## Design

Lower Basins: Sloping at less than 1% from north to south, these two basins provide large, flat, planted areas for retaining and cleaning storm water run-off from adjacent paving and buildings. They are bordered on the east side by pedestrian promenades and wide steps that provide access and informal seating along their entire length. Views from the plaza extend over all three basins to Jefferson Park Avenue.

**Upper Basin:** Terraces that follow the rhythm of street trees allow this basin to step down with the 7% grade of Brandon Avenue in this section. Weir walls control the flow of water between levels, allowing for infiltration and highlighting the spill of water through scuppers at the center of each.





Bioretention basins / Plan view



Bioretention basin / Perspective view at pedestrian bridge



**Bioretention Basin / East-west cross section** 

## SOUTH LAWN AND EAST CONNECTORS

## Intent

The South Lawn Connector and East Connector are intended to provide a direct and pleasant route for the students, faculty and staff that travel between classrooms and other destinations within the Academical Village, South Lawn, and the Health System during the day. The two connectors, which are linked with wide, safe crosswalks across the Brandon Green Street, provide an important ADA-accessible connection in this part of the district, which has significant slope challenges.

#### Design

South Lawn Connector: The South Lawn Connector has a concrete pathway that links to existing paths at South Lawn and the Foster historic site. The sweeping profile of the path, which aligns aesthetically with the Foster site design, enables the creation of an ADA-compliant route. Stairs and gathering spaces are provided between the loops of the path for able-bodied users. The design calls for tight clusters of trees along the path to provide shade.

**East Connector**: The East Connector provides an important pedestrian and ADA path between Brandon Avenue and Monroe Lane. The curve of the pathway is continued here to provide an ADA-compliant route. Bike storage is recommended in this space to serve future Buildings A, B, and G.





South Lawn Connector and East Connector / Plan view



South Lawn Connector / Perspective view looking west from Brandon Avenue towards South Lawn



South Lawn Connector / East-west cross section

## THE PLAZA AND THE QUAD

## Intent

The Plaza anchors the end of Brandon Avenue with a bosque of shade trees and informal gathering spaces among them. The Quad and Plaza work together to connect green space across Brandon Avenue. The Quad provides space for passive recreation and allows the possibility for programmed activities to spill out from the Student Health and Wellness Center. The elevation provides views to the park and pond across Monroe Lane. While not specified within this project, access will also be provided to the private cemetery to the south of The Quad.

## Design

<u>Plaza</u>: Students will find tables and chairs shaded by bald cypress trees with a fine-textured canopy that allows filtered light in the summer. Stepped seating along the promenade wraps the south side of the bioretention basin, inviting users to experience the view that extends the full length of Brandon Avenue. The mountable curb that surrounds the plaza makes it easy to set up temporary events for nearby residence halls or the neighboring Student Health and Wellness facility.

Quad: The spacious lawn, bordered on the north and south by brick sidewalks and rows of trees, accentuates the east-west connection between the Plaza and pond. Using the elevation change as a feature of this space allows the strong visual connection down to the park and pond beyond. As the brick path steps down, a switch back ramp provides ADA-access to Monroe Lane and the Overlook Park. An alternative design, which was documented in the preliminary design (PD) documents shows a terraced lawn, illustrated on the opposite page. This alternative would require ADA-access to be provided as part of Building E.





The Plaza and the Quad



Sketch showing design alternative for The Quad: terraced lawn with views of Overlook Park and South Pond



Sketch showing design alternative for the Quad: terraced lawn with views of Overlook Park and South Pond

## SOUTH POND AND THE OVERLOOK PARK

## Intent

The South Pond concept builds upon the Master Plan for the Brandon Avenue Green Street through the opening of views and connections to the surrounding urban fabric. Once a hidden and under used University amenity, the vision for this open space offers site visibility and access improvements that encourage activation from adjacent academic, research, and residential uses. The overall design strategy for South Pond is threefold: 1) To activate the site by enhancing the walking conditions and providing seating areas, 2) To provide safety through the use of lighting and expanded views from the park to the west, and 3) To create an enriched habitat through the addition of selective planting. See the South Pond Concept (November 19, 2017) document for more information.

## Design

<u>Overlook Park</u>: Realignment of Monroe Lane allows the formation of Overlook Park. This small lawn and overlook structure is designed to visually engage the pond as part of its experience.

South Pond: The improved path network connects the pond to Overlook Park and the greater Brandon Avenue district, as well as the Health System to the east. Several moments to stop and enjoy views occur around the pond, but the main feature is the bosque and trellis. These form a gathering space where the path descends to the pond. Maintenance vehicles can access the paths from Monroe Lane or Crispell Drive, as illustrated on page 44.



THE OVERLOOK PARK



View of Improved South Pond, looking towards the Overlook Park and Building E (future Student Health and Wellness)

## Public Realm Guidelines

Part II: Public Realm Design

Grading Vehicular Circulation Pedestrian and Bicycle Accommodations ADA Accommodations Lighting Street Trees Landscape Materials

## GRADING

## Intent

The final grading plan includes a level (less than 1% slope) Brandon Avenue south of the South Lawn Access Drive, with a transition to the existing incline (7% slope) towards Jefferson Park Avenue. The plan is designed to optimally meet the following design criteria:

- Providing smooth transitions to existing grades at the following fixed points: JPA, Eunoia site, The Monroe Apartment Building site, the South Lawn Service Court, Monroe Lane, and neighborhood edges along the proposed Bice House Access drive;
- Enabling multi-level access to future buildings, including primary pedestrian entrances on Brandon Avenue and vehicular entrances to below-grade podium parking from Monroe Lane and access drives;
- Supporting an efficient and sustainable drainage strategy, including maximizing the amount of surface flows channeled to the proposed bioretention medians;
- Maintaining and enhancing ADA access across the District, including key east-west connections between South Lawn and the Health System; and,
- Providing level gathering spaces within the new streetscape.

See also "Stormwater Infrastructure" on page 58.

## **UVA Standards**

Slopes for all paving and curbs are to be greater than 1%. Maximum slope of streets, service drives and parking lots must be less than 8% (as described in the UVA Facility Design Guidelines).



## **VEHICULAR CIRCULATION**

## Intent

The one-way loop of Brandon Avenue circles the bioretention basins, plaza and promenade, forming the core of this pedestrian-focused district. Vehicular access for buildings is provided separate from Brandon Avenue to ensure the continuity of the unified streetscape, with the exception of the existing curb cuts at Eunoia and The Monroe. To the west, the South Lawn Service Drive allows for a connection to parking/service for future buildings B and C, as well as the existing South Lawn and Bice service courts. (The South Lawn service court also includes ADA-compliant parking spaces). To the east, Monroe Lane provides parking/service access to buildings F, G, the Monroe and the future Student Health and Wellness Center. Vehicular access to the future Upper Class Housing building is provided by a connection at the southeast corner of Brandon Avenue.

The vehicular circulation patterns for Brandon Avenue are illustrated on the opposite page. The plan does not include vehicular connections between Brandon Avenue and Monroe Lane, to ensure a pedestrian-oriented environment on Brandon Avenue.

Traffic analysis performed as part of the master plan showed no significant difference between current conditions and the proposed redevelopment (see table below). The figure at right summarizes the improvements recommended for the Brandon Ave / JPA intersection. A dedicated right-turn lane is included in the final design (see opposite page), following the recommendations of the 2017 JPA / Emmet Corridor Study.

## **Typologies**

One-way street (20' overall width)



Two-way street (22' overall width)





JPA / Brandon Ave Intersection Improvements

Reduction of turn radius to reduce pedestrian crossing distance Visible crosswalks

Eastbound transit stop improvements

- W Reconstruction of ADA ramps at all four corners

Traffic analysis of proposed develop	No Build Scenario (2020)		Build Scenario (2020)		
Intersection name	Control	AM	РМ	AM	РМ
JPA / Brandon Ave / Ruppell Dr	Signalized	B (NB-C)	B (NB-C)	C (EB-D)	B (NB-C)
JPA / Monroe Ln	Unsignalized	(NB-C)	(NB-C)	(NB-C)	(NB-D)
JPA / Lane Rd	Signalized	A (NB-C)	B (NB-C)	B (EB-D)	B (NB-D)

X = Overall Level of Service (XX-X) = Worst approach - Worst approach Level of Service NB = Northbound EB = Eastbound. Assumes 60/40 split of traffic from the west and east, respectively.



## PEDESTRIAN AND BICYCLE ACCOMMODATIONS

## Intent

The Brandon Avenue vision is an urban, pedestrianfocused district. Generous, tree-lined sidewalks, a promenade and plaza contribute to a vibrant public realm. These spaces support the active ground floor programs of each building. Active and pedestrian friendly streets will slow vehicular traffic and create safe conditions for bicycles to share the 20' wide, one-way travel lane of Brandon Avenue. Bike racks are located near each building in order to minimize conflicts with pedestrians, just off Brandon Avenue. Bike storage will also be located within buildings (not shown here) and will be dependent on building type.

## **UVA Standards**

- Dero Hoop bike rack
- Neoliviano benches and chairs
- Catena tables

## **Typologies**

From the UVA campus landscape typologies, Brandon Avenue is classified as a Street/Pedestrian Corridor: *Pedestrian corridors are connections that accommodate those walking or biking (and occasional service/emergency vehicles, not regular vehicular traffic or transit); streets allow for transit only or transit and vehicles. Both streets and pedestrian corridors are to be designed with generous walking zones.* (See Landscape Typologies + Standards, Office of the Architect, University of Virginia 2011 for more information.)



## Legend

 Pedestrian route
Suggested location of bike racks
Suitable zone for bike racks
Bench seating
Table and chair seating



## **ADA ACCOMMODATIONS**

## Intent

The pedestrian focus of Brandon Avenue makes ADA accommodation a top priority. The steep existing grades are taken up by the proposed buildings to the greatest extent possible. This leaves the majority of Brandon Avenue at less than one percent slope in the north-south direction. The northern section of the street (between Jefferson Park Avenue and the South Lawn Connector) remains steeper than 5%, but new connections are provided to South Lawn in order to mitigate this existing condition. The most severe grade change occurs between Brandon Avenue and Monroe Lane at the future Student Health and Wellness site. Providing an accessible route here is important to link southern Brandon Avenue to the park and pond. Elevator access shall be available within the future Student Health and Wellness building on an extended schedule (and ideally 24 hours a day).

## **UVA Standards**

Despite challenging topography and historic considerations, UVA strives to provide ADA access when possible. The Brandon Avenue master plan has been crafted to increase participation in and enjoyment of this campus district. The design team has worked with UVA Office of the Building Official (UBO) to ensure compliance with ADA Standards of Accessible Design (ADA), Public Rights-of-Way Guidelines (PROWAG), and applicable university, local and state policies and regulations related to accessibility.



## LIGHTING

## Intent

To provide for pedestrian, bicyclist and vehicular safety during low-light and night-time conditions.

## **UVA Standards**

The following UVA Standards and Plans have been applied to the selection of luminaires for the Brandon Avenue District:

• UVA Exterior Lighting Study (2011)

## **Typologies**

The following luminaires have been located for the first phase of construction, as illustrated in the map at right. Please refer to Brandon Avenue construction documents for additional details.

A	Edgewater by King or Spring City
B	77 928 by Bega
C	Gullwing GL18 by Gardco
D	77 023 by Bega
E	Lumenpod by Wagner
0	VarioLED Flex Hydra by Intertek

The following luminaires have been identified for use in the zones labeled at right: specific locations for these luminaires will be determined as part of the design process for these spaces:

South Lawn Connector: Use 🕢 for path lighting				
East Connector: Use \Lambda for path lighting				
South Lawn Access Dr: Use <b>B</b> to light both sidewalks				
Bice House Access Dr: Use <b>B</b> to light sidewalk, east side				
Quad : Use \Lambda for path lighting				
Park : Use 🚺 for path lighting				
Monroe Lane : Use \Lambda to light sidewalks				

Shields will be provided on light fixtures along Bice Access Drive to protect residential properties from light pollution.





## **STREET TREES**

## Intent

These trees are intended to provide shade in support of pedestrian activity, and to complement the aesthetic appeal of the Brandon Avenue streetscape, buildings and open spaces with robust trees featuring attractive fall color.

### **Typologies (New Trees)**

The following trees have been identified in the construction documents, as illustrated in the map at right.

- 'Brandywine', a male cultivar of **Red Maple** is selected as the street tree for its proven performance on campus and in the region, and to avoid maintenance related to seeding in the bioretention zone.
- Black Gum will provide bright red fall color highlighting the promenade alongside the bioretention median. It grows well in wetter areas, which makes it suitable for this location close to the bioretention zone.
- **Bald Cypress** will give a special sense of place to the plaza that contrasts with other planting along the street. Its tight, taller form and feathery leaves will work well as a bosque, providing some shade without over-shading the space. It grows well in wetter areas, which makes it suitable for this location close to the bioretention zone.
- Willow Oak will provide scale to the facade of the future Upper Class Housing building. This species has been proven throughout campus.

#### **Tree Preservation**

Where possible, new development on Brandon Avenue should strive to maintain mature trees that are existing on site. Three mature oak trees, in particular, have been identified for preservation as shown on the map at right. Follow instructions of the arborist and excavate by hand where necessary. Trees in the private cemetery will also be retained to the degree possible, but are not specified as part of this project.

### Installation and Maintenance

Use of clonal cultivars is recommended to reduce maintenance burden with seasonal acorn and leaf drop, and to achieve a uniform streetscape look.





## LANDSCAPE PLANTINGS

## Intent

The design team worked with University researchers to identify a well-performing plant palette for the green street that can endure changing conditions and meets the university's goals for longevity and ease of maintenance.

## **Typologies**

The following plants have been identified for the first phase of construction, as illustrated in the map at right.

**Switchgrass** is a finely textured grass that flowers in summer and produces seeds that are a food source for birds. Several cultivars are available such as 'Shenandoah' and 'Northwind.'

**Common Rush** is a rhizomatic plant. Like Switchgrass, it flowers in summer and has similar form and texture. It thrives in wet soils.

**Virginia Sweetspire** is a deciduous shrub with showy flowers, appearing in late spring. Prolonged fall color will add interest until winter.

**Winterberry** produces signature red berries that attract birds on female plants, but require male plants for fertilization.

**Liriope** fills tree pits along the high traffic sidewalks because of its hardiness and adaptability.

## Installation and Maintenance

- Cut "X" into coir mat for installation of each bioretention plant.
- Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings during initial 12 month maintenance period.
- Switchgrass, Common Rush and Liriope should be cut back each winter (February suggested in order make seeds available to wildlife prior to cutting).
- Mulch should be reapplied each winter.
- Keep drains clear of mulch and other landscape debris.





# District Infrastructure

Stormwater Infrastructure Utilities Fire Safety

## STORMWATER INFRASTRUCTURE

## Intent

UVA is considered a regulated small Municipal Separate Storm Sewer System (MS4) and is therefore subject to a general permit for stormwater discharges issued by the Virginia Department of Environmental Quality (DEQ).

The Brandon Avenue master plan will enable the University to meet its DEQ obligations by channeling previously untreated surface flows to a bioretention median (see page 8 for description). The grading plan illustrated on page 42 enables the reversal of existing drainage patterns to the center of the street for pollutant treatment (sediment and nutrients) and volume reduction.

The new Brandon Avenue stormwater district consists of five drainage areas, four of which drain into the bioretention median as shown in the diagram at right. The fifth ("UCH") drains to a separate bioretention basin as shown. The basins are designed to accommodate stormwater runoff from all surfaces, including UVA roofscapes with the exception of Bice House, OPSC, and a portion of Building G, as shown. Opportunity exists for the collection and/or treatment of stormwater from these roofs through the application of best practices including green roofs and graywater systems. Overflow from all five areas is channeled to the existing City sewers near the railroad berm. See "Brandon Avenue Green Street & Utilities Infrastructure Stormwater Report" for technical details.

## **UVA Standards**

The Brandon Avenue Plan meets the guidelines provided for sustainable stormwater management in the 2015 UVA Energy and Utilities Master Plan.

## **Typologies**

The Brandon Avenue green street expands on existing BMP types on the UVA campus and places sustainable stormwater management on display at the heart of the new district. See page 32 for a detailed description of the bioretention basin design.



Bioretention Subbasin	Planned Drainage Area (acres)	Planned Impervious Surface Area (acres)	Subbasin Area (sf)
UCH	3.05		N/A
А	1.73	1.61	5,278
В	1.17	1.01	3,101
С	1.13	0.67	2,083
D	0.93	0.71	1762

\* Stormwater in this zone is directed to the tree planters / soil cells through sheet flow and slot drains, with overflow channeled into the overflow pipe for Subbasin A.



## UTILITIES

## Intent

The master plan team has worked with UVA Facilities Management staff to identify an infrastructure plan for Brandon Avenue that is compatible with the urban design and program goals.

## **UVA Standards**

The utility infrastructure plan builds on the recommendations of the 2015 Energy and Utilities Master Plan.



As part of the plan, UVA is extending University-operated water, and electrical, thermal and telecommunication utilities to Brandon Avenue to service Bice House, and future University buildings. A majority of the new utilities will be located under the western leg of Brandon Avenue as illustrated on the opposite page. Non-University utilities (electrical, water, gas and telecom) are maintained and re-routed as needed, to service non-University buildings-the Eunoia Community and the Monroe apartments—and Valley Road. Overhead powerlines owned by Dominion Energy will be buried to enable the creation of a unified streetscape. The infrastructure plan also extends city-owned gas line south to Bice House and new residential buildings. For sanitary service, the majority of the buildings will connect to the recently upgraded City sewer on Valley Road.



NOTE: Electrical service to Buildings A & B will be extended from South Lawn (route TBD during design phases for the buildings).



## **FIRE SAFETY**

## Intent

Brandon Avenue is designed as a one-way, 20' wide loop to provide sufficient space for a fire truck in compliance with state requirements. Access roads accommodate twoway vehicular traffic and are minimally 22' wide.

## Dimensions

Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).

## Surface

Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide allweather driving capabilities.

## **Turning radius**

The required turning radius of a fire apparatus access road has been determined based on information received from the Albemarle County Fire Department.

- Inside turn: 25'-10"
- Curb to curb: 41'-7"
- Wall to wall: 45'-8"







11' MIN

BLDG SETBACK



PERKINS+WILL