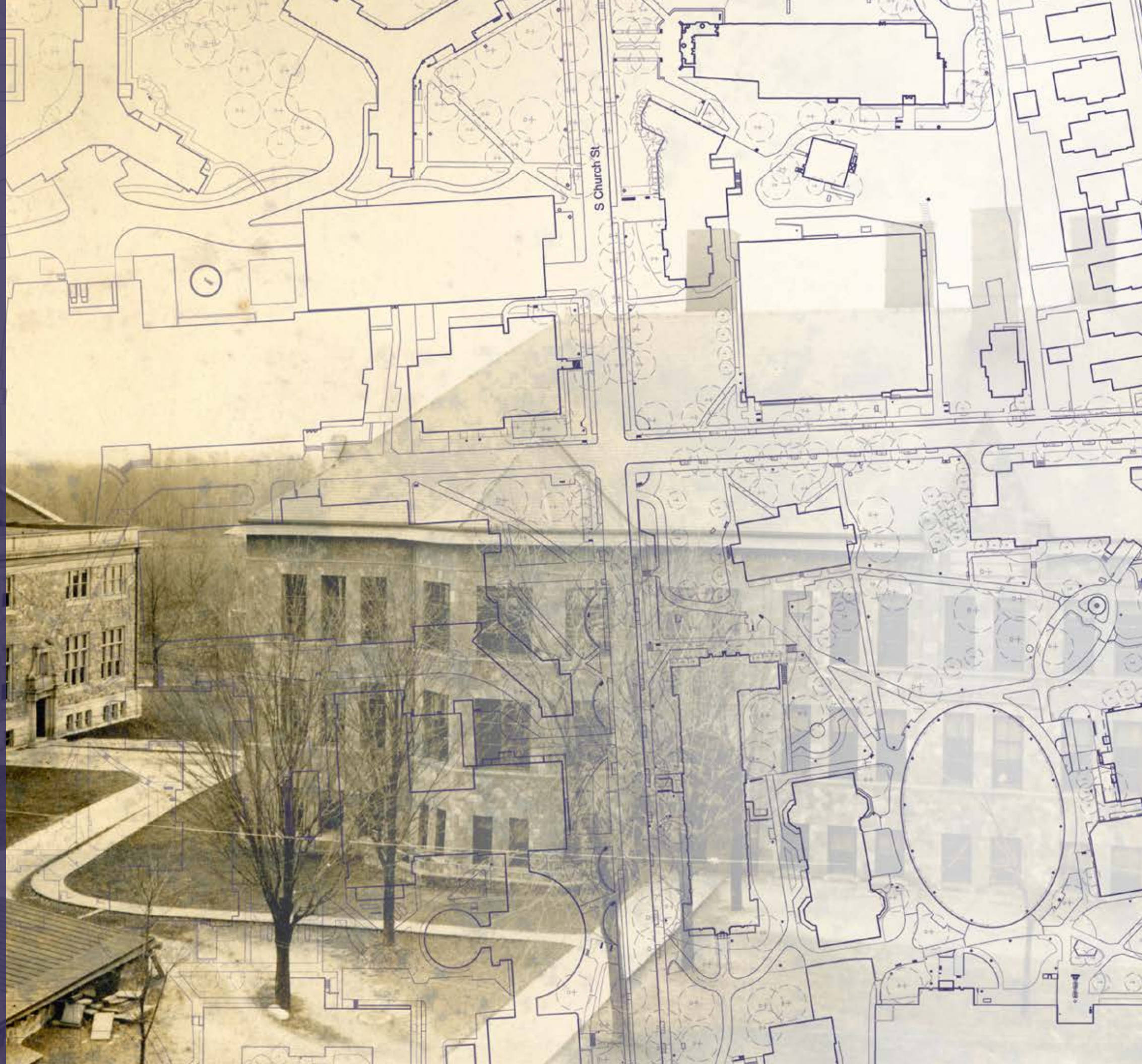




# Landscape Master Plan

October 9, 2017

landworks>studio<sup>inc.</sup>





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# BUILDING A COHESIVE AND ACTIVE CAMPUS VISION FOR WEST CHESTER UNIVERSITY

*A Letter from Landworks Studio, Inc.*

## AN INTERATIVE AND ITERATIVE PROCESS

Working collaboratively with Biohabitats and benefitting greatly from frequent input provided by the University, the Landworks Studio team has generated a long term vision for West Chester University: a vision that is built upon the foundation of a comprehensive understanding of the physical, historical, academic, ecological and student realities and conditions of the Campus. The primary goal of the landscape master plan is the creation of a long-term, incremental enhancement of the student experience and the emergence of a cohesive identity for the Campus over time.

## HISTORY

As an urban campus West Chester University has evolved as a subset of the larger surrounding urban network of streets and neighborhood boundaries. Accordingly, the potential for a well rounded and autonomous Campus character has been limited. While the Campus has grown over time, it has done so primarily as a product and focus of academic expansion through land and building acquisition. Consequently, the physical nature of the resulting open space network lacks a unifying focus and clarity and has largely ignored the underlying ecology. With the exception of a series of well-designed landscapes, the potential of many student spaces remains unrealized, with the overall feel of the Campus being one of fragmentation and disconnection.

## APPROACH

Consequently, as a means of establishing a more cohesive Campus character and sense of place, the work of Landworks Studio's team turned its focus toward developing an intimate working relationship with the Campus, local and regional contexts (physical, programmatic and ecological). Resolving edges, enhancing existing cross-campus pedestrian connections and creating new ones, challenging the primacy of the automobile, building upon existing well-established patterns of vegetation and the matrix of existing canopy tree plantings, expanding larger ecological and environmental attributes – all these elements became central building blocks to the development of the Campus Landscape Master Plan. Not built from whole cloth, rather, the master plan for West Chester University is built upon underlying and embedded truths and characteristics of the Campus itself. We believe this approach to be the most efficient mechanism for projecting a positive future of sustainable growth and a unifying identity.

## STRATEGY

The guiding principles that have emerged from the master plan work are rooted in the overarching ambition to synthesize an active and healthy student mind and body with active and performative ecological function occurring across and throughout the Campus, locally and regionally. By achieving this synthesis, a more sustainable and resilient Campus identity emerges.

## LANDSCAPE MASTER PLAN ASPIRATIONS

### 1. *A Landscape of and for Learning*

To create a Campus environment that optimizes the potential for learning and thoughtful engagement in pursuit of the advancement of academic excellence.

### 2. *A Landscape of Memory and Character Building*

To establish for the Campus a cohesive and resilient sense of place, one that enhances a positive educational experience for its students and ensures the long term open space character for the University.

### 3. *A Landscape of Resilience and Adaptability*

Ecological: to create a landscape that builds upon and honors the environmental heritage of the local and regional ecology.

Programmatic: to effectively calibrate the relationship between academic programs, landscape systems and active student experiences, and to provide a logic for expandability and flexibility as the nature of education and access to available resources remain dynamic forces in the growth of any campus.

### 4. *A Landscape of Seamlessness and Integration*

Cultural: to create a Campus which is integrated with the surrounding neighborhoods, where student interactions with the public realm are safe, coherent and smart; where active thresholds reinforce a generative dialogue between town and gown.

Ecological: new student spaces and connections will actively engage ecological phenomena, patterns and communities to ensure that larger regional ecological patterns are reinforced and that highly local student experiences are inspiring, regenerative, and sustainable.

## CONCLUSION

The bones of the evolving student-based landscape at West Chester University Campus already exist in the form of the site as we see it today. However, the following collection of documents, photographs, diagrams, maps, and vignettes seeks to provide: a cohesive, new, emergent Campus identity from a language comprised of building blocks; a vision which is flexible enough to absorb evolving needs over time; and yet a vision that provides highly particular and achievable milestone construction scenarios which are embedded within the establishment plan for a long-term and sustainable Campus.



Michael Blier, FASLA  
Founding Principal  
Landworks Studio, Inc.

# MASTER PLAN VISION WITH TREES





Re-envisioning Plum Run as an ecologically intensified corridor

## A CAMPUS FOR THE NEXT 150 YEARS

Historically, the college campus is organized around a central 'Yard' or evolves over time as a result of development and expansion. West Chester University is a product of the latter, growing to meet needs and curricula of the last 150 years, and doing an admirable job. Most of the walkways are accessible; there are large student gathering spaces; the Campus is open for public enjoyment; housing and recreation opportunities are varied; parking is ample for commuters, and a robust canopy of trees covers much of the Campus.

The campus of the future is envisioned as a very different place, still centered on the movement and gathering of students, but providing far more opportunities for learning and socializing. The campus must be integrated with the surrounding neighborhoods and the environment as it plays a crucial role in the development of young adults. Most importantly, the campus must be able to adapt to the rapidly changing face of higher education.

The goal of this Landscape Master Plan is to synthesize the human performance and active ecology of the Campus. West Chester University Campus landscape has the bones for developing into the future. The semi-urban environment allows for ease of movement throughout the campus while still providing areas for socializing and interacting with existing natural and social systems. Landworks Studio and Biohabitats, with the help of the entire University have teased out the important features of the Campus and developed a direction for continued enhancement that will lead West Chester University forward in achieving their stated mission, vision and values.

WCU Statement of Mission and Goals- West Chester University is a community of educators that develops graduates to succeed personally and professionally and contribute to the common good.

### WCU GRADUATES WILL:

- Apply scientific reasoning and demonstrate quantitative and qualitative literacy
- Collaborate with others to solve problems and address societal needs
- Communicate effectively and participate in civic discourse
- Engage inclusively in a diverse society
- Understand the ethical implications of decisions and the world in which they live

### INSTITUTIONAL GOALS:

To fulfill its mission as a public institution serving the Commonwealth, West Chester University will focus on student success and institutional improvement as measured by the degree to which WCU demonstrates:

- Access to learning
- Community and cultural engagement
- Continuous improvement
- Critical thinking
- Inclusion
- Scholarly and creative activities
- Sustainability

**WCU Values Statement** - West Chester University is committed to attracting, enrolling, and graduating quality students from a wide variety of educational, cultural, and economic backgrounds. This endeavor requires the University to attract and retain highly qualified faculty and staff and to provide each member of the University community with learning and leadership development opportunities. To this end, the University supports and encourages programs which benefit all people and which seek to eradicate discrimination and injustice. We treasure what we believe to be the highest principles of American society: the worth and uniqueness of each individual, the belief that success is to be earned by individual effort put forth in an environment founded on equality of opportunity, and the appreciation of the ideal of an inclusive society.

We believe that it is incumbent upon all members of our community - staff, students, faculty and administrators - to conduct themselves with civility toward one another at all times. We value the special talents and contributions of each member of our community. We further affirm the worth and dignity of each member and the shared responsibility of all to treat each other as individuals, with respect and courtesy.

As a university owned by the citizens of Pennsylvania, we value our mission to provide the best educational opportunities possible which will enable the University community to successfully address the concerns of a global society. To this end, West Chester University seeks to provide diligent advising for students and to focus on teaching students to think clearly and critically, to make logical and ethical judgments, and to communicate effectively with others.

West Chester University's community strongly supports the principles of academic integrity and academic responsibility, viewing both as the province of every member of the campus community. We hold the highest esteem for teaching directed toward student learning and affirm that mastery of content as well as mastery of teaching skills necessary to communicate such content are paramount.

This values statement is intended to be a living document which will serve West Chester University as it changes and evolves in the coming years.

**WCU Vision Statement** - West Chester University will be a national model for excellence for public regional comprehensive universities and especially noted for:

- Undergraduate programs that actively engage students in connecting the life of the mind to the world in which they live and work.
- The responsiveness of its graduate and post-baccalaureate programs to regional needs.
- Its focus on providing lifelong-learning, technical, and applied skills essential to graduates' success now and in the future.
- A commitment by faculty, staff, and administrators to provide access and to serve effectively the educational needs of a diverse student body.
- Its role as a leading educational and cultural resource and partner in fostering the economic, social, and cultural vitality of southeastern Pennsylvania.

### Defining a Sustainable Campus

Sustainability on a college campus is not just an end goal. It is about sustaining conditions that enable life to flourish and cultivating an awareness that all things are interconnected. It is about reducing consumptive and wasteful practices, promoting more regenerative practices, and developing a deeper understanding of the campus community's relationship with the natural world, the broader natural community, and the very systems that we rely on for survival, like our waterways.

West Chester University has shown continued leadership in the governance of the school as a sustainable institution. In 2010 the school became a signatory to the American College and University Presidents' Climate Commitment and then three years later the University developed a Climate Action Plan with the aim of being carbon neutral by 2025. Beyond carbon-neutrality there are other important aspects of sustainable campus communities that West Chester's Office of Sustainability is addressing. Three of these tie directly to the landscape master plan presented here: Curriculum, Biodiversity and Landscape, and Water. In part, the intention of this master plan is to formalize a framework for a sustainable and regenerative campus landscape through practices that respond to the University's unique site context and programming needs. This will be done by responding to the local and regional hydrology and ecology through both general guidance and site-specific recommendations, while considering student life, curricular needs, and institutional identity.





# I. Introduction

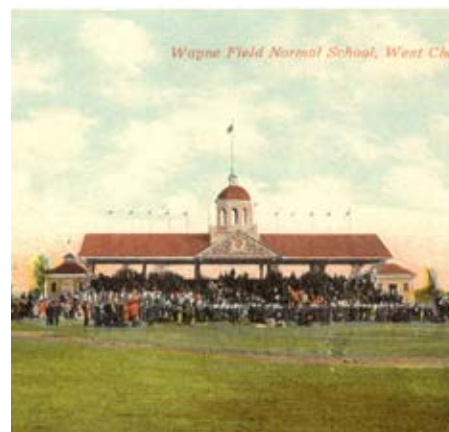


## HISTORICAL PERSPECTIVE/CAMPUS CHANGE

West Chester, Pennsylvania is located twenty-five miles due west of Philadelphia between two watersheds, Brandywine Creek that flows south and Chester Creek which flows southeast, both to the Delaware River. West Chester has been the Chester County seat since 1786 when it moved from Chester. The borough was incorporated in 1799.

West Chester University took root from a local private school, West Chester Academy, which founded in 1813. In 1871, after much deliberation and 'intensive session' the Board transitioned the Academy to become West Chester State Normal School, privately owned and State certified. In 1913, West Chester State became the first normal school to be owned outright by the Commonwealth. In 1926 the school became the West Chester Teachers College, and in 1960 dropped the word 'Teachers' from its name. In 1983, in response to the State System Higher Education Bill, the school became West Chester University.

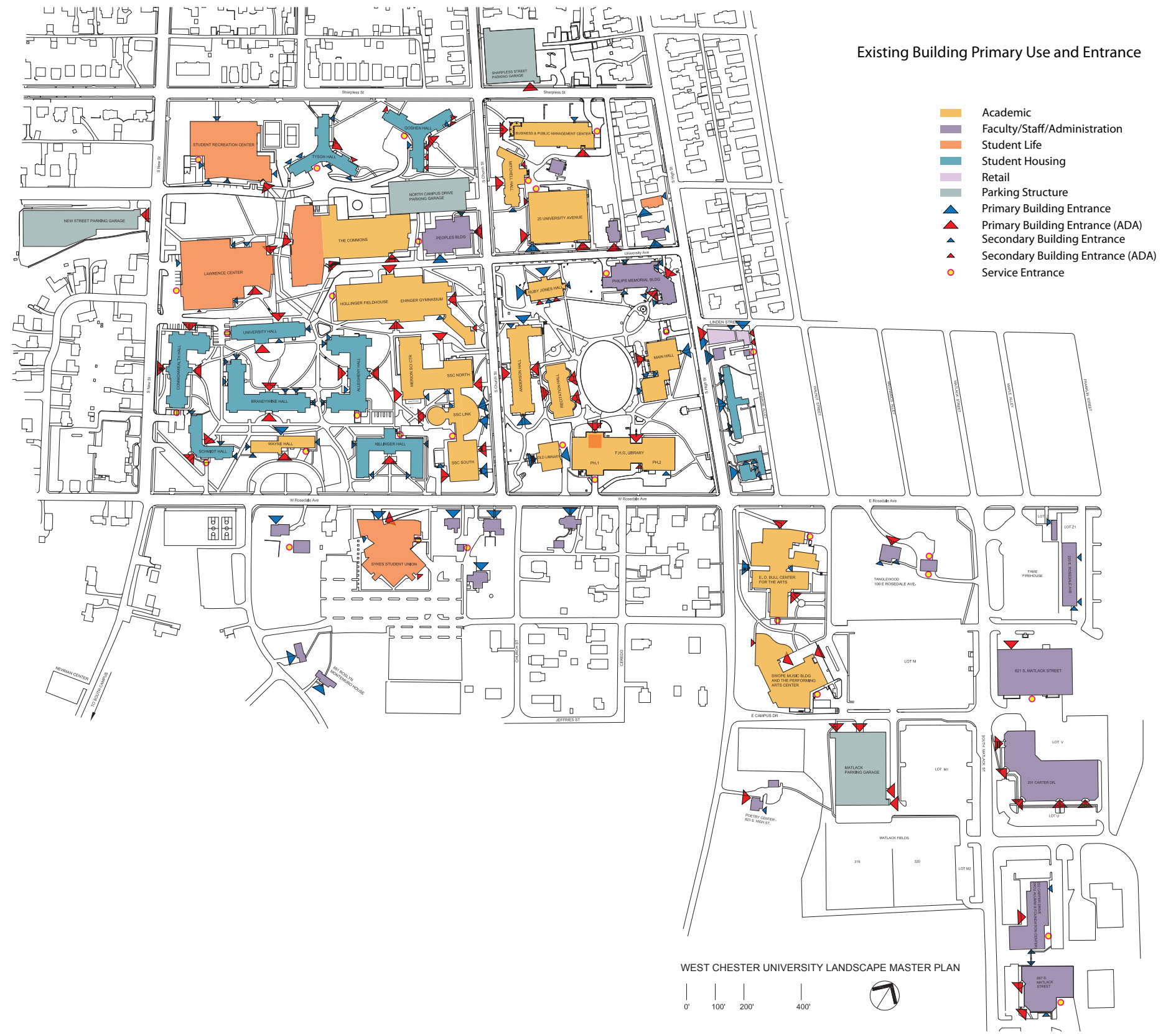
In 1871 the landscape of West Chester was bucolic, as a single building housed the school that 'opened to the sounds of ringing bell, atop the original Main Building, set forth on the breeze of the morning, over the fertile fields of the Goshens, and the Bradfords, to awaken our valleys, and be re-echoed back by the rolling hills of the Brandywine.' Historical records, maps and photographs are evidence of a pastoral landscape being transitioned to a formal landscape of mostly lawn with few strategically planted trees, greatly appreciated, used and recorded in the public record. Entries include use for baseball, skating and strolling at the turn of the 20th century; memorial gardens were planted throughout Campus during the first half of the same century; major concerns arose for the landscape as the Quad was paved to meet the parking needs of day students and when Hurricane Hazel damaged many 'fine old trees.' Streets were lined with trees which matured and produced beautiful corridors. Post WWII through the early 1960's marked a period of continuous Campus development as buildings were removed to make room for new buildings and connecting landscapes were built, including the Quad parking which was restored to a mostly green open space.



## SUMMARY PERSPECTIVE OF TODAY'S CAMPUS

West Chester University is comprised of three distinct areas, North Campus, East Campus and South Campus. This document provides direction for the landscapes of North Campus and East Campus. West Chester University Campus provides many opportunities for students and faculty to socialize, study and simply relax. On-going development looks to fulfill the needs of students and remain open to the surrounding neighborhoods. Renovations to the Quadrangle provided a much needed activity space while making improvements to storm water management and deteriorating walkways. Planting of trees continues to contribute to the Campus distinction among Arbnet, the Interactive Community of Arboreta.

The Campus is the product of nearly 150 years of development being carried out by both the University proper and the West Chester University Foundation that includes University Student Housing. What was once an academic block and an athletic block has dramatically grown to become two blocks of academics and two blocks associated with student life. Needs for additional academic space finds Schmucker and Merion Science Centers west of Church Street, as will The Commons project, scheduled for construction in the near future. The expanded population of students and ever-changing attitude of the Campus, finds the West Chester University Campus with typical shortcomings of an urban university. Included among these, are limited space to expand, clarity of circulation, and distinct use of spaces.

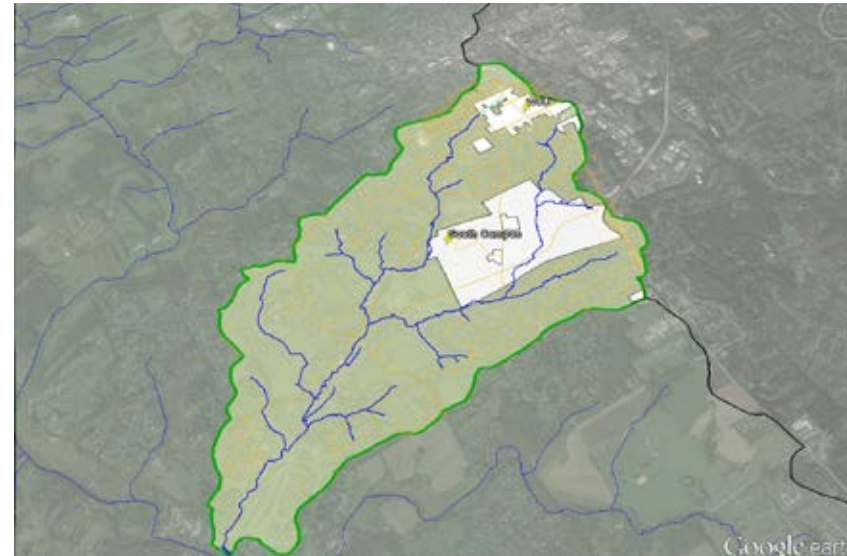


## CAMPUS ECOLOGICAL CONTEXT

West Chester University is intrinsically bound to its natural history, native ecology, and hydrology. By examining the natural history of the Campus and its existing resources, ways can be found to strengthen the ecosystems on and near Campus through landscape design, resource management, and maintenance techniques.

Two tributaries of Plum Run (a stream that feeds Brandywine Creek which joins the Christina River before eventually flowing into the Delaware River) begin in or near the North Campus. The main branch of Plum Run originated at a spring north of Price Street and east of South Church Street (historic map) and flowed through what is now the main campus. This portion of Plum Run is thought to have flowed on the surface until the early to mid-20th-century, at which time it was buried in a pipe system. This branch of Plum Run now daylight west of North Campus. (Cressler 2015)

The east branch of Plum Run originates at the edge of the university near the Matlack Parking structure and it daylight west of South High Street. This branch runs through the South Campus property, which also hosts the School's most significant natural resource asset: the Robert B. Gordon Natural Area for Environmental Studies. (Cressler 2015)



West Chester University (white) within the Plum Run Watershed.

Source: Plum Run and its Watershed: A Tutorial in Stream Ecology Using Google Earth, Christopher Robinson, WCU.



Plum Run in its historic condition runs south and west through the current West Chester University Campus.

Source: Cressler, W. (2015). The Flow of History along Plum Run. Retrieved from [http://digitalcommons.wcupa.edu/gna\\_sp\\_series/49](http://digitalcommons.wcupa.edu/gna_sp_series/49)

## STORMWATER AND GREEN INFRASTRUCTURE – EXISTING CONDITIONS OBSERVATIONS

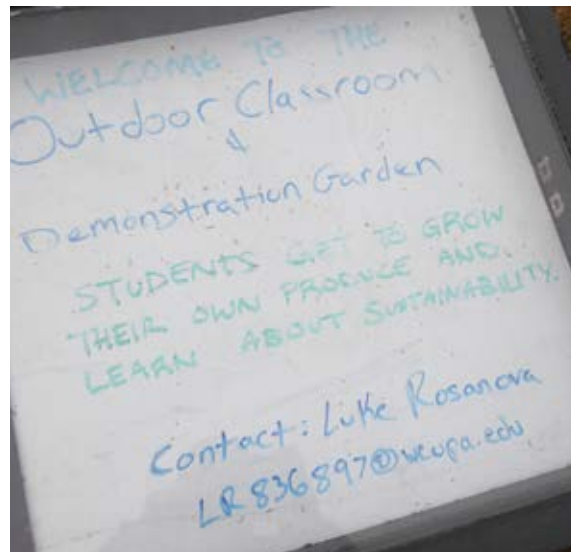
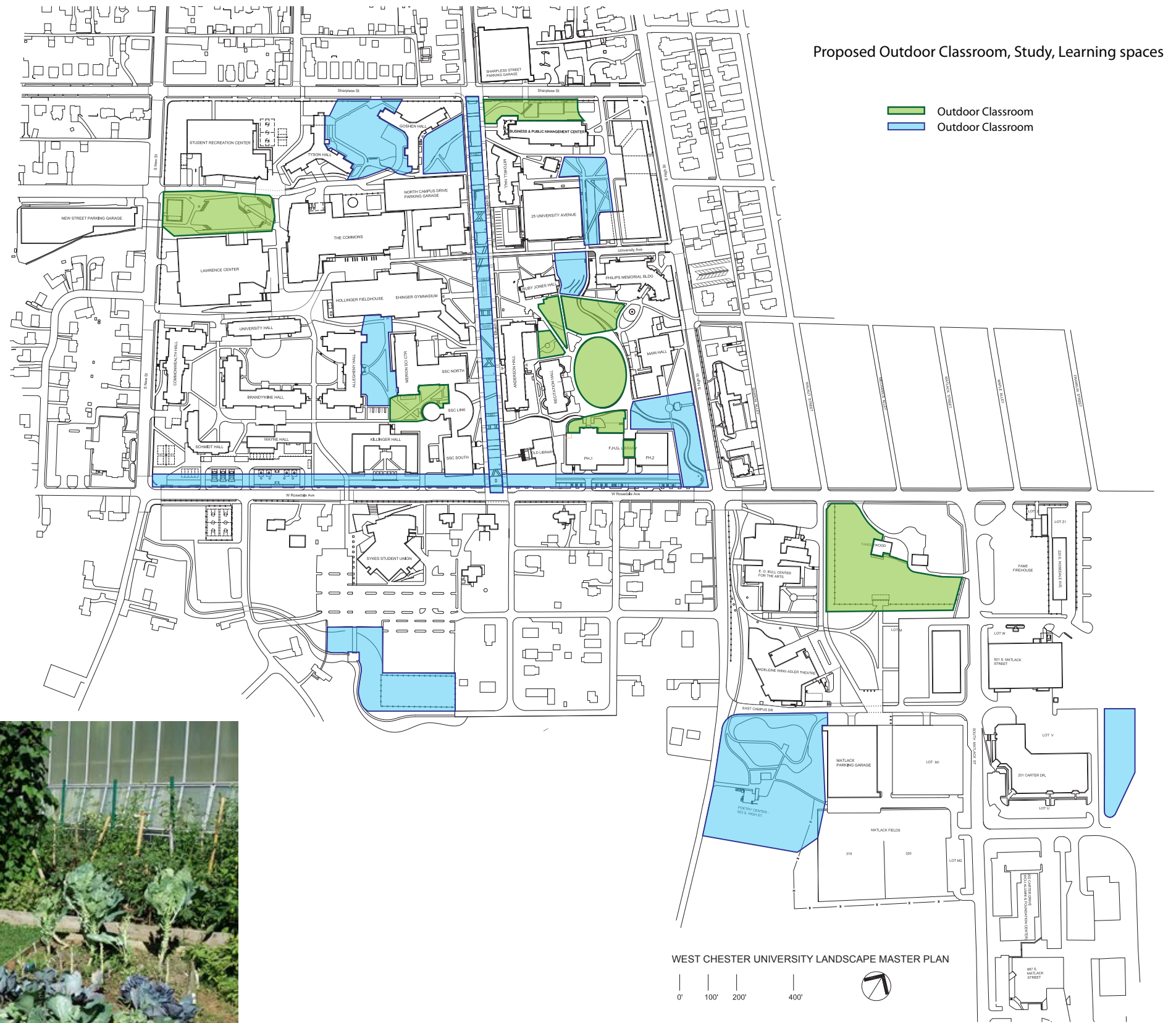
In the early phases of this master planning effort a rapid field assessment of the campus was completed to understand existing conditions and the potential for new opportunities for integrated green infrastructure. This field visit used information available from the University to locate existing surface stormwater management features in the landscape.



# OUTDOOR LEARNING, STUDY AND RESEARCH SPACES

Outdoor education, study, and research spaces takes many forms. Some may be created with permanent seating organized in a traditional fashion, while others may have more flexible seating or spatial arrangements that are amenable to a variety of activities. Feedback from current students and faculty has noted that shade is an important consideration as well as space to accommodate a variety of different size groups. One favorite spot is the shaded area on the north side of the Oval. Another is the University's first Outdoor Classroom located in the courtyard outside of Merion Hall, which is certified as a backyard habitat by the National Wildlife Federation and the Audubon At Home Bird Recognition Program.

Research on campus landscapes can include soil testing, water quality monitoring, vegetative surveys, wildlife surveys, as well as other more specific surveys determined by faculty. Through this planning process faculty and staff identified a number of locations across the Campus where learning, research and classes are held. Added to these are new locations associated with the proposed ecological corridors or other green infrastructure elements that will be opportunities for monitoring and learning in the future. There is a also great resource available developed by West Chester University student Erika Szonntag (2010) about creating and maintaining outdoor classrooms.



Demonstration Garden Sign



Campus Demonstration Garden

## DATA COLLECTION PROCESS

To better understand today's Campus, Landworks Studio and Biohabitats began the Master Plan process by looking at the Campus and its collective components. Throughout this report, we will refer to existing conditions, to set the stage for what is to come. Some of the basic conditions, that are not developed through the Master Plan but that contribute to base information, can be found in the Appendix to this Master Plan.

The office of Facilities Design and Construction shared maps and diagrams of the Campus. Additionally, Landworks Studio and Biohabitats were introduced to Archivists at the University who shared historical records and photographs. West Chester University has compiled a comprehensive database of on-line information that has provided a considerable in-depth look at the Campus. Members of the Geography Department, using their GIS database, were able to provide additional information. Through hours of on-site touring and data collection, followed by workshops to discuss information, a fairly clear and concise framework of the existing University was established.

In addition to physical data collection, the team held a number of open forum meetings to discuss the Campus with students, faculty, and staff. These in-person gatherings were further supplemented through a University published internet survey, yielding more than 1200 responses. The most common responses are outlined below and become the basis for the Summary Analysis (page 13).



### A) CLIENT IDENTIFIED NEED & DESIRED IMPROVEMENTS:

- 1) Safer, more organized street crossings
- 2) Updated main Campus Sign
- 3) Stronger gateways onto Campus
- 4) Enhanced experience for Campus visitors from 'M' Lot to Admissions
- 5) Developed planting strategy to improve aesthetics, ecology, and maintenance
- 6) Future closing of Church Street and University Avenue
- 7) EW pathway from BPMC to New Street Parking Garage
- 8) Improved Presidents Walk
- 9) NS connection from Quad to 25 University Ave and on to BPMC
- 10) Connection from Sharpless Street to Student Recreation Center
- 11) Relocation of food trucks
- 12) Improved appearance from perimeter, addressing loading drives and docks
- 13) Upgraded FHG Library approach and arrival
- 14) Maintain ability for drive-up move-in-day
- 15) Lessen impact of service yard, west of Old Library

### B) SURVEY IDENTIFIED NEED & DESIRED IMPROVEMENTS:

- 1) Promote more physical activity - exercise loops
- 2) More ornamentation - flowers, flowering trees, fountains, labyrinth
- 3) Greater landscape sustainability
- 4) Update the main entry sign
- 5) Widen sidewalks at Campus perimeter
- 6) Remove chains at quad to allow cut-across
- 7) Improve safety at road crossings
- 8) Provide more places for seating
- 9) Control entries onto Campus
- 10) Enhance greenspace - plant more trees, protect existing trees, create more play areas
- 11) Install more native plant gardens
- 12) Better define Campus edges
- 13) Close Church Street to cars
- 14) Provide more outdoor learning experiences
- 15) Bring all areas up to that of high-level improvements
- 16) Add more parking

### C) LANDWORKS & BIOHABITATS IDENTIFIED NEED & DESIRED IMPROVEMENTS:

- 1) Create clear gateways
- 2) Enhance perimeter definition and aesthetic quality
- 3) Simplify path system - block desire lines with plants, fences, and walls, create hierarchy
- 4) Enhance plantings to consistent high level - tree canopy, shrub beds, and turf
- 5) Screen undesirable views
- 6) Provide diverse opportunities for landscape interaction
- 7) Create a landscape that reflects the regional, native ecology, by enhancing and expanding native plantings across Campus and celebrating natural systems that connect the Campus to the broader landscape
- 8) Optimize on-site stormwater management in integrated green infrastructure practices; benefiting the broader watershed

# SUMMARY ANALYSIS



**A.** Limited ecological expression and green infrastructure



**B.** Streets dividing the Campus



**C.** Missing and redundant connections



**D.** Underdeveloped student zones



**E.** Maintenance heavy landscaping



**F.** Lack of clear gateway



**G.** Unsafe street crossings



**H.** Undersized walkways



**I.** Views to undesirable area



WEST CHESTER UNIVERSITY LANDSCAPE MASTER PLAN

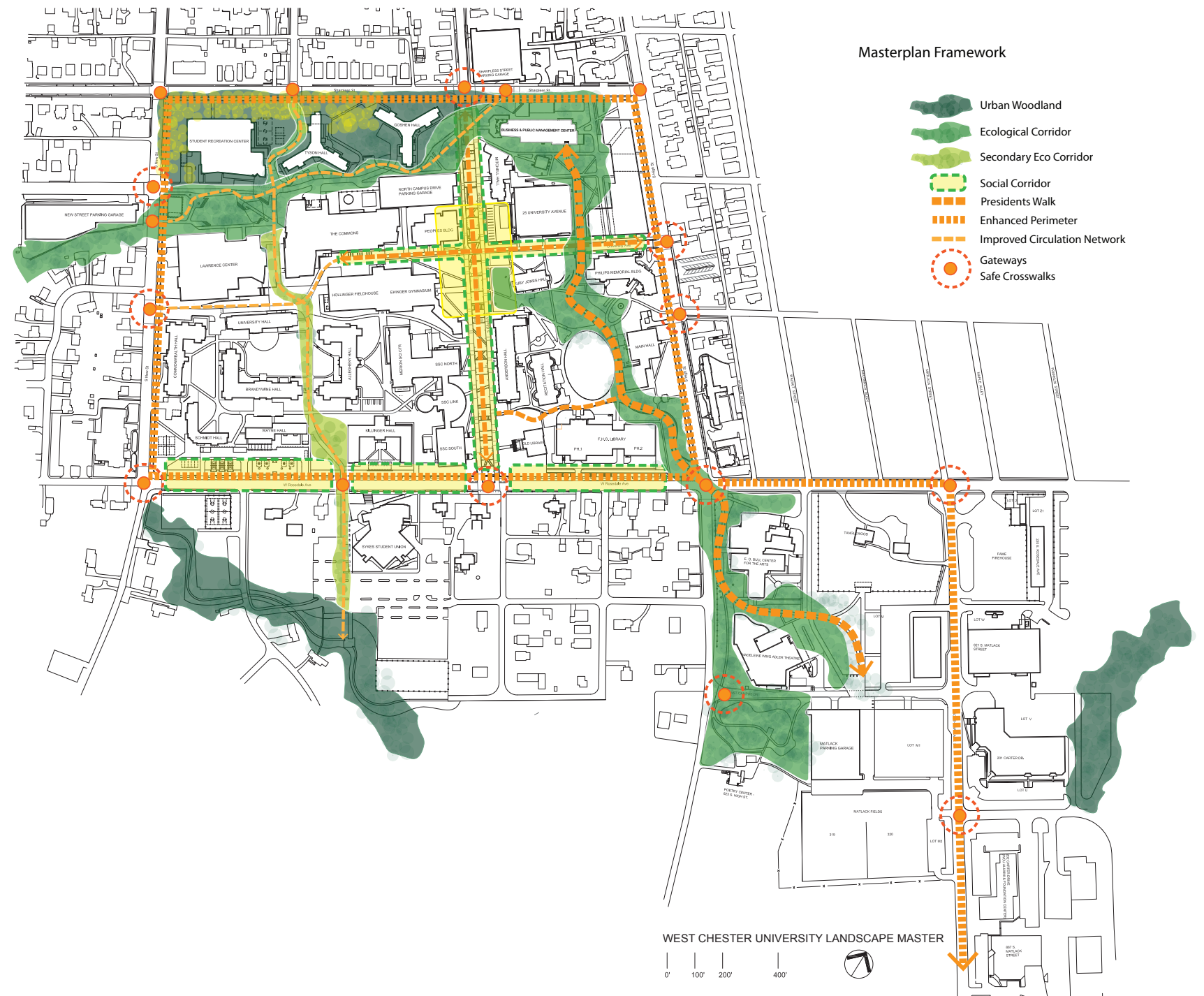


## MASTER PLAN GOALS & OBJECTIVES

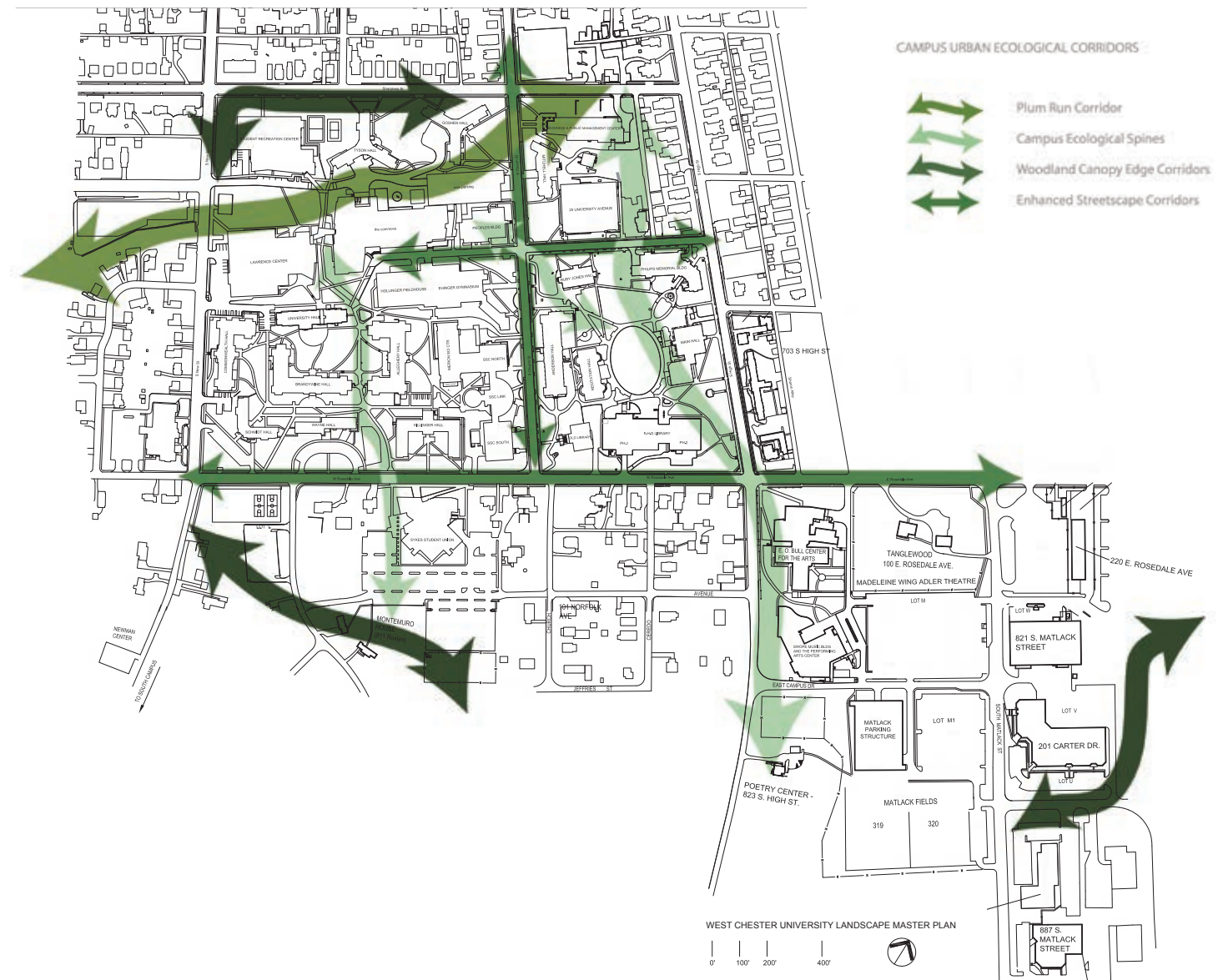
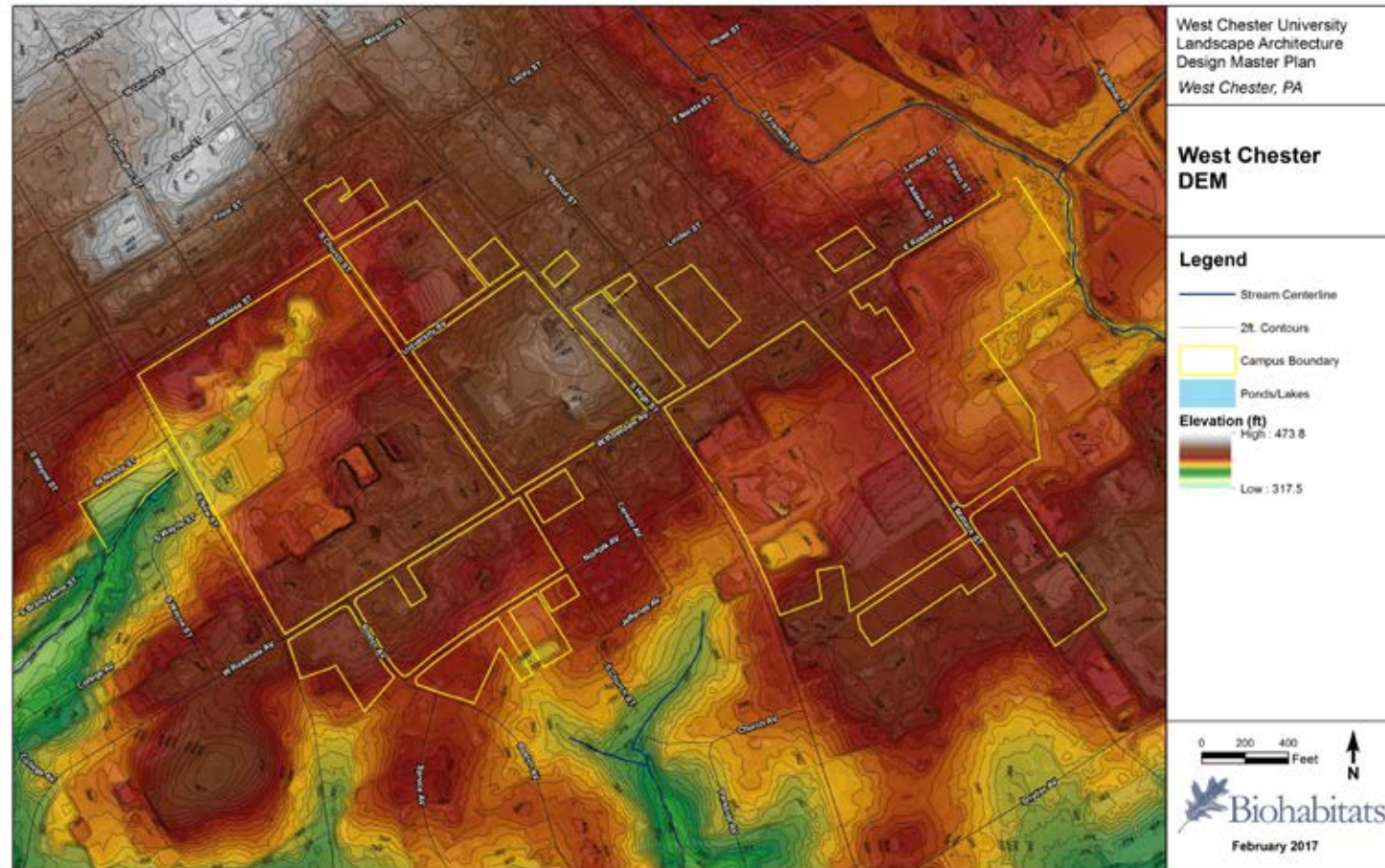
1. Improve definition and aesthetic quality of the **Campus perimeter** while creating strategic, **focal gateways** and a new **entry signage** system.
2. Create enhanced first visit impression and move-in day experience, as part of a **comprehensive circulation system** that includes walkway hierarchy, more available routes, and enriched student experience.
3. **Increase safety** through the organization and improvement of street crossings as well as the enhancement and hierarchy of pathway and parking lot lighting systems.
4. Provide **diverse landscape interaction** for socializing, fitness, outdoor study, and seating while considering the relocation of the food trucks and the opportunity for making Church Street a pedestrian only corridor.
5. Develop a **strong planting strategy** representing the native ecology, integrating regenerative green infrastructure practices, including reducing the maintenance associated with the existing landscape.

## MASTER PLAN FRAMEWORK

The Master Plan Framework consists of both physical design and ecological principles intended to simplify and enrich the overall Campus experience. Student social corridors will be defined to provide opportunities for programmed and non-programmed activities. An improved circulation network will identify primary east-west and north-south corridors with secondary walkways running between and to the Campus perimeter. The perimeter will be strengthened to provide a new face of the University, and the entire Campus will be organized as a series of ecological corridors that further enhance the on-ground experience.







## Ecological Corridors

While West Chester University’s North Campus is a fairly urban campus landscape, there are ecological features and remnants of ecological history that provide inspiration for the landscape planning process. Through the examination of the natural resources on Campus, a series of ecological corridors are defined for this landscape master plan.

Primary amongst these is the historic Plum Run Creek corridor that runs east/west across the northern portion of the Campus. While the actual stream has been buried in a pipe below the surface, its corridor still exists as a natural valley within the Campus and it reaches the surface at the far western edge of the Campus along the southern side of the

New Street Parking Garage (see topo map). Mature tree canopy and a stormwater bioretention feature north of Lawrence Center serve as subtle reminders of the historic stream bed. Further to the east is a less obvious natural corridor in the layout of streets, parking and buildings, but the valley topography provides clues to its route.

Mature tree canopy and patches of woodlands along the north, west, and eastern edges of North Campus also provide a potential foundation for further opportunities for ecological uplift through improved connectivity of canopy and understory. In some cases these areas coincide with existing stormwater bioretention practices that provide minimal

habitat for local wildlife species and important water management for stormwater before it flows into natural wetlands or the Plum Run tributaries. These remnants of woodland, in some cases, are all that is remaining of historic floodplain and wetlands associated with Plum Run and the neighboring East Branch of Chester Creek (see further context for the regional hydrology in Section VI).

Given the existing landscape, there is the potential for a series of ecological spines through campus, connecting student movement with increased tree canopy and native plantings. The most significant of these spines runs north/south. It begins in the south at the large bioretention feature west of

Matlack Garage, continues north toward Presidents Walk, through the Oval that includes the woodland grove with the Bartram Oak, and finally to the new College of Business and Public Management Center building along Sharpless Street. Many of the significant pedestrian corridors as well as the streetscapes that bound the campus could provide further ecological uplift through increased use of native plants: trees, shrubs, and groundcover. Additionally, flowering native plants provide ecological uplift by enhancing pollinator habitat.



## II. Defining the Campus Perimeter



## EXISTING CAMPUS EDGES

The North Campus of West Chester University is comprised of the primary block bounded by S. High Street, W. Rosedale Avenue, S. New Street, and Sharpless Street. From this perimeter, the Campus extends to the Sharpless Street Parking Garage, the New Street Parking Garage, properties across Rosedale Avenue, including Sykes Student Union, K Lot parking, Admissions, and the College Arms Apartments, retail properties, and G Lot parking east of S. High Street. The one missing tooth in the primary block is comprised of a half dozen residential buildings, along S. High Street near Sharpless Street that remain privately owned.

Focusing on the primary block, the conditions along the street are quite varied. Buildings such as Killinger Hall, Commonwealth Hall, Tyson Hall, and Goshen Hall are designed with street frontage in mind. Other buildings including FHG Library, Lawrence Center, and the Student Recreation Center present the back of the building at the street edge. There are many driveways entering Campus to assist in servicing buildings and providing for convenient drop-off.

In 1965 the senior class left a financial gift to the University with the intention that it be combined with previous class gifts for the purpose of developing “a new landmark” at the corner of W. Rosedale Avenue and S. High Street. The Campus Sign is indeed a landmark and premier photo opportunity for students and visitors alike. This entrance to Campus is recognized as the “Main Entry,” later supplemented to include an accessible ramp. A large number of students, who arrive by car daily, walk from East Campus and enter the University at this corner. Still many other students approach the University from other directions and enter on one of the many walkways that unceremoniously connect to the perimeter.

The streetscape surrounding the Campus is an extension of the Borough street system. Sidewalks and lighting are designed to continue the residential neighborhood system around the Campus. Sidewalks are constructed of poured-in-place concrete with an average width of 5'-0". Street lighting is comprised of cobra style fixtures suspended on timber poles, often shared with utilities.

Street trees, originally planted in a planting strip between the sidewalk and curb, are being moved to the property side of the sidewalk, when replacement is warranted. The planting strip in general has been turf grass often replaced with permeable pavers when the grass becomes unsustainable, due to foot traffic or street tree root expansion.



Campus Gateway



Lawrence Hall



SSC South

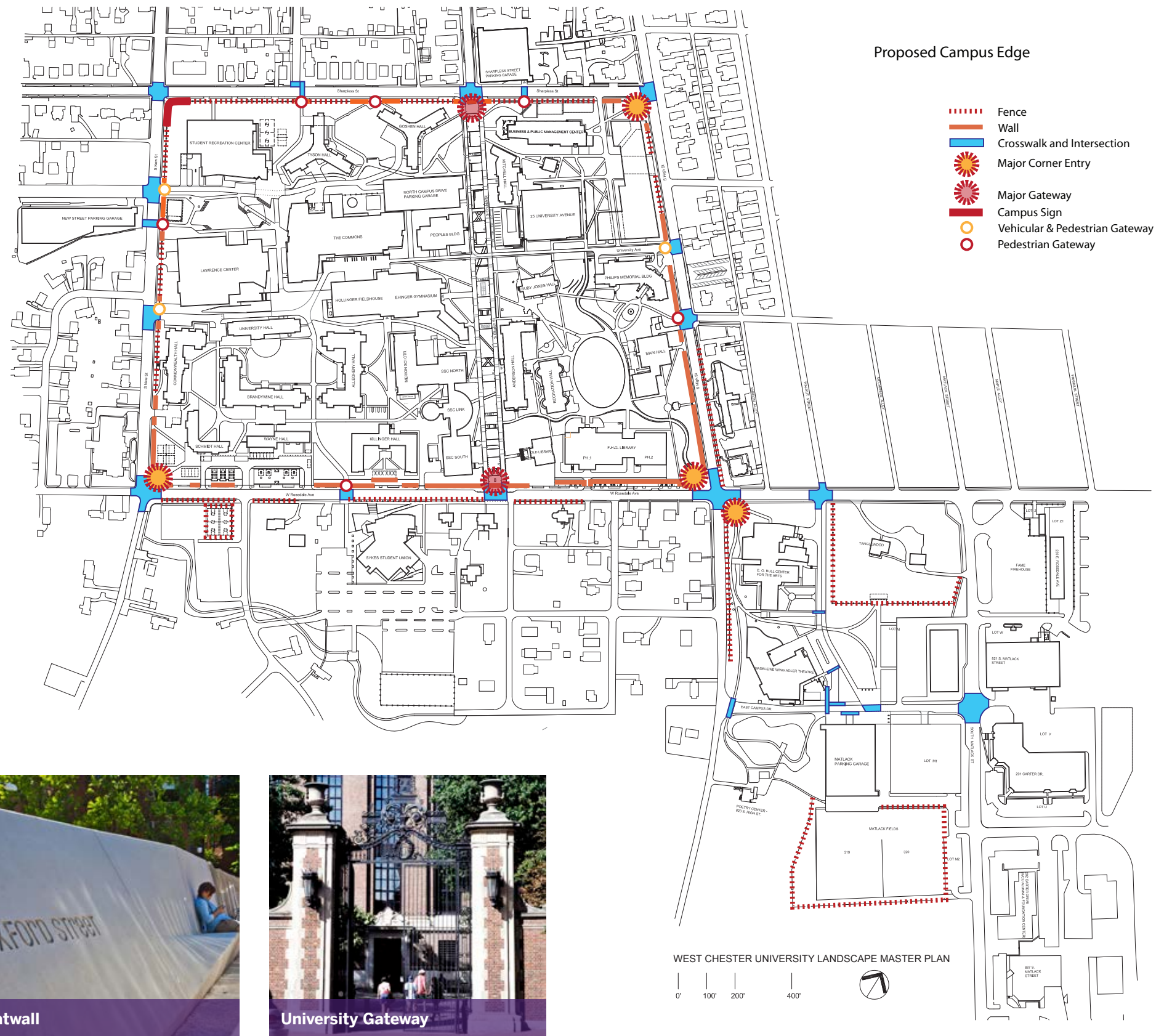


## PROPOSED CAMPUS EDGES

The organization of the Campus landscape begins at the edges. Where academic buildings front the street, only minor improvements are recognized. Where buildings turn their back, attempts are made to develop a landscape between the buildings' less attractive side and the street. Individual access drives are combined so that points of penetration through the landscape buffer are limited.

Gateways are a major area of focus developed later in this report. The intention is to have fewer entrances to the Campus and to celebrate these entrances with a sign of 'Welcome.'

The streetscape itself shall become a line of demarcation between the neighborhoods and the Campus. The intent is not to separate the Campus, but to call attention to this wonderful attribute of West Chester, allowing visitors and students to sense the arrival at this special place. Sidewalks shall be widened to a minimum of 10'-0" allowing easy passage of two-directional pedestrian traffic. The use of a permeable pavement not only demarcates the edge, but harkens to the strong ecological commitment of the University. Combination streetlight/sidewalk light fixtures provide beacons along the campus edge to further reinforce the edge. Street trees strengthen the street edge and give relevance to the pedestrian component of the street.



Dynamic Fence



Interactive Wall



Seatwall



University Gateway



## W. ROSEDALE AVENUE

### Existing Conditions

W. Rosedale Avenue is the widest street section surrounding the Campus and bears many pedestrian crossings between Sykes Student Union and the heart of Campus. Attempts have been made in front of Sykes to limit crossings, yet during class changes there remain considerable vehicular and pedestrian conflicts.

Sidewalks along W. Rosedale are narrow, between 5'-0" and 6'-0" wide. When two persons walking in one direction are met by an approaching pedestrian, someone generally needs to exit the sidewalk and walk on the adjacent lawn. The same is true if wanting to pass. The majority of the sidewalk meets Campus on-grade, allowing for ease of walking and pathway transitions. Adjacent to FHG Library and immediately across W. Rosedale Avenue the grade rises rapidly to adjoining properties.

The zone between the sidewalk and street was historically lawn with spaced street trees and utility poles. Overflow use of this area seriously stresses the lawn. Many locations have been replaced with pavers to accommodate foot traffic. Along the south side of W. Rosedale Avenue, there are locations where the sidewalk is elevated above the curb/street. As a planted strip, this condition is adequate. As an overflow or crossing, the slope is both dangerous and unsustainable. At Sykes Student Union, the strip has again been replaced with pavers to accommodate this condition. Overhead utilities are very visible along W. Rosedale Avenue, accentuated by the gaps in street tree planting.

### Proposed Conditions

The basic design principles along W. Rosedale Avenue, for properties owned by West Chester University, include the following:

- Widen sidewalks to a minimum of 10'-0" to allow for sharing and ease in passing.
- Set sidewalks level with curbs to provide continuous pedestrian space, retaining slope on the back side of the walk.
- Plant single or double rows of street trees along entire length with spacing not to exceed 35'-0", acknowledging strategic gaps in street trees to highlight areas of interest.
- Provide engineered planting strip for long-term street tree health.
- Include areas of porous paving at crossings and waiting areas to prevent damaging the planting strip.
- Accentuate paving, lighting, and street furnishings to 'announce' the perimeter of Campus.
- Create viable student-rich landscapes between the sidewalks and building facades to activate the street edge and take advantage of residual, underutilized lands.



## SHARPLESS STREET

### Existing Conditions

Sharpless Street, at the northern most boundary of the University, maintains the most residential feel of all surrounding streets, a result of the street width and the number of private residences immediately adjacent. It may also be a result of more limited student traffic travelling along this street edge. The 5'-0" wide sidewalks do not seem overburdened, yet at times there is the need to step off the sidewalk to pass others.

The planting strip along Sharpless is very narrow, only 3'-0" wide. At the west end, street trees have grown to occupy the entire space between the curb and sidewalk and are now lifting the sidewalk. South of the sidewalk, the grade drops away quickly towards the newly built Student Recreation Center, as well as Tyson and Goshen Halls. Students have created a makeshift entry to Campus across from S. Darlington Street, resulting in a dangerous and heavily eroded slope.

The recently completed Business and Public Management Center included a state-of-the-art storm water management garden along its northern edge. This garden is located directly across the street from the Sharpless Street Garage. Unfortunately, the mass of the two buildings, the very open landscape, and immature street trees leave a gap in this otherwise lovely street.

### Proposed Conditions

The basic design principles along Sharpless Street, for properties owned by West Chester University, include the following:

- Widen sidewalks to a minimum of 8'-0" to allow for sharing and ease in passing, and widen planting strip.
- Set sidewalks level with curbs to provide continuous pedestrian space, retaining slope on the back side of the walk.
- Plant a single row of street trees along entire length with spacing not to exceed 35'-0", acknowledging strategic gaps in street trees to highlight areas of interest.
- Provide engineered planting strip for long-term street tree health.
- Include areas of porous paving at crossings and waiting areas to prevent damaging the planting strip.
- Accentuate paving, lighting, and street furnishings to 'announce' the perimeter of Campus.
- Create viable landscapes between the sidewalks and building facades to activate the street edge while providing links to the residential neighbors.



## S. NEW STREET

### Existing Conditions

S. New Street presents itself as the widest street surrounding North Campus. Buildings set back from the street edge and expansive lawns create a feeling of openness. The loading dock at Lawrence Center opens to the Street with a minimal screen wall for separation. Similar conditions exist at the electrical sub-station. From the entry road at Commonwealth Hall and the Student Health Center to the entry road at Student Recreation Center, the former planting strip, adjacent to the curb, has been paved over. Overhead utilities run on each side of the road. Commonwealth and Schmidt Halls are elevated above the road. There are a few, undersized pear trees along the street, adjacent to the Student Recreation Center.

### Proposed Conditions

The basic design principles along S. New Street, for properties owned by West Chester University, include the following:

- Widen sidewalks to a minimum of 8'-0" to allow for sharing and ease in passing.
- Set sidewalks level with curbs to provide continuous pedestrian space, retaining slope on the back side of the walk.
- Plant a single row of street trees along entire length with spacing not to exceed 35'-0", acknowledging strategic gaps in street trees to highlight areas of interest.
- Provide engineered planting strip for long-term street tree health.
- Include areas of porous paving at crossings and waiting areas to prevent damaging the planting strip.
- Accentuate paving, lighting, and street furnishings to 'announce' the perimeter of Campus.
- Create viable landscapes between the sidewalks and building facades to activate the street edge.



## S. HIGH STREET

### Existing Conditions

S. High Street is the busiest street along North Campus and poses the most danger to pedestrians. With a high speed limit right up to Campus adjacency, drivers are often crossing the W. Rosedale Avenue/S. High Street intersection at excessive speeds. This tendency extends along the length of S. High Street.

Sidewalks along S. High Street are narrow, between 5'-0" and 6'-0" wide. When two persons walking in one direction are met by an approaching pedestrian, someone generally needs to exit the sidewalk and walk on adjacent lawn. Immediately adjacent to the sidewalk west of S. High Street and adjacent to Presidents Walk, the grade slopes up to Campus. This slope is currently covered with ivy groundcover and requires stairs and ramps for traversing grade.

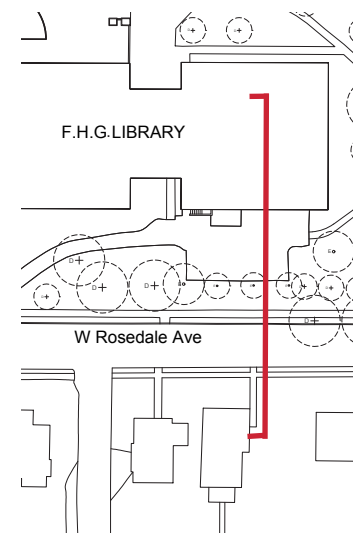
The planted strip between sidewalk and curb is generally maintainable except in areas of crossing, where large numbers of students overflow the sidewalk, compacting the soil and compromising the turf. At University Avenue and Linden Street, these stations have been remedied with the addition of pavers to widen the sidewalk.

### Proposed Conditions

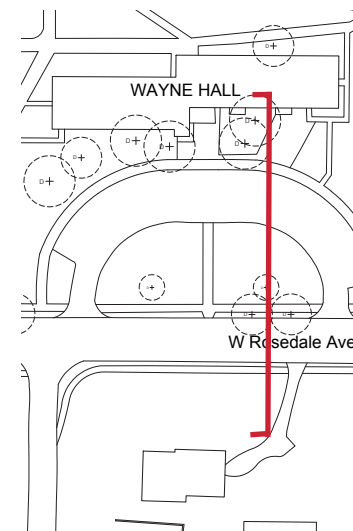
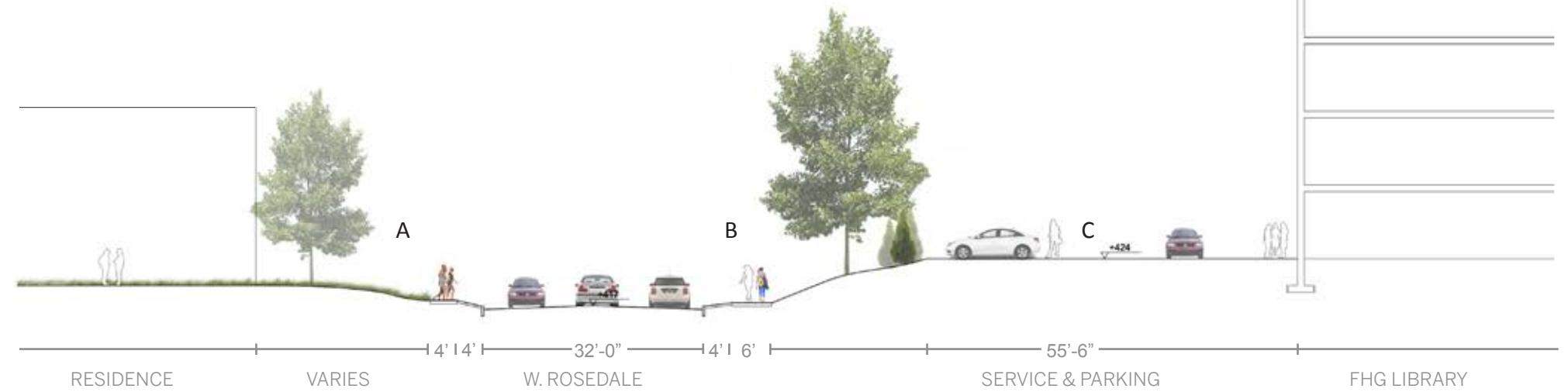
The basic design principles along S. High Street, for properties owned by West Chester University, include the following:

- Widen sidewalks to a minimum of 10'-0" to allow for sharing and ease in passing.
- Set sidewalks level with curbs to provide continuous pedestrian space, retaining slope on the back side of the walk.
- Plant single or double rows of street trees along entire length with spacing not to exceed 35'-0", acknowledging strategic gaps in street trees to highlight areas of interest.
- Provide engineered planting strip for long-term street tree health.
- Include areas of porous paving at crossings and waiting areas as to not damage planting strip.
- Accentuate paving, lighting, and street furnishings to 'announce' the perimeter of Campus.
- Create viable, mixed use landscape between the sidewalks and building facades to activate the street edge and take advantage of adjacent properties.

# EXISTING CONDITIONS ALONG W. ROSEDALE AVENUE



W. ROSEDALE  
LOOKING WEST



W. ROSEDALE  
LOOKING WEST





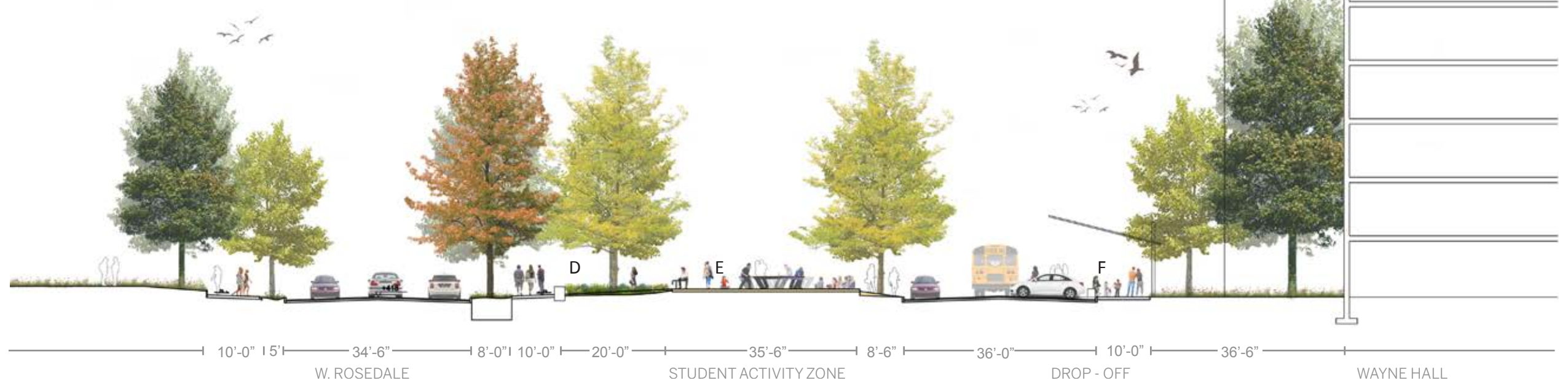
# PROPOSED CONDITIONS ALONG W. ROSEDALE AVENUE



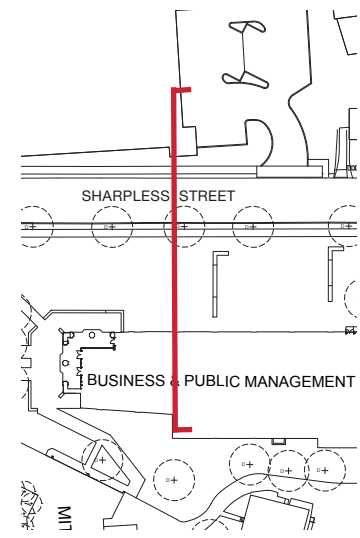
W. ROSEDALE  
LOOKING WEST



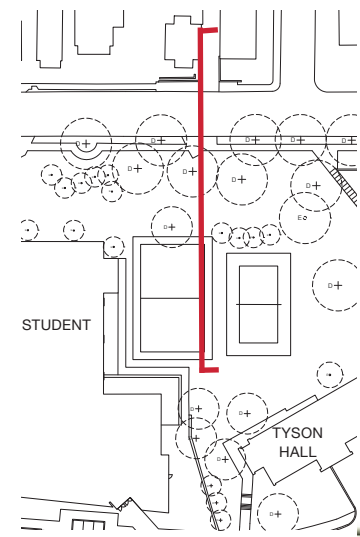
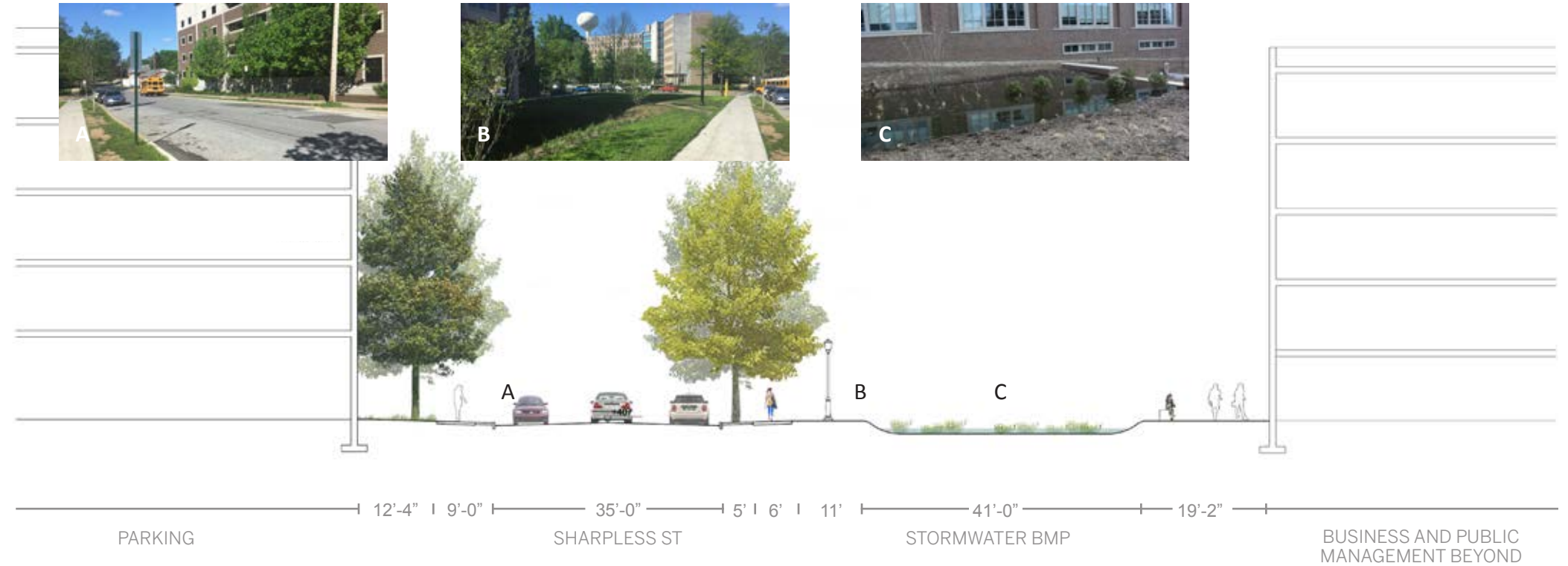
W. ROSEDALE  
LOOKING WEST



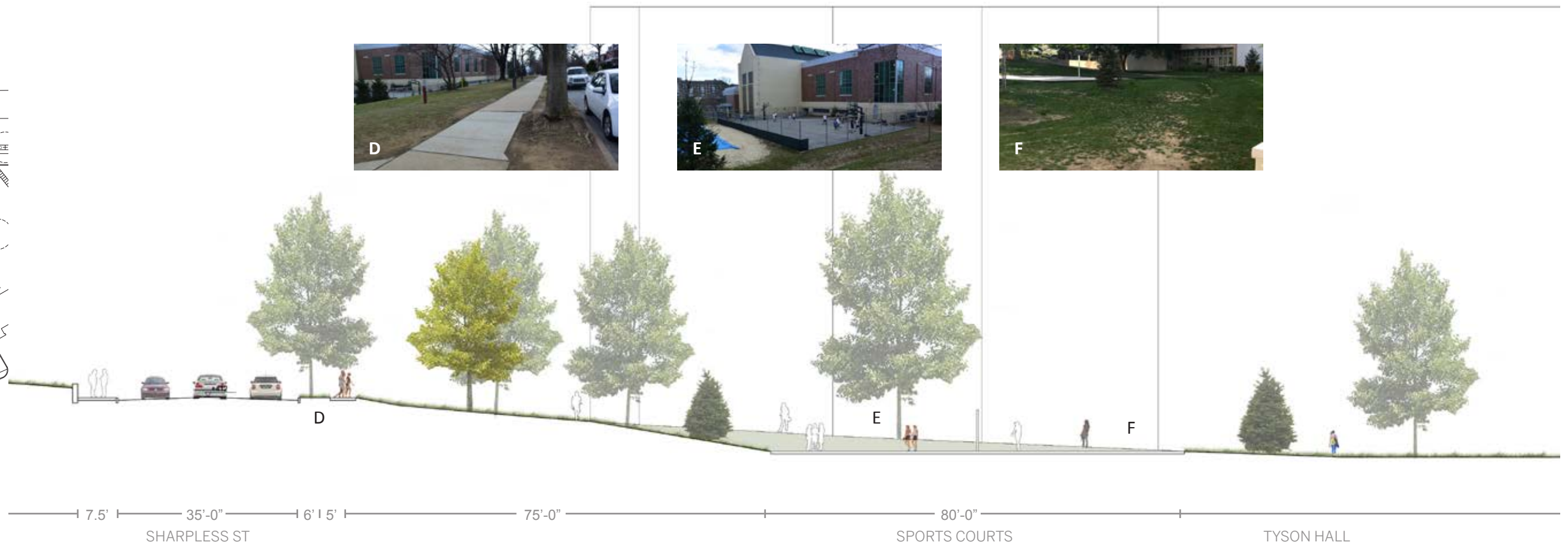
# EXISTING CONDITIONS ALONG SHARPLESS STREET



SHARPLESS  
LOOKING EAST



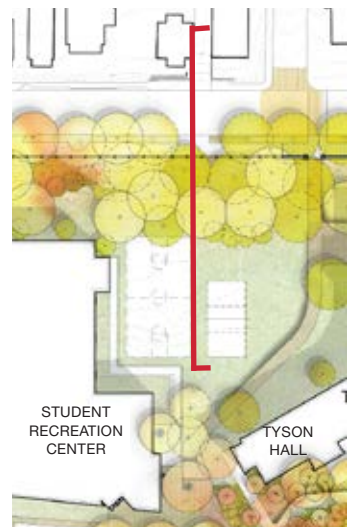
SHARPLESS  
LOOKING EAST



# PROPOSED CONDITIONS ALONG SHARPLESS STREET



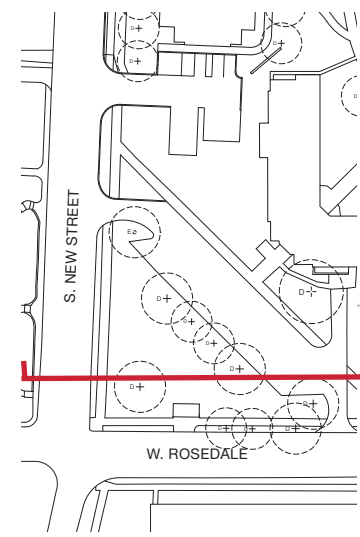
SHARPLESS  
LOOKING EAST



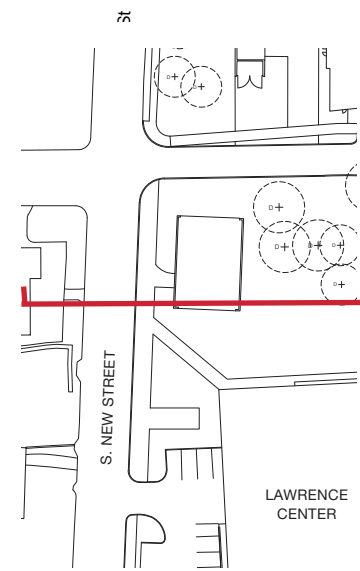
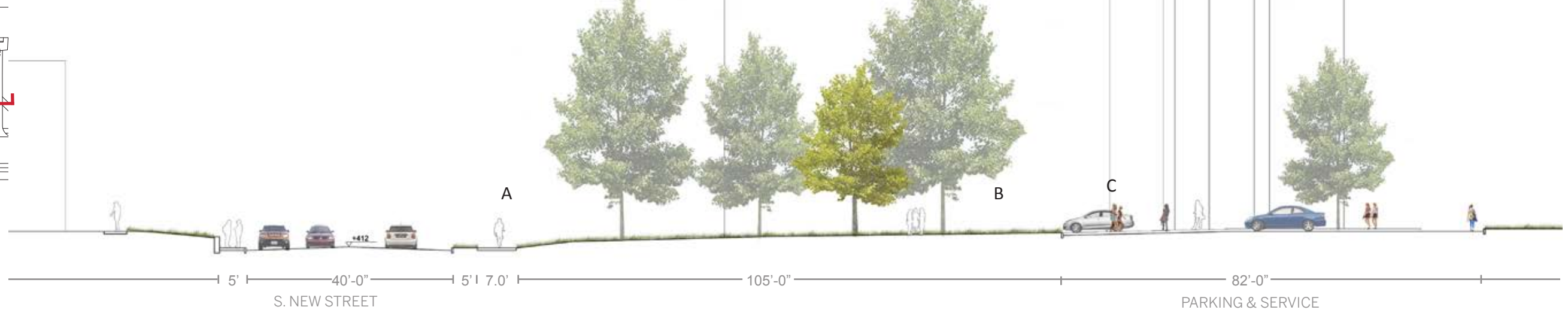
SHARPLESS  
LOOKING EAST



# EXISTING CONDITIONS ALONG S. NEW STREET



S. NEW STREET  
LOOKING NORTH



S. NEW STREET  
LOOKING NORTH



# PROPOSED CONDITIONS ALONG S. NEW STREET



S. NEW STREET  
LOOKING NORTH



S. NEW STREET  
LOOKING NORTH

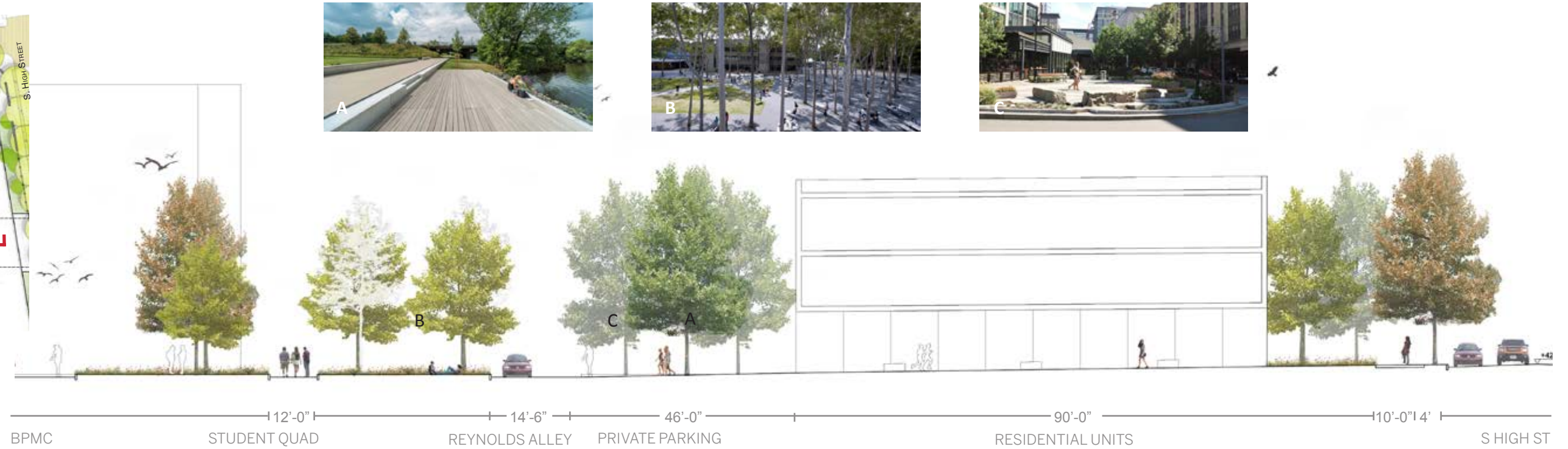




# PROPOSED CONDITIONS ALONG S. HIGH STREET



S. HIGH STREET  
LOOKING NORTH

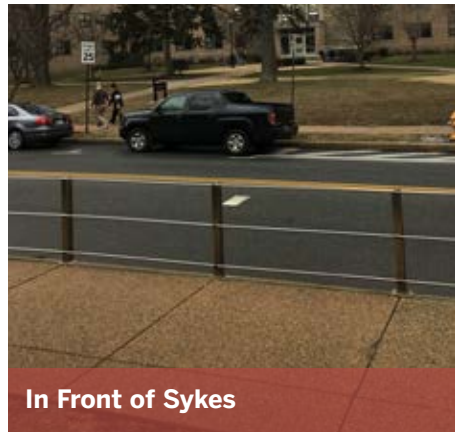


S. HIGH STREET  
LOOKING NORTH

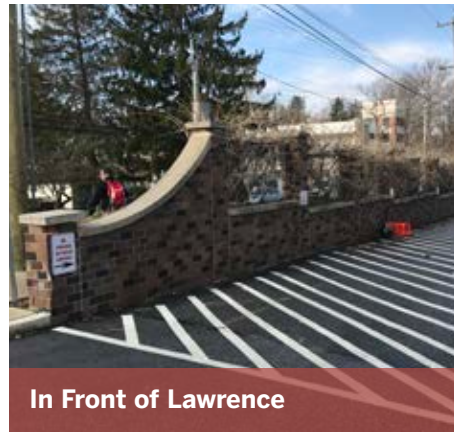


# EXISTING STREETScape - FENCES & WALLS

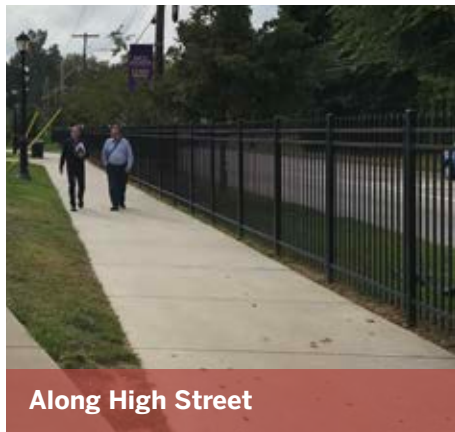
Historical photographs of West Chester Teachers College show the use of fences along many frontages of Campus, defining of the edge and creating sense of place and security. Today's lack of fences and walls makes the Campus much more porous, reversing trends of exclusion, but also limiting the notion of arrival and entry. There are over thirty points of entry around campus and new paths being defined by student on-going use. The landscapes adjacent to the street bleed into streetscapes, adding to the definition of the street and less of the Campus.



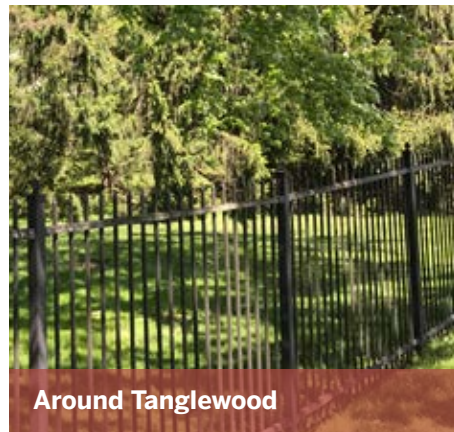
In Front of Sykes



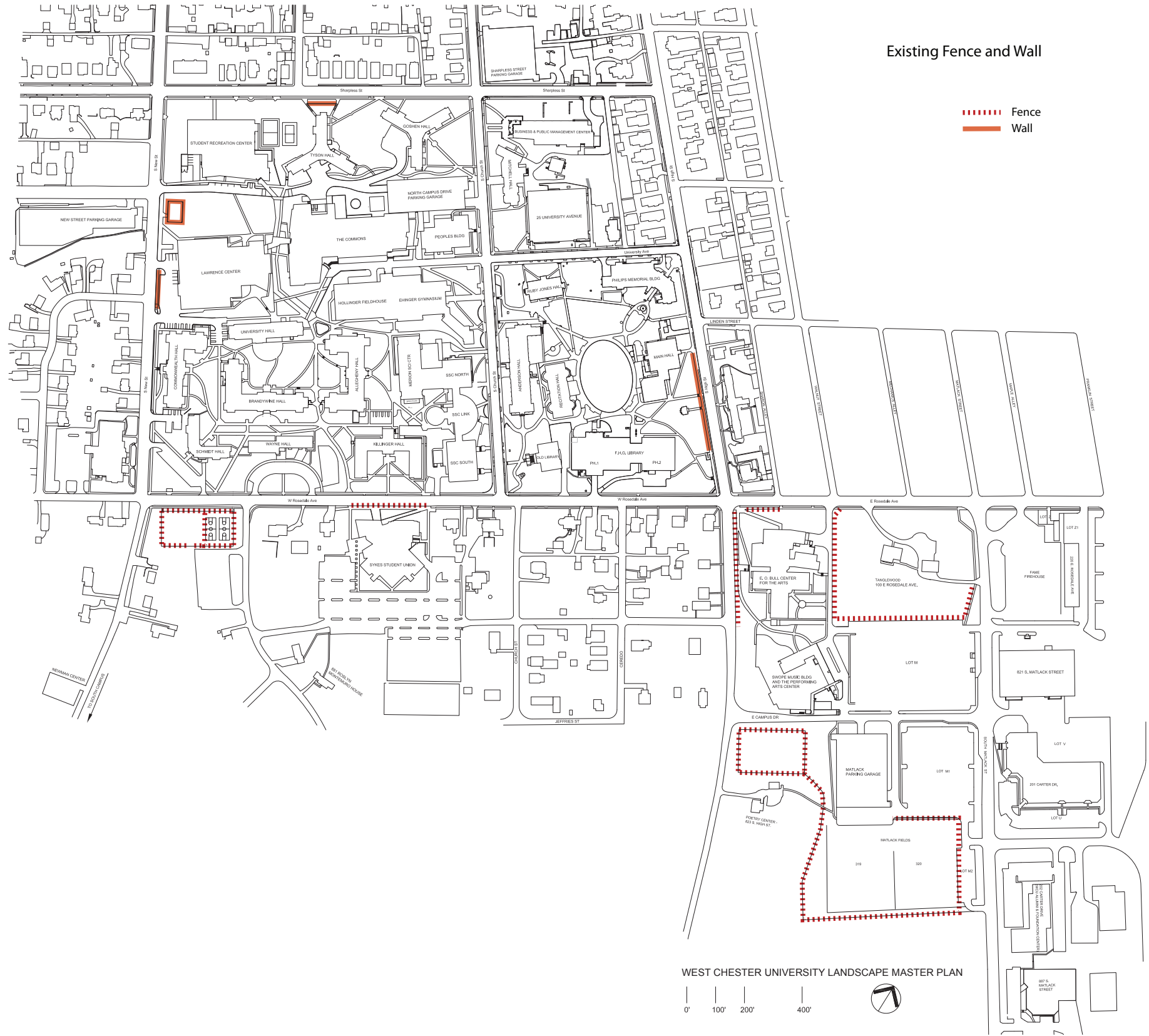
In Front of Lawrence



Along High Street



Around Tanglewood





## PROPOSED STREETScape - FENCES & WALLS

Steep slopes, either side of FHG Library and Commonwealth Hall, as well as screen walls at Lawrence Center and the electrical sub-station, provide a sense of edge and how the use of fences and walls might work to develop the Campus edge. Fences and walls provide a suggestion for where one enters the Campus and how the spaces adjacent to the road are used.

Walls along W. Rosedale Avenue are explored as seating opportunities while walls at FHG Library create division between service and parking and student space below. Walls at Lawrence Center and the sub-station are repeated to both create interesting screening while opening portals into the Campus. Fences also work to set boundaries and openings for gateways while allowing visual porosity. The added security addresses a concern raised in the survey and limits desire paths worn into the University fabric.



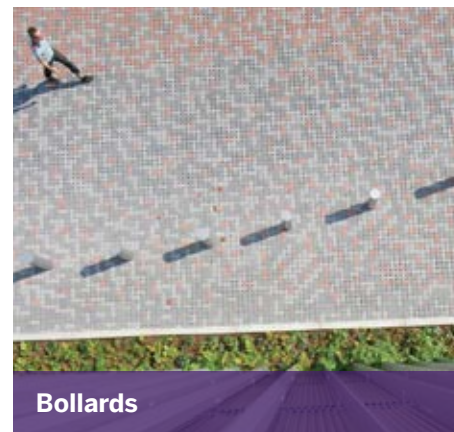
Seatwall



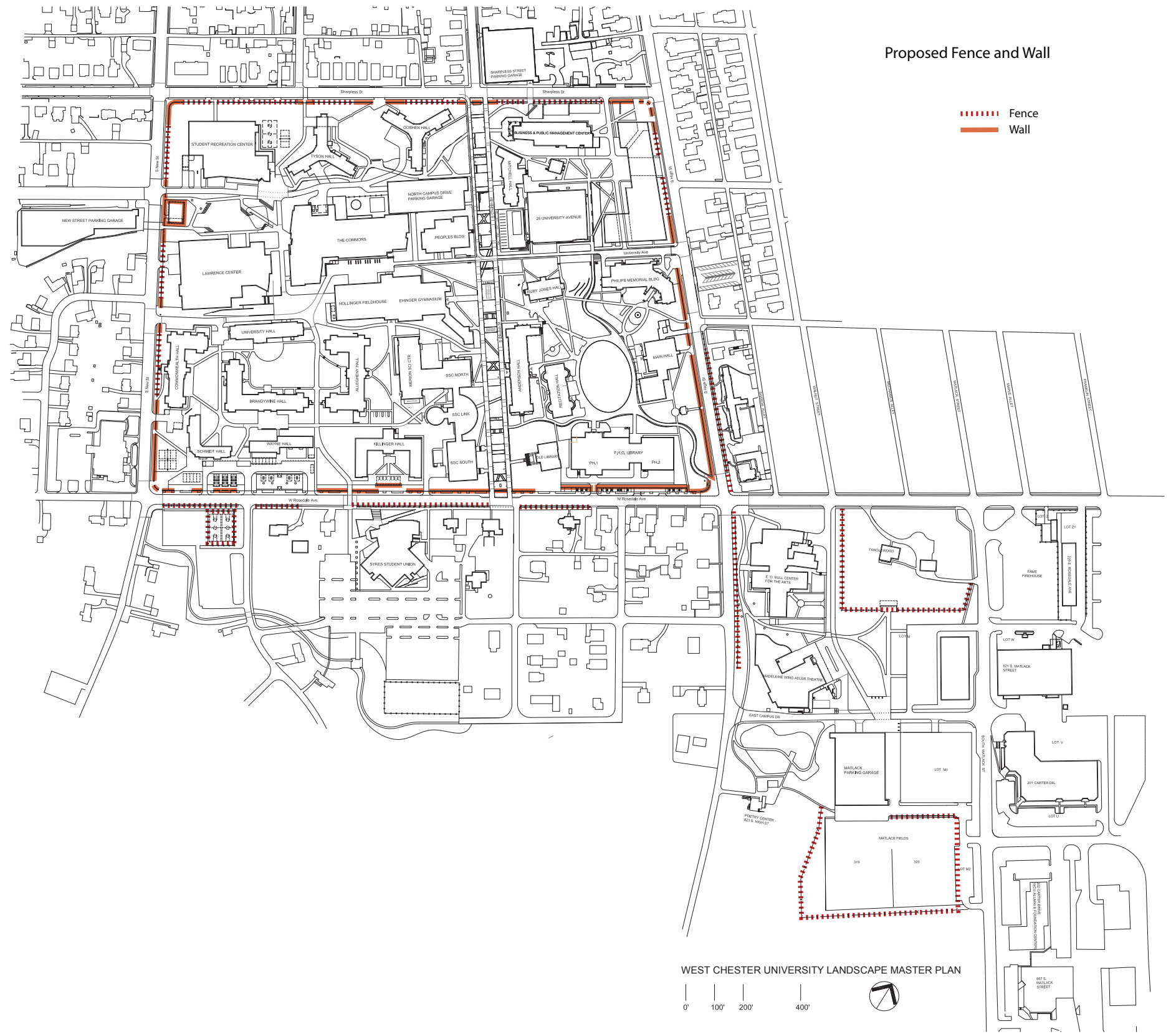
Picket Fence



Screen Fence



Bollards



WEST CHESTER UNIVERSITY LANDSCAPE MASTER PLAN

0' 100' 200' 400'

**STREETScape - FENCES & WALLS  
RETAINING EXAMPLES**



**Low Retaining Walls**



**Wall + Seating + Stair + Building Entrance**



**Path Wall**



**Lawn Seatwall**

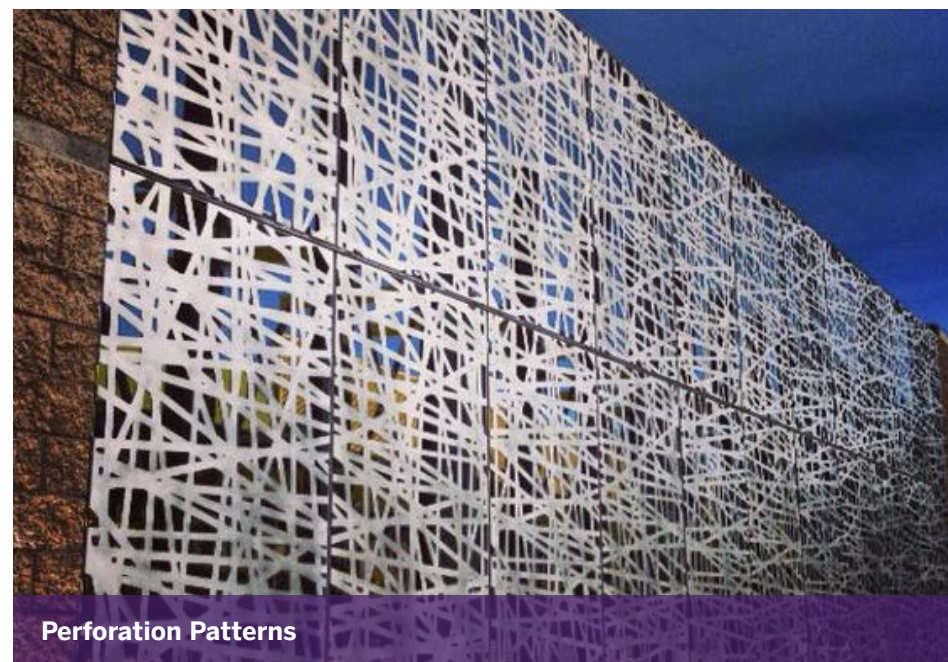


**Integrated Site Features**



**Lounging Areas**

# STREETSCAPE - FENCES & WALLS SCREENING EXAMPLES



## EXISTING STREETScape - CROSSWALKS

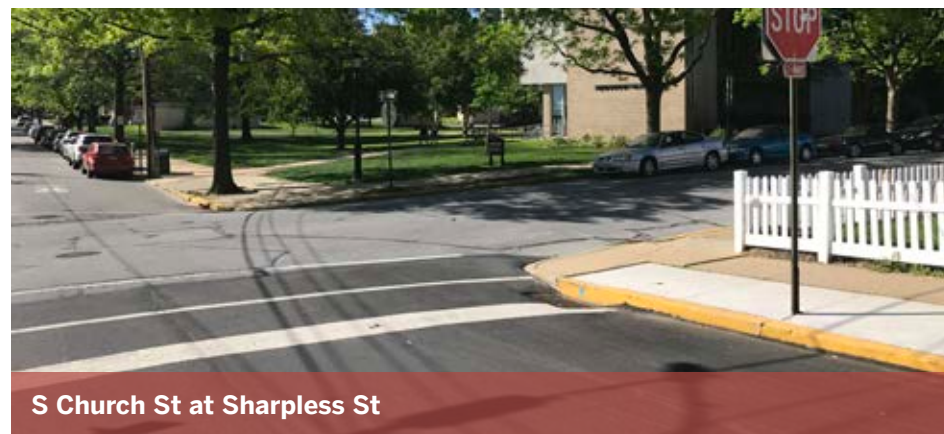
Crosswalks approaching West Chester University are modest, traffic-marker painted striping to meet PennDOT standards. Those along S. High Street are maintained by PennDOT while the other roadways are maintained by the Borough of West Chester. A vehicular warning signal exists at the crossing west of Sykes Student Union; other crosswalks are not signaled.



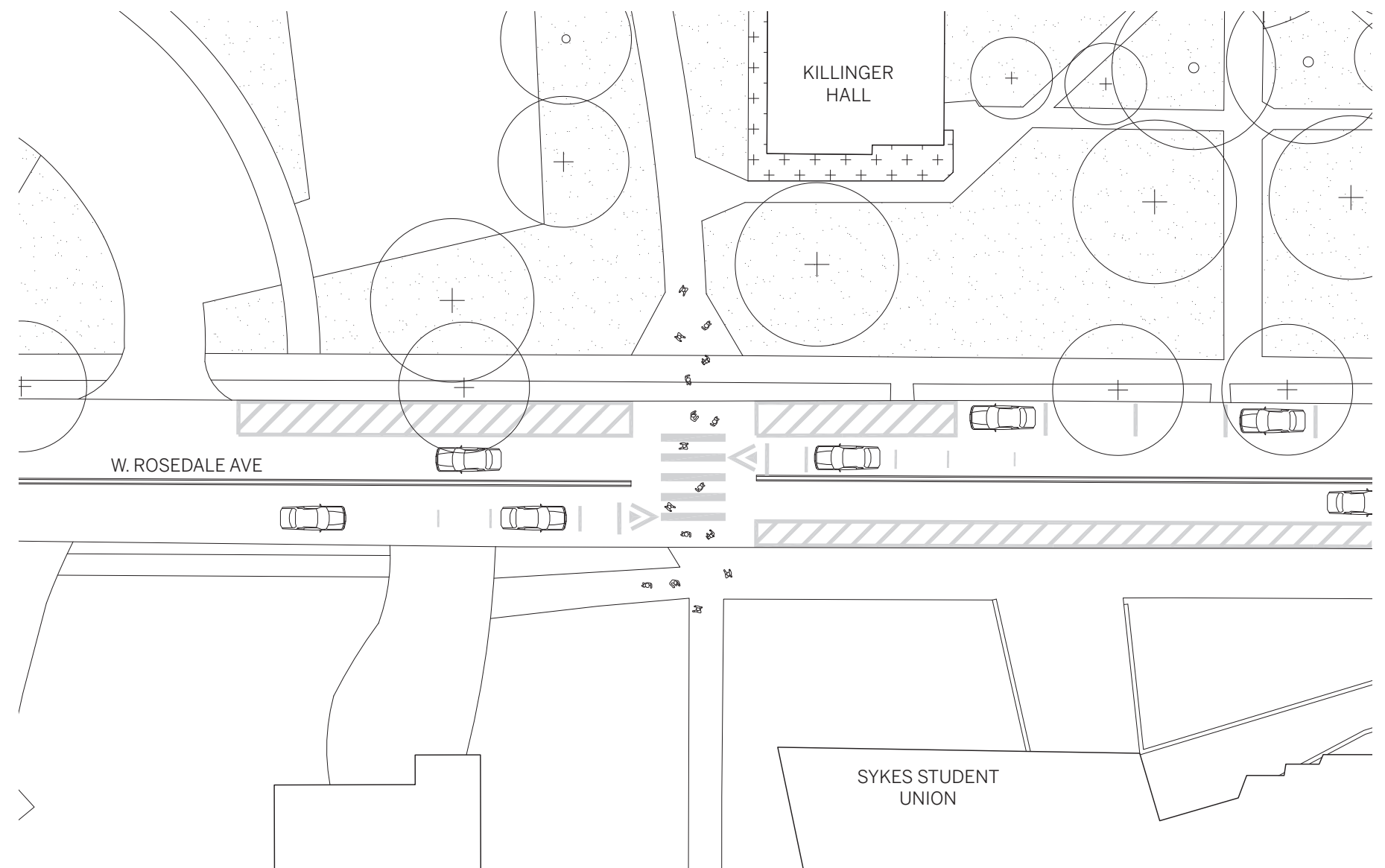
M Lot



W Rosedale Ave at Sykes Student Union

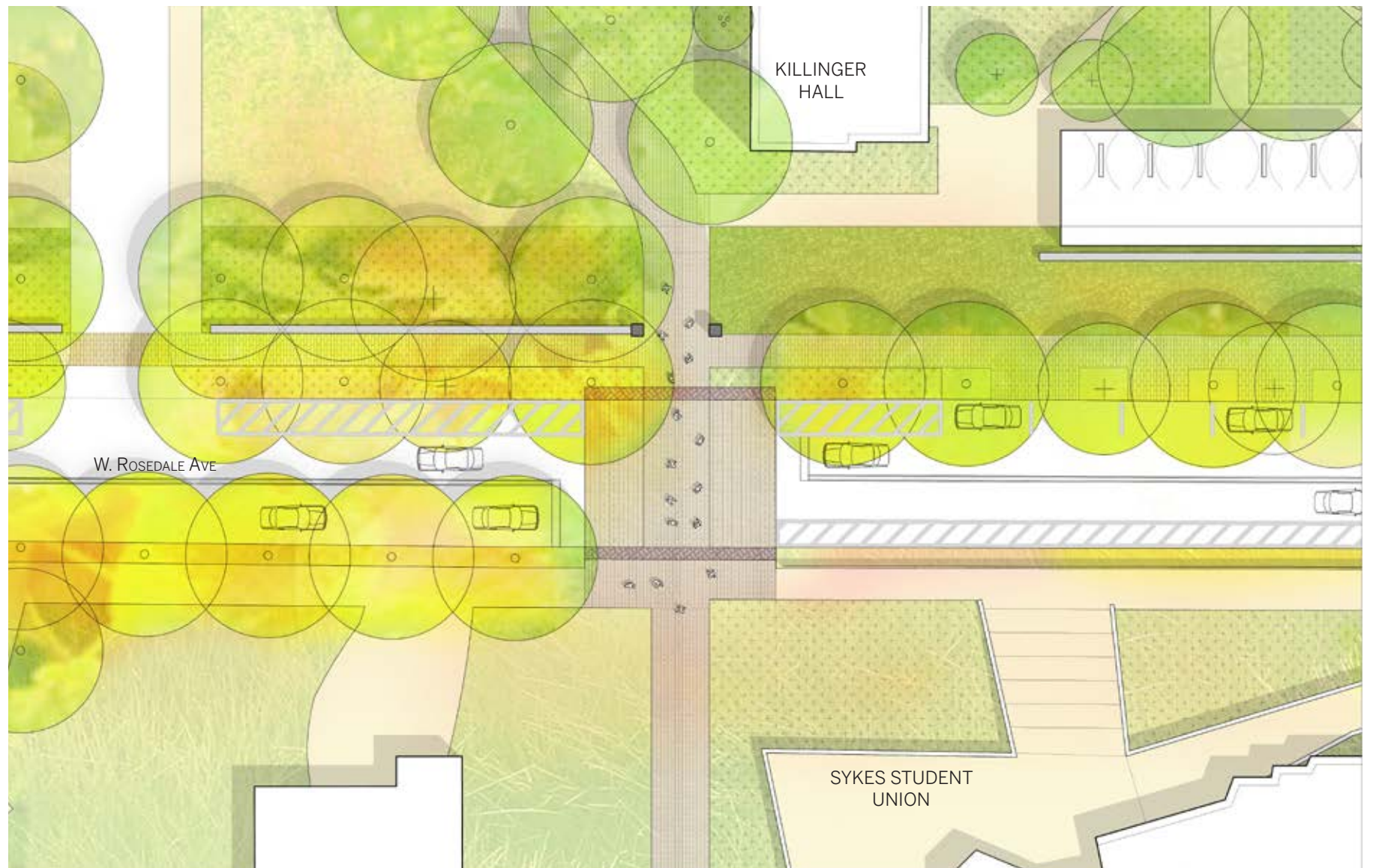


S Church St at Sharpless St



## PROPOSED STREETScape - CROSSWALKS

As entrances to the Campus are more clearly defined, the intent is to have crosswalks relate directly to primary pathways. Crosswalks will exist in front of the New Street and Sharpless Parking Garages, and across W. Rosedale Avenue from the parking lot behind Skyes Student Union to the Recreation Run. All other street crossings will be at intersections (p. 36-37). Given the three locations for crosswalks and the frequency of use, recommendations include exploring with the Borough the opportunity to raise these crosswalks to curb height. The approach to the crosswalks can be extended, not creating speed bumps but merely raised traffic calming conditions, which can be further announced with dramatic marking paint or vehicular rated pavers.



## EXISTING STREETScape - INTERSECTIONS

In 1946 Dr. Swope, then President of the College, recognized the danger of intersections and began asking for a signal at the intersection of W. Rosedale Ave. and S. High Street. This intersection is signaled for both traffic and pedestrian crossing. The S. High Street and Linden Street intersection is signaled for vehicles. The intersection of S. Church Street and W. Rosedale Avenue has a vehicular warning signal only. Remaining intersections have stop signs for less active roadways. All intersections are flat with associated crossings painted to meet PennDOT standards. Those along S. High Street are maintained by PennDOT while the other roadways are maintained by the Borough of West Chester.



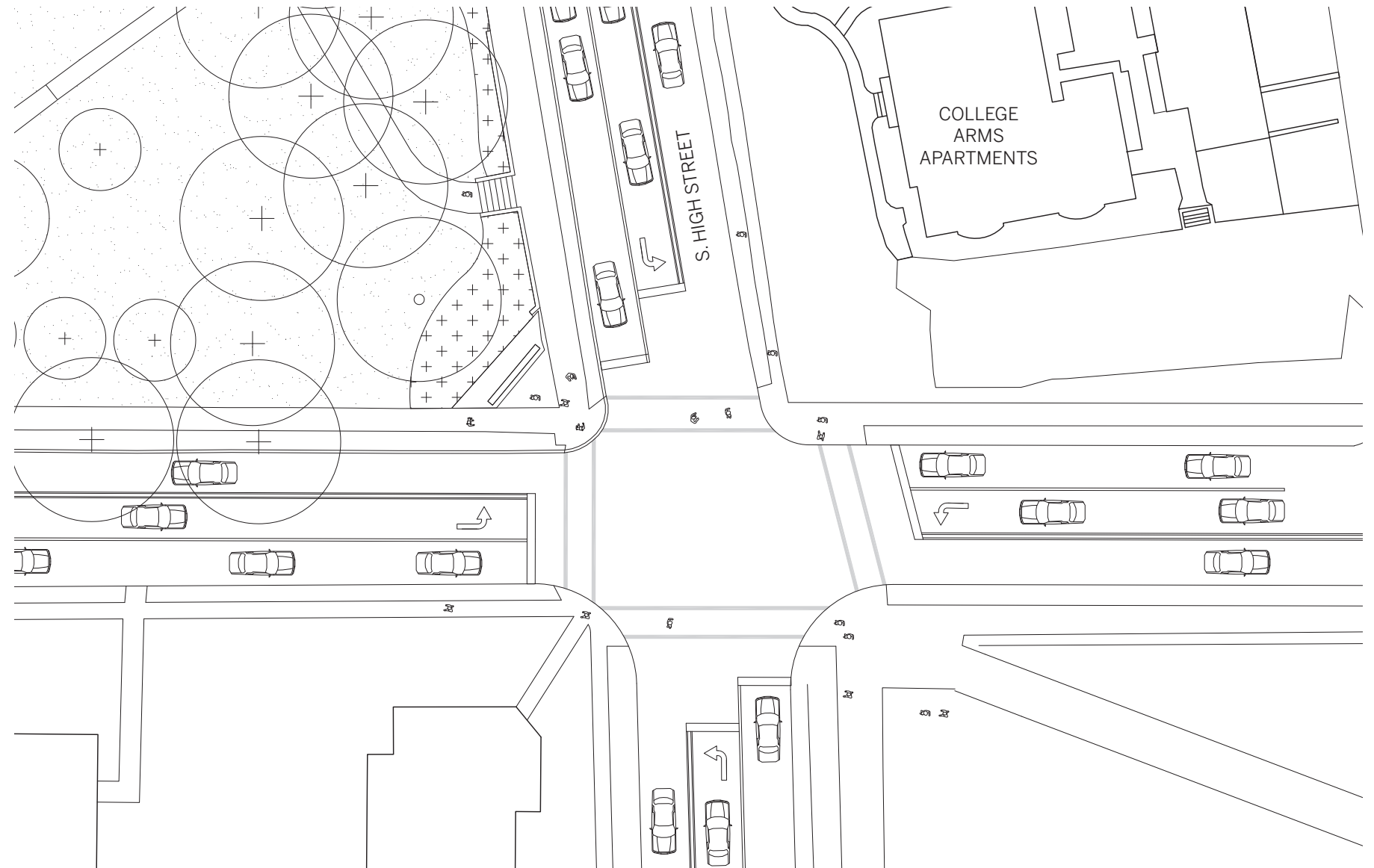
S. Church St. at Sharpless St.



S. Church St at University Ave.



S High Street



## PROPOSED STREETScape - INTERSECTIONS

As entrances to the Campus are more clearly defined, the intent is to have intersections relate directly to those entrances and become more pedestrian friendly. Given the limited number of intersections and the growing concern for safety, recommendations include exploring with the Borough and State the opportunity to raise intersections to curb height. The vehicular approach to the intersections can be extended, not creating speed bumps but merely raised traffic calming conditions, which can be further announced with dramatic marking paint or vehicular grade pavers.



# EXISTING ENTRANCES TO CAMPUS

The Borough of West Chester is a quiet hamlet with development pressures on every front. West Chester University appears to face similar pressures brought on through years of development. There are currently 30 entrances into Campus. Church Street and University Avenue divide the North Campus into four quadrants and service entrances accommodating trash removal and scientific supply deliveries are plentiful. Students scurry across the four perimeter streets and enter the Campus at will, sometimes using walkways and sometimes not. The closest suggestion of a physical gateway is the main Campus Sign at the corner of W. Rosedale Avenue and S. High Street, its proximity to the stairway is suggestive of entry. The archway to Old Main Hall is suggestive of a gateway, but is scaled for a building entry and positioned away from a perimeter edge. The most dramatic of gateways is the Central Hallway of Phillips Memorial Hall which opens to the Quadrangle providing spectacular views. Still this gateway is a remnant of a time when campus ended at University Avenue.



W Rosedale Ave at S High St.



Roslyn Ave at W Rosedale Ave



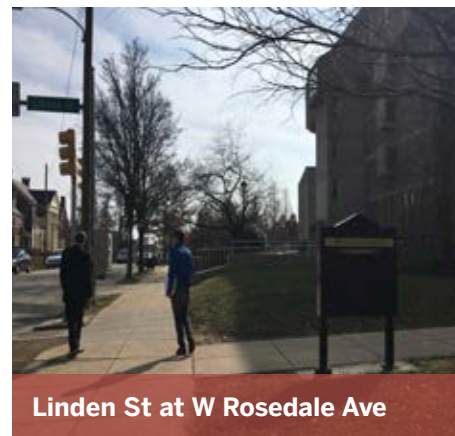
Student Recreation Center



Student Recreation Center



S Church St at W Rosedale Ave

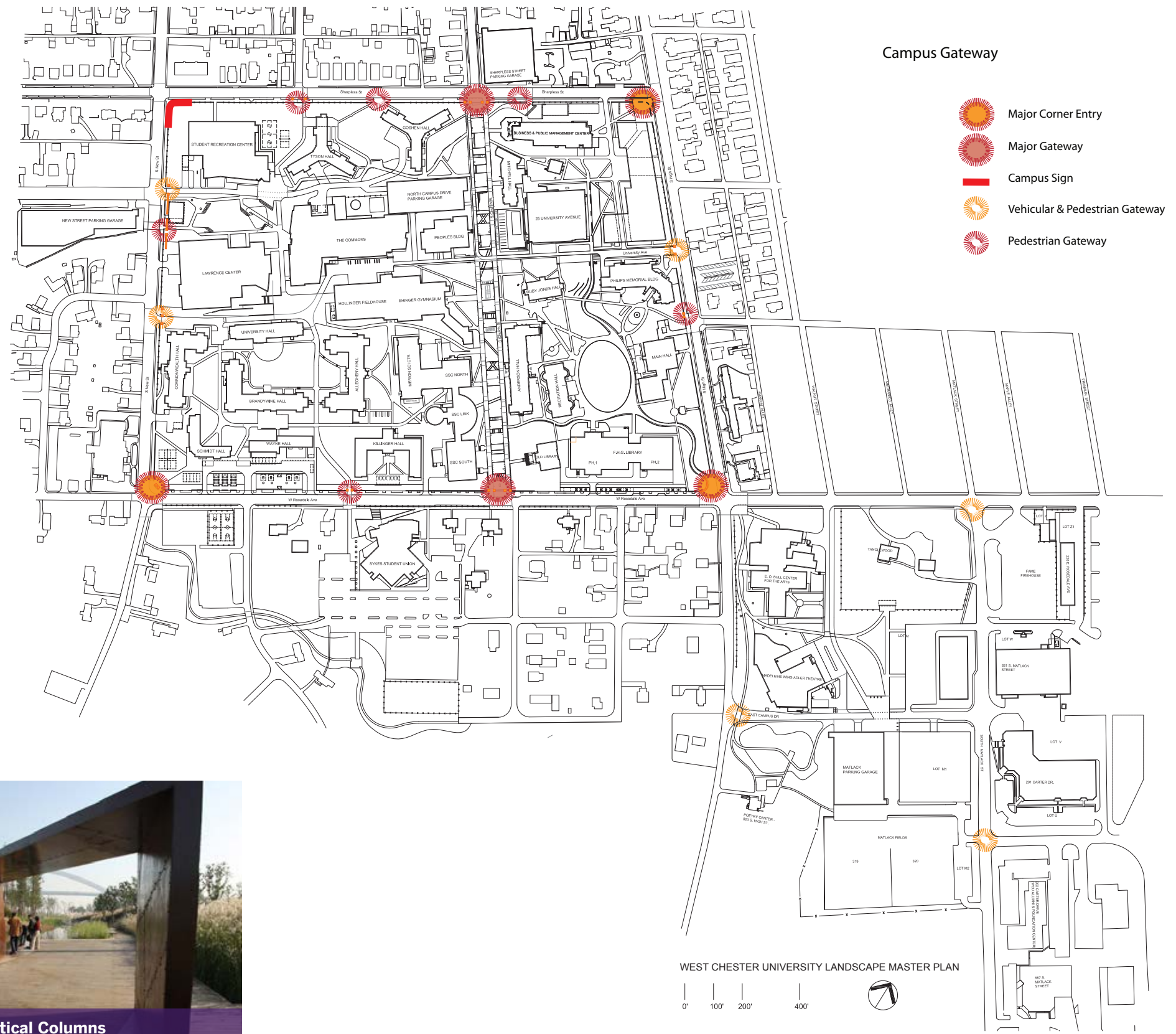


Linden St at W Rosedale Ave

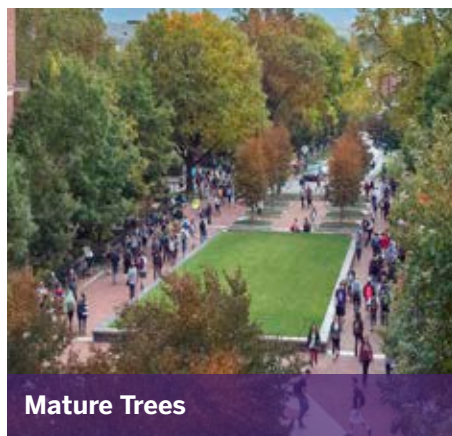


# PROPOSED ENTRANCES TO CAMPUS

The introduction of gateways at specific points of entry to the Campus will direct circulation, limiting haphazard street crossings, improving safety, and developing a more ceremonial procession to entering the 'Halls of Learning.' The gateways are intended to be purposeful, directed, intentional, grand, and inviting, to announce the Campus to which one approaches and enters. West Chester University is a special place and these gateways will announce its presence. The gateways are not meant to be closed but inviting, with a sense of importance that should be recognized.



Dynamic Wall



Mature Trees



Vertical Columns



Vertical Columns

## GATEWAYS CASE STUDY

### HARVARD UNIVERSITY - Cambridge, Massachusetts

The 25 gates that surround Harvard University demarcate the threshold of the academic community. The firm McKim, Mead, and White are responsible for many of the gateway designs, developed for various classes in the 1800's and into the early 1900's.

[HTTPS://WWW.CURBED.COM/2016/4/27/11519500/HARVARD](https://www.curbed.com/2016/4/27/11519500/harvard)



Johnston Gate, vehicular (restricted to maintenance/grounds workers) and pedestrian entrance, South Western boarder of Harvard Yard



South Eastern boarder of Harvard Yard

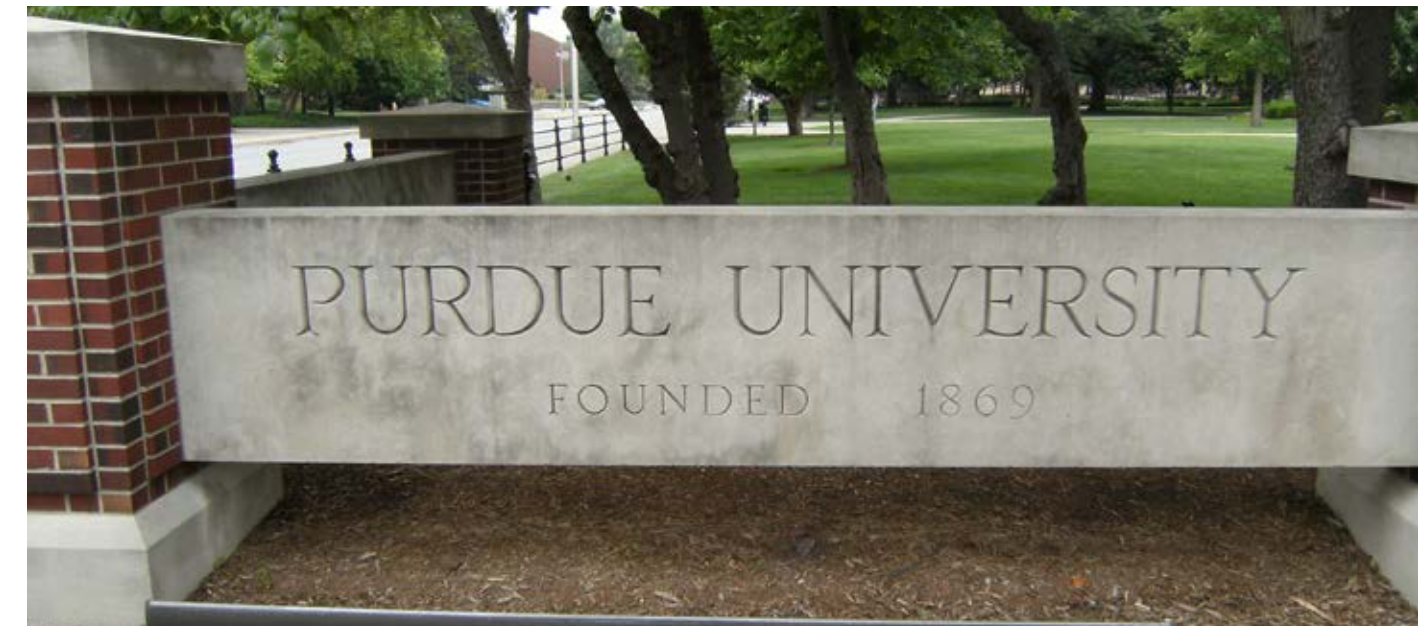
### PURDUE UNIVERSITY - West Lafayette, Indiana

The 'Gateway to the Future', located near the intersection of Stadium Avenue and University Street, is a gift to the university from the classes of 1958 and 1959. The classes raised \$550,000 to create the arch to commemorate the 50th anniversary of each class's graduation from Purdue University.

[HTTP://WWW.PURDUE.EDU/UNS/X/2008B/081022WEBBGATEWAY.HTML](http://www.purdue.edu/uns/x/2008B/081022webbgateway.html)



Alumni Gateway, The "Gateway to the Future" arch, located near the intersection of Stadium Avenue and University Street.



Southern Corner University Gateway

## PENNSYLVANIA STATE UNIVERSITY - University Park, Pennsylvania

A gift from the Class of 1916, the Memorial Gateway at Allen Street and College Avenue acts as a corridor between downtown State College and campus. The original stone pillars were purchased from the St. Louis Exposition in 1904 and were topped with statues of two lions holding shields.

[HTTP://NEWS.PSU.EDU/STORY/157414/2011/06/08/MEMORIAL-GATEWAY](http://news.psu.edu/story/157414/2011/06/08/memorial-gateway)



Allen Street Gate - Located at the intersection of South Allen Street and College Avenue, this gate marks the entrance to campus.



Memorial Gate - Dimensions: approximately 50' apart

## UNIVERSITY OF CINCINNATI - Cincinnati, Ohio

This campus embraces the future through the use of a variety of gateway styles and markers. The contemporary additions of the Campus Green Gateway and the Woodside Gateway occurred during the realization of the 1998 Master Plan Update.



Woodside Gateway - Columns



Campus Green Gateway - Mound and signage, North Eastern corner of campus

## GATEWAYS

### A CASE FOR CONTEMPORARY DESIGN ELEMENTS

The architecture throughout West Chester University is diverse, dating back to the latter half of the 19th century (18th century if you include Tanglewood, the University President's house). Most recently, the Business and Public Management Center opened this year. At the time of construction, many of the buildings - Student Recreational Center, Sykes Student Union and Swope Music Building - were fine examples of modern architecture. Business and Public Management Center, Allegheny, Brandywine and Commonwealth Hall were built recently in styles that included more historical references.

In considering the signs and gateways throughout Campus, questions surrounding a traditional gateway or more contemporary gateway were explored. Two different schools of thought, based in the evolution of campus development, historical reference, and contemporary appreciation are pondered.

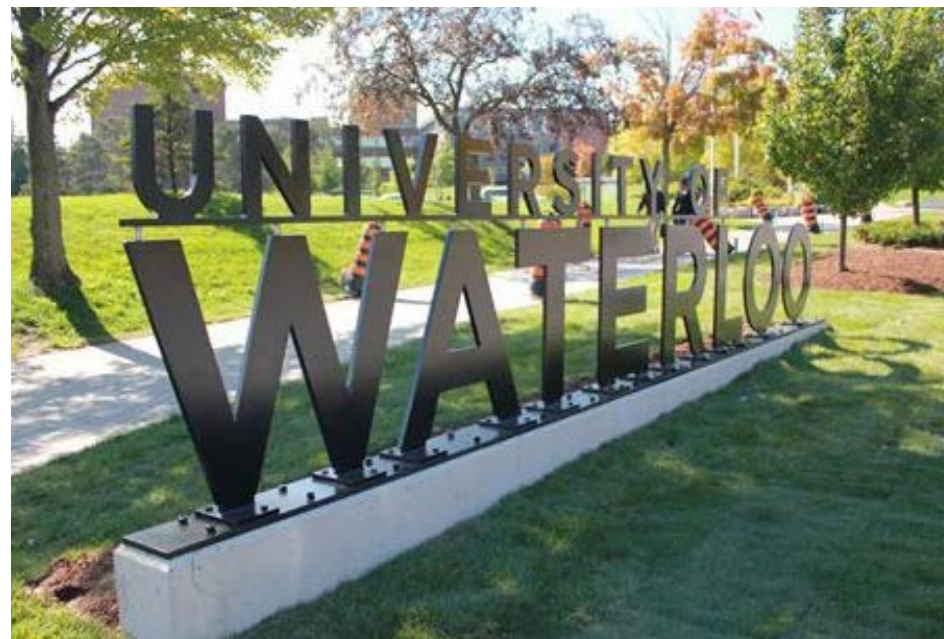
The modern campus is not the campus of yesterday: libraries house more information but fewer volumes; multi-media is piped into classrooms on high-speed internet and used for on-line examinations and teacher conferences with academics from around the globe; and students have more information available upon which to decide where they will go to school. West Chester University has begun to modernize apartments and grounds alike, providing opportunities for socializing and academics. The 'Welcome' to this Campus should share the feeling of modernization and advancement for the next 150 years.



Light Perforation Gateway



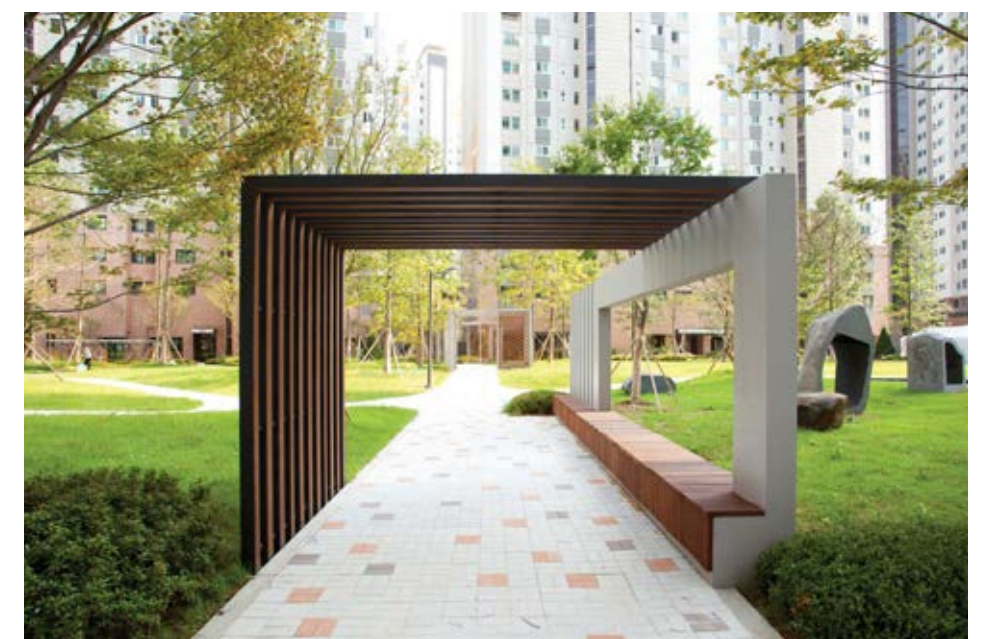
Perforated Gateway Sign



Contemporary Gateway Sign



Wall Sign Integrated with Landform



Canopy and Seating

# GATEWAYS

## A CASE FOR CONTEMPORARY DESIGN ELEMENTS



Linear Canopy



Sculpted Canopy



Column Forest



Entry Plaza + Shadows



Lighted Canopy



Undulating Seat and Canopy System



### III. Campus Circulation



# EXISTING PEDESTRIAN CIRCULATION

Walkways throughout Campus are primarily cast-in-place concrete varying in width between 5'-0" and 8'-0." At major intersections and service yards the walkways widen to accommodate use and turning. Walkways often branch to address desire lines and entries to buildings. More recent additions recognize that the widths of walkways are insufficient, apparent by the worn turf adjacent to walkways and at corners.

Redundant walkways are a function of individual project requirements, exclusive of surrounding projects and connections. Perhaps the most noticeable of redundant paths exists between Wayne and Brandywine Halls. Missing connections also arise from limited planning; the recent opening of the Business and Public Management Center has been followed by the unanticipated development of desire paths.

Still the hierarchy of walkways is more a function of the adjacent uses than the walks themselves. The walk around the Quadrangle - the most popular student space - is perceived as the primary path in Campus while Church Street and its food trucks are equally prominent.



S Church St



Walkway From K Lot



Sharpless Street Facing West



Sharpless Street Facing East

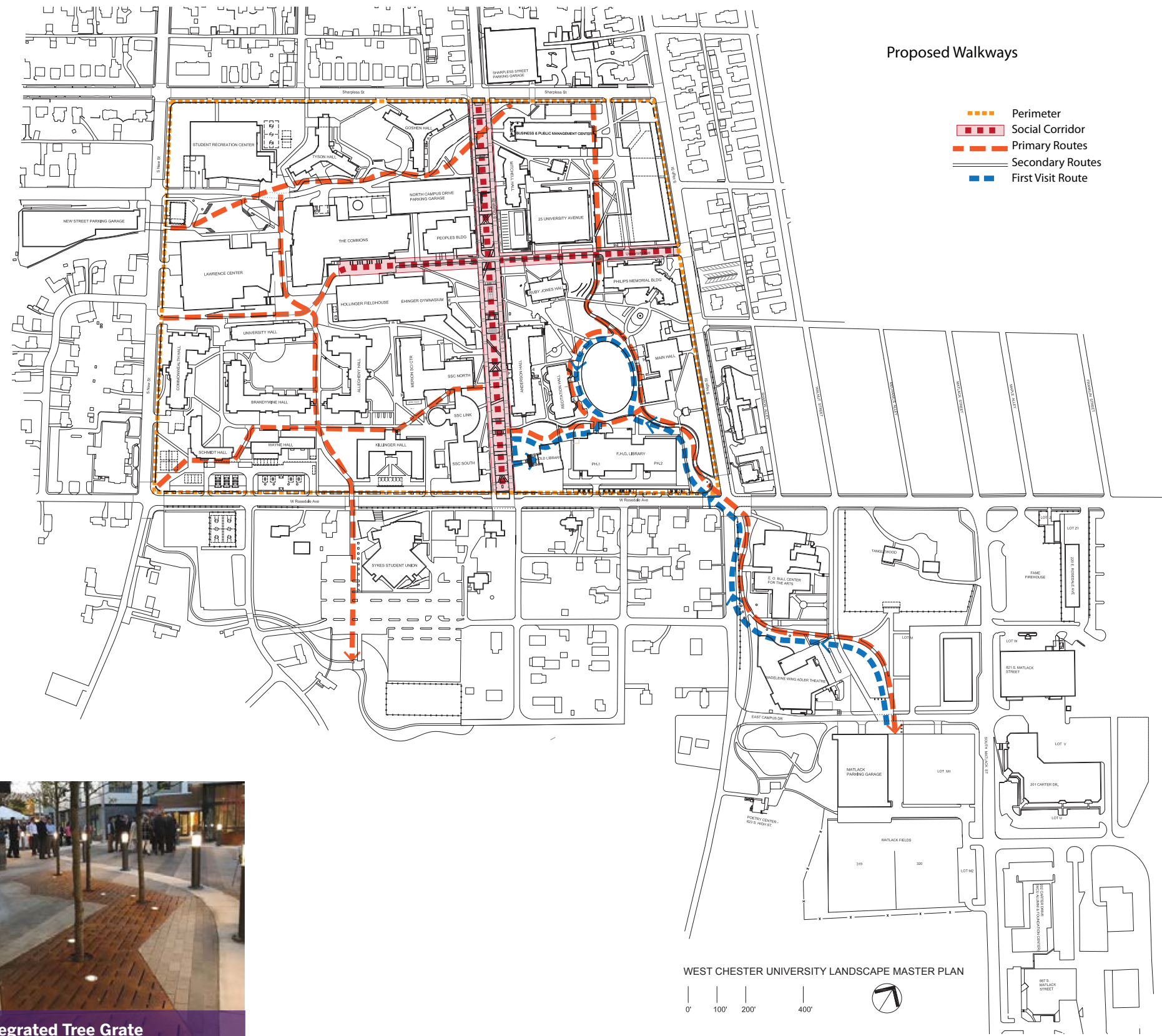


W Rosedale Ave



# PROPOSED PEDESTRIAN CIRCULATION

The new walkway system addresses clear circulation routes, north-south and east-west, and defines standards by which these walkways achieve their prominence in an overall hierarchy. Walkways shall be classified as Perimeter Walkways, Social Corridors, Primary Walkways and Secondary Walkways (p. 50-53). Secondary Walkways will remain as currently defined: cast-in-place concrete varying in width between 5'-0" and 8'-0," while redundant and missing connections will be vastly simplified to reduce hardscape and clarify routes.



Pedestrian Bridge



Paving Bands



Dynamic Paving



Boardwalk



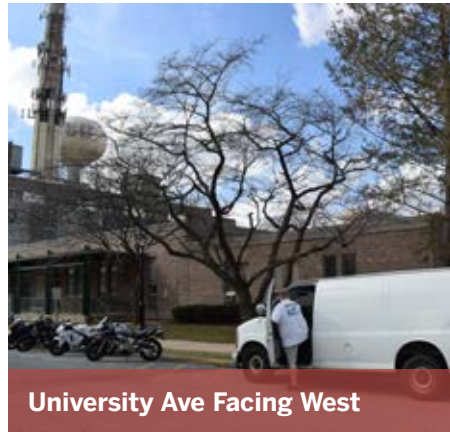
Integrated Tree Grate

# EXISTING SPECIAL CIRCULATION REQUIREMENTS

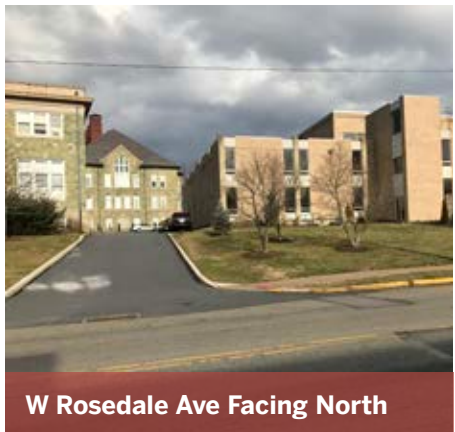
In addition to the daily movement through Campus (car, class, dining, apartment, Student Union, Recreation Center and others) the University and Borough require specific circulation needs to be met. Campus, local, and regional bus lines run through and around Campus. Move-in day requires students and their furnishings to be dropped off in proximity to housing. When prospective students visit the Campus for the first time, clear direction is given for parking and walking to the Admissions Department. Services including deliveries, trash collection, and maintenance must all be accommodated.



N Campus Dr Facing West



University Ave Facing West



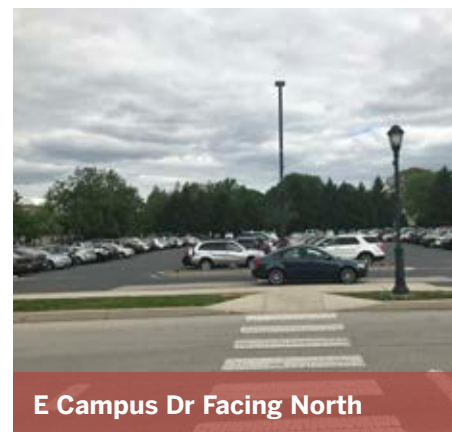
W Rosedale Ave Facing North



University Ave Facing South



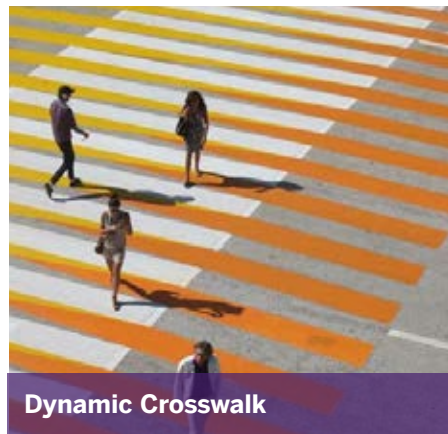
W Rosedale Ave Facing West



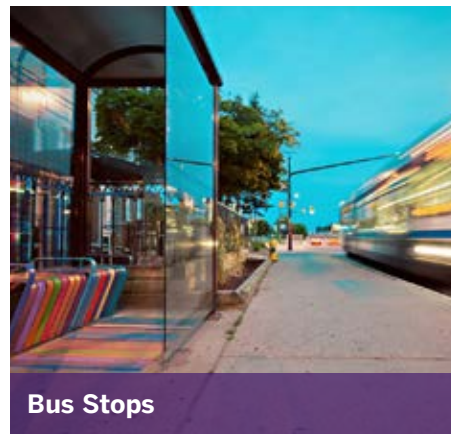
E Campus Dr Facing North

# PROPOSED SPECIAL CIRCULATION REQUIREMENTS

New routes, responding to the enhanced Master Plan, address the requirements of bus routes, move-in day, first visits and services. Discussion and testing will need to be addressed with the Borough prior to implementation. Walkways, that double as service and special occasion driveways need to be appropriately structured and scaled. Service and emergency vehicle access ways will exceed requirements.



Dynamic Crosswalk



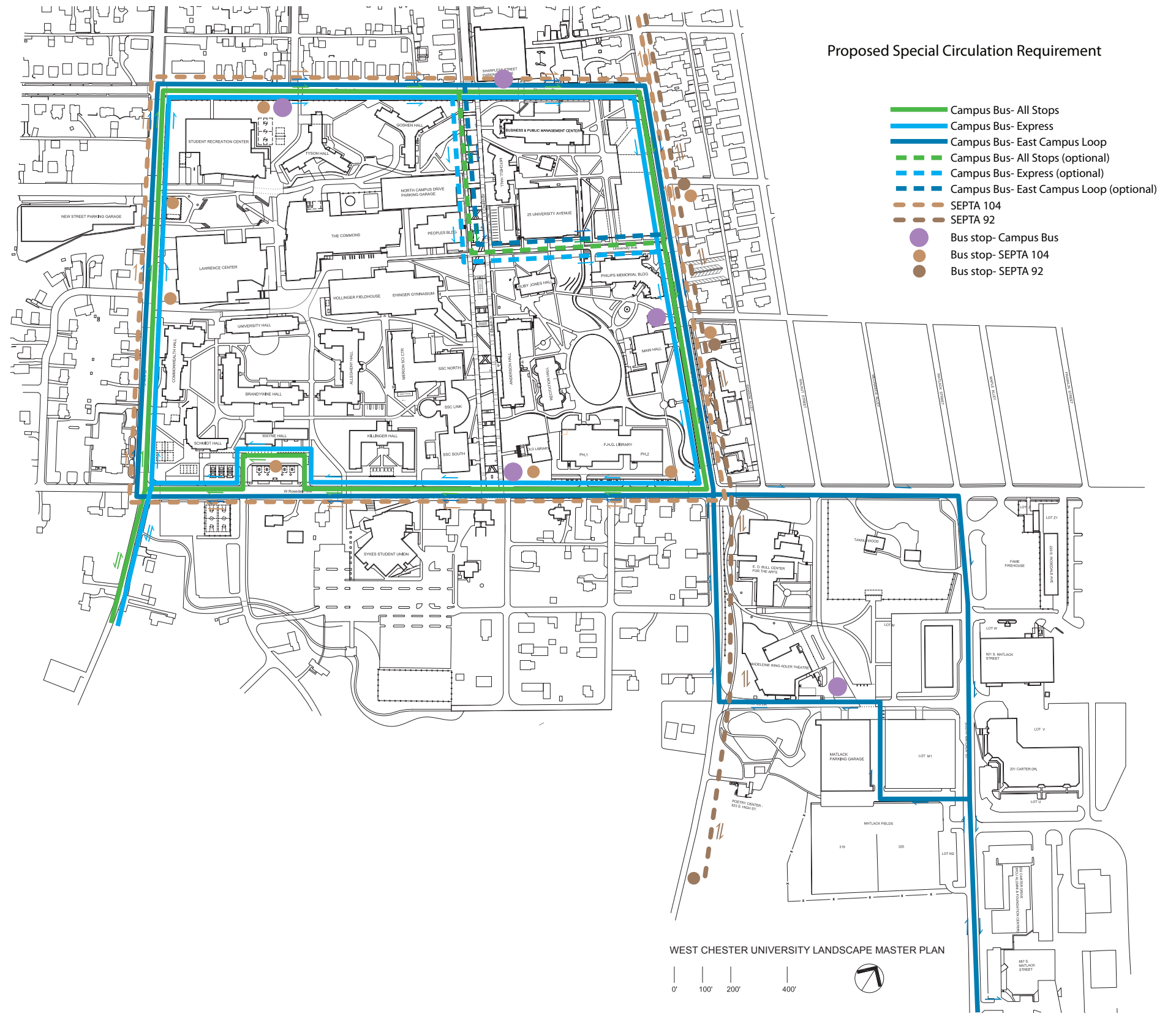
Bus Stops



Raised Crosswalk

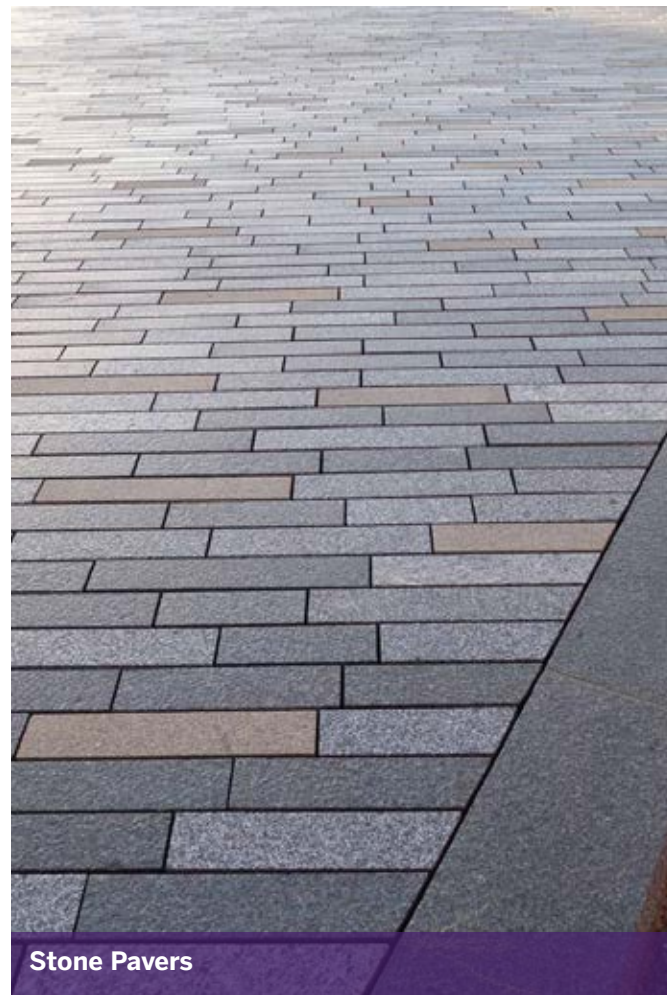


Intersections



## PERIMETER WALKWAY STANDARDS (W. ROSEDALE AVENUE)

The streetscape shall become a line of demarcation between the neighborhoods and the Campus. The intent is not to separate the Campus, but to call attention to this wonderful attribute of West Chester, allowing visitors and students to sense the arrival at this special place. Sidewalks shall be widened to a minimum of 10'-0," allowing easy passage of two-directional pedestrian traffic. The use of a porous pavement not only demarcates the edge, but harkens to the strong ecological commitment of the University.



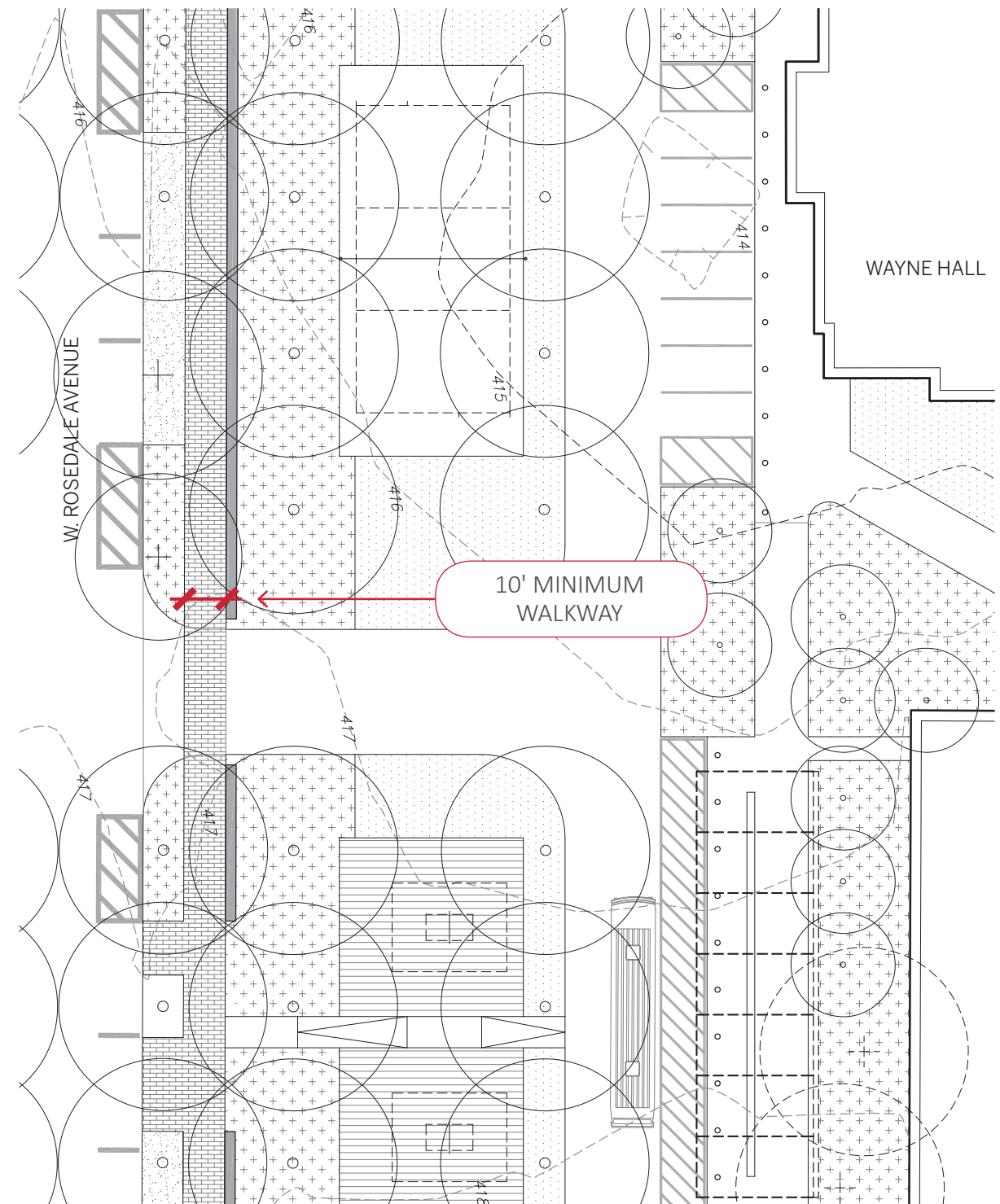
Stone Pavers



Asphalt Paving, Markings



Brick Pavers

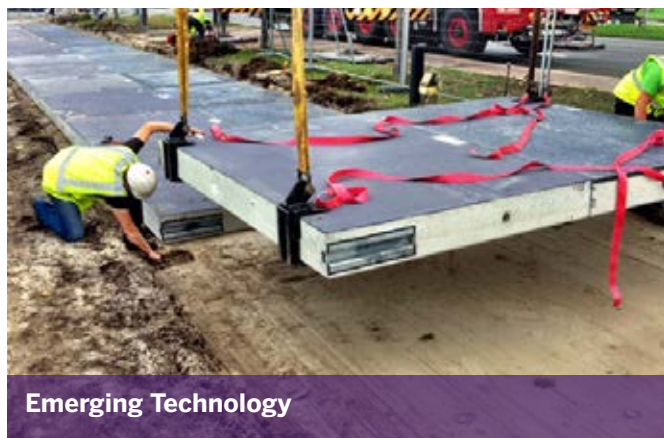


8' 10'

## SOCIAL CORRIDOR STANDARDS (CHURCH STREET)

A complete transformation of Church Street into a Social Corridor requires the development of special event nodes while maintaining access for emergency vehicles along the entire length and possibly buses along part of the length. A minimum width of 16'-0" is planned for vehicle access and can be increased if Borough requirements increase.

The Church Street and W. Rosedale Corridors will become the Social Hubs of the Campus. Active pedestrian spaces will provide for both flexible and programmed activities. The central spaces will connect dual service corridors that, while accommodating occasional traffic, need to work functionally and aesthetically for this active pedestrian way. Creative use of paving materials with integrated lighting and technology will enliven the hardscape and relate to a more pedestrian scale.



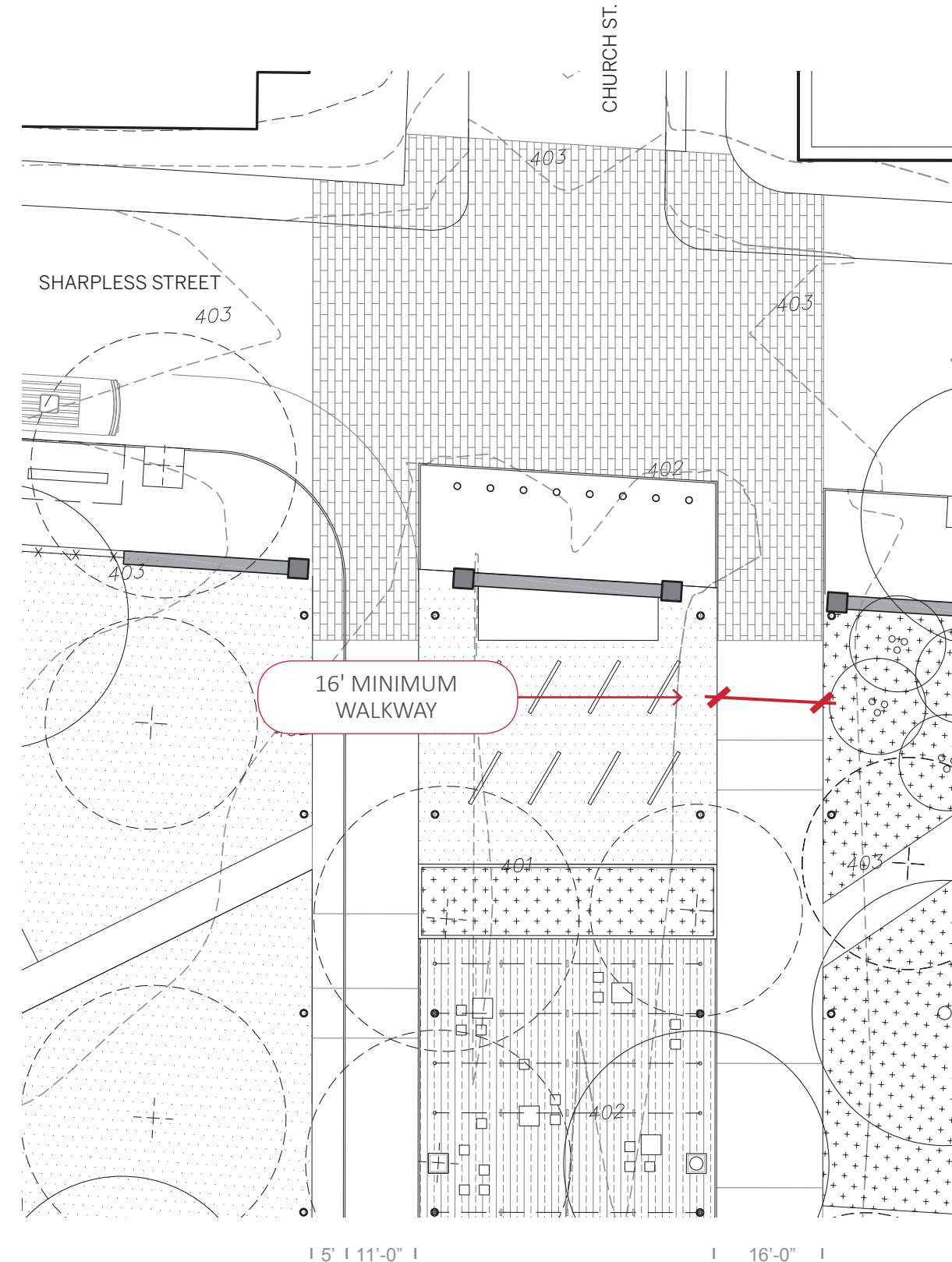
Emerging Technology



C.I.P. Concrete Paving



Asphalt & Porous Paving



## PRIMARY WALKWAY STANDARDS (PRESIDENTS WALK)

10'-0" to 12'-0" in width, and constructed of more interesting materials, Primary Walkways will become thoroughfares for walking, biking, and skateboarding through the Campus. The surface durability must handle snow removal and University service vehicles. The existing sidewalks edged with red and green pavers provide an example of a walkway upgrade with a more traditional feel. Newer, more finished materials including precast pavers, colored and textured concrete, and permeable pavers may produce an upgrade while addressing storm water management.



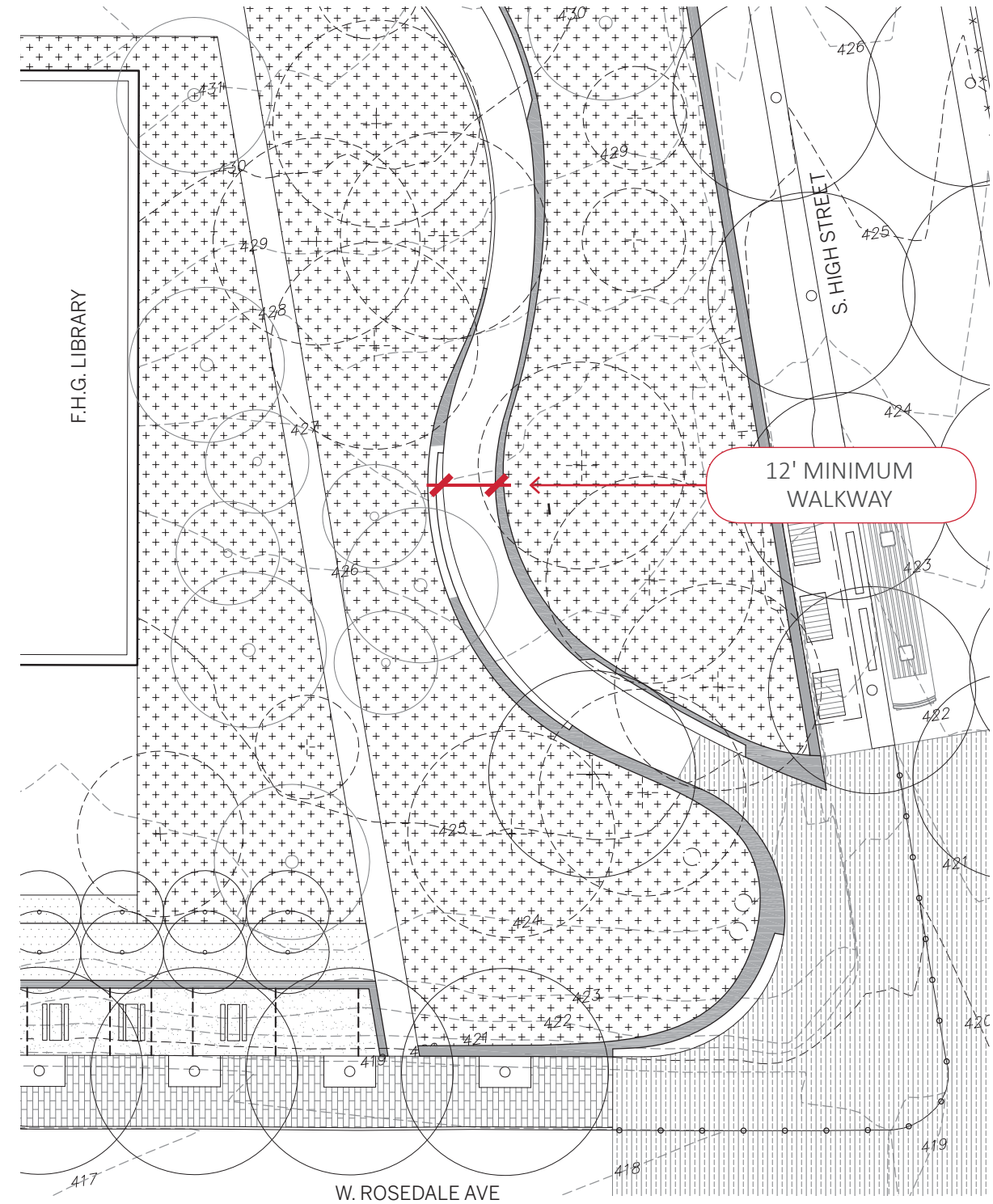
C.I.P. Concrete Paving



Precast Concrete



Concrete Pavers



## PRIMARY WALKWAY STANDARDS (PLUM RUN CORRIDOR)

The Plum Run Corridor has three sections: wood boardwalks as it crosses the natural area between the Student Recreation Center and Lawrence Center, a central plaza where it crosses the Recreation Run and the walkway east of the Recreation Center to the Sharpless Street Garage. As a primary east-west walkway, specifications include: 12'-0" in width, able to handle snow removal, and constructed of an upgraded material. An exposed aggregate concrete would make a visual connection to the natural materials of the stream bed.



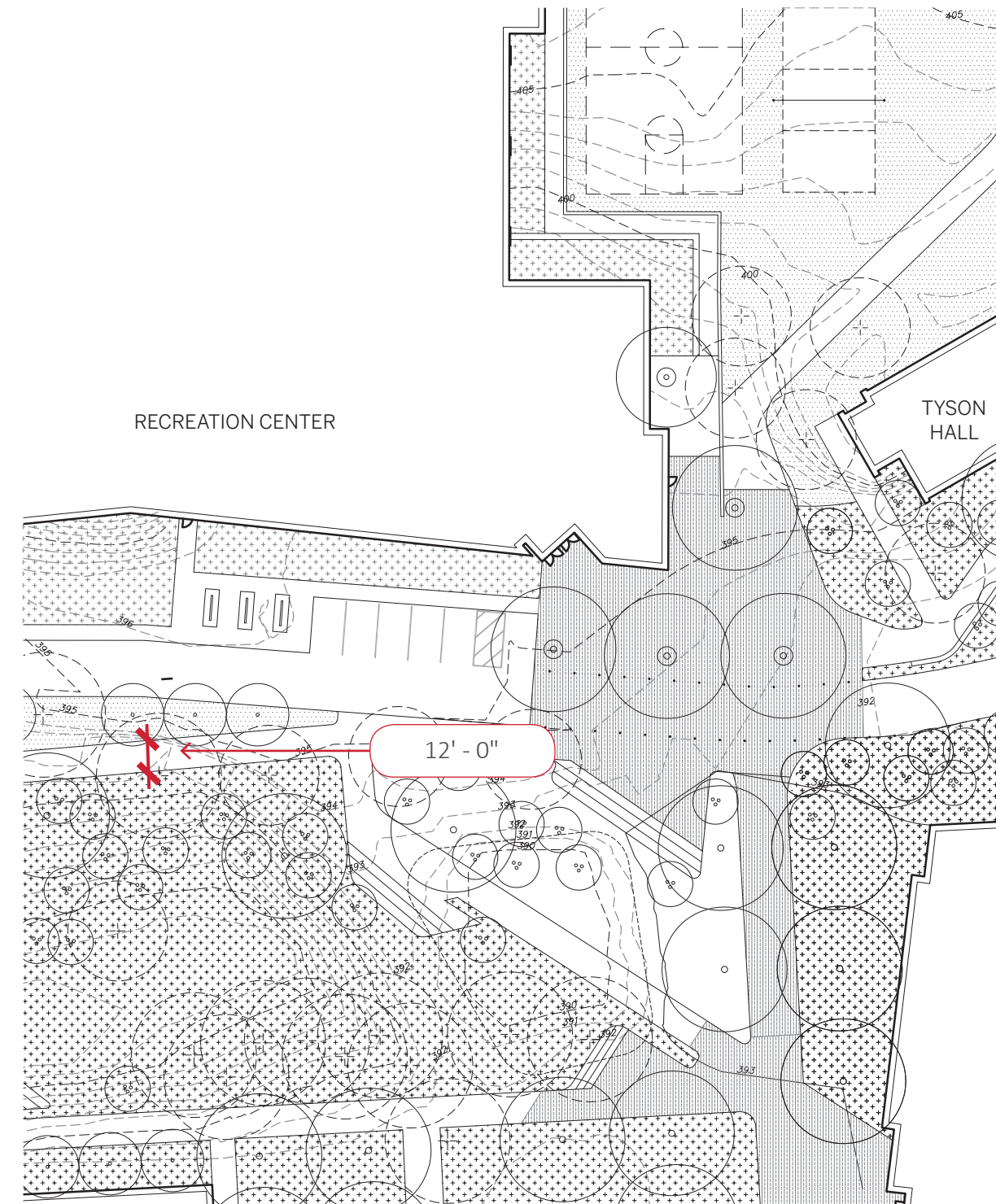
Wood Decking



Exposed Aggregate



Plaza Pavers







## IV. Campus Use/Program

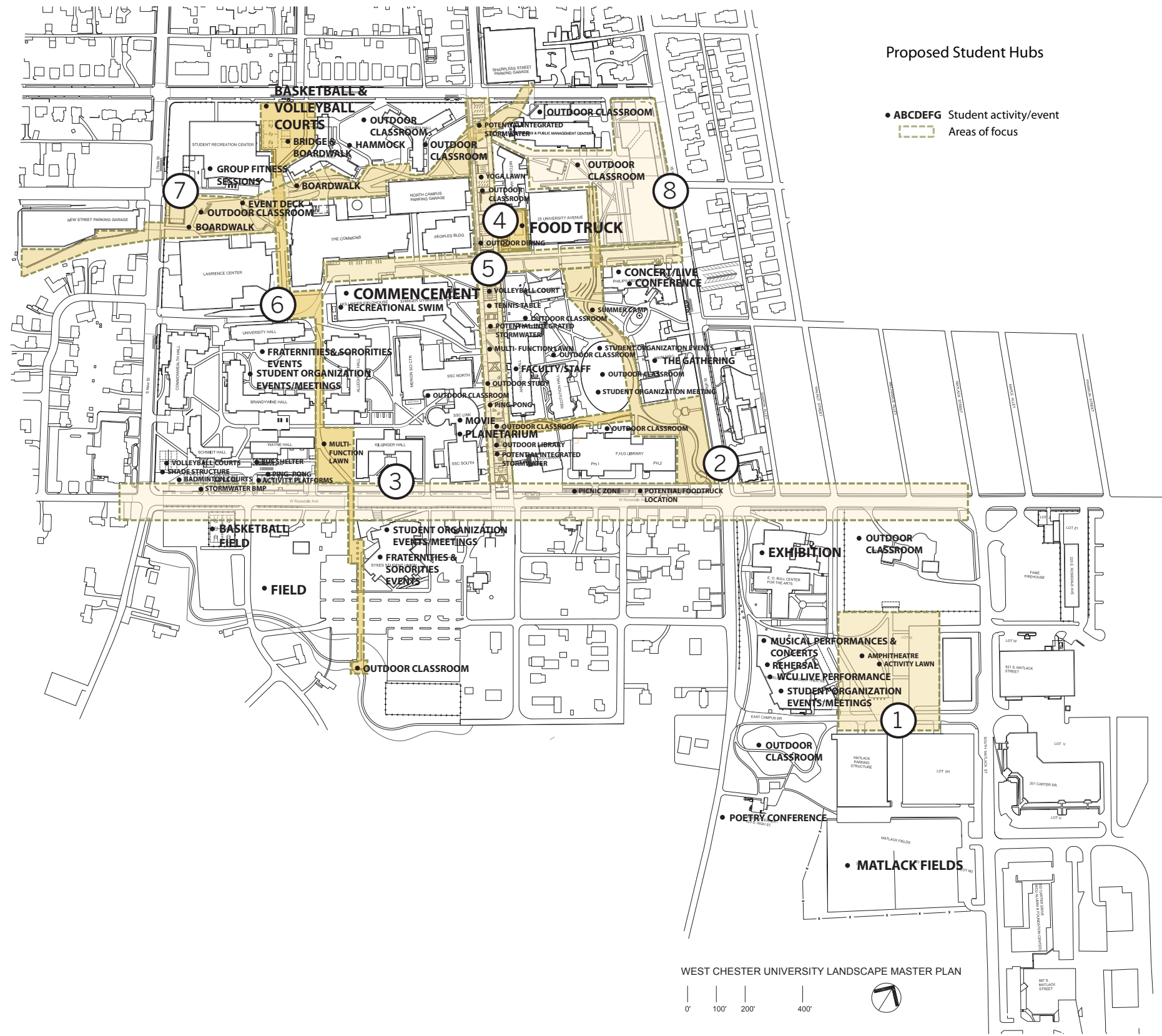




# PROPOSED STUDENT HUBS

In addition to the reorganization of walkways, a number of student hubs are designated in this Master Plan. The intent of the hubs is to provide more and varied opportunities for students to enjoy the Campus. The hubs are intended to function as both programmed and non-programmed space.

1. **Campus Arrival Plaza** - special event courtyard; amazing first impression.
2. **Campus Sign Plaza** - threshold moment and 'photo-op' at main campus entry.
3. **Rosedale Corridor** - student activity zones along street edge.
4. **25 University Plaza** - relocated food truck dining and multi-purpose plaza.
5. **Church Street Corridor** - programmed student activity zone running the length of the Campus.
6. **Recreation Run Plazas** - multiple plazas along length to program independent or collectively.
7. **Plum Run Boardwalk** - enchanted woodland walk and outdoor teaching experience.
8. **N.E. Quad** - a future draw to northeast corner of campus, large public gathering plaza.



## EXISTING PRESIDENTS WALK

Presidents Walk is currently the section of pathway from the intersection of W. Rosedale Avenue and S. High Street to the northeast corner of FHG Library. This short section of walkway is lined with crabapple trees that put on a dramatic show of blossoms every spring. Pages 59-69 explore options for this area of walkway, while a more comprehensive Presidents Walk is considered to extend all the way to the Business and Public Management Center, including an additional spur in front of FHG Library to S. Church Street. Perhaps the most critical portion of this north-south primary walkway is the section from the Oval to 25 University Avenue which does not exist but is needed by evidence of the major desire path.



1. Entry Gateway



2. Path



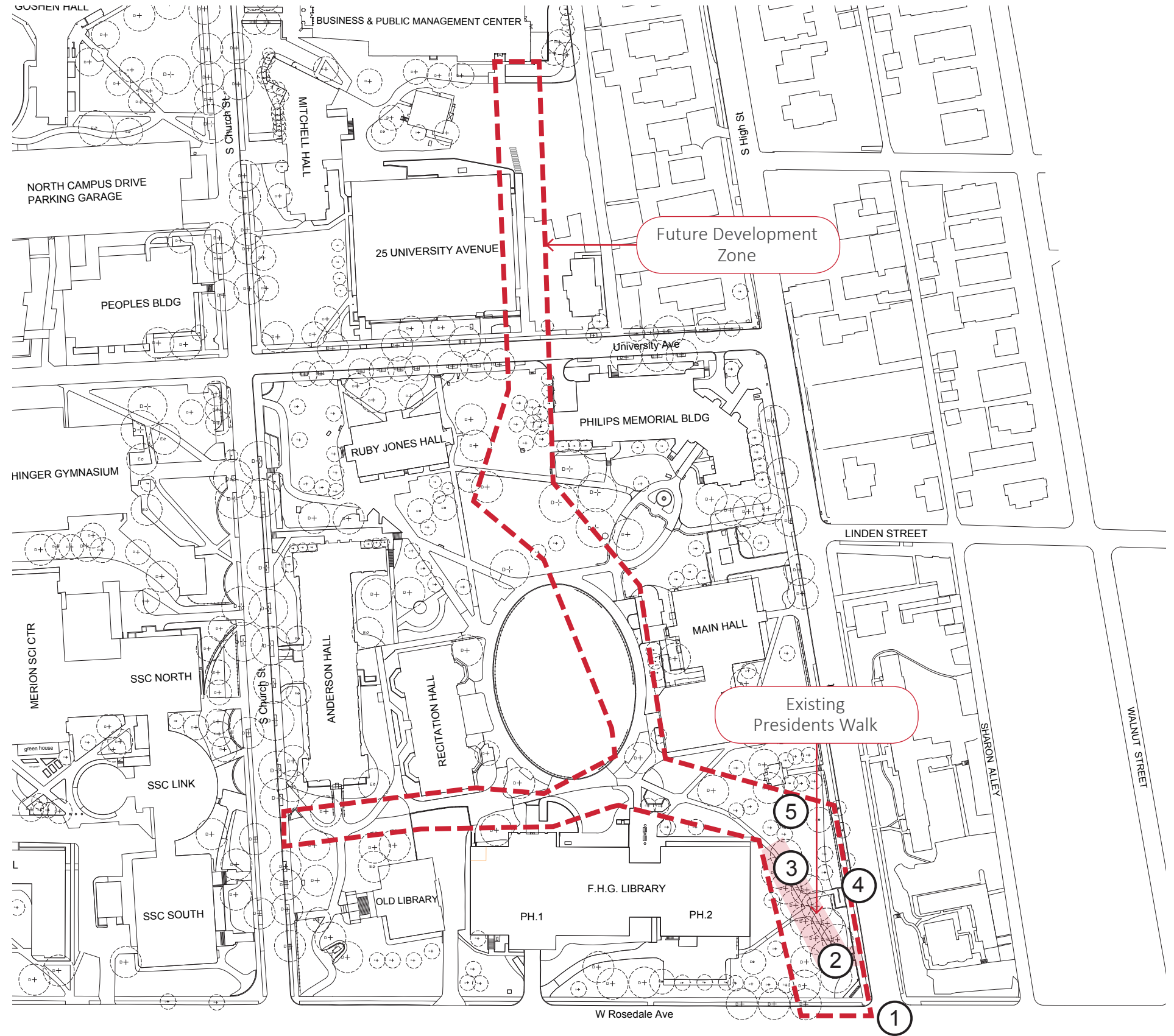
3. Tree Allee



4. ADA Access

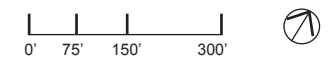
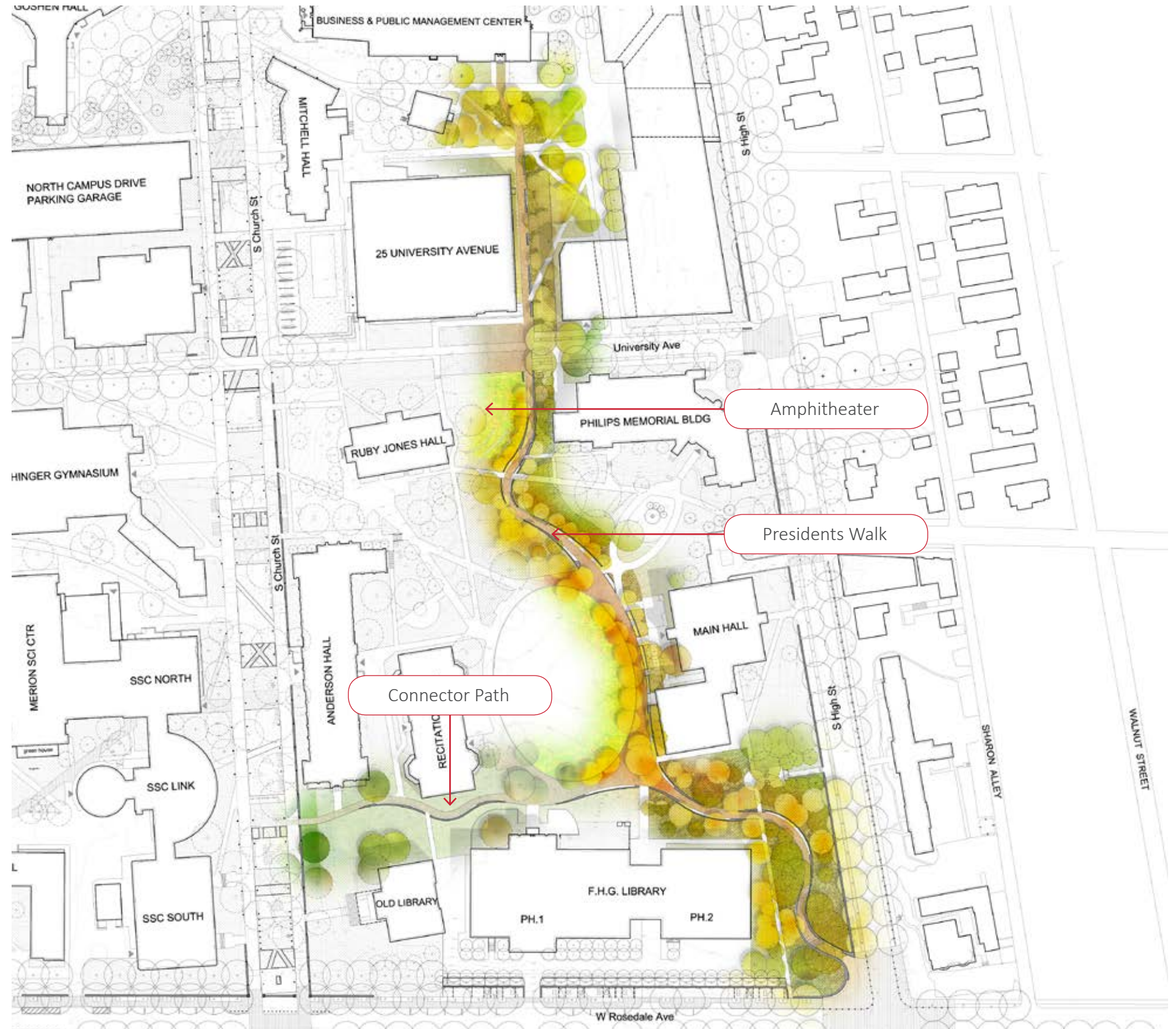


5. Open Space



## PROPOSED PRESIDENTS WALK

Presidents Walk is destined to be the second most important and transformative corridor on Campus. The Church Street corridor will provide varied opportunities for student activity, but Presidents Walk will be the major link from 'M' Lot to the north edge of Campus. Conceived as a gently winding, lovely path, lined with bold architectural benches and reinforced through a strong planting ecology, this path will replace the entry photo-op with multiple opportunities. The relaxing yet dynamic nature of this procession will transform the experience of walking and sitting along this path.



## EXISTING PRESIDENTS WALK (S. HIGH STREET/ROSEDALE INTERSECTION TO QUADRANGLE)

Presidents Walk at the intersection of W. Rosedale Ave and S. High Street is the strategic nucleus of Presidents Walk. Its position on Campus gives the space its hierarchical importance as the primary gateway and threshold into Main Campus. It also presents interesting technical constraints, topography, and utility infrastructure. Topographically, the walk slopes gradually down from the Academic Quad until it approaches S. High Street at W. Rosedale Avenue where it drops drastically to meet the intersection. At the top of the S. High Street stairs are several utility trunks including electrical, data, and steam. The following three options study ways of negotiating these existing topographic and utility constraints.



1. Entry Gateway



2. Path



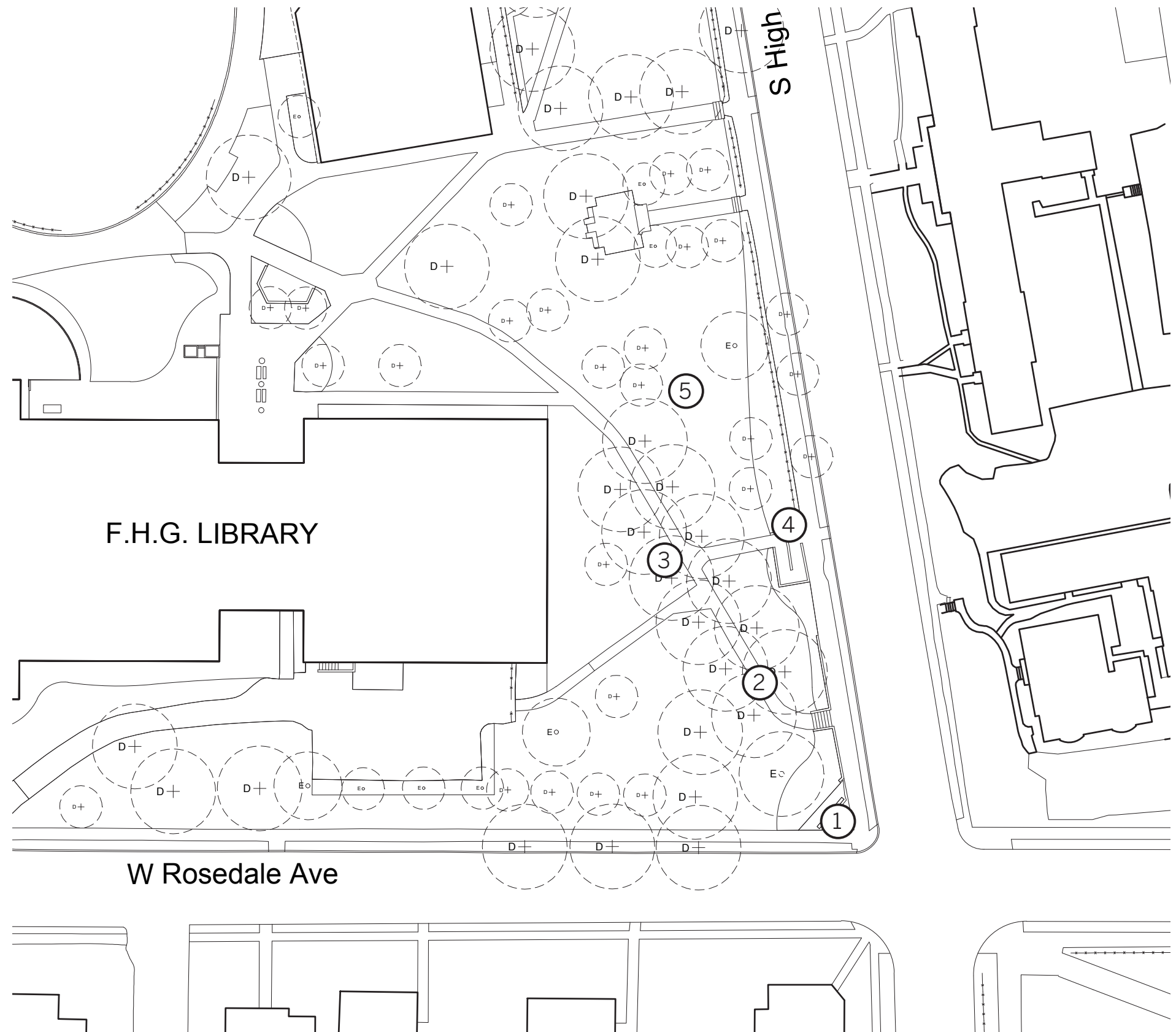
3. Tree Allee



4. ADA Access

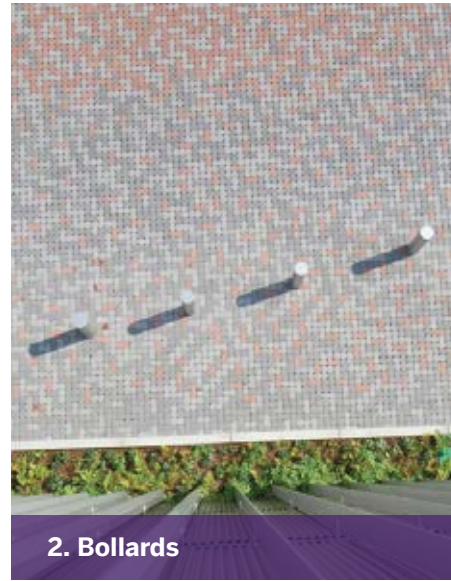
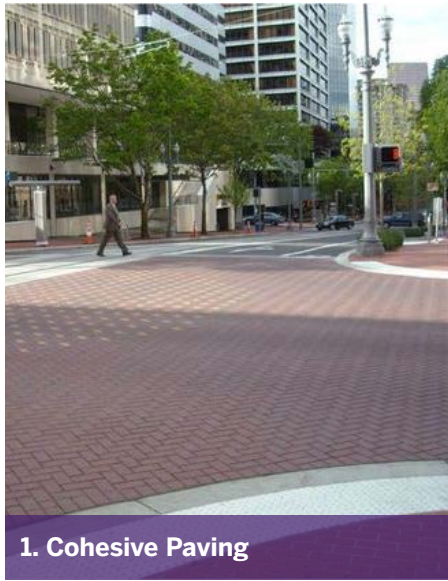


5. Open Space



## PRESIDENTS WALK – OPTION 1

A more curvilinear configuration of the walk and seatwall are emphasized by sculpted landforms and a dense grove of trees that heighten the spatial experience of the walk. This option incorporates ADA accessibility along the entire length of the walk resulting in a wider, more singular terminus at the gateway. The terminus is punctuated by seatwalls that flare open on either side to frame views to the Academic Quad. Holding back grade, the seatwalls are also tall enough to incorporate gateway signage that further announces the new entrance to North Campus.



# PRESIDENTS WALK - OPTION 1 SECTION



S HIGH STREET  
LOOKING NORTH

EXISTING



PROPOSED





# PRESIDENTS WALK - OPTION 1 VIEW



FHG Library

Presidents Walk  
Tree Plantings

Gateway Sign

Seatwall

Bollards

Pedestrian-friendly  
Intersection

**PRESIDENTS WALK - OPTION 1  
VIEW**



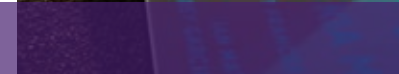
# PRESIDENTS WALK COMMEMORATIVE LANDSCAPE TYPOLOGIES



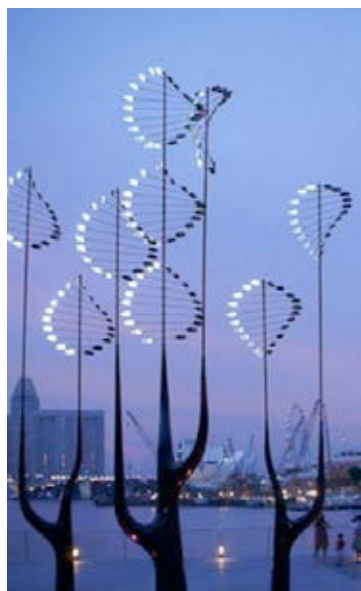
Etched Paving



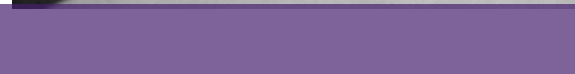
Path Narrative



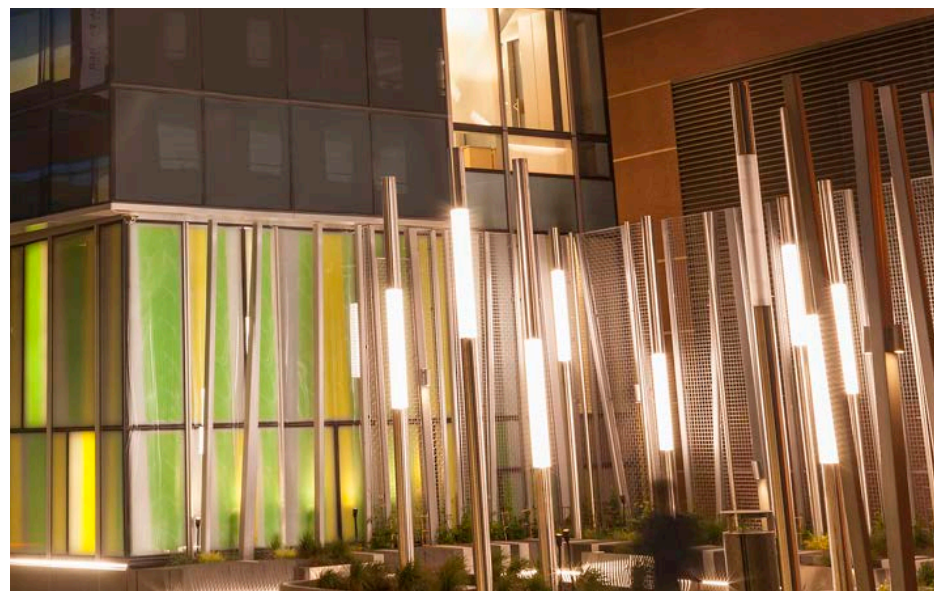
Paving Insets



Art



Lights



Landforms

## PRESIDENTS WALK - OPTION 2

Beginning at the quadrangle, a similar curvilinear form straightens as it enters the existing alley of trees and avoids disturbance. As it passes through the last pair of trees, the path deflects to the west and splits into two. A secondary path extends to a set of stairs down to the Rosedale Food Truck Zone, while the primary path shifts back to S. High Street and ascends down an ADA accessible ramp. This path layout avoids conflict with utility lines by wrapping the ramp down on the W. Rosedale Avenue side. A seatwall at the corner of the gateway retains the grade change to keep the existing utility structures in place. This option uses the seatwall as the signature gateway to North Campus: the difference is that this option centers the gateway instead of using it as a frame.



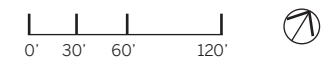
1. Dynamic Path & Paving



2. Undulating Seatwall



3. Pedestrian Lighting



# PRESIDENTS WALK - OPTION 2 VIEW



FHG Library

Presidents Walk  
Tree Plantings

Gateway Sign

Seatwall

Bollards

Pedestrian-friendly  
Intersection

### PRESIDENTS WALK - OPTION 3

A hybrid option takes cues from the existing alignment of Presidents Walk and the previous two studies. The straight layout of the existing path is used to avoid disturbance of trees and to maintain the current elevation, avoiding utility lines. To negotiate the grade, the path splits into two ADA paths as it approaches the corner. The west path splits further to a set of stairs down to the Rosedale Food Truck Zone. The main path continues its approach to the corner broadening into an upper landing before folding down into a grand set of stairs that wrap the W. Rosedale Avenue and S. High Street side of the sidewalk. The stairs become a more monumental punctuation and signature opportunity for photo-ops.



1. Trees enhanced with Groundcover



2. Seating & Open Space



# PRESIDENTS WALK - OPTION 3 VIEW



FHG Library

Presidents Walk  
Tree Plantings

Gateway Sign

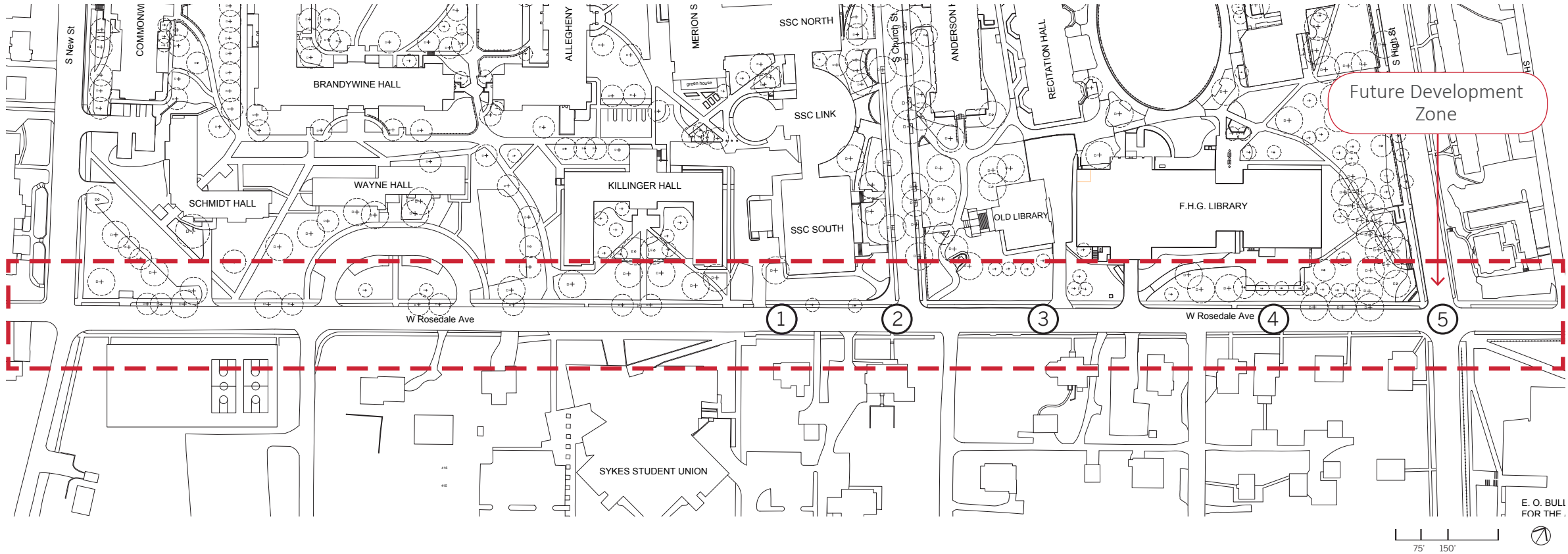
Monumental Stair

Bollards

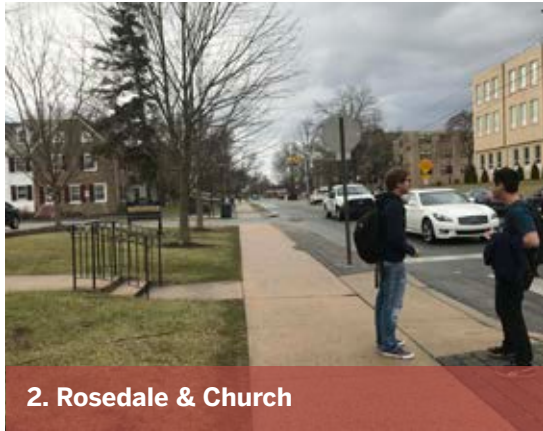
Pedestrian-friendly  
Intersection

# EXISTING W. ROSEDALE CORRIDOR

W. Rosedale Avenue is a prominent vehicular and pedestrian way along the southern edge of the North Campus. It links the President's residence, Tanglewood, to the E.O. Bull Center for the Arts, FHG Library, Old Library, Admissions, Sykes Student Union, Wayne Hall and the student resident halls. The streetscape is comprised of: a 4' wide planting strip including parking meters, utility poles, street signs, and trees; a 5'-0" wide cast-in-place concrete sidewalk; and building setbacks between 50' and 100'.



1. Street Elements



2. Rosedale & Church



3. Rosedale looking West



4. Rosedale looking East



5. Rosedale @ S. High



## PROPOSED W. ROSEDALE CORRIDOR

These designs address the lack of a cohesive streetscape and hazardous pedestrian crossings by enhancing the overall streetscape in three key areas. A widened, continuous and healthy street tree planting zone creating an iconic canopied sidewalk on both sides of W. Rosedale Avenue. Flexible program spaces located along W. Rosedale Avenue will activate the street with events such as movie screenings, ping-pong tournaments, and food truck dining. When events are not programmed, general use will flood this contemporary activity zone. A more robust material palette will differentiate program zones (decomposed granite in the Food Truck Zone) from the sidewalk (unit pavers).



**W. Rosedale Corridor West**  
**Option 1 See Page 72 - 77**  
**Option 2 See Page 78 - 83**

**W. Rosedale Corridor East**  
**See Page 84 - 87**



**1. Gateways**



**2. Seatwall**



**3. Activity Platforms**



**4. Stormwater**



**5. Enhanced Crossing/Sidewalk**

## EXISTING W. ROSEDALE CORRIDOR WEST

This area of W. Rosedale Avenue is distinguished by its adjacency to Schmidt and Wayne Halls, set back 100' from the street allowing for significant program space and opportunities. The southwest corner of the campus is a prominent gateway when approaching from South Campus. Pedestrians from parking Lot L on the south side of W. Rosedale Avenue often cross the street where most convenient, making for a hazardous condition.



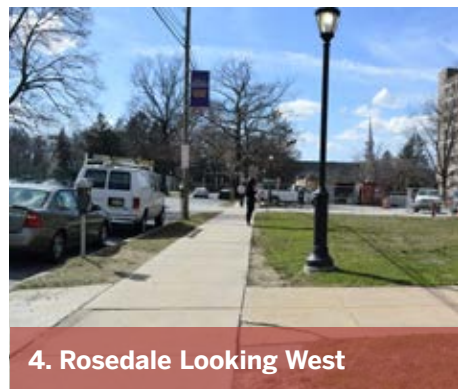
1. West of Killinger Hall



2. Looking at Bus Drop-Off



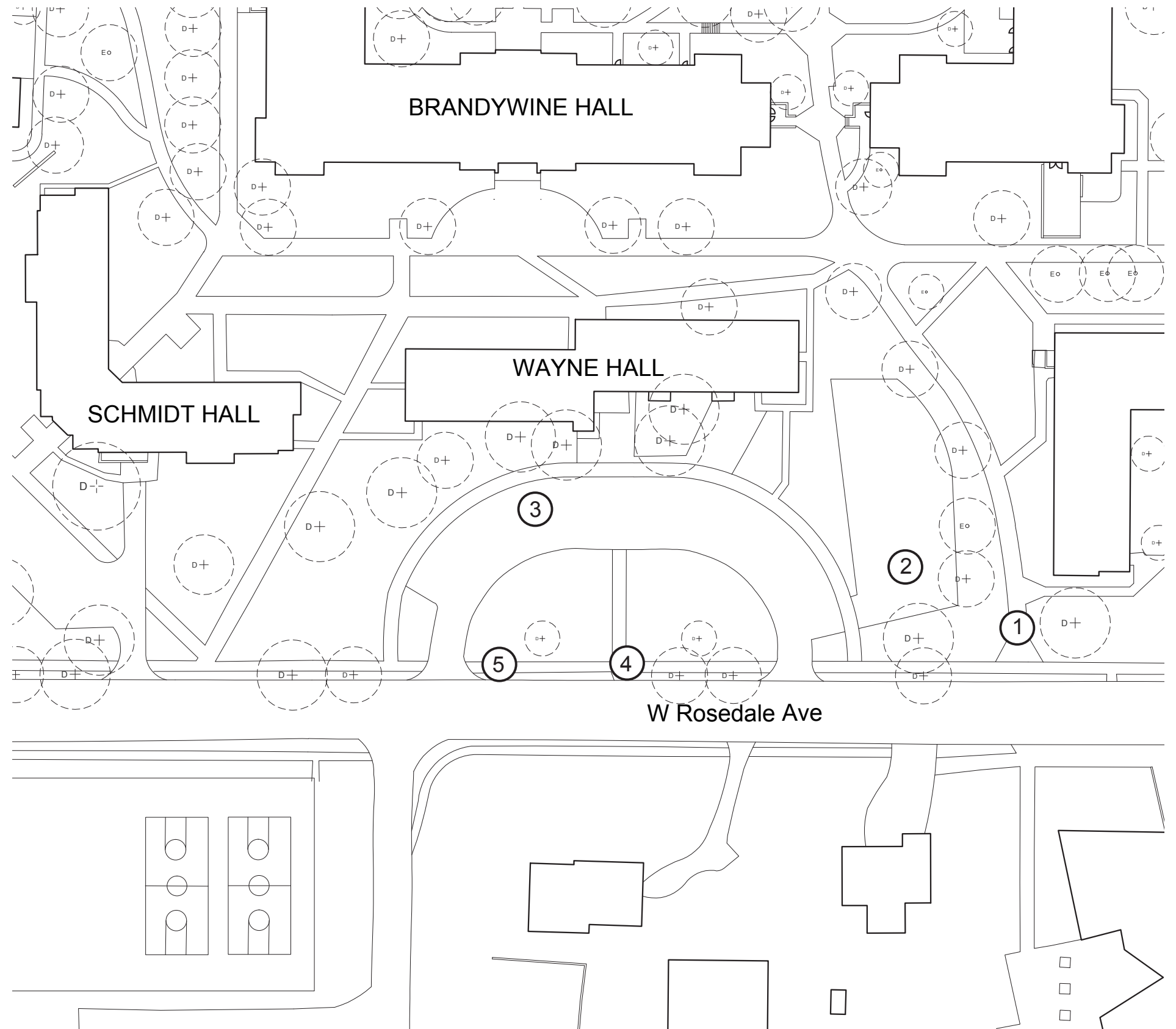
3. Bus Drop-Off Area in Front of Wayne



4. Rosedale Looking West



5. Rosedale Looking West



## PROPOSED W. ROSEDALE CORRIDOR WEST - OPTION 1

The primary difference between the two W. Rosedale Avenue options, is the placement of the street trees. Both options expand the overall width of the streetscape to 18'-0". Option 1 enhances the existing tree planting at the street edge by increasing the planting strip to 8'-0". The planted areas are strategically placed in zones devoid of on-street parking to limit pedestrian crossing, while areas with adjacent parking provide crossing to allow access to the sidewalk. The sidewalk is expanded to 10'-0" to allow for a more fluid movement of people.



1. Moveable Furniture



2. Bench



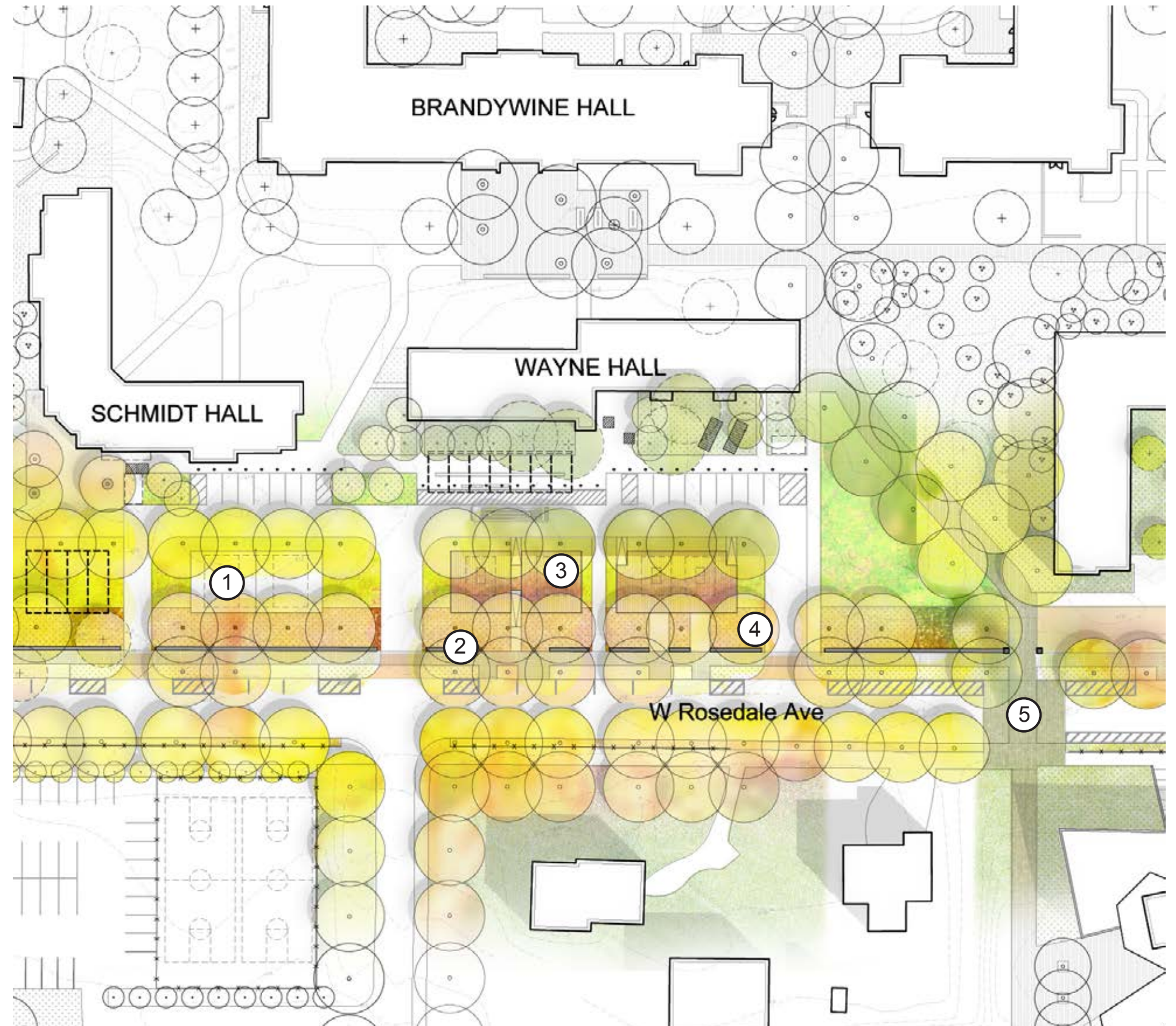
3. Activity Platform



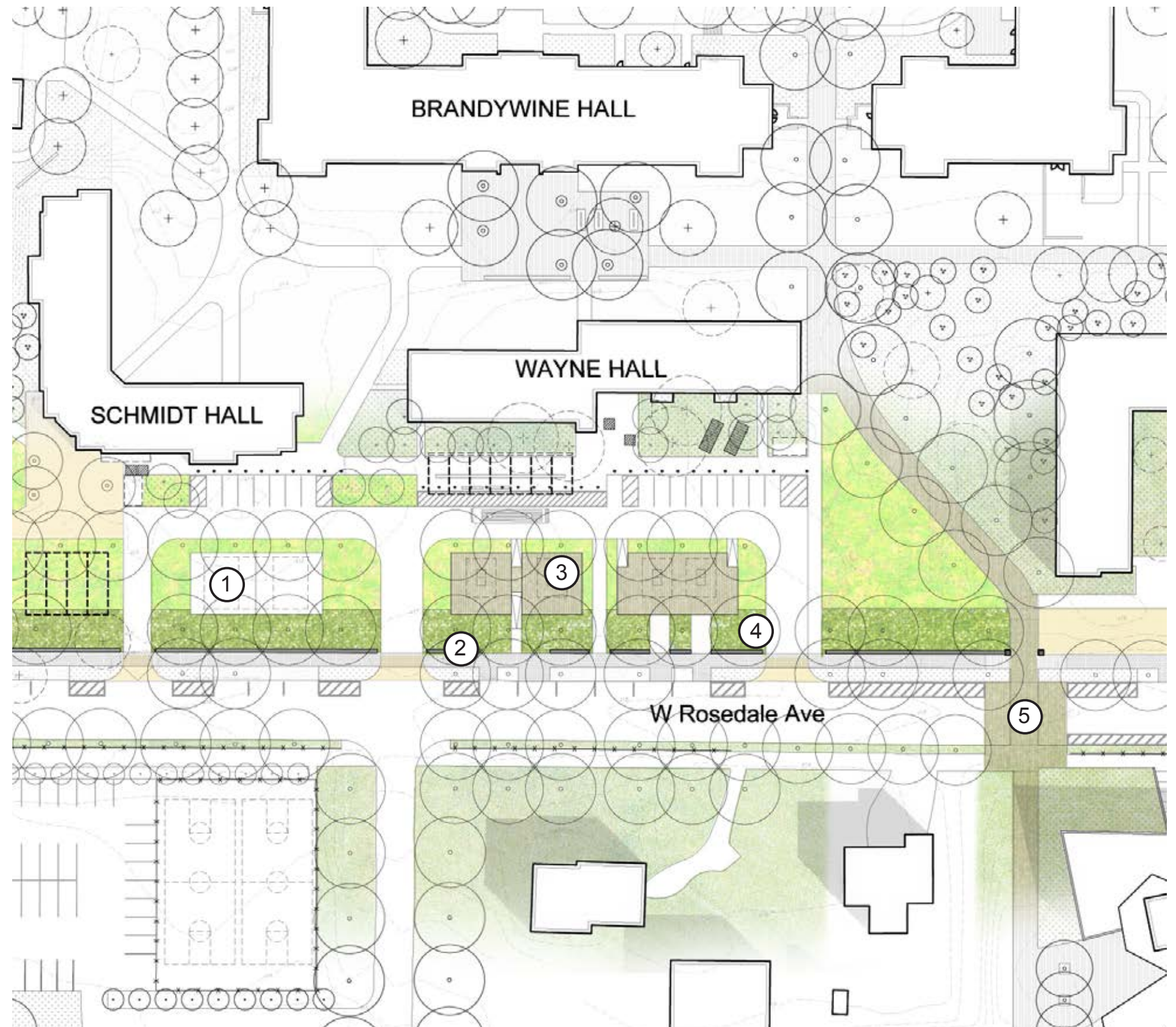
4. Stormwater



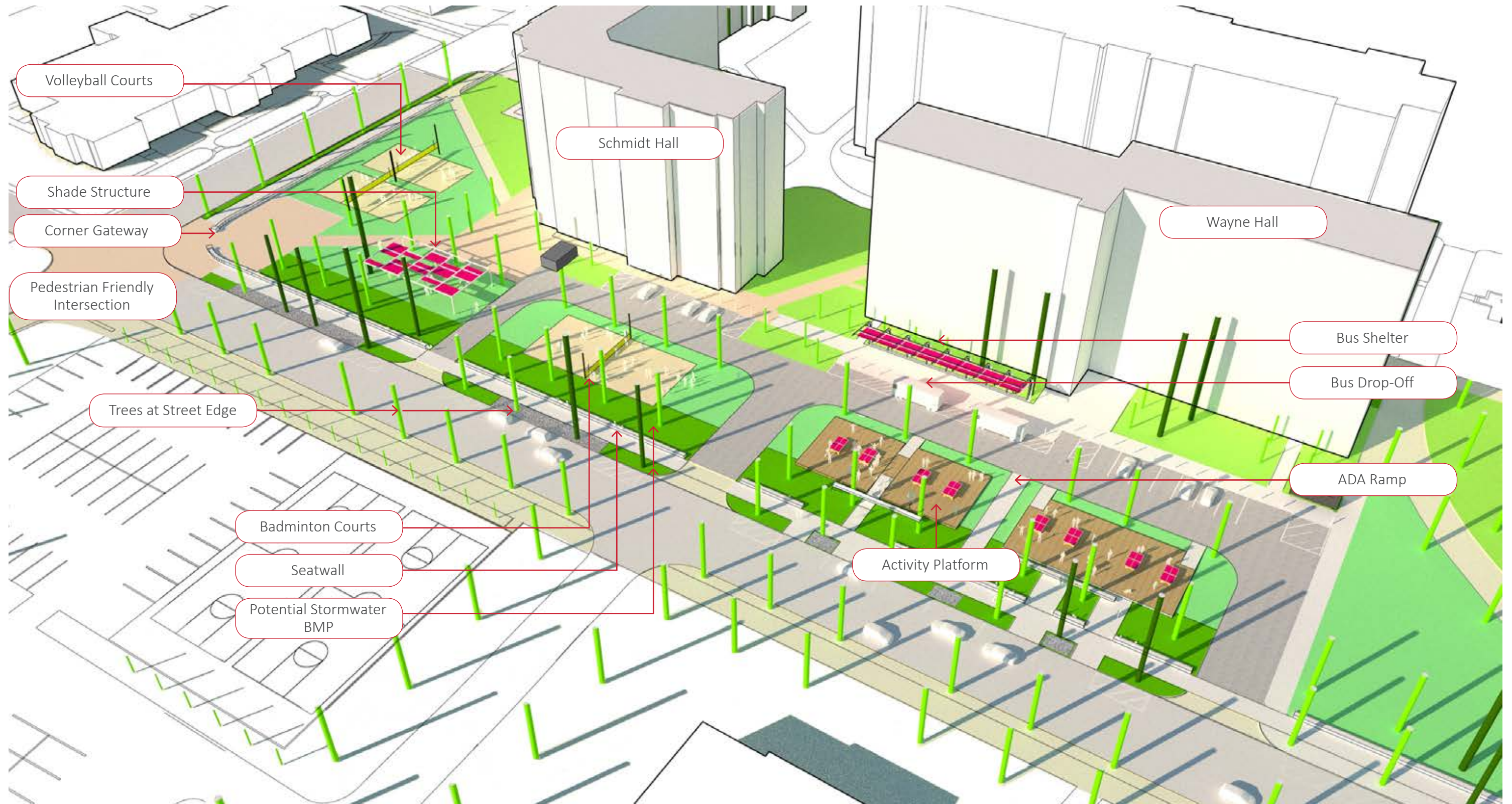
5. Crosswalk



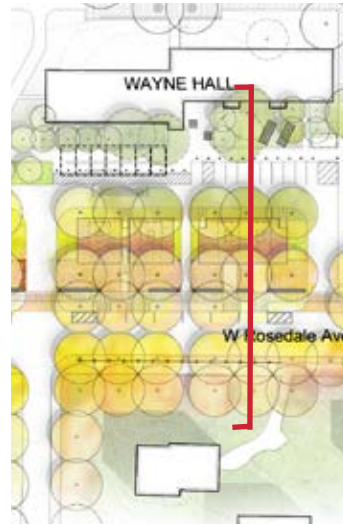
## W. ROSEDALE CORRIDOR WEST - OPTION 1



# W. ROSEDALE CORRIDOR WEST - OPTION 1 AERIAL VIEW



# W. ROSEDALE CORRIDOR WEST - OPTION 1 SECTION



W. ROSEDALE  
LOOKING WEST



**W. ROSEDALE CORRIDOR WEST - OPTION 1  
VIEW**



## EXISTING W. ROSEDALE CORRIDOR WEST

Open space in front of Schmidt and Wayne Halls is dedicated mostly to building services circulation. Bus and vehicular drop-off and trash collection lack organizational hierarchy and compete with pedestrian circulation. Three surface parking lots occupy a significant portion of the 100' setbacks in front of Schmidt and Wayne Halls.



1. West of Killinger Hall



2. Looking at Bus Drop-Off



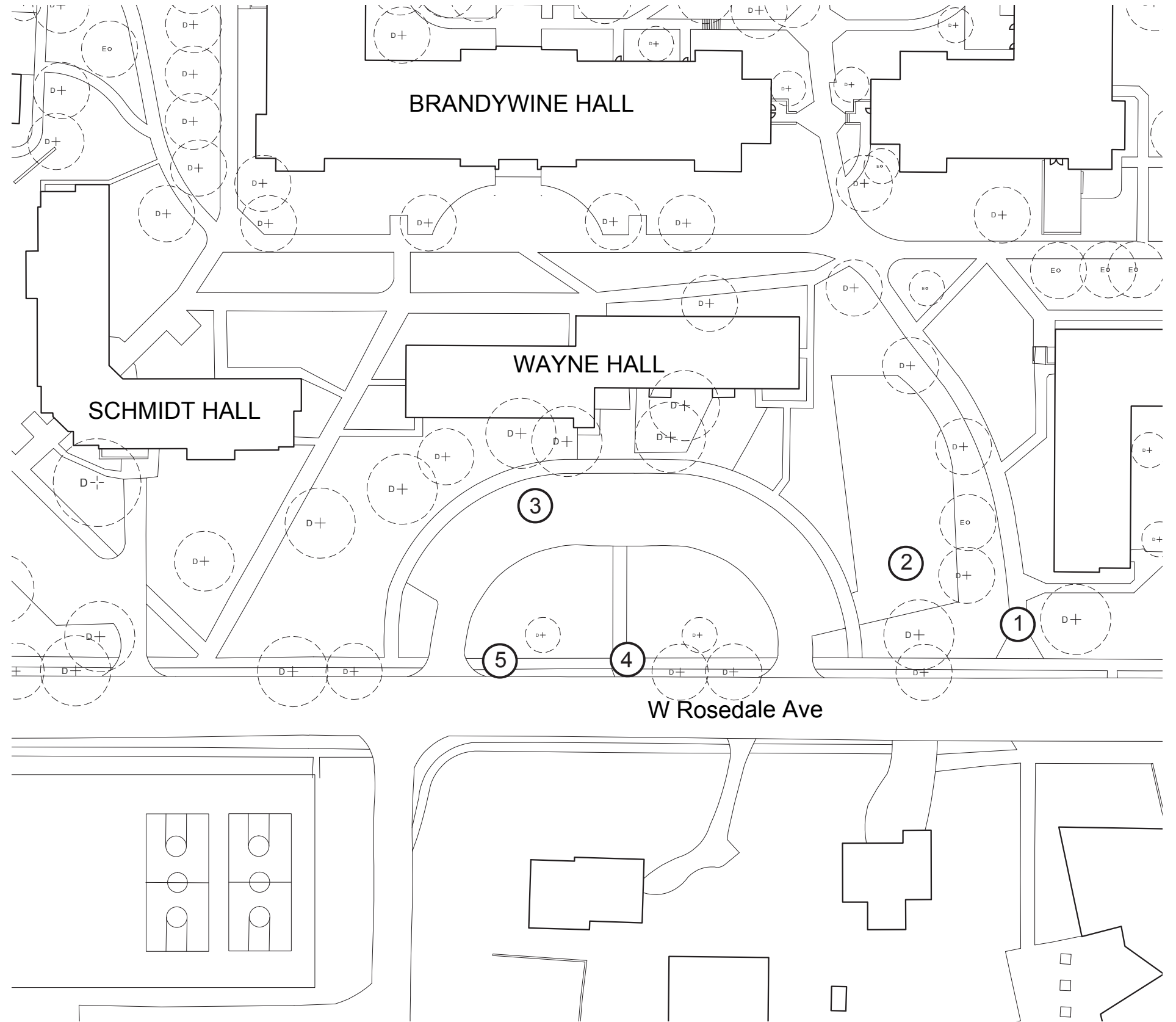
3. Bus Drop-Off Area in Front of Wayne



4. Rosedale Looking West



5. Rosedale Looking West





## PROPOSED W. ROSEDALE CORRIDOR WEST - OPTION 2

Option 2 for W. Rosedale Corridor proposes setting trees back from the street edge in line with efforts by the Borough to eliminate the conflict between street trees and overhead power lines. This option has a 10'-0" wide sidewalk at the street edge with the trees placed behind in an 8'-0" wide planting zone. Both options reconfigure Schmidt and Wayne Hall service areas to allow space for flexible and programmed activity, including ping pong, gaming, and moving screenings.



1. Bus Shelter



2. Bench



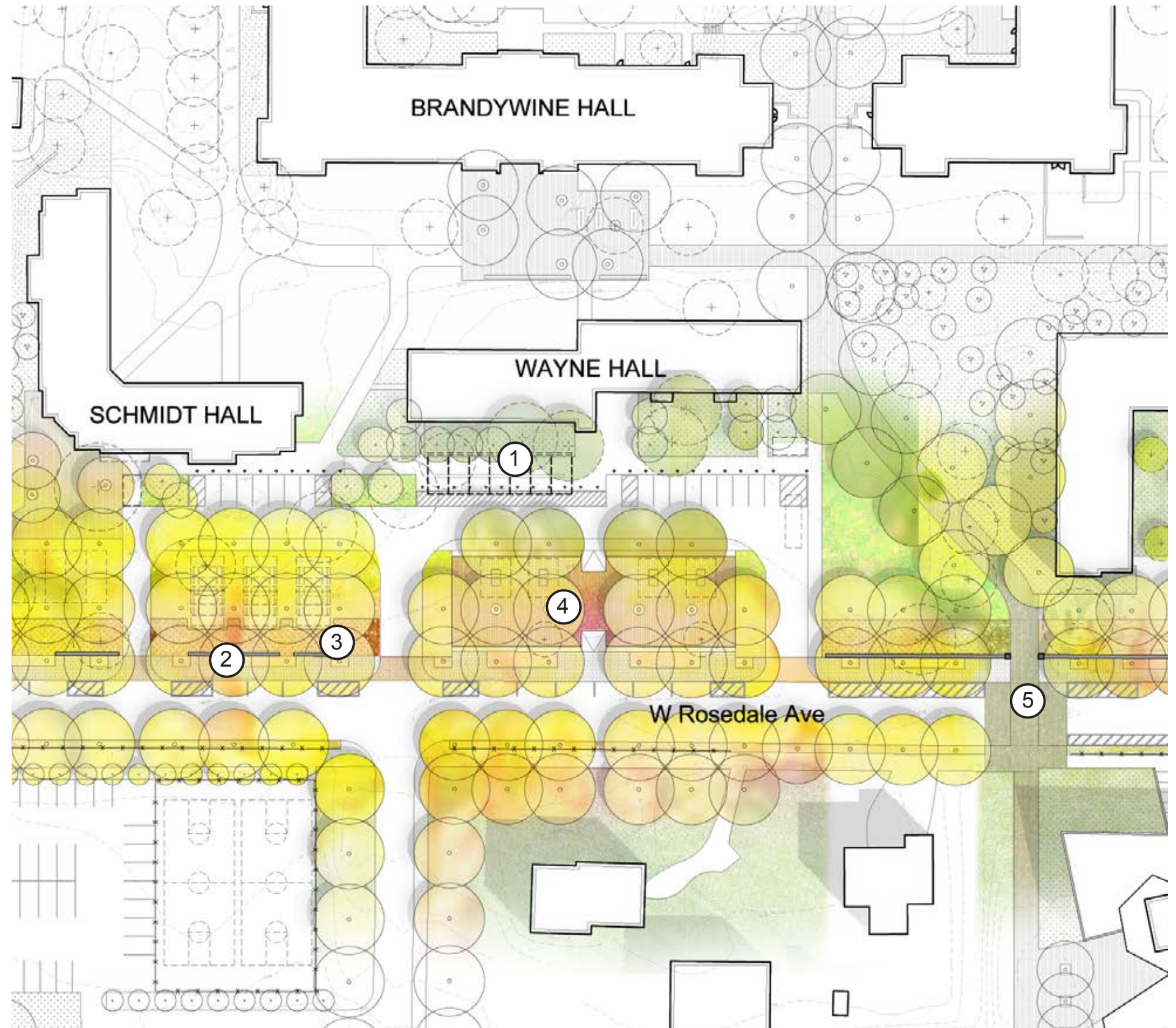
3. Stormwater Management



4. Activity Platform



5. Smart Light @ Crossing



W. ROSEDALE CORRIDOR WEST - OPTION 2



1. Bus Shelter



2. Bench



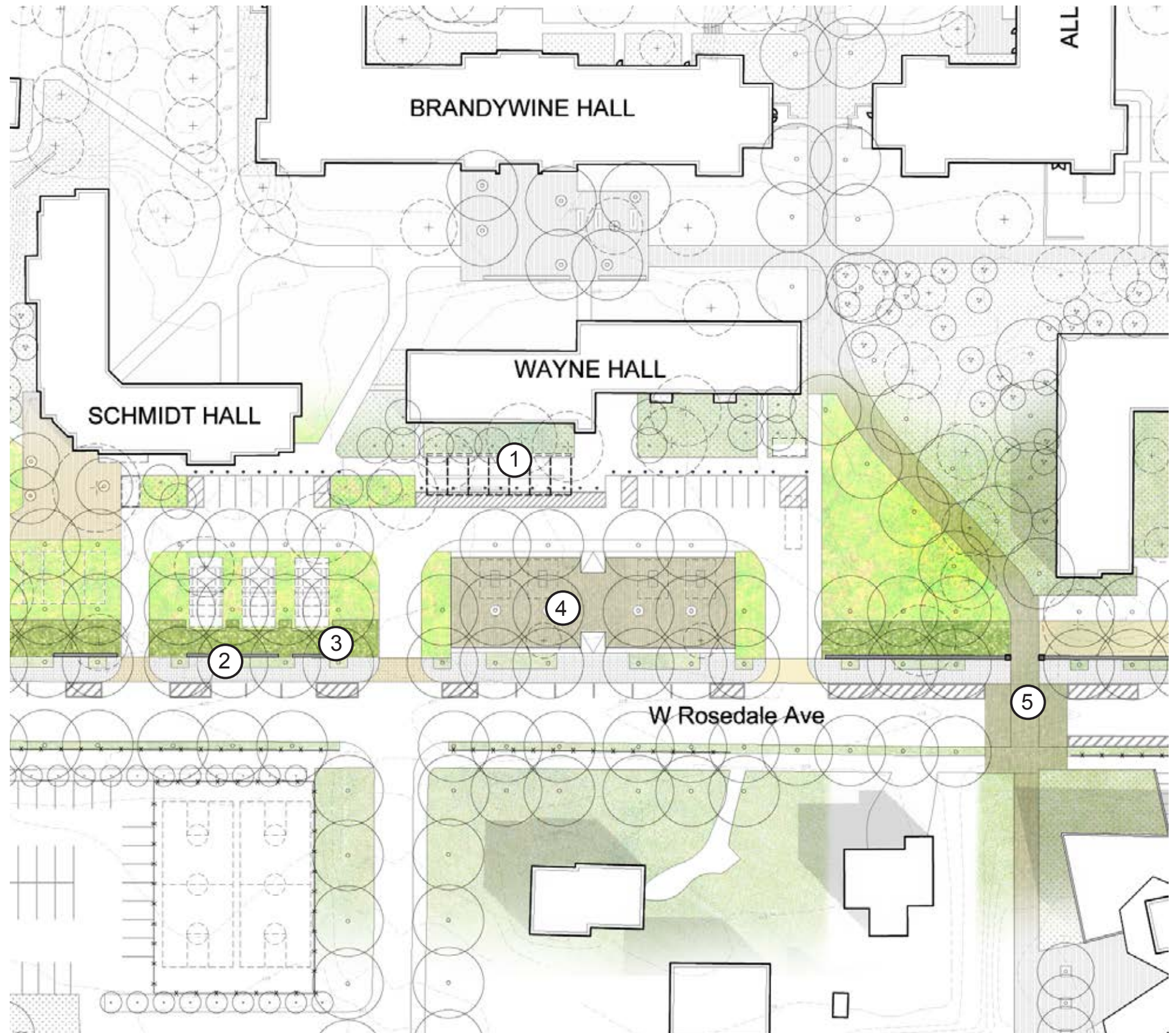
3. Stormwater Management



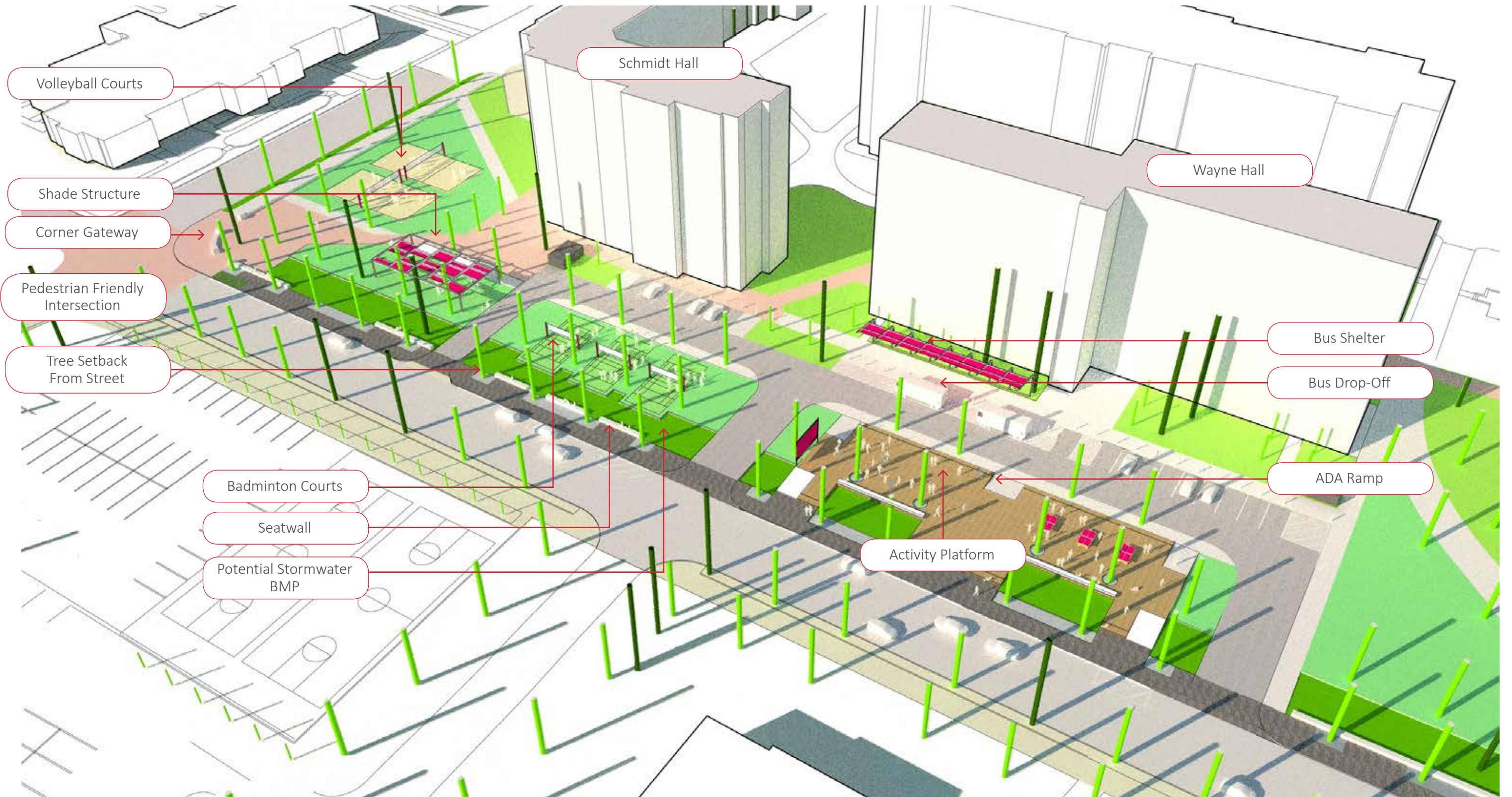
4. Activity Platform



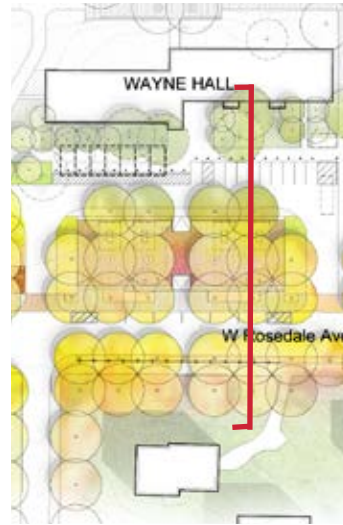
5. Smart Light @ Crossing



# W. ROSEDALE CORRIDOR WEST - OPTION 2 AERIAL VIEW



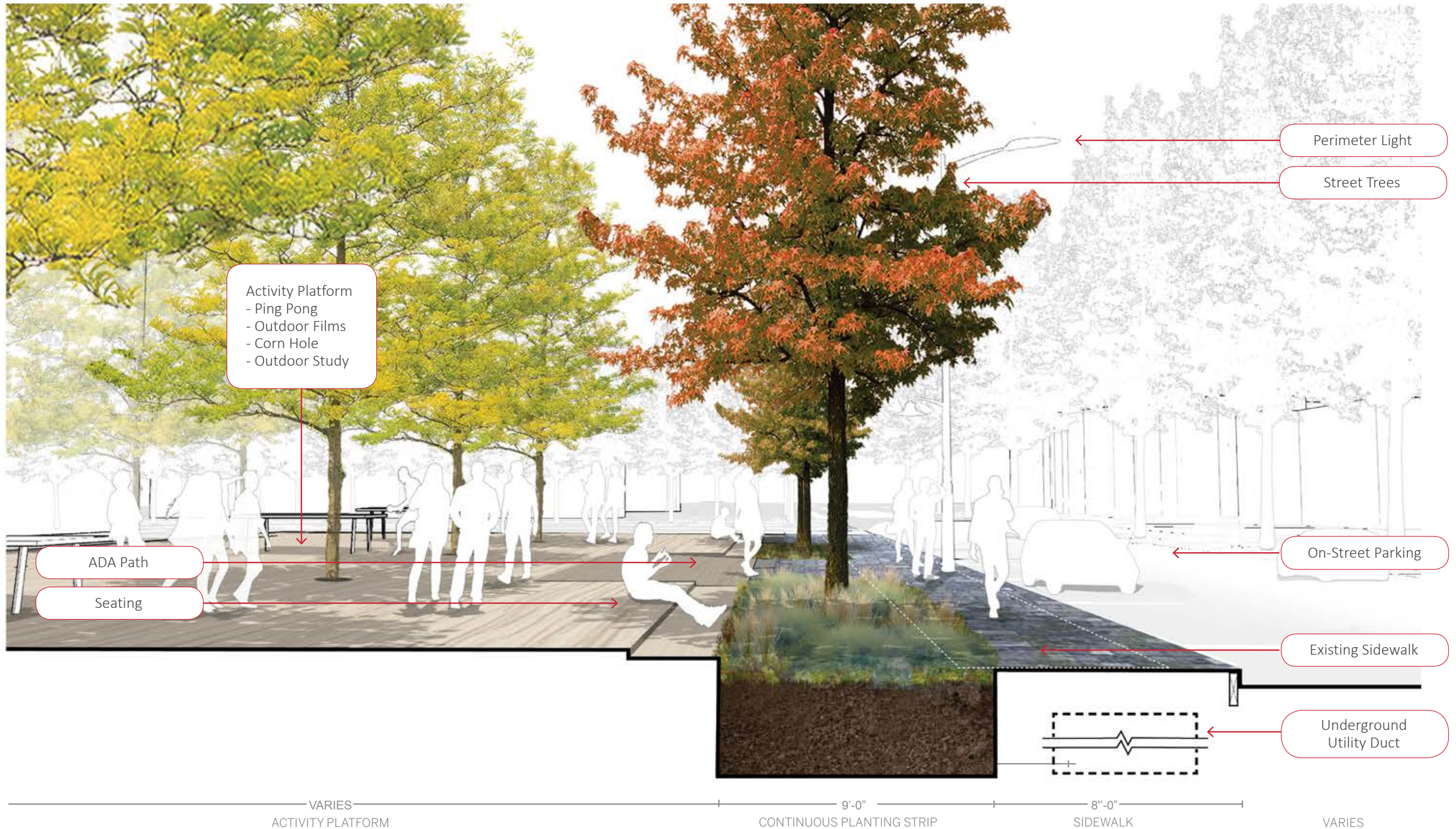
# W. ROSEDALE CORRIDOR WEST - OPTION 2 SECTION



W. ROSEDALE  
LOOKING WEST



**W. ROSEDALE CORRIDOR WEST - OPTION 2  
VIEW**



## EXISTING W. ROSEDALE CORRIDOR EAST

The corner of W. Rosedale Avenue and S. High Street is a significant entry to North Campus. This section of Rosedale, extending from S. High Street to the Old Library is unique because of the elevational difference between the street and FHG Library, approximately 10'. A strip of lawn gradually slopes up to the service yard and accessible parking at the rear of FHG Library. The prominence of the parking and the rear façade of the building loom over W. Rosedale Avenue.



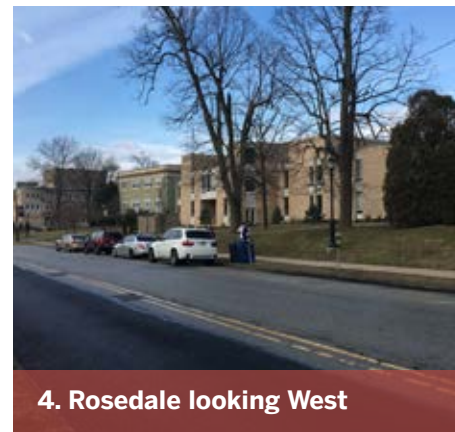
1. Loading Dock @ FHG Library



2. Secondary Entry @ FHG Library



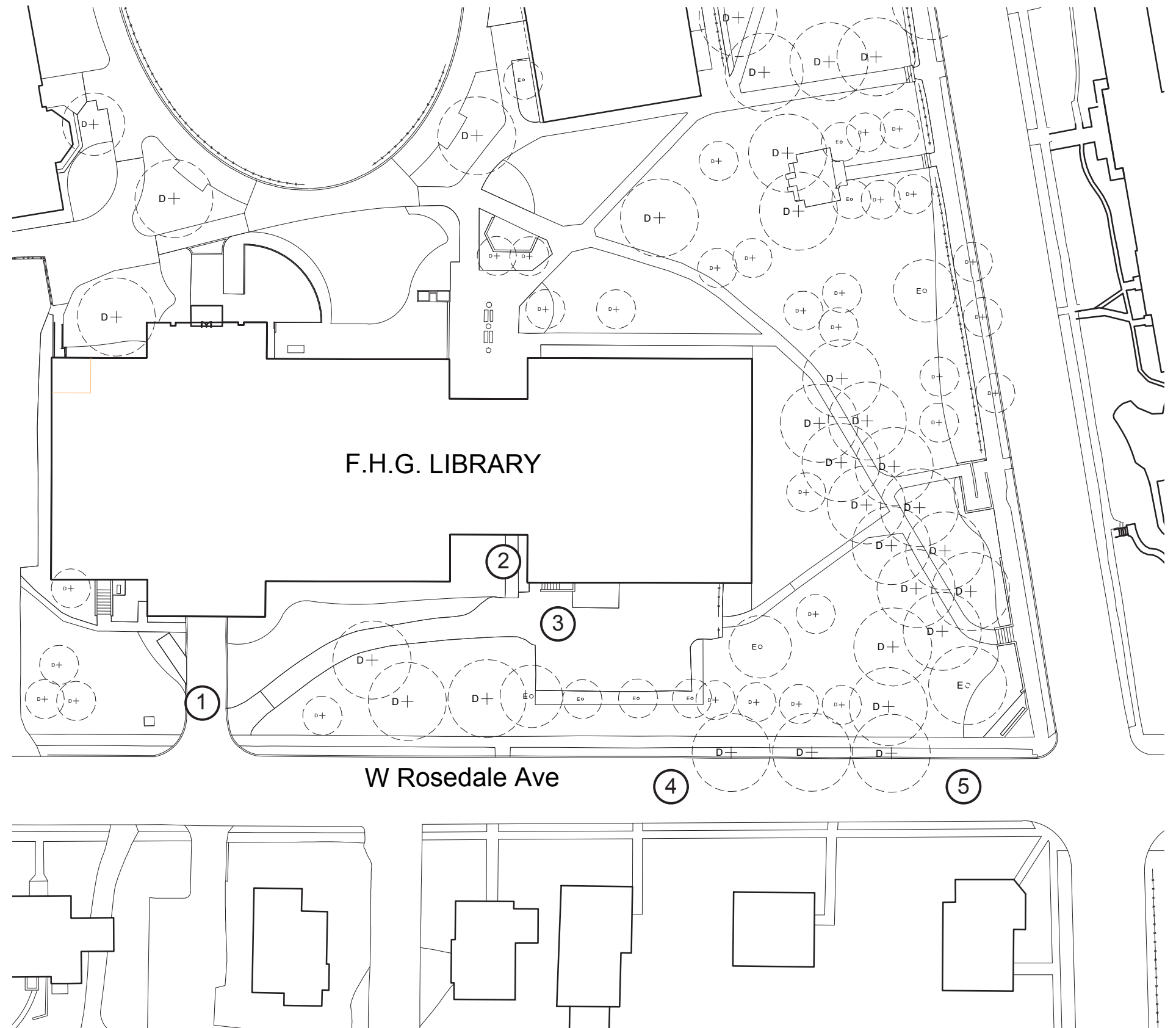
3. Parking @ FHG Library



4. Rosedale looking West



5. Rosedale looking West



## PROPOSED W. ROSEDALE CORRIDOR EAST

W. Rosedale Avenue, from Church Street to S. High Street, has great potential as a catalyst for programmatically activating the gateway to North Campus and the connection to E.O. Bull Center and Swope Music Building. By retaining the slope and shortening the existing lawn, 10'-0" of streetscape can be gained. The addition of curb cuts and a material change help to indicate a space for food trucks. Clustered tables and chairs, along with an innovative canopy system, incorporating lighting, sound, and technology, punctuate the year-round potential of this student activity zone.



1. Canopy



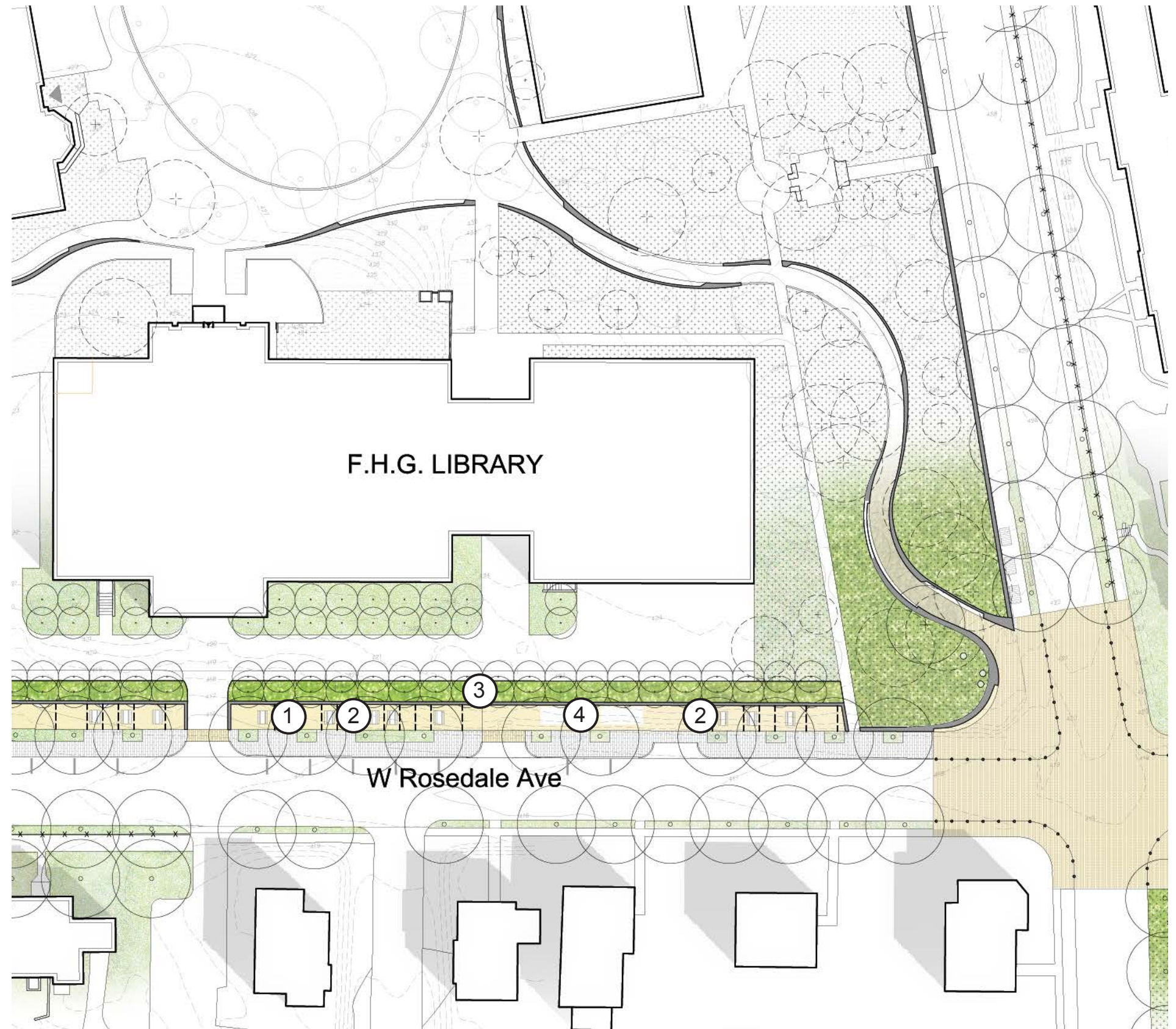
2. Picnic Zone



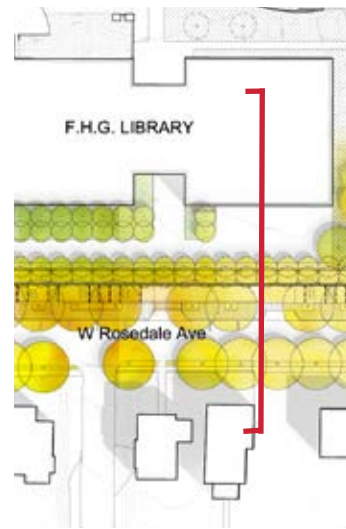
3. Planted Slope + Seatwall



4. Food Truck Parking

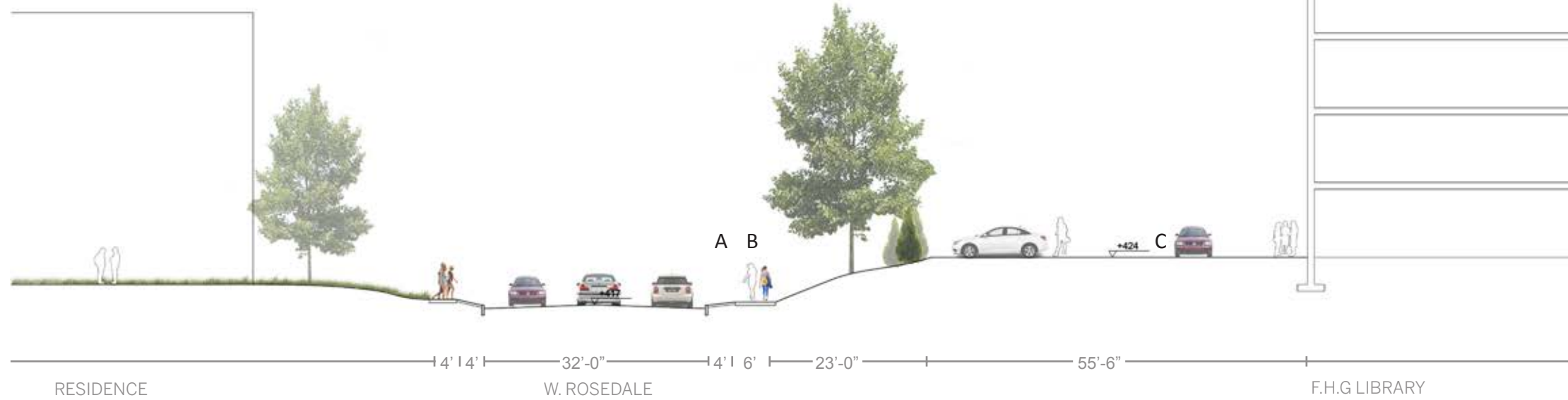


# ROSEDALE CORRIDOR EAST SECTION



W. ROSEDALE  
LOOKING EAST

EXISTING

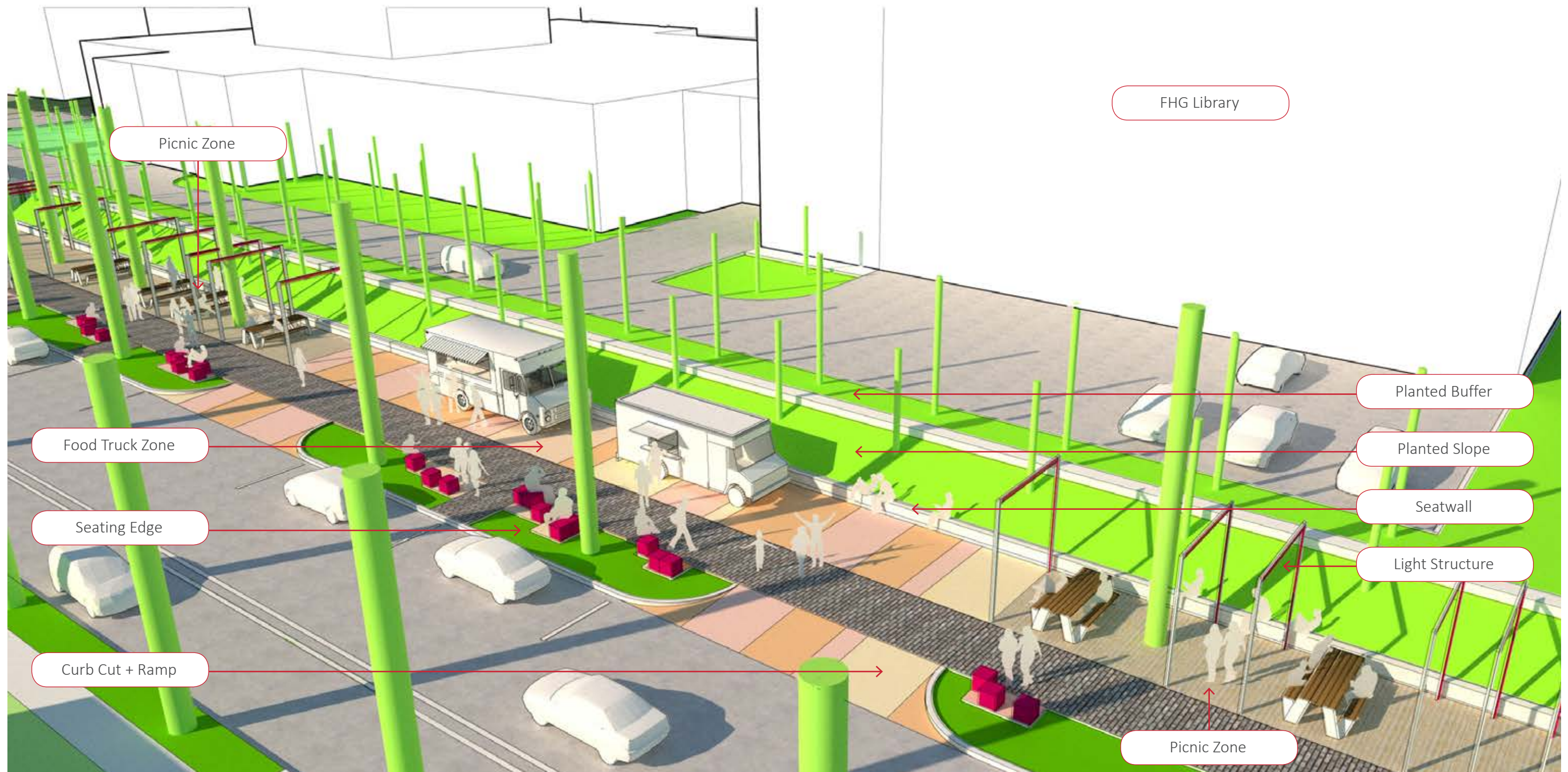


PROPOSED





# W. ROSEDALE CORRIDOR EAST AERIAL VIEW



FHG Library

Picnic Zone

Planted Buffer

Planted Slope

Seatwall

Light Structure

Food Truck Zone

Seating Edge

Curb Cut + Ramp

Picnic Zone

## EXISTING CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS

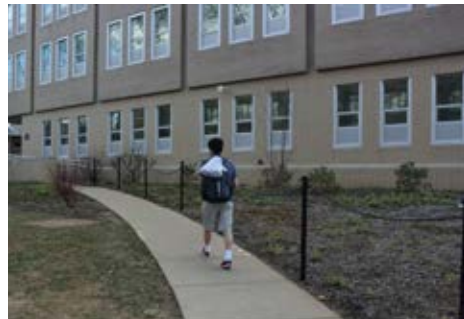
Other campuses of the Pennsylvania System have expanded in similar fashion to West Chester University, finding themselves spanning municipal streets and dividing the campus. Locust Street in Philadelphia divided the University of Pennsylvania and Allen Street did the same at Penn State. In both cases, the Universities worked with local governments to close the street and allow the Campus to reconnect. While S. Church Street is a beautiful tree-lined street, many of the historic sycamores have died and others show signs of age and stress. Automobile parking and food trucks create an additional barrier to simple crossing, making the impact of the street greater.



1. Church @ Rosedale



2. Food Trucks



3. Science Center Path



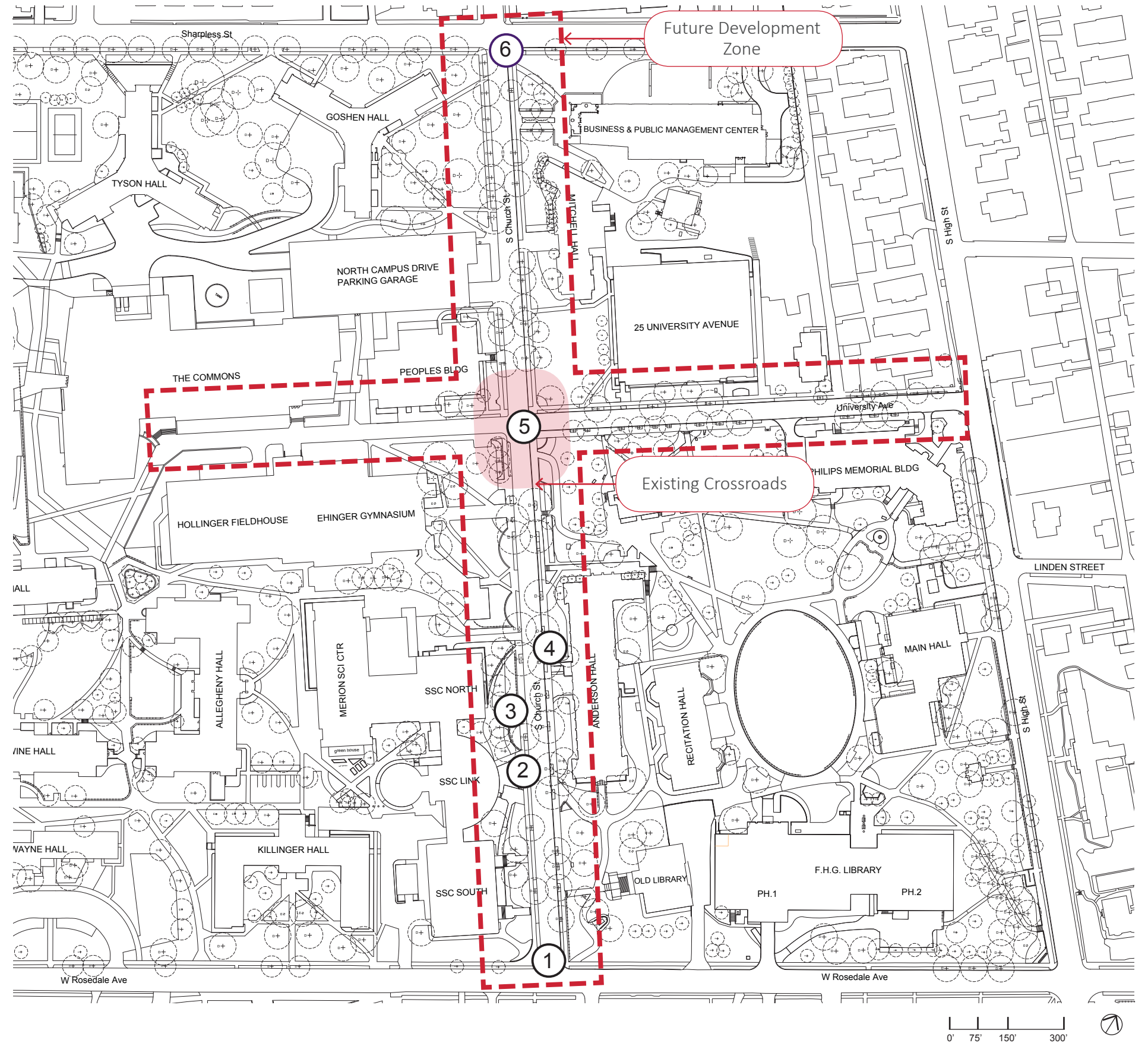
4. Anderson Hall



5. Church @ University



6. Church @ Sharpless



# PROPOSED CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS

Amazing possibilities are presented by the consideration of closing Church Street and University Avenue as the amount of contiguous open space is unparalleled on North Campus. The addition of and to buildings was explored and the idea of a linear, active, public open space studied. Similar to University of Pennsylvania and Penn State, the proposal to make the central spine open space is further enhanced by the building setback, allowing not only for walkway/emergency access but for reserved, active programmed space as well.



1. Enhanced Walkways



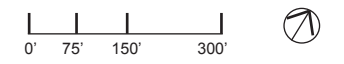
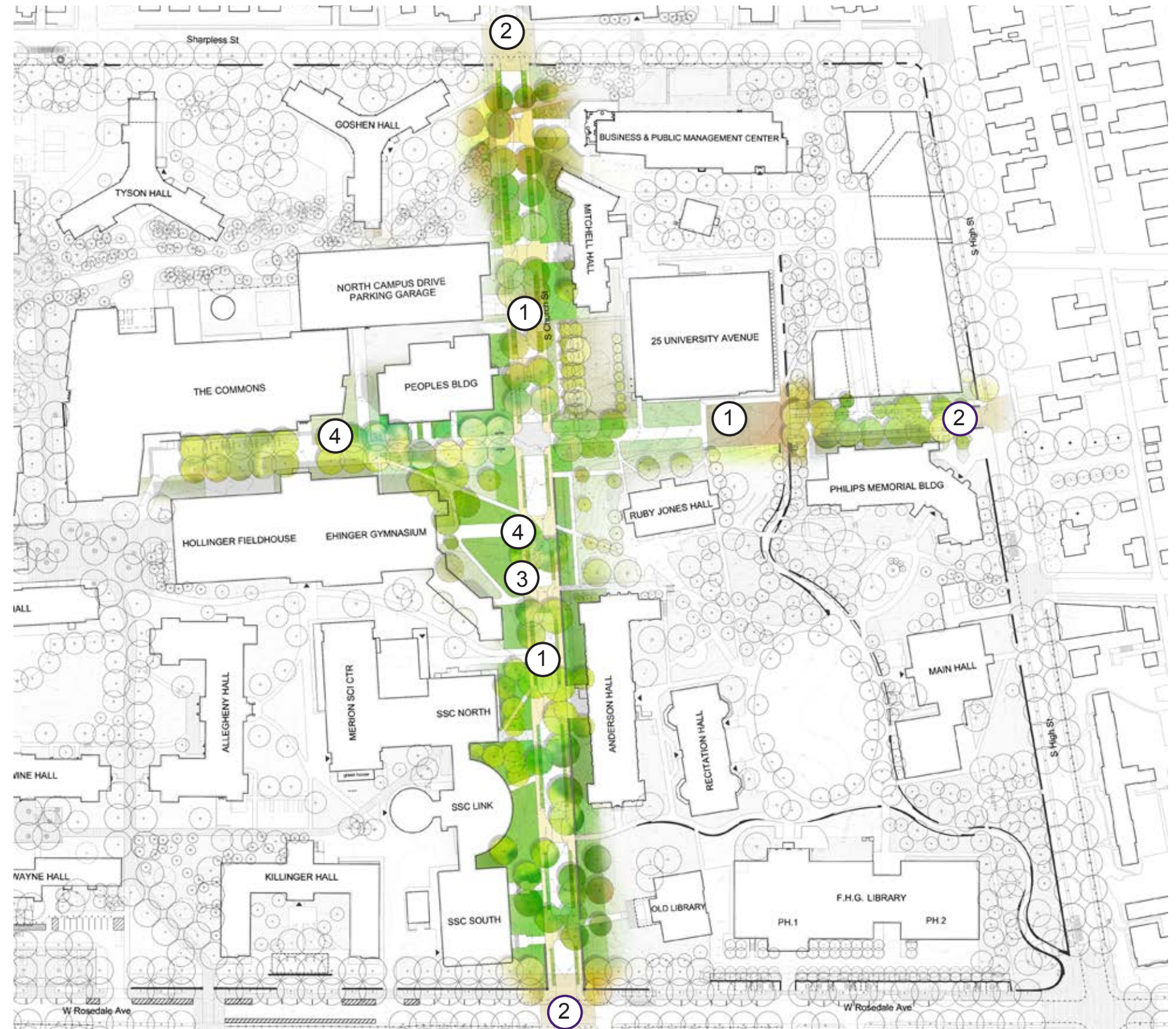
2. Visible Gateways



3. Permeable Pavers



4. Seating Edge



# PROPOSED CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 1 (GROUND PLANE)

An interim improvement looks at the reduction of on-street parking and the addition of traffic calming to enhance the street and provide for safe crossings. Existing porous paving zones are expanded to unify crosswalks and street tree canopy is reinforced. Curb and roadway improvements improve pedestrian safety at some expense to vehicular convenience.



1. Enhanced Walkways



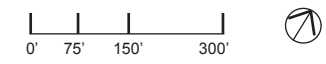
2. Visible Gateways



3. Permeable Pavers



4. Seating Edge



# CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 1 SECTION

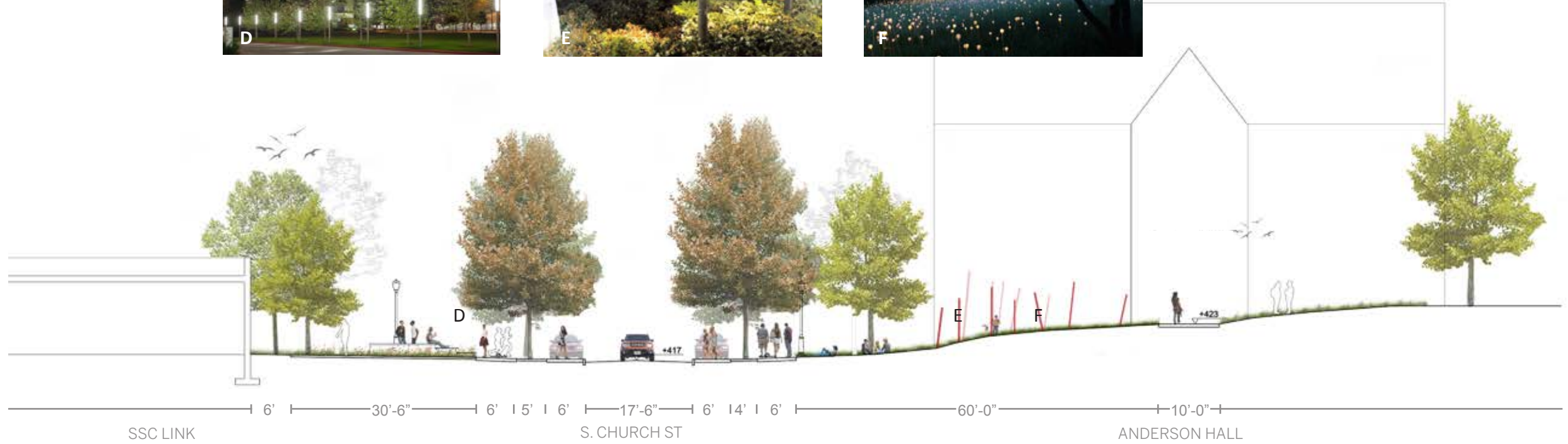


S. CHURCH ST  
LOOKING NORTH

EXISTING



PROPOSED



# PROPOSED CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 2

Developed with structured turf, the central green is masked emergency access that can be used for both active and passive lawn events. Existing sidewalks are widened and the remaining areas up to the buildings are developed as planted and paved garden spaces. The landscape becomes a 'green' version of University of Pennsylvania's Locust Walk. Public driving is not available, open only to service and emergency vehicles.



1. Continuous Canopy



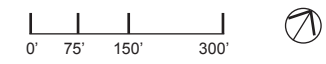
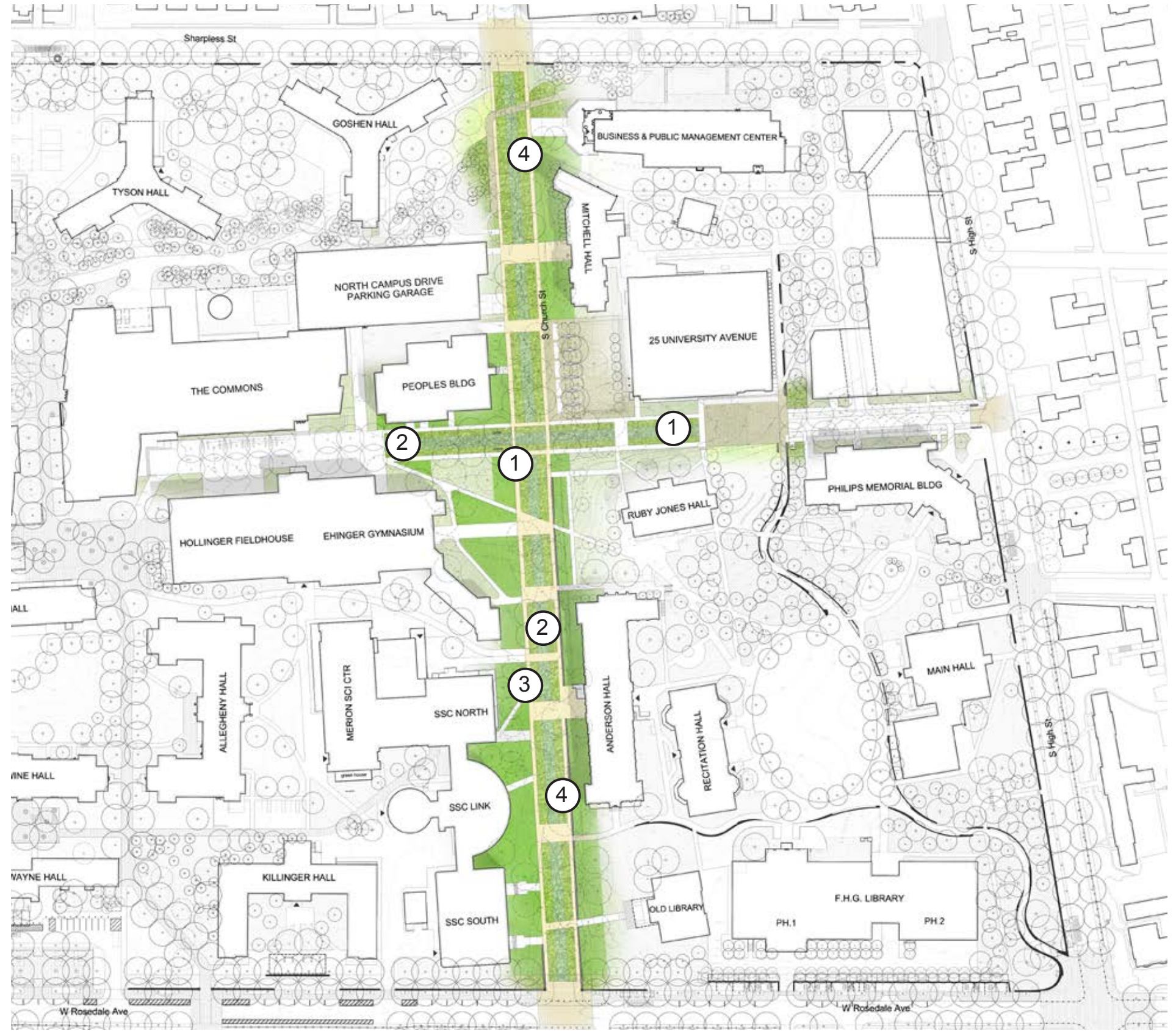
2. Connected Greenway



3. Continuous Tree Pit



4. Pedestrian Lighting



# CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 2 SECTION



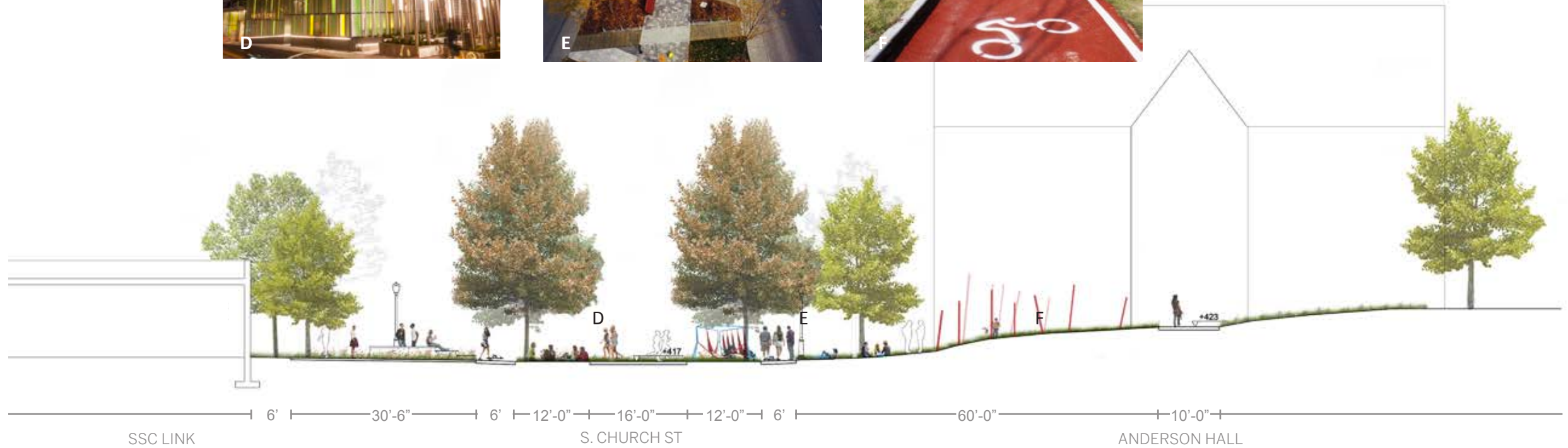
S. CHURCH ST  
LOOKING NORTH



EXISTING



PROPOSED

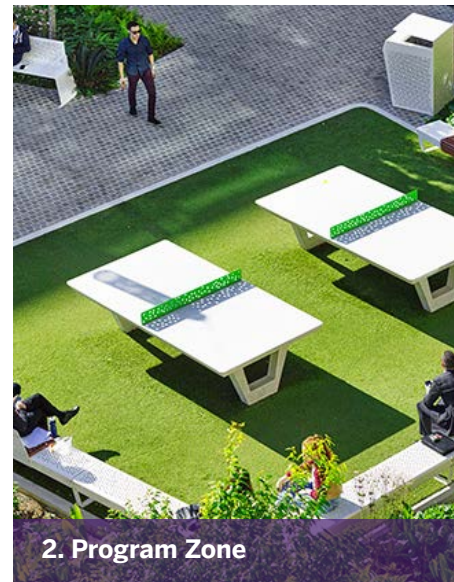


## PROPOSED CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 3

The building setbacks allow for walkways to be widened accommodating emergency vehicle access, preserving the street width to be developed as active and programmable public space. Repeating 'rooms' interspersed with storm water management gardens provides varied spaces that can be set for play and study. Summer reading rooms, nighttime video pods, and game plazas can be set up and moved as demand dictates.



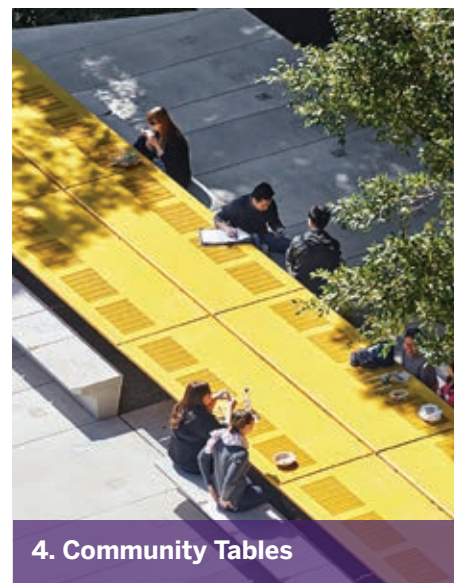
1. Study Space



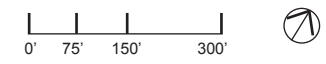
2. Program Zone



3. Stormwater



4. Community Tables

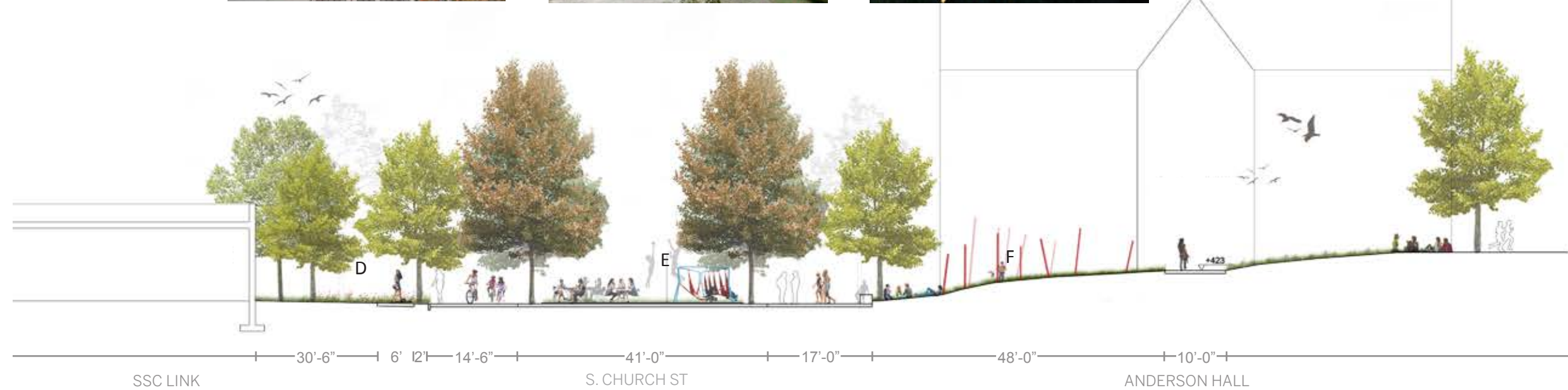
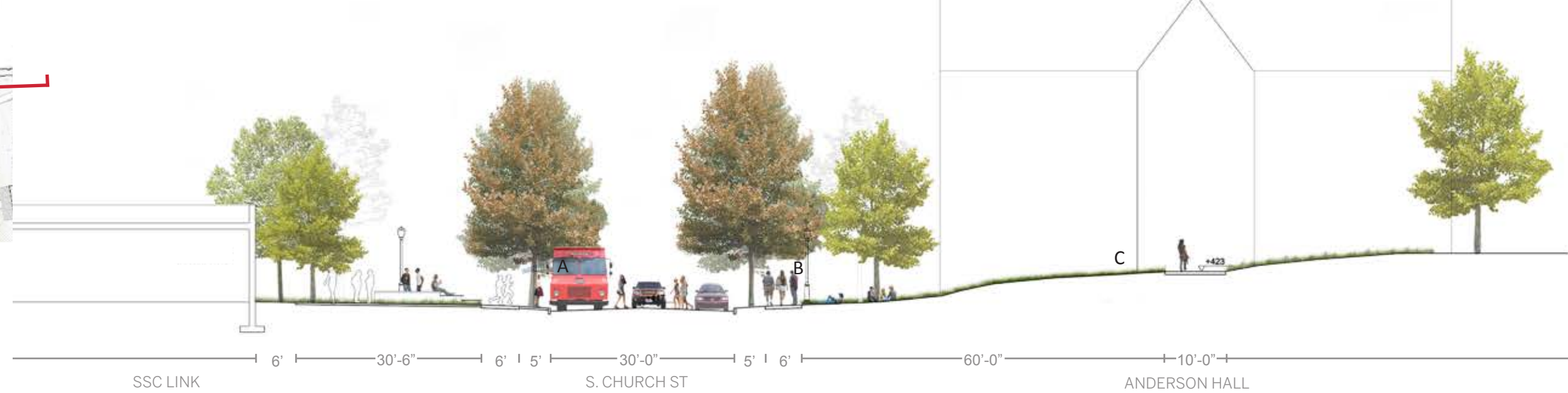




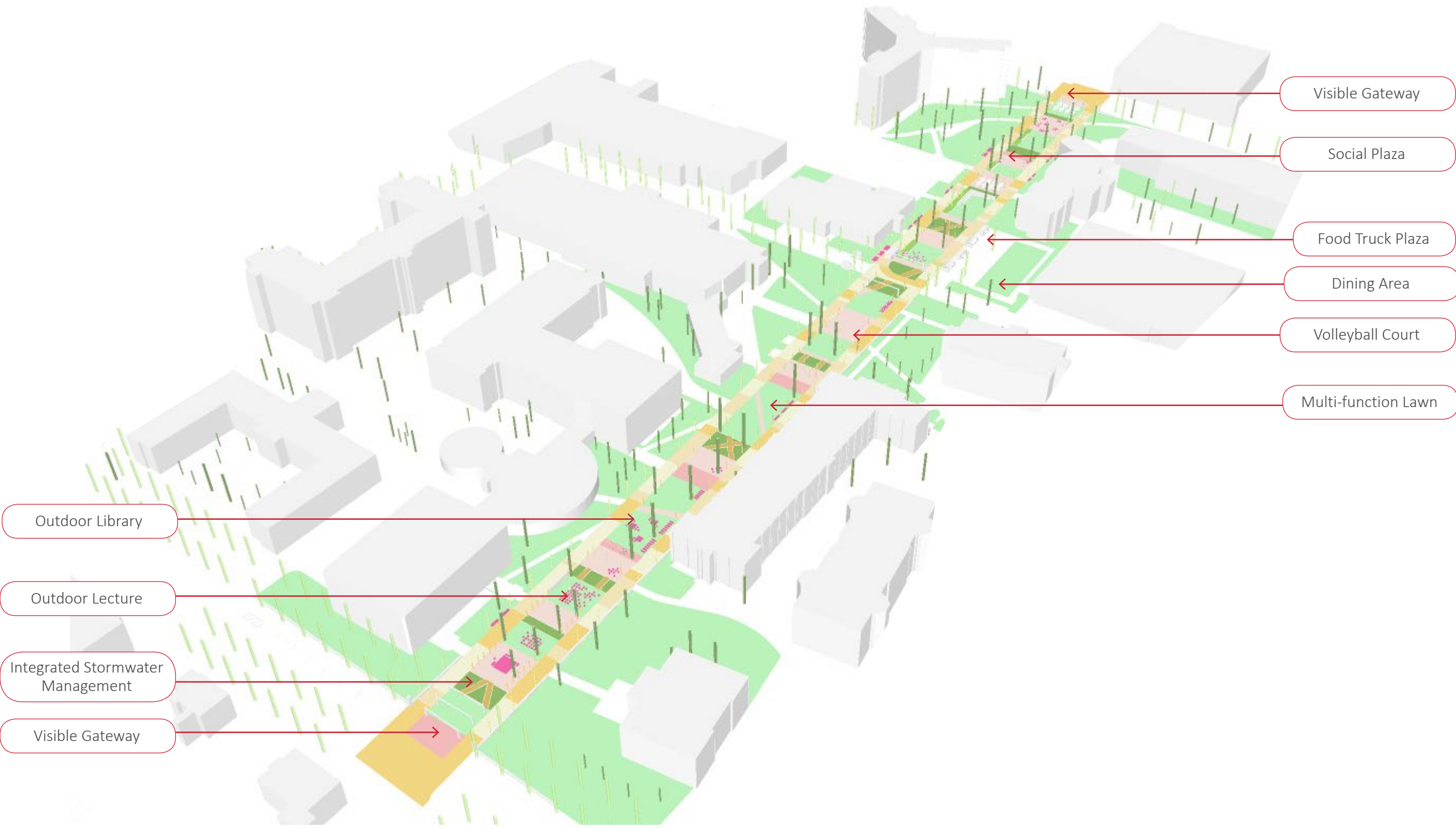
# CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 3 SECTION



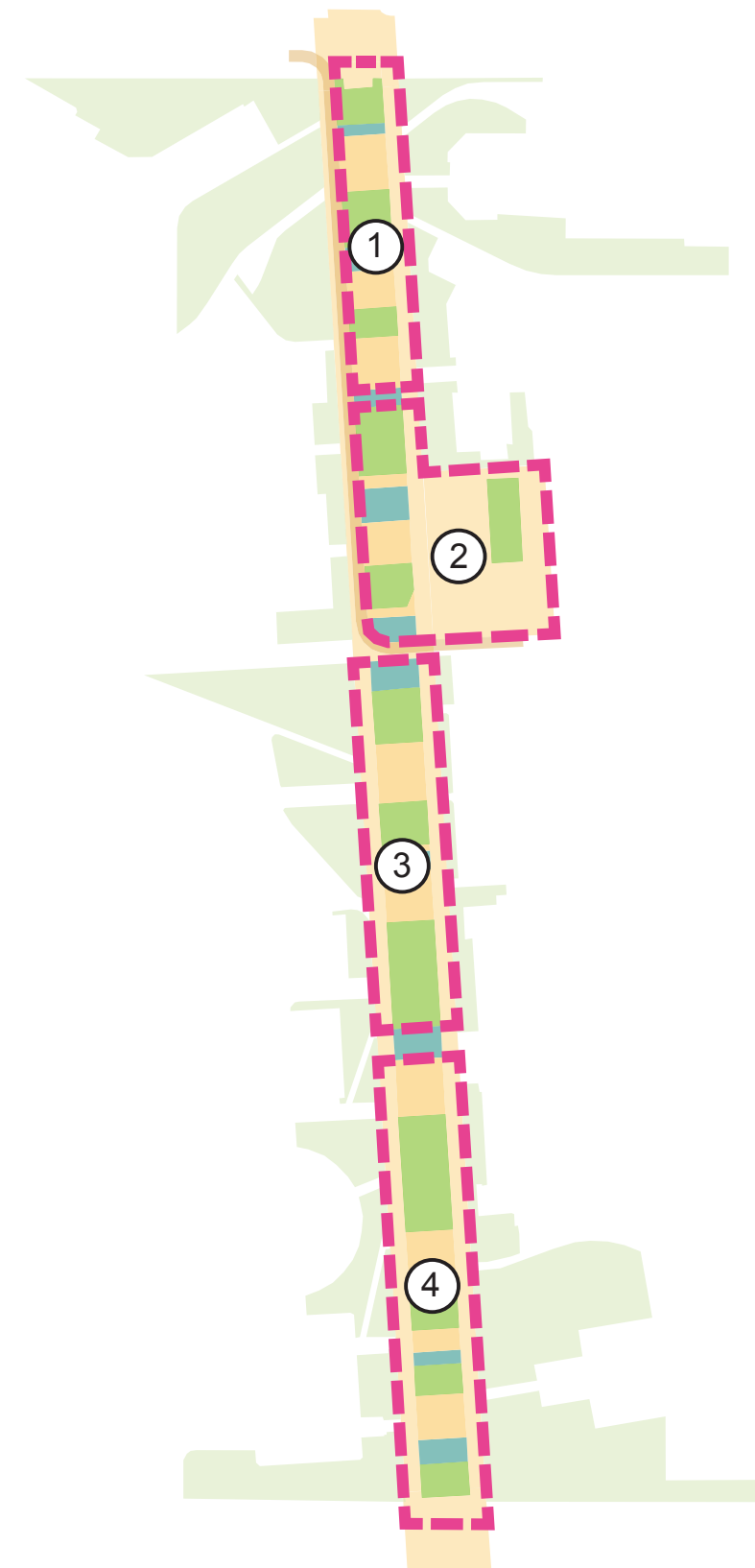
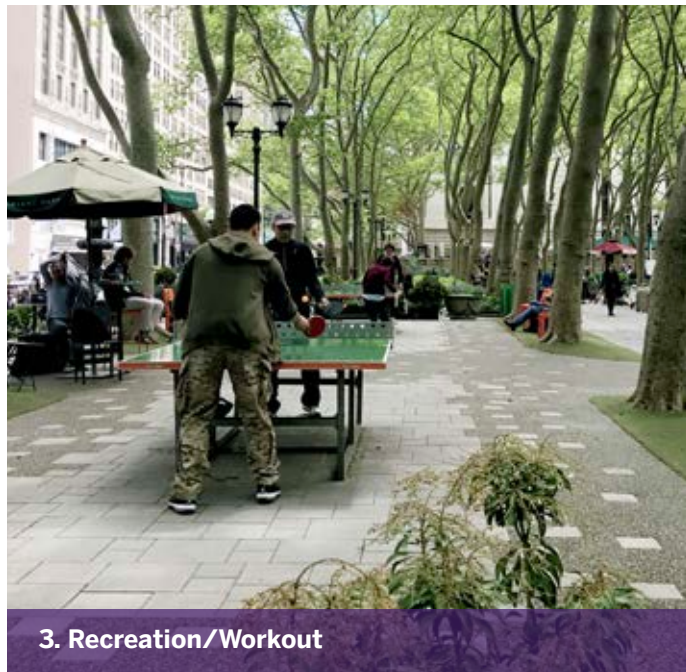
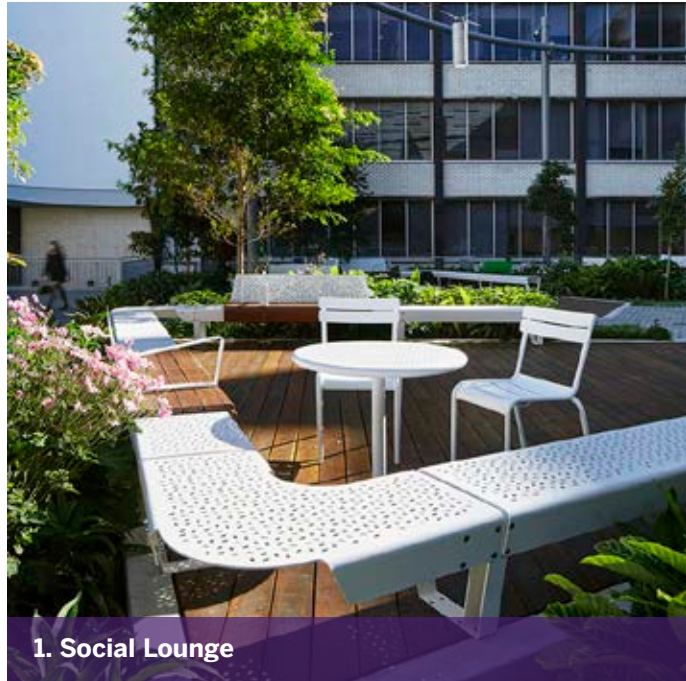
S. CHURCH ST  
LOOKING NORTH



**CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 3**  
**PROGRAM AXON**

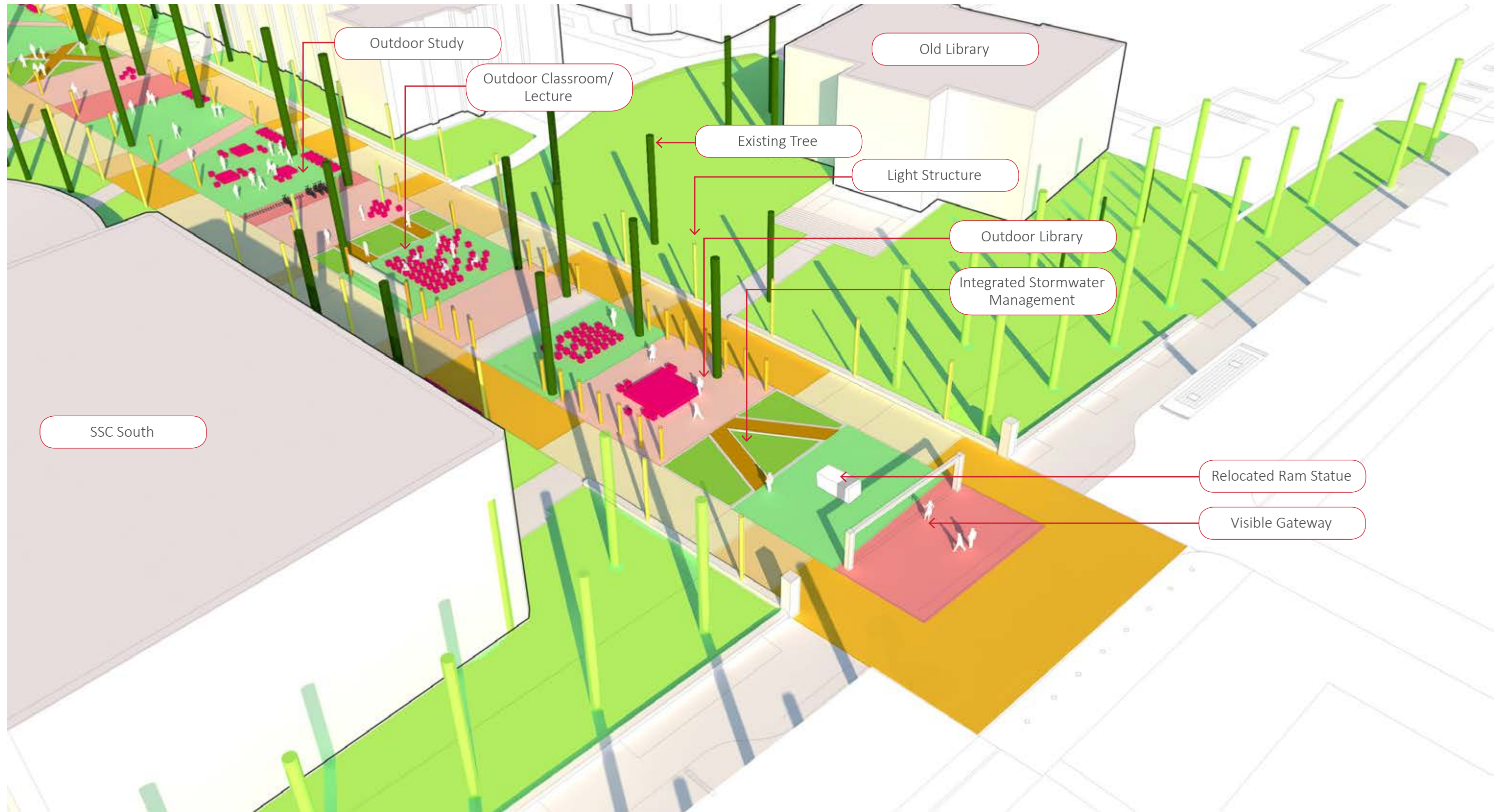


# CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 3 PROGRAM DIAGRAM

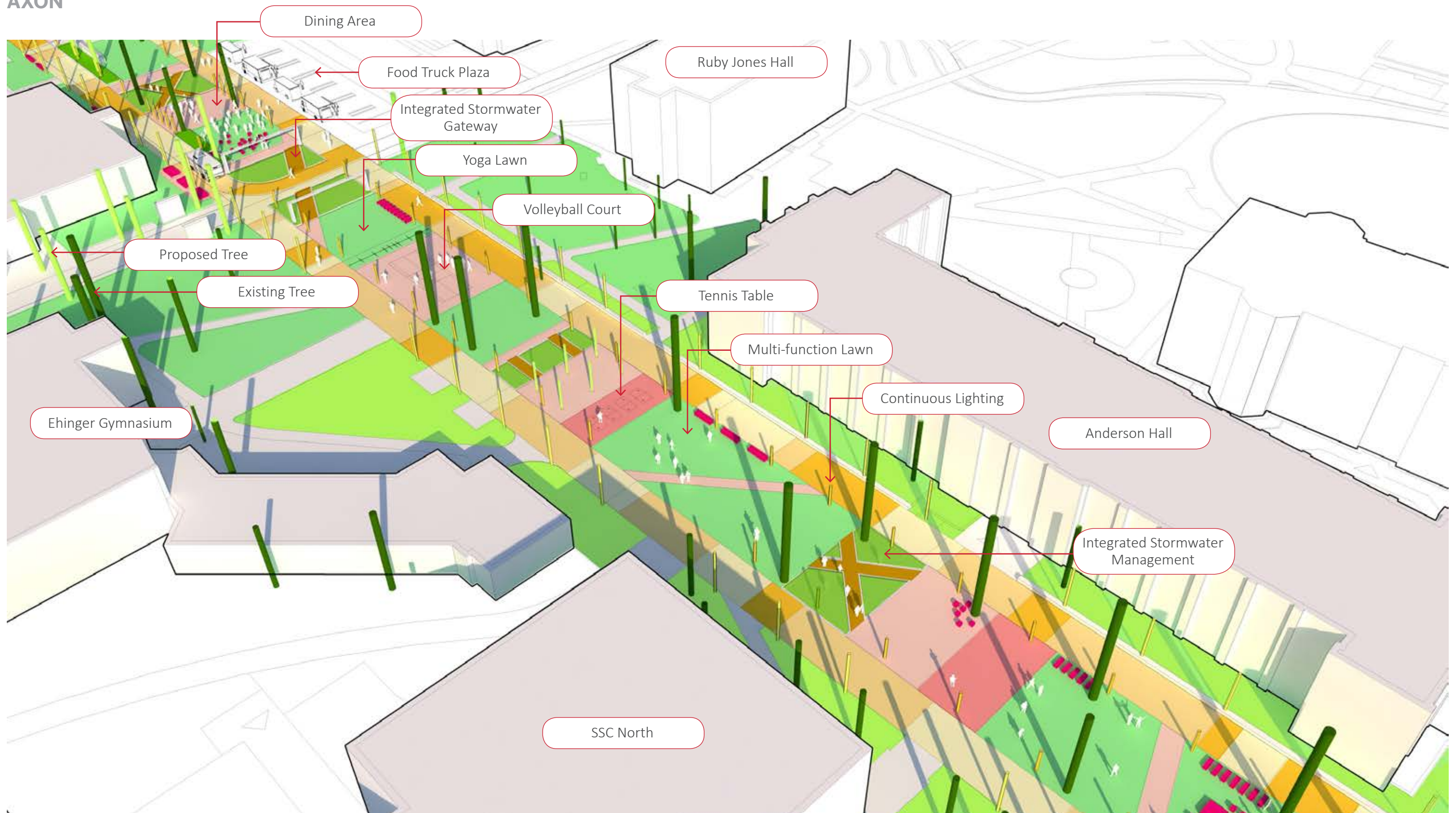


- ① SOCIAL LOUNGE**
  - event lawn
  - Student's work showroom
  - social plaza
  - mini golf
  - croquet
  - seasaw
  - stormwater research
  - exhibition
- ② FOOD COURT**
  - food truck parking
  - dining plaza
  - picnic dining lawn
  - dancing/game plaza
  - movie projecting
  - lawn game
  - bike rack
- ③ RECREATION/WORKOUT**
  - Yoga lawn
  - volleyball court
  - tennis table
  - rest seating
  - multi-function lawn
  - sunbathing
  - lawn game
  - chess field
  - bowling
  - pool game lawn
  - bike rack
- ④ LEARNING/EDUCATION**
  - outdoor library & study
  - outdoor classroom
  - outdoor lecture
  - happy hour plaza
  - bike rack

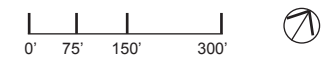
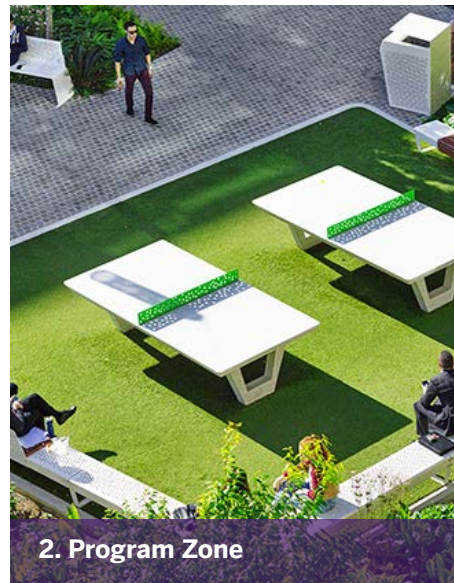
# CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 3 AXON



# CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 3 AXON



# CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 3

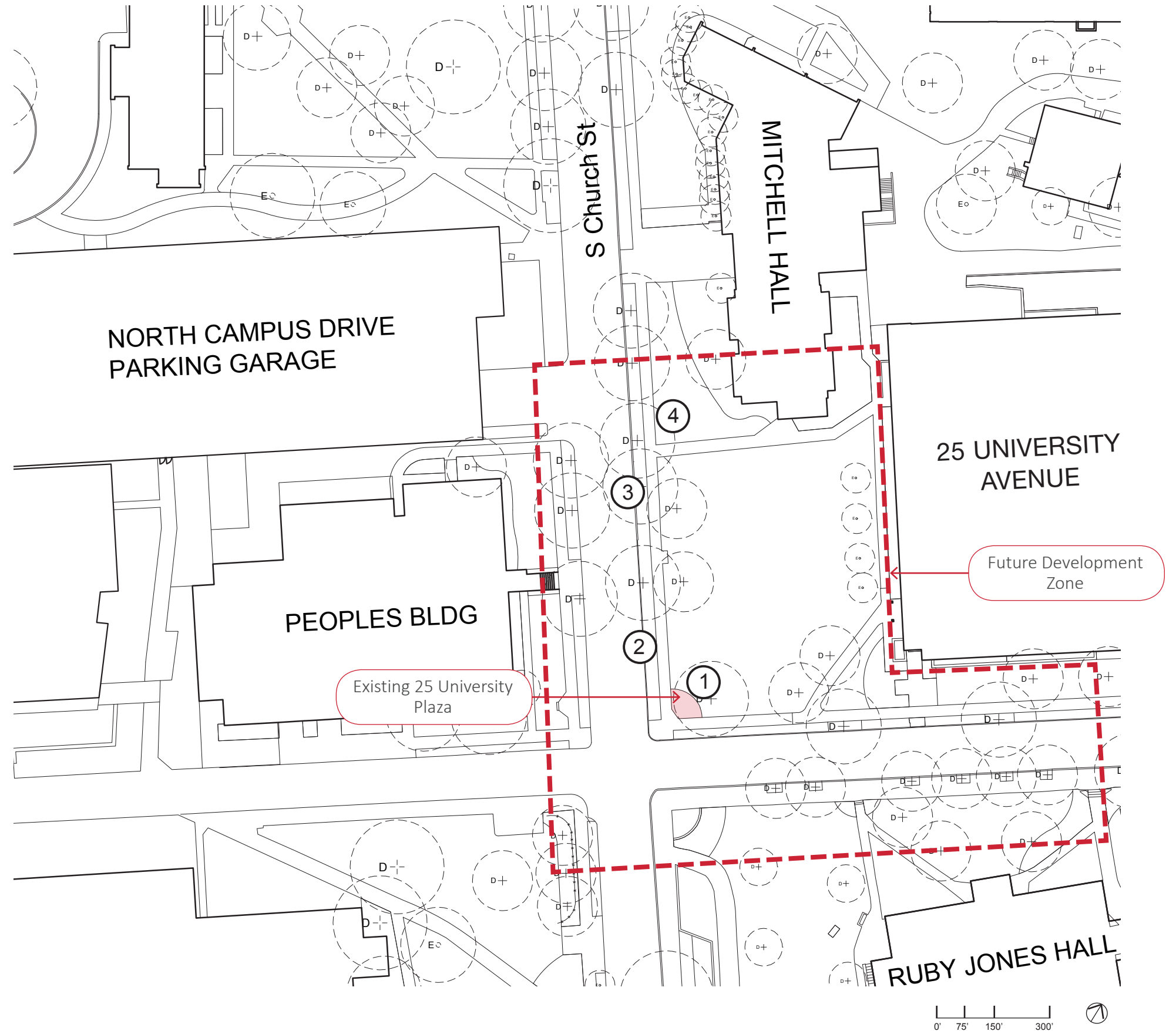


# CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS - OPTION 3 VIEW



## EXISTING 25 UNIVERSITY PLAZA

The lawn between S. Church Street and 25 University Avenue is one of the most recognized, underutilized open spaces on campus. The lawn, surrounded by concrete sidewalks with a few widely spaced trees, has been furnished with benches and barbeques, but still only gets used for randomly programmed events. A geothermal system, installed under the lawn in 2008-2009, has associated weight and depth limits for program above. The lawn is mostly flat but gradually slopes from S. Church Street to 25 University Avenue along University Avenue, a total of approximately 4'-0" grade change.



1. View to 25 University



4. View North on S. Church Street



3. View South on S. Church Street

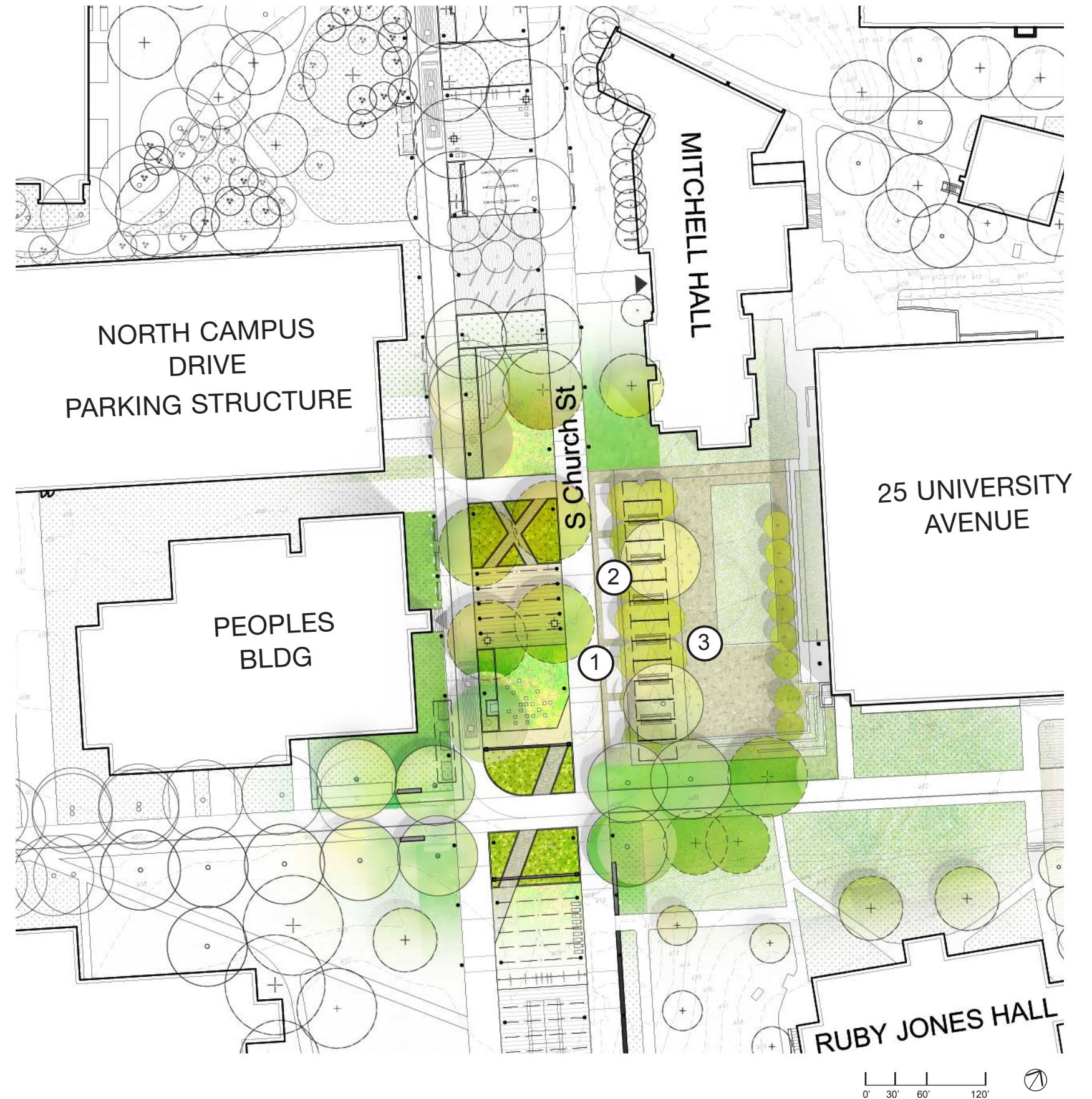
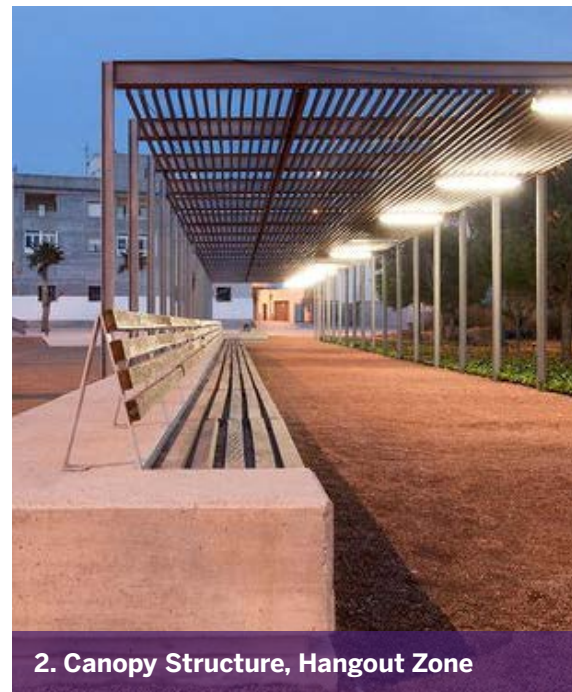


2. View to Ruby Jones Hall



## PROPOSED 25 UNIVERSITY PLAZA

One of the most exciting and dynamic new spaces on Campus can be realized with three strategic design moves. First, the area is made level with the addition of amphitheater seating along University Avenue to contain the grade change. Second, a bosque of trees is added to the outer edges of the site to add spatial definition and shade to the plaza. And third, food trucks are relocated to the S. Church Street side of the plaza complemented with tables and chairs under a lighted canopy system. The inherent flexibility of this plaza enables a variety of events and activities to take place. The following series of aerial views explores how different program scenarios might use 25 University Plaza at different times of the year.



# 25 UNIVERSITY PLAZA SECTION

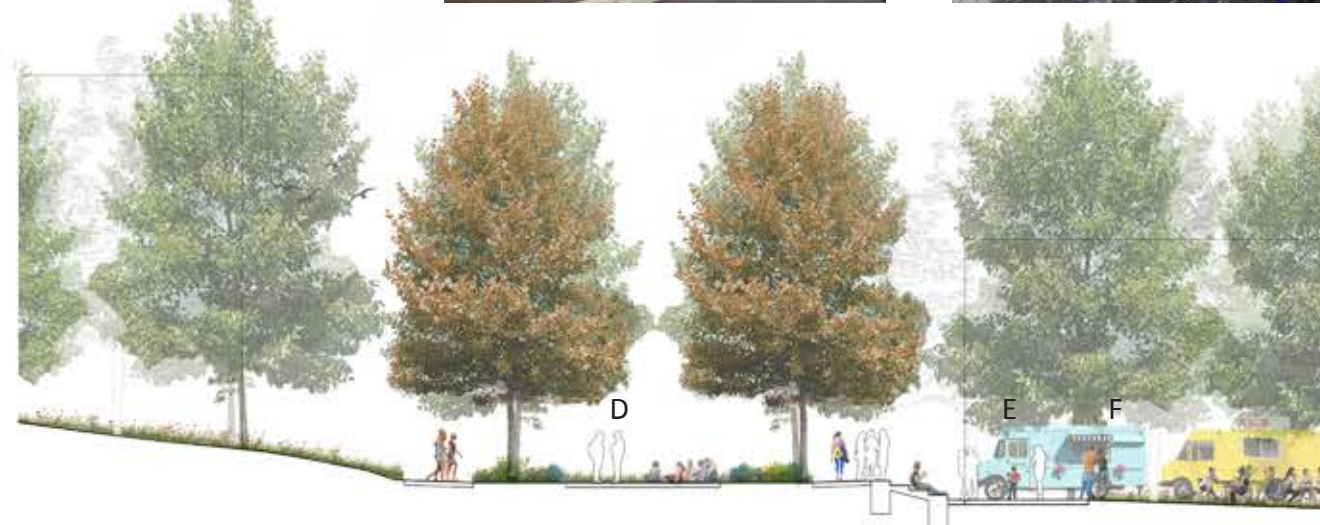


UNIVERSITY AVE  
LOOKING WEST



EXISTING

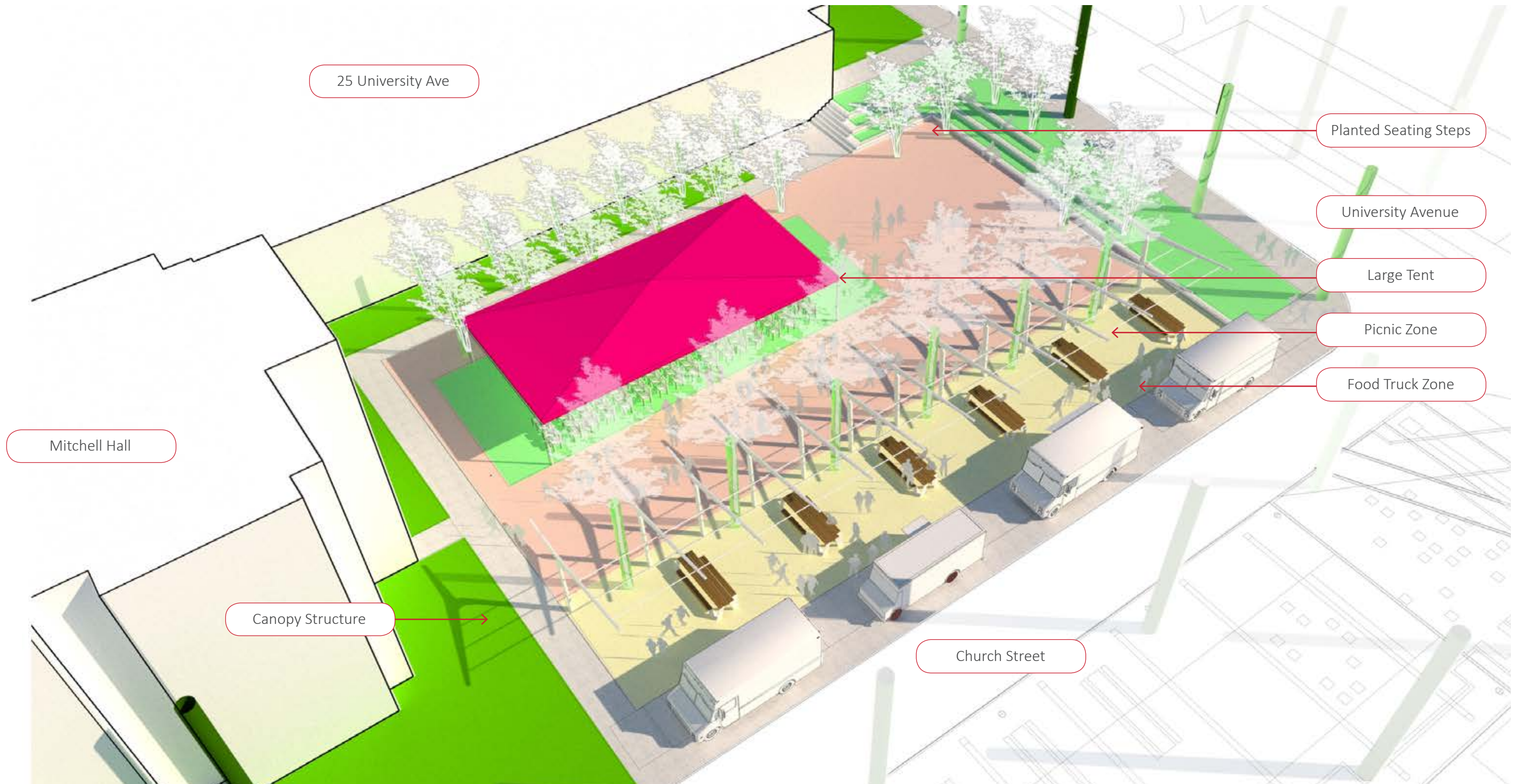
UNIVERSITY AVE



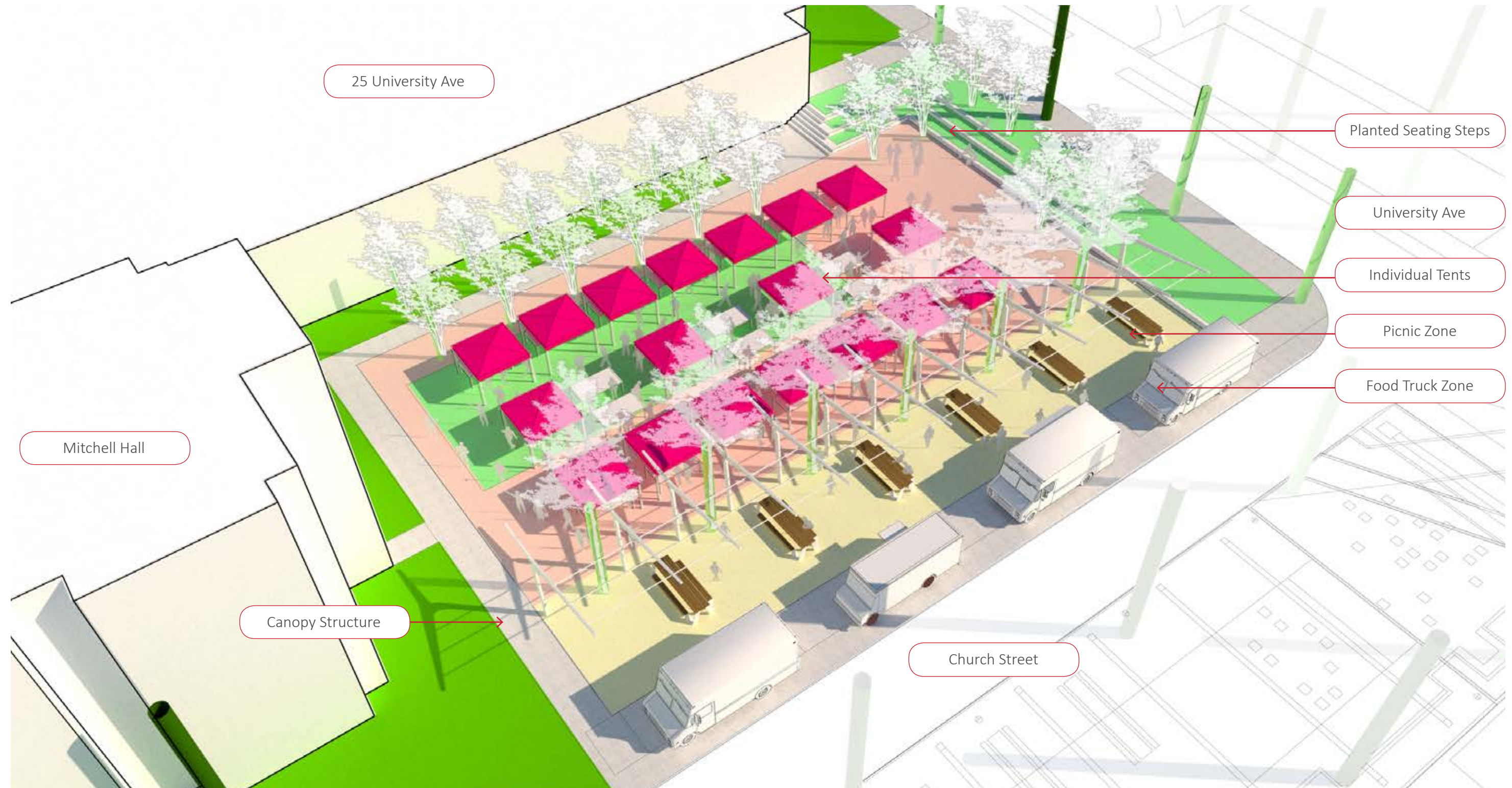
PROPOSED

UNIVERSITY AVE

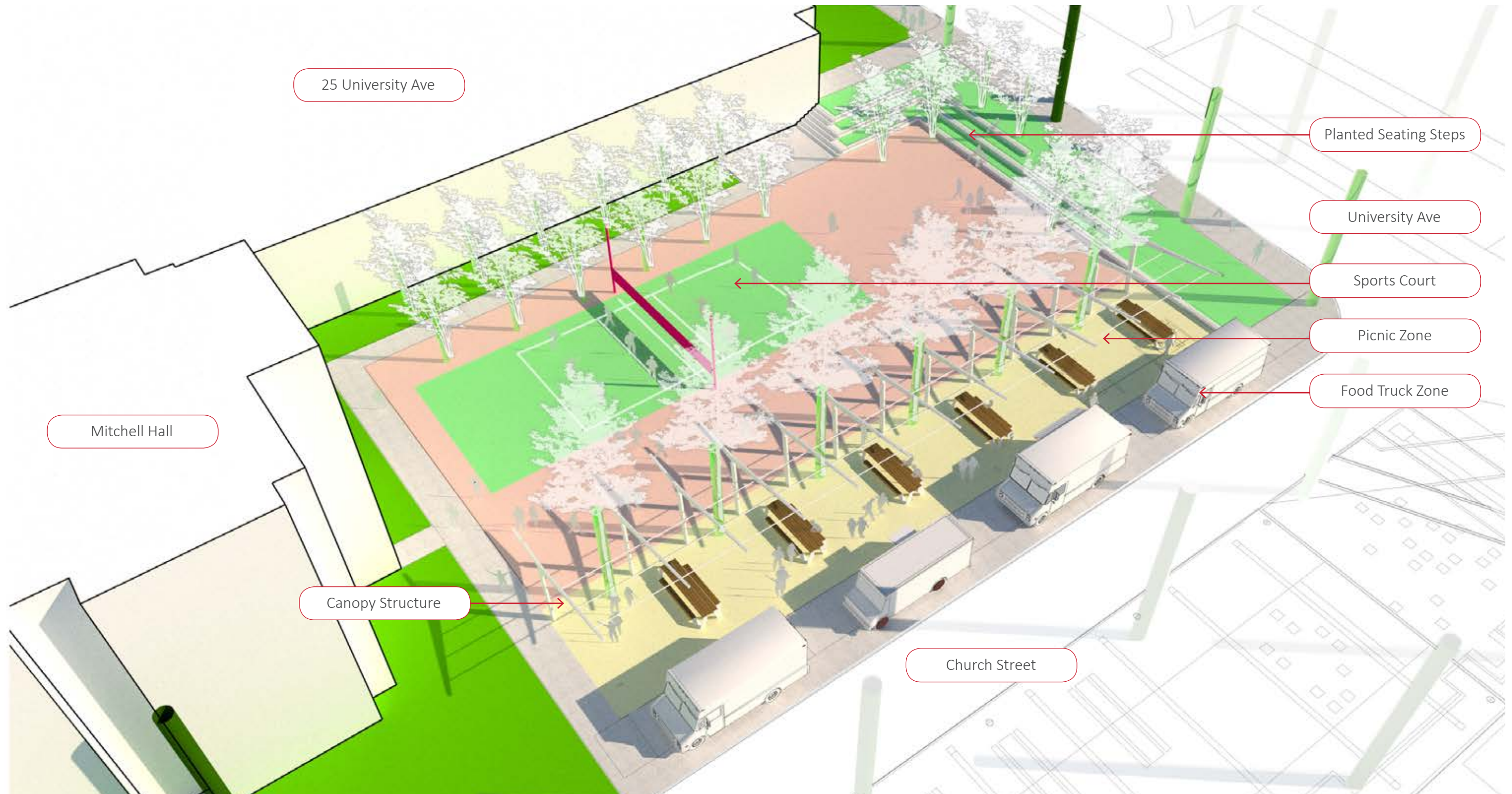
**25 UNIVERSITY PLAZA**  
PROGRAM AXON - EVENT TENT



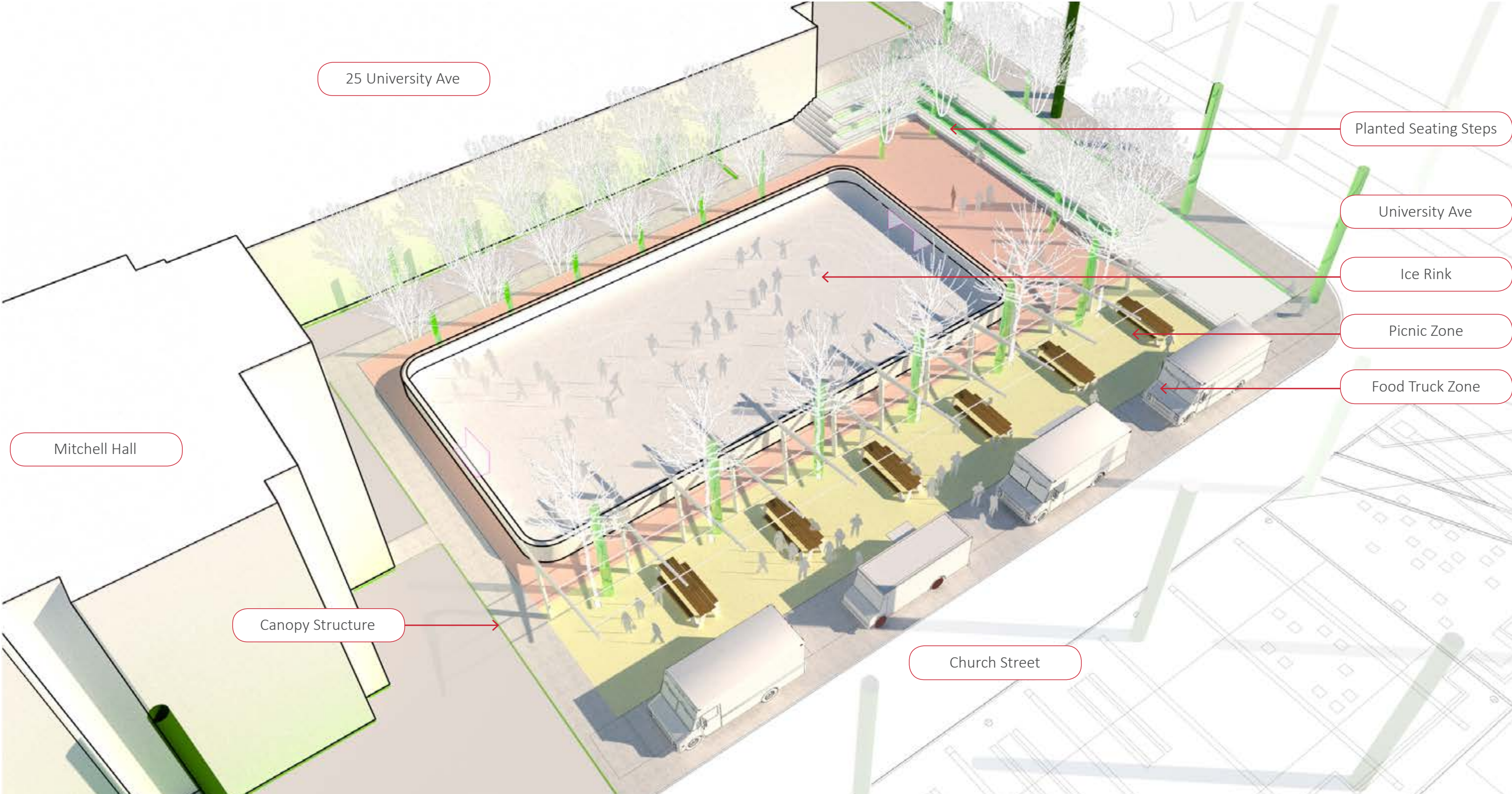
25 UNIVERSITY PLAZA  
PROGRAM AXON - STUDENT FAIR



# 25 UNIVERSITY PLAZA PROGRAM AXON - SPORTS COURT



**25 UNIVERSITY PLAZA  
PROGRAM AXON - SKATING RINK**



# 25 UNIVERSITY PLAZA PROGRAM AXON - MOVIE NIGHT



25 UNIVERSITY PLAZA  
VIEW



Food Truck Zone

25 University Ave

Mitchell Hall

Movie Screen

Seating Stairs



# 25 UNIVERSITY PLAZA VIEW



## EXISTING PLUM RUN CORRIDOR

Plum Run is a tributary stream to Brandywine Creek which eventually makes its way to the Delaware River. The watershed of Plum Run includes all of North and South Campuses making the ecological and stormwater stewardship most important. Located on the northern edge of Campus, the Plum Run is piped from the Sharpless Street Parking Garage to the New Street Parking Garage. Most of the surface area has been developed as a circulation corridor for service vehicles and students using a fragmented pedestrian path to get to and from the Lawrence Center and Student Recreation Center. One area along the corridor has retained a mature tree canopy. Part of this area of open space is a stormwater BMP associated with the Student Recreation Center. Adjacent to the stream corridor there is topographic variations of up to 15', which is unique on this relatively flat campus.



1. Plum Run Looking North



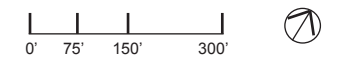
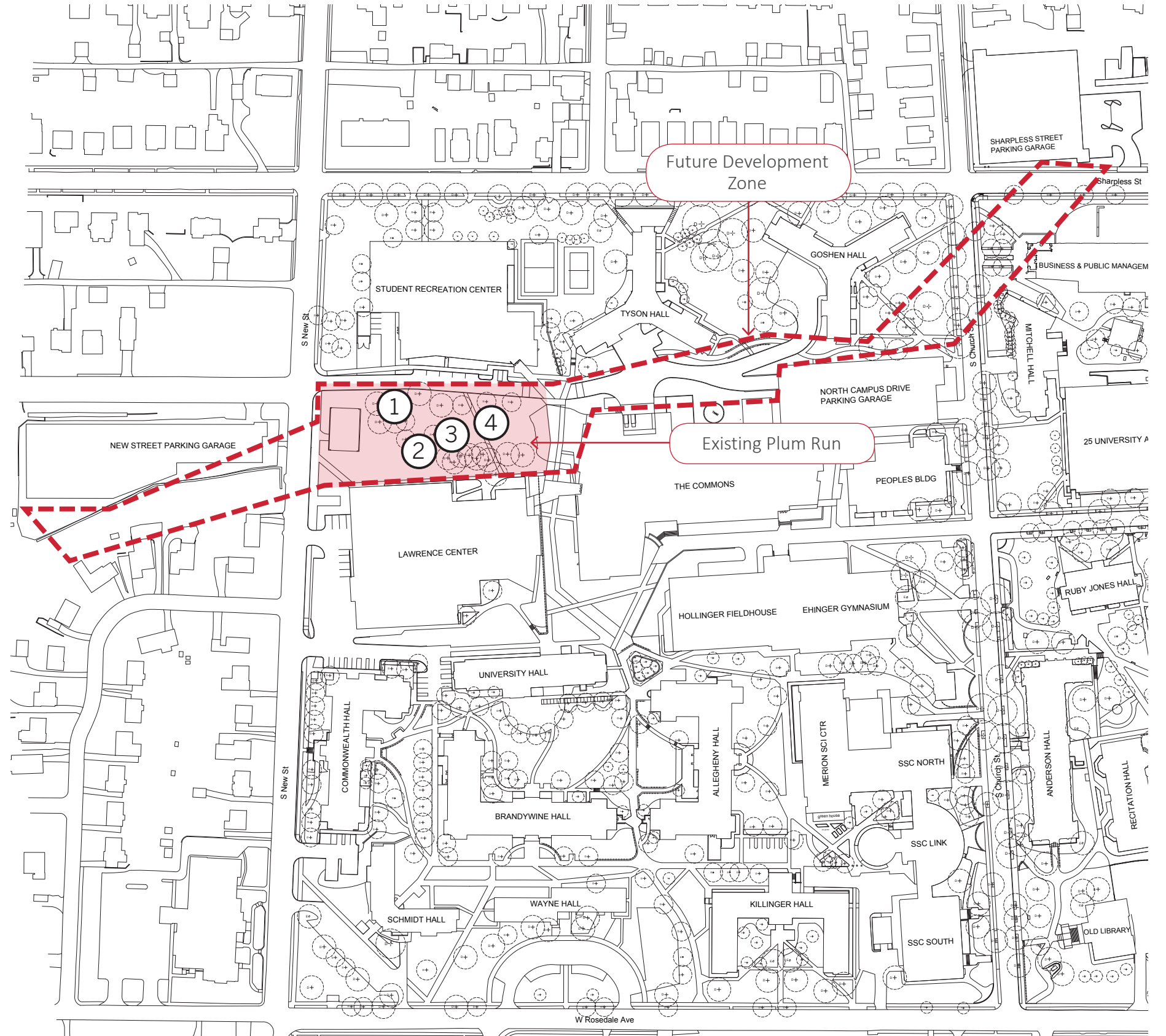
2. Plum Run Looking East



3. Plum Run Looking West

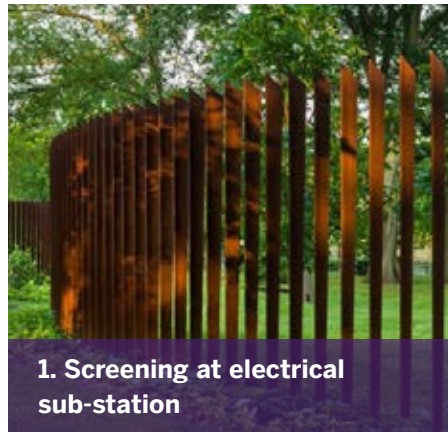


4. Plum Run looking Northeast



## PROPOSED PLUM RUN CORRIDOR

The Plum Run Corridor has enormous potential to be a dynamic amenity for the University. It is envisioned as an ecologically enhanced and connected corridor that provides opportunities for outdoor classrooms, biological research, and water quality monitoring along this natural east-west corridor. Pedestrian circulation will be simplified into one, continuous boardwalk with strategic locations for outdoor classrooms and quiet reflection. The extents of North Campus Drive are reduced to increase the natural character of the corridor. Subtle landforms create more dynamic spatial conditions along the corridor, while referencing the historic Plum Run corridor. An ecologically diverse corridor is characterized by a diversity of native vegetation: herbaceous groundcover, shrubs, understory trees, and canopy trees.



1. Screening at electrical sub-station



2. Screening Along Lawrence Center Service Yard



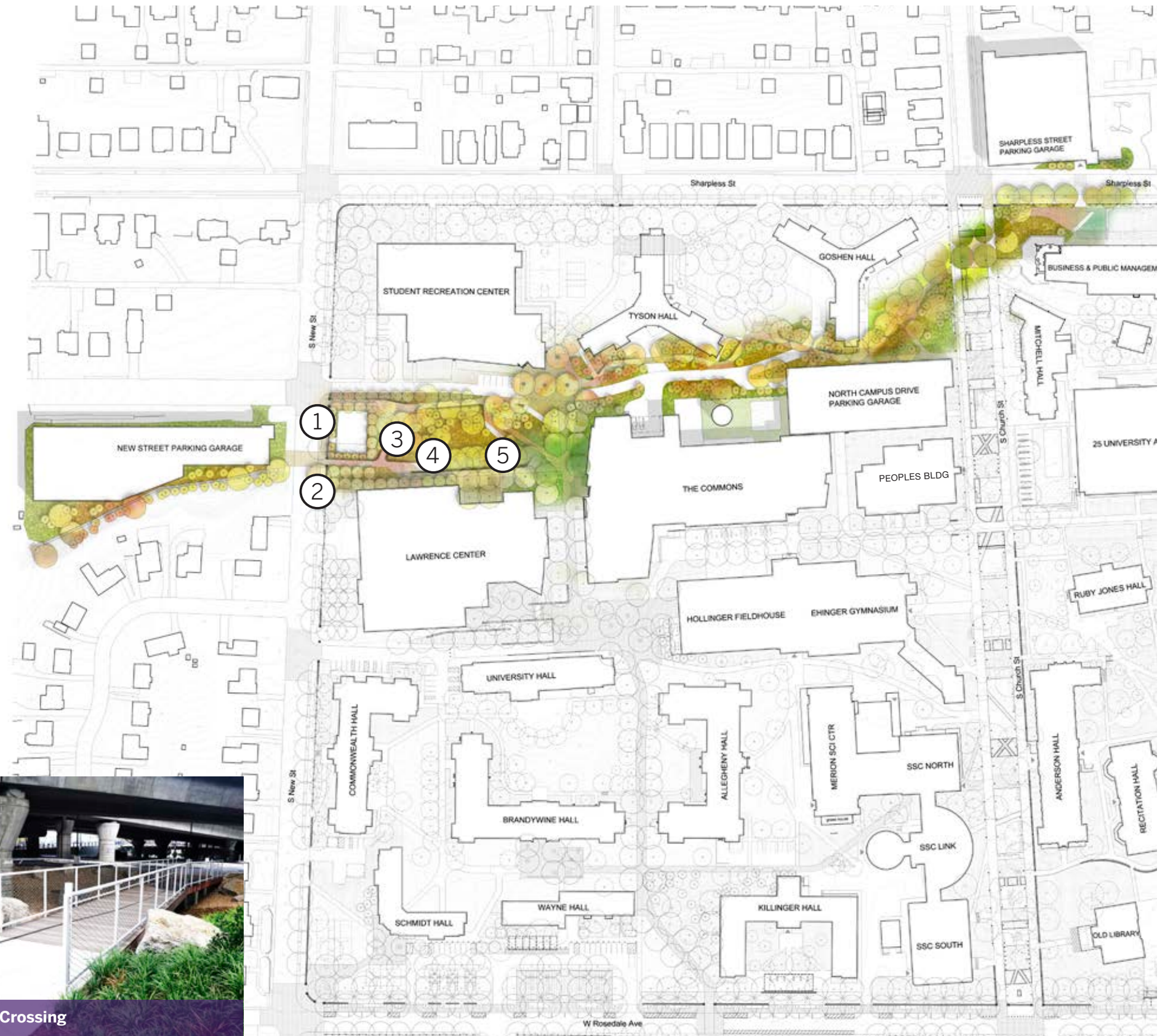
3. Outdoor Classroom Deck



4. Woodland Stream Valley



5. Crossing



# PLUM RUN CORRIDOR



1. Screening at electrical sub-station



2. Screening Along Lawrence Center Service Yard



3. Boardwalk Path



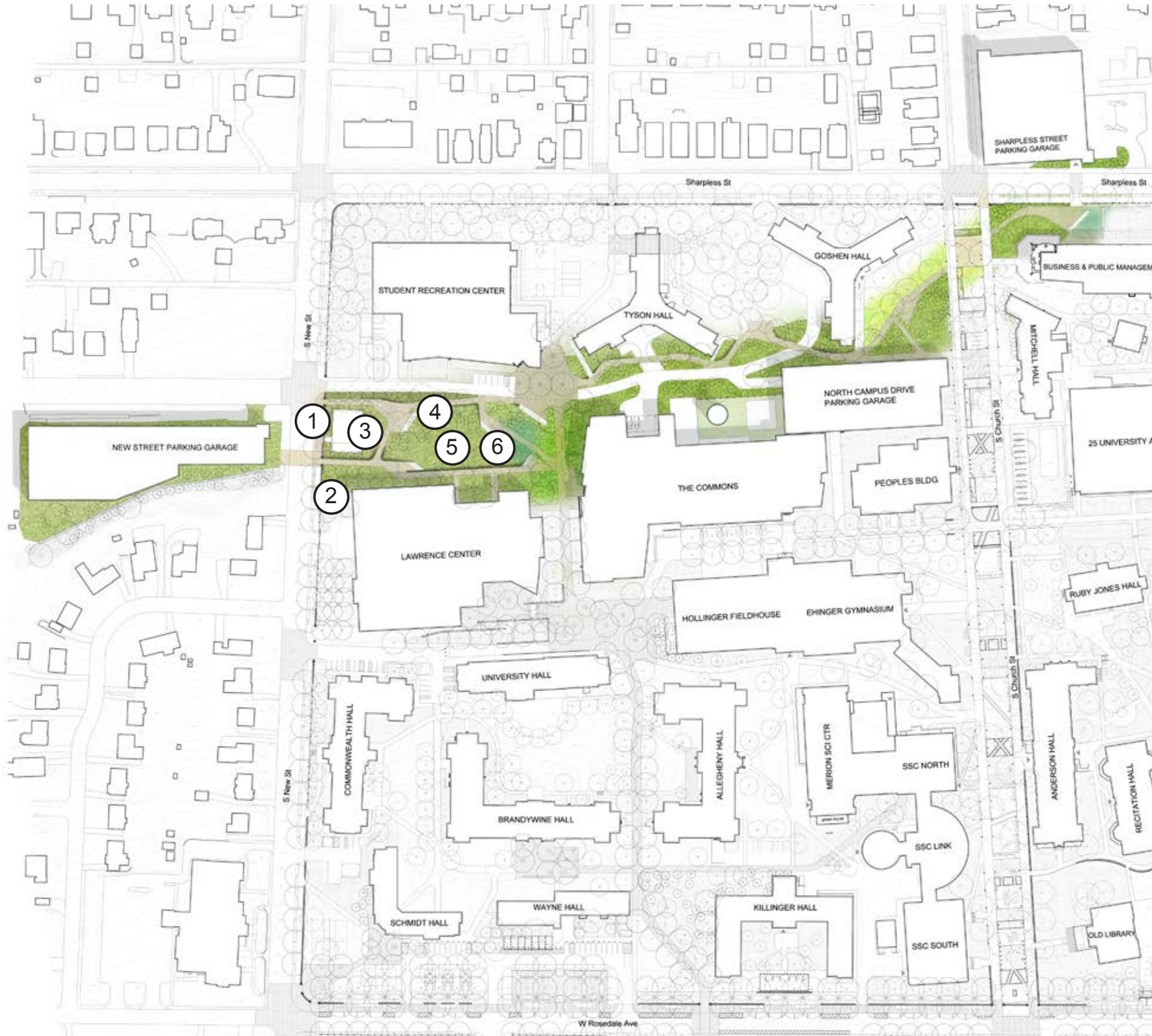
4. Outdoor Classroom Deck



5. Woodland Stream Valley



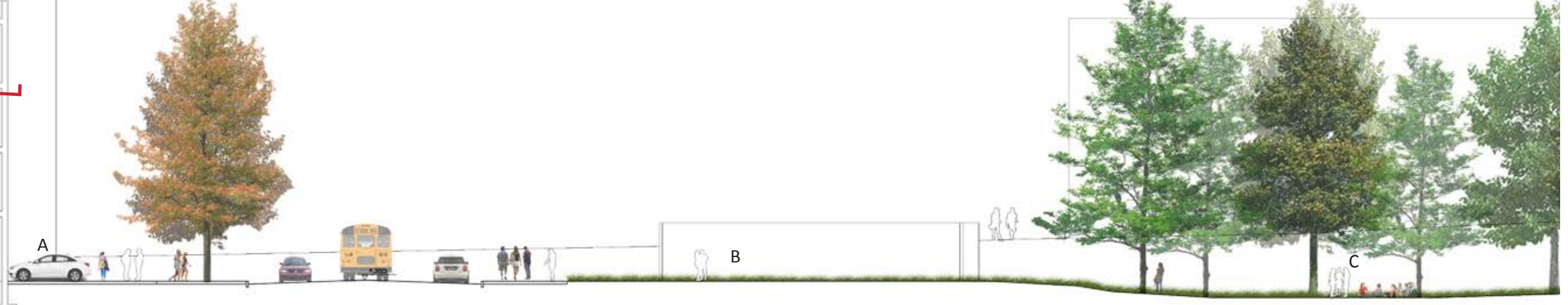
6. Crossing



# PLUM RUN CORRIDOR SECTION



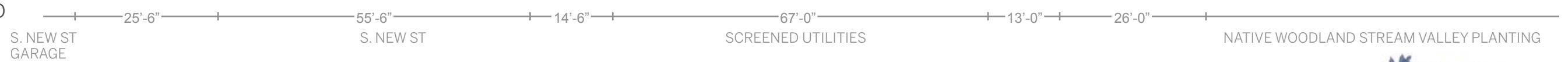
S. NEW ST  
LOOKING NORTH



EXISTING



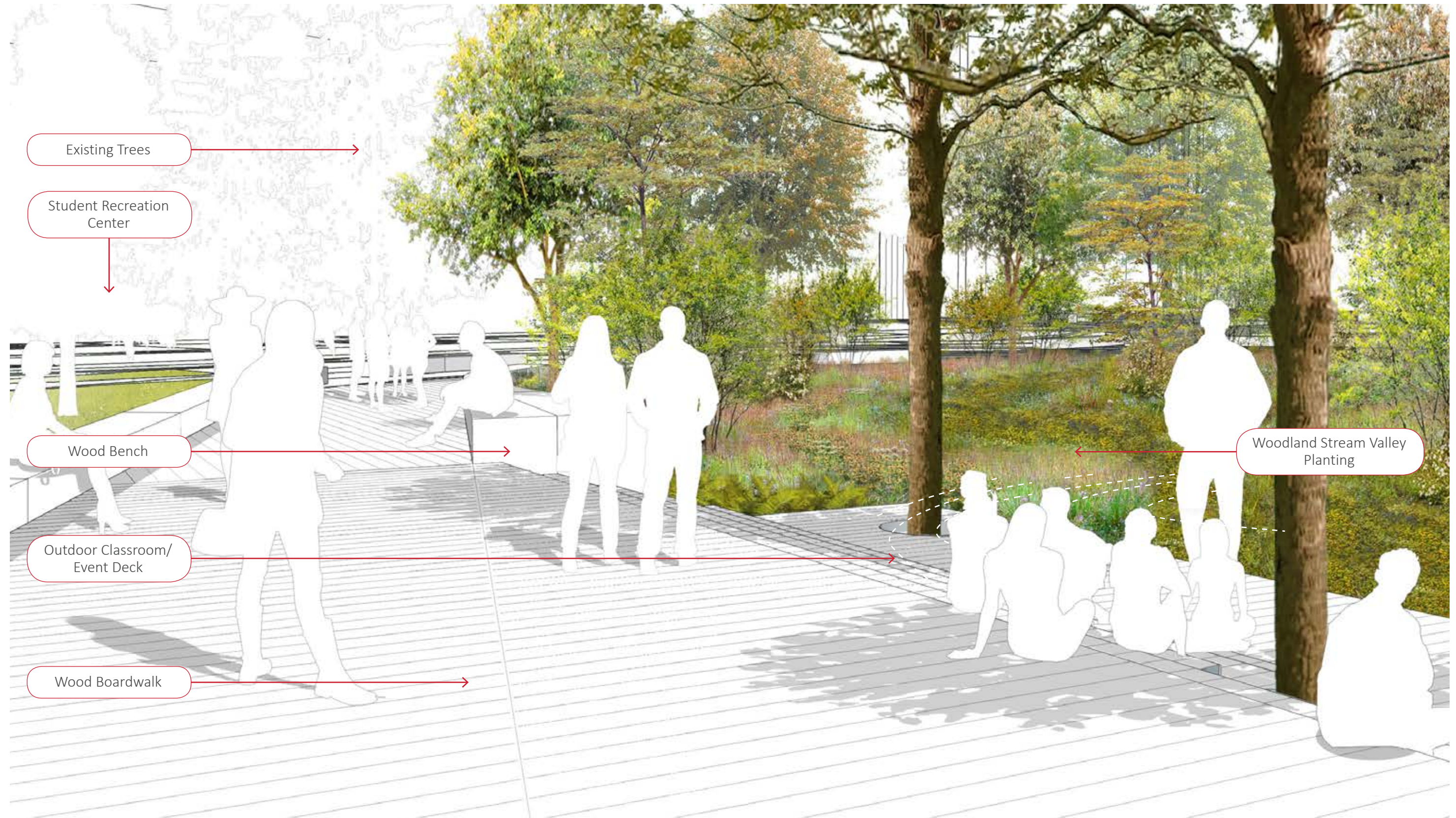
PROPOSED



**PLUM RUN CORRIDOR  
AERIAL VIEW**

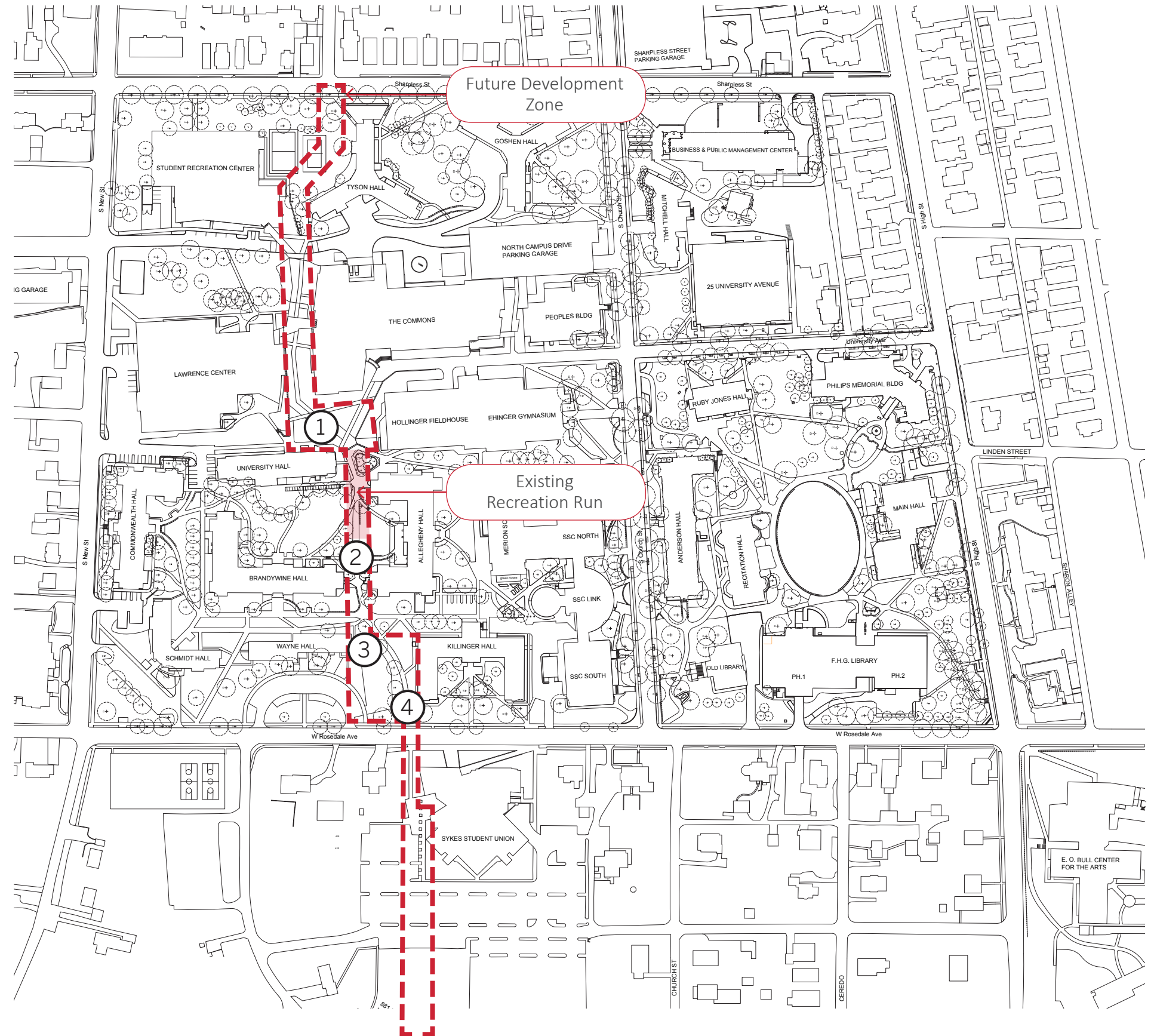


# PLUM RUN CORRIDOR VIEW

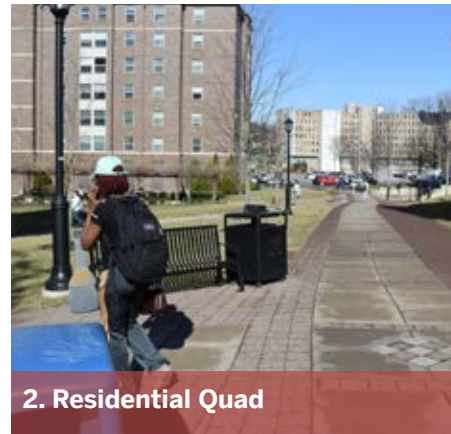


## EXISTING RECREATION RUN

Recreation Run is a heavily trafficked pedestrian path that connects the Student Recreation Center to student housing and Sykes Student Union. Recreation Run is a primary north-south path that collects many secondary paths from the southern residential halls, Lawrence Center, and Hollinger Field House. The path is absorbed in the field of parking at lot 'D' which will be removed with the building of The Commons.



1. The Common Area



2. Residential Quad



3. Walkway Between Wayne and Killinger



4. Recreation Run Entrance



## PROPOSED RECREATION RUN

The Recreation Run is a primary north-south walkway with unique adjacency to important areas on Campus. The Run connects the Student Recreation Center, Lawrence Center, The Commons, and resident halls to the Sykes Student Union. The Run will include a southern extension past Sykes to 'K' Lot and northern extension from the front of the Student Recreation Center to Sharpless Street. This connection up to S. Darlington Street crosswalk is a major desire path by students and an opportunity to further connect the Campus with a "Gateway Bridge." As a primary walkway and designated bicycle route, The Run will be a minimum of 12'-0" wide which can accommodate light vehicles on Move-in Day. The paving material will have a more contemporary finish with distinguishable bicycle and pedestrian lanes. The path is enhanced with a pronounced tree planting to create a continuous, vibrant canopy and establish a datum for spacing signature pedestrian lights and benches that create moments of respite and opportunities for small group gathering. A number of enhanced plazas are located along the Recreation Run to link buildings and provide for programmed and non-programmed events.



1. Community Workout Stations



2. Plaza



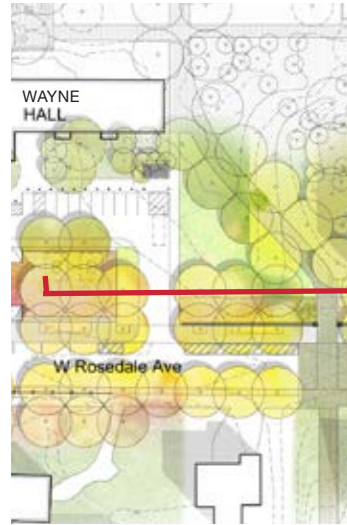
3. Lawn



4. Pedestrian Path

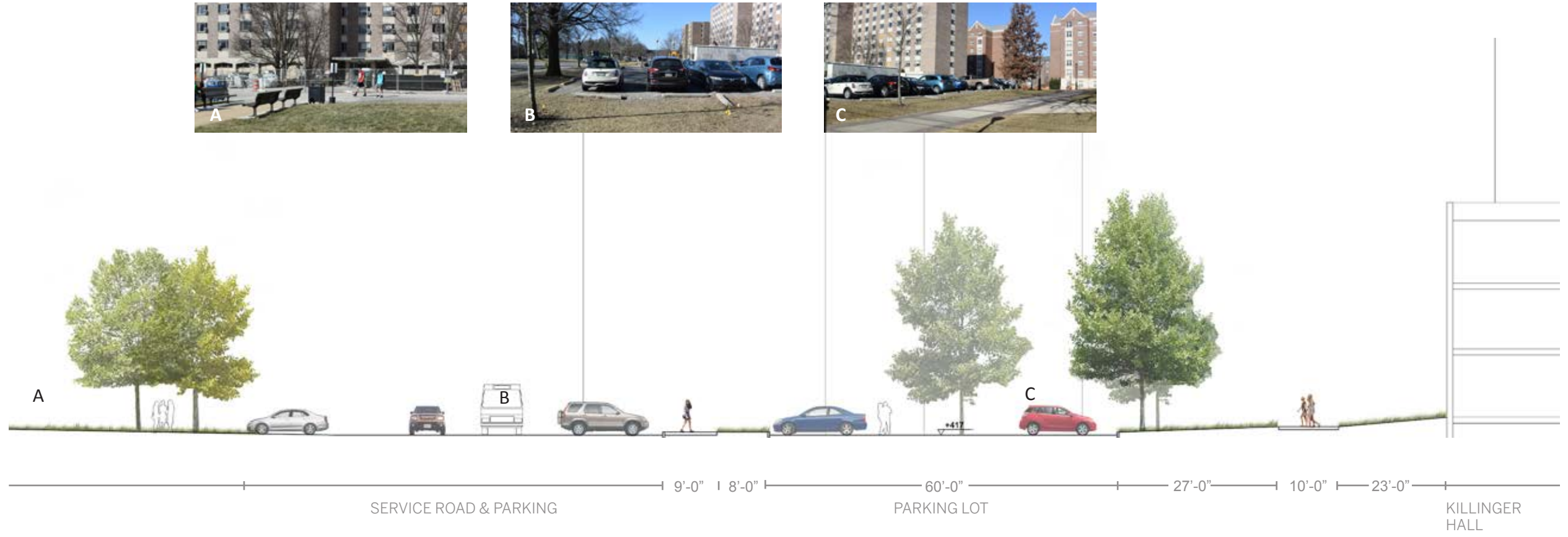


# RECREATION RUN SECTION

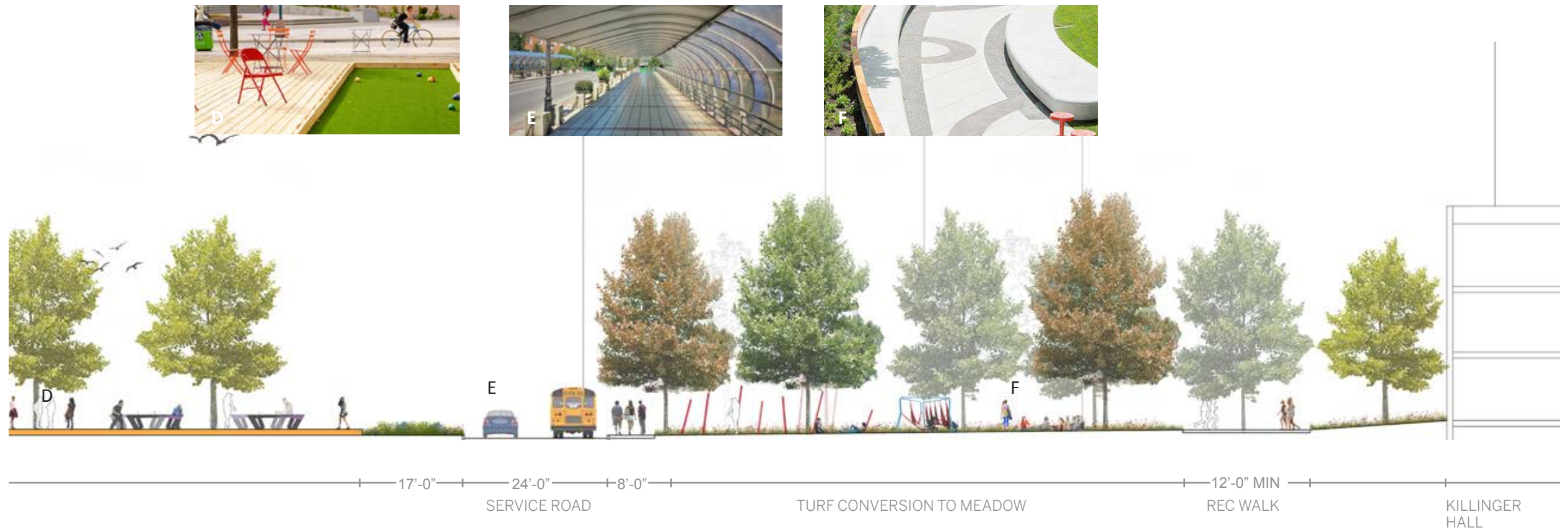


S. NEW ST  
LOOKING NORTH

EXISTING



PROPOSED

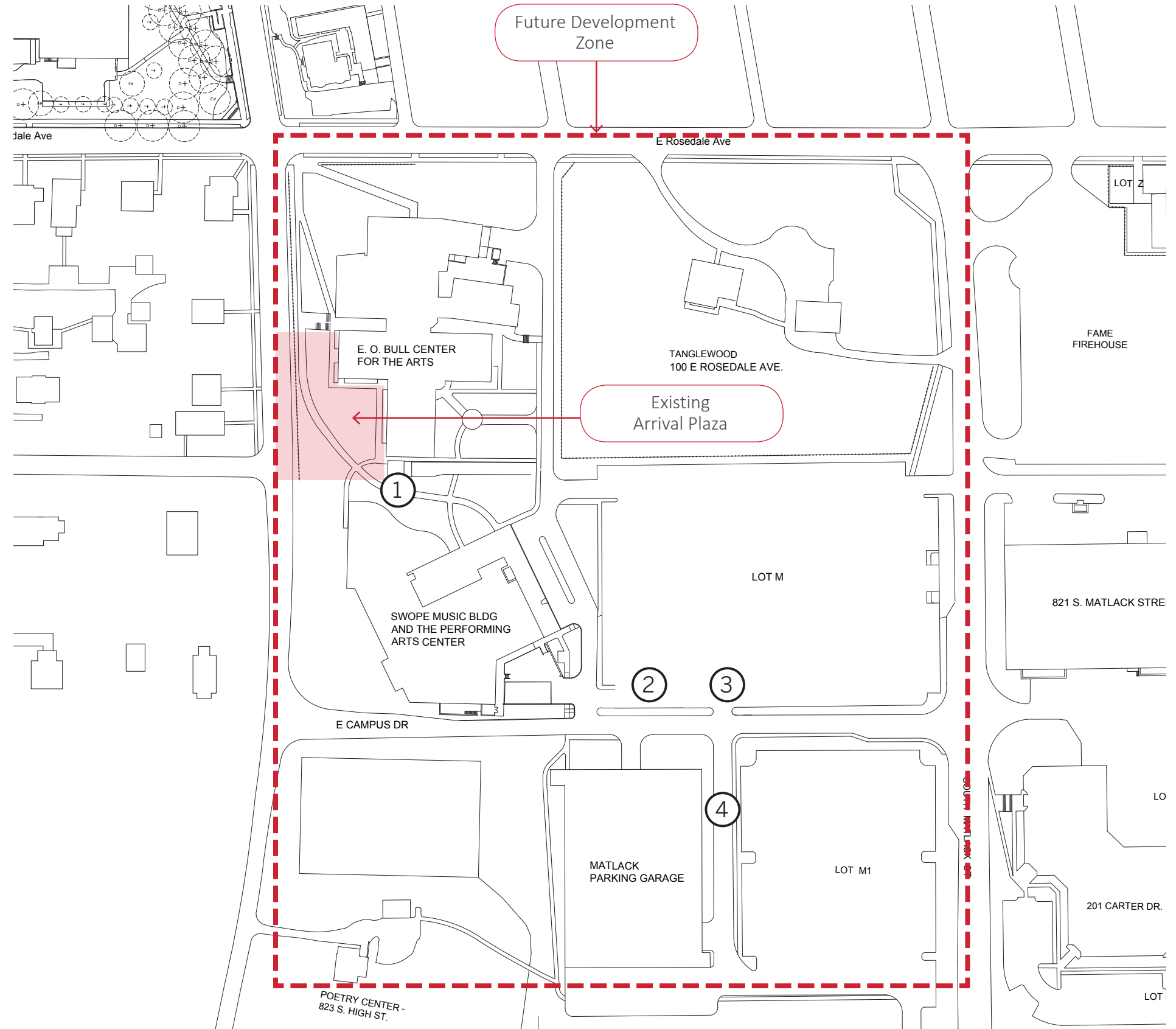


# RECREATION RUN VIEW

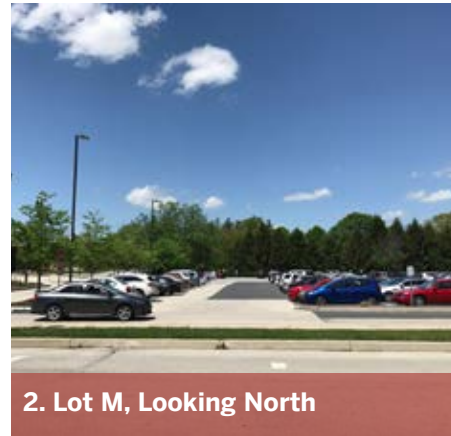


## EXISTING ARRIVAL PLAZA

A loosely defined area between Adler Theatre, Tanglewood, and Matlack Parking Structure is recognized as the de facto 'Arrival' to the University for students and visitors utilizing parking opportunities. Expansive and remote surface parking lots do not lend themselves as welcoming to either potential commuters or students in residence. Lack of active space, barring performance nights at the Theater, leaves this area under attended and gives the impression of being unsafe to users.



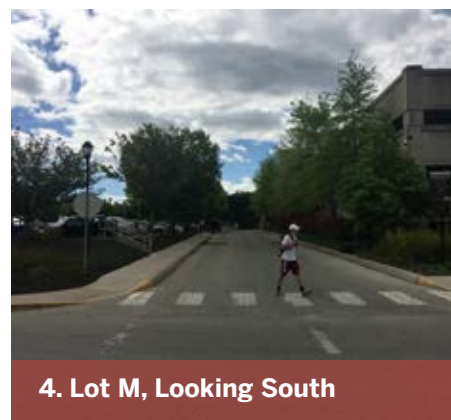
1. Pathway to Swope



2. Lot M, Looking North



3. Lot M, Looking Northwest



4. Lot M, Looking South

## PROPOSED ARRIVAL PLAZA

The Plaza will create this sense of arrival for visitors and a more significant threshold to Campus. Fifty-two parking spaces will be removed from the 'M' Lot with the newly acquired space being converted into green space for the new Arrival Plaza. A second parking garage will be added to the Matlack Parking Structure to accommodate any displaced parking. The space directly in front of Matlack will be used as a plaza with water features, seating, and groves of trees for small and large group gatherings and photo opportunities. Further, circulation is improved with the upgraded extension of Presidents Walk creating a more important connection from the parking garages to North Campus.



1. Plaza



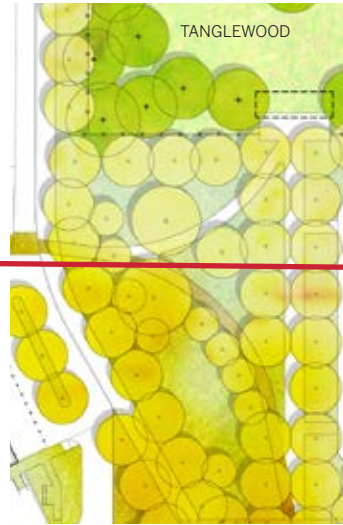
2. Ceremonial Gateway



3. Wooded Green

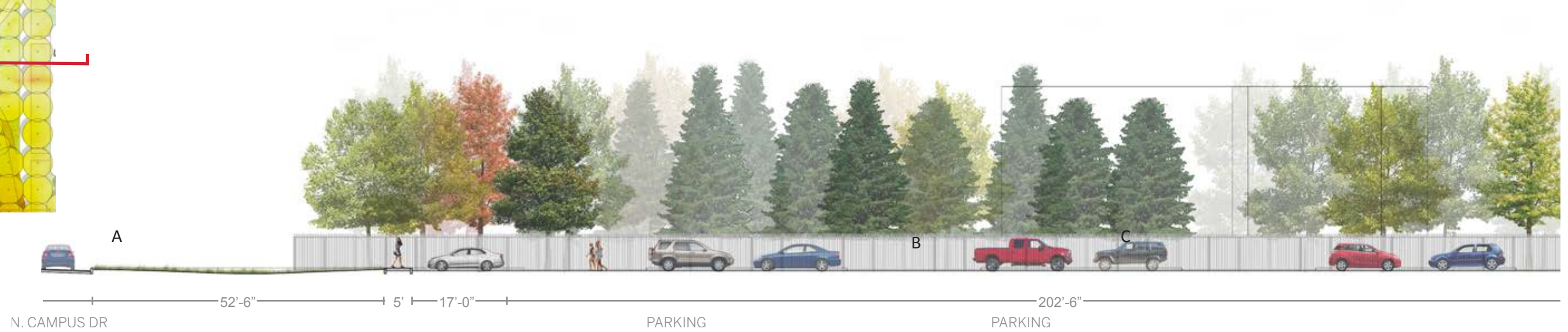


# ARRIVAL PLAZA SECTION



ARRIVAL PLAZA  
LOOKING NORTH

EXISTING



PROPOSED

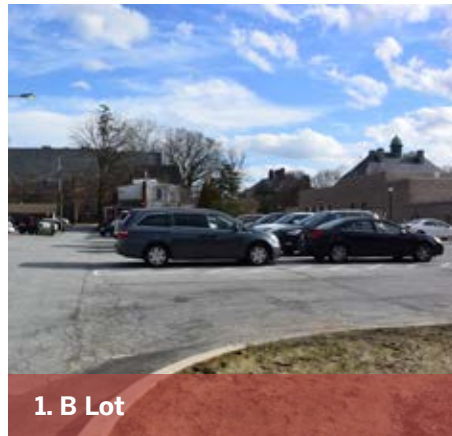
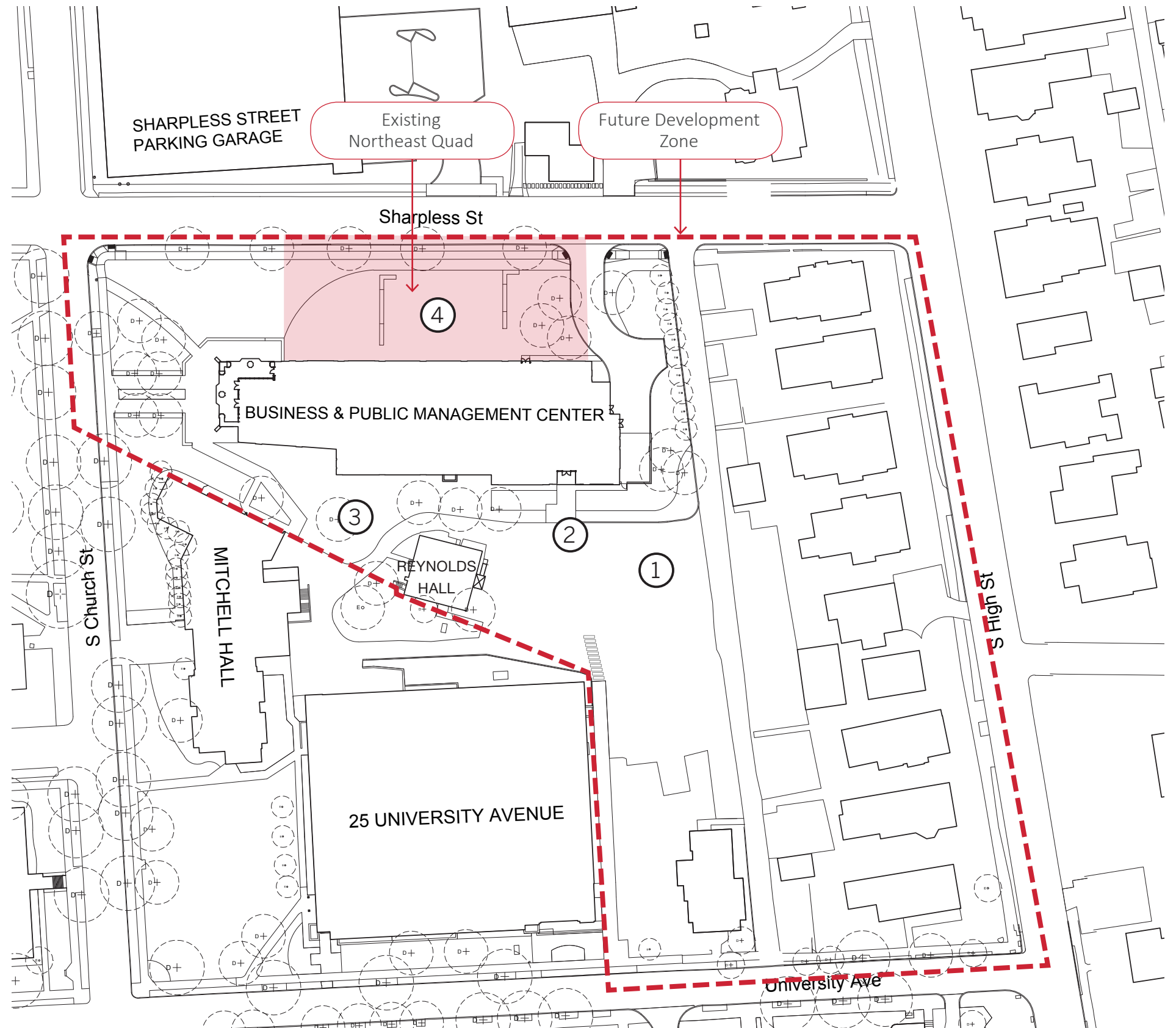


# ARRIVAL PLAZA VIEW



## EXISTING NORTHEAST QUAD

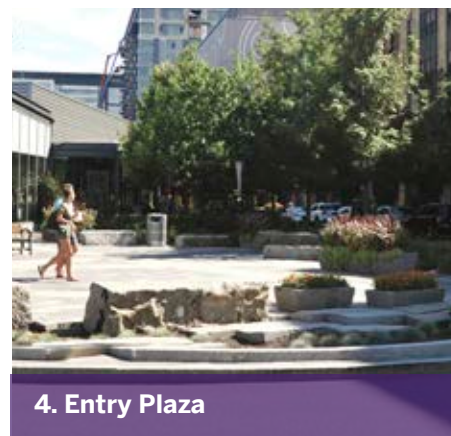
The Northeast Quad is defined as the area of Campus bounded by Sharpless Street, S. High Street, University Avenue, and Reynolds Alley. The strip of land between Reynolds Alley and S. High Street is mostly privately owned with two parcels owned by the University. Acquiring these properties in the future would allow the University to expand and complete a more symmetrical Campus with all four corners displaying prominent 'Gateways.' West of Reynolds Alley currently functions as parking and back-of-house service for academic and administrative buildings.





## PROPOSED NORTHEAST QUAD

The Northeast Quad is a vision for what would happen if the University were to purchase, rezone, and consolidate the existing residential properties. The program for the Quad includes the addition of a new academic building designed to wrap the corner while providing a major gateway experience, opening to a new student open space – in effect what Phillips Memorial Hall did for the Campus when built in 1926. The Quad will connect to Presidents Walk, as it approaches Business and Public Management Center, providing access throughout the Campus.



# 8. NORTHEAST QUAD SECTION



ARRIVAL PLAZA  
LOOKING NORTH



# NORTHEAST QUAD VIEW



MASTER PLAN AERIAL - NO TREES



# MASTER PLAN AERIAL VIEW - TREES



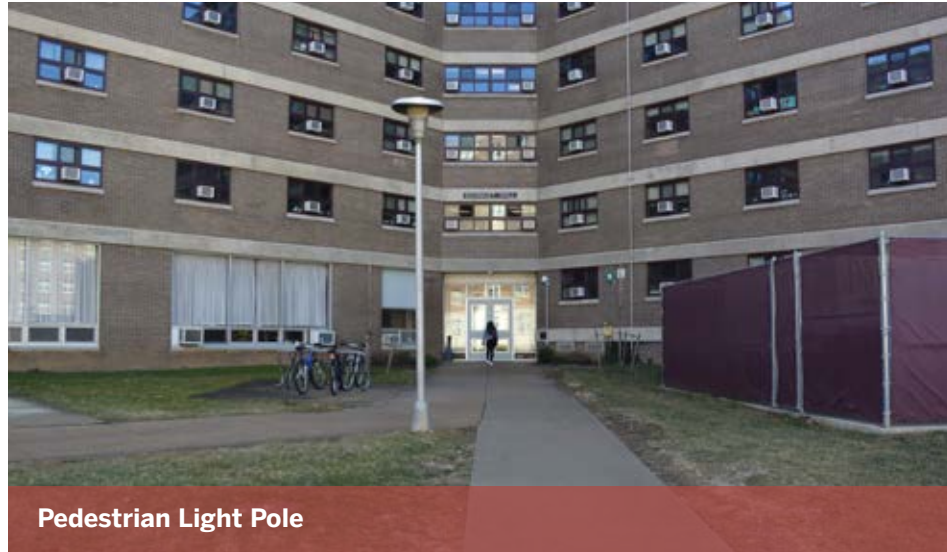


# V. Campus Accent



# EXISTING CAMPUS LIGHTING

The University has made concerted efforts to update the pedestrian lighting throughout Campus to LED fixtures of a single style. While remnant fixtures and some newer non-conforming fixtures still exist, this overall program is making for a more evenly lighted, energy efficient, safer Campus. Safety concerns were voiced regarding peripheral parking areas, and intensified lighting needs are to be considered for these areas.



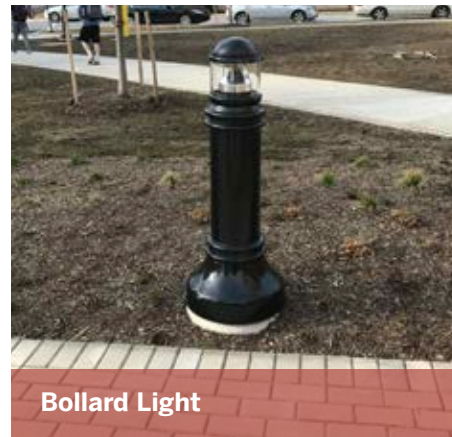
Pedestrian Light Pole



Street Light



Parking Light



Bollard Light



# PROPOSED CAMPUS LIGHTING

Supplemental and specialty lighting will provide project specific enhancement to the general Campus lighting, suggested and specific for social corridors, plazas, and primary walkways. Simple additions of festoon lighting and smart pathway lighting will allow extended hours of use and enhanced safety and security.



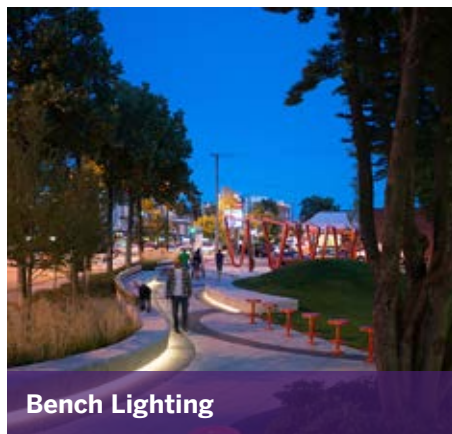
Feature Lighting



Smart Lighting



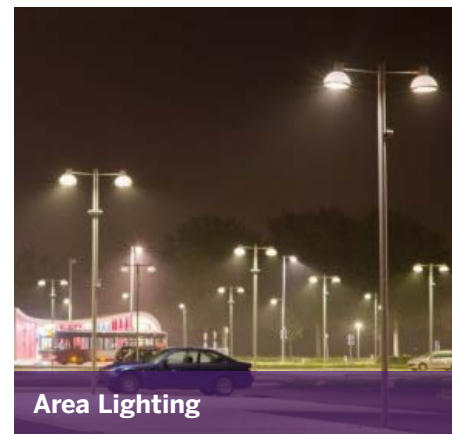
Perimeter Lighting



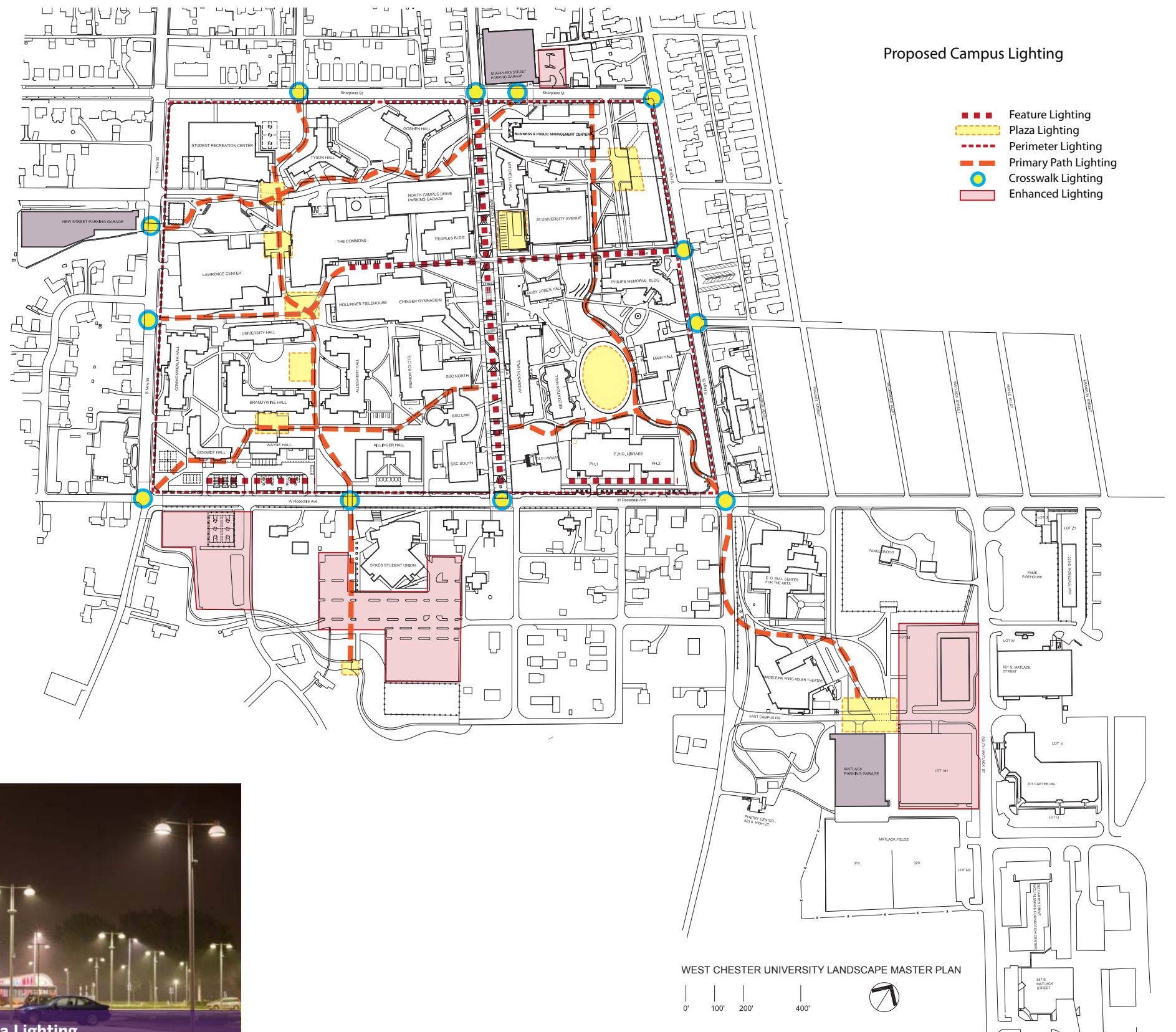
Bench Lighting



Festoon Lighting



Area Lighting



# EXISTING CAMPUS FURNITURE

The University has made concerted efforts to update the furniture throughout Campus, including standardized benches, tables, trash and recycling receptacles, and bicycle racks of a single style. While remnant furnishings still exist, this overall program is making for a clean, simple distribution of furnishings. Concerns were voiced regarding usefulness of furnishings where too much sun or shade limits comfort. Adirondack chairs have been placed in two locations to provide a casual sitting experience.

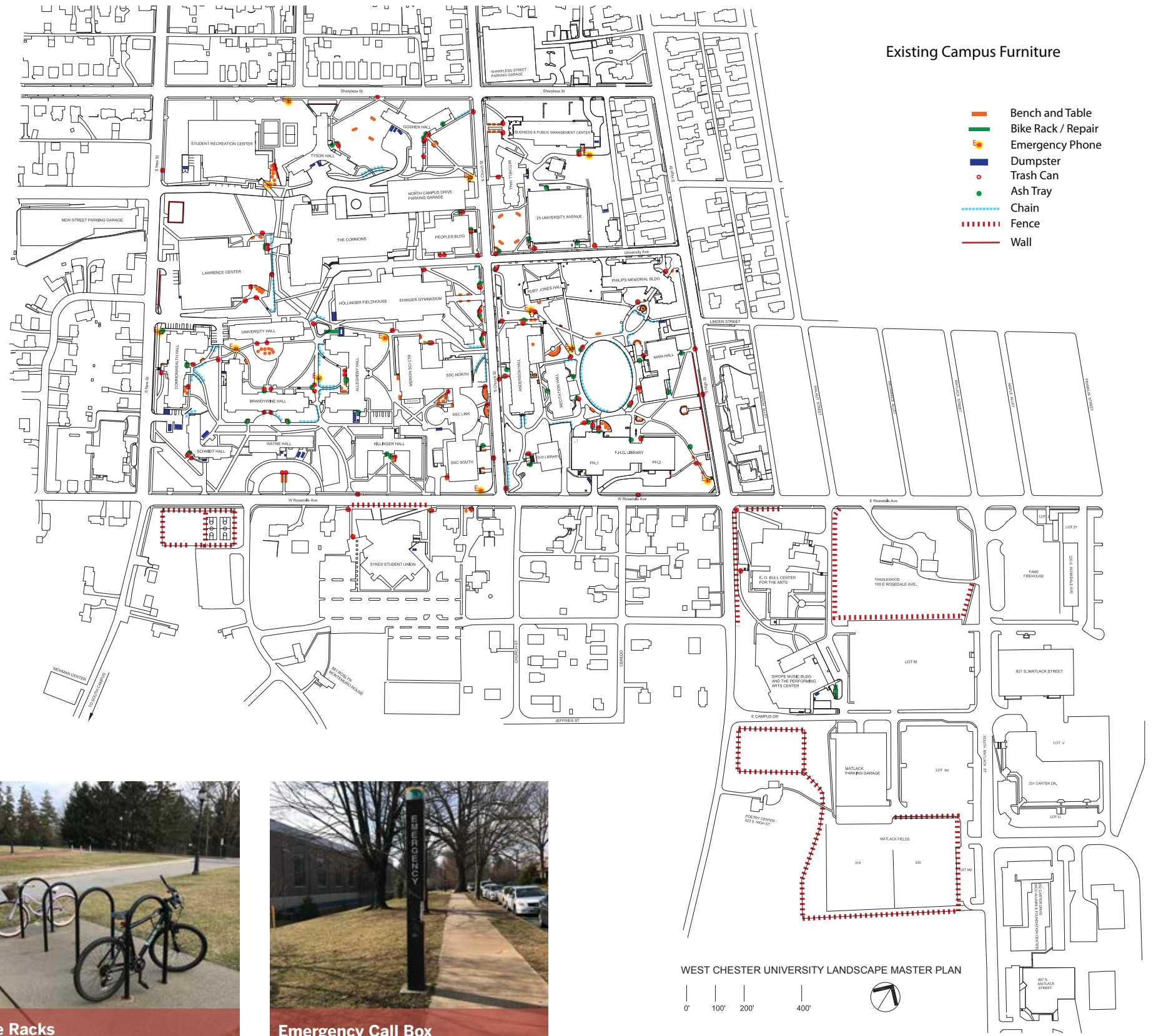
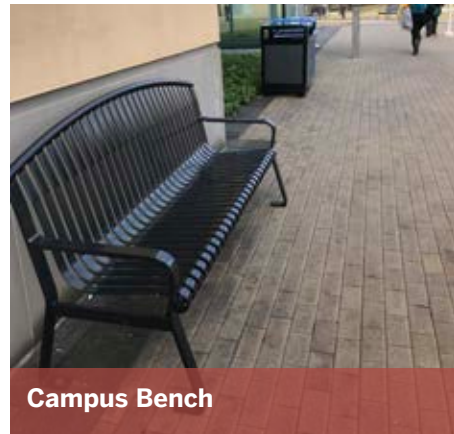


Table & Chairs



Campus Bench



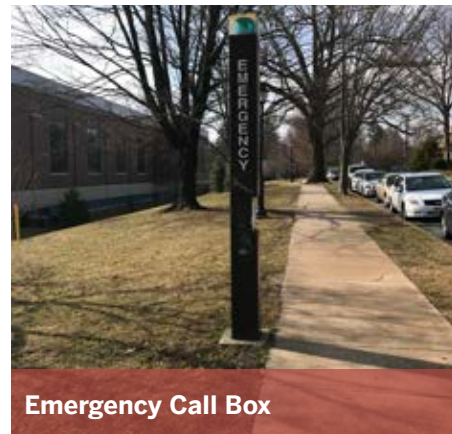
Bollards



Trash & Recycling



Bike Racks



Emergency Call Box

# PROPOSED CAMPUS FURNITURE

Supplemental and specialty furniture will provide project specific enhancement to the general Campus furniture, suggested and specific for social corridors, plazas, and primary walkways. Simple additions of site specific benches and game tables will accommodate activities throughout Campus.



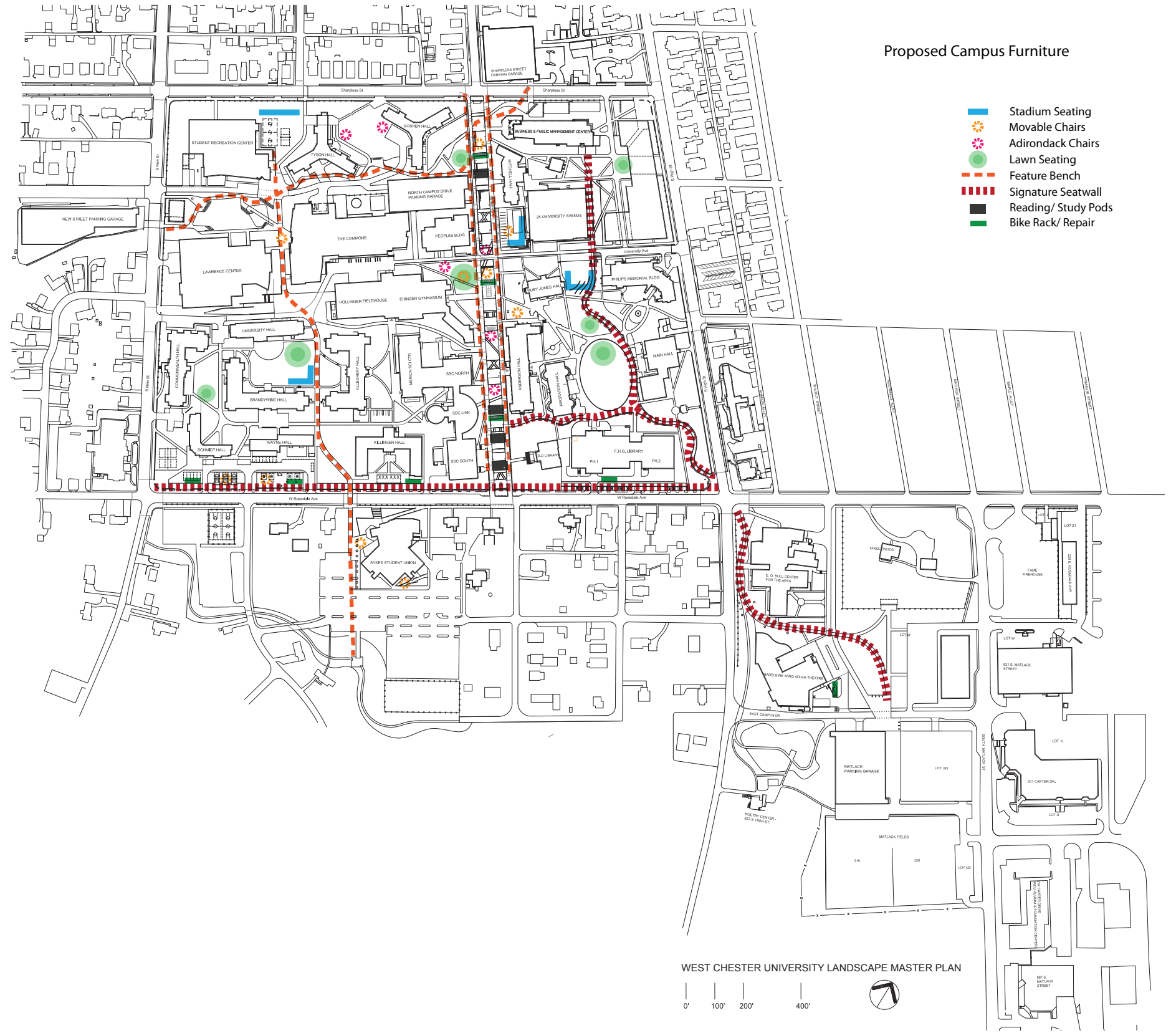
Bike Infrastructure



Signature Seating



Experiential Furniture



**SPECIALTY CAMPUS FURNITURE**



**Campus Bench**



**Campus Table & Chairs**



**Experiential Furniture**



**Movable Chairs**



**Feature Path Bench**



**Seatwall**

## SPECIALTY CAMPUS FURNITURE



Bollard



Campus Bike Rack



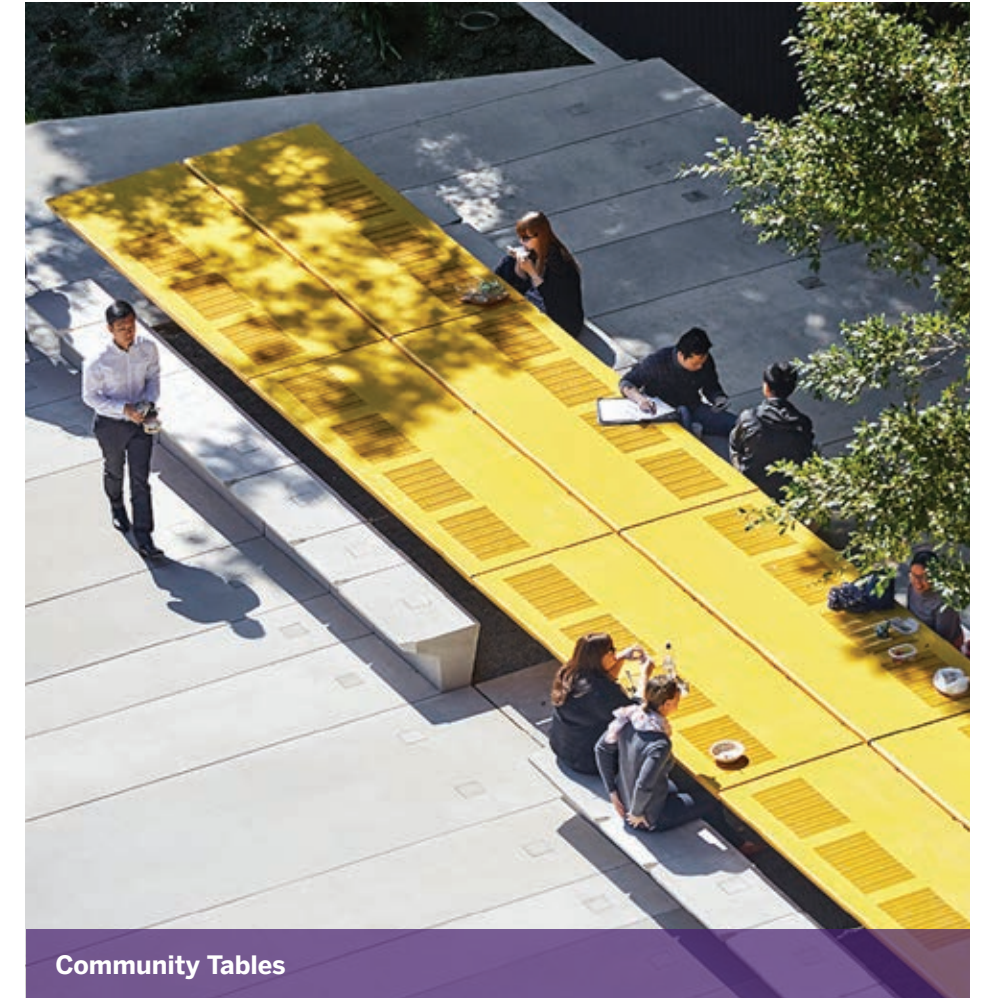
Bike Repair



Wifi Kiosk



Tree Grate



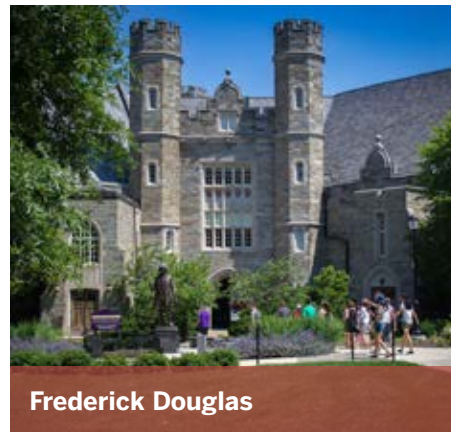
Community Tables

# EXISTING CAMPUS ART

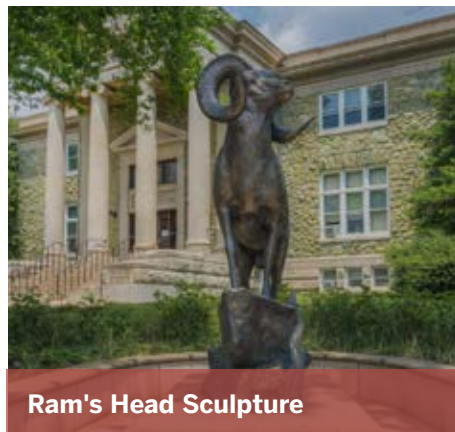
West Chester University has a long history of displaying art on Campus. The previous iteration of the Quad was home to many sculptures, some with associated earthworks. Sculptures were moved to E.O. Bull Center when the Quad was redeveloped. The Frederick Douglass and Ram sculptures hold prominent positions on Campus. New art has recently been placed at the Merion Science Center garden and next to Brandywine Hall.



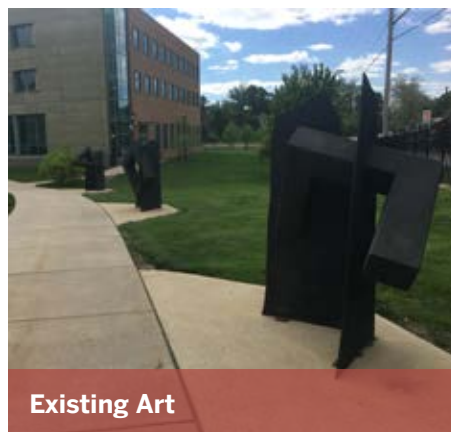
Existing Art



Frederick Douglas



Ram's Head Sculpture

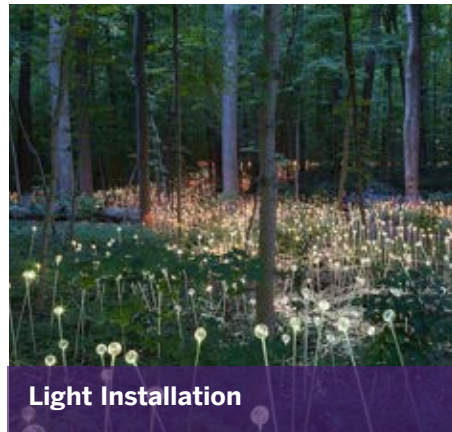


Existing Art

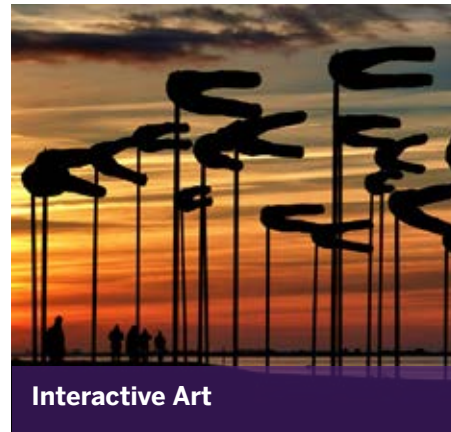


## PROPOSED CAMPUS ART

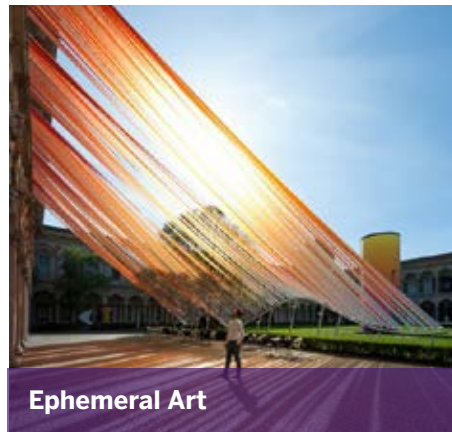
With new art being fabricated on Campus and other pieces being endowed to the University, an Art Walk and Art Park are proposed. While site specific pieces can be placed randomly throughout Campus, the Walk and Park provide opportunity for placement and more focused viewing. The Art Walk would originate at the Main Entry to North Campus, follow Presidents Walk, cross the Plum Run Corridor and return via the Recreation Run. The Art Park would encompass the landscape of East Campus around E.O. Bull Center, Swope Music Building, Poetry Center, Tanglewood, and the Arrival Plaza. Art should also be located in all student activity corridors.



Light Installation



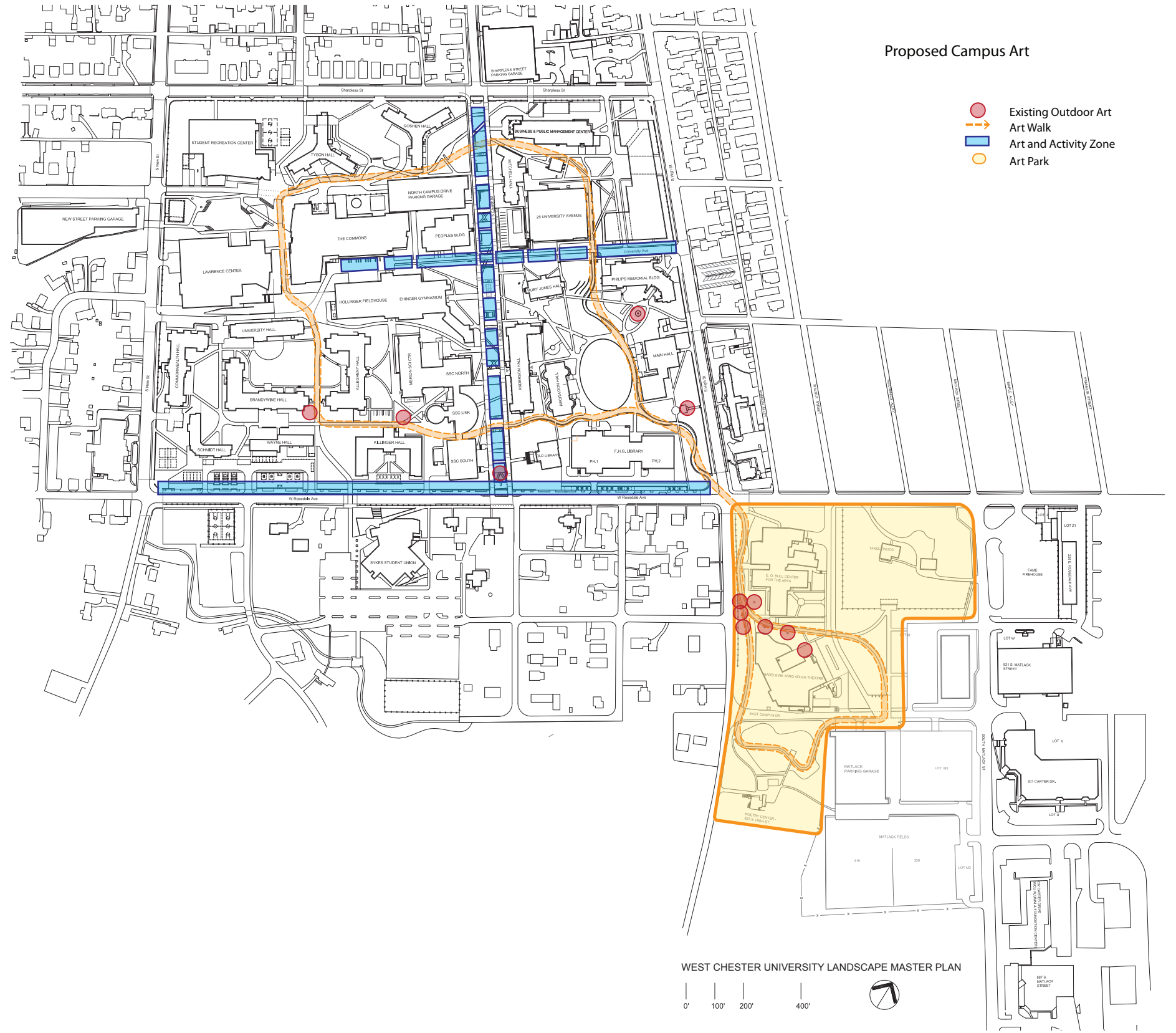
Interactive Art



Ephemeral Art



Wall Art



# EXISTING CAMPUS SIGNAGE

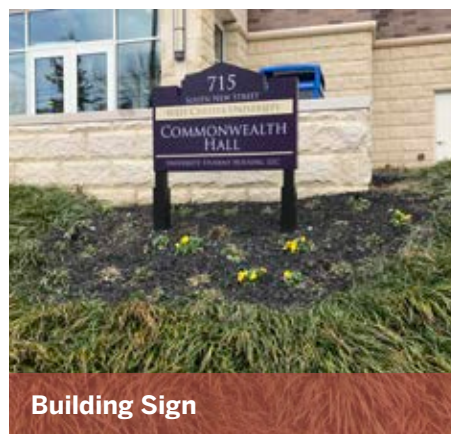
The Campus signage system is far more extensive than recognized when first visiting. Signs are somewhat understated and in many instances blend into the landscape, even with the signature purple and gold. Some signs are highlighted with annual flowers; others are located in planting beds, lawns, and pavement.



Digital Sign



Information Sign



Building Sign



Street Sign



Existing Campus Signage

- ◆ Orientation
- ★ Commemorative Building
- Building
- Rules and Safety
- Gateway

WEST CHESTER UNIVERSITY LANDSCAPE MASTER PLAN





# PROPOSED CAMPUS SIGNAGE

Proposed campus signs will be used strategically to augment the new landscape focus zones. Vertical signs will give directional information to nearest wifi hotspots or miles traveled on the bike loop. Visually unobtrusive ground-level signs will educate users on flora and fauna along the paths winding through ecological corridors. Ephemeral signage, like painted asphalt marking 'Food Trucks Here' will help to highlight program zones.



Vertical Sign



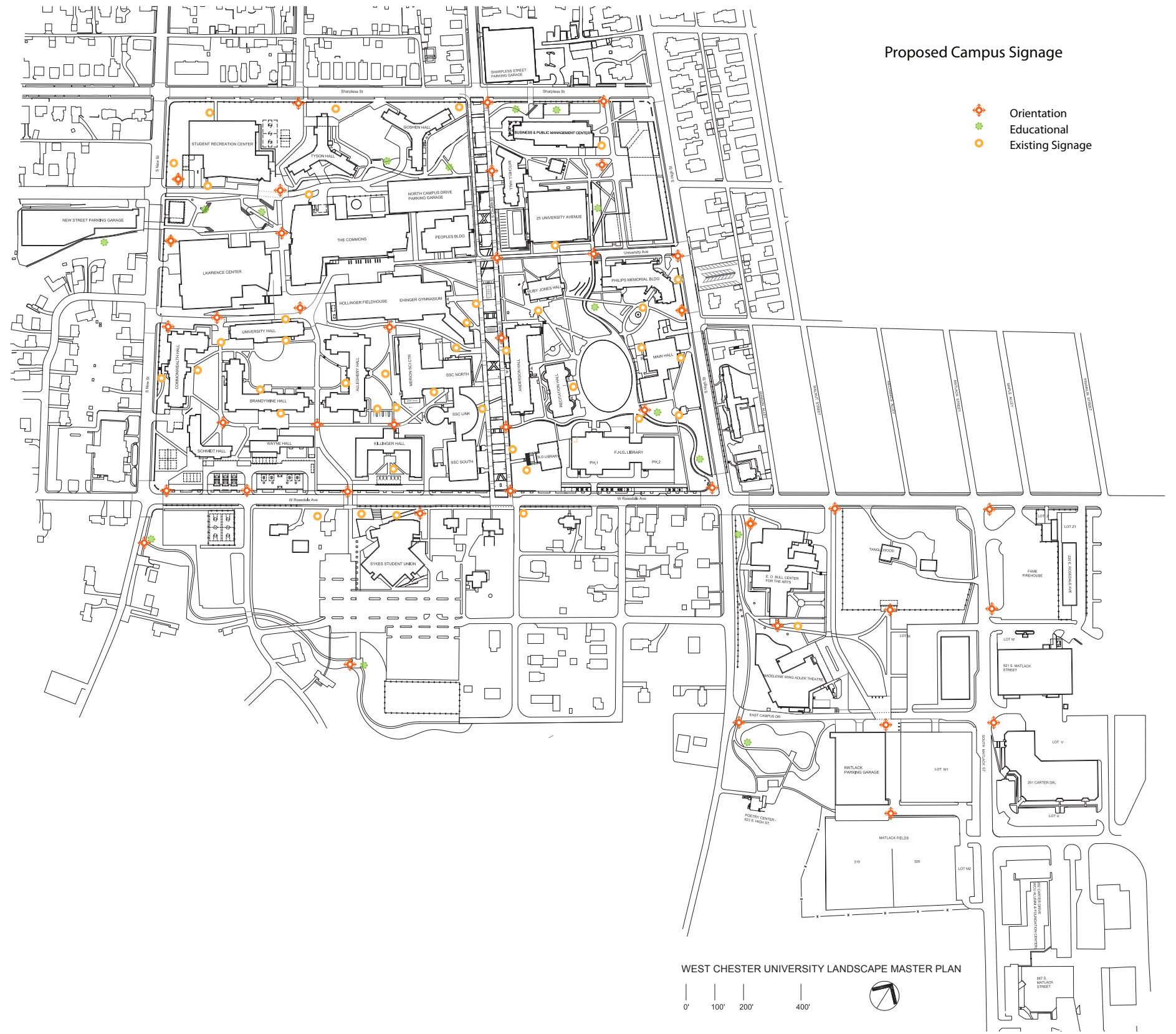
Directional Sign



Ephemeral Signage



Path Signage



**SPECIALTY SIGNAGE**  
**ORIENTATION + CLARITY + FUN**



Wayfinding



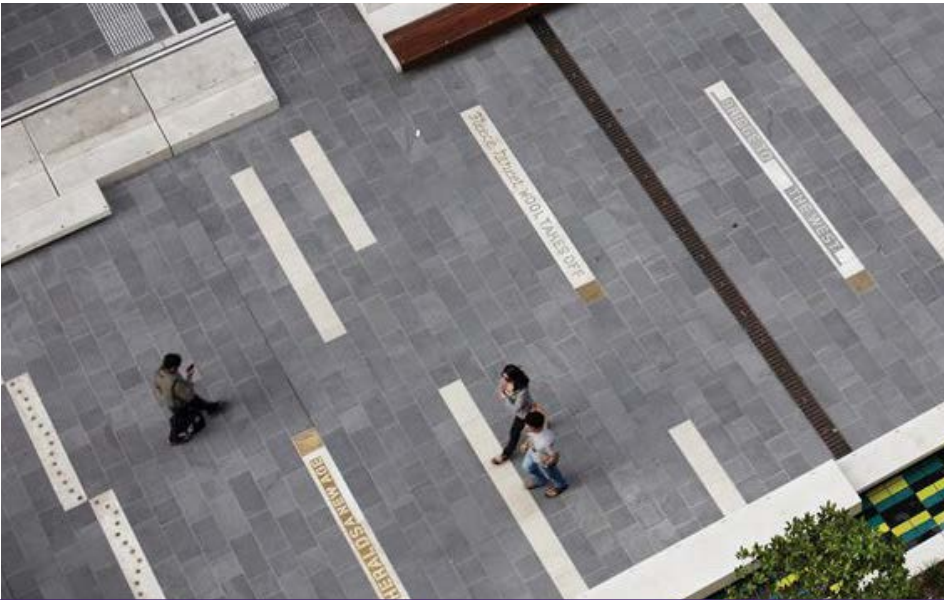
Interactive



Directional



Text on Bench



Text + Paving Integration



Quote + Paving Integration

**SPECIALTY SIGNAGE  
INTERPRETATION**



Informational



Wayfinding Map



Interpretive



Bike Lane



Paving

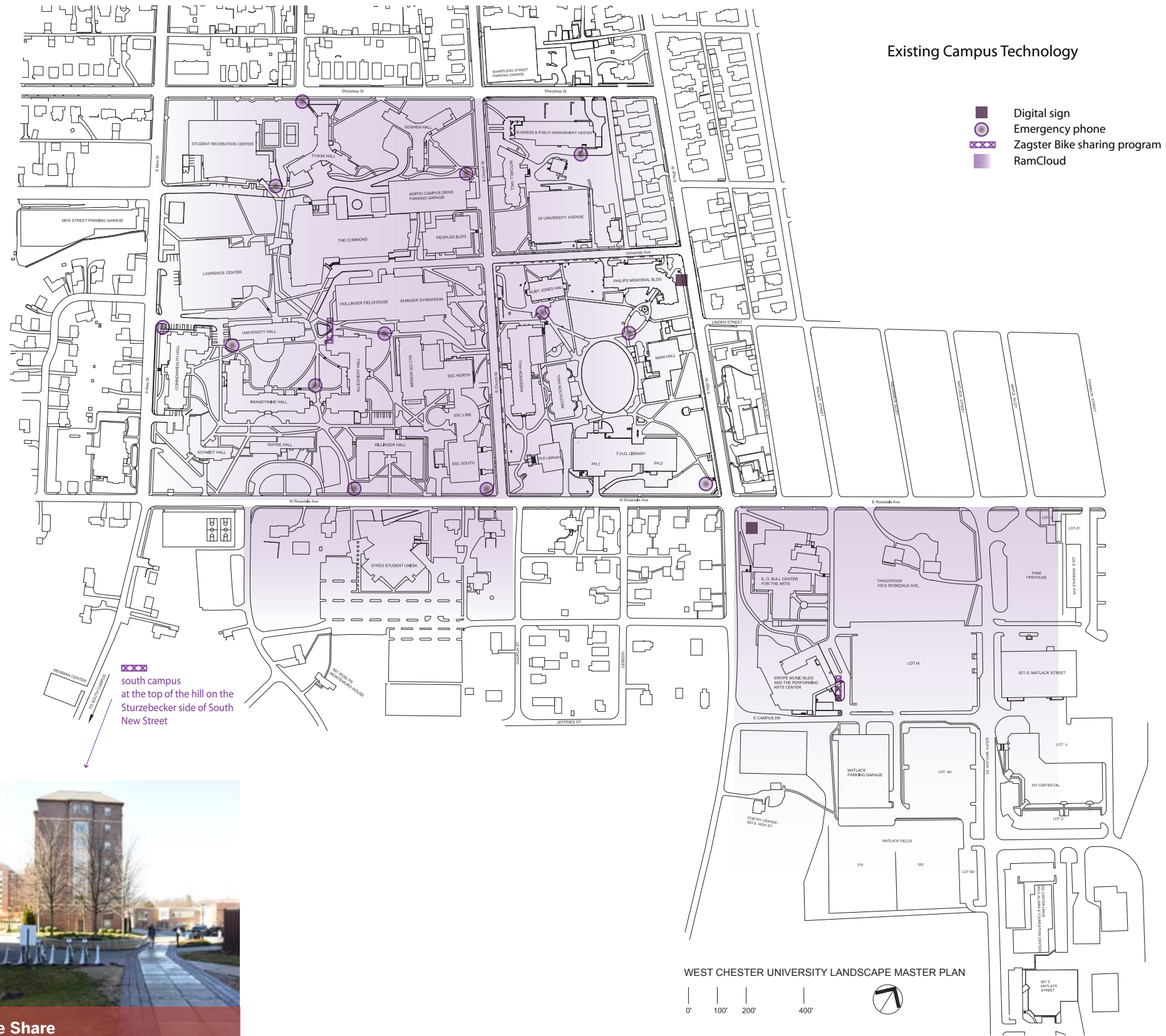


Crosswalk

# EXISTING CAMPUS TECHNOLOGY

One of the most impactful technologies on Campus is the recently installed RAMCloud. This networked system (private cloud) increases the interconnectedness of the Campus, allowing students, faculty, and staff access to university applications via personal laptops, tablets, and phones and providing flexibility for future technologies to be adapted by the university. Access points to RAMCloud are located throughout the Campus giving significant wifi coverage.

Security call boxes provide for immediate response and contribute to Campus security. Digital signs post special events and reminders for students.



**WCU Mobile**  
By Modo Labs, Inc.  
Open iTunes to buy and download apps.

**Description**  
WCU Mobile gives users access to West Chester University information and news.

**Features:**  
WCU Mobile Support!

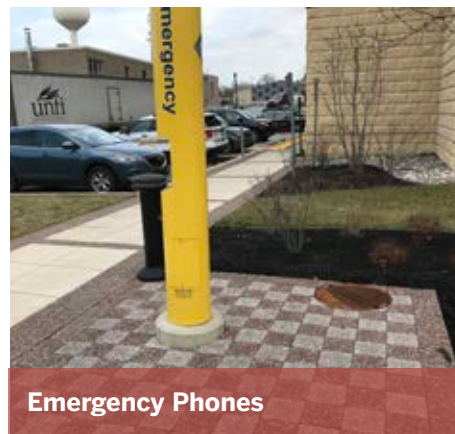
**What's New in Version 1.3**  
Enhancements and bug fixes

**Screenshots**

**Free**  
Category: Education  
Updated: Jun 14, 2017  
Version: 1.3  
Size: 4.2 MB  
Language: English  
Seller: Modo Labs, Inc.  
© 2017 West Chester University of Pennsylvania  
You must be at least 17 years old to download this app.  
Unrestricted Web Access

**Compatibility:** Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.

**Customer Ratings**  
**University App**  
the current version of this



Emergency Phones



Digital Sign



Bike Share

# PROPOSED CAMPUS TECHNOLOGY

Rapidly changing advancements in technology make planning for future installations challenging. At this time considerations are being given to smart lighting, emerging technologies, and vehicle evolution - hybrid and electric. A smart pedestrian lighting system will record environmental factors (temperature, precipitation, and ambient light) to adjust site specific lighting accordingly. Some lighting and smart crosswalks will activate as pedestrians approach. A series of 'test plots' along Church Street can be used for researching and testing emerging technologies (i.e. solar pavers) that, if successful, could be deployed in future projects. As the driverless cars, rideshare programs, and electric vehicles technologies evolve, dedicated spaces should be provided and become more available as a reduced number of parking spaces will be needed. Basic 'needs' for technology, including charging stations, should be designed into new projects.



Smart Lights



Safe Crosswalks



Connected Campus



Outdoor Speakers

PROPOSED CAMPUS TECHNOLOGY



Motion Detecting Crosswalks



Enhanced Wifi



Connected Campus



Outdoor Sound + Movie Systems



Emerging Technology Prototype



Water Quality Testing

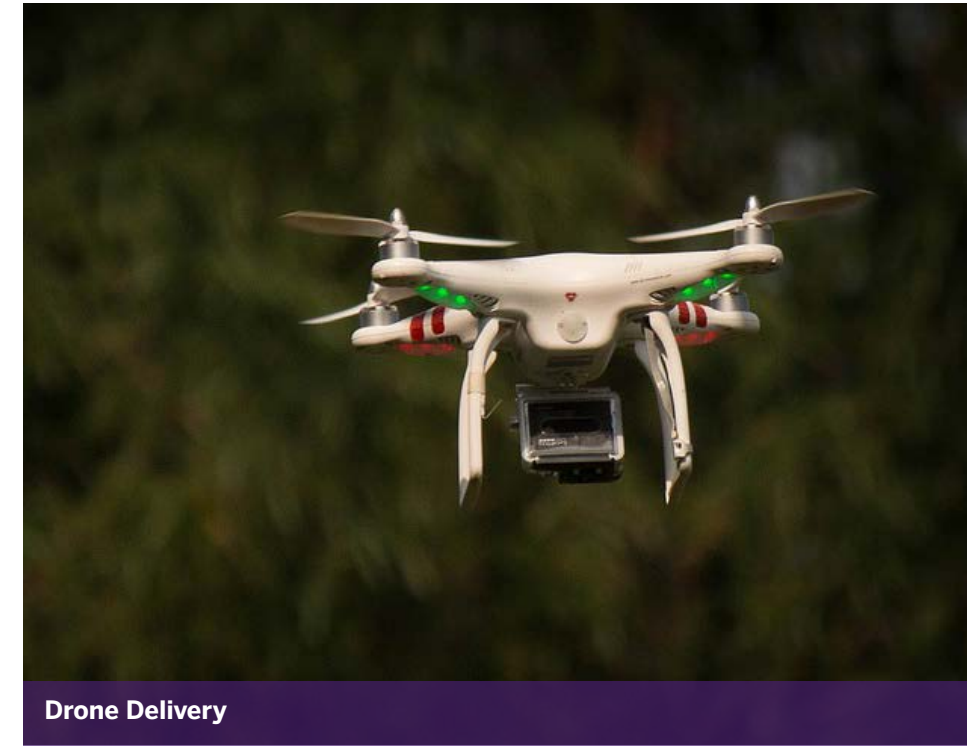
## PROPOSED CAMPUS TECHNOLOGY



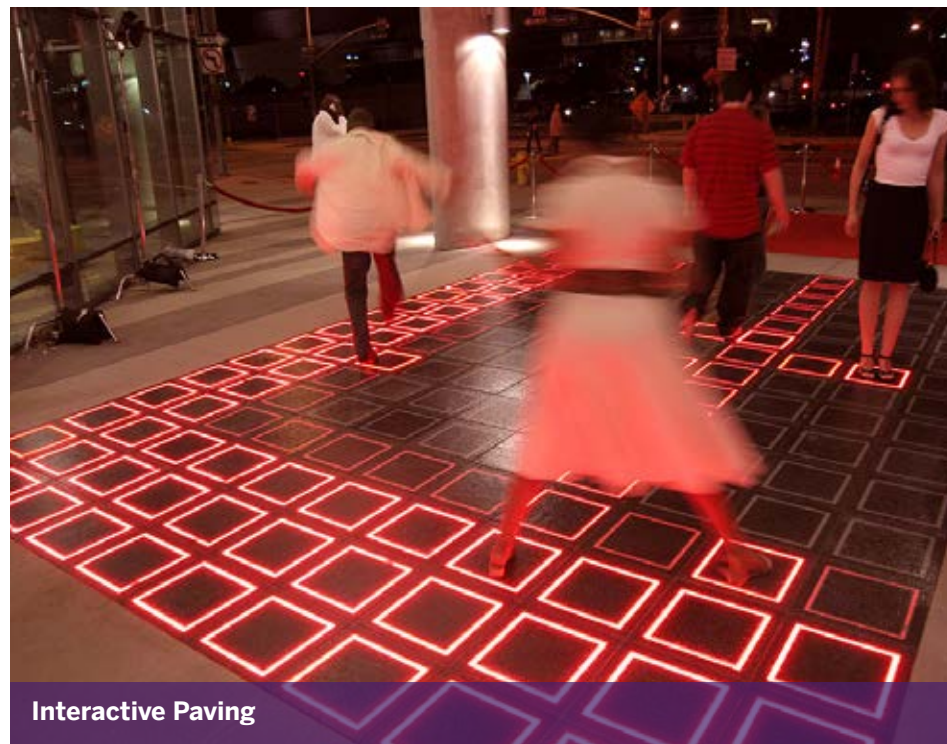
Augmented Reality



Car Charging Stations



Drone Delivery



Interactive Paving



Driverless Cars



Solar Pathways





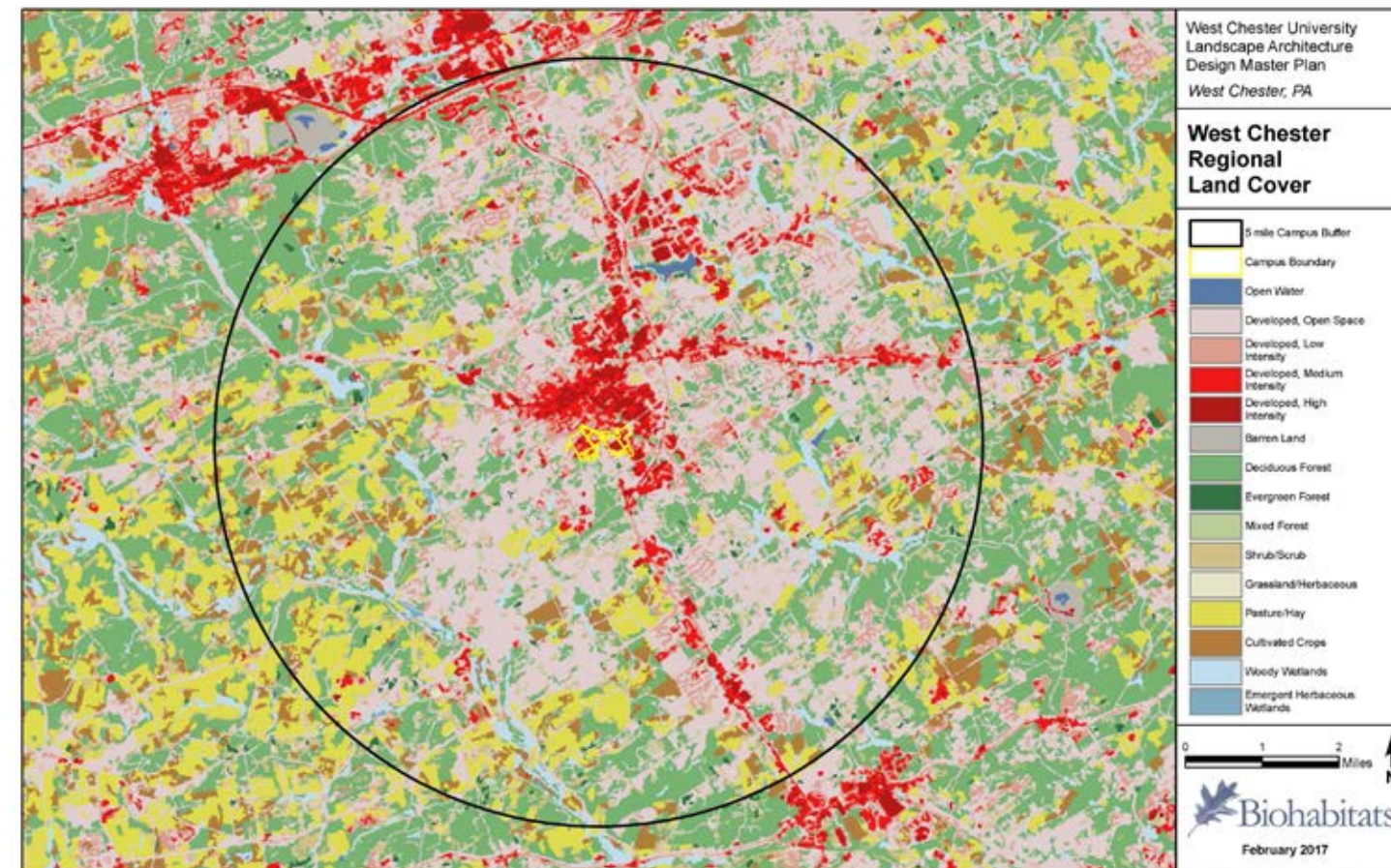
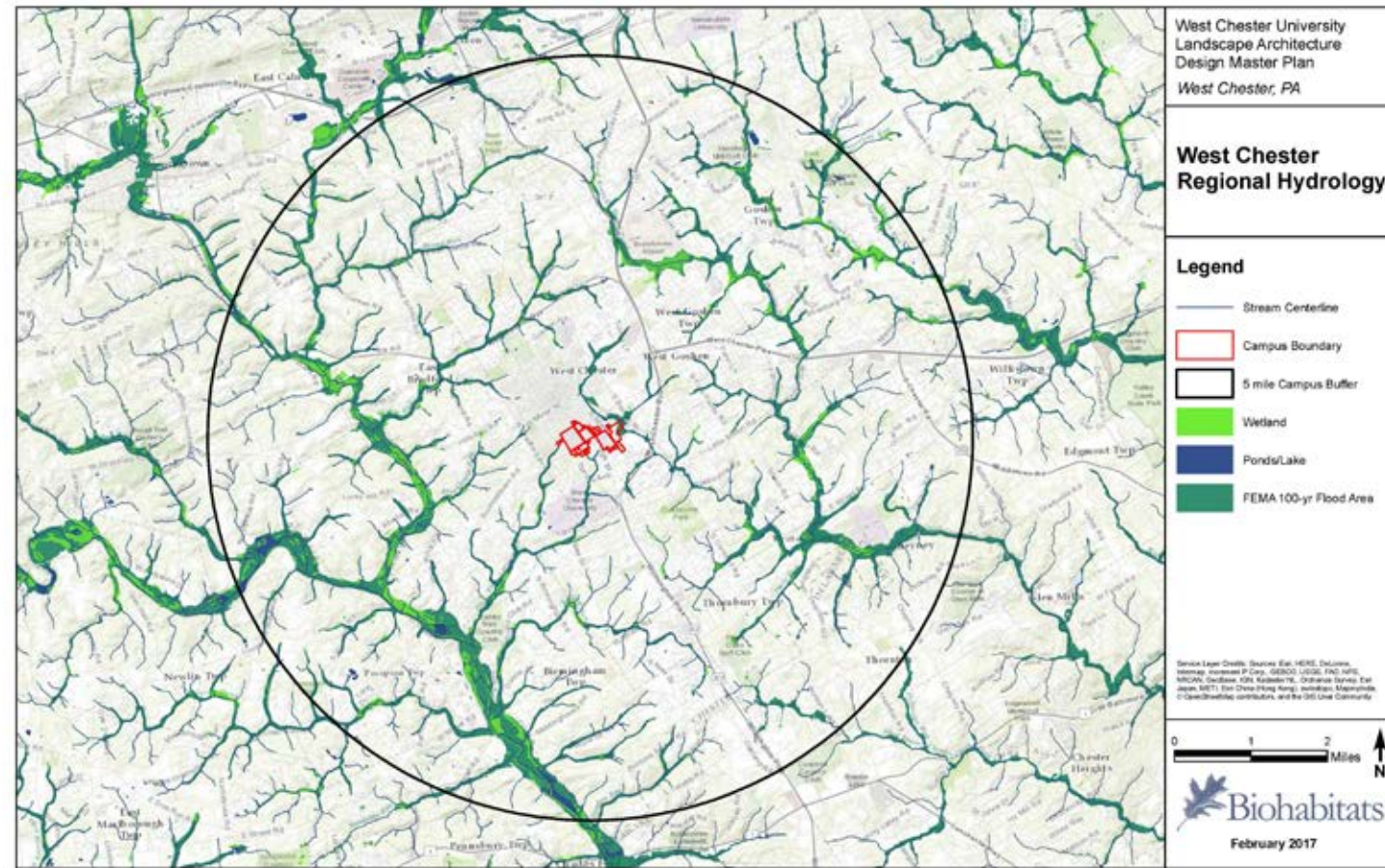
# VI. Campus Ecology and Green Infrastructure



## REGIONAL ECOLOGICAL AND HYDROLOGIC CONTEXT

The North Campus is located in the headwaters of two stream tributaries that eventually flow to the Delaware River. As previously described, on the west side of campus water flows to the southwest via two small tributaries of Plum Run which eventually join Brandywine Creek. On the eastern edge of campus water flows to the east branch of Chester Creek. Sitting at the headwaters of both of these systems, West Chester University's Campus has an important role in limiting impacts on the water quality by managing water wisely onsite through the integration of green infrastructure practices in the landscape.

While the Campus is considered in the range of medium to high intensity urban development, within a 5-mile radius of Campus the landscape shifts to a matrix of natural and managed green space including deciduous forest, mixed forest, pasture, cultivated croplands, and developed open space. Given that the University has several areas of mature tree canopy on Campus, there is an opportunity to enhance tree canopy coverage in order to provide an oasis for birds and other wildlife within the urban setting.



## SITE ECOLOGY – HISTORIC

In historic aerial photography from 1937, the local landscape is predominantly agricultural and the historic stream corridors (although significantly developed) are still visible. While there is little photography from earlier periods, mapping and historic texts of Chester County describe a landscape that has long been farmed and cleared for agriculture, from the Native Americans, to the Swedes and Finns, and finally the British (Scholl 2008). Old growth forest would have existed mainly within wetlands and river corridors.

As evident in the 1937 aerial, the most mature tree canopy is located along Rosedale Avenue and points west and south of Campus, where there were known wetlands and stream corridors. By interpreting these historic patterns of streams, wetlands, and forests, it is possible to understand the potential to embrace the natural systems that are historically engrained in the Campus and identify the connections and corridors that can be enhanced moving into the future.

Recent studies at the Gordon Natural Area on South Campus, detail a young hardwood forest mainly dominated by American beech (47%), but also including Norway maple, red oak, tulip poplar, and white ash. There is potential for the contemporary Campus to reflect and enhance this underlying ecology through new plantings and a landscape that responds to the native ecological context (Dicce et al 2010).

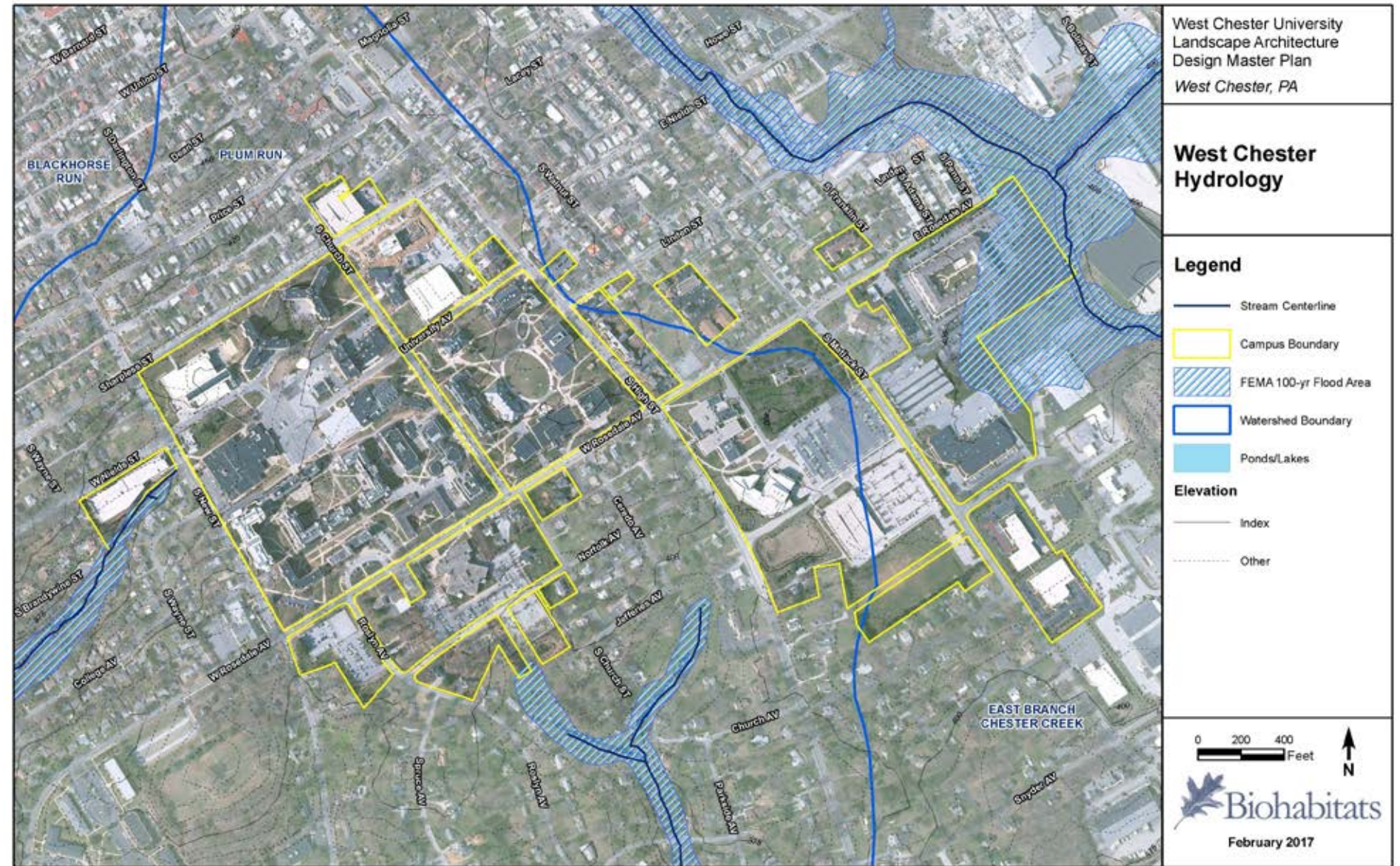


An interpretation of historic ecology patterns

## SITE ECOLOGY – EXISTING ECOLOGICAL FEATURES

Several landscape features found on North Campus today provide the basis for the development of a green infrastructure framework plan as part of this Landscape Master Plan. These include the Plum Run tributaries, the native gardens on Campus including the outdoor classroom outside of the Merion Science Center, the Bartram Oak and other mature tree canopy areas on Campus, and the existing surface stormwater BMPs scattered across Campus.

At the site scale, a review of the historic and existing hydrology shows the extent of floodplain areas and the various tributaries and watersheds that define the Campus: Plum Run and the East Branch of Chester Creek. Even if hydrologic features are not immediately visible, when one is standing on campus, historic data coupled with existing conditions show the way the campus landscape is inextricably linked to the context of watersheds and hydrology.



Bartram Oak Grove



BPMC BMP



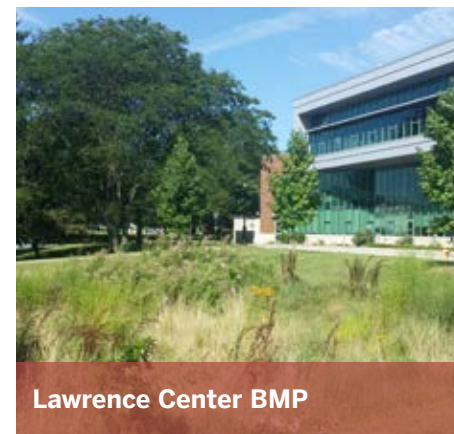
Matlack Parking BMP



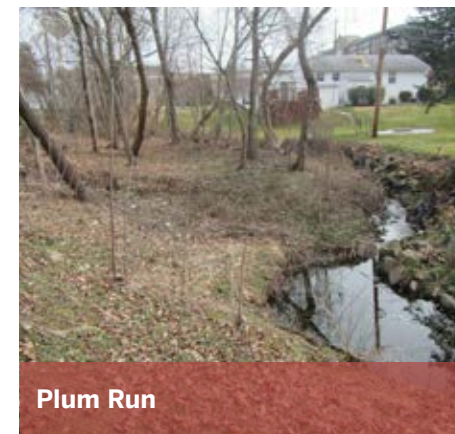
Matlack Parking BMP



Merion Science Center



Lawrence Center BMP



Plum Run

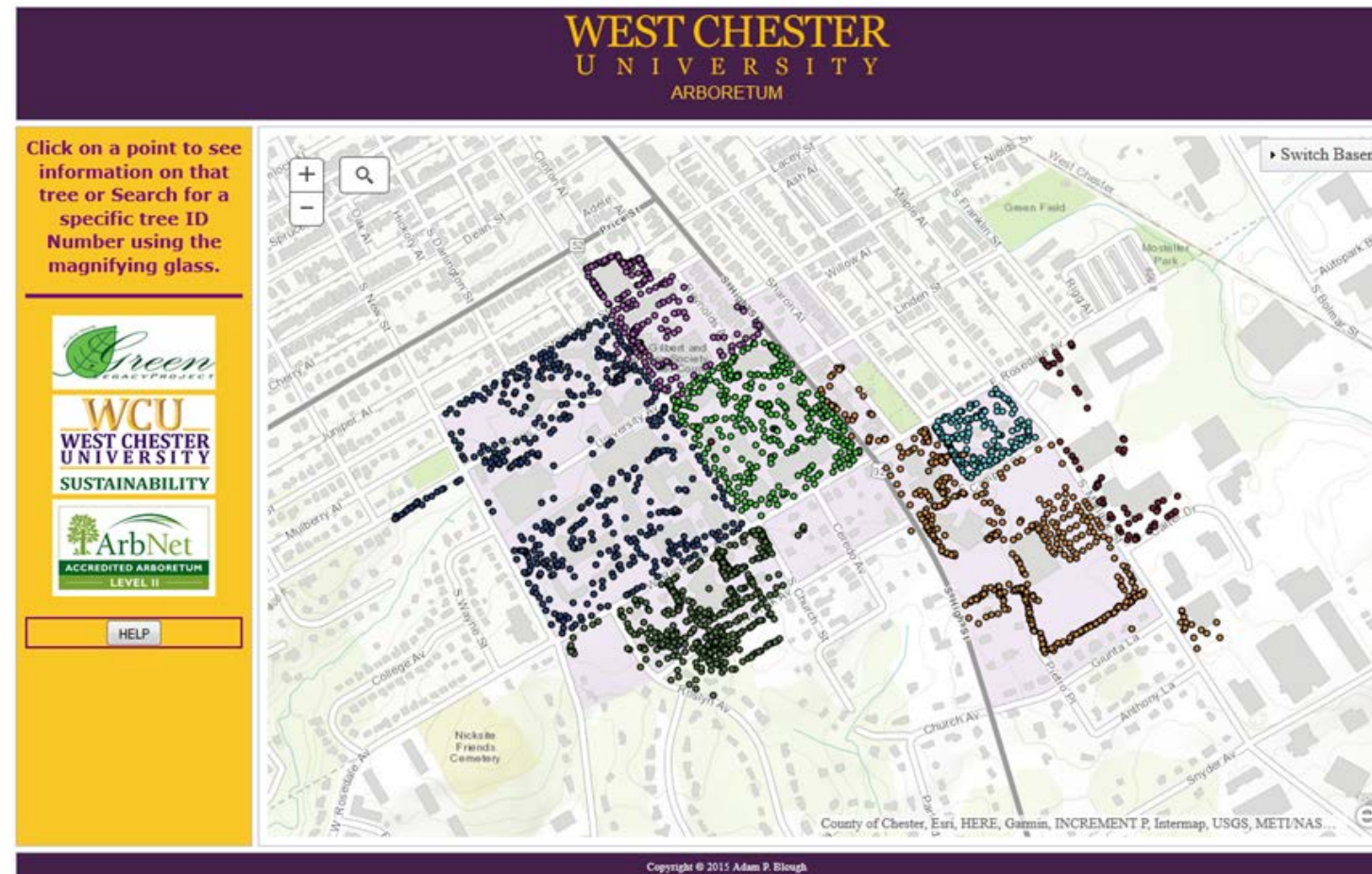


Woodland @ Goshen Hall

## REGULATORY CONTEXT

North Campus has the unique challenge of falling within the jurisdictions of both the Borough of West Chester and West Goshen Township, both of which have MS4 permits and directives associated with nutrient and sediment reduction. Many of the streams in the area are considered impaired by Pennsylvania Department of Environmental Protection, so these regulations aim to promote water quality improvements and quantity control.

When new construction associated with this Landscape Master Plan commences on Campus, special attention should be paid to the two jurisdictions and the relevant stormwater requirements of each. It will be prudent for the University to develop a database for asset management – which acts as a central database for all projects' basis of designs and specifications, as well as as-built drawings for all structures, stormwater management, and associated landscapes on Campus. This could also act as a complement to a comprehensive vegetative survey of Campus that describes all planted beds, the planting palette, condition, and maintenance regime/schedule (perhaps building on the geodatabase of trees currently curated by the Geography and Planning department).



An interactive mapping feature on the University's website showcases the geodatabase that the school utilizes to monitor tree canopy on the Campus. Through this work the University has been designated as a Level II Certified Arboretum by ArbNet and is recognized as a Tree Campus USA institution. This resource can continue to be utilized to track the health and diversity of the trees on Campus.



Matlack Parking Garage BMP



Merion Science Center Planting



BMP South of Sykes Student Union

# GREEN INFRASTRUCTURE

The West Chester University Campus Green Infrastructure Framework overlay provides a holistic vision for the Campus as a whole. This overlay illustrates how the Campus landscape can respond to and reflect the integration of native ecology while serving various University priorities outlined in this Landscape Master Plan. The framework identifies nine landscape typologies that help define the Campus landscape and provide a cohesive approach to landscape management that reflects a combination of native ecosystems and Campus function. These typologies are further defined in the following pages. The associated planting palettes that have been created to reflect these typologies are provided on pages 174-180.



## GREEN INFRASTRUCTURE RECOMMENDATIONS BY TYPE

### Woodland Groves

There are several locations on Campus where mature trees in small woodland groves provide beneficial amenities including shade, vertical structure, aesthetics, carbon sequestration, natural habitat, and stormwater reduction. In other locations, identified in this green infrastructure overlay, there is the potential to augment the existing plantings with a more dense planting of trees, to provide further connectivity to existing natural resources through a diversity of canopy, understory, shrub layer and ground cover.

An enhanced native woodland palette, with a diverse selection of native species will help promote the ecological health and long-term sustainability of the tree canopy on the Campus. These areas will continue to provide space for students to study, research, and understand urban tree canopy, as well as enjoy the amenity. Recent research has shown there are many human health benefits from experiencing nature or “forest bathing,” including a boosted immune system, lower blood pressure, stress reduction, improved mood, improved ability to focus, accelerated recovery from illness, increased energy level, and improved sleep (NY DEC 2017). Given the many stresses and challenges that students may face during their studies, there is a benefit to having natural spaces with a mature and diverse tree canopy on Campus and directly accessible to all students on a daily basis.

Using the existing arboretum database set up by the Geography and Planning Department the University can continue to monitor the health and age of trees, determine when removal or replacement is appropriate with the aid of a licensed arborist, and supplement the existing plantings with new native trees to increase diversity and resilience.



## Ecological Essence Garden Zones and Corridors

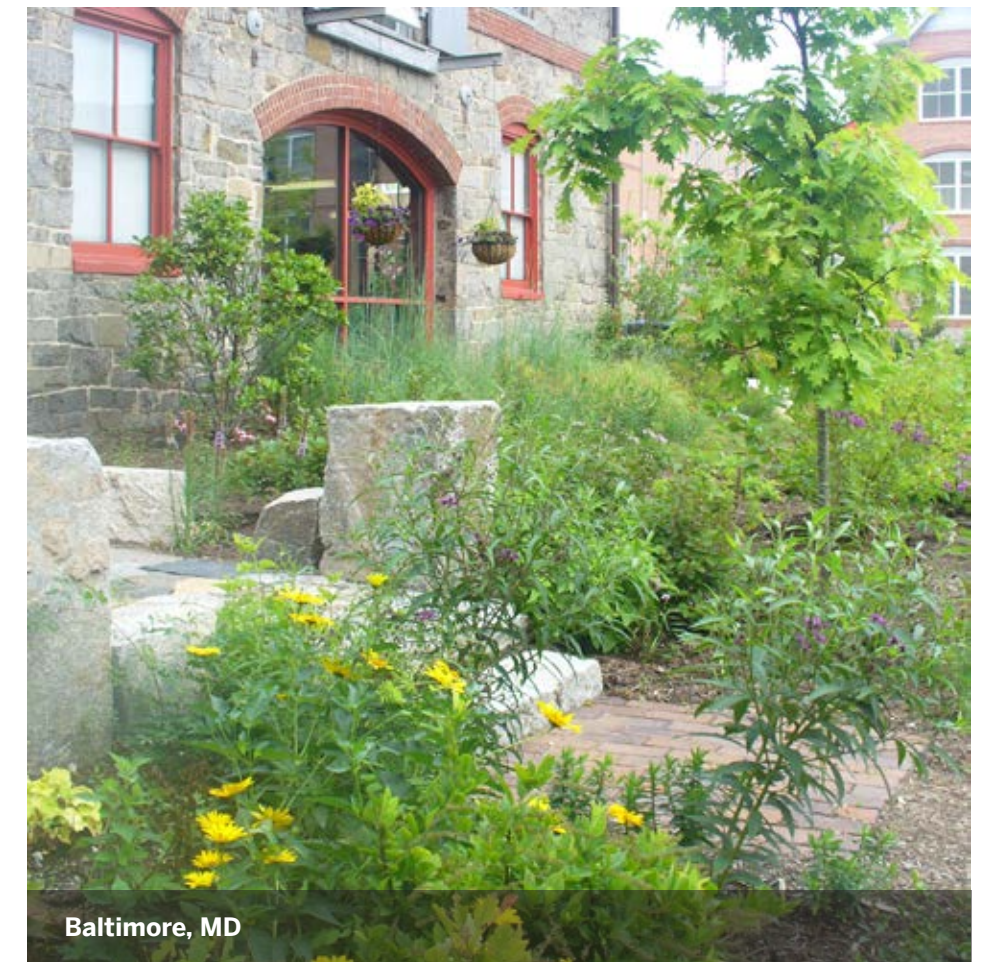
These are zones identified across the Campus where a focus on native ecology guides landscape design and enhancement, based on a diversity of native plants, from groundcover to shrubs and trees. Among the locations identified as essence zones are:

- the Plum Run Corridor, Presidents Walk and the connection on the north portion of Campus to Plum Run,
- the corners of the old Quad along the facades of the most historic buildings on Campus,
- the proposed new pedestrian-only corridor through Campus along Church Street,
- the gateway at W. Rosedale and S. New Street,
- the walk from the oval to the Frederick Douglass memorial,
- the front lawn of Tanglewood (the President's residence),
- and the landscapes around the stormwater amenities alongside the Matlack Parking Structure and 201 Carter Drive.

In each of these locations a diversity of native plants will provide visual interest as well as many ecological benefits including enhanced habitat, increased water infiltration capacity, nutrient uptake, improved soils, biodiversity and resilience, and lower maintenance with the removal of turf areas.

Design and planting palettes will be responsive to context and spatial needs, but will be consistent throughout the Campus, prioritizing a native and diverse plant palette. For instance along Plum Run, the design will be one that reflects a wooded stream valley, while the planting along Presidents Walk will be one that prioritizes flowering trees and an array of seasonal color and textures along this prominent Campus gateway corridor. In some locations plantings may be multilayered while in others they may be more of a meadow with tree groves, or dense shrub plantings. One great model is the existing Outdoor Classroom garden outside of Merion Science Center where a diverse palette of native perennial plants flanks the walkways.

See the planting interventions section for further detail on more specific planting palettes.





## **Enhanced Surface Stormwater Best Management Practices (BMPs)**

There are already six surface stormwater BMPs located across the Campus. These bioretention, stormwater basins, or other practices integrate stormwater management and natural resource enhancement into the landscape as an amenity for users and a resource for education and research. Each of the existing practices can be enhanced with a more diverse native plant palette and regular maintenance to remove invasive plants and/or sediment when needed. These surface amenities should respond to the ecological context of the site by including a variety of native plants including trees, shrubs, and perennials.

With an increasingly diverse palette, these practices can continue to function as stormwater filtration or storage systems as well as habitats for a wide variety of native wildlife including pollinators, small mammals, and birds. The practices seamlessly integrate into the other landscape types, primarily the ecological essence zones and the woodland groves. In each case, planting must be done in keeping with the design capacity of each stormwater practice, so required storage volumes are not diminished at each location, based on original design capacities. Regular monitoring and maintenance are required to make sure the practices are performing as designed.



## **Turf Conversion and Interstitial Spaces**

Typically, extensive areas of lawn on Campus often require regular mowing and associated fuel costs, as well as the use of fertilizer, lime, pesticides and herbicides to maintain a consistent appearance. Maintained turf or lawn areas often have lower and less desirable stormwater infiltration rates than natural areas due to soil compaction resulting from the heavy equipment used to maintain them. They are also generally very poor wildlife habitat. One way to create a more sustainable campus is to minimize the amount of turf in the landscape and replace many turf areas with a meadow palette of native perennials: grasses and forbs.

Interstitial spaces that are not identified as focal points for student recreation or other formal gatherings can be converted to native meadows/wildflower gardens. This enhances the overall ecological function of the landscape and provides a much more aesthetically pleasing look that reflects the native ecology. These areas also reduce environmental impacts of lawn maintenance by eliminating mowing and the use of fertilizers and pesticides. Native plantings serve to enhance various walkways and paths throughout the Campus that have been noted as important spines as well as along the foundations of many buildings. While the focus of these plantings is on perennials, the use of shrubs and trees may be deemed appropriate when converting turf to a native planting, to help shape a space, provide a screen, create winter interest, or guide wayfinding.



## Formal Greens, Quads, Oval

West Chester University, like many college campuses around the country, has a variety of iconic lawns and formal greens that provide important spaces for both impromptu and formal events and recreation, as well as a keen sense of place. While this plan suggests the conversion of a substantial amount of interstitial lawn areas on campus to native meadow plantings, the following lawns remain as important multifunctional amenity spaces: the Oval, the proposed amphitheater north of the Oval, several spaces in and around the residential portions of North Campus, and the back lawn of Tanglewood (the Presidents residence). These iconic lawns will remain open lawns. Depending on the specific location, they could include shade trees and even stormwater management opportunities along the edges, as needed. These spaces will continue to be an important part of the landscape. More sustainable maintenance practices will include integrated pest management and a discontinued use of herbicides and pesticides.



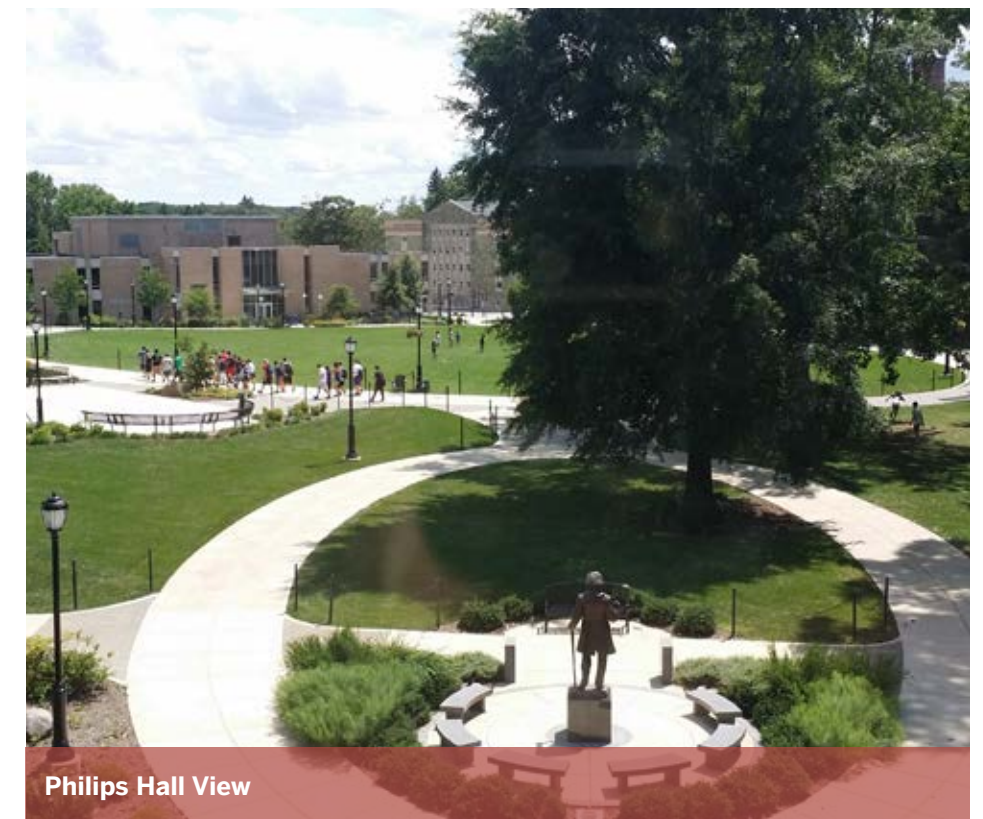
Swarthmore College



Swarthmore College



University of Pennsylvania



Philips Hall View

## Edges/Streetscapes

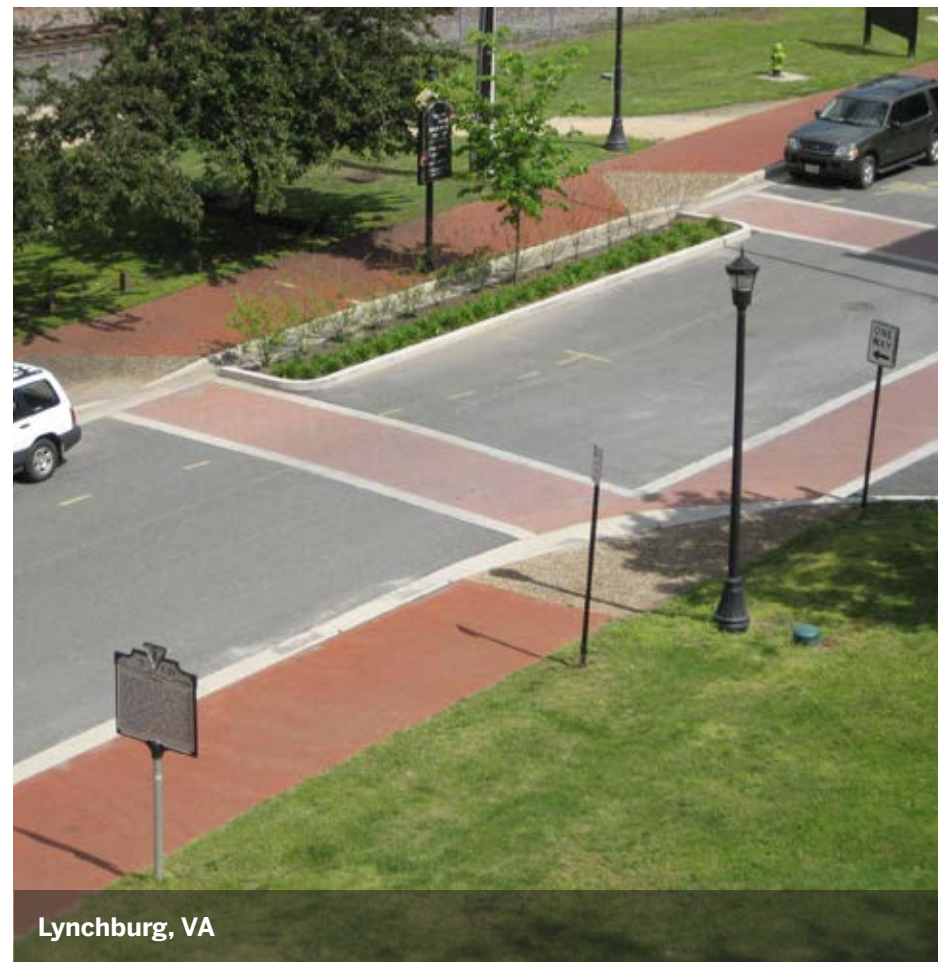
Streetscapes along the outer edges of North Campus present a great opportunity to create a sense of place, reinforcing the University's presence and unique identity while reflecting the local ecology. Streetscapes can be designed as green corridors, expressing the ecological context of the Brandywine and Chester Creek watersheds, incorporating water quality treatment and stormwater best management practices and native plantings with improved sidewalks, more comfortable gathering spaces, and safer crossings. Streetscape tree pits should provide proper growing media and spacing to allow for mature trees.



Lynchburg, VA



Portland, OR



Lynchburg, VA



University of Delaware

## Green Roofs

Existing and planned green roofs on Campus provide significant benefits both in terms of stormwater management – absorbing or storing water temporarily on the building—and as visual amenities and research/study spaces. Additionally, a planted roof can lower summer cooling energy needs, lower the summer urban heat island effect, provide habitat, and depending on the design, provide a usable space for studying, gardening, food growing or other activities. Maintenance is required and should be continued to ensure the success of these amenities.

## Athletics/Recreation Fields

While the athletics and recreation fields are limited on North Campus, as green space they are part of the green infrastructure framework for the Campus. Where possible, it will be prudent to see that stormwater is managed effectively as it runs off of these fields into grass swales or vegetated bioretention, where appropriate. This provides some level of treatment, facilitates pollutant removal, and potentially provides short-term storage.



## Surface Parking Enhancements

Large impervious parking lots create high stormwater runoff flows, which contribute to surface water quality degradation. Stormwater runoff, that may take several hours to flow from a grassy meadow or a forest before it reaches a stream, may only take a few minutes when it is flowing from a parking lot or a street. Water quality degradation associated with paved lots includes increased water temperatures and high volumes of unfiltered water that contain toxic contaminants from vehicles, such as oils, metals, and exhaust particles. Heat island effect is another environmental issue associated with parking lots, where the air temperature above them is elevated, increasing daytime temperatures, reducing night time cool-off, and causing respiratory distress in some people.

As parking lots on Campus come up for repairs or renovations it will be prudent to integrate green infrastructure practices like permeable paving, bioretention, and/or vegetated swales that collect, filter, or store water nearer to where it falls on the lots. Having planted medians or tree pits within a lot can help mitigate urban heat island effects and help manage stormwater runoff. Increased tree canopy in parking lots provides shade and visual relief in an otherwise monotonous environment, adding vertical structure, color, and texture to the landscape. It is prudent to try to avoid placement of waste storage (dumpsters) above or near stormwater inlets in parking and loading zones.



Philadelphia, PA



Portland, OR



University of Delaware



Chicago, IL

## GENERAL GREEN INFRASTRUCTURE RECOMMENDATIONS

- Treat water close to the source
- Replace impervious surfaces with permeable pavement
- Limit new disturbance
- Balance initial costs with long-term benefits
- Create opportunities for multi-functional landscapes
- Use a diverse native plant palette

### Design options for stormwater management:

Green roofs, vegetated swales, rain gardens, bioretention, harvest and storage in cisterns, living walls, regenerative stormwater conveyance, turf conversion to meadow or grassland, forest enhancement, & permeable pavement

### Landscape types/locations for treatment:

Parking lots, building roofs, foundation planting zones, sidewalks, open space, natural areas, and interstitial spaces



Quad BMP



Lawrence Center BMP



BPMC BMP





## VII. Planting



## SUSTAINABLE PLANTING STRATEGY

The planting throughout West Chester University is extremely well maintained and quite beautiful in every season. Much thought and care has been given to this aspect of the landscape and a great variety of planting types can be seen, from mown turf, to ornamental beds, to the complex meadow plantings behind Merion Science Center.

Landworks Studio and Biohabitats understand the value of the diverse plantings but recognize the tremendous effort behind upkeep. There is a shared consideration to make the Campus more sustainable and less maintenance intensive, without loss of opportunity for students, faculty, and staff to use and enjoy. In direct response, the Master Plan strives to create a landscape that reflects the regional, native ecology, by enhancing and expanding native plantings across Campus. This entails not only the species that are planted but also the planting patterns that replicate natural systems where possible.

The Green Infrastructure Diagram identifies different plant communities that can be replicated on Campus. In areas where expansive lawns are underutilized, meadow plantings can be substituted. In heavily canopied areas, where little user activity is noted, woodlands can be supplemented with understory planting to create a healthier system. If a given area does not fit one of the green infrastructure types, 'a simple forest garden contains three layers, trees, shrubs, and ground plants can fulfill both the aesthetic and ecological function.' A case-in-point would be the rich planting on the University Avenue side of Phillips Hall, where large Oakleaf hydrangeas fill beds below a canopy of Lacebark Elms and a simple Pachysandra groundcover fills in below. 'For those who like to take advantage of every planting opportunity, a deluxe forest garden can contain as many as seven tiers of vegetation.' (Gaia's Garden by Toby Hemenway, Chelsea Green Publishing 2001.)

Not every planting needs to replicate a native system, but planting in a more natural pattern, filling the voids, works in favor of reducing maintenance requirements, limiting weeding and plant trimming, eliminating the need for mulch, one theory for bee population reductions, and promoting a healthier plant population.

Pages 170-173 provide guidelines where the Campus groundcover and tree canopy will be improved. Pages 174-180 provide plant lists that can be used to populate the tiers of garden in each zone.



Phillips Hall - Northwest Corner



Phillips Hall - East Face



Phillips Hall - Southeast Corner



Phillips Hall - North Face



# EXISTING GROUNDCOVER



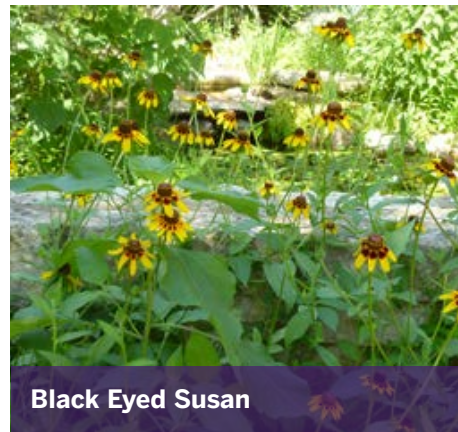
# PROPOSED GROUNDCOVER



Oakleaf Hydrangea



Butterfly Weed



Black Eyed Susan



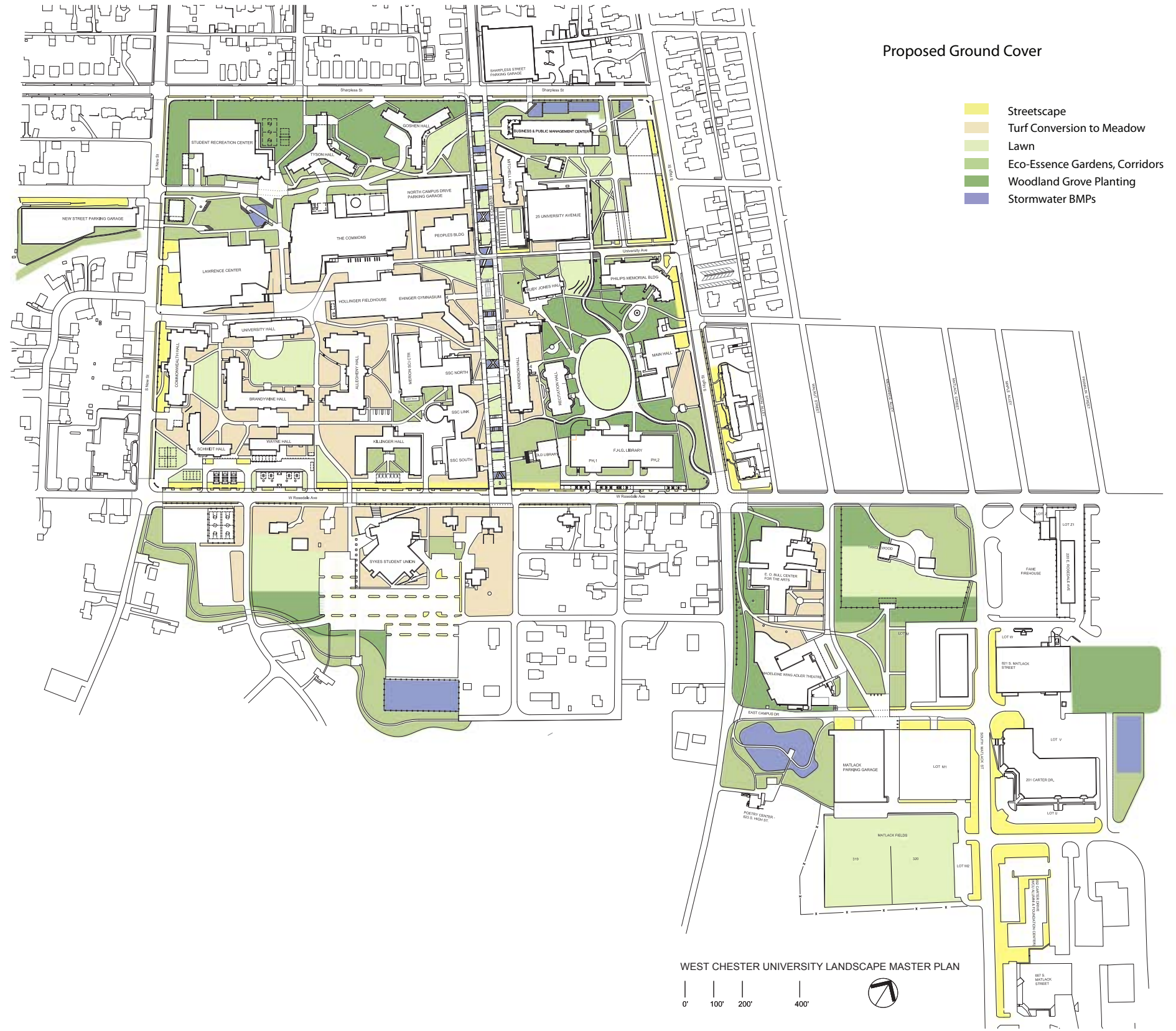
Tall Thimbleweed



Southern Arrowwood



Purple False Foxglove



# EXISTING TREE CANOPY



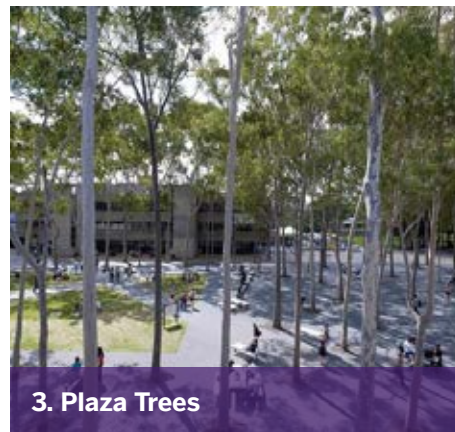
# PROPOSED TREE CANOPY



1. Swamp White Oaks



2. Seasonal Color



3. Plaza Trees



4. Mature Campus Trees



5. Canopied Streets



6. Street Tree Planting



## Proposed Tree Canopy

- Existing Tree
- Heritage Tree
- Proposed Tree

# PLANTING INTERVENTIONS

## ► Wooded Stream Valley

### CANOPY TREES

common name	botanical name
red maple	<i>Acer rubrum</i>
sugar maple	<i>Acer saccharum</i>
silver maple	<i>Acer saccharinum</i>
river birch	<i>Betula nigra</i>
black gum	<i>Nyssa sylvatica</i>
black willow	<i>Salix nigra</i>
sycamore	<i>Platanus occidentalis</i>
hackberry	<i>Celtis occidentalis</i>

### MIDSTORY TREES

common name	botanical name
serviceberry	<i>Amalanchier canadensis</i>
redbud	<i>Cercis canadensis</i>
witch hazel	<i>Hammamelis virginiana</i>

### SHRUB

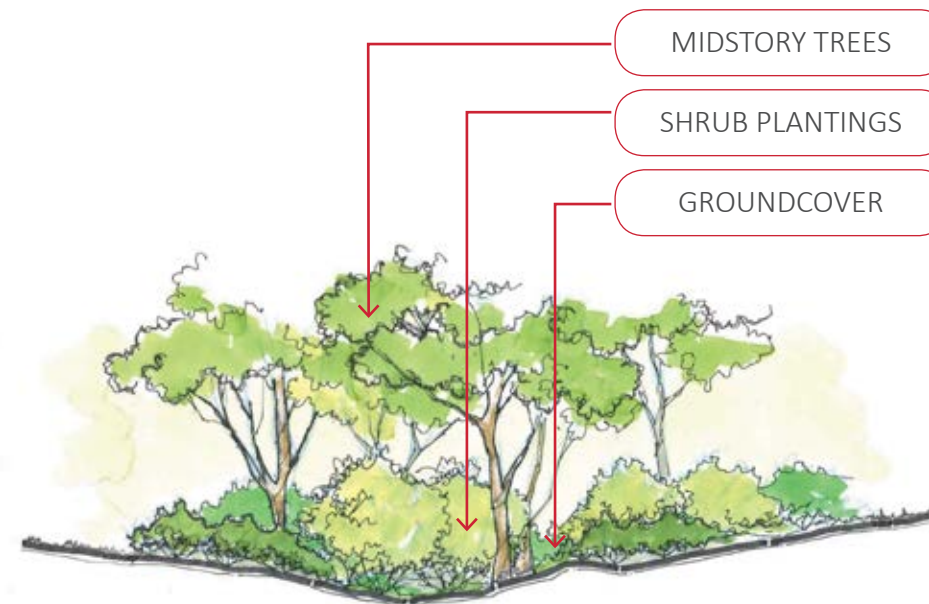
common name	botanical name
smooth alder	<i>Alnus serrulata</i>
oak leaf hydrangea	<i>Hydrangea quercifolia</i>
wild hydrangea	<i>Hydrangea arborescens</i>
spicebush	<i>Lindera benzoin</i>
elderberry	<i>Sambucus canadensis</i>
red elderberry	<i>Sambucus racemosa</i>
lowbush blueberry	<i>Vaccinium angustifolium</i>
highbush blueberry	<i>Vaccinium corymbosum</i>
arrowwood	<i>Viburnum dentatum</i>

### HERBACEOUS

common name	botanical name
autumn bentgrass	<i>Agrostis perennans</i>
big bluestem	<i>Andropogon gerardii</i>
swamp milkweed	<i>Asclepias incarnata</i>
flat top aster	<i>Aster umbellatus</i>
fox sedge	<i>Carex vulpinoidea</i>
partridge pea	<i>Chamaecrista fasciculata</i>
riverbank wild rye	<i>Elymus riparius</i>
Virginia wild rye	<i>Elymus virginicus</i>
blue mist flower	<i>Eupatorium coelestinum</i>
boneset	<i>Eupatorium perfoliatum</i>
Joe Pye weed	<i>Eupatorium fistulosum</i>
smooth oxeye	<i>Heliopsis helianthoides</i>
alum root	<i>Heuchera americana</i>
soft rush	<i>Juncus effusus</i>
Turk's cap lily	<i>Lilium superbum</i>
ostrich fern	<i>Matteuccia struthiopteris</i>
bee balm	<i>Monarda fistulosa</i>
scarlet bee balm	<i>Monarda didyma</i>
cinnamon fern	<i>Osmundastrum cinnamomeum</i>
switchgrass	<i>Panicum virgatum</i>
little bluestem	<i>Schizachyrium scoparium</i>
wild senna	<i>Senna hebecarpa</i>
Maryland senna	<i>Senna marilandica</i>
Indiangrass	<i>Sorghastrum nutans</i>
blue vervain	<i>Verbena hastata</i>
ironweed	<i>Vernonia noveboracensis</i>



Wooded Stream Valley





► **Upland Meadow with Oak Groves**

TREES (Members of the Northeast upland oak communities native to Chester County)

common name	botanical name
blackjack oak	<i>Quercus marilandica</i>
northern red oak	<i>Quercus rubra</i>
post oak	<i>Quercus stellata</i>

MEADOW GRASSES AND PERENNIALS FORBS

common name	botanical name
big bluestem	<i>Andropogon gerardii</i>
columbine	<i>Aquilegia canadensis</i>
common milkweed	<i>Asclepias syriaca</i>
butterfly weed	<i>Asclepias tuberosa</i>
blue false indigo	<i>Baptisia australis</i>
yellow wild indigo	<i>Baptisia tinctoria</i>
patridge pea	<i>Chamaecrista fasciculata</i>
whorled tickseed	<i>Coreopsis verticillata</i>
tickseed	<i>Coreopsis tripteris</i>
panicked tick trefoil	<i>Desmodium paniculatum</i>
Canada wild rye	<i>Elymus canadensis</i>
Virginia wild rye	<i>Elymus virginicus</i>
Joe Pye weed	<i>Eupatorium fistulosum</i>
hyssopleaf thoroughwort	<i>Eupatorium hyssopifolium</i>
sweet Joe Pye weed	<i>Eupatorium purpureum</i>
smooth oxeye	<i>Heliopsis helianthoides</i>
Allegheny stonecrop	<i>Hylotelephium telephioides</i>
roundhead bushclover	<i>Lespedeza capitata</i>
savanna blazing star	<i>Liatris scariosa</i>
dense blazing star	<i>Liatris spicata</i>

wild lupine	<i>Lupinus perennis</i>
eastern bee balm	<i>Monarda bradburiana</i>
scarlet bee balm	<i>Monarda didyma</i>
spotted bee balm	<i>Monarda punctata</i>
evening primrose	<i>Oenothera biennis</i>
narrow-leaf evening primrose	<i>Oenothera fruticosa</i>
golden ragwort	<i>Packera aurea</i>
Carolina phlox	<i>Phlox carolina</i>
orange coneflower	<i>Rudbeckia fulgida</i>
black-eyed Susan	<i>Rudbeckia hirta</i>
brown-eyed Susan	<i>Rudbeckia triloba</i>
lyre-leaf sage	<i>Salvia lyrata</i>
big bluestem	<i>Schizachyrium scoparium</i>
blue-stemmed goldenrod	<i>Solidago caesia</i>
seaside goldenrod	<i>Solidago sempervirens</i>
showy goldenrod	<i>Solidago speciosa</i>
Indiangrass	<i>Sorghastrum nutans</i>
blue wood aster	<i>Symphotrichum cordifolium</i>
heath aster	<i>Symphotrichum ericoides</i>
New England aster	<i>Symphotrichum novae-angliae</i>
purpletop	<i>Tridens flavus</i>



Upland Meadow with Oaks

## PLANTING INTERVENTIONS

### ► Upland Woodland/ Flowering Woodland with Evergreen Groves

#### DECIDUOUS TREES

common name	botanical name
red maple	<i>Acer rubrum</i>
sugar maple	<i>Acer saccharum</i>
sweet birch	<i>Betula lenta</i>
river birch	<i>Betula nigra</i>
mockernut hickory	<i>Carya alba</i>
black gum	<i>Nyssa sylvatica</i>

#### FLOWERING TREES

common name	botanical name
downy serviceberry	<i>Amelanchier arborea</i>
serviceberry	<i>Amelanchier canadensis</i>
Allegheny serviceberry	<i>Amelanchier laevis</i>
redbud	<i>Cercis Canadensis</i>
fringetree	<i>Chionanthus virginicus</i>
alternate leaf dogwood	<i>Cornus alternifolia</i>
flowering dogwood	<i>Cornus florida</i>
witchhazel	<i>Hamamelis virginiana</i>
sweetbay	<i>Magnolia virginiana</i>
American plum	<i>Prunus americana</i>
chokecherry	<i>Prunus virginiana</i>
nannyberry	<i>Viburnum lentago</i>
blackhaw	<i>Viburnum prunifolium</i>

#### EVERGREEN TREE

common name	botanical name
American holly	<i>Ilex opaca</i>

#### EVERGREEN SHRUBS

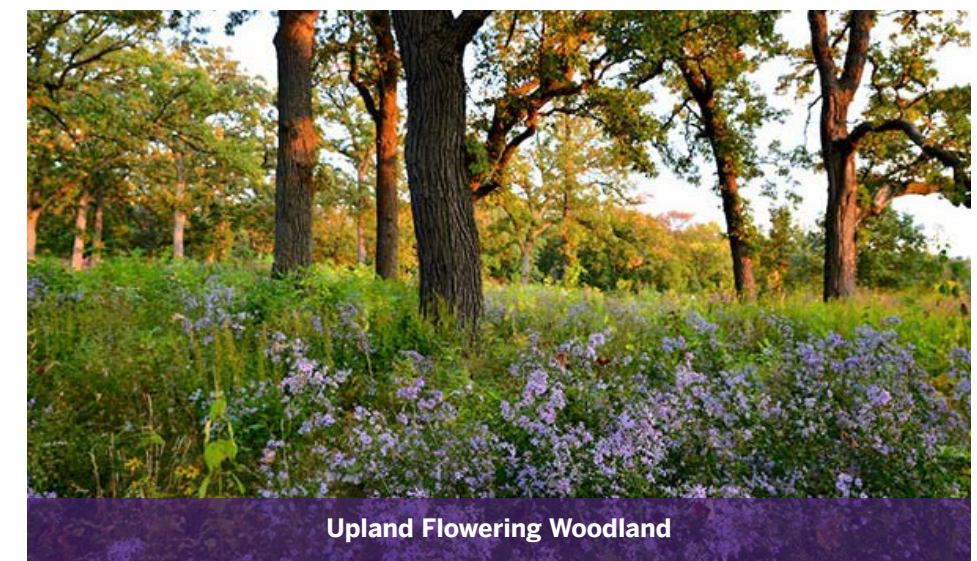
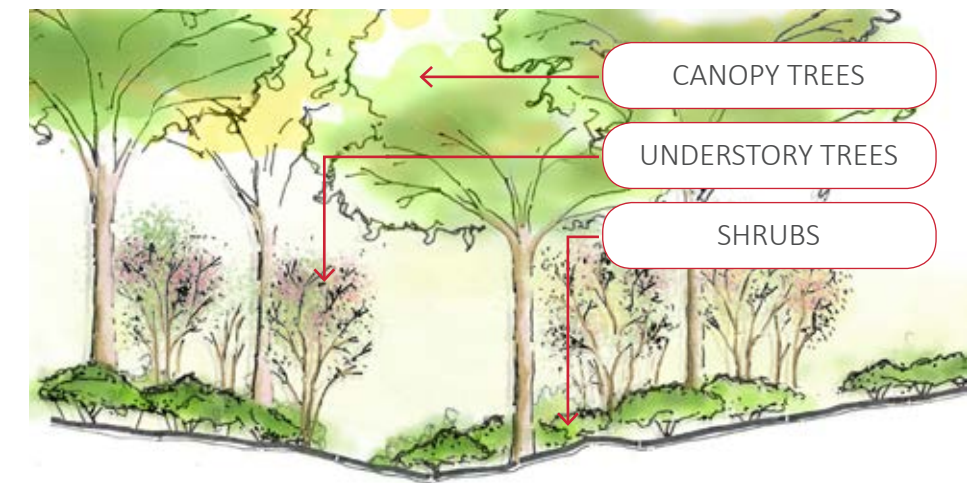
common name	botanical name
common juniper	<i>Juniperus communis</i>
gallberry	<i>Ilex glabra</i>
sheep laurel	<i>Kalmia angustifolia</i>
mountain laurel	<i>Kalmia latifolia</i>
rhododendron	<i>Rhododendron maximum</i>

#### DECIDUOUS SHRUBS

common name	botanical name
red chokeberry	<i>Aronia arbutifolia</i>
black chokeberry	<i>Aronia melanocarpa</i>
New Jersey tea	<i>Ceanothus americanus</i>
gray dogwood	<i>Cornus racemosa</i>
red osier dogwood	<i>Cornus sericea</i>
winterberry	<i>Ilex verticillata</i>
Virginia sweetspire	<i>Itea virginica</i>
bayberry	<i>Myrica pensylvatica</i>
pink azalea	<i>Rhododendron periclymenoides</i>
fragrant sumac	<i>Rhus aromatica</i>
winged sumac	<i>Rhus copallina</i>
maple leaf viburnum	<i>Viburnum acerifolium</i>
arrowwood	<i>Viburnum dentatum</i>
possumhaw	<i>Viburnum nudum</i>

#### GROUNDCOVER

common name	botanical name
eastern teaberry	<i>Gaultheria procumbens</i>
partridgeberry	<i>Mitchella repens</i>
Allegheny spurge	<i>Pachysandra procumbens</i>
fragrant sumac "Gro Low"	<i>Rhus aromatica "Gro Low"</i>



Upland Flowering Woodland

► **Ecological Essence Gardens – Upland Meadow**

GRASSES

common name	botanical name
autumn bentgrass	<i>Agrostis perennans</i>
big bluestem	<i>Andropogon gerardii</i>
river oats	<i>Chasmanthium latifolium</i>
deer-tongue	<i>Dichanthelium clandestinum</i>
riverbank rye grass	<i>Elymus riparius</i>
little bluestem	<i>Schizachyrium scoparium</i>
Indiangrass	<i>Sorghastrum nutans</i>



Upland Meadow

PERENNIALS

common name	botanical name
tall thimbleweed	<i>Anemone virginiana</i>
butterfly weed	<i>Asclepias tuberosa</i>
blue false indigo	<i>Baptisia australis</i>
tickseed	<i>Coreopsis tripteris</i>
whorled tickseed	<i>Coreopsis verticillata</i>
dense blazing star	<i>Liatris spicata</i>
eastern bee balm	<i>Monarda bradburiana</i>
spotted bee balm	<i>Monarda punctata</i>
Carolina phlox	<i>Phlox carolina</i>
orange coneflower	<i>Rudbeckia fulgida</i>
black-eyed Susan	<i>Rudbeckia hirta</i>
brown-eyed Susan	<i>Rudbeckia triloba</i>
blue-stemmed goldenrod	<i>Solidago caesia</i>
seaside goldenrod	<i>Solidago sempervirens</i>
showy goldenrod	<i>Solidago speciosa</i>
heath aster	<i>Symphyotrichum ericoides</i>
smooth blue aster	<i>Symphyotrichum laeve</i>

FERNS

common name	botanical name
hay-scented fern	<i>Dennstaedtia punctiloba</i>
sensitive fern	<i>Onoclea sensibilis</i>
bracken fern	<i>Pteridium aquilinum</i> Herbaceous

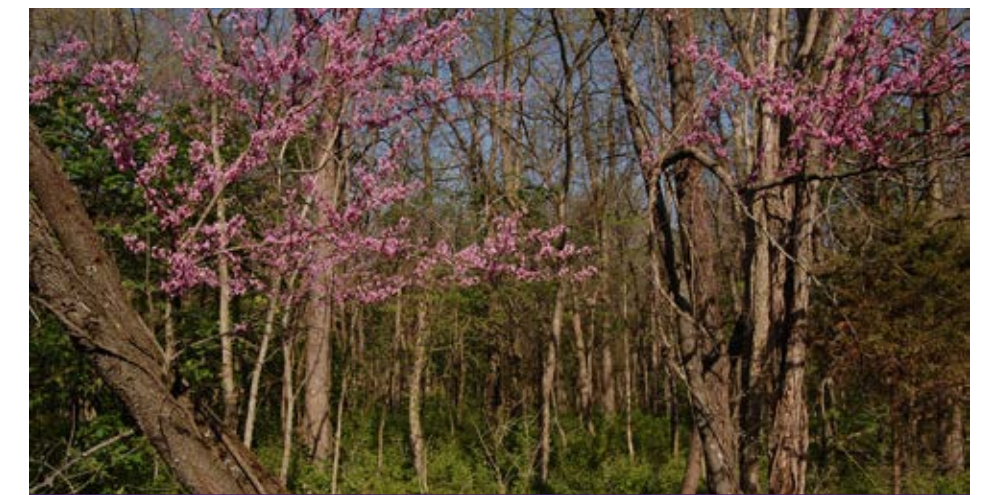
**Ecological Essence Gardens - Upland Woodland**

TREES

common name	botanical name
red maple	<i>Acer rubrum</i>
sugar maple	<i>Acer saccharum</i>
river birch	<i>Betula nigra</i>
black gum	<i>Nyssa sylvatica</i>
serviceberry	<i>Amalanchier canadensis</i>
redbud	<i>Cercis canadensis</i>
witchhazel	<i>Hammamelis virginiana</i>

SHRUBS

common name	botanical name
gallberry	<i>Ilex glabra</i>
sheep laurel	<i>Kalmia angustifolia</i>
pinxter azalea	<i>Rhododendron periclymenoides</i>
oak leaf hydrangea	<i>Hydrangea quercifolia</i>
wild hydrangea	<i>Hydrangea arborescens</i>
arrowwood	<i>Viburnum dentatum</i>



Redbud

## PLANTING INTERVENTIONS

### ► Ecological Essence Gardens – Wet Meadow

#### FERNS

<i>common name</i>	<i>botanical name</i>
sensitive fern	<i>Onoclea sensibilis</i>
cinnamon fern	<i>Osmunda cinnamomea</i>
eastern marsh fern	<i>Thelypteris palustris</i>

#### GRASSES

<i>common name</i>	<i>botanical name</i>
big bluestem	<i>Andropogon gerardii</i>
broomsedge	<i>Andropogon virginicus</i>
blue wood sedge	<i>Carex glaucoidea</i>
tussock sedge	<i>Carex stricta</i>
riverbank wild rye	<i>Elymus riparius</i>
rice cutgrass	<i>Leersia oryzoides</i>
switchgrass	<i>Panicum virgatum</i>

#### HERBACEOUS

<i>common name</i>	<i>botanical name</i>
purple false foxglove	<i>Agalinis pupurea</i>
swamp milkweed	<i>Asclepias incarnata</i>
marsh marigold	<i>Caltha palustris</i>
flat-top aster	<i>Doellingeria umbellatus (Aster)</i>
Joe Pye weed	<i>Eupatorium fistulosum</i>
spotted Joe Pye weed	<i>Eupatorium maculatum</i>
sweet Joe Pye weed	<i>Eupatorium perfoliatum</i>
bottle gentian	<i>Gentiana clausa</i>
common sneezeweed	<i>Helenium autumnale</i>
Canada lily	<i>Lilium canadense</i>
cardinal flower	<i>Lobelia cardinalis</i>
golden ragwort	<i>Packera aurea (Senecio aureus)</i>
meadow phlox	<i>Phlox maculata</i>
green-headed coneflower	<i>Rudbeckia laciniata</i>
rose pink	<i>Sabatia angularis</i>
cup plant	<i>Silphium perfoliatum</i>
wrinkleleaf goldenrod	<i>Solidago rugosa</i>
nodding ladies' tresses	<i>Spiranthes cernua</i>
smooth hedgenettle	<i>Stachys tenuifolia</i>
New York aster	<i>Symphotrichum novi-belgii (Aster)</i>
swamp verbena	<i>Verbena hastata</i>
dog violet	<i>Viola conspersa</i>
striped cream violet	<i>Viola striata</i>



► **Rain Garden/ BMP**

<i>common name</i>	<i>botanical name</i>
butterfly weed	<i>Asclepias tuberosa</i>
swamp milkweed	<i>Asclepias incarnata</i>
cardinal flower	<i>Lobelia cardinalis</i>
great blue lobelia	<i>Lobelia siphilitica</i>
scarlet beebalm	<i>Monarda didyma</i>
dense blazingstar	<i>Liatris spicata</i>
blue flag iris	<i>Iris versicolor</i>
tussock sedge	<i>Carex stricta</i>
black chokeberry	<i>Photinia melanocarpa</i>
spice bush	<i>Lindera benzoin</i>

**FOR VERY WET ZONES**

<i>common name</i>	<i>botanical name</i>
buttonbush	<i>Cephalanthus occidentalis</i>
redozier dogwood	<i>Cornus sericea</i>
bayberry	<i>Myrica pensylvanica</i>
ninebark	<i>Physocarpus opulifolius</i>
blueflag iris	<i>Iris versicolor</i>
cardinal flower	<i>Lobelia cardinalis</i>
sweet Joe Pye weed	<i>Eupatorium perfoliatum</i>
sensitive fern	<i>Onoclea sensibilis</i>
swamp milkweed	<i>Asclepias incarnata</i>
marsh mallow	<i>Hibiscus moscheutos</i>
switchgrass	<i>Panicum virgatum</i>

**FOR MODERATELY WET ZONES**

<i>common name</i>	<i>botanical name</i>
big blue lobelia	<i>Lobelia siphilitica</i>
cinnamon fern	<i>Osmunda cinnamomea</i>
green-headed coneflower	<i>Rudbeckia laciniata</i>
brown-eyed Susan	<i>Rudbeckia triloba</i>
Indiangrass	<i>Sorghastrum nutans</i>
Joe Pye weed	<i>Eupatorium fistulosum</i>
spotted Joe Pye weed	<i>Eupatorium maculatum</i>
sweet Joe Pye weed	<i>Eupatorium purpureum</i>
marsh marigold	<i>Caltha palustris</i>
royal fern	<i>Osmunda regalis</i>
spicebush	<i>Lindera benzoin</i>
sweet pepperbush	<i>Clethra alnifolia</i>
swamp azalea	<i>Rhododendron viscosum</i>
turtlehead	<i>Chelone glabra</i>
winterberry	<i>Ilex verticillata</i>
wild blue phlox	<i>Phlox divaricata</i>



**FOR DRY ZONES**

<i>common name</i>	<i>botanical name</i>
butterfly weed	<i>Asclepias tuberosa</i>
common milkweed	<i>Asclepias syriaca</i>
blue false indigo	<i>Baptisia australis</i>
yellow wild indigo	<i>Baptisia tinctoria</i>
partridge pea	<i>Chamaecrista fasciculata</i>
tickseed	<i>Coreopsis tripteris</i>
whorled tickseed	<i>Coreopsis verticillata</i>
panicked tick trefoil	<i>Desmodium paniculatum</i>
hyssopleaf thoroughwort	<i>Eupatorium hyssopifolium</i>
sweet Joe Pye weed	<i>Eupatorium purpureum</i>
smooth oxeye	<i>Heliopsis helianthoides</i>
roundhead bushclover	<i>Lespedeza capitata</i>
dense blazing star	<i>Liatris spicata</i>
wild lupine	<i>Lupinus perennis</i>
eastern bee balm	<i>Monarda bradburiana</i>
scarlet bee balm	<i>Monarda didyma</i>
spotted bee balm	<i>Monarda punctata</i>
evening primrose	<i>Oenothera biennis</i>
narrow-leaf evening primrose	<i>Oenothera fruticosa</i>
orange coneflower	<i>Rudbeckia fulgida</i>
black-eyed Susan	<i>Rudbeckia hirta</i>
brown-eyed Susan	<i>Rudbeckia triloba</i>
blue-stemmed goldenrod	<i>Solidago caesia</i>
seaside goldenrod	<i>Solidago sempervirens</i>
showy goldenrod	<i>Solidago speciosa</i>
blue wood aster	<i>Symphyotrichum cordifolium</i>
heath aster	<i>Symphyotrichum ericoides</i>
New England aster	<i>Symphyotrichum novae-angliae</i>

Partial list from Philadelphia  
 More here: <http://raingardenalliance.org/planting/plantlist>

## PLANTING INTERVENTIONS

### ► Canopy Trees

#### STREET TREES

<i>common name</i>	<i>botanical name</i>
paperbark maple	<i>Acer griseum*</i>
red maple	<i>Acer rubrum</i>
sugar maple	<i>Acer sachharum</i>
hybrid of <i>A. arborea</i> and <i>A. laevis</i>	<i>Amenlanchier x grandifolia*</i>
European hornbeam	<i>Carpinus betulus "Fastigiata"*</i>
musclewood	<i>Carpinus caroliniana</i>
redbud	<i>Cercis canadensis</i>
Kentucky coffee tree	<i>Cladastris kentukea</i>
yellowleaf hawthorn	<i>Crataegus flava</i>
honey locust	<i>Gleditsia triacanthos</i>
black gum	<i>Nyssa sylvatica</i>
London planetree	<i>Platanus x acerifolia</i>
American plum	<i>Prunus americana</i>
Shumard oak	<i>Quercus shumardii</i>
shingle oak	<i>Quercus imbricaria</i>
basswood	<i>Tilia americana</i>
Accolade elm	<i>Ulmus x accolade*</i>

\* denotes non-native species

Adapted from West Chester Borough List (<http://www.west-chester.com/193/Trees>) and City of Philadelphia list (<http://www.phila.gov/ParksandRecreation/environment/Documents/PPR%20Approved%20Street%20Tree%20List.pdf>)

### ► Interstitial Spaces & Foundation Plantings

#### SHRUBS

<i>common name</i>	<i>botanical name</i>
gallberry	<i>Ilex glabra</i>
sheep laurel	<i>Kalmia angustifolia</i>

#### GRASSES

<i>common name</i>	<i>botanical name</i>
little bluestem	<i>Schizachyrium scoparium</i>
Indiangrass	<i>Sorghastrum nutans</i>

#### PERENNIALS

<i>common name</i>	<i>botanical name</i>
butterfly weed	<i>Asclepias tuberosa</i>
blue false indigo	<i>Baptisia australis</i>
tickseed	<i>Coreopsis tripteris</i>
whorled tickseed	<i>Coreopsis verticillata</i>
dense blazing star	<i>Liatris spicata</i>
eastern bee balm	<i>Monarda bradburiana</i>
spotted bee balm	<i>Monarda punctata</i>
Carolina phlox	<i>Phlox carolina</i>
orange coneflower	<i>Rudbeckia fulgida</i>
black-eyed Susan	<i>Rudbeckia hirta</i>
brown-eyed Susan	<i>Rudbeckia triloba</i>
blue-stemmed goldenrod	<i>Solidago caesia</i>
seaside goldenrod	<i>Solidago sempervirens</i>
showy goldenrod	<i>Solidago speciosa</i>
heath aster	<i>Symphotrichum ericoides</i>
smooth blue aster	<i>Symphotrichum laevis</i>

#### FERNS

<i>common name</i>	<i>botanical name</i>
hay-scented fern	<i>Dennstaedtia punctiloba</i>
bracken fern	<i>Pteridium aquilinum</i>



Streetscapes



Interstitial Spaces







# VIII. Phasing and Budgeting



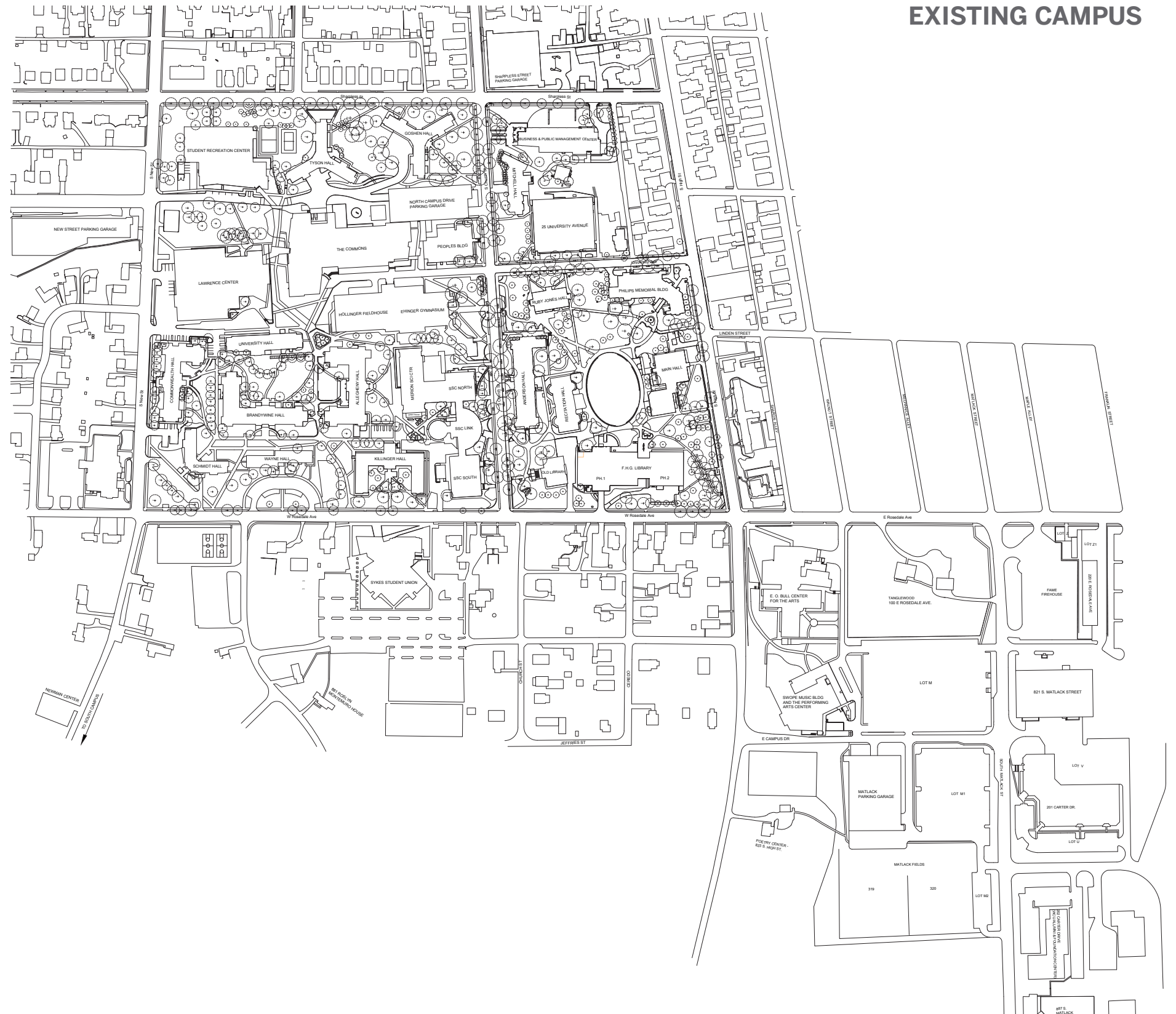
## PHASING AND BUDGETING

A master plan is more of a road map than a plan; it offers ideas and options but does not prepare final design. The intent of any master plan is to use the information to inform the steps of development moving forward.

In the Landscape Master Plan for West Chester University, Landworks Studio and Biohabitats have developed a framework of concepts, for both physical projects and ecological concepts to be implemented throughout the North and East Campuses. Following are recommendations for how these projects and policies might be implemented over the next two decades.

Landworks Studio and Biohabitats understand that in our world and the University's world of developing technologies and evolving critical thinking some of the ideas put forth in the Landscape Master Plan may need revisiting in less than 20 years. We welcome challenges to this Master Plan and look forward to the next 150 years of West Chester University.

## EXISTING CAMPUS



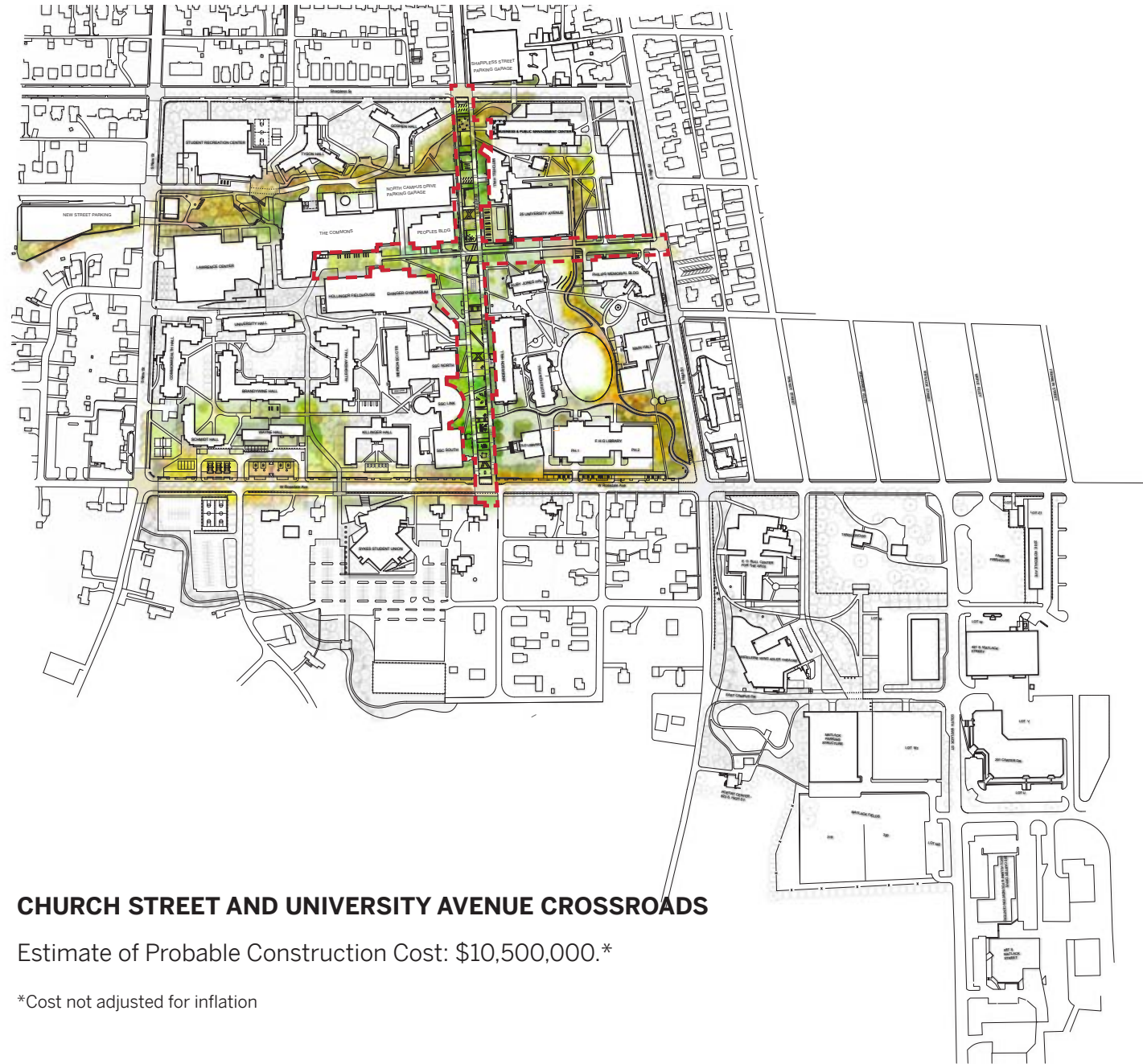
# PROPOSED CAMPUS







## PHASING 2023

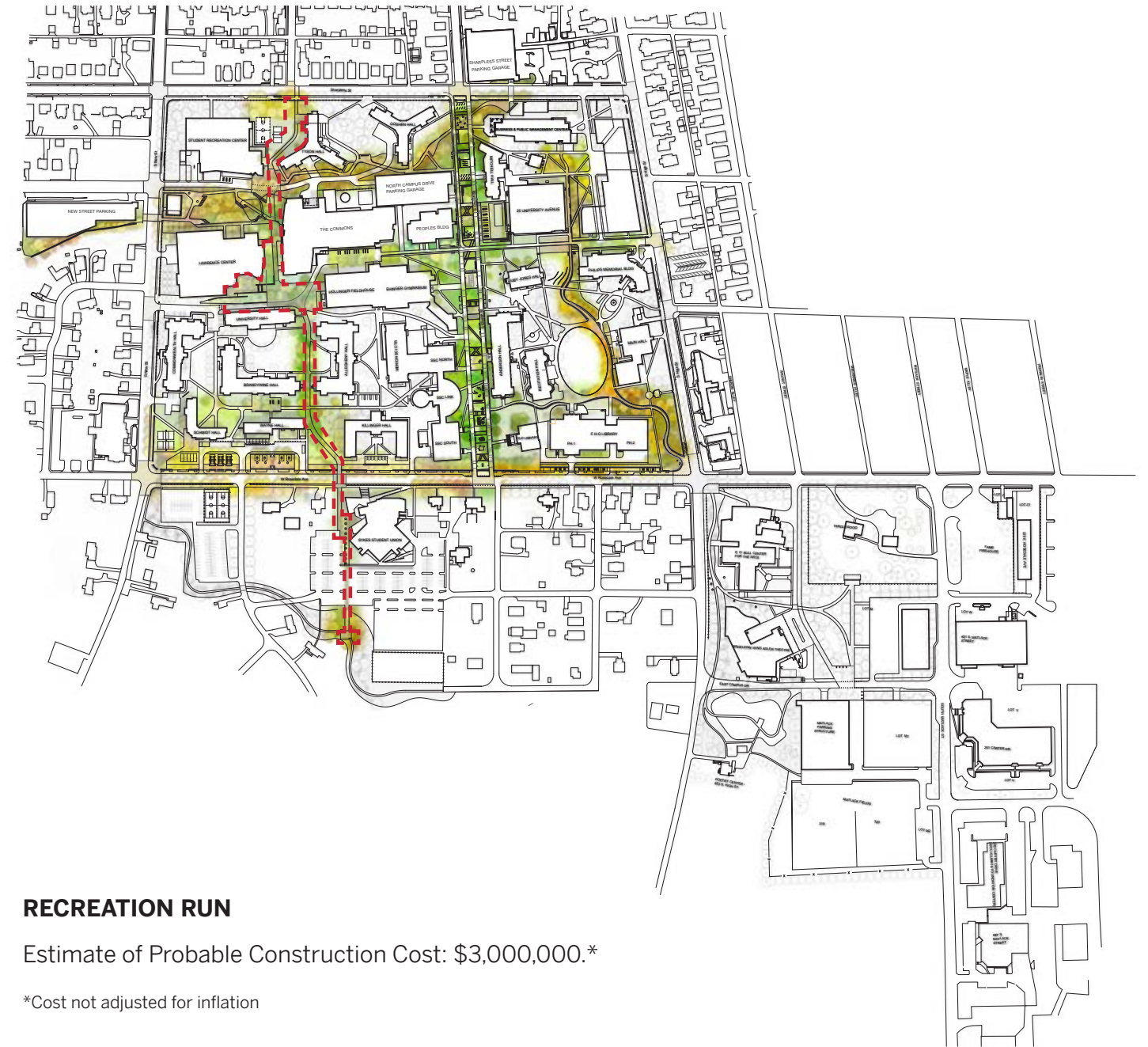


### CHURCH STREET AND UNIVERSITY AVENUE CROSSROADS

Estimate of Probable Construction Cost: \$10,500,000.\*

\*Cost not adjusted for inflation

## PHASING 2028

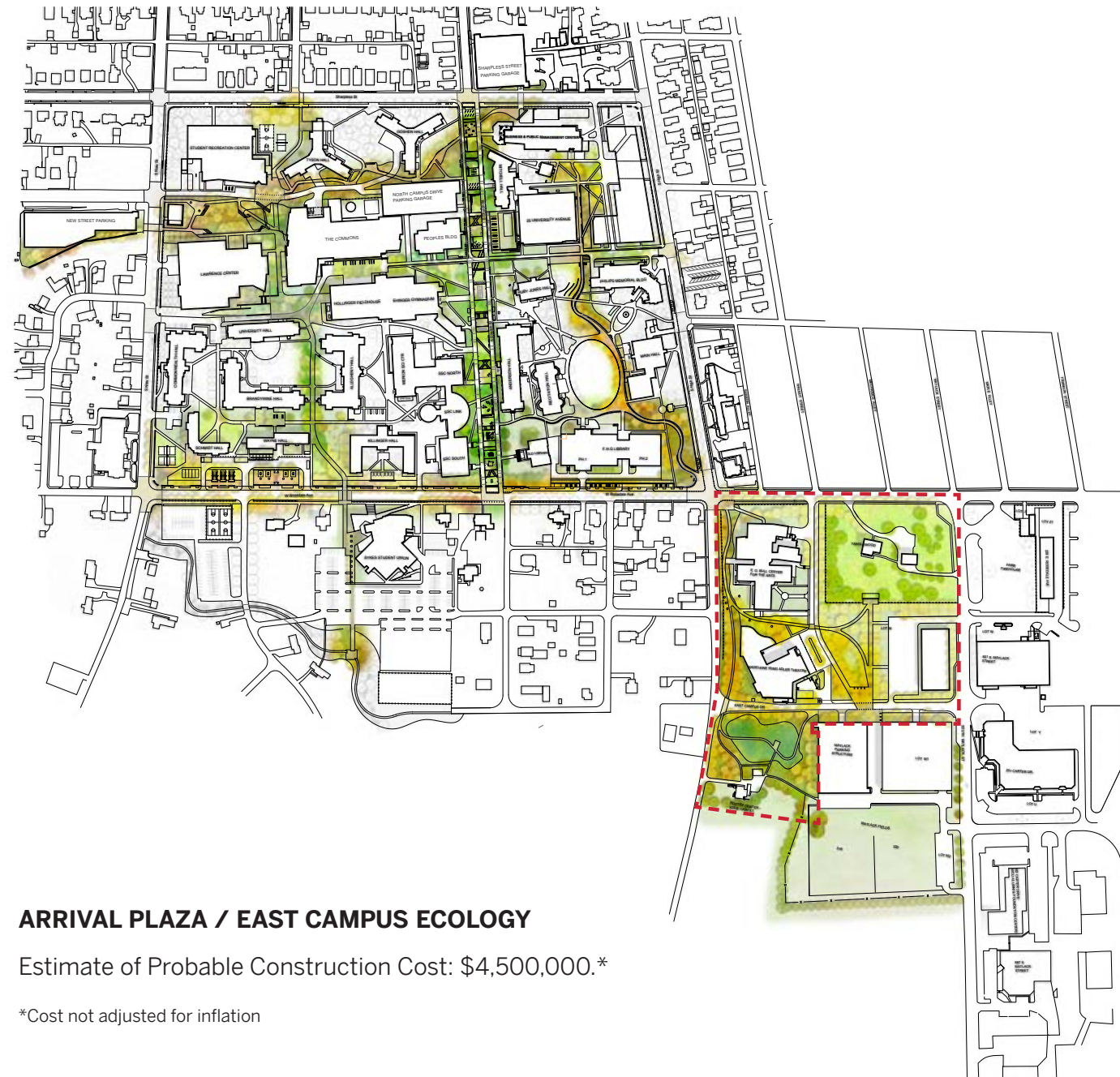


### RECREATION RUN

Estimate of Probable Construction Cost: \$3,000,000.\*

\*Cost not adjusted for inflation

PHASING 2038



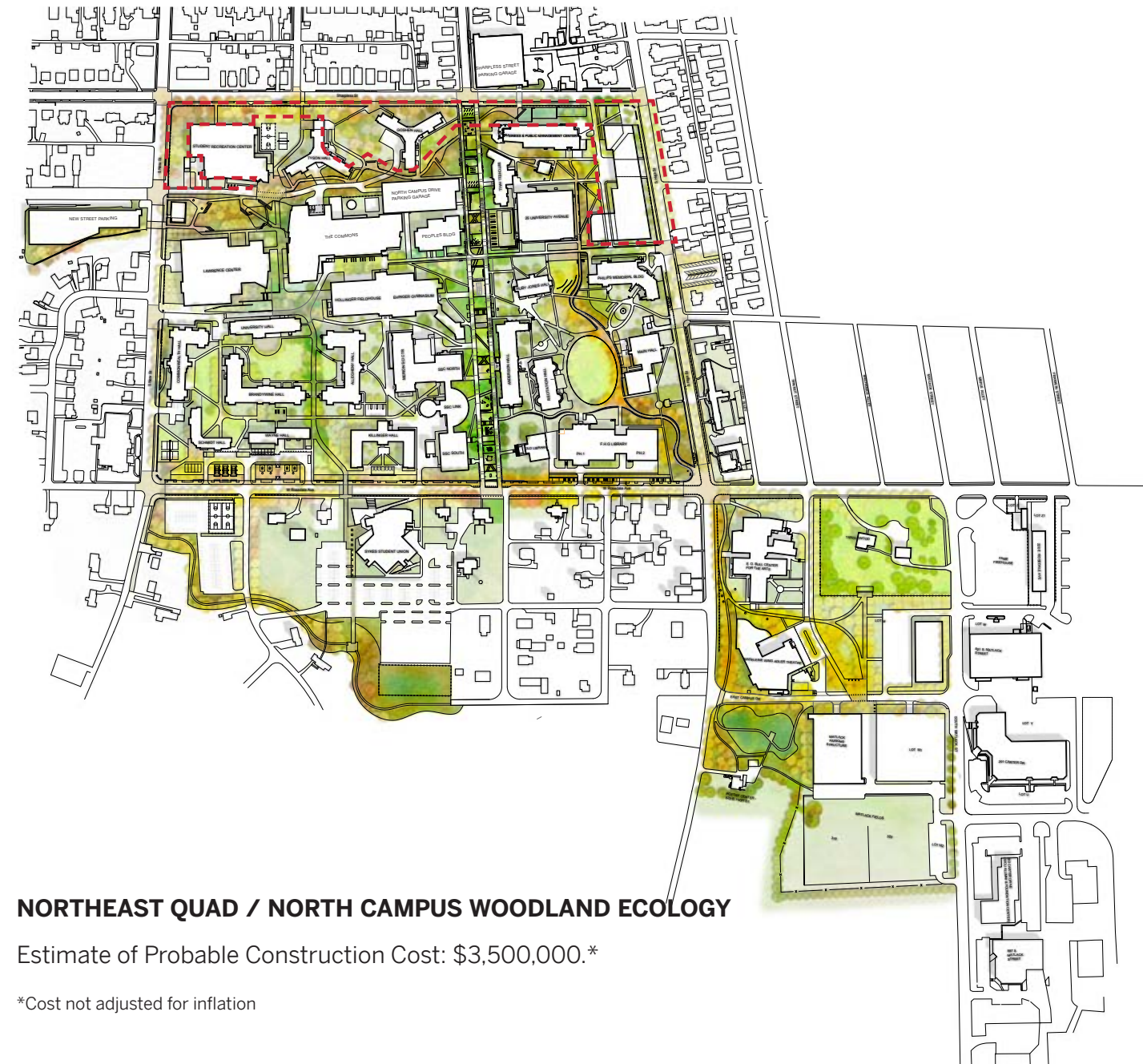
**ARRIVAL PLAZA / EAST CAMPUS ECOLOGY**

Estimate of Probable Construction Cost: \$4,500,000.\*

\*Cost not adjusted for inflation



PHASING 2038



**NORTHEAST QUAD / NORTH CAMPUS WOODLAND ECOLOGY**

Estimate of Probable Construction Cost: \$3,500,000.\*

\*Cost not adjusted for inflation



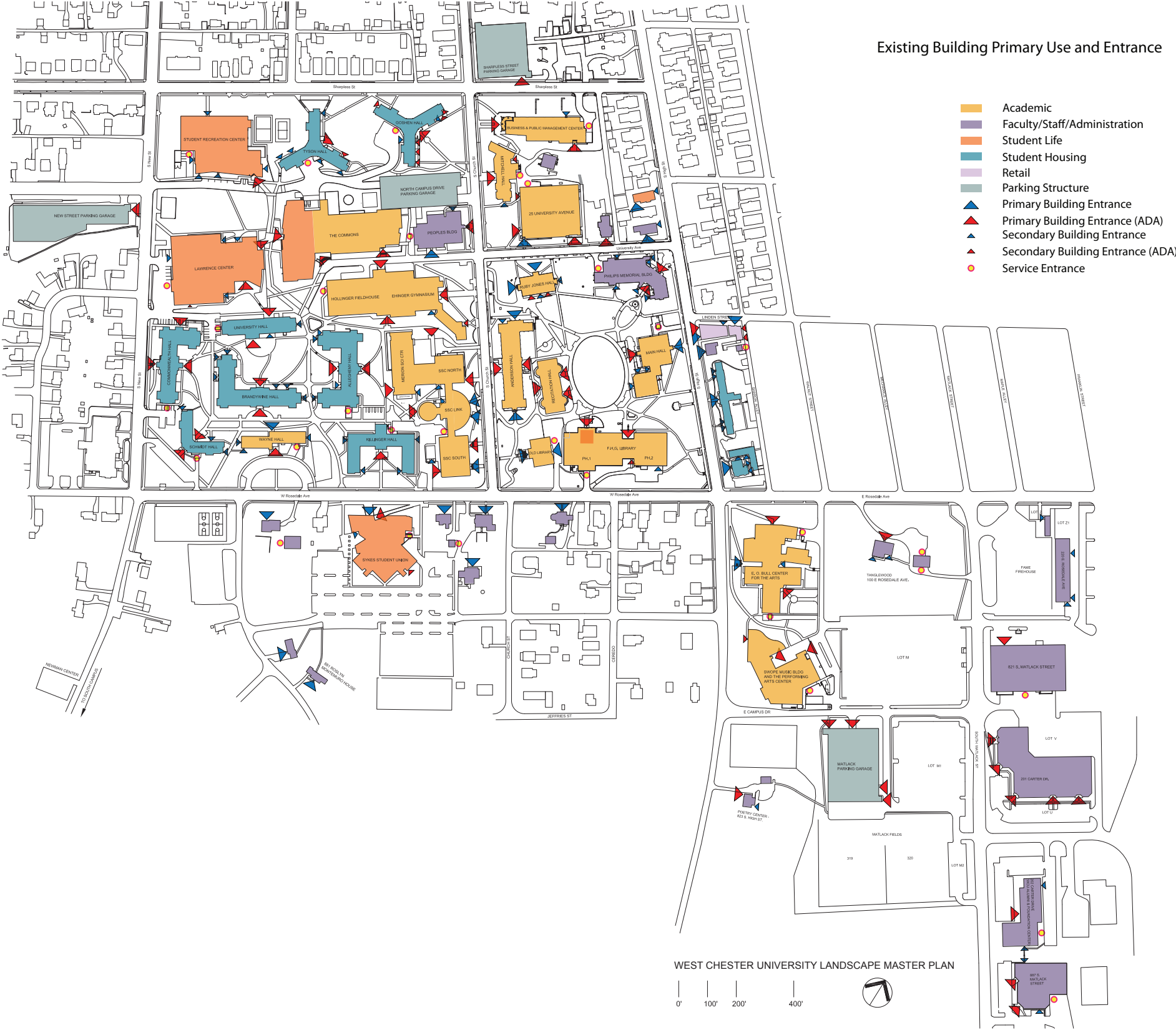






## IX. Appendix

# EXISTING BUILDING PRIMARY USE AND ENTRANCE

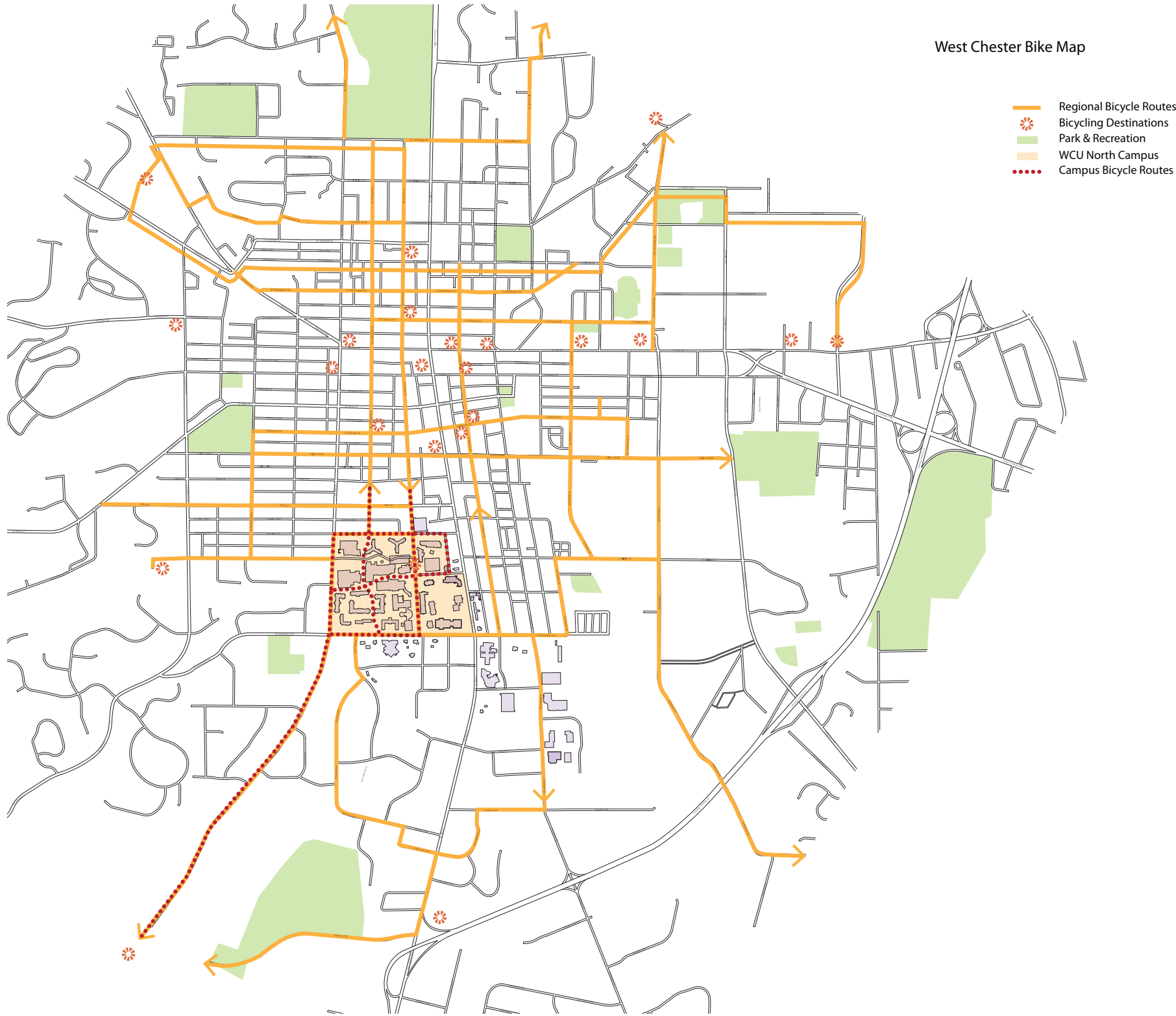




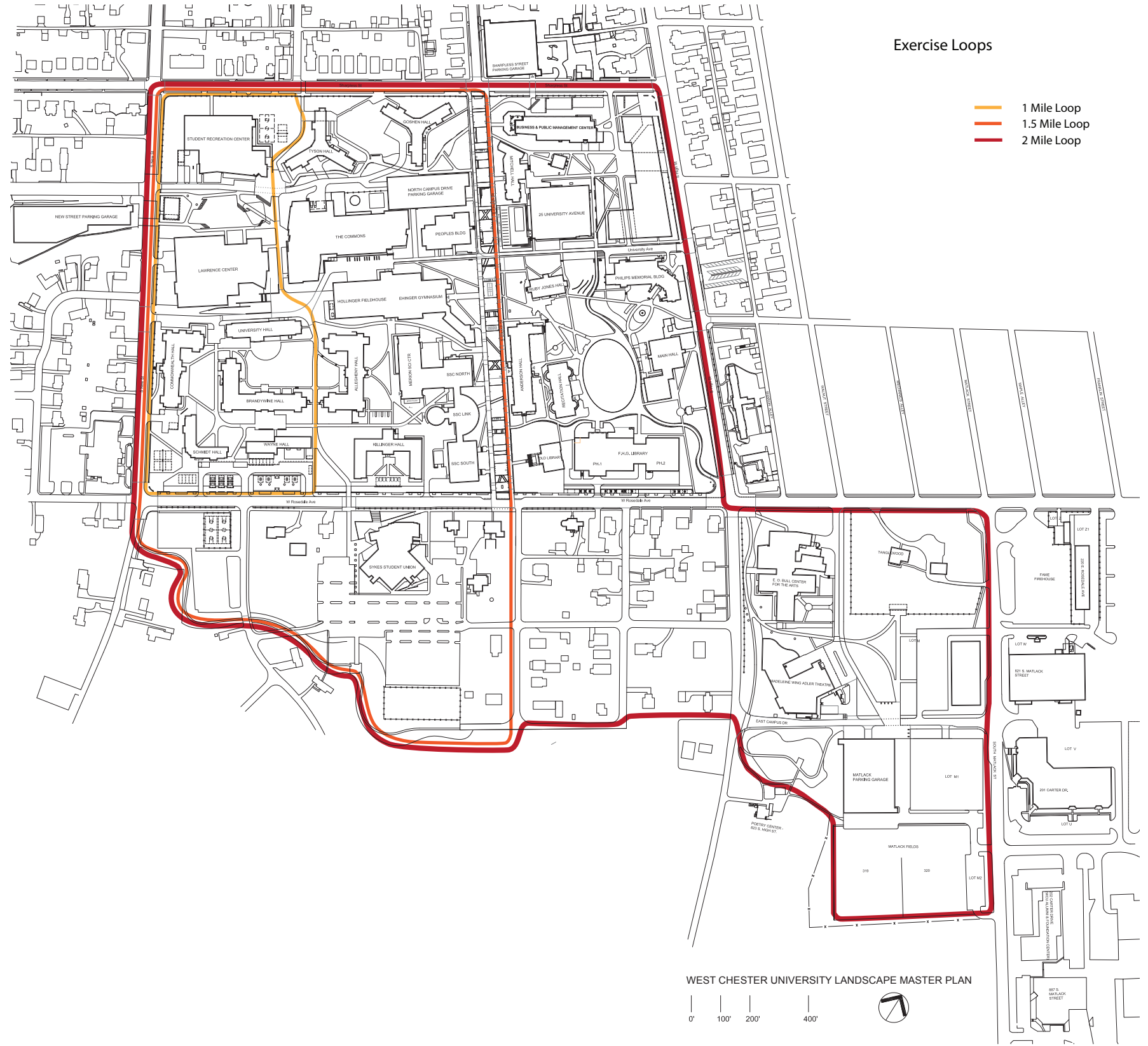




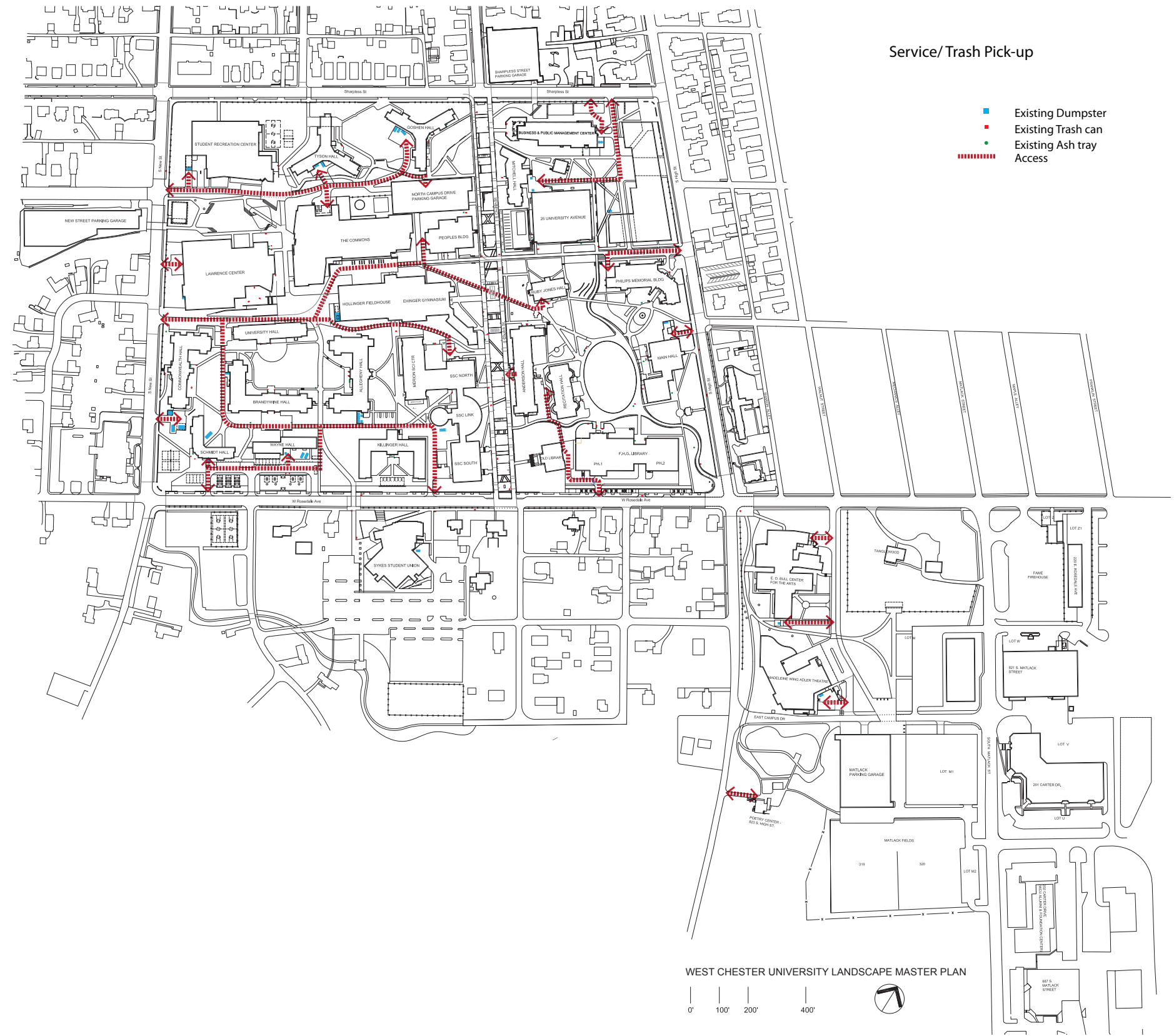
# BICYCLE ROUTES



# EXERCISE LOOPS



# PROPOSED SERVICE TRASH PICK-UP







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*West Chester University (white) within the Plum Run Watershed. The focus of this study is on the North Campus.*

Source: *Plum Run and its Watershed: A Tutorial in Stream Ecology Using Google Earth*, Christopher Robinson, WCU.

*Carbon Neural by 2025*: <https://www.wcupa.edu/sustainability/carbonneutralityplan.aspx>

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