



APPALACHIAN STATE UNIVERSITY

MASTER PLAN 2025
2016 - 2017



DUDA | PAINE
ARCHITECTS

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01 INTRODUCTION

Letter from the Chancellor

Master Plan Overview

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Master Plan Process Timeline

2014-2019 Strategic Plan Overview



01 INTRODUCTION



This series of photographs was taken during the Master Plan Public Design Charrette, held October 20th through October 21st, 2016.

Letter from the Chancellor



Dear Colleagues and Friends:

A Master Plan is critical to ensuring Appalachian State University has the infrastructure and resources in place to support our academic mission as realized in the strategic plan. To this end, many individuals from the university community, Town of Boone and Watauga County have provided invaluable information through their participation in the planning process.

This comprehensive plan serves as a living document to guide our vision in providing transformational educational experiences through teaching, research and service. The plan addresses much needed space for academics and other support for students, faculty and staff. In addition to supporting our academic mission, a plan is key in ensuring we develop our campus in ways that protect and broaden its beauty and live up to our core value of sustainability.

I thank the greater Appalachian community for being part of this planning process and encourage you to remain engaged as we move forward together. Our continued partnership will ensure Appalachian and Boone are beautiful and healthy places to learn, work and live.

Sincerely,

Sheri N. Everts

Chancellor

Master Plan Overview

Appalachian State University's location in the distinctive Town of Boone in the Blue Ridge Mountains, has greatly influenced its values of environmental stewardship, integrative scholarship, and community involvement. The University's commitment to these values is sustained and achieved through thoughtful planning, strategic implementation, and an enduring focus on the University's mission.

The Master Plan 2025 is a guide for the physical development of campus over the next twenty years. Drawing on successful aspects of the existing campus and considering future enrollment growth, changes in pedagogy, and sustainable practices, the Master Plan 2025 provides recommendations for creating a built environment to support the effective execution of the University's Strategic Plan. The improvements proposed in this document include new buildings, upgrades to roads, and open space enhancements.

The recommendations provided were informed by careful analysis of the campus, as well as input received during a series of meetings between the Design Team, members of Appalachian State, and representatives from the surrounding community. The Guiding Principles section is a synthesis of the fundamental values communicated during this extensive process. Using this foundational basis, a Campus Vision was created to guide the overall layout of the campus. In line with these overarching guidelines and integrating institutional and public input, the Precinct Plans illustrate how each campus district might be developed to reflect the needs and goals of the University.

The Master Plan 2025's broad principles and framework are provided to ensure it remains a Living Document, which will evolve and progress as Appalachian State expands. Tools such as the Design Standards & Guidelines, which provide architectural, open space, street, and utilities criteria for future projects, will help to create a unified campus that adheres to the Campus Vision. Similarly, the Plan Implementation & Recommendations provides a road-map for prioritizing implementation goals and conducting studies that will improve the functionality and experience of campus. Using this broad outline for campus development, Appalachian State can ensure that future improvements remain true to the University's spirit and values.

Master Plan Committee and Design Team

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 Dayton Cole, *General Counsel*
 Matthew Dockham, *Director of External Affairs & Community Relations*
 Randy Edwards, *Interim Vice Chancellor for University Advancement*
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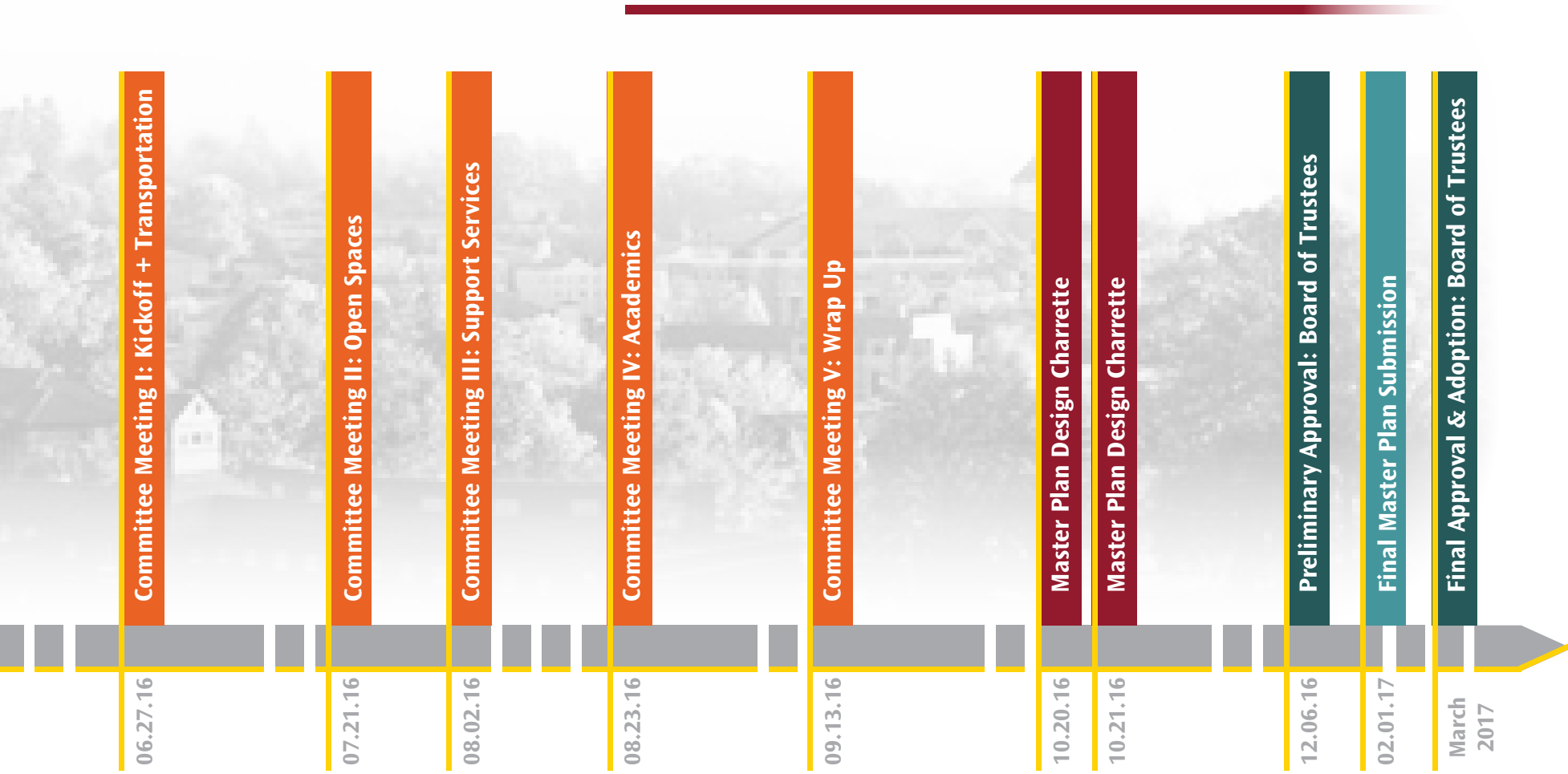
Brailsford & Dunlavy Analytics

Wilson Jones

Master Plan Process Timeline



PHASE I: Listening Sessions & Work Sessions



PHASE II: Committee Meetings, Design Charrettes, & Final Master Plan

2014 - 2019 Strategic Plan Overview

The Master Plan 2025 will facilitate achievement of the goals listed in Appalachian State University's existing strategic plan titled The Appalachian Experience: Envisioning a Just and Sustainable Future. Below is a summary of the University's Strategic Directions, which have informed the Master Plan 2025 vision and Guiding Principles.

1 Creating the Transformational Educational Experience

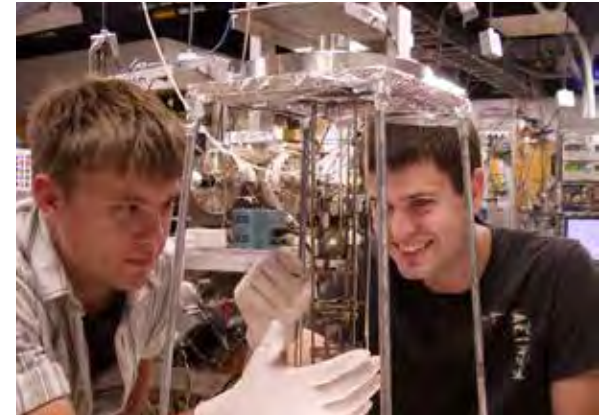
Appalachian State students will be provided with a transformational education by creating and maintaining intellectually challenging academic programs and extra-curricular experiences that involve them in civic engagement and community service. Appalachian State will continue to impact student and faculty success by expanding e-learning opportunities and increasing access to innovative learning technologies.

2 Advancing Knowledge & Addressing the Challenges of Our Region, State, & World Through Creativity & Innovation

One of the fundamental responsibilities of a university is the advancement of knowledge through research and creative activities. Two noteworthy qualities of Appalachian are the way scholarship informs teaching and how we engage our students in research. Appalachian has depth in its disciplinary research and is poised to expand its efforts to create interdisciplinary research teams focused on important local and global issues. We value the role North Carolina citizens play in the global ecosystem and society, and will increase the value and visibility of research efforts in all disciplines.

3 Engaging the State, Region, & World

We create a culture of outreach and engagement through innovative teaching and scholarship as well as valuing engagement with varied communities. By applying our academic and professional expertise to collaborations with external partners, we improve the quality of life for the communities we serve. Through outreach, we apply our academic and professional expertise to the direct benefit of external audiences.



Ion Trap Lab, Physics Department, Appalachian State



Costa Rica Study Abroad Program, Appalachian State

Engagement allows us to use our professional academic skills in collaboration with the community in ways that mutually benefit each partner. Outreach and engagement promote improving the quality of our life for our university and the communities we serve.

4 Embracing Diversity of Thought, Belief, & Community

Diversity is imperative for institutional, faculty, staff, and student success. Continued assessment and planning ensures that diversity is incorporated into the fabric of the campus through its policies, administration, practice and service delivery. We are committed to fostering a community culture that is a microcosm of and responsive to the beliefs, identities, practices, and values needed for constructive engagement in our increasingly global community. At Appalachian State University, diversity is recognized as an essential binding agent of the interdisciplinary approach to education, as well as to the greater life experience.

5 Preserving Faculty & Staff Excellence

Our success in accomplishing our mission requires ongoing professional and personal development of faculty and staff and sustained wellness of our employees. Employees who are healthy and well-prepared can better perform their job duties, and can also serve as strong, effective role models to students. Faculty and staff development take the form of both professional knowledge and skills as well as personal growth. Professional development ranges from acquiring new knowledge in a discipline to learning new pedagogies to acquiring new skills with technologies. Personal development includes health, wellness, and work-life balance.

6 Building a Responsive Infrastructure for a Sustainable Campus

How we employ our infrastructure, broadly defined, is critical to accomplishing our mission. Infrastructure includes both material and non-material means by which university personnel achieve our mission, encompassing both the physical facilities, and the operations, programs, business processes, organizational frameworks, and technologies we employ to sustain our campus into the future.



Student Leaders, Appalachian State



Solar Homestead Construction 2014, Appalachian State

02 INFORMATION GATHERED

Information Gathered Overview
Executive Summary of Listening Sessions
Accommodating Growth



02 INFORMATION GATHERED



Appalachian State Faculty discuss the campus' future at a Listening Session with the Staff Senate.

Information Gathered Overview

From late March through early May of 2016, the Master Planning Committee, Duda | Paine Architects, and their consultants held a series of Listening Sessions to gain insight into community priorities and goals for the Master Plan 2025 to guide the future development of Appalachian State's campus. Together, Duda | Paine Architects, various consultants, and the Committee spoke with a total of nine groups representing faculty, administration, staff, students, and the local community.

Participants at these Listening Sessions discussed how and where Appalachian State's physical campus should grow. A series of 'Thought Starters'—questions about improvement priorities, enrollment and retention strategies, inspiring campuses, transportation needs, and promoting sustainability—guided the group brainstorming sessions, although participants were encouraged to share all concerns and comments. While the Sessions generated a variety of responses, most participants shared the belief that improving academic spaces, reinforcing transportation and connectivity, enhancing open spaces, and bolstering support services are top priorities on campus. More information about common responses, opinions, and perceptions raised during this outreach effort are provided in the Appendix section of this document.

In tandem with Listening Session efforts, six stakeholder Work Sessions were held to glean insight into current conditions on campus and future master plan needs. Participants in these Sessions included various departments, transportation officials, planning professionals, and representatives from the Town and County of Boone. A summary of the topics discussed in the Listening Sessions can also be viewed in the Appendix.

Input received during the Listening Sessions and Work Sessions, along with information collected from University professionals, the local community, and previous studies, were used to inform the design objectives of the Master Plan 2025.

Executive Summary of Listening Sessions: Top Priorities

This section includes a summary of the most common responses and concerns raised by Listening Session participants when asked about what they believe high priority goals for improvement should be at Appalachian State. The topics listed herein have been generated based on the frequency of each comment during the meetings. For a full account of discussion topics, including meeting minutes, refer to the Information Gathered section of the Appendix.



IDEX Lab, Appalachian State

1 Expanded, Flexible, & Functional Academic Spaces

Participants are interested in expanded spaces for purposes such as conducting large lectures and serving disciplines that require larger spaces and specialized equipment, such as science and design. The functionality of academic spaces can be improved by updating and renovating existing academic space to improve layout, integrate appropriate technology, and ensure efficient climate control in classrooms. To ensure flexibility, these spaces should accommodate a variety of uses to accommodate a range of teaching styles and classroom sharing. They should also allow for both individual and group study.



Lecture Hall, Belk Library, Appalachian State

2 A Pedestrian, Bicycle, & Alternative Transportation Friendly Campus

Comments regarding this topic often had to do with pedestrian and cyclist safety, but also touched upon the need for clear wayfinding strategies on campus, ADA accessibility, and the idea of promoting sustainable modes of transportation on campus.



Pedestrian Pathways, Appalachian State

3 Expanded & Functional Support Services

Participants noted the need for more student support services, such as more study space, group work areas, and a wellness center, but also highlighted the need for faculty support services and faculty and staff offices.



PSU Solarium, Appalachian State

4 Vehicle & Parking Policy

The discussion regarding vehicles and parking highlighted the need to rethink the campus parking policy, mitigate traffic, increase pedestrian safety, and prevent unauthorized vehicles from driving into the heart of campus.



Kitakyushu Technology Center Parking, Fukuoka, Japan

Executive Summary of Listening Sessions: Top Priorities



Free Expression Tunnel, Appalachian State

5 Mass Transit & Alternative Transportation on Campus

Increasing transit options to and around campus was noted as a priority that would help mitigate traffic and decrease the need for cars on campus.



AppalCart, Appalachian State

6 A Sense of Place

Participants mentioned the need for a campus environment that reflects the values of Appalachian State and creates a visually cohesive experience through the design of buildings and outdoor spaces.



Daniel Boone Statue, Appalachian State

7 Green Space Improvements

The idea of improving the campus landscape and preserving open space was mentioned various times throughout the Listening Sessions.



Durham Park, Appalachian State

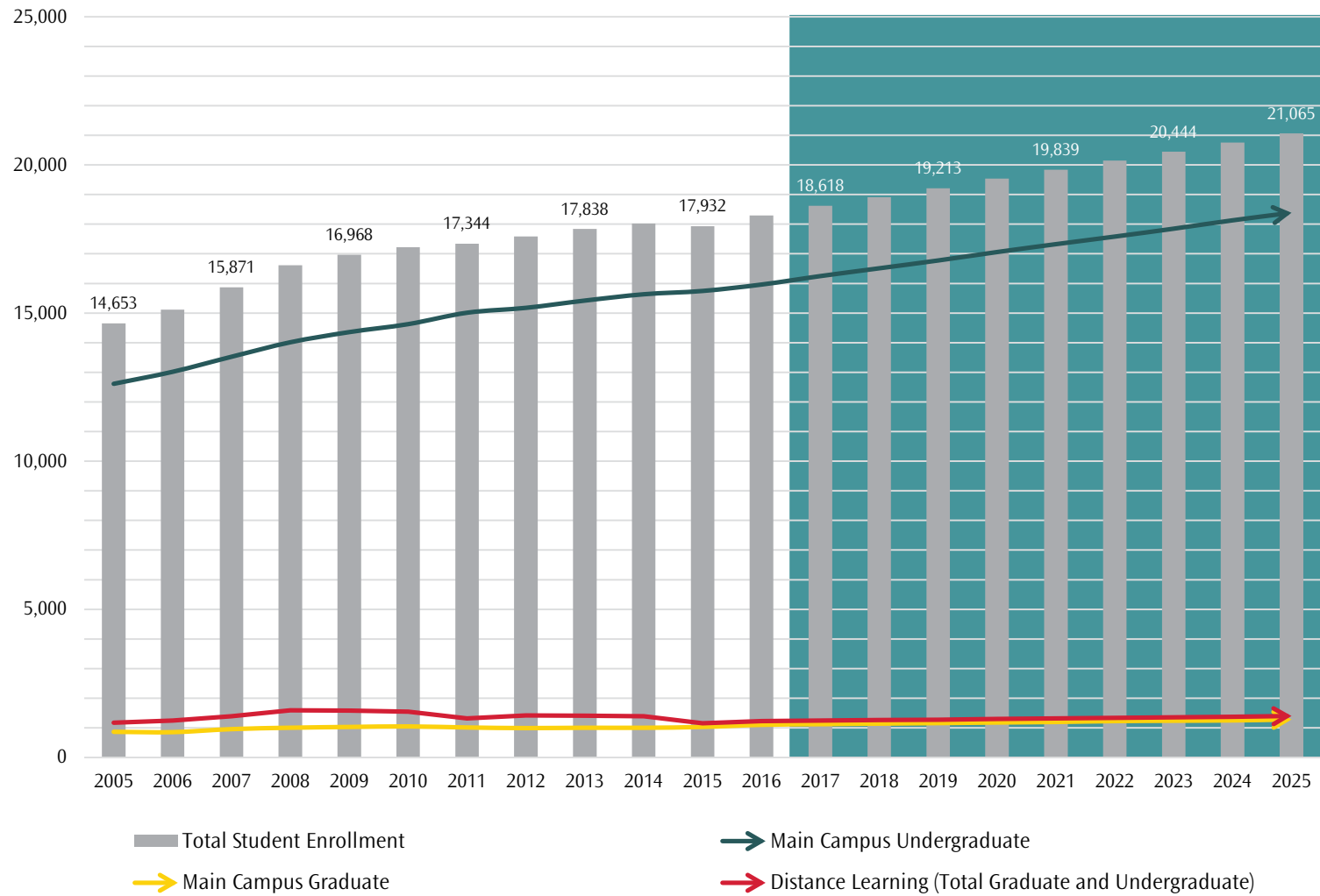
8 Sacred Spaces

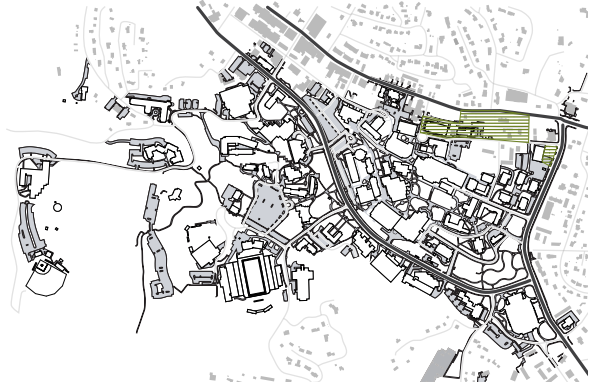
Participants noted that improvements to gathering and community spaces at Appalachian State, such as Sanford Mall, are important.



Sanford Mall, Appalachian State

Accommodating Growth: Enrollment Projections





Areas of Acquisition Potential

Sites abutting Appalachian State's campus can provide valuable opportunities both for growth and for forging partnerships with the Town of Boone. The expansion of the Legends site at the northeast corner of campus could provide space for a conferencing and events center to invite collaboration with neighboring communities and outside institutions. It can also play an important role in creating a face for the University on King Street.

In addition to this area, the University might think about acquiring the High School property just south of Route 105 to improve athletics facilities.



Areas of Demolition

Scheduled campus demolitions and renewals provide opportunities for the construction, expansion, and improvement of buildings. Both new buildings and renovations should be designed to maximize space and use land as efficiently as possible.



Infill Potential

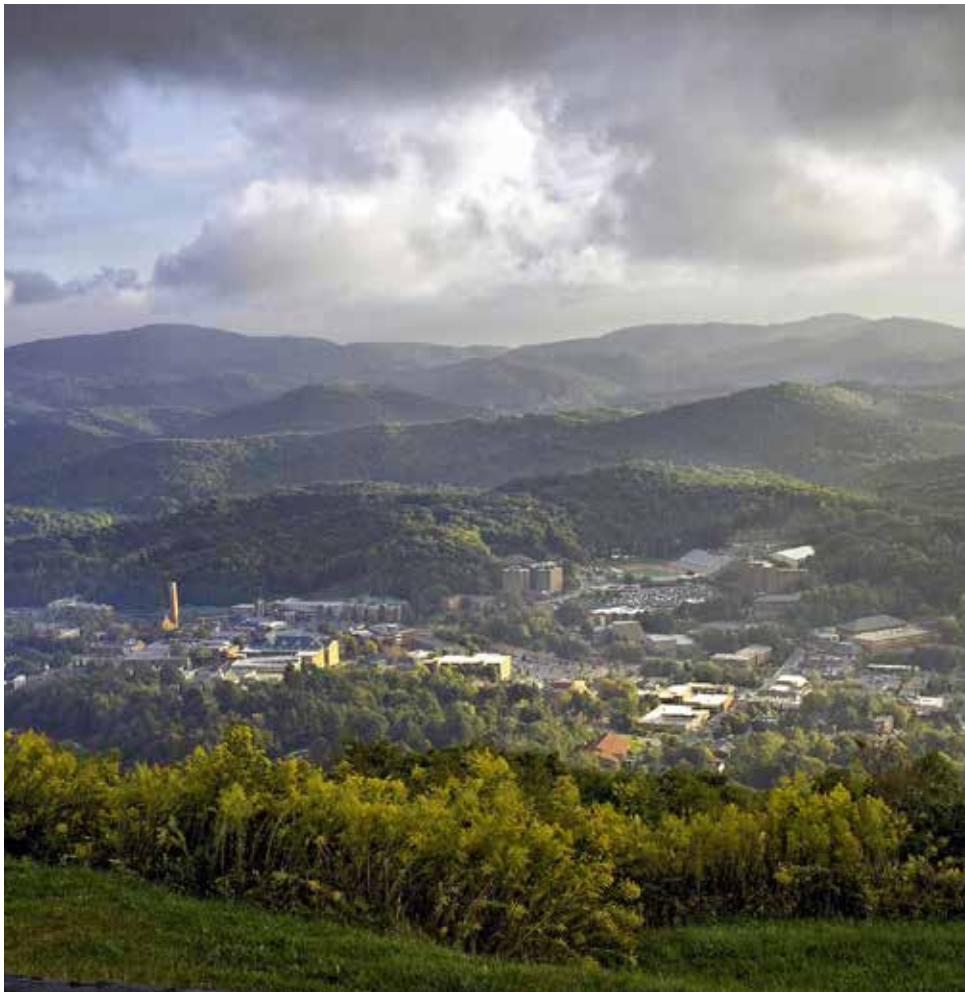
The mountainous regions of main campus have steep slopes, which increase the difficulty and expense of building. An infill building strategy could help to address campus growth needs.

03 SITE CONSTRAINTS

Site Constraints Overview
Site Constraints Maps



03 SITE CONSTRAINTS



Appalachian State University
Photo by Marie Freeman¹

Site Constraints Overview

The Blue Ridge Mountains—one of the most striking features of the Appalachian State campus—also constitute many of the site constraints that inform the Master Plan 2025. Other important aspects of campus that drive the Master Plan include Appalachian State’s built environment, sacred spaces, and infrastructure such as parking and streets. The Master Plan 2025 combines extensive analysis of these elements with the Appalachian State Strategic Plan, input of the members of Appalachian State, and the greater community to provide a comprehensive Campus Vision.

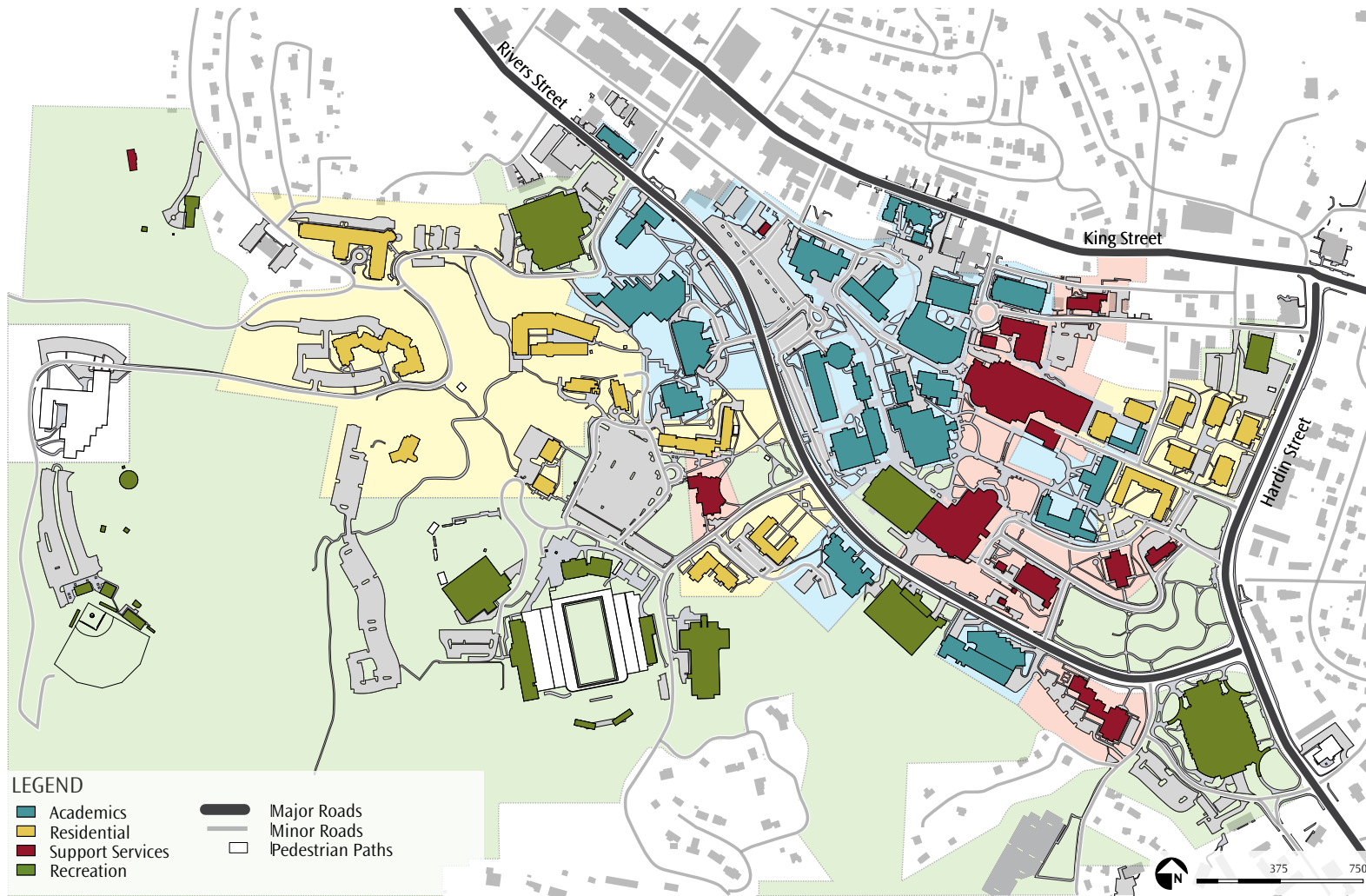
The campus’s topography is a boon for preservation of the natural landscape, but results in limited build-able space. Water flowing from the surrounding mountains reaches a flood plain at Rivers Street, further decreasing build-able space, but provides a valuable opportunity to preserve and showcase Boone Fork Creek, which runs beside the street. Leveraging these natural constraints as opportunities, the Master Plan 2025 proposes to preserve unbuildable land and densify the built environment in areas that allow for construction.

Places of University culture and tradition, such as sacred spaces and gathering spots, also set important considerations for the Master Plan 2025. The Campus Vision framework acknowledges these open spaces and buildings as areas that should not be removed, but rather celebrated and revitalized. Accordingly, improvements have been proposed for areas such as Sanford Mall, the tailgate zone at Kidd Brewer Stadium, and for academic buildings serving the University’s core value of creating a transformational educational experience.

Campus infrastructure, which is largely shaped by local topography, also poses certain checks on University development. Parking is particularly affected by the limited build-able area and the need to expand academic capacity. The Master Plan 2025 addresses this constraint by proposing that parking decks be built at the campus perimeter to provide more on-campus space for other uses. Greater access to and increased use of public transportation will also address sustainability goals, increase pedestrian safety, and decrease the number of cars on campus.

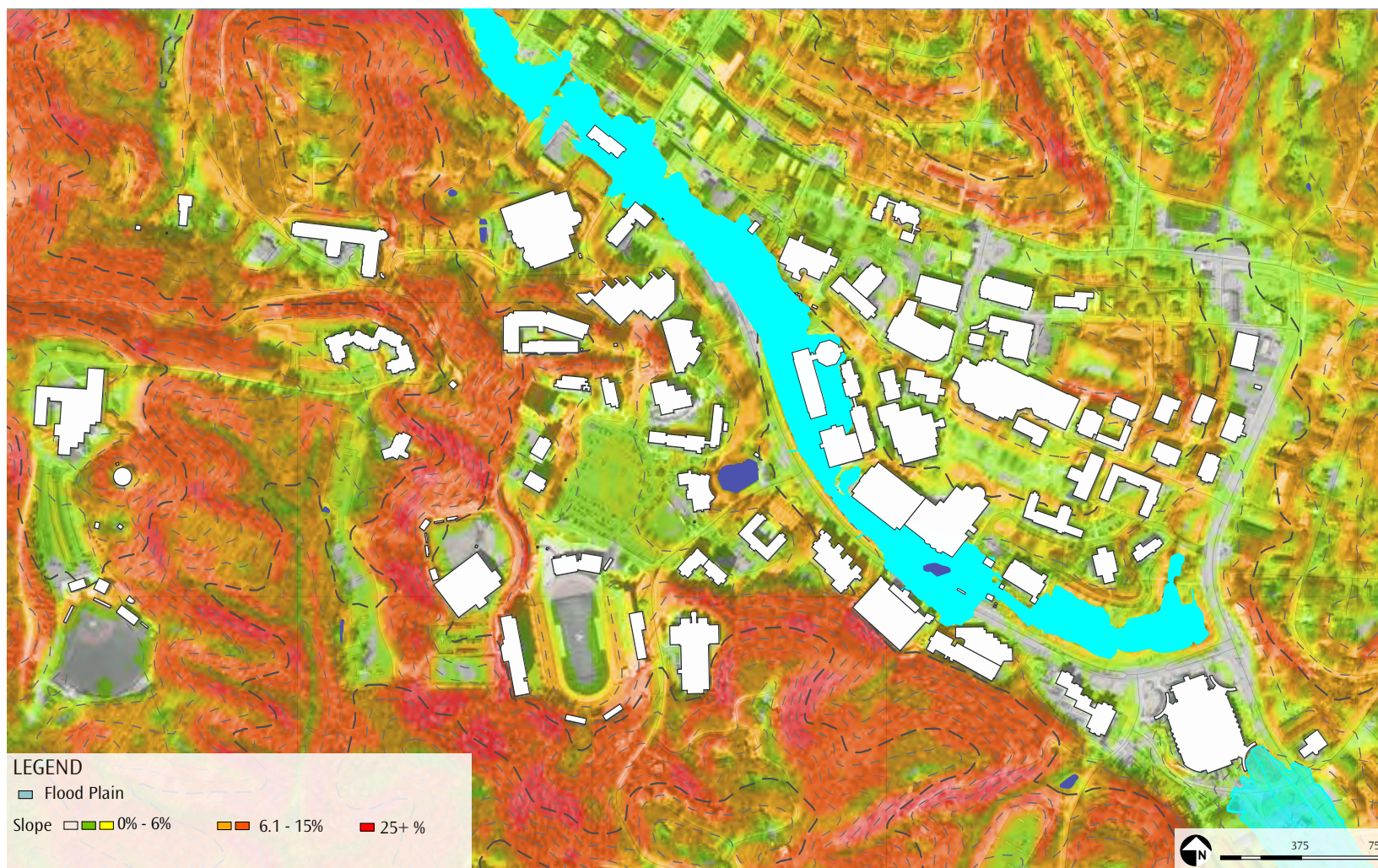
Guided by the Appalachian State Strategic Plan and community input, the Master Plan 2025 addresses these site constraints in a manner consistent with the University’s values for a responsive infrastructure.

Constraints: Existing Campus Neighborhoods



The edges of campus are defined by King Street, Rivers Street and Hardin Street. The neighborhoods created within these edges include: Academics (blue) and Academic Support (red), which run North to South, and Housing (yellow) and Recreation and Athletics (green), which run East to West.

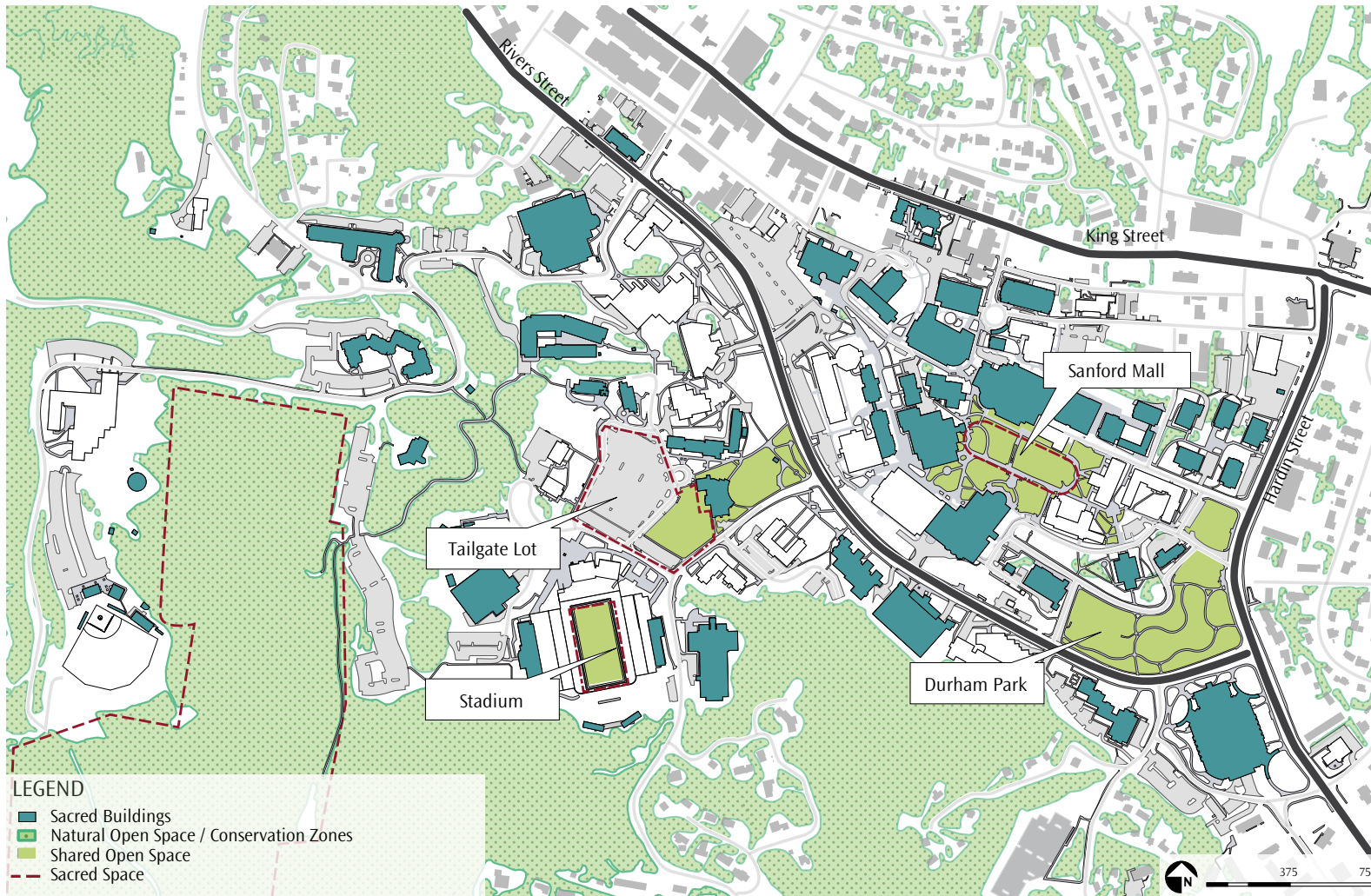
Rivers Street also creates an edge that bisects the campus and, without proper interventions, can function as a barrier.

Constraints: The Natural Landscape

The mountainous regions of main campus, which are shown in red and orange, are comprised of steep slopes, making building difficult and expensive. Infill building and densification strategies may prove more feasible approaches to meeting campus growth needs.

Rivers Street and the adjacent land to the north serves as the campus' low point and is within a large floodplain that converges with Boone Creek. The creek is exposed across roughly half of the campus. Because the creek presents significant barriers to development, it is better served as open green space.

Constraints: Sacred Spaces & Sacred/Functional Buildings



Sacred open spaces on campus include: Sanford Mall, Durham Park, the tailgate parking lot, and Kidd Brewer Stadium. Buildings in teal require little or no repair and will likely not be demolished.

Constraints: Buildings to be Demolished or Renovated

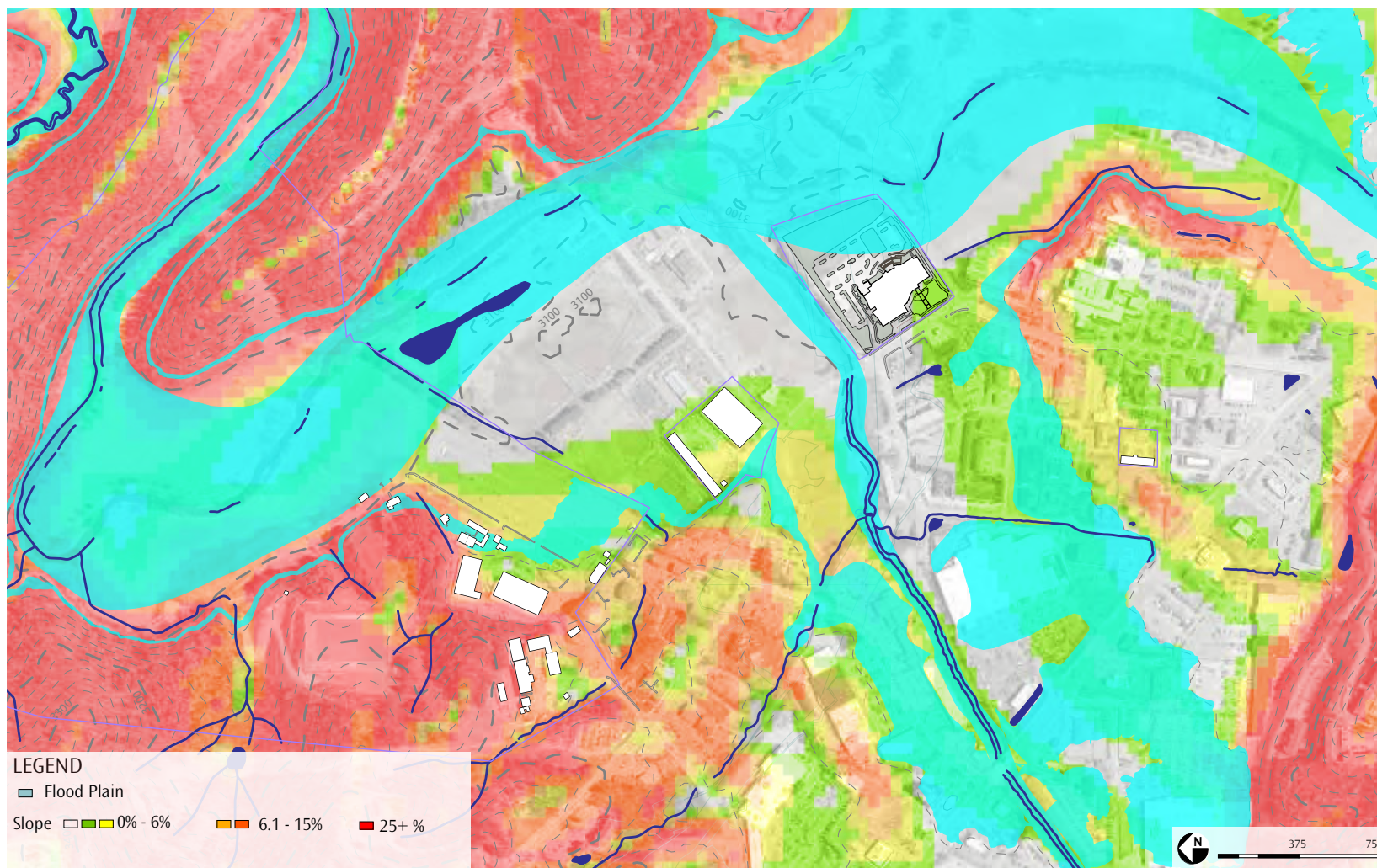


Campus demolitions and renovations provide opportunities for the construction, improvement, and programming of future buildings. Swing space must be considered as buildings are demolished, renovated, or newly built.

Constraints: State Farm Buildings to be Demolished or Renovated



Campus renovations at the State Farm Campus can provide opportunities for the construction, improvement, and programming of future buildings.

Constraints: The Natural Landscape at State Farm

The mountainous regions of the State Farm campus, which are shown in red and orange, are comprised of steep slopes that surround a large flood plain. These natural features pose significant limitations to the construction of new buildings. Any new buildings in this area should be oriented away from flood zones.

04 GUIDING PRINCIPLES

Guiding Principles Overview
Guiding Principles



04 GUIDING PRINCIPLES



Appalachian State University
Photographer Unknown²

Guiding Principles Overview

The Guiding Principles weave together the knowledge gleaned from the information gathering and site constraint analysis phases of the master planning process, as well as from design meetings and community discussions that occurred throughout 2016. This set of far-reaching, transformative ideas outlines how Appalachian State goals for academic achievement, ecological stewardship, civic engagement and collaboration can be implemented in the physical framework of campus. Together, these principles serve as a road-map for current and future planning policies and design projects at Appalachian State. The following section outlines the details of each of the principles, which are:

1. RENEW THE ACADEMIC CORE
2. ENSURE A PEDESTRIAN-SAFE & MULTIMODAL CAMPUS
3. CULTIVATE A SENSE OF PLACE & ARRIVAL
4. IMPLEMENT SUSTAINABLE STRATEGIES
5. MAXIMIZE EXISTING BUILDABLE SPACE
6. PLAN FOR FUTURE ENROLLMENT

These principles integrate Appalachian State's Strategic vision as a challenging and transformative education environment, a culture of civic engagement and outreach, a home for interdisciplinary collaboration, a diverse and global community, a place for continuing personal and professional development, and a manifestation of what responsive infrastructure can accomplish. The broad nature of the Guiding Principles causes some overlap in scope. However, this interdependence ensures all physical developments informed by the principles link together to achieve a cohesive Campus Vision.

Guiding Principles

1 Renew the Academic Core

Appalachian State recognizes the need for improved research and learning environments across campus. Developing a big-picture framework for placing and improving these spaces is the first step in addressing the physical needs of individual academic departments and support services. This high-level process includes identifying methods to improve the academic neighborhood fabric; documenting opportunities for expansion, construction, and renovation; and identifying productive partnerships among departments and outside stakeholders.



Sanford Mall, Appalachian State

2 Ensure A Pedestrian-Safe & Multimodal Campus

Establishing a clear mobility hierarchy on campus is key to ensuring the safe and comfortable movement of pedestrians, cyclists, skateboarders, and vehicles. As the campus transitions to a more pedestrian- and cycle-oriented environment, the University endeavors to bolster mass transportation and reduce dependence on private vehicles. Vehicle speed, access, and parking will be thoughtfully planned to eliminate conflicts and prioritize pedestrians, cyclists, and skateboarders.



Complete Streets, Gateway Village Technology Center, NC

3 Cultivate a Sense of Place & Arrival

The University is committed to creating clear gateways and thoughtfully designed campus edges and nodes to welcome visitors, showcase university life, and foster community. Transparent building facades, prominent signage, and sightlines to the campus' open spaces expose public activity, facilitate wayfinding, and enliven the streets. Neighborhood nodes draw people from across campus and promote social activity. Recurring visual elements, such as unique portals, planters, large-scale art pieces, lighting, and repeating pathway materials, create a cohesive visual identity and put people at ease as they make their way around campus.



Talley Student Union, North Carolina State University

4 Implement Sustainable Strategies

At Appalachian State, sustainability goes hand in hand with education and the preservation of surrounding ecosystems. A dedicated Office of Sustainability oversees the University's adherence to its Guiding Commitments and provides resources to engage Appalachian State and the wider community in environmentally sound practices. Physical plans for the campus integrate ongoing sustainability projects and propose additional initiatives to restore the natural landscape and cultivate a living laboratory.



Broyhill Wind Turbine, Appalachian State

5 Maximize Existing Buildable Space

The mountainous terrain of the Appalachian State campus serves as both a natural asset and a hindrance to expansion. The densification of existing buildings will allow for the best use of buildable land and the maximization of available space. This strategy's implementation also involves increasing the number of mixed-use buildings on campus. Neighborhoods and buildings that offer a variety of activities and functions promote cross-disciplinary interactions and greater integration of academic and residential life.



PSU Solarium, Appalachian State

6 Plan for Future Enrollment

Appalachian State continues to attract faculty and students through research opportunities and integrative learning environments. As the University grows, it will endeavor to preserve and enhance its existing assets while taking advantage of expansion opportunities. Regular analysis and benchmarking of University enrollment is key to generating smart strategies for future development.



International Education Week, Appalachian State

05 CAMPUS VISION

Campus Vision Overview
Campus Initiatives
Framework & Site Plan Overview



05 CAMPUS VISION



Appalachian State University

Photo by Appalachian State University (still from a video)³

Campus Vision Overview

The Appalachian State campus includes plazas, gardens and large open spaces. Buildings delineate these public spaces, which are linked by pathways. The sidewalks, building edges, and natural features work together to define open spaces and create inviting entryways. Art, landmarks, and sustainable features demarcate key places and provide orientation. Their iconic forms propel circulation down streets toward the next destination and mark a sense of arrival.

The Campus Vision outlines the broad physical framework for Appalachian State's diverse neighborhoods. Taking a cue from the natural assets and sustainability goals of Appalachian State, the it creates three open space spines that link various neighborhoods throughout campus. They are: the River Walk, which showcases Boone Creek along Rivers Street; the Events Corridor, which links together social and collaborative spaces throughout campus; and the Arts Walk, which links the University performance venues and arts throughout campus and connects to the surrounding town.

Informed by the Campus Vision and Guiding Principles, the Master Plan 2025 Campus Initiatives define five key master plan projects to enhance the physical framework of Appalachian State University. The Campus Initiatives are:

1. CREATE A SENSE OF PLACE & CENTRAL GATEWAY
2. ENHANCE RIVERS STREET
3. UNITE THE TWO HALVES OF CAMPUS
4. FOSTER COMMUNITY & MIXED-USE PARTNERSHIPS IN WEST CAMPUS & THE ATHLETICS NEIGHBORHOOD
5. SUPPORT INNOVATION & COLLABORATION AT THE BOOKENDS OF CAMPUS

Each of these initiatives provides a call to action for the Master Plan 2025 designs and recommendations.

Campus Initiatives

1 Create a Sense of Place & a Central Gateway

Great campuses are often defined by great spaces and landmarks. Landmarks can be buildings, but also bridges, towers, pavilions, or sculptures. The heart of campus, bound by King, Hardin, Depot, and Rivers Streets, contains many of the University's academic buildings and sacred spaces, but lacks clear gateways and monuments to welcome visitors into its lively central core. Strategic updates to university buildings and spaces flanking these streets will help to create a cohesive visual identity, expose public activity, and indicate one's arrival on campus. Striking landmarks and signage on Hardin and Rivers Streets can direct visitors and indicate their location on campus.

2 Enhance Rivers Street

Appalachian State's campus is best experienced on foot, through safe, ever evolving streets that provide moments of orientation to guide pedestrians. To support a more pedestrian- and cyclist-oriented environment, Complete Streets standards should be implemented on the campus' high-traffic streets. Transformative plans are already underway for W. Howard Street, but it is equally important to address Rivers Street, which serves as a main campus thoroughfare. In addition to providing key University access points, Rivers Street mediates between the city context and the surrounding natural landscape. Daylighting Boone Creek along Rivers Street would expose the natural ecosystems presence throughout campus.

3 Unite the Two Halves of Campus

Campus destinations are linked by streets and pathways that define circulation and one's experiential procession. Pathways of warm, rich materials at Rivers Street crossings would orient pedestrians and create memorable links for campus neighborhoods. The pathways can connect buildings and lively plazas marked by inspiring installations and a grand transit pavilion. The Arts buildings on campus, which run north to south from King Street to the Stadium Lot, provide an ideal datum for a central route, which will connect campus and the surrounding community to the Arts, transportation, and university events.

4 Foster Community & Mixed-Use Partnerships in West Campus & the Recreational Village

Central open spaces on campus create areas of recreation and respite, where people gather to celebrate, exchange ideas, and play. The Stadium Lot, which is located south of Rivers Street, contains a large portion of the build-able land on campus and is also framed by a multitude of residences and Athletics facilities. Establishing an open space hearth in this neighborhood would enhance social engagement between residents, athletes, and game-day spectators.



Gateway, UNC Charlotte



Oregon Convention Center Rain Garden, Portland

The densification and infill of this area's available land will ensure that build-able space is used efficiently, and the new open will enrich campus life by encouraging student interaction and fostering mixed-use partnerships between housing, dining, and athletics.

5 Support Innovation & Collaboration at the Bookends of Campus

Research and knowledge are the beacons that guide Appalachian State into the future. Innovative ideas need a place to grow. The expansion of university research facilities will support faculty and student academic pursuits while also providing spaces to engage the wider academic community. The Broyhill site to the west of campus, which is framed by the Biological Preserve, is an ideal location to develop generous research facilities that tie in with the natural assets of Appalachian State. The Legends site at the northeastern corner of campus interfaces with the Town of Boone and can therefore serve as the public face and welcome point for an innovation campus. The Legends site development also presents an opportunity to partner with the Town of Boone and other external sponsors.



Enhanced Crosswalks Connect to Open Space



Main Approach & Tailgate Fields, USC

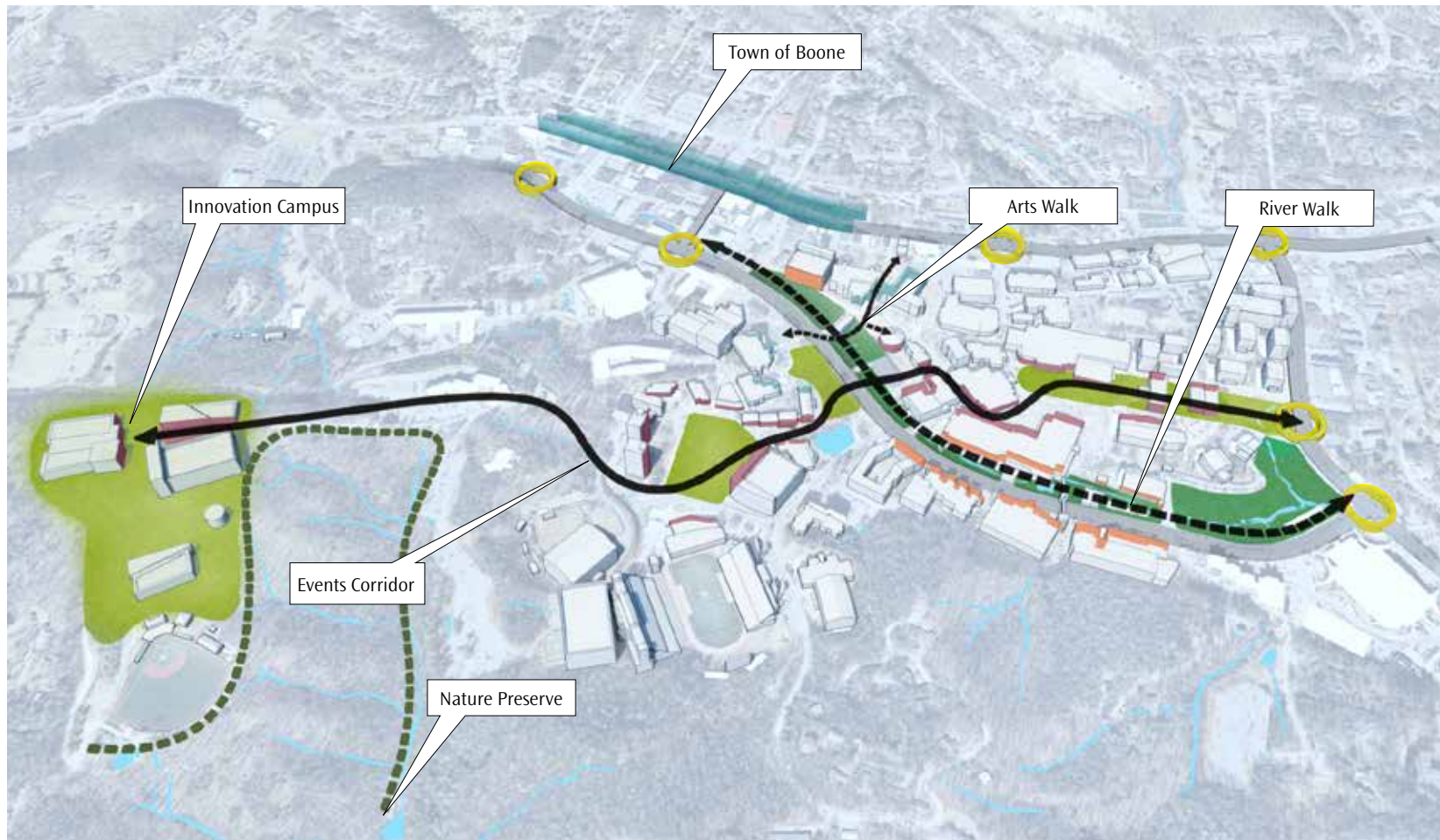


Academic Center: Shortlidge Mall, Penn State



Innovation Campus Greenhouse, University of Nebraska

Campus Vision Framework



The campus framework builds off of Appalachian State's existing assets to create a stronger and more unified vision for the organization and physical expression of campus.

Campus Vision Framework Priorities**River Walk**

A spine of blue and green spaces on Rivers Street defines the River Walk, where Boone Creek converges with green space to provide a vital ecosystem within the dense campus fabric. Bridges and overpasses lead over the water, while walking paths follow its edge. Boone Creek becomes a place for education, contemplation, and natural inspiration.

Implementation might start with daylighting Boone Creek at Duncan Hall. Rivers Street improvements include the addition of bike lanes, crosswalks, traffic calming devices, and gateway signage.

**Arts Walk**

The Arts Walk runs north to south, uniting campus across Rivers Street. This is the urban center of campus, which captures the artistic energy and creative sensibilities of Appalachian State. Lush plantings and sculptures converge with prominent buildings, a grand transportation hub, and a multitude of gathering spots.

Plan implementation might begin with the addition of prominent signage between Turchin Center and Schaefer Center. Repeating design elements, pathways, and lighting can add relevance and a sense of continuity.

**Events Corridor**

The Events Corridor threads together the social spaces that link campus from east to west. Here, the diverse communities of Appalachian State converge for discussion, recreation, and celebration in what is home to the central open spaces, or hearths, of campus.

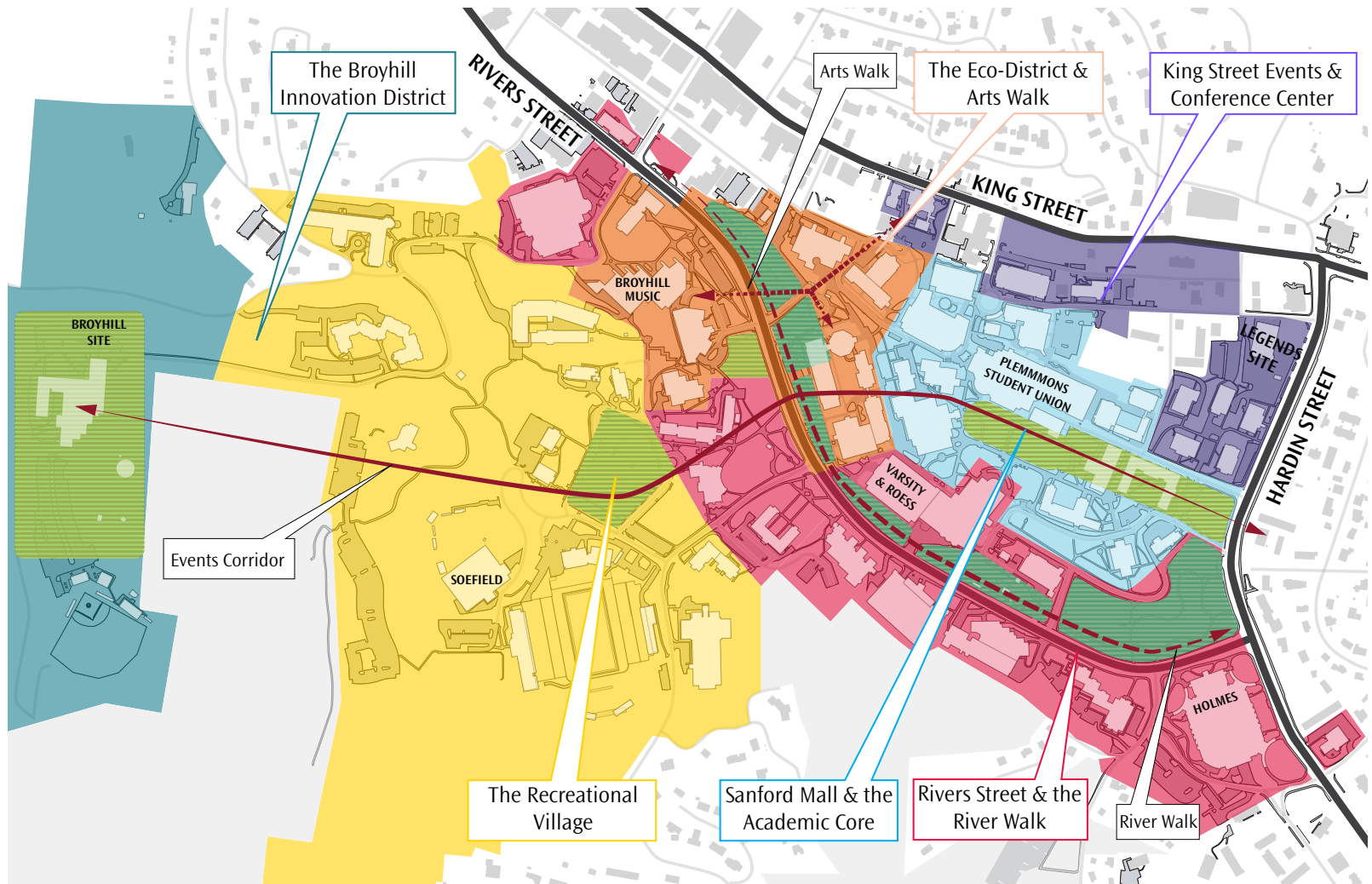
Implementation of this plan might start with Sanford Mall improvements followed by the creation of a new entrance once East Hall is demolished.

06 PRECINCT PLANS

Precinct Plans Overview
Precinct Plans



06 PRECINCT PLANS



Precinct Plans Overview

The Precinct Plans provide a vision for how each of the six campus planning areas can be developed to embody the principles and initiatives outlined in the Master Plan 2025. Each Precinct is a tapestry of various neighborhoods and uses designed to unify the University by strengthening connective pathways, enhancing open spaces, and expanding academic facilities and other resources. Repeating materials and design elements in each Precinct indicates arrival and promotes a sense of place and a cohesive experience on campus. The six Precincts are:

- 1** SANFORD MALL & THE ACADEMIC CORE
- 2** RIVERS STREET & THE RIVER WALK
- 3** THE ECO-DISTRICT & ARTS WALK
- 4** KING STREET EVENTS & CONFERENCE CENTER
- 5** THE BROYHILL INNOVATION DISTRICT
- 6** THE RECREATIONAL VILLAGE

While the goals of the Precinct Plans overlap, each individual plan responds to the specific conditions and needs of its neighborhoods. Some Precinct Plans focus on bolstering academic facilities and providing spaces for gathering and collaboration, while others place greater emphasis on showcasing Appalachian State's commitment to sustainability and creating a living laboratory. These Precinct Plans are a tool for the development of Appalachian State in cultivating its unique character and memorable campus experiences.

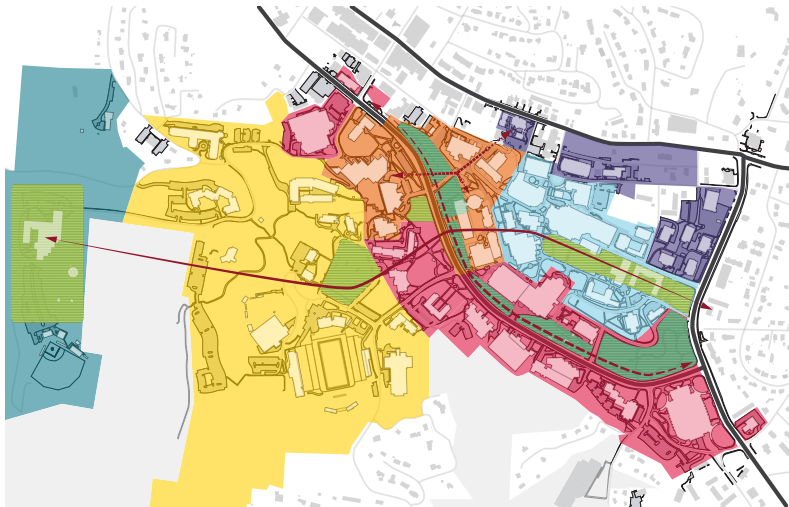
Campus Site Plan Overview

CAMPUS SITE PLAN

The Campus Site Plan is a unified vision for the six Campus Precincts that make up the Campus Vision Framework and Campus Initiatives. The site plan illustrates added buildings, open space enhancements, and road improvements on main campus.

KEY PROJECTS

- 1** Sanford Mall Master Plan Implementation
- 2** Rivers Street Complete Streets Improvements
- 3** Boone Creek Daylighting & Transit Hub Pavilion
- 4** East Howard Street Improvements
- 5** Research Building & Labs with Surface Parking
- 6** Recreational Heart- Reinforced Turf & Tailgate Space





Campus Satellites Site Plan Overview

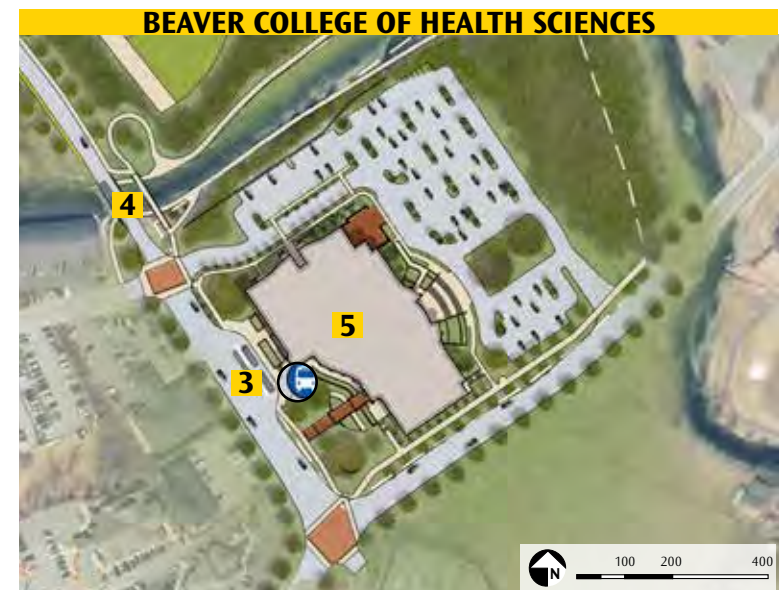
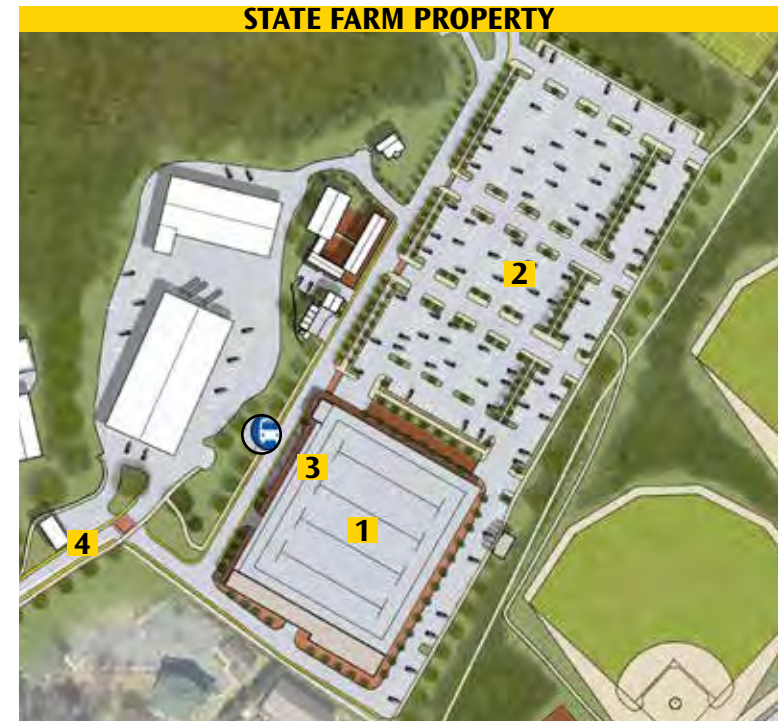
CAMPUS SATELLITES SITE PLAN

The Campus Satellites Site Plan is a rendered vision for the College of Health Sciences, which is currently in construction, and future improvements to the State Farm site. The plan illustrates future a parking deck which is located away from the flood zone, as well as open space enhancements and connectivity to main campus.

Recommendations include enhancing connectivity between Winkler Creek Greenway, Pride Drive Access, Leola Drive, Greenway Road, Faculty Street, and Holmes Drive to create a continuous path to the Greenway Trail. Such improvements would include pedestrian sidewalks and dedicated bike lanes on each of the roads listed. A pedestrian crosswalk should be added at the intersection of Faculty Street and Route 105 to ensure the safety of individuals traveling to the Greenway Trail by foot.

KEY PROJECTS

- 1** Parking Deck with Park & Ride Facility (268 spaces/ft - yields 1340 spaces)
- 2** Surface Parking with Storm Water Management (483 spaces)
- 3** Main Transit Stops with Express Bus Service
- 4** Dedicated Bike Lanes on
 - State Farm Road
 - Dale Street
- 5** New Beaver College of Health Sciences

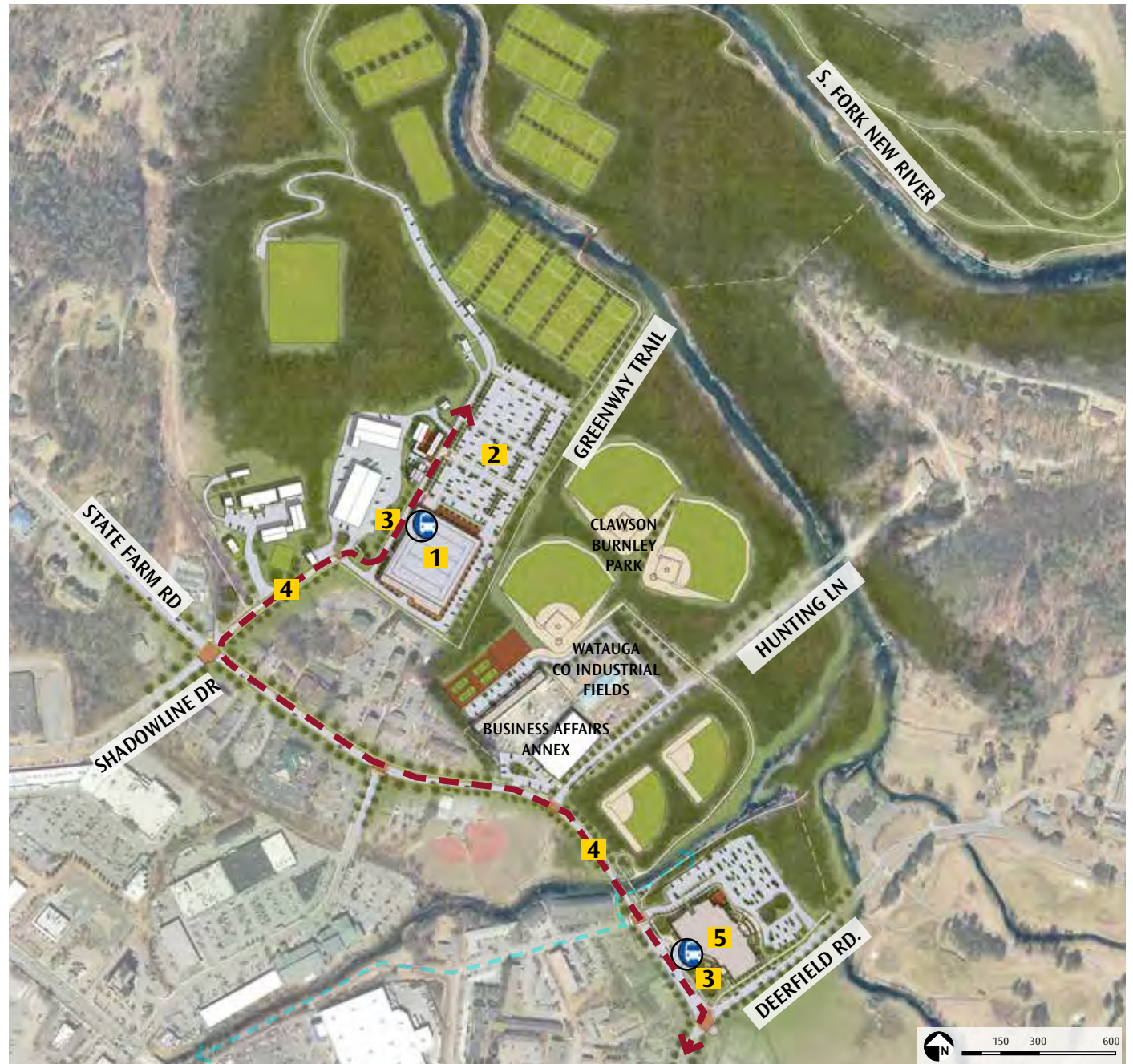


STATE FARM FLOOD ZONE



- Flood Fringe
- 100 Year Storm Event

- Transit Hubs / Park and Ride
- Express Bus
- Winkler Creek to Boone Creek Greenway



Precinct Plans: Built Environment Goals

The following section provides an overview of the campus improvements and goals proposed in the Master Plan 2025 separated into the categories Building, Open Space, Transportation, and Utilities.

Overall Building Improvements

The main Building goals of the Master Plan 2025 are to:

- Expand academic space and research facilities
- Construct flexible, multi-disciplinary facilities that maximize space
- Increase the total housing bed count to 6,047 by adding 362 new beds
- Add dining options on West Campus to address a deficit
- Add more study areas throughout campus
- Update Athletics and Recreation facilities as needed



Beaver College of Health Sciences, Appalachian State



Performing Arts, University of Central Florida



Lecture Hall, Duke School of Medicine

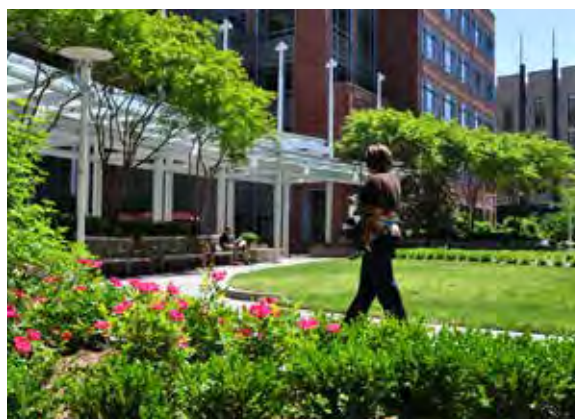


Residential Commons, University of Chicago

*Precinct Plans: Open Space Goals***Overall Open Space Improvements**

The main Open Space goals of the Master Plan 2025 are to:

- Define the overall campus character and reinforce the University's unique identity
- Connect open spaces, buildings, campus neighborhoods and the larger Town of Boone context
- Promote social interaction and the healthy well-being of the ASU community
- Provide a strong sense of place and clear campus arrival by enhancing significant gateways
- Preserve sensitive existing ecological qualities by protecting steep terrain, native forest and other environmentally noteworthy landscapes
- Utilize preserved and constructed open spaces as a sustainable "Living Laboratories" to offer a variety of educational and research opportunities
- Enhance and expose deteriorated or hidden natural features including Boone Creek
- Create distinctive landmarks and wayfinding strategies to orient pedestrians, cyclists, and motorists



Gateway Village Urban Courts, Charlotte, NC



Outdoor Meeting Space, CTech Offices, Georgia



Gateway Art, Texas Tech University



Syme Rain Garden, NCSU

Precinct Plans: Transportation Goals

Overall Transportation Improvements

The main Transportation goals of the Master Plan 2025 are to:

- Ensure pedestrian safety on streets and pathways throughout campus
- Provide wheelchair accessibility throughout campus
- Curtail vehicular circulation on main campus
- Identify key intersections with signage and other elements
- Construct campus gateways that create a sense of place and arrival
- Improve the visibility of wayfinding signage
- Expand the convenience and capacity of transit
- Install weather appropriate bus shelters
- Strategically place transit hubs to ensure satisfactory access and service throughout campus

The following are committed transportation improvements:

- West Howard Street woonerf and improvements by the Town of Boone
- A private Marketplace Development on W. Howard Street
- Intersection improvements at College and King Streets by NCDOT



Vehicular Gateway with Pedestrian Crossings



Woonerf, Batavia, Illinois



Pedestrian-Oriented Pathways, Talley Student Union, NC

*Precinct Plans: Transportation Goals***Campus Parking Considerations**

Most parking on campus is low-density surface lots. The Peacock Lot presents major conflicts with pedestrians, buses, and cut-through traffic. Additionally, small surface lots are scattered through main campus, breaking the continuity of pedestrian routes. Though there are many surface parking lots, the campus has inadequate parking capacity. The Master Plan 2025 proposes the following parking improvements:

- Densify parking through the construction of parking decks, which will free up space for new buildings and outdoor spaces (various locations proposed)
- Provide mixed-use parking decks to use space efficiently and add facilities to campus
- Construct surface lots that include dedicated pedestrian walkways, trees, and storm water management systems
- Indicate appropriate locations for short-term parking



American Tobacco Gateway, Durham, NC



Protective Bus Shelter



Surface Parking with Storm Water Management



Wrapped Parking Deck with Offices, Miami Beach, FL

Precinct Plans: Utilities Goals

Overall Utilities Improvements

The main Utilities goals of the Master Plan 2025 are to:

- Upgrade steam infrastructure to ensure efficient distribution of energy and heat
- Expand and construct chiller plants as buildings are renewed or added on campus
- Add innovative, non-traditional, and renewable energy sources on campus, such as geothermal wells, which use the earth's heat to cool and heat buildings and domestic water
- Broaden the means of generating electricity by adding clean energy sources, such as photovoltaics, on campus
- Upgrade the IT infrastructure to increase the speed that information travels between buildings and other areas of campus
- Expand Wi-Fi canopy/coverage access to exterior locations across campus
- Install artful and sustainable energy producing features on campus be used for demonstrative and practical purposes. Examples include photovoltaic (PV) sculptures that collect energy and PV-powered bus shelters



Solar Sunflowers, Austin, Texas

*Precinct Plans: Utilities Goals***Campus Geothermal Central Energy Plant Considerations**

Appalachian State may consider installing a geothermal energy plant on campus as a source of clean, innovative energy. Geothermal wells use the earth's energy to cool and heat water, which is used to cool and heat buildings and tap water. A geothermal energy plant houses the equipment required to distribute this water to buildings so it can be used in HVAC and plumbing systems. Because geothermal wells must be placed deep in the earth, installing them in campus areas projected to undergo extensive renovations and expansions in the future is most practical and economical.

Campus Precincts that include buildings of diverse functions, such as academics, recreation, dining, housing, and offices, are ideal zones to install a geothermal energy plant. Because each building is used for a different purpose with different peak-usage hours, energy from the geothermal wells can be stored, shifted, and distributed to buildings based on peak usage. For example, heat generated in academic and office buildings can be used to heat tap water in the residence halls or for a swimming pool in a recreation building. The capability to shift and store energy reduces the cost of energy on campus and can also decrease campus emissions and dependence on fossil fuel.

A main concern regarding installation of geothermal plants is the cost of installing the required infrastructure, which can be significant. However, when a group of buildings with diverse HVAC and plumbing needs are connected to a central geothermal energy plant, the upfront cost of installing this system can be reduced, since the energy generated by the plant serves multiple buildings. This strategy can be replicated throughout campus.

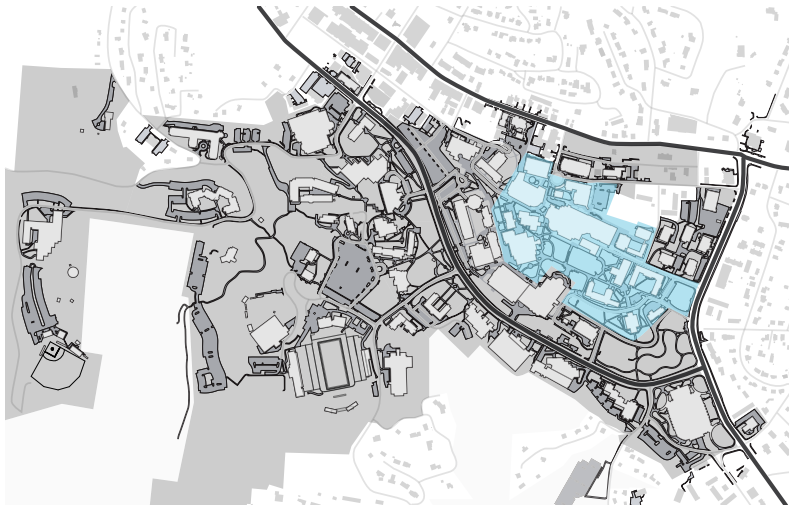


Thermal Energy Storage Tank, Macquarie University

Sanford Mall & the Academic Core

SANFORD MALL & THE ACADEMIC CORE

Sanford Mall is the beating heart of campus, where students come together to celebrate, socialize, play, and relax. It is the glue that unites the surrounding academic core and student services buildings. This Precinct Plan focuses on expanding and renewing many of the academic buildings that comprise this district. It also proposes enhancing Sanford Mall and creating a new landmark open space to designate a gateway into the lively center of campus. Vehicular access through these spaces is curtailed and mitigated with brick paved woonerfs that indicate a pedestrian-oriented zone.



KEY PROJECTS

- 1** New Academic Buildings (2)
- 1A** *See Alternative Ecological Garden Design*
- 2** Sanford Hall Renewal
- 3** Plemmons Student Union Addition
- 4** Sanford Mall Master Plan Implementation
- 5** Ecological Garden & Campus Gateway
- 6** Campus Woonerf Loop
- 7** Revised Vehicular Route & Woonerf at Academy St. & Center St.
- 8** Durham Park Promenade at University Dr.
- 9** Sacred Space: Veterans Memorial, Donor Memorial, and Greek Plots

Sanford Mall & the Academic Core



Sanford Mall & the Academic Core



Sanford Mall & the Academic Core Buildings & Open Spaces

BUILDINGS

- 1** New Academic Building
- 2** New Academic Building
(See alternative design on page 60)
- 3** Sanford Hall Renewal
- 4** Plemmons Student Union Addition
- 5** Varsity Gym Renewal
- 6** Rankin Science Renewal

LEGEND

- Academics
- Student Housing
- Mixed Use
- Recreation
- Art / Culture
- Support / Admin / Other
- Athletics
- Parking Lot
- Parking Deck
- Major Road
- Minor Road



OPEN SPACES

- 1** Sanford Mall Master Plan Implementation
- 2** Ecological Garden, Campus Gateway & Durham Park Promenade
(See alternative design on page 60)
- 3** Improvements to the Pit

LEGEND

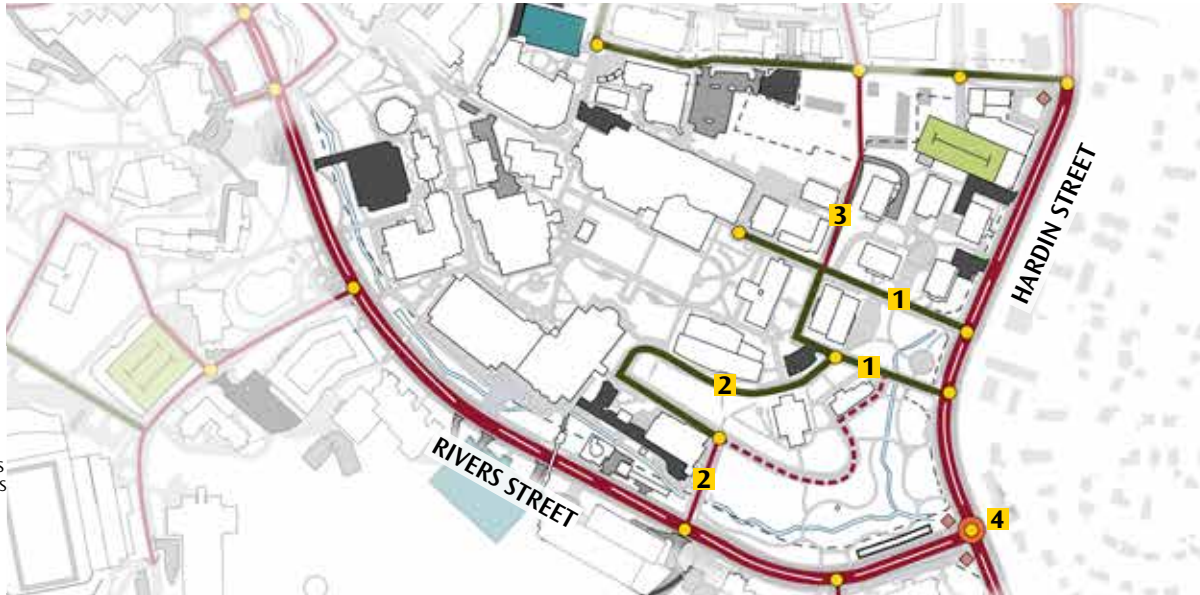
- Natural Conservation Zones
- Shared Open Spaces
- Athletic Fields
- Recreational Fields
- Trails
- Pedestrian Pathways
- Art Walk
- Landmarks
- Sacred Spaces
- Greenway Connection



Sanford Mall & the Academic Core Transportation

LEGEND

- Existing Surface parking
- New Surface Parking
- Existing Parking Decks
- New Parking Decks
- Proposed Road Improvements
- Scheduled Road Improvements
- Woonerfs
- Median
- Intersection Improvements
- Vehicular gateways
- Signs

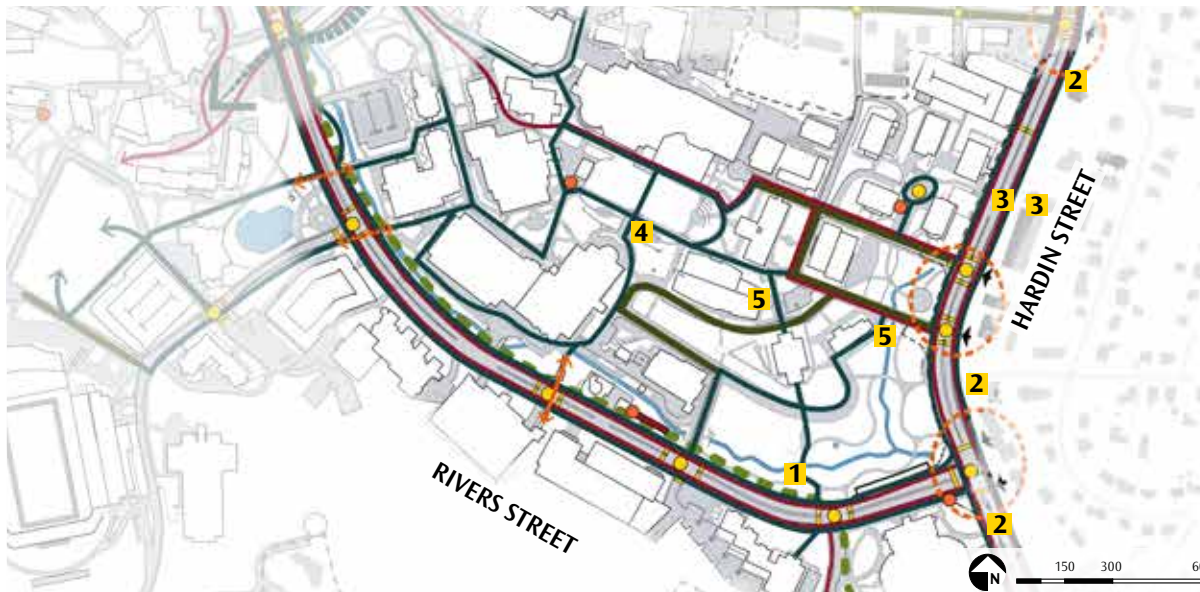


VEHICULAR CIRCULATION

- 1** Campus Woonerf Loop on Locust & Daugh Blan Streets
- 2** Revised Vehicular Route & Woonerf at Academy & Center Streets
- 3** New Vehicular Gateway at Rivers Street
- 4** Brown Street Extension

LEGEND

- Pedestrian Gateways
- Pedestrian Pathways
- Cross Walks
- Art Walk
- Trails
- Bike / Skateboard routes
- Woonerfs
- Greenway Connection
- Intersection Improvements
- Pedestrian Access to Campus
- Bridge
- Tunnel
- Bike Stop



PEDESTRIAN CIRCULATION & CYCLING INFRASTRUCTURE

- 1** Durham Park Promenade at University Drive
- 2** Pedestrian Gateways at Entry Points on Hardin Street
- 3** Dedicated Bike Lanes on Hardin Street
- 4** Inter-Campus Bike Lanes
- 5** New Pedestrian Pathway Connections at:
 - Ecological Garden
 - The Pit
 - Sanford Hall

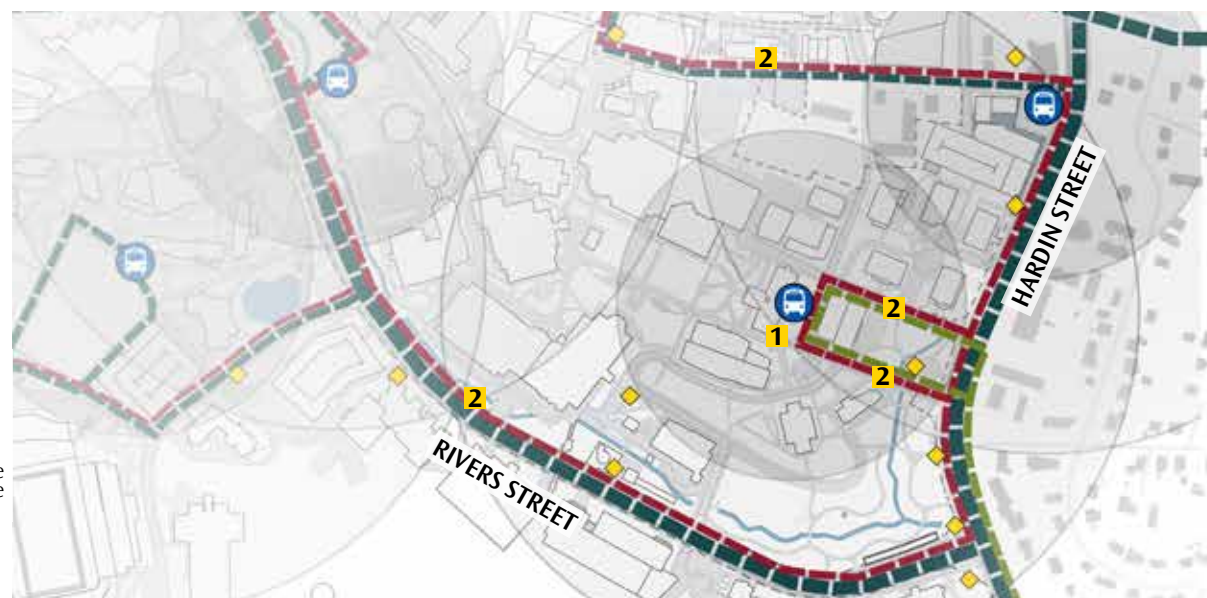
Sanford Mall & the Academic Core Utilities

MASS TRANSIT

- 1 Transit Stop at Campus Woonerf Loop
- 2 New Campus Shuttle Route
- 3 Improved Bus Shelters at All Bus Stops (yellow dots)

LEGEND

- Campus Shuttle Route
- AppalCart Route
- Express Bus Route
- Bus Stop
- 2 Minutes Walking Distance
- 5 Minutes Walking Distance
- Ⓢ Proposed Transit Stop



UTILITIES

- 1 Geothermal Wells at
 - Ecological Garden
 - Sanford Mall
- 2 Expanded Wi-Fi Canopy at Sanford Mall
- 3 New Solar Thermal Installations at:
 - Plemmons Student Union
 - Summit Hall
 - Varsity Gym
- 4 New PV Panel Installations at Howard Street Plaza
- 5 Steam Infrastructure Upgrades at:
 - Ecological Garden
 - Locust Street

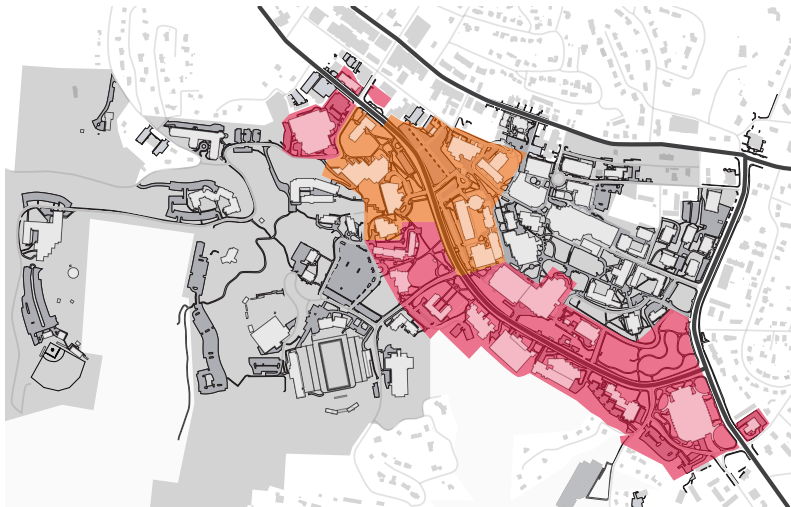
LEGEND

- Future Solar Photovoltaic
- Existing Steam Network
- New/Old PV
- New/Old Solar Thermal
- New/Old Wind Turbines
- New WiFi Canopy
- Sustainable Eco-Sites
- New/Old Chilled Water
- Electrical Delivery Points
- Existing LEED Buildings
- IT Hut Within Building
- Future Geo Thermal Site



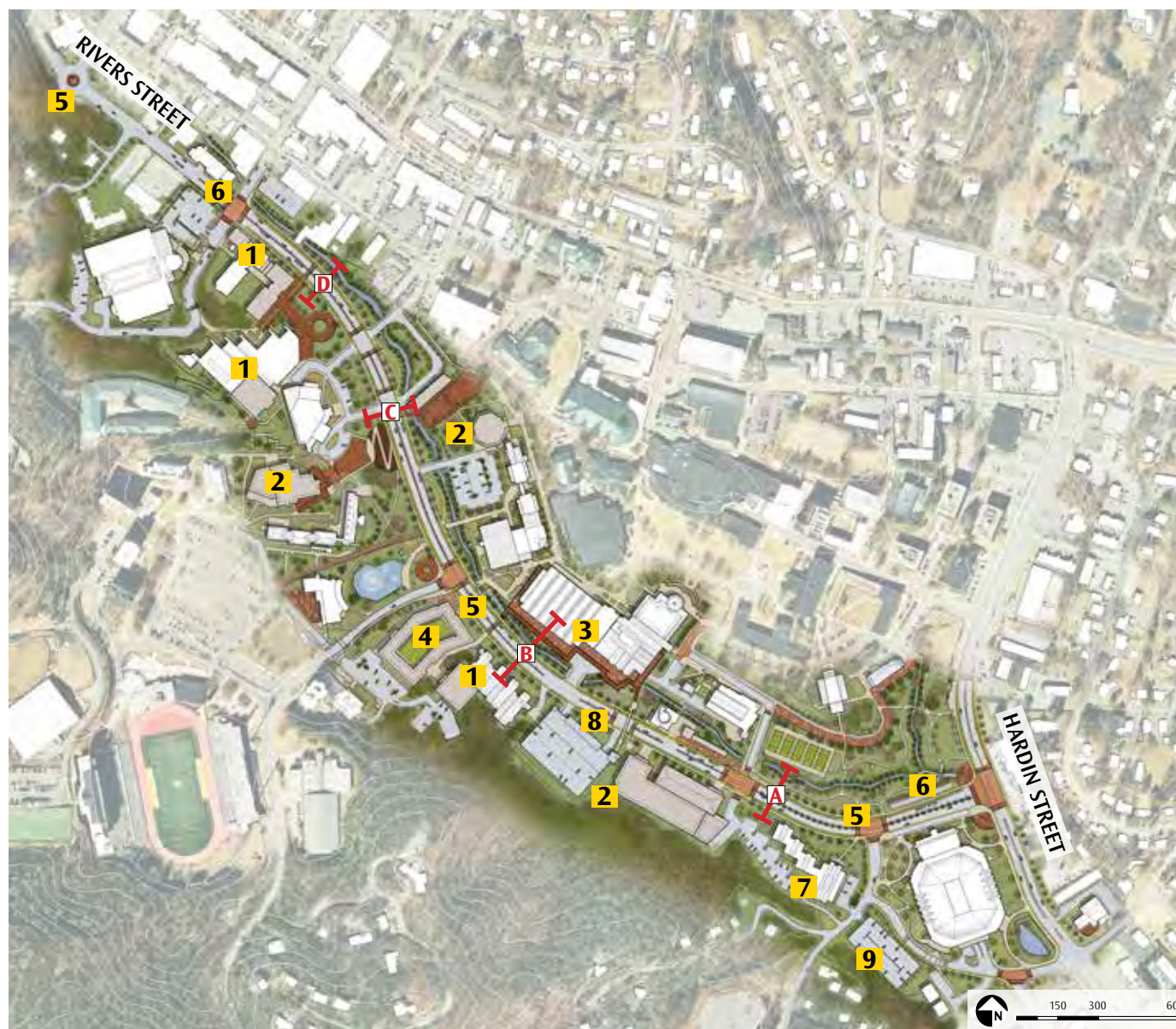
*Rivers Street & the River Walk***RIVERS STREET & THE RIVER WALK**

As a major thoroughfare of campus, Rivers Street has the potential to become a memorable route for members of the Appalachian State community, for drivers coming through campus, and for the greater neighboring community. A Complete Streets upgrade of Rivers Street will ensure safety for pedestrians and cyclists, while the daylighting of Boone Creek and the addition of gateway landmarks and PV sculptures will provide beauty, orientation, and inspiration. Expanded and renovated academic buildings will provide additional space for Appalachian State's growing enrollment and propel the renewal of Rivers Street to new heights.

**KEY PROJECTS**

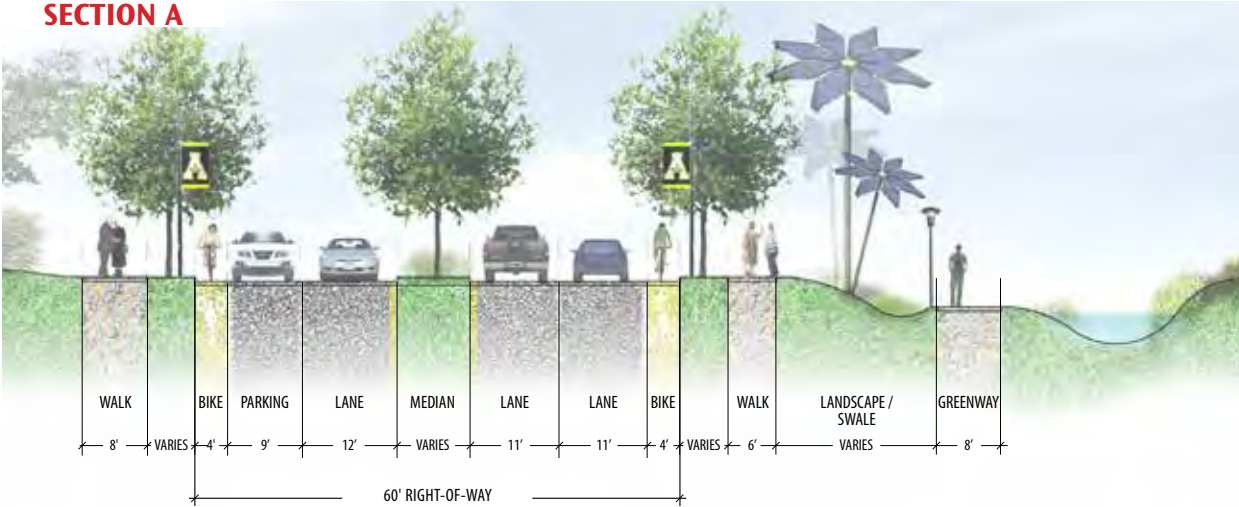
- 1** Academic Building Expansion (4)
- 2** Academic Building Renovation/Renewal (3)
- 3** Roess/Varsity Veranda
- 4** Justice Hall Renewal
- 5** Complete Streets Improvements on Rivers St. & Water Street Roundabout (Sidewalks, Bike Lanes, Crosswalks, Medians)
- 6** Improved Gateway at Hardin and Depot Streets
- 7** Bike Lanes & Greenway Connection on Faculty Drive
- 8** Bike Station & Repair Facility
- 9** New Parking Deck (106 spaces/fl yields 530 spaces)

Rivers Street & the River Walk

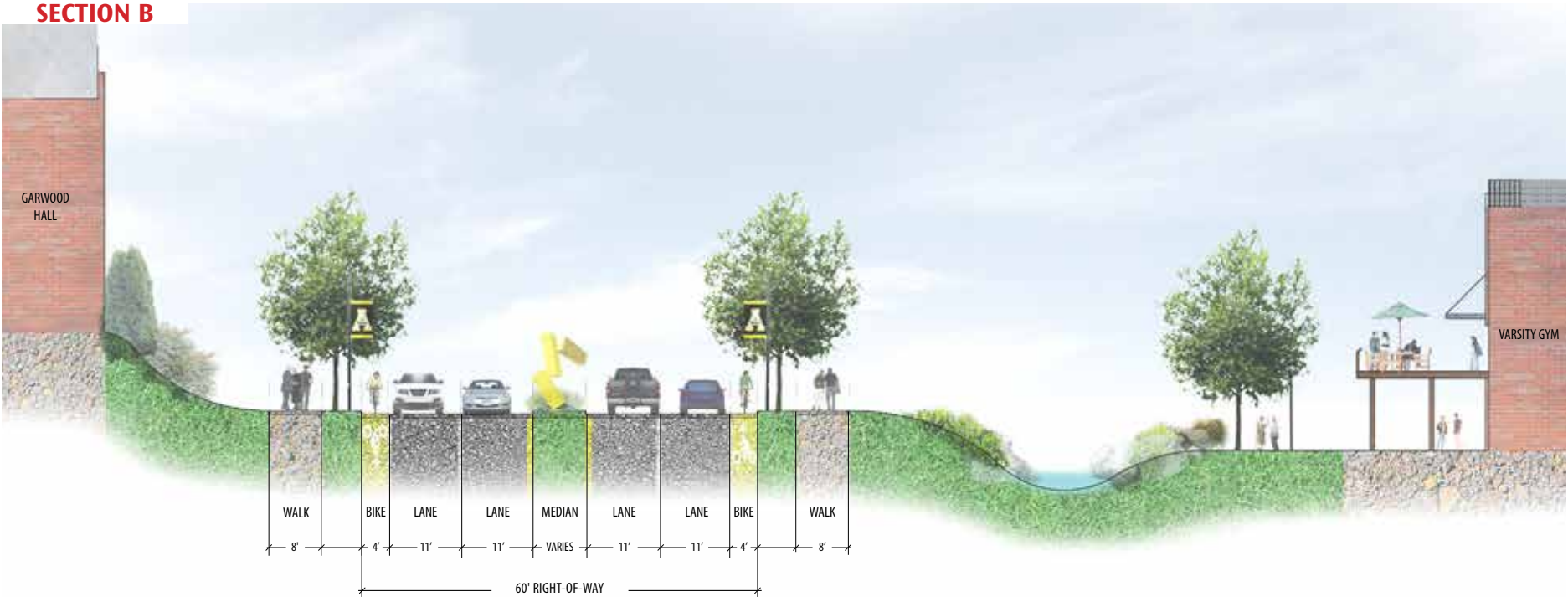


Rivers Street & the River Walk Street Sections

SECTION A

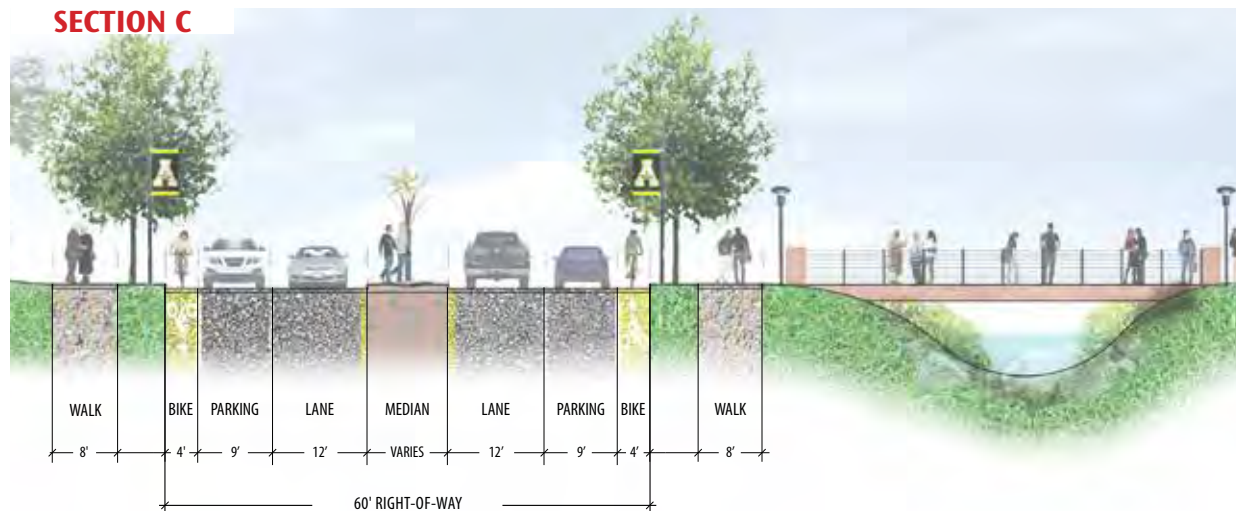


SECTION B

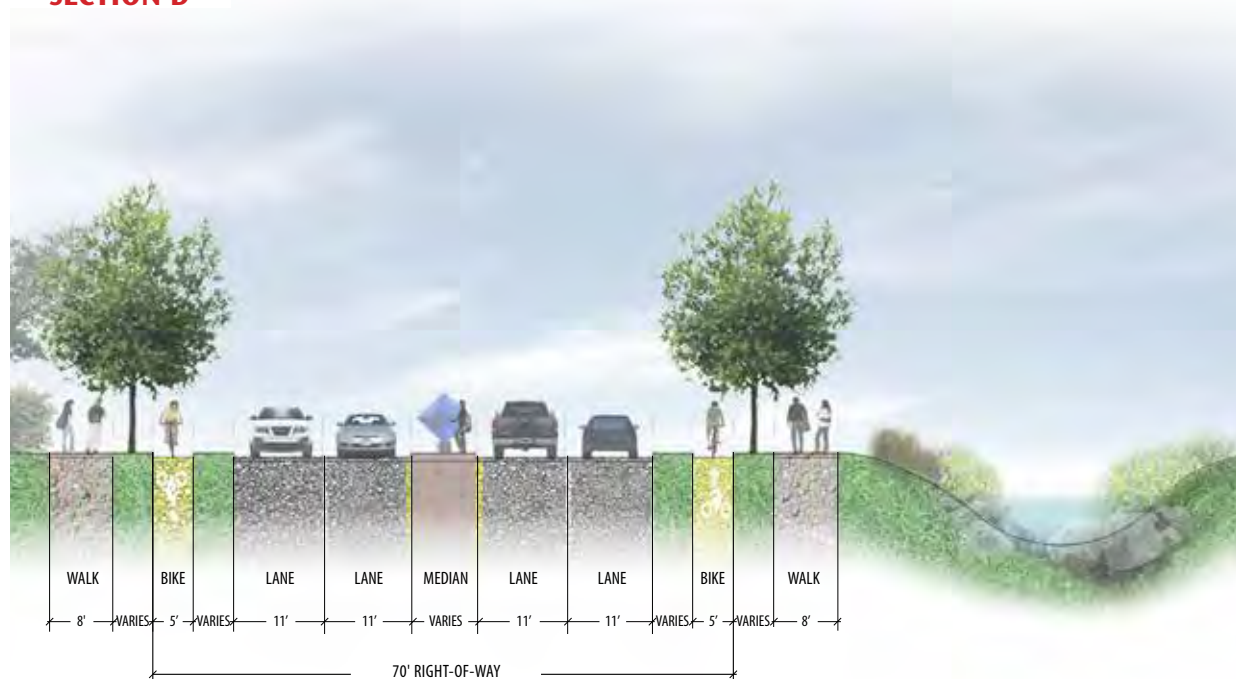


Rivers Street & the River Walk Street Sections

SECTION C



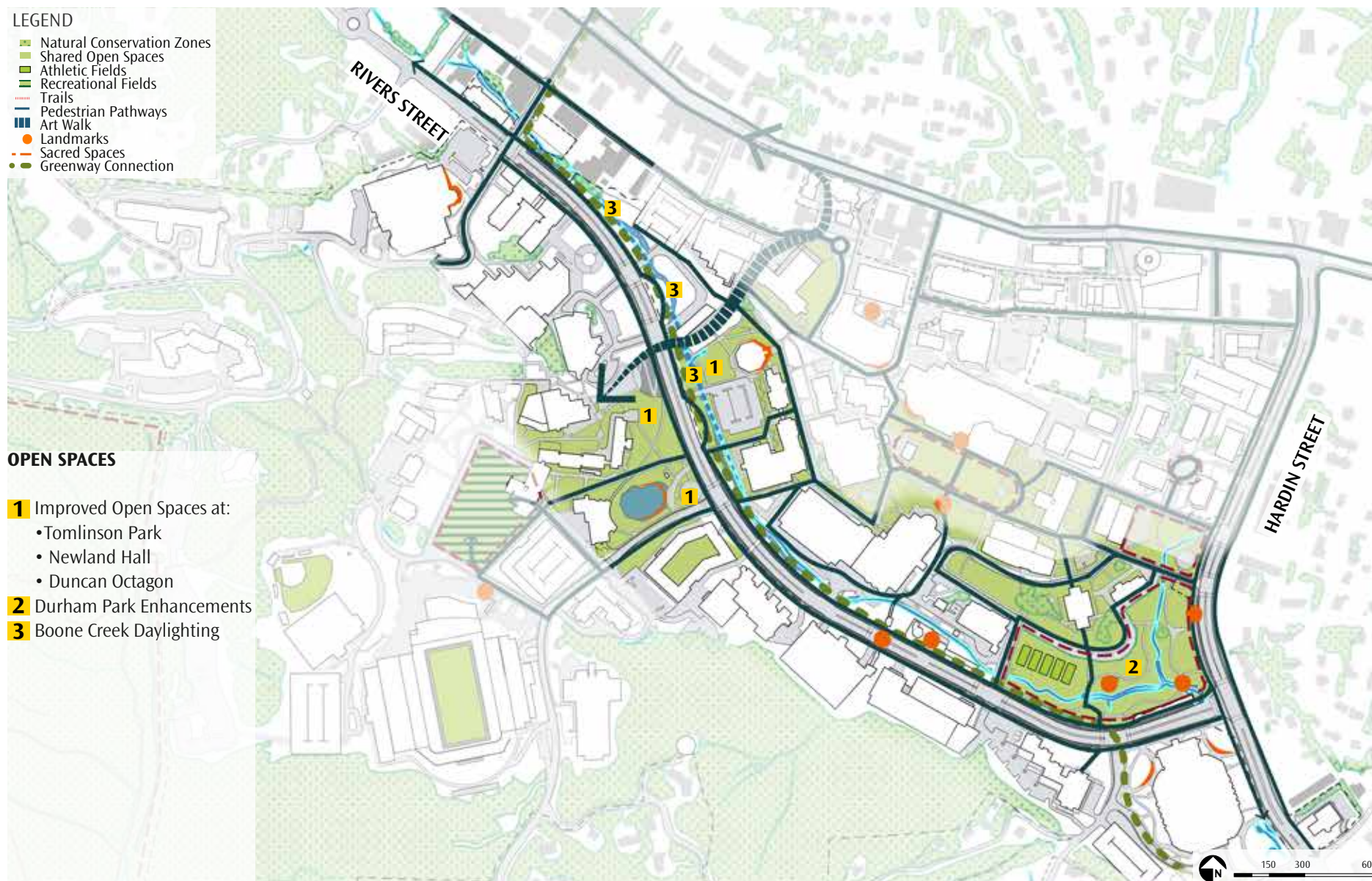
SECTION D



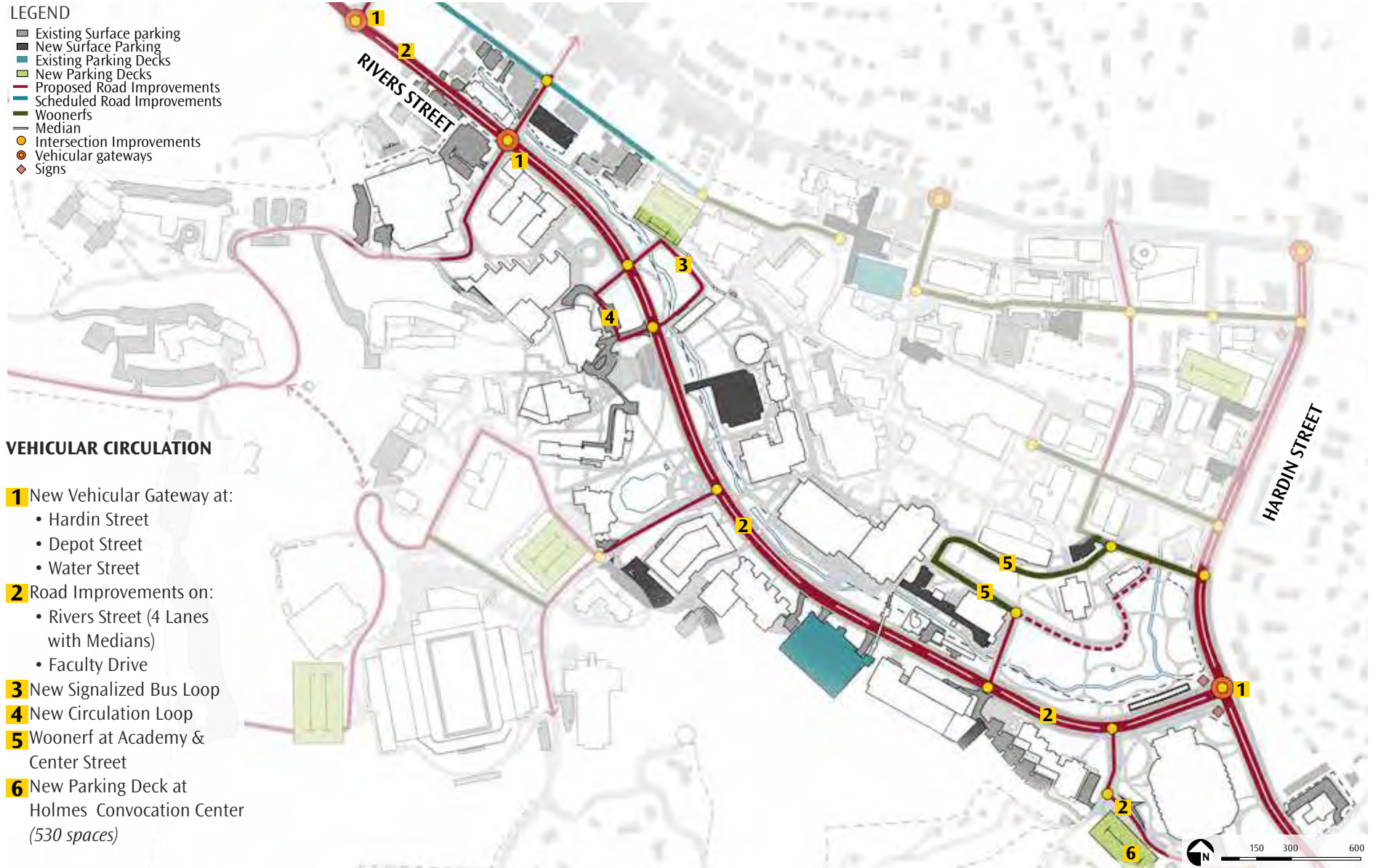
Rivers Street & the River Walk Buildings



Rivers Street & the River Walk Open Space
















Rivers Street & the River Walk Transportation



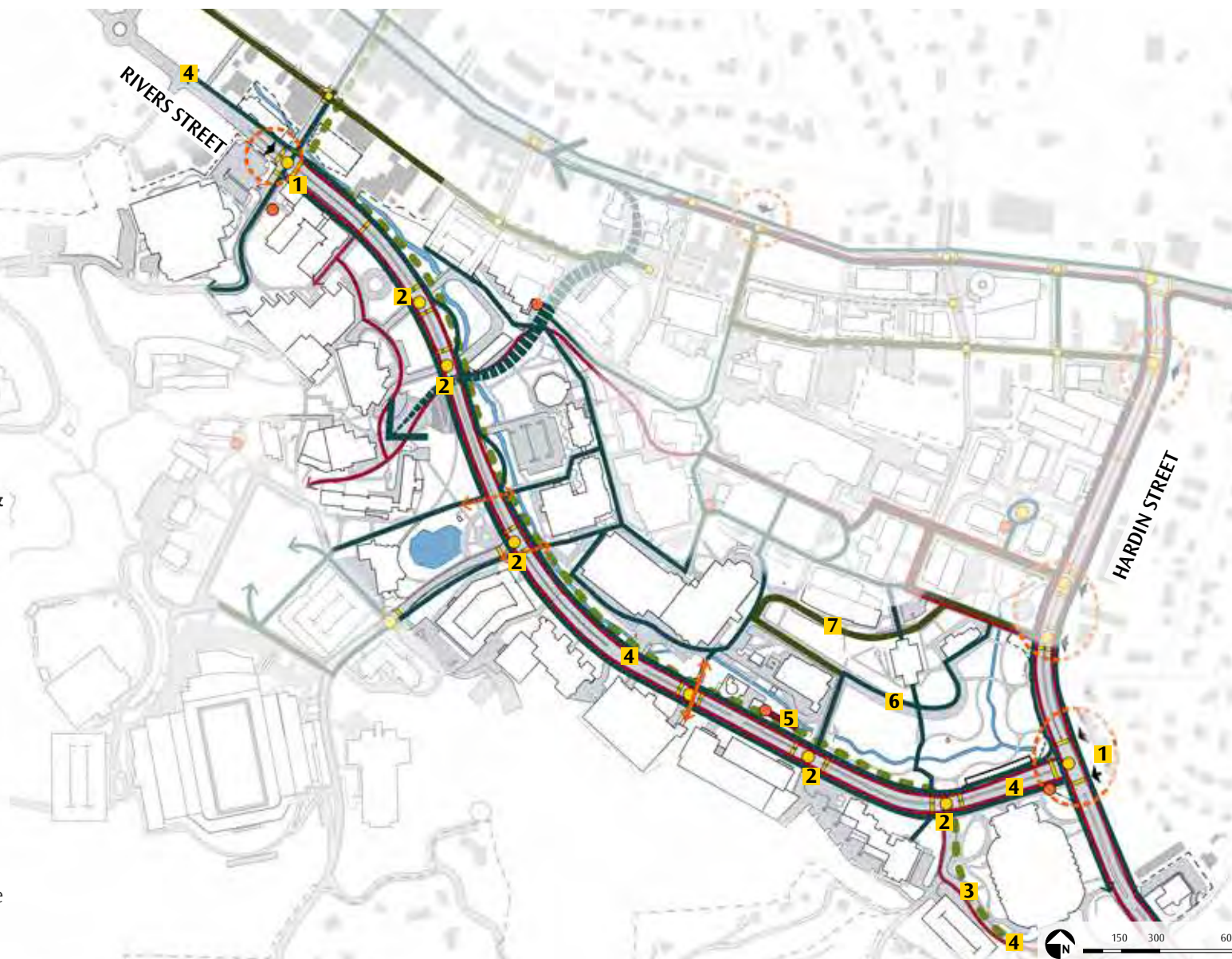
Rivers Street & the River Walk Transportation

LEGEND

-  Pedestrian Gateways
-  Pedestrian Pathways
-  Cross Walks
-  Art Walk
-  Trails
-  Bike / Skateboard routes
-  Woonerfs
-  Greenway Connection
-  Intersection Improvements
-  Pedestrian Access to Campus
-  Bridge
-  Tunnel
-  Bike Stop

PEDESTRIAN CIRCULATION & CYCLING INFRASTRUCTURE

- 1** New Pedestrian Gateway at:
 - Hardin & Rivers Street
 - Depot & Rivers Street
- 2** On-Street Crossings on Rivers Street (yellow dots)
- 3** Greenway Extension to College of Health Sciences
- 4** Dedicated Bike Lanes on:
 - Rivers Street
 - Faculty Drive
- 5** Bicycle Repair Station
- 6** New Pedestrian-Only Pathway at University Drive
- 7** Woonerf at Academy & Center Street



Rivers Street & the River Walk Transportation



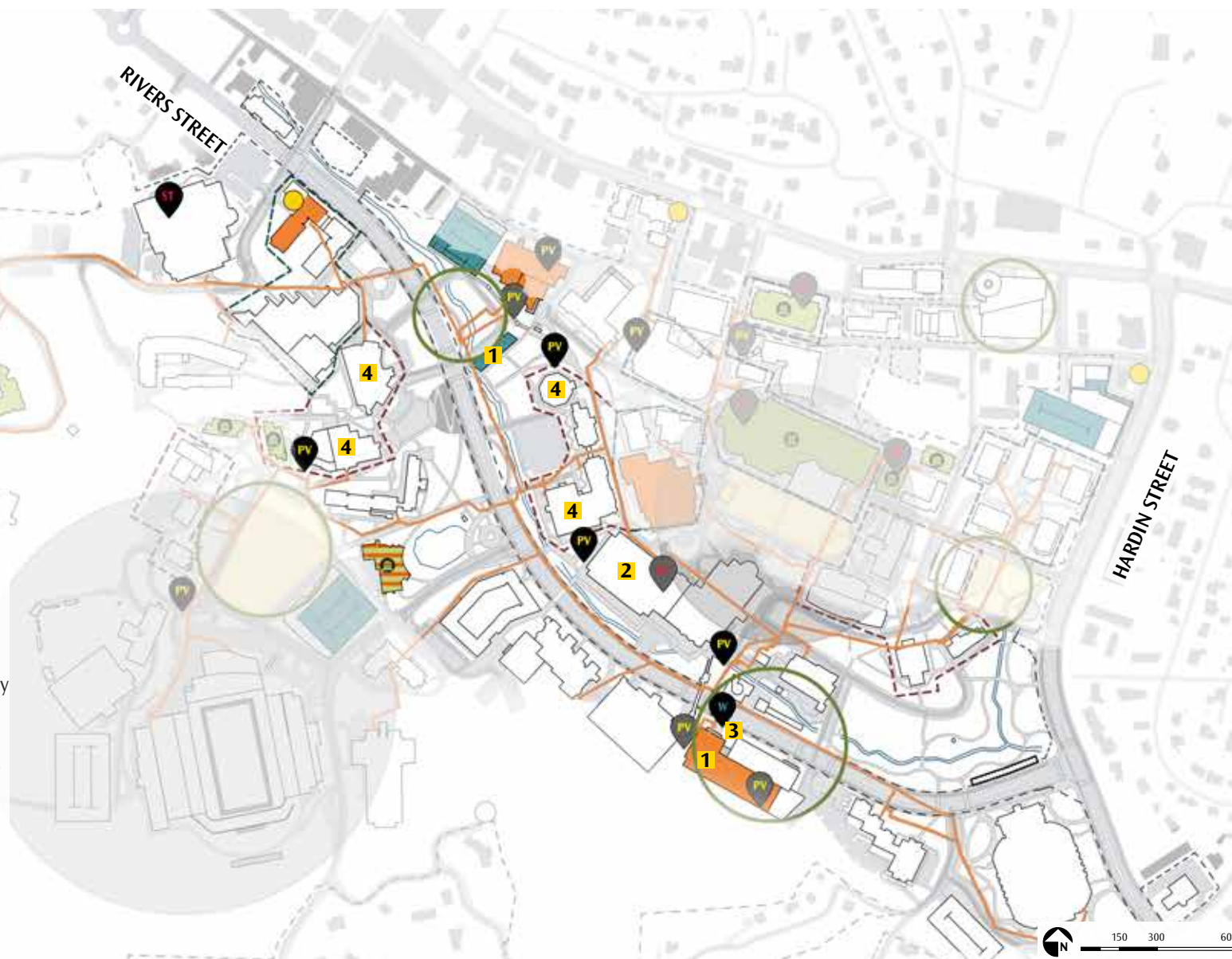
Rivers Street & the River Walk Transportation

LEGEND

- Future Solar Photovoltaic
- Existing Steam Network
- New/Old PV
- New/Old Solar Thermal
- New/Old Wind Turbines
- New WiFi Canopy
- Sustainable Eco-Sites
- New/Old Chilled Water
- Electrical Delivery Points
- Existing LEED Buildings
- IT Hut Within Building
- Future Geo Thermal Site

UTILITIES

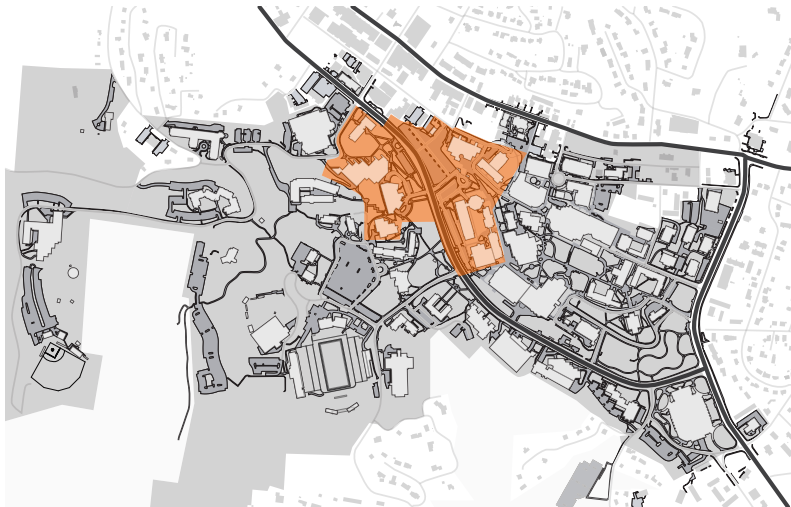
- 1** New PV Panel Installations at:
 - Kerr Scott/Harper Hall
 - Transit Hub Pavilion
- 2** New Solar Thermal Installations at Roess/ Varsity
- 3** New Windmill Installation at Kerr Scott/Harper Hall
- 4** Chiller Loop Improvements at:
 - Schaefer & Wey Hall
 - Duncan Octagon & Rankin Science



The Eco-District & Arts Walk

THE ECO-DISTRICT & ARTS WALK

The Eco-District & Arts Walk is a place where the campus' natural features and urban landscape combine to form a lively hybrid that is neither rural nor urban. Boone Creek is unearthed and exposed to create an inspiring and educational corridor linked through a series of green spaces, pathways, and sustainable design elements. The Arts Walk, a handsome public corridor that intersects Boone Creek, stitches together campus, buildings for the arts, and the Town of Boone. In the center, a Transit Hub Pavilion serves as a gallery and gateway for commuters. The surrounding academic buildings are expanded and renovated to accommodate new audiences and a growing student body.



KEY PROJECTS

- 1** Academic Building Renovation & Expansion (6)
- 2** Transit Hub Pavilion
- 3** Wrapped Parking Deck with Retail & Covered Walkway (*109 spaces/ft & one bay of retail space yields 514 spaces*)
- 4** Boone Creek Daylighting & Sustainability Showcase
- 5** Arts Walk: Unifying the two Halves of Campus
- 6** Improved Plaza (2)
- 7** Surface Parking with Storm Water Management System (*85 spaces*)
- 8** Complete Streets Improvements on Rivers Street
- 9** Howard Street Woonerf Improvements & Roundabout

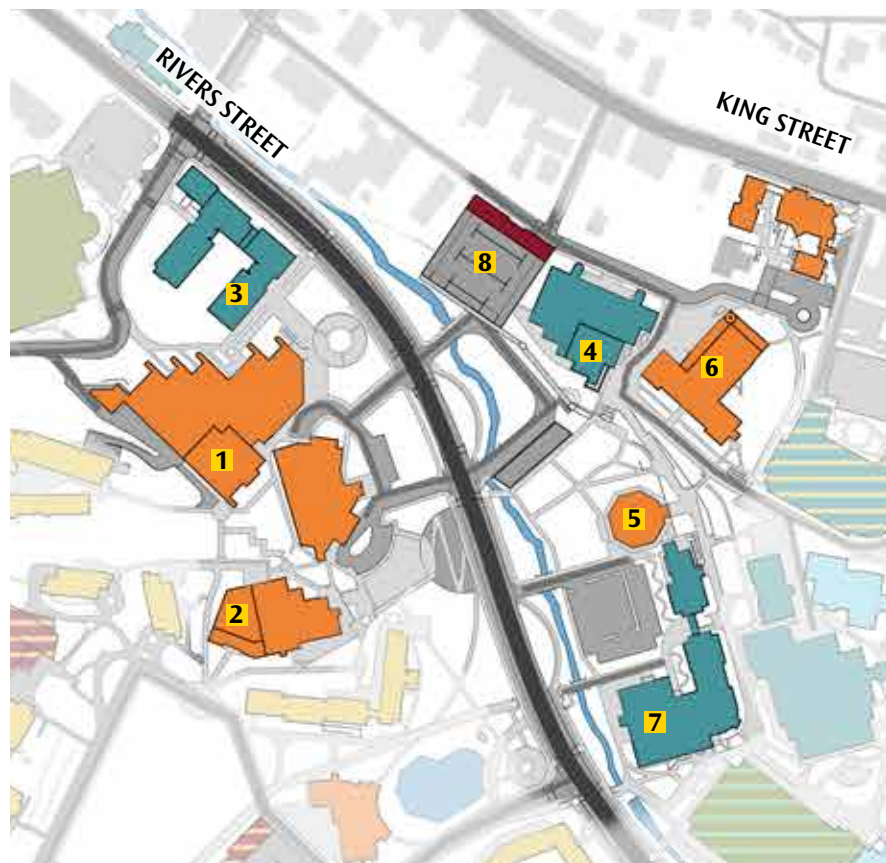
The Eco-District & Arts Walk



The Eco-District & Arts Walk



The Eco-District & Arts Walk Buildings & Open Spaces

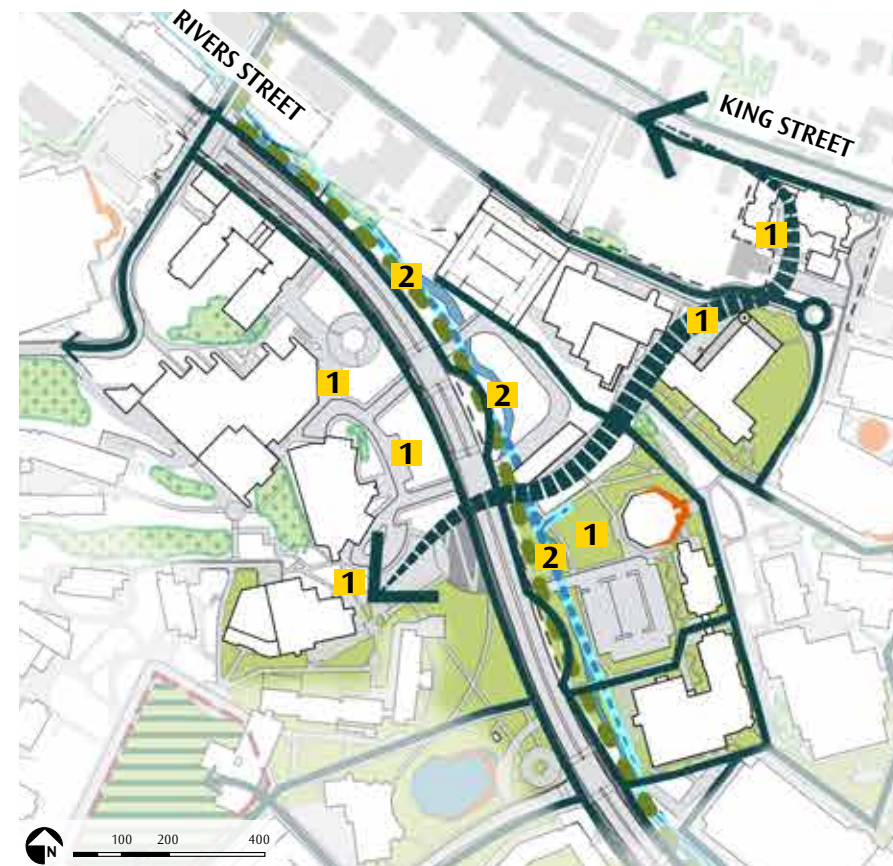


BUILDINGS

- 1** Broyhill School of Music Expansion
- 2** Wey Hall Expansion
- 3** Walker Hall Expansion
- 4** Peacock Hall Expansion
- 5** Duncan Octagon Renewal
- 6** Chappell Wilson Renewal
- 7** Rankin Science Renewal
- 8** Wrapped Parking Deck with Retail (514 spaces)

LEGEND

- Academics
- Student Housing
- Mixed Use
- Recreation
- Art / Culture
- Support / Admin / Other
- Athletics
- Parking Lot
- Parking Deck
- Major Road
- Minor Road



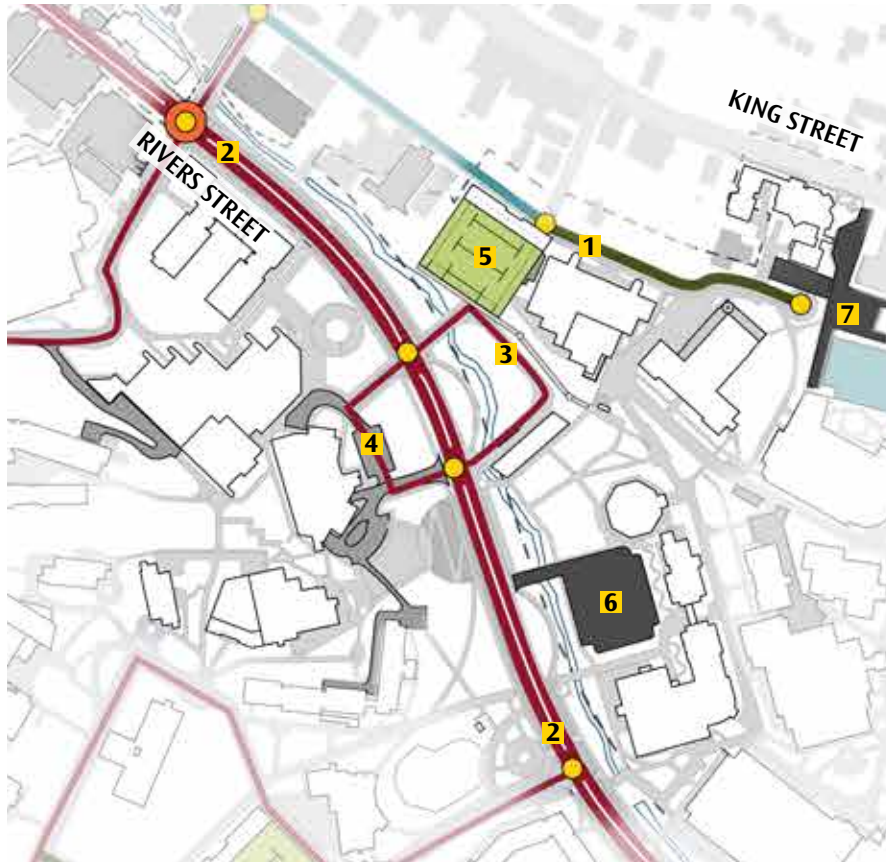
OPEN SPACES

- 1** Arts Walk: Improved Open Spaces at:
 - Turchin Hall (Plaza)
 - Wey Hall (Plaza)
 - Duncan Octagon (Green Space)
 - Chappell Wilson Hall (Plaza)
 - Schaefer Center (Green Space)
 - Broyhill Music Center (Plaza)
- 2** Boone Creek Daylighting

LEGEND

- Natural Conservation Zones
- Shared Open Spaces
- Athletic Fields
- Recreational Fields
- Trails
- Pedestrian Pathways
- Art Walk
- Landmarks
- Sacred Spaces
- Greenway Connection

The Eco-District & Arts Walk Transportation

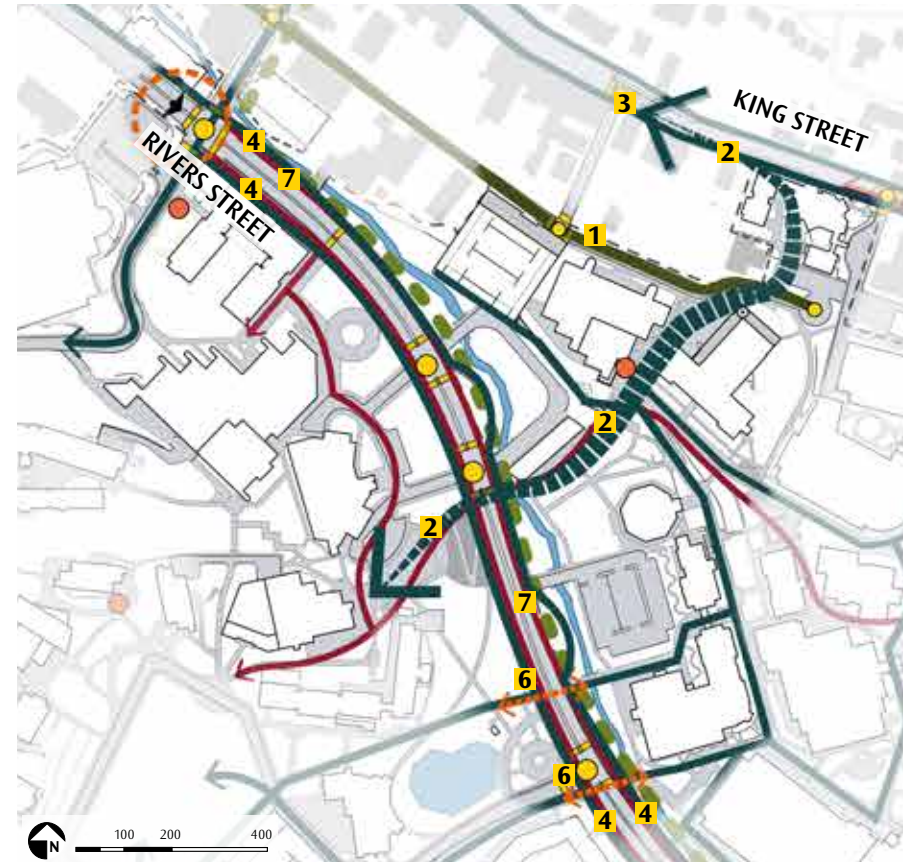


VEHICULAR CIRCULATION

- 1** Woonerf at West Howard Street
- 2** Road Improvements & Medians on Rivers Street (4 Lanes)
- 3** New Signalized Bus Loop
- 4** New Circulation Loop
- 5** Wrapped Parking Deck with Retail (514 spaces)
- 6** New Surface Parking with Storm Water Management System (85 spaces)
- 7** Improved Loading Zone

LEGEND

- Existing Surface parking
- New Surface Parking
- Existing Parking Decks
- New Parking Decks
- Proposed Road Improvements
- Scheduled Road Improvements
- Woonerfs
- Median
- Intersection Improvements
- Vehicular gateways
- Signs



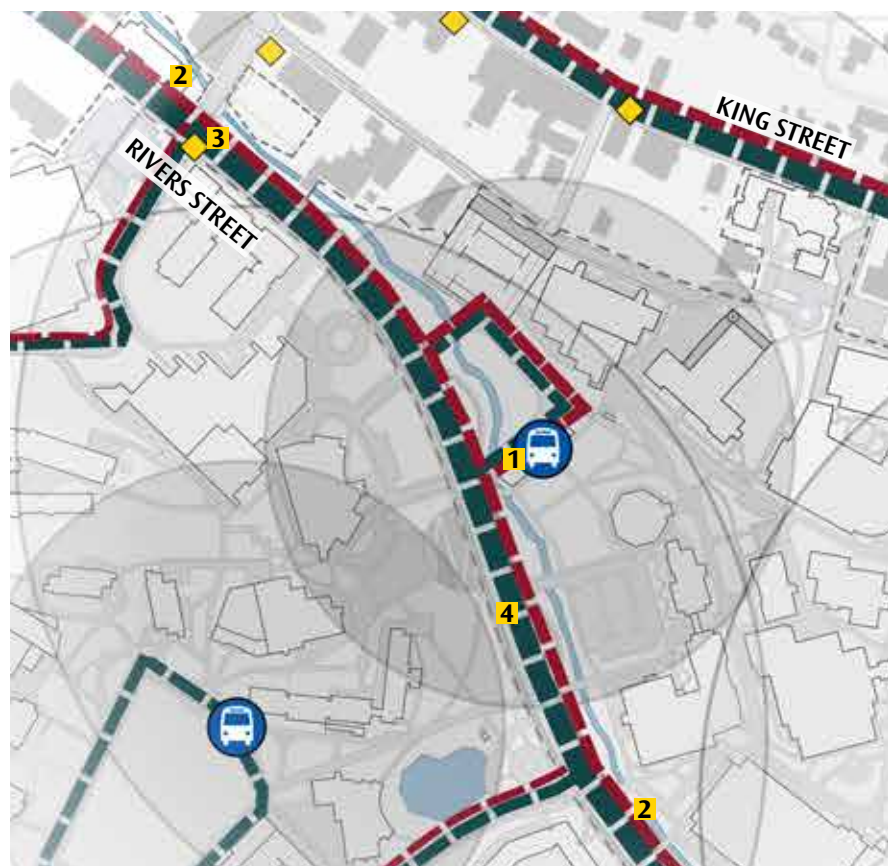
PEDESTRIAN CIRCULATION & CYCLING INFRASTRUCTURE

- 1** Woonerf at West Howard Street
- 2** Arts Walk Connection Across Campus
- 3** Connection to Downtown & Nearby Venues
- 4** Improved Pedestrian Sidewalks on Rivers Street
- 5** On-Street Crossings on Rivers Street (yellow dots)
- 6** Tunnel Improvements
- 7** Dedicated Bike Lanes on Rivers Street

LEGEND

- Pedestrian Gateways
- Pedestrian Pathways
- Cross Walks
- Art Walk
- Trails
- Bike / Skateboard routes
- Woonerfs
- Greenway Connection
- Intersection Improvements
- Pedestrian Access to Campus
- Bridge
- Tunnel
- Bike Stop

The Eco-District & Arts Walk Transportation & Utilities

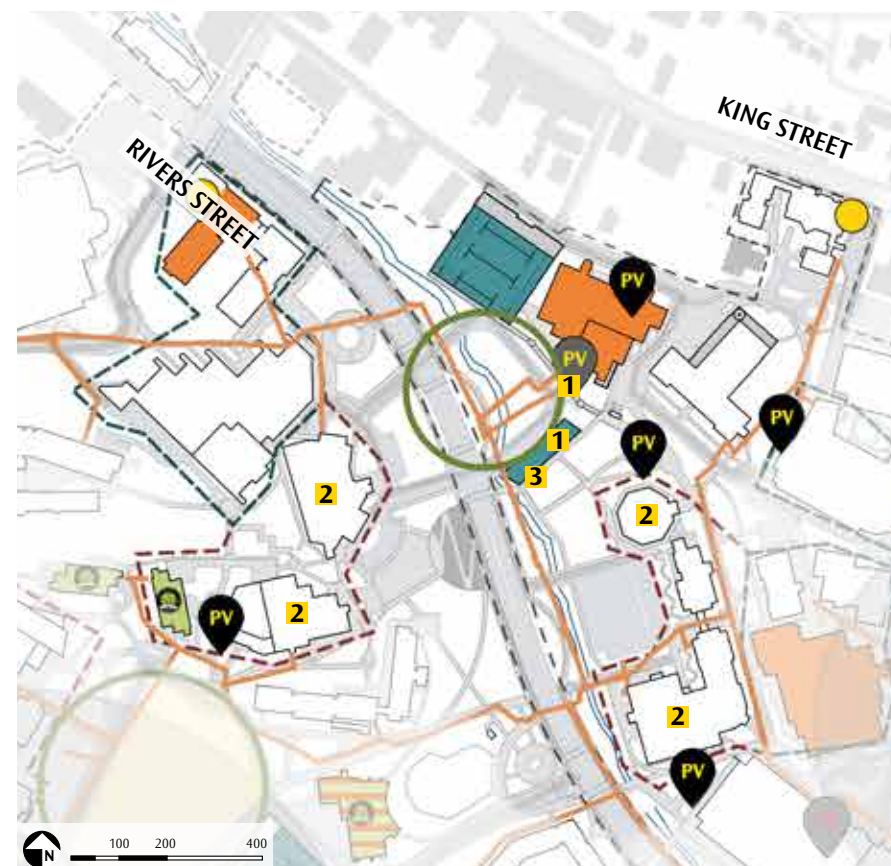


MASS TRANSIT

- 1** Transit Hub Pavilion at Arts Walk
- 2** New Campus Shuttle Route
- 3** Improved Bus Shelters at All Bus Stops (yellow dots)
- 4** Improve Capacity and Service on Pop 105 Route

LEGEND

- Campus Shuttle Route
- AppalCart Route
- Express Bus Route
- Bus Stop
- 2 Minutes Walking Distance
- 5 Minutes Walking Distance
- ⊕ Proposed Transit Stop



UTILITIES

- 1** New PV Panel Installations at:
 - Parking Deck Walkway
 - Transit Hub Pavilion
- 2** Chiller Loop Improvements at:
 - Schaefer & Wey Hall
 - Duncan Octagon & Rankin Science
- 3** Sustainable Art Installations at Arts Walk

LEGEND

- Future Solar Photovoltaic
- Existing Steam Network
- New/Old PV
- New/Old Solar Thermal
- New/Old Wind Turbines
- New WiFi Canopy
- Sustainable Eco-Sites
- New/Old Chilled Water
- Electrical Delivery Points
- Existing LEED Buildings
- IT Hut Within Building
- Future Geo Thermal Site

King Street Events & Conference Center

KING STREET EVENTS & CONFERENCE CENTER

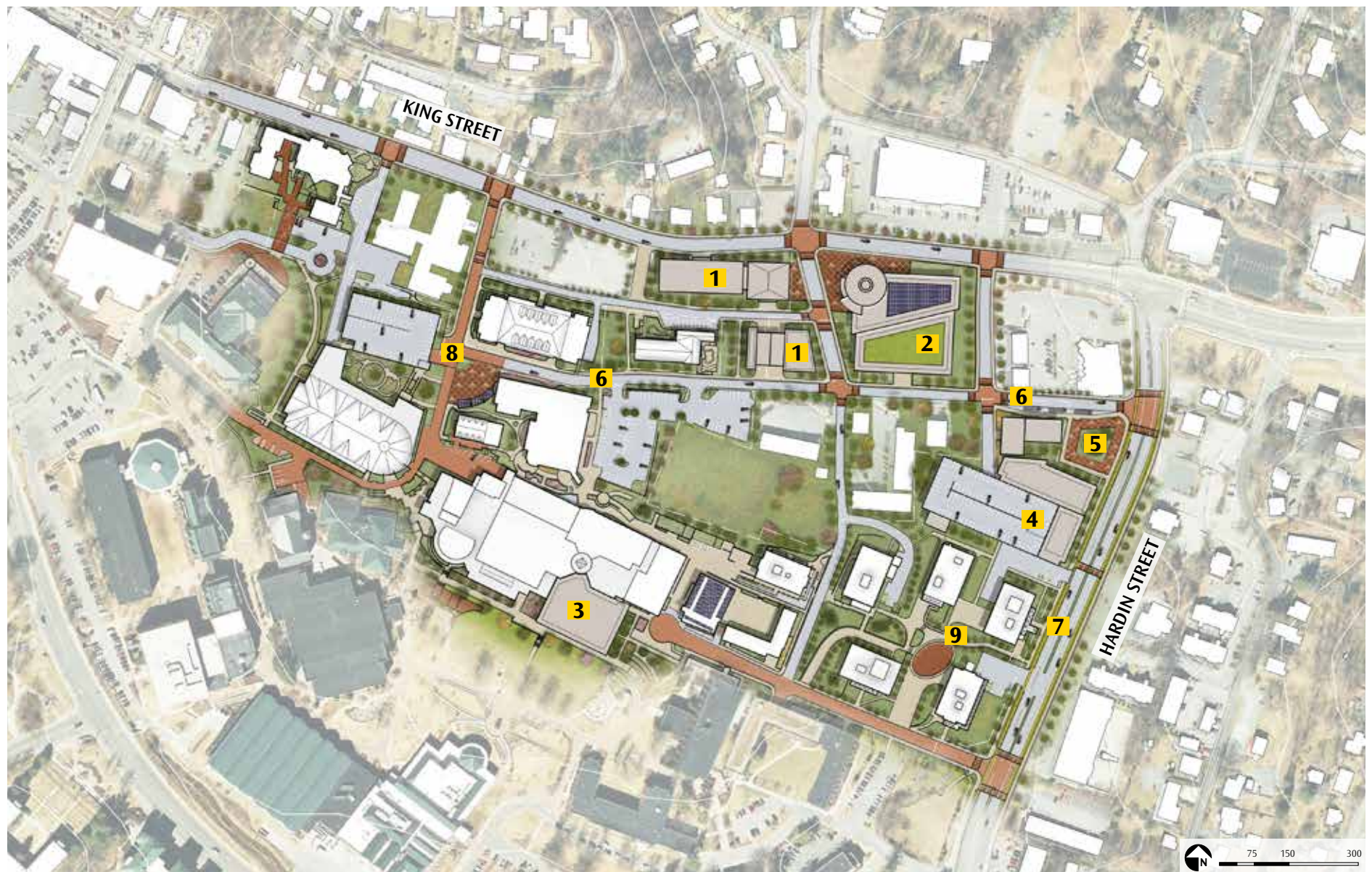
The King Street Events & Conference Center forms the public face for the research component of campus, inviting collaboration and partnership within University departments and with the broader academic community. Development in this zone includes offices and research space for faculty, a hotel for visitors, academic conference spaces, and an events venue that will replace Legends. Proposed infrastructure upgrades aim to create lively, pedestrian-friendly streets and include a woonerf at East Howard Street, a transit hub, Complete Streets improvements on Hardin Street, and restoration of the Pit. Development of this zone would require significant acquisition of property to the northeast of campus.



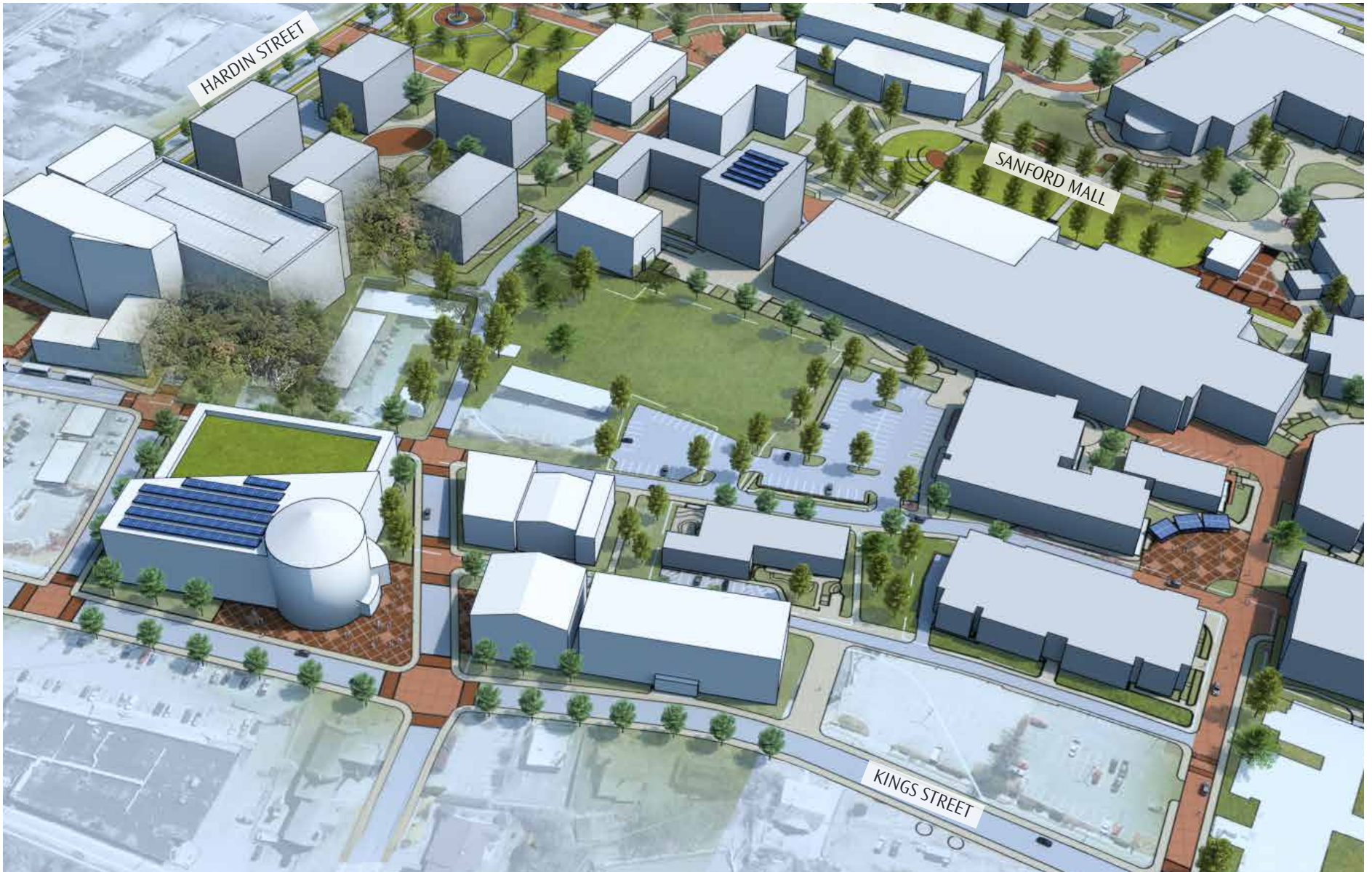
KEY PROJECTS

- 1** New Faculty Offices (2)
- 2** New Academic Research & Events Venue
- 3** Plemmons Student Union Expansion
- 4** Wrapped Parking Deck with Hotel & Conference Space (110 spaces/ft yields 550 spaces)
- 5** Transit Hub & Open Space
- 6** East Howard Street Woonerf
- 7** Complete Streets Improvements at Hardin Street
- 8** Open Space & Intersection Improvements at College Street
- 9** Pit Improvements: New Neighborhood Center

King Street Events & Conference Center



King Street Events & Conference Center



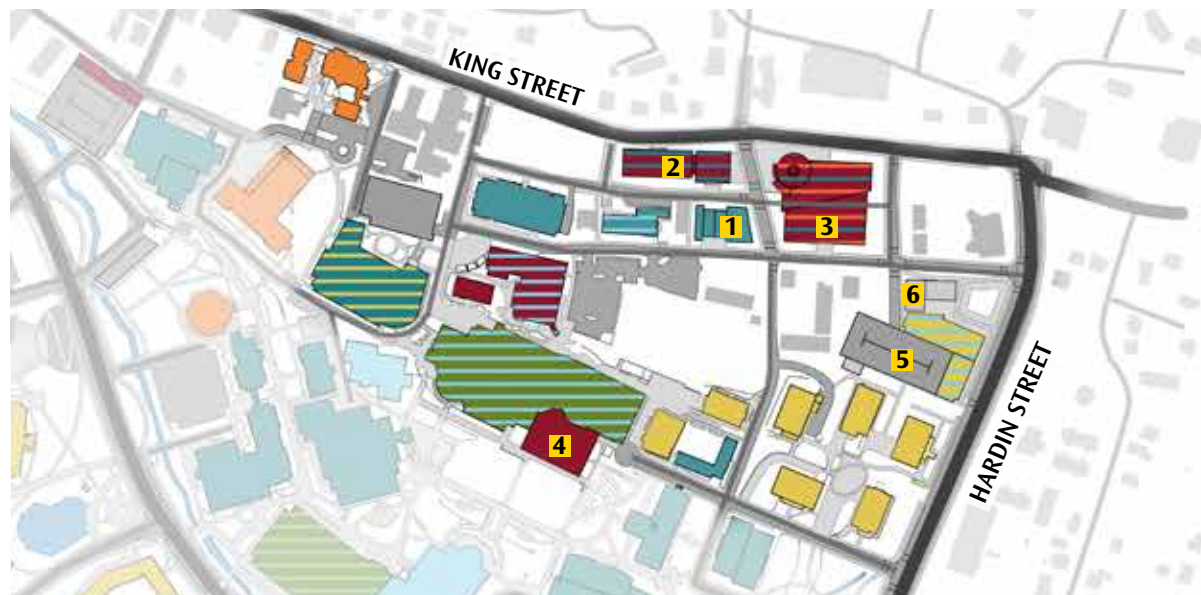
King Street Events & Conference Center Buildings & Open Spaces

BUILDINGS

- 1** New Faculty Offices
- 2** New Mixed-Use Building & Faculty Offices
- 3** New Academic Research & Events Venue
- 4** Plemmons Student Union Expansion
- 5** Wrapped Parking Deck with Hotel & Conference Space (550 spaces)
- 6** New Transit Hub & Facilities

LEGEND

- Academics
- Student Housing
- Mixed Use
- Recreation
- Art / Culture
- Support / Admin / Other
- Athletics
- Parking Lot
- Parking Deck
- Major Road
- Minor Road



OPEN SPACES

- 1** Improvements to The Pit
- 2** New Transit Hub Plaza

LEGEND

- Natural Conservation Zones
- Shared Open Spaces
- Athletic Fields
- Recreational Fields
- Trails
- Pedestrian Pathways
- Art Walk
- Landmarks
- Sacred Spaces
- Greenway Connection



125 250 500

King Street Events & Conference Center Transportation

LEGEND

- Existing Surface parking
- New Surface Parking
- Existing Parking Decks
- New Parking Decks
- Proposed Road Improvements
- Scheduled Road Improvements
- Woonerfs
- Median
- Intersection Improvements
- Vehicular gateways
- Signs

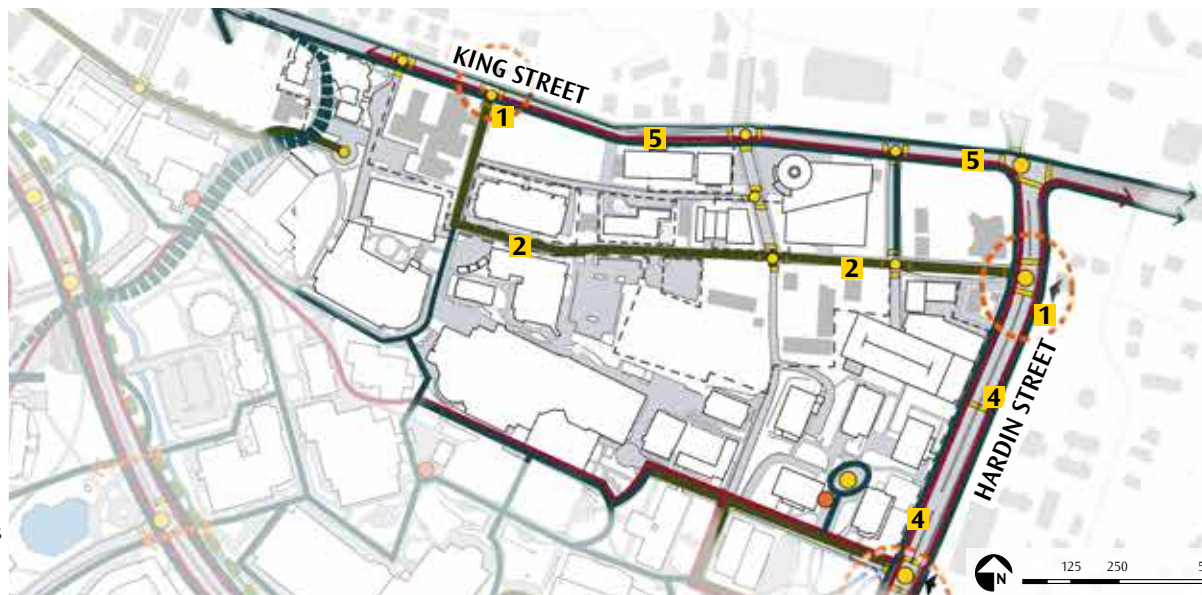


VEHICULAR CIRCULATION

- 1** Vehicular Gateway
Improvements at:
 - Hardin & King Street
 - College & King Street
- 2** Woonerf at East Howard Street
- 3** Road Improvements & Medians on Hardin Street (4 Lanes)
- 4** Parking Deck at Hardin Street (550 spaces)
- 5** Intersection Improvements (yellow dots) on:
 - East Howard Street
 - Hardin Street
 - College Street

LEGEND

- Pedestrian Gateways
- Pedestrian Pathways
- Cross Walks
- Art Walk
- Trails
- Bike / Skateboard routes
- Woonerfs
- Greenway Connection
- Intersection Improvements
- Pedestrian Access to Campus
- Bridge
- Tunnel
- Bike Stop



PEDESTRIAN CIRCULATION & CYCLING INFRASTRUCTURE

- 1** Pedestrian Gateway
Improvements at:
 - Hardin & King Street
 - College & Howard Street
- 2** Woonerf at East Howard Street
- 3** On-Street Crossings (yellow dots) on:
 - Hardin Street
 - King Street
 - Howard Street
- 4** Dedicated Bike Lanes on:
 - King Street
 - Hardin Street
- 5** Path Connectivity at the Pit

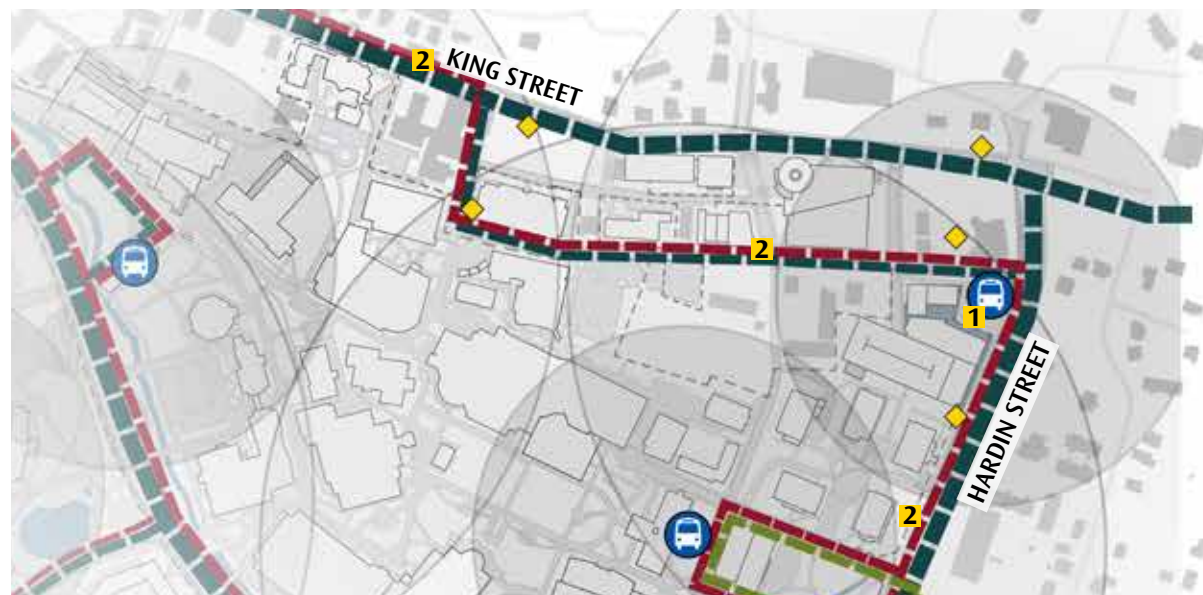
King Street Events & Conference Center Transportation & Utilities

MASS TRANSIT

- 1** Transit Hub at East Howard Street
- 2** New Campus Shuttle Route
- 3** Improved Bus Shelters at All Bus Stops (yellow dots)

LEGEND

- Campus Shuttle Route
- AppalCart Route
- Express Bus Route
- Bus Stop
- 2 Minutes Walking Distance
- 5 Minutes Walking Distance
- ⓘ Proposed Transit Stop

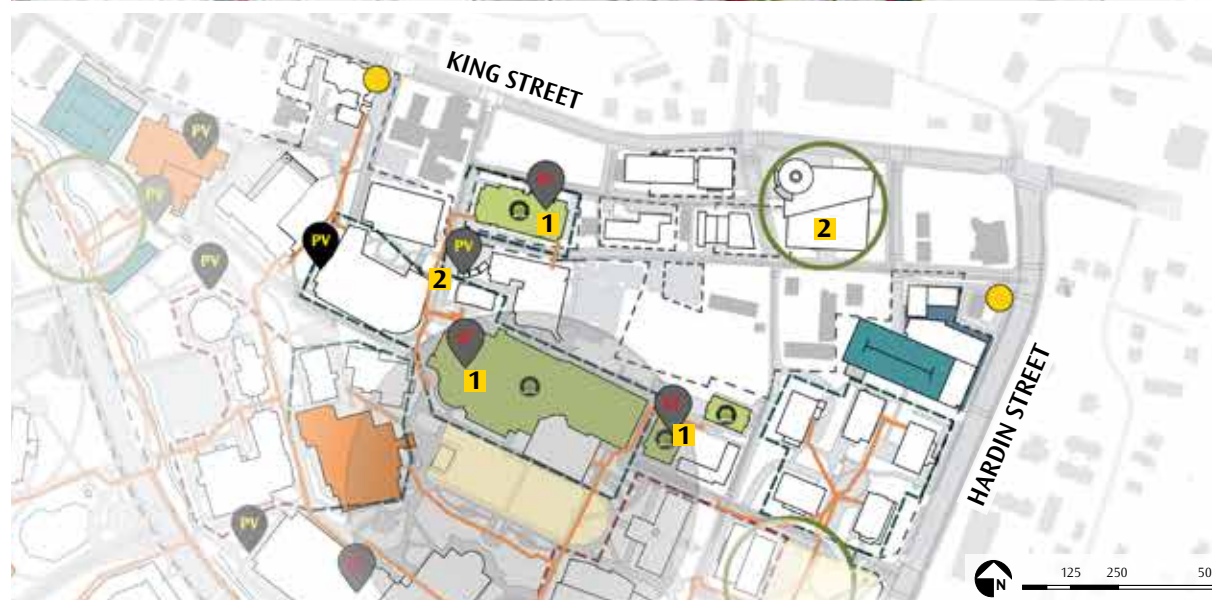


UTILITIES

- 1** New Solar Thermal Installations at:
 - Plemmons Student Union
 - Summit Hall
 - Reich College of Ed
- 2** New PV Panel Installations at:
 - College Street Open Space
 - New Academic Research & Events Venue

LEGEND

- Future Solar Photovoltaic
- Existing Steam Network
- New/Old PV
- New/Old Solar Thermal
- New/Old Wind Turbines
- New WiFi Canopy
- Sustainable Eco-Sites
- New/Old Chilled Water
- Electrical Delivery Points
- Existing LEED Buildings
- IT Hut Within Building
- Future Geo Thermal Site



The Broyhill Innovation District

BROYHILL INNOVATION DISTRICT

Appalachian State's need to explore, advance, and achieve new academic heights is addressed in the Broyhill Innovation District. The Innovation Promenade forms a spine that connects a multitude of research facilities with gardens and the Biological Preserve. These natural zones are more than places of inspiration—they are a living laboratory. This Precinct is both innovative and experimental: geothermal fields provide power to each of the district's buildings, and surface parking is outfitted with a robust storm water management system.



KEY PROJECTS

- 1** Research Building & Labs
- 2** High-Bay Building
- 3** Academic Building
- 4** Wrapped Parking Deck with Academics (*186 spaces/fl yields 930 spaces*)
- 5** Innovation Promenade
- 6** Formal Roundabout, Plaza, & Landmark
- 7** Biological Preserve Connection
- 8** Research Gardens
- 9** Surface Parking with Storm Water Management System (Expansion Zone) (*263 spaces*)
- 10** Geothermal Zone (3)

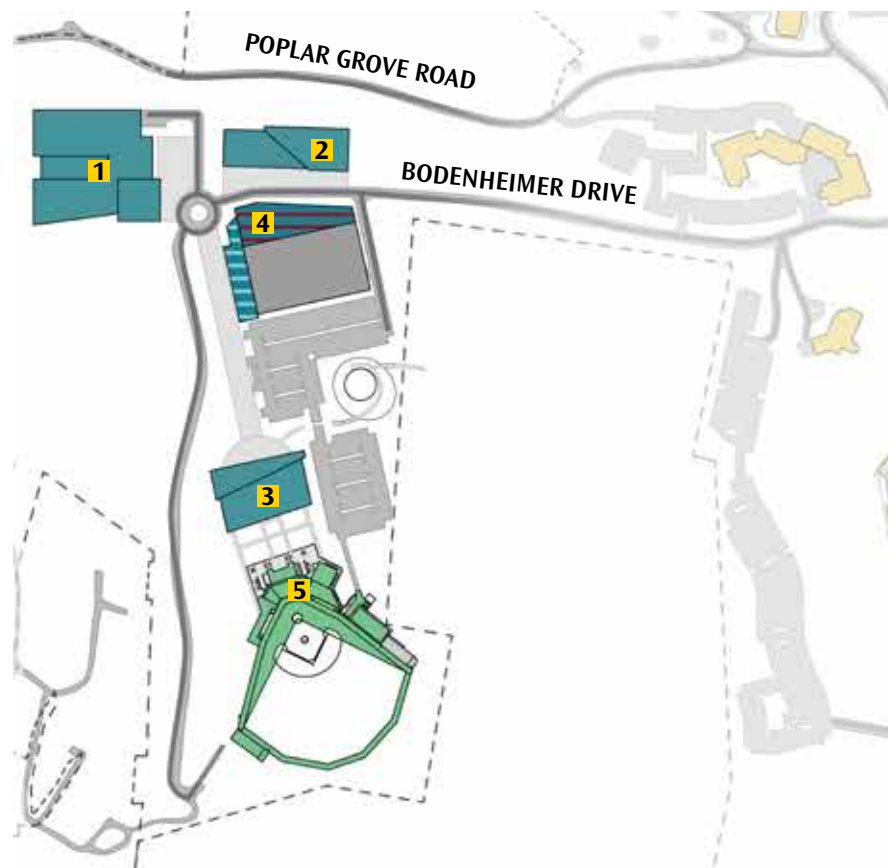
The Broyhill Innovation District



The Broyhill Innovation District



The Broyhill Innovation District Buildings & Open Spaces

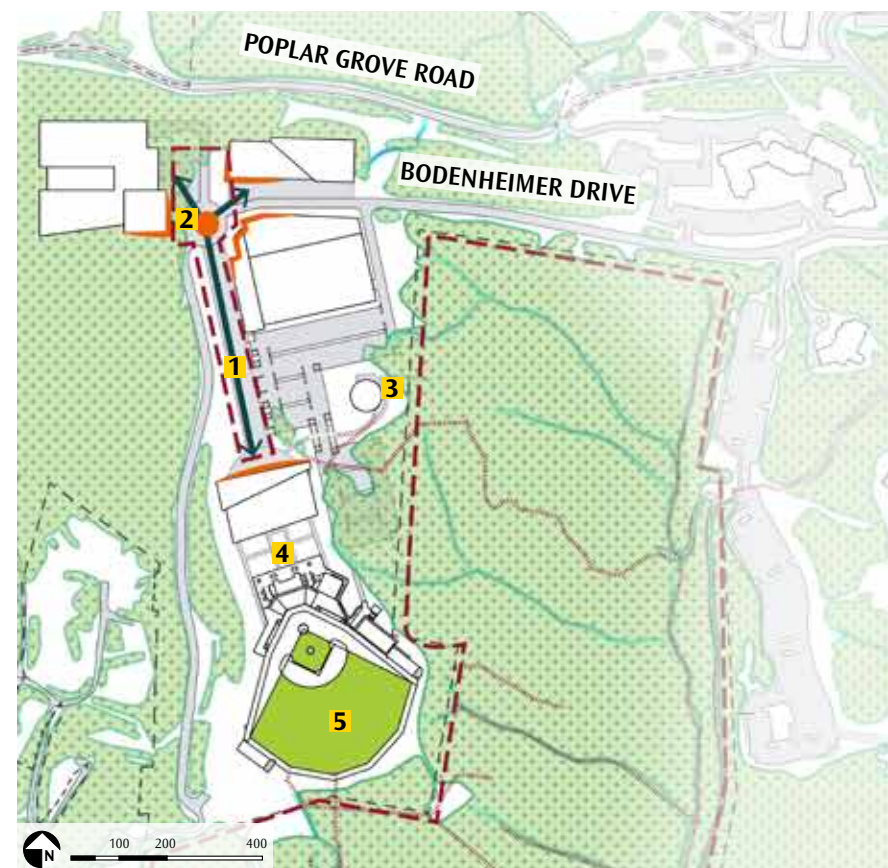


BUILDINGS

- 1** Research Building & Labs
- 2** High-Bay Building
- 3** Academic Building
- 4** Wrapped Parking Deck with Academics (930 spaces)
- 5** Renovated Athletics Facilities

LEGEND

- Academics
- Student Housing
- Mixed Use
- Recreation
- Art / Culture
- Support / Admin / Other
- Athletics
- Parking Lot
- Parking Deck
- Major Road
- Minor Road



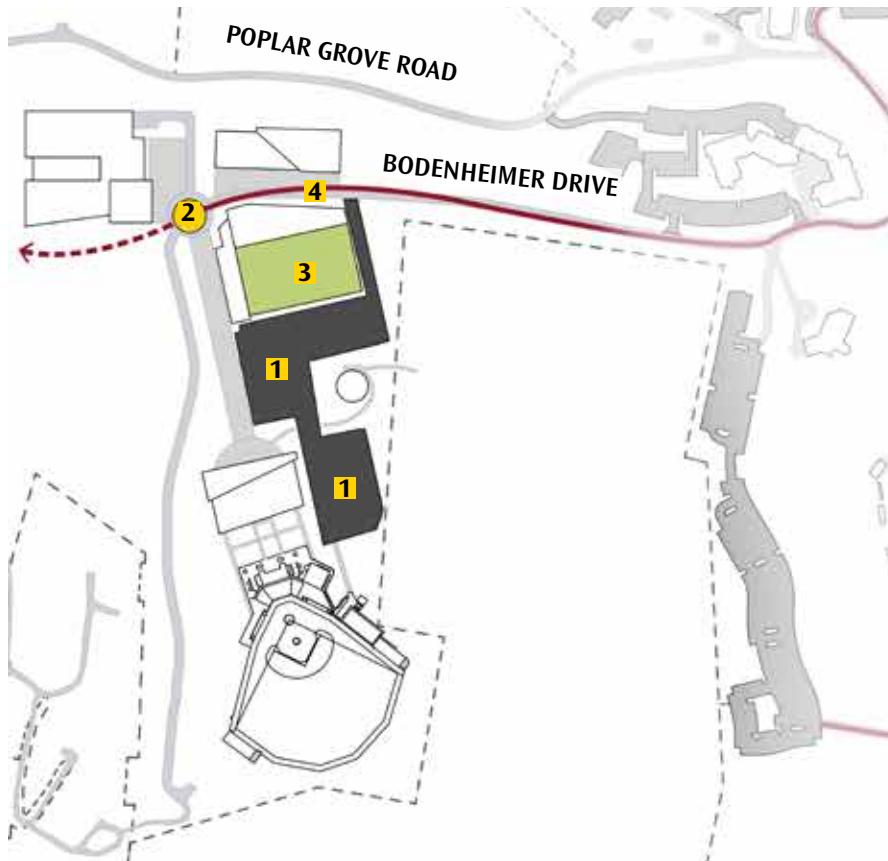
OPEN SPACES

- 1** Innovation Promenade
- 2** Formal Roundabout, Plaza, & Landmark
- 3** Biological Preserve Connection
- 4** Research Gardens
- 5** Renovated Baseball Field

LEGEND

- Natural Conservation Zones
- Shared Open Spaces
- Athletic Fields
- Recreational Fields
- Trails
- Pedestrian Pathways
- Art Walk
- Landmarks
- Sacred Spaces
- Greenway Connection

Broyhill Innovation District Transportation

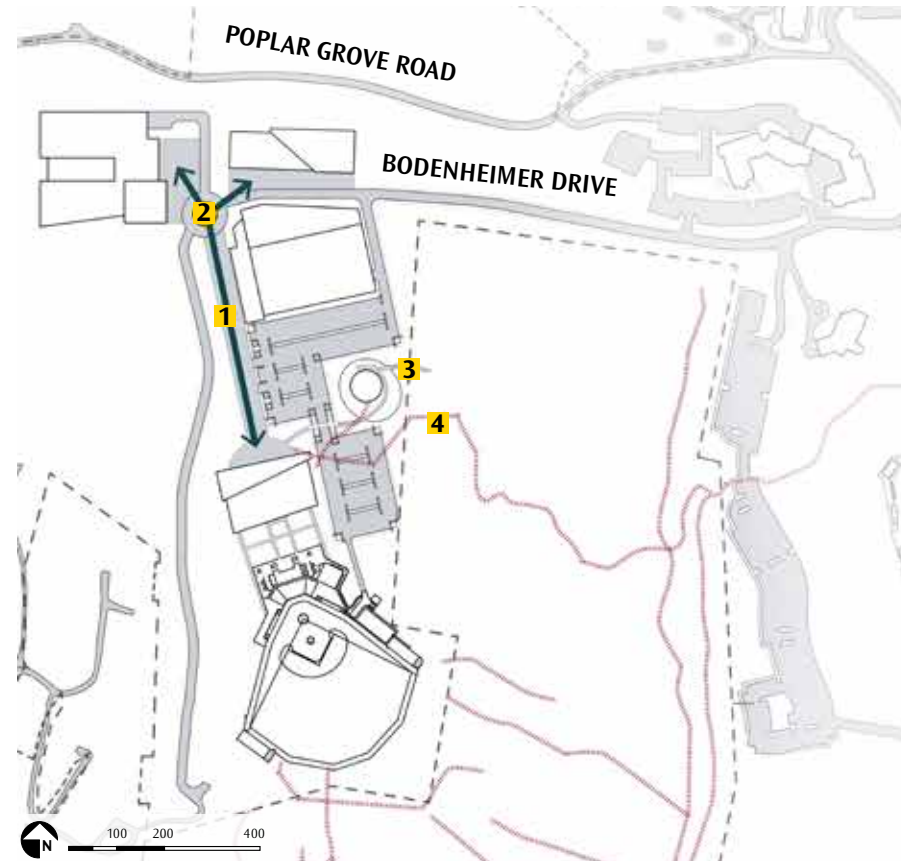


VEHICULAR CIRCULATION

- 1** New Surface Parking with Storm Water Management System (263 spaces)
- 2** Vehicular Roundabout & Gateway
- 3** New Wrapped Parking Deck (930 spaces)
- 4** Improvements on Bodenheimer drive

LEGEND

- Existing Surface parking
- New Surface Parking
- Existing Parking Decks
- New Parking Decks
- Proposed Road Improvements
- Scheduled Road Improvements
- Woonerfs
- Median
- Intersection Improvements
- Vehicular gateways
- Signs



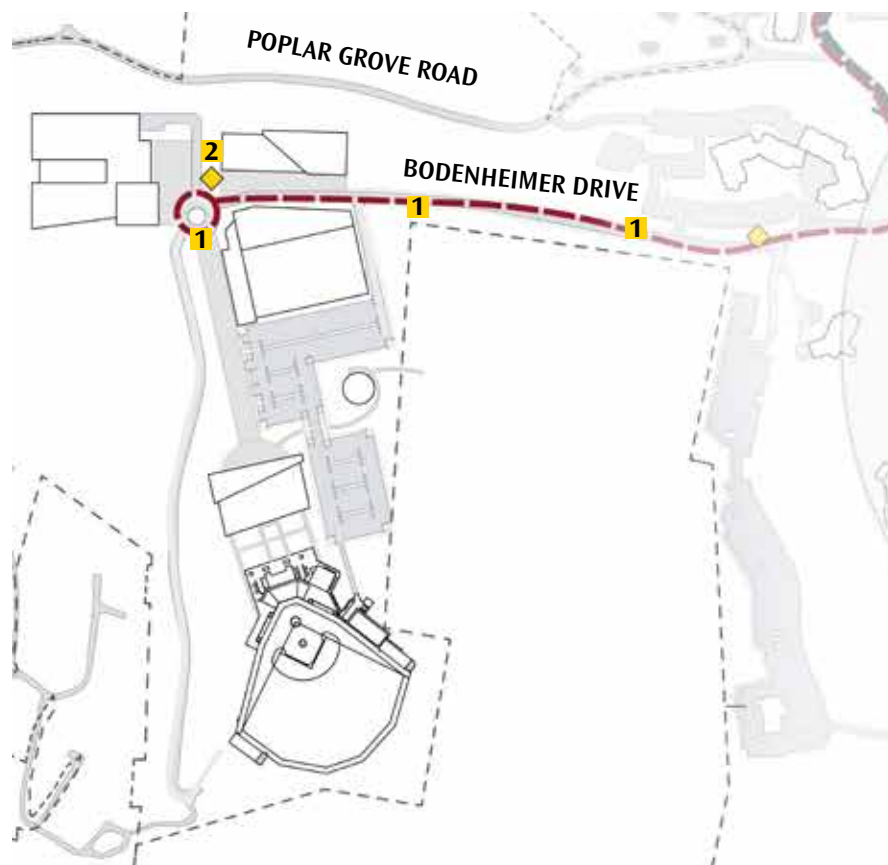
PEDESTRIAN CIRCULATION & CYCLING INFRASTRUCTURE

- 1** Innovation Promenade
- 2** Roundabout & On-Street Crossing
- 3** Biological Preserve Connection
- 4** Improved Trail Connectivity

LEGEND

- Pedestrian Gateways
- Pedestrian Pathways
- Cross Walks
- Art Walk
- Trails
- Bike / Skateboard routes
- Woonerfs
- Greenway Connection
- Intersection Improvements
- Pedestrian Access to Campus
- Bridge
- Tunnel
- Bike Stop

Broyhill Innovation District Transportation & Utilities

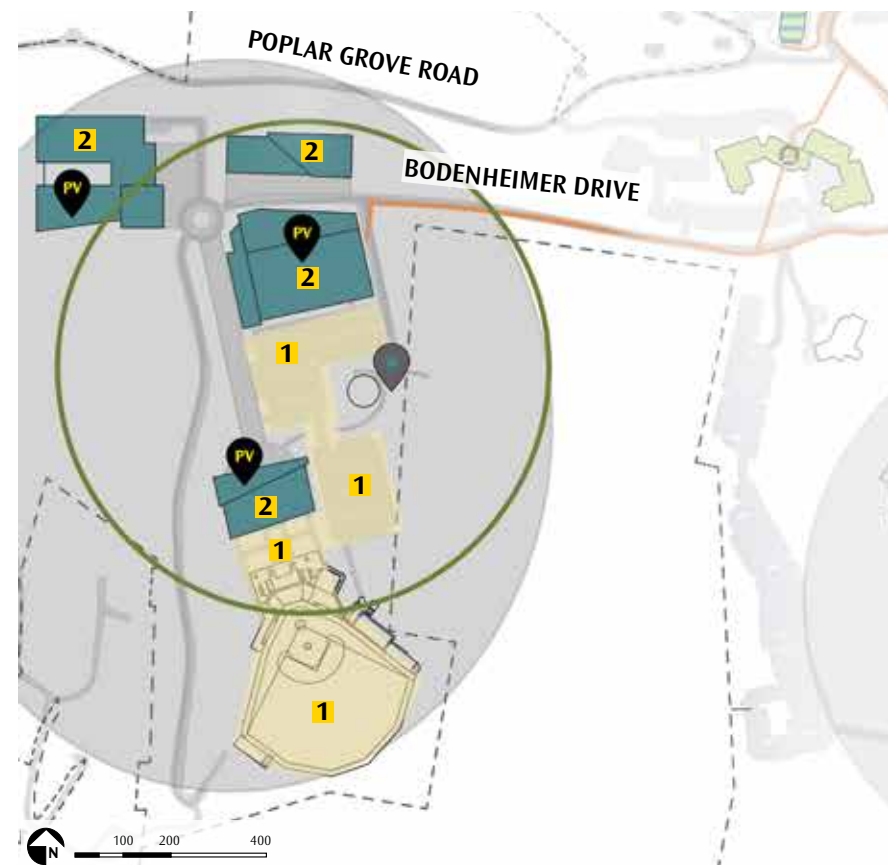


MASS TRANSIT

- 1** New Campus Shuttle Route
- 2** New Bus Stop

LEGEND

- Campus Shuttle Route
- AppalCart Route
- Express Bus Route
- ◆ Bus Stop
- 2 Minutes Walking Distance
- 5 Minutes Walking Distance
- ⊙ Proposed Transit Stop



UTILITIES

- 1** Geothermal Wells at:
 - Surface Parking Lot
 - Research Gardens
 - Baseball Field
- 2** New PV Panel Installations at:
 - Research Building & Labs
 - High Bay Building
 - Academic Building
 - Wrapped Parking Deck with Academics
- 3** Expanded Wi-Fi Canopy

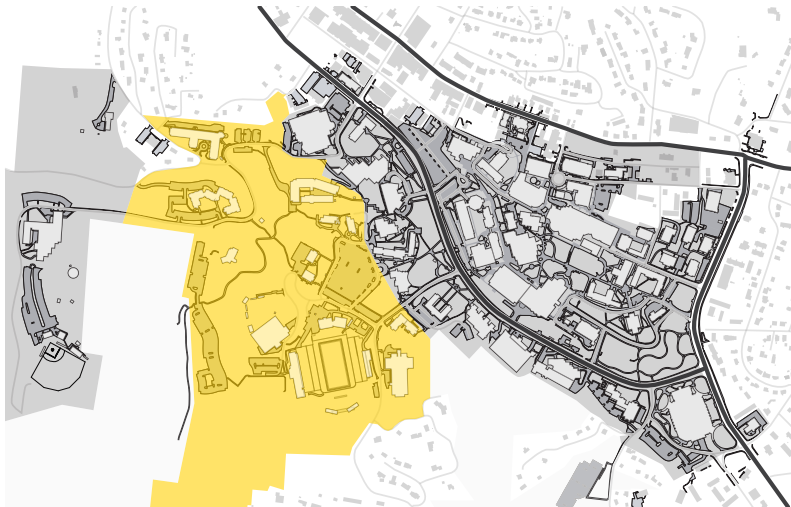
LEGEND

- Future Solar Photovoltaic
- Existing Steam Network
- New/Old PV
- New/Old Solar Thermal
- New/Old Wind Turbines
- New WiFi Canopy
- Sustainable Eco-Sites
- New/Old Chilled Water
- Electrical Delivery Points
- Existing LEED Buildings
- IT Hut Within Building
- Future Geo Thermal Site

The Recreational Village

THE RECREATIONAL VILLAGE

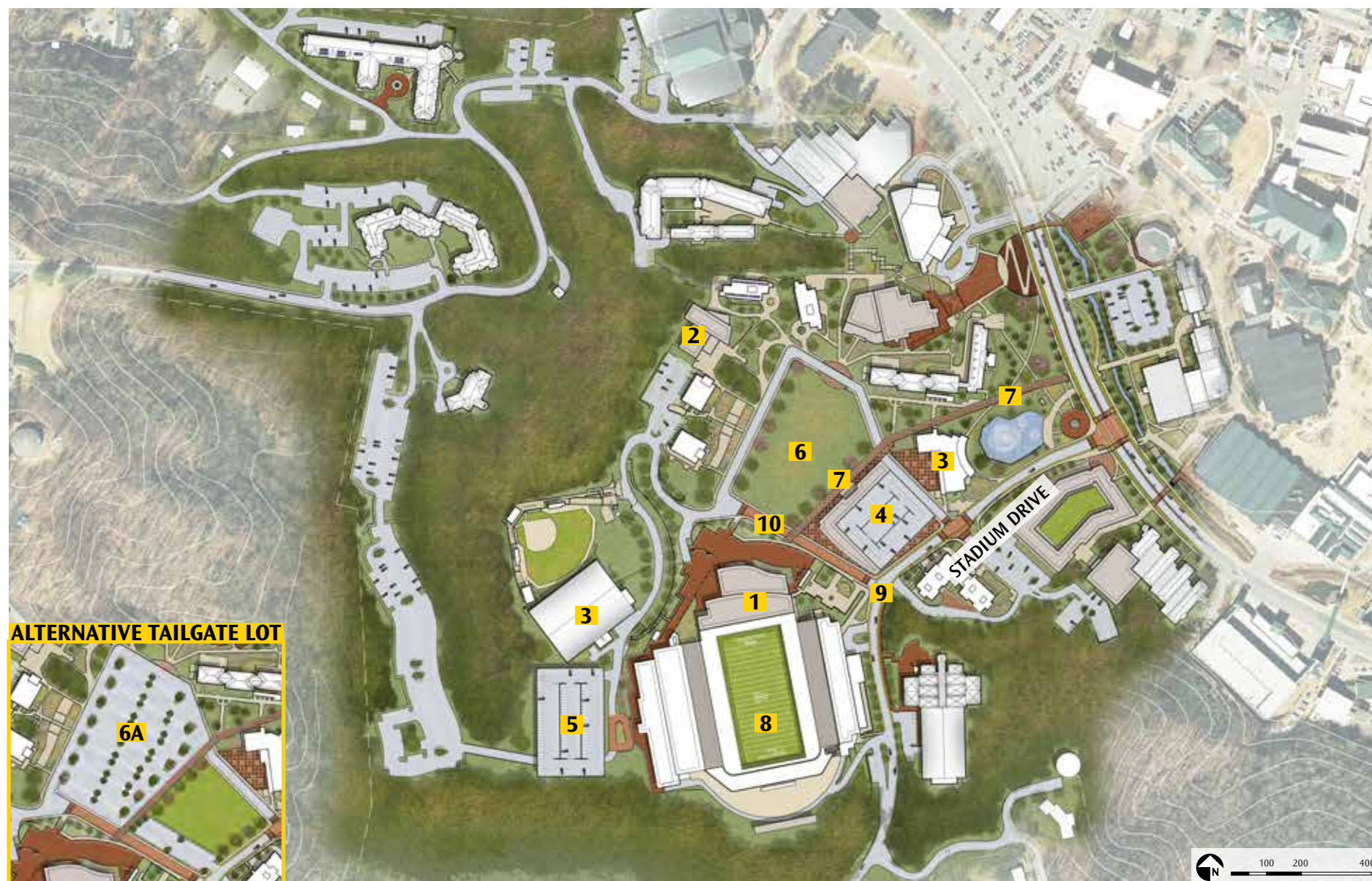
West Campus encompasses the Recreational Heart & Tailgate Space that serves as a mirror to Sanford Mall. In this space, students, residents, athletes, and spectators can gather to enjoy nature, recreation, and engage in game-day revelry. This grand open space is flexible enough to accommodate tailgating on game days, but has also been outfitted with a wrapped parking deck to accommodate daily parking needs. It is framed by several residences, dining halls, and athletics facilities that animate the space. A grand Ceremonial Stadium Approach defines the path to this Precinct and provides a gracious route for pedestrians.



KEY PROJECTS

- 1** Mixed-Use Athletics Facility
- 2** Winkler Hall Reconstruction
- 3** Building Renewal (*Soefield & Trivette*)
- 4** Wrapped Parking Deck with Retail & Housing (*132 spaces/fl yields 660 spaces*)
- 5** Stadium Parking Deck (*159 spaces/fl yields 795 spaces*)
- 6** Reinforced Turf Tailgate & Recreation Field (*Recreational Heart*)
- 6A** See Alternative Tailgate Lot Design & Stormwater Management System (*354 spaces*)
- 7** Stadium Approach for Pedestrians
- 8** Athletics Master Plan Implementation
- 9** Stadium Drive Improvements
- 10** Stadium Heights Drive Woonerf

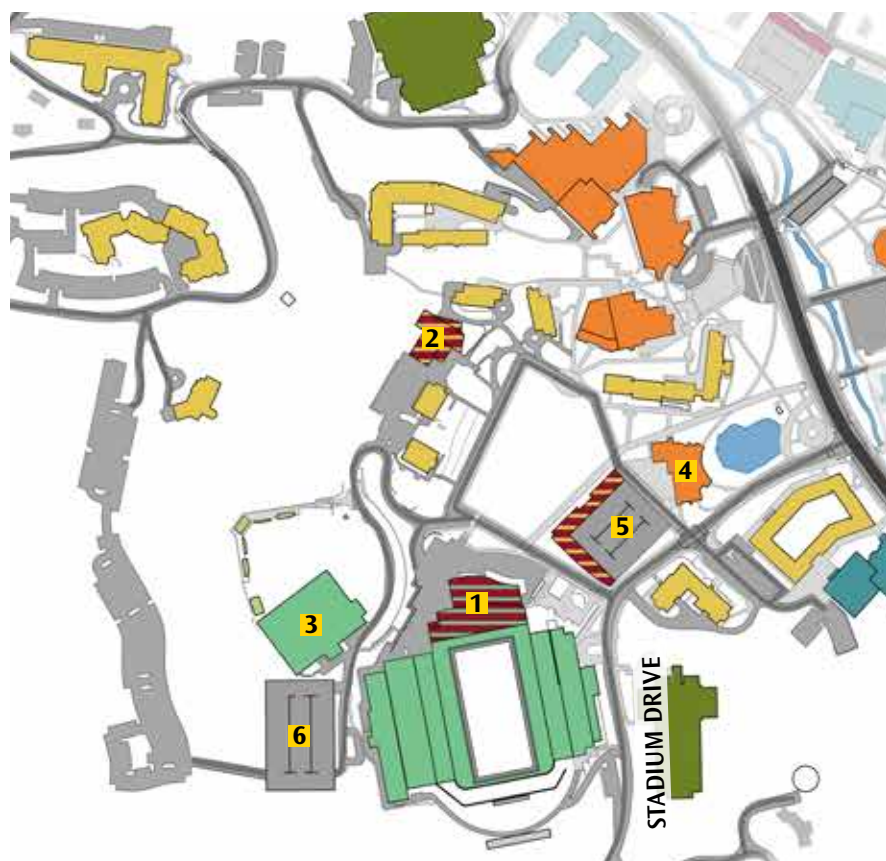
The Recreational Village



The Recreational Village



The Recreational Village Buildings & Open Spaces

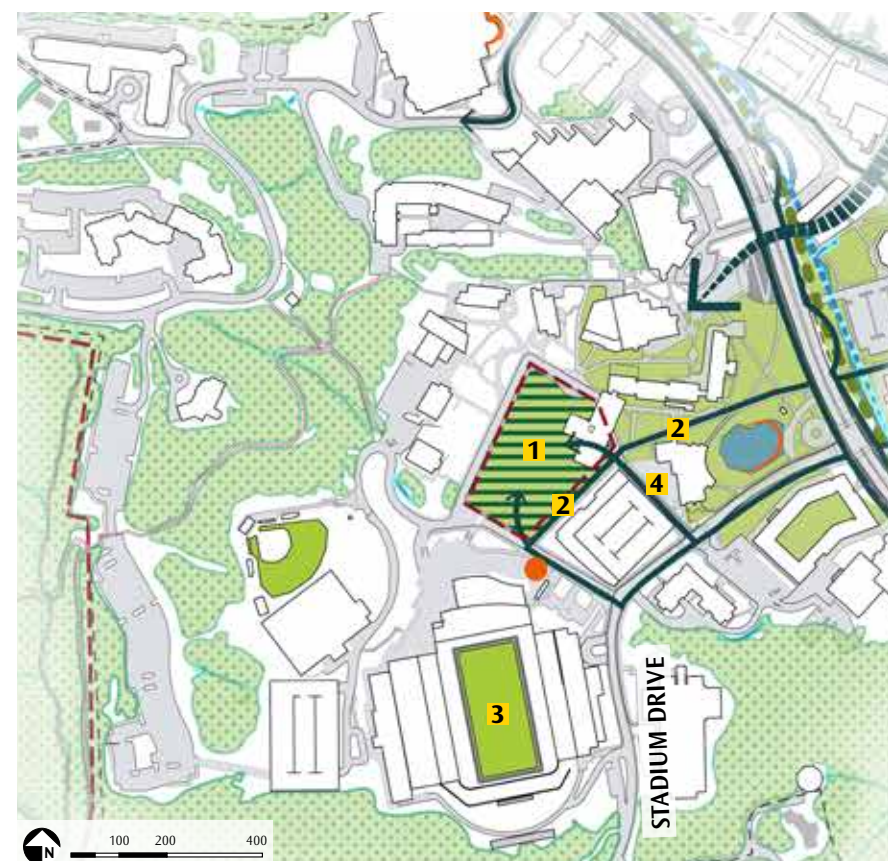


BUILDINGS

- 1** New Mixed-Use Athletics Facility
- 2** Winkler Hall Reconstruction
- 3** Soefield Renewal
- 4** Trivette Renewal
- 5** Wrapped Parking Deck with Retail & Housing (660 spaces)
- 6** New Stadium Parking Deck (795 spaces)

LEGEND

- Academics
- Student Housing
- Mixed Use
- Recreation
- Art / Culture
- Support / Admin / Other
- Athletics
- Parking Lot
- Parking Deck
- Major Road
- Minor Road



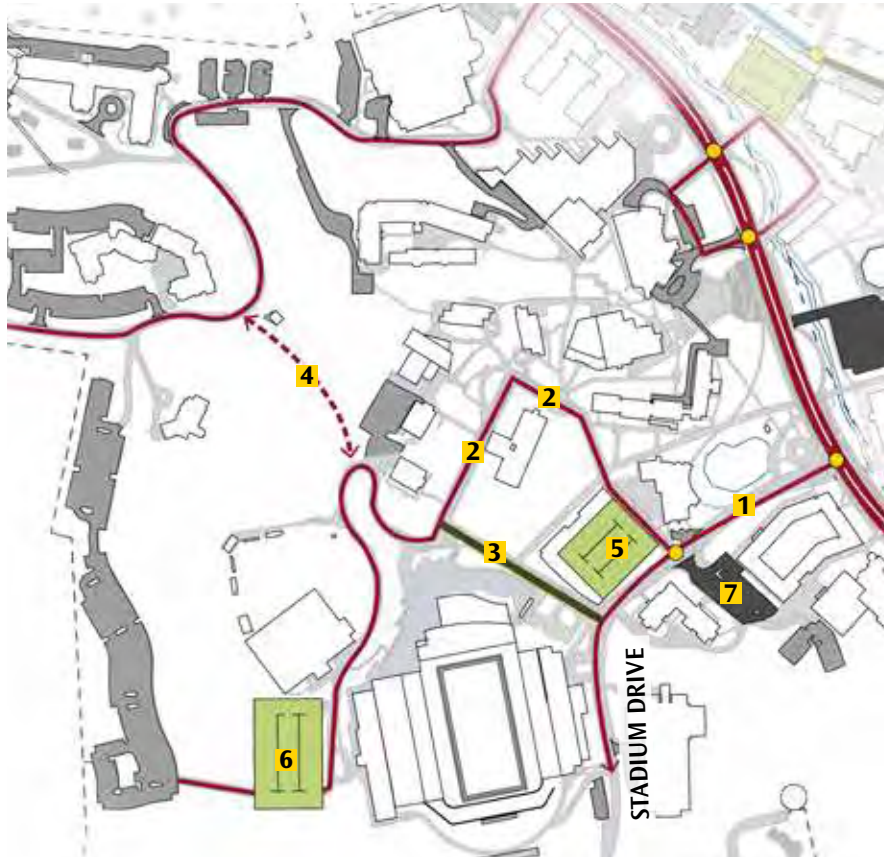
OPEN SPACES

- 1** Reinforced Turf Tailgate & Recreation Field
(Recreational Heart) (See alternative design on page 94)
- 2** Stadium Approach for Pedestrians
- 3** Athletics Master Plan Implementation
- 4** Trivette Hall Plaza Improvements

LEGEND

- Natural Conservation Zones
- Shared Open Spaces
- Athletic Fields
- Recreational Fields
- Trails
- Pedestrian Pathways
- Art Walk
- Landmarks
- Sacred Spaces
- Greenway Connection

The Recreational Village Transportation

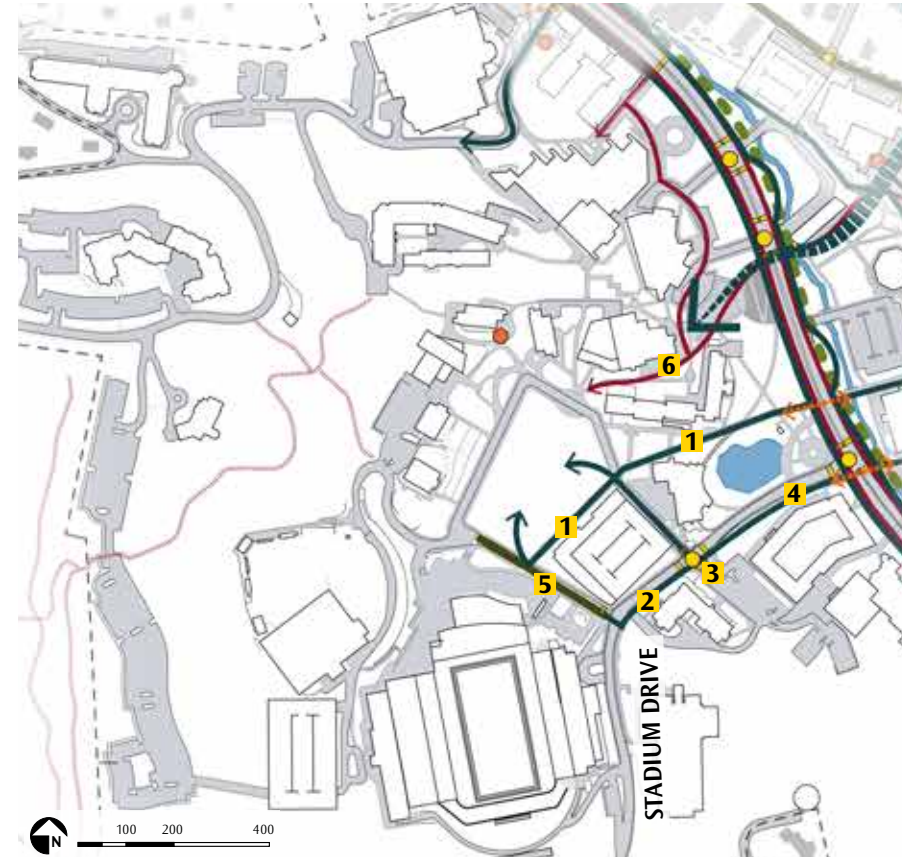


VEHICULAR CIRCULATION

- 1** Road Improvements on Stadium Drive
- 2** Parking and Bus Loop Borders Recreational H
- 3** Woonerf at Stadium Heights Drive
- 4** New Connection to Poplar Grove Road
- 5** Wrapped Parking Deck (660 spaces)
- 6** Stadium Parking Deck (795 spaces)
- 7** Improved Surface Parking at Justice Hall

LEGEND

- Existing Surface parking
- New Surface Parking
- Existing Parking Decks
- New Parking Decks
- Proposed Road Improvements
- Scheduled Road Improvements
- Woonerfs
- Median
- Intersection Improvements
- Vehicular gateways
- Signs



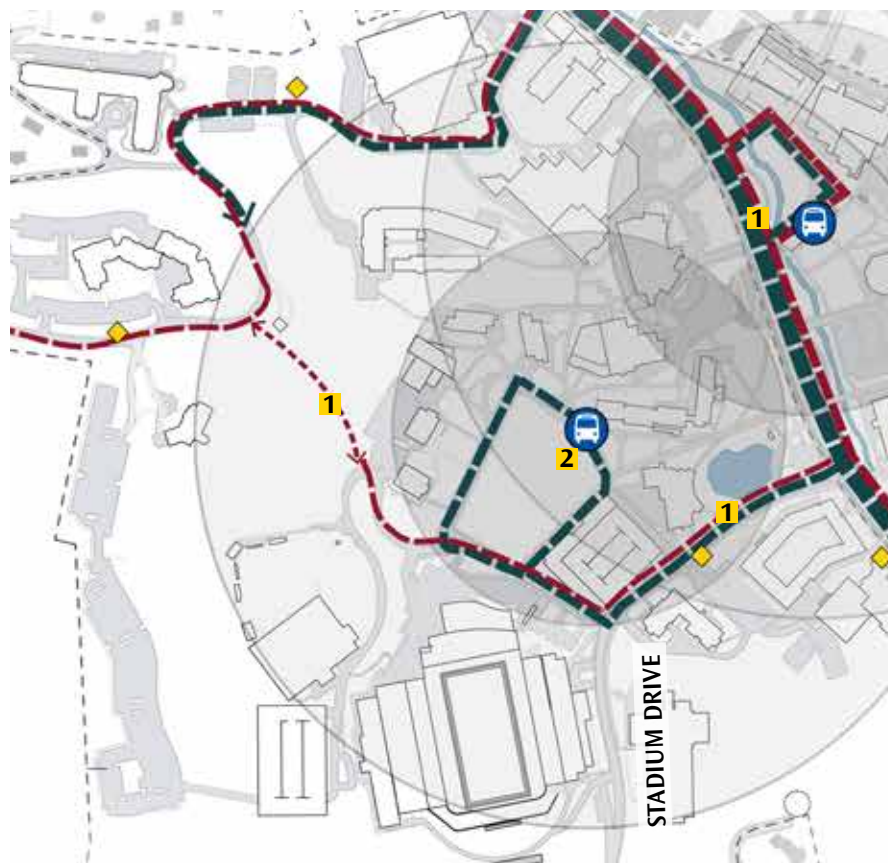
PEDESTRIAN CIRCULATION & CYCLING INFRASTRUCTURE

- 1** Stadium Approach for Pedestrians
- 2** Improved Pedestrian Sidewalks on Stadium Drive
- 3** On-Street Crossings on Stadium Drive (yellow dots)
- 4** Dedicated Bike Lanes on Stadium Drive
- 5** Stadium Heights Drive Woonerf
- 6** Improved Pedestrian Connectivity from Arts Walk

LEGEND

- Pedestrian Gateways
- Pedestrian Pathways
- Cross Walks
- Art Walk
- Trails
- Bike / Skateboard routes
- Woonerfs
- Greenway Connection
- Intersection Improvements
- Pedestrian Access to Campus
- Bridge
- Tunnel
- Bike Stop

The Recreational Village Transportation & Utilities

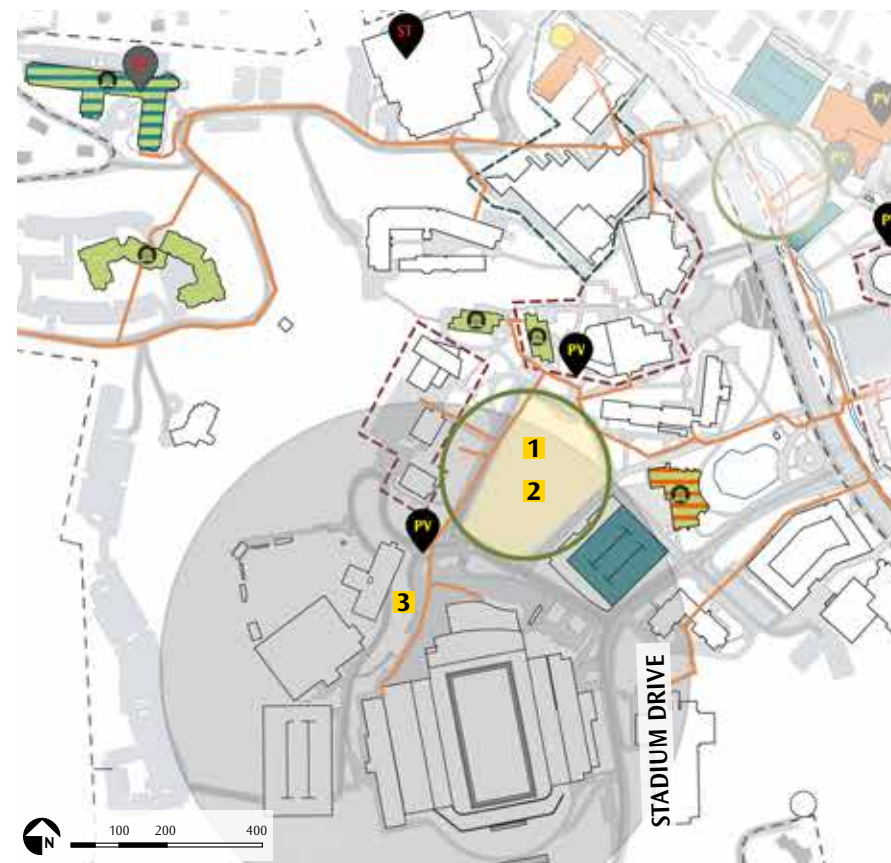


MASS TRANSIT

- 1** New Campus Shuttle Route
- 2** New Bus Stop

LEGEND

- Campus Shuttle Route
- AppalCart Route
- Express Bus Route
- ◆ Bus Stop
- 2 Minutes Walking Distance
- 5 Minutes Walking Distance
- Proposed Transit Stop



UTILITIES

- 1** Geothermal Wells at Recreational Heart & Tailgate Space
- 2** Steam Infrastructure Upgrades at Recreational Heart & Tailgate Space
- 3** Expanded Wi-Fi Canopy

LEGEND

- Future Solar Photovoltaic
- Existing Steam Network
- New/Old PV
- New/Old Solar Thermal
- New/Old Wind Turbines
- New WiFi Canopy
- Sustainable Eco-Sites
- New/Old Chilled Water
- Electrical Delivery Points
- Existing LEED Buildings
- IT Hut Within Building
- Future Geo Thermal Site

07 DESIGN GUIDELINES & STANDARDS

Design Guidelines & Standards Overview

Design Guidelines & Standards



07 DESIGN GUIDELINES & STANDARDS



Appalachian State University
Photographer Unknown⁴

Design Guidelines & Standards Overview

Appalachian State's campus is marked by its distinguishing natural features and unique open spaces, as well as the buildings and pathways that define those spaces. The Design Guidelines & Standards* aim to enhance those features and create a harmonious campus experience through the employment of consistent design standards and repeating elements. The Master Plan 2025 provides broad Design Guidelines & Standards in four categories: Buildings; Open Space, Landscape, & Sustainability; Streets, Parking, & Wayfinding; and Utilities.

Buildings can invite and engage communities, house lively activities, define meaningful spaces, and spark inspiration. The Building Standards recognize buildings as a form of engagement between exterior and interior activities. They provide recommendations as to how entrances, orientation, views, materials, and building systems can express the University's identity and intentions.

The character of Appalachian State's campus is defined by the University's outdoor public spaces and natural amenities—mountains, waterways, and trees—that provide areas of respite and community. The Open Space, Landscape, & Sustainability Standards outline how these public places can serve as gathering places, learning tools, and a framework for the local ecosystem.

Pathways through campus are defined by the boundaries, corners, perimeters, thresholds, and borders that create them. The Streets, Parking, & Wayfinding Standards are a tool for improving the efficiency, safety, and navigation of routes in Appalachian State. They aim to define the important moments between traversing and arriving to destinations on campus.

Innovation, conservation, energy efficiency, and the strategic use of technology are central to Appalachian State's sustainability values. These values also inform the Utilities Standards, which aim to create a smart and environmentally friendly campus in artful and educational ways.

**The Design Guidelines & Standards were compiled using Appalachian State's Wayfinding Master Plan, the Facility Design Manual, the Master Plan 2020, the Sustainable Living Guide, the Wellness District Design Standards, the Town of Boone Ordinances, and discussions with the Appalachian State community through Listening Sessions and Committee Meetings. For more information, please consult these individual sources.*

Building Standards

General Building Standards

Establish building forms and street standards that enhance the public realm

Ensure a sense of place and community identity through thoughtful building design

Encourage exceptional design that adheres to adopted campus design standards

Building Orientation, Entrances, and Setback Standards

Orient building edges and transparent entrances to face public “areas” to assure an active public experience. Avoid blank walls and tinted windows facing the public areas. Orientation is a key element of enclosing memorable “outdoor rooms”

Provide shelter from inclement weather at building entrances. Avoid heavy, dark entrance canopies

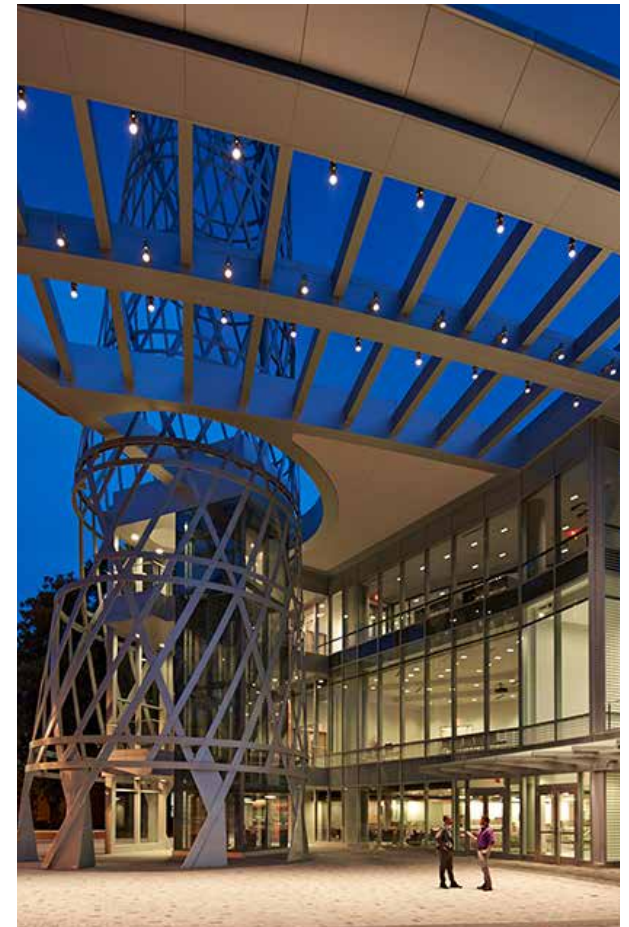
Add needed parking decks on the campus periphery to limit traffic and surface parking interior to campus

Screen service zones and mechanical areas from public view and locate in less publicly visible areas

Where fire access and service access are granted interior to campus, provide a woonerf street design where the pedestrian experience is primary. Restrict unauthorized vehicles from public zones



Belk Library, Appalachian State



Talley Student Union Entrance, NC State

*Building Standards***Architectural Design Standards**

Incorporate purposeful variations or accents in building materials, textures and colors

Soften building mass through changes in building planes such as offsets and recesses. Place special architectural emphasis on building entries, lobbies, etc

Feature perceivable and repeated features, patterns and materials in each building that relate to the overall campus built environment

Create “porous” building programming, such that activity can be seen and perhaps spill out to the public realm

Apply similar building setback, scale and height requirements and architectural design and material standards to parking decks

Reinforce the Appalachian State brand with site furniture selection through uniformity of style, materials, color, etc. Locate site furniture (seating, trash receptacles, signage, lighting, etc.) near building entries, plazas, courtyards, shelters and other outdoor spaces



Campus Life Center Entrance, Emory University



Green Roof Garden, Vancouver Island University

Building Material Standards

Assure contextual design where massing and exterior building materials are similar in size, scale, color and finish to surrounding existing buildings. Allow flexibility for building projects to deviate from the standard where desired

Encourage tasteful campus color branding on building graphics, lighting and signage

Avoid dark tints in glazing that reduces views inside and out and make buildings “unwelcoming”

Encourage use of envelope features that improve building performance through sustainability (shading devices, light shelves, operable windows, and fritted glass)

Clad exposed building roofs in standing-seam metal or tile. Design flat roofs with high albedo reflective membranes, decorative ballast and/or vegetated (green) roofs. Roof areas are ideal for adding solar domestic hot water and photovoltaic arrays

Screen publicly visible mechanical equipment for new buildings whether equipment is located at grade or on the roof. Locate equipment in the building if possible. Avoid placement of equipment in the public right-of-way or visible roof areas

Building Standards

Planning for Future Capacity Needs

Consider including shell space in new buildings to provide for future growth

Carefully plan construction phasing to ensure proper swing-space availability during renovation projects

Develop strategies and policies for reducing vehicular traffic in and around campus. Various policies may include mandated no parking passes for freshmen, programs for ride sharing and carpooling, metered parking, a campus circulator shuttle, parking permit zoning, and enhanced greenway connectivity

Consider buildings that share facilities between colleges and disciplines

Consider an integrated health, wellness and recreation center

Promote an innovative campus that includes the following: (a) high bay lab, (b) research facilities, (c) conference spaces, and (d) hotel and accommodations

Incorporate dining, shared study spaces and retail programs in multi-use campus buildings

Incorporate alternative uses attached to new parking decks such as student housing/hotel, academic programs, retail, and playing fields



Outdoor Classroom, University of Cincinnati



Duke School of Medicine Classrooms & Study Spaces



Mixed-Use Offices & Dining, Palisades West, Texas

*Building Standards***Building Sustainability**

Minimize buildings' environmental impact passively through appropriate siting strategies, solar orientation, and high envelope performance attributes

Facilitate infill development with higher density areas versus building in pristine environments

Use local building materials where possible

Pursue LEED building certification in new construction projects. Consider other types of certification depending on project type

Develop energy use policies and standards for campus buildings



Mixed-Use Parking Deck, Pomona College



Sustainable Housing, Pomona College



Solar Homestead, Appalachian State

Open Space, Landscape, & Sustainability Standards

Open Space Standards

Provide high-quality overall building and open space design

Create universally accessible and highly functional open spaces

Maximize campus and mountain sight-lines

Buffer and screen open spaces from vehicular traffic and service areas

Incorporate active space-defining edges for all open spaces

Plan optimum solar orientation for open spaces and site specific climactic conditions

Specify highly durable, low-maintenance site furnishings

Provide special amenities including, but not limited to, campus art, sculpture, banners, kiosks, and hammock stations

Connect to outdoor spaces including parks, quadrangles, courtyards, terraces, patios, gardens, and gazebos with promenades, walkways, paths, and trails

Use outdoor spaces for teaching and learning opportunities, including open-air and covered outdoor classrooms

Formalize the University's walkway system and assure strong linkages to central campus



Terraced Landscape, Botanical Gardens, Brooklyn, NY



Amphitheater, Palisades West, Texas



Active Open Space Defined by Buildings

*Open Space, Landscape, & Sustainability Standards***Sustainability & Environmental Stewardship Standards**

Promote campus development that minimizes negative impacts on natural resources

Use indigenous plant materials, well adapted to the local climate, with minimal dependence on maintenance and irrigation

Protect and enhance existing shrubs, trees, and natural areas

Implement progressive, innovative storm water management strategies to protect and conserve the ground and rain water resources

Implement rigorous campus-wide water conservation practices

Do not construct in or impact the floodway

Do not unnecessarily pipe natural drainage features, including streams and creeks



Outdoor Sculpture by Dana Gingras



Shoemaker Bioretention Area, UPenn



City Creek, Salt Lake City, Utah

Streets, Parking, & Wayfinding Standards

Walkway & Streetscape Standards

Promote pedestrian oriented urban forms

Maximize connectivity and access through a multimodal circulation network

Minimize vehicle-pedestrian conflicts on pedestrian routes. Avoid terminating pedestrian pathways with vehicular zones

Maintain a consistent width for pedestrian walkways
Ensure that pedestrian width is appropriate based on location and use (for example, parking, bike lanes, etc.)

Provide functional, aesthetically pleasing steps and ramps where needed; shelter steps and ramps where possible

Provide campus accessibility for individuals with disabilities on all streets and walkways

Include sidewalks, bike lanes, and transit stops on both sides of large roads

Post speed limits on all major roads

Include signalized crosswalks and traffic calming measures such as landscaped medians and roundabouts, on roads with heavy pedestrian traffic

Design intersections perpendicular to streets and include appropriate signalization, lighting, and landscape setbacks

Include dedicated bike lanes on all streets where width permits

Include a pedestrian zone, planting strip, and amenity zone for street furnishings on sidewalks

Connect walkways to major circulation paths and offer pedestrians a direct means of travel

Include identifying material such as pavers at on-grade intersections and crosswalks

Provide continuity of paving materials and patterns to maintain visually cohesive pedestrian routes



Artful Pedestrian Crosswalk



Landscaped Ramps, AT&T Performing Arts Center, TX

*Streets, Parking, & Wayfinding Standards***Public Transportation Standards**

Position campus bus stops not more than a short walk apart

Provide adequate lighting and weather-shielding bus shelters at bus stops

Connect bus stops to other modes of travel

Provide park-and-ride facilities near major bus stations, include structured parking as feasible

Minimize impacts of cross traffic on transit lines

Promote bus and bike initiatives to decrease dependency on private vehicles



Transperth Curtin Bus Station, Curtin University



Bicycle Paths, 5th Avenue, Seattle WA

Gateway, Entry, & Sign Standards

Place signage to maximize visibility, perpendicular to the main direction of travel

Minimize visual clutter on signage through consistent graphics, universal symbols, and concise messaging
Scale signage appropriately for surroundings

Signage should be uniform and cohesive in appearance

Signage design should reflect a brand distinctive to Appalachian State University



Gateway, Duke University

Utilities Standards

Utilities & Servicing Standards

Minimize the visual impact of utilities, elevators, and equipment (HVAC, ground/roof level mechanical, dumpsters, waste storage, recycling, loading areas, etc.) from public view. Use appropriate screening such as berms, landscape screening, stone walls, or aluminum railing, as appropriate

Install utilities underground where possible

Do not place utility cabinets in parking lot landscape islands or in public right of way

Avoid placing meter boxes on the front of buildings

Avoid placing mechanical rooms that contain chillers, boilers, steam, air handling units, or other equipment near occupied spaces such as classrooms, labs, and conference rooms

Place water meters and back flow preventers inside buildings

Place loading areas in zones that do not conflict with public right of way

Screen loading areas with landscape, gates, or other elements



PV Array, Appalachian State



Green Roof, CUC Tremough, UK



PV Carport



Water Cistern Installation, Talley Student Union, NC State

Energy & Lighting Standards

Incorporate new technology into campus buildings to support university advancement

Integrate energy efficiency practices throughout the campus

Preserve indoor environmental quality through material choice, ventilation, lighting and temperature controls

Provide short-term bike parking close to building entrances with clear signage and a curb ramp

Use outdoor lighting that emits a low-intensity, high-quality white light and minimizes shadows. Use dark sky compliant LED lights.



At the Ethel M. Botanical Cactus Garden in Nevada, waste water produced by the nearby Ethel M. Chocolate Factory is treated with bacteria, algae, protozoa, snails and fish instead of chemicals.

08 PLAN IMPLEMENTATION & RECOMMENDATIONS

Plan Implementation & Recommendations Overview
Master Plan Implementation
Recommended Assessments



08 PLAN IMPLEMENTATION & RECOMMENDATIONS



Appalachian State University
Photo by Lift Aerial⁵

Plan Implementation & Recommendations Overview

Appalachian State's commitment to responsive infrastructure is demonstrated in its continuous endeavor to improve its facilities and support projects that embody its principles. The Master Plan 2025 is a broad vision of how this goal may be achieved through the renewal, renovation, and expansion of the physical campus. Achieving this vision will require thoughtful assessments of future enrollment, space needs, facility conditions, and existing improvement proposals to create a plan of action. Strategic partnerships and community support will be integral in executing all improvements.

The Plan Implementation section of this document illustrates how the University might prioritize the projects outlined in the Precinct Plans. The Recommended Assessments section provides more detail about the types of studies and projections that should be conducted along the way to ensure that the projects which serve campus best are prioritized. This is especially important when limited funds are available for capital improvements.

To facilitate implementation of the Master Plan 2025, the following sections list proposed projects categorized into 5, 10, and 15-year build-out possibilities, along with several additional key projects that may be included in the final master plan development. The lists provide a tool for determining potential projects for completion in each time increment. These recommendations should be considered in tandem with institutional decision-making processes and prioritization methods at Appalachian State. A catalyst project has been suggested for each Precinct to emphasize the most impactful design elements that may best stimulate other projects. They are as follows:

- Sanford Mall & the Academic Core: *Sanford Mall Master Plan Implementation*
- Rivers Street & the River Walk: *Rivers Street Complete Streets Improvements*
- Peacock Eco-District & Arts Walk: *Boone Creek Daylighting & Transit Hub Pavilion*
- King Street Events & Conference Center: *East Howard Street Improvements*
- Broyhill Innovation District: *Research Building & Labs with Surface Parking (Storm Water Management System)*
- The Recreational Village: *Recreational Heart Reinforced Turf & Tailgate Space*

Plan Implementation: 0-5 Year Projects

POSSIBLE PROJECTS

1 Sanford Mall & the Academic Core

- Sanford Hall Renewal (*use swing space in Duncan Hall, LS Dougherty and DD Dougherty vacated by the College of Health Science relocation*)
- Demolish East Hall
- Implement Sanford Mall Master Plan
- Begin planning for demolition of I.G. Greer and replacement with a new academic building.

2 Rivers Street & the River Walk

- Implement Rivers Street “Complete Streets” program and add crosswalks
- Implement Rivers Street gateway improvements, Durham Park Arcade, and associated signage improvements
- Construct a bike station and repair facility with adjoining plaza

3 Peacock Eco-District & Arts Walk

- Construct “wrapped” parking deck with ground floor retail at Howard Street and covered walkway
- Demolish Peacock Lot and implement bus loop and circulation improvements
- Construct Peacock Hall expansion with adjacent portion of Arts Walk
- Construct transit hub pavilion with Boone Creek daylighting and adjacent portion of Boone Creek

4 King Street Events & Conference Center

- Acquire property situated between Coffey and College Streets to the west and east and King and West Howard Streets to the north and south.
- Implement Brown Street extension and add crosswalks, connect to campus woonerf loop
- Implement College Street improvements by creating a woonerf and removing existing roundabout
- Implement Hardin Street improvements by adding dedicated bike lanes and signage

5 The Broyhill Innovation District

- Demolish Broyhill Inn and existing parking
- Renovate Baseball Field to incorporate a geothermal system

6 The Recreational Village

- Construct Winkler Hall (*underway*)





Plan Implementation: 6-10 Year Projects

POSSIBLE PROJECTS

1 Sanford Mall & the Academic Core

- Demolish and Replace IG Greer (*use swing Space in Duncan Hall, LS Dougherty and DD Dougherty after Sanford Renewal*)
- Demolish LS Dougherty after completion of IG Greer replacement project
- Construct a campus woonerf loop and add crosswalks at Locust and Daugh Blau Street
- Construct ecological garden and campus gateway with new academic building (*see alternative design to the right*)
- Construct new vehicular route at Academy and Center Streets and close University Drive
- Construct Durham Park Promenade and implement Founders Hall improvements

2 Rivers Street & the River Walk

- Complete Garwood Hall science lab expansion
- Complete Roess/Varsity veranda and gym renovation
- Implement Holmes Drive/Faculty Street improvements to provide connectivity to Boone Creek Greenway, College of Health Sciences and State Farm Road

3 Peacock Eco-District & Arts Walk

- Construct Broyhill School of Music expansion and new plaza fronting building

4 King Street Events & Conference Center

- Implement East Howard Street improvements by constructing a woonerf and crosswalks
- Demolish buildings between brown street extension and Coffey Street and construct academic research and events venue

5 The Broyhill Innovation District

- Construct new surface parking with storm water management system and geothermal system
- Construct research building and labs and adjacent plaza
- Construct formal roundabout, plaza, and “landmark”

6 The Recreational Village

- Construct wrapped parking deck with retail and housing with adjacent connector road
- Implement Stadium Drive improvements and construct Stadium Heights Drive woonerf
- Construct ceremonial Stadium approach for pedestrians
- Construct Tailgate Turf Field (*see alternative design to the right*)





Plan Implementation: 11-15 Year Projects

POSSIBLE PROJECTS

1 Sanford Mall & the Academic Core

- All proposed projects complete

2 Rivers Street & the River Walk

- Complete Harper Hall renovation (use new I.G. Greer Academic Building as swing space)
- Construct Water Street roundabout

3 Peacock Eco-District & Arts Walk

- Construct Chapell Wilson façade and entry renovation with adjacent portion of Arts Walk and improvements to Joyce Lawrence Lane woonerf
- Construct East Howard Street roundabout in tandem with adjacent portion of Arts Walk

4 King Street Events & Conference Center

- Construct parking deck and transit hub at existing Legends site
- “Wrap” deck with conference and hotel uses at existing Legends site

5 The Broyhill Innovation District

- Construct wrapped parking deck with academics and half of the Innovation Promenade
- Construct high-bay building and adjacent plaza

6 The Recreational Village

- All proposed projects complete





Plan Implementation: Final Build-out Projects

POSSIBLE PROJECTS

1 Sanford Mall & the Academic Core

- Implement Student Housing "Pit" Improvements to create a new neighborhood center

2 Rivers Street & the River Walk

- Complete Justice Hall renovation

3 Peacock Eco-District & Arts Walk

- Construct Wey Hall renovation and expansion with stair-ramp and adjacent portion of Arts Walk
- Construct Walker Hall renovation and expansion with adjacent portion of Arts Walk
- Construct improved plaza at Duck Pond

4 King Street Events & Conference Center

- Demolish buildings between Hamby Alley and King Street and construct faculty offices and ground-floor retail space
- Demolish buildings between Hamby Alley and West Howard Street and construct faculty offices

5 The Broyhill Innovation District

- Construct academic building and complete Innovation Promenade with the terminating plaza
- Construct research gardens and geothermal system

6 The Recreational Village

- Implement *Athletics Master Plan* Improvements, which include: Mountaineer Plaza improvements; a mixed-use and Athletics Facility; Soefield Practice Field renovation/expansion and Stadium Parking Deck
- Build connector road from Stadium Lot to Poplar Grove Road





Recommended Assessments

Potential Partnerships

Partnerships are critical to accomplishing the goals of the Master Plan 2025, as these goals create synergies in education, research, infrastructure, and economic development. Interdepartmental partnerships that unite disciplines with similar technological and educational needs can promote the exchange of ideas and maximize the use of available space and technology. Academic facilities, when mixed into buildings that also house revenue-generating University services such as student residences and dining halls, can potentially obtain alternative funding sources. Furthermore, shared academic spaces can be run by Student Affairs to ensure they are booked and utilized as efficiently as possible.

Public private partnerships (PPP or P3) are important strategies to explore for future University development. PPPs are mutually beneficial, cooperative arrangements between one or more public and private sectors where the responsibility of construction, operation, or maintenance of a facility is managed by the private sector for an agreed upon time period. Such partnerships can help to spur other economic and real estate development. In the higher education context, PPPs can reduce a project's impact on the university's debt capacity, thereby allowing facilities to be built earlier than they may have if using only university funding and resources. PPPs are popular for housing, hotels, dining, restaurants, retail, offices, conference centers, and other revenue-generating campus projects.

PPPs are popular for housing, hotels, dining, restaurants, retail, offices, conference centers, and other revenue-generating projects on campuses.

Establishing a strong Town and Gown relationship is essential to successful campus development. Alliances between Appalachian State, the Town of Boone, and the North Carolina Department of Transportation are vital in executing proposed upgrades to infrastructure such as Rivers, Hardin, King, and Howard Streets. These partnerships can also stimulate private economic development that enlivens campus, such as the West Howard Street Marketplace, which will include housing, retail, and parking.



Tennis Courts, Appalachian State



Town of Boone, NC



Music Maker Relief Foundation Exhibit, Turchin Center

*Recommended Assessments***Space Needs, Utilization & Standards**

Flexibility and coordination between University divisions is key in ensuring properly equipped, utilized, and designed University spaces. New construction, expansions, and renovations should be designed to respond to occupant-specific needs, but also include flexible spaces that can easily be converted for a multitude of uses. In addition, a broad account of division-specific needs throughout Appalachian State can promote beneficial adjacencies and the efficient use of space. Recommended assessments for the accomplishment of these goals include the following: (1) Space Needs & Utilization Study,; and (2) Space Standards Study.

The Space Needs & Utilization Study would provide direction regarding existing and projected space needs. Based on several factors, including enrollment projections, faculty and staff growth, and department-specific needs, this study could help to identify surpluses and deficits in various University divisions. The Space Standards Study would identify key space standards for facilities such as classrooms, research spaces, labs, offices, study areas, housing, and recreation to ensure they are designed to adhere to program-specific standards and fulfill Appalachian State's mission. Together with funding considerations and feasibility assessments, these studies could identify the priorities for future campus development at Appalachian State.



GoTo Facility, Appalachian State



Football Stadium & Track, Appalachian State



Reich College of Education, Appalachian State



Belk Library, Appalachian State

Recommended Assessments

Capital Improvements: Facility Condition & Quality

In addition to identifying space needs and studying space utilization, Appalachian State is committed to the improvement and maintenance of campus facilities. Due to funding challenges and aging facilities, the University has a significant list of maintenance and repair projects.

The Physical Plant, which runs and maintains the Appalachian State campus, documents and prioritizes building, system, and utilities needs throughout campus. Buildings are assessed and categorized by repair, renovation, renewal, and demolition requirements; these assessments inform Appalachian State's plans for Capital Improvements. To ensure the most impactful improvements to campus, the projects listed in Appalachian State's Capital Improvements plan may be prioritized based on needs, project scope, and available funding.



Varsity Gym, Appalachian State



East Hall, Appalachian State



Katherine Harper Hall, Appalachian State



I.G. Greer Hall, Appalachian State

*Recommended Assessments***Incorporating Existing Plans**

The Master Plan 2025 is an all-encompassing vision of the Appalachian State campus that incorporates existing plans and projects throughout campus. Projects currently under consideration and/or construction include: the Beaver College of Health Sciences, the Miles Annas Student Support building renovation, the Sanford Mall Master Plan, the Athletics Master Plan, the addition to the Hayes School of Music, the Housing Master Plan Update and new Winkler Residence Hall, the Duncan Octagon renovation, and the Holmes Convocation Center Parking Deck. Other documents incorporated into the Master Plan 2025 include: the Appalachian State Facility Design Manual; the Appalachian State Strategic Plan; the Appalachian State Wayfinding Master Plan; the Town of Boone Wellness District Standards; and the Town of Boone Pedestrian and Bicycle Plan.

To ensure the Master Plan 2025 remains a living document that can be further developed in the future, new projects and studies should continue to be accounted for and incorporated into the plan. Projects designed to adhere to the Guiding Principles and standards outlined herein will ensure future developments contribute to the functionality, beauty, and cohesiveness of the Appalachian State campus.



Sanford Mall Master Plan, Appalachian State

09 APPENDIX

Appendix Overview
References
Listening Sessions
Work Sessions
Site Analysis
Design Charrette
Key Terms



09 APPENDIX



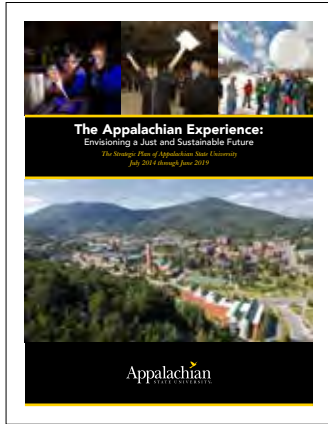
Appendix Overview

The appendix includes relevant data collected, site analysis and proposed solutions for reference. The preceding pages represent the final master plan while this section is meant to tell the story of the evolution of the ideas and convey the process for how the master plan developed.

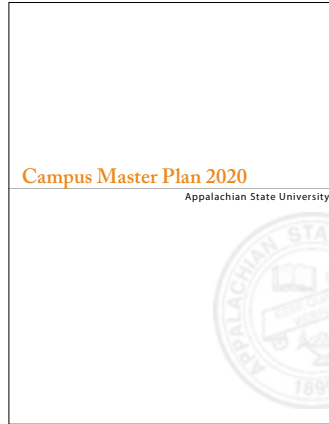


09 APPENDIX: REFERENCES

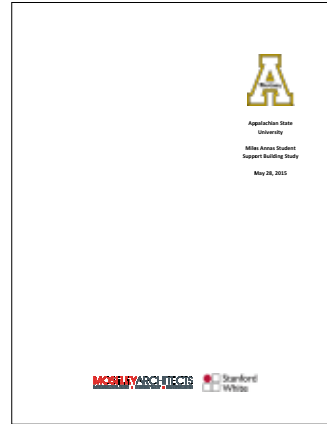
Information Gathered: Reference Studies List



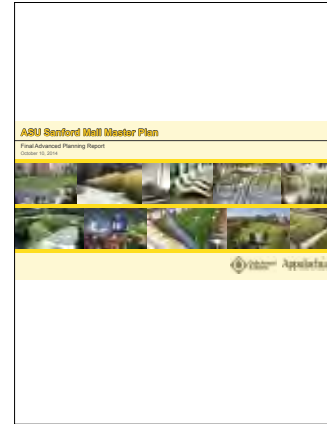
Appalachian State Strategic Plan 2014 - 2015



Appalachian State Campus Master Plan 2020



Miles Annas Student Support Building Study 2015



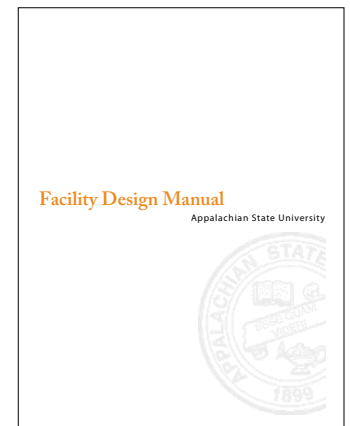
Appalachian State Sanford Mall Master Plan 2014



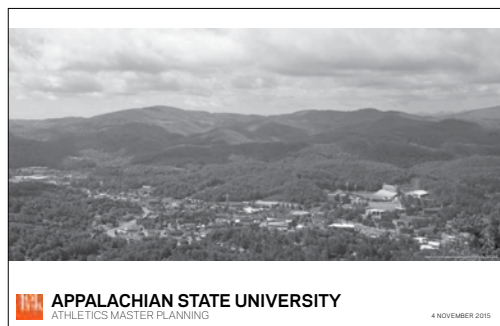
Market & Financial Feasibility Study Kidd Brewer Stadium 2016



Appalachian State Wayfinding Master Plan 2014



Appalachian State Facility Design Manual 2009



Athletics Master Plan 2014



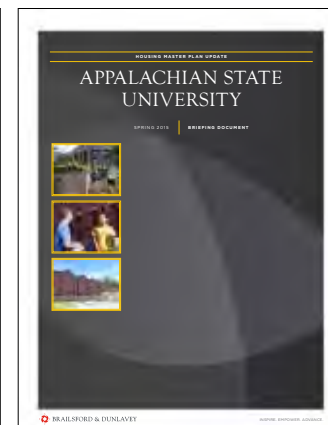
Land Use Study Property at Broyhill 2015



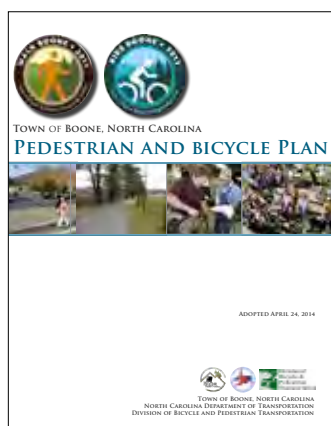
Town of Boone Wellness District Standards 2014



Advance Planning for Addition to Hayes School of Music 2013



Housing Master Plan Update 2015



Town of Boone Pedestrian & Bicycle Plan 2014

09 APPENDIX: LISTENING SESSIONS

In the spring of 2016, Duda Paine Architects, the Office of Institutional Research, Assessment and Planning (IRAP), and the Master Planning Committee, held a series of Listening Session meetings with faculty, administration, staff, students, and the local community to discuss the future growth and development of Appalachian State University. The 'Thought Starters' were a series of questions about university improvement priorities, enrollment and retention strategies, inspiring campuses, transportation needs, and sustainability practices; these questions were used to guide the discussions.



Listening Session Thought Starters

Below is a list of ‘Thought Starters’ asked at each of the Listening Sessions.

Thought Starter I: List high priority goals for improvement that Appalachian State should address in the master planning process. Consider needs such as building updates and renovations, safety, and accessibility in the categories below. What barriers to success exist? Add information as necessary. *Categories to consider include: Academic, Administrative, Athletics, Student Recreation, Dining, Housing, Support Services, Outdoor/Open Spaces, and Technology.*

Thought Starter II: What campus improvements might help with enrolling, recruiting, and retention of students, of faculty, of staff? *Think about what creates an inclusive, innovative, and diverse environment.*

Thought Starter III: Think of memorable university campuses you have visited in the past. What do you think makes those campuses memorable? What physical characteristics create an identity and sense of place on campus? *List any campus and describe the shortcomings and successes you observed.*

Thought Starter IV: What are the top priorities for transportation in and around the campus? Consider the list below and add information and suggestions for improvement as required. *Categories to consider include: pedestrian safety/accessibility; clarity/accessibility of transportation routes; improvements to campus entrances; parking availability and access; intersection improvement; wayfinding and orientation; lighting and beautification; improvements to transit (AppalCart); and cycling routes, bike parking and safety.*

Thought Starter V: Consider what sustainability means. Do the spaces on campus reflect this value? What are the top priorities for furthering sustainability goals? *Consider the following: green spaces, infrastructure, and/or buildings; developing campus-wide sustainability guidelines; reducing energy consumption and lowering the carbon footprint to approach carbon neutrality; on-campus agriculture and locally grown food; greater availability of mass-transit/reducing automobile reliance; rainwater harvesting, filtration and recycling technologies; using interactive information technology to measure, benchmark, and share performance goals (energy use, etc.); and engaging the local community.*

Listening Session Findings: High Priority Goals for Improvement

Expanded Academic Spaces

Many of the Listening Session participants share the belief that several academic spaces should be expanded, particularly for science and design programs, which require large lab, studio and 'maker' spaces. This is also true of larger academic departments that incorporate lectures as part of their pedagogy and struggle due to a limited number of adequately sized lecture halls. Current trends in academic space do not settle for a one-size-fits-all approach to programming and recommend mixing large gathering spaces, smaller group work spaces and individual study spaces alongside classrooms and generating room sharing policies among various academic departments.



Duke School of Medicine

Functional Academic Spaces

The importance of functional academic space was expressed often, particularly for labs, studios and classrooms that require updates relating to technology and teaching. It was suggested that faculty and departments be consulted prior to renovation projects and building new facilities to ensure proper functionality. Special attention should be paid to integrate appropriate technologies, climate control, safety and ventilation to guarantee support and flexibility of functional academic space. Faculty offices and touch down space should be adjacent to teaching space. Conference spaces for visiting scholars and events (local, regional and global) was discussed as a missing function on campus.



Multi-Function Furniture at Steelcase HQ

Flexible /Swing Academic Spaces

As Appalachian State grows, adds new buildings and renovates or demolishes outdated structures, attention should be paid to phasing and relocation of dislocated entities on campus. Swing space should embody the priorities of expanded and functional academic spaces so they work well in the interim as groups and departments may move to new locations.



Plemmons Student Union, Appalachian State

An Accessible Pedestrian & Cycle Friendly Campus

Listening Session participants often mentioned pedestrian routes, bicycle routes and safety as main concerns. Suggestions included the incorporation of traffic calming strategies on dangerous streets, particularly Rivers Street, fixes to walkways in disrepair; more contiguous cycling and pedestrian routes; and clear environmental signage for effective wayfinding throughout campus. The choice of paving materials and location of routes and their relationship to topography were cited as important measures to ensure ADA access to all facilities on campus.



Bicycle Parking, Gateway Village, NC

Mass Transit & Alternative Transportation Options

Many Listening Session participants expressed concern about gaps in service and upholding mass transit and alternative transportation options in the future. This was of particular interest for participants invested in a sustainable campus and connecting individuals who are traveling from distant parking lots and other parts of campus. Shelters and sheltered walkways for individuals opting for park-and-ride or cycling should be explored.



UPenn Campus Shuttle

Vehicle & Parking Policy

During the Listening Sessions, the idea of peripheral parking to campus was often discussed to maintain a pedestrian friendly central campus, though no consensus was reached as to what degree this is a feasible plan for the future. Participants agree that parking access and location is a main concern and the circulation system should be integrated with other forms of transportation. Restricted vehicle access to central campus spaces, such as Sanford Mall, was also discussed as an important policy to enforce.



One Franklin Park Walkway & Parking Deck

Listening Session Findings: High Priority Goals for Improvement

Expanded & Functional Support Services

Expanding support services is strongly encouraged to meet future targets for enrollment and staff recruitment. Entities to improve support services are group and individual study spaces; counseling and wellness spaces; student recreation; faculty office and research space; and non-traditional housing. The opportunity for indoor athletics programs and balanced distribution of dining services was also noted. Concerns about the functionality of these facilities were often related to a lack of space to support auxiliary services, reservations, access and hours of operation, as well as the need for basic repairs, such as HVAC updates.



Duke School of Medicine Group Work Spaces

Flexible & Mixed-Use Support Spaces

In response to questions regarding priorities for improvements on campus, Listening Session participants noted the need for flexible support spaces. Suggestions for accomplishing this include incorporating a mix of uses into support spaces to ensure that they remain multifunctional and convenient, meeting the needs of students, faculty and staff. Examples noted include residence halls which incorporate academic and study space, as well as academic buildings which incorporate retail, such as a copy shop.



NCSU Talley Student Union & Retail

Placement & Visibility of Support Services

The placement of signage relating to support services was noted as an effective way to communicate to the Appalachian State community the location and availability of facilities such as counseling services or student recreation. Entrances to these facilities should be inviting, welcoming and accessible to students, faculty staff and visitors to campus.



Talley Student Union, North Carolina State University

Green Space Improvements

Among the most common concerns relating to open space was the need for improvements to campus green spaces, including basic landscape maintenance, the availability of technology, such as Wi-Fi and the characteristics of these spaces as they relate to showcasing Appalachian State's commitment to sustainability. When asked what building evokes the campus identity, many participants commented that it was not "bricks and mortar" but the beautiful, mountainous setting in which the University resides.



Trent Semans Center for Health Education, Duke University

Sacred Spaces

Participants often noted the need to preserve and renovate existing sacred spaces, such as Sanford Mall, but also mentioned a need to create new sacred spaces, including dedicated monument space for student organizations, such as the National Pan-Hellenic Council. It was also noted that sacred spaces should conserve the existing view sheds to the mountains. In order to accomplish this goal, it will be important to determine whether certain areas should remain free of future development.



Sanford Mall, Appalachian State

A Sense of Place

The need for a visually cohesive campus was mentioned several times throughout the Listening Sessions, not just for the Appalachian State community, but also to indicate the location and values of Appalachian State to visitors and local residents. Many participants encouraged the master plan to create "gateways" to campus to evoke a sense of arrival and consider the edge interface between the Appalachian State and the Town of Boone. Sustaining the campus relationship to the Appalachian Mountains is crucial to create a sense of place and identity for the university.



Talley Student Union, North Carolina State University

Listening Session Findings: Improvements for Enrollment, Recruitment & Retention

Better Classroom Size, Quality & Equipment

The size and quality of classrooms plays a role in attracting and retaining students and faculty. This includes outfitting classrooms with proper equipment and technology, such as lab tools, computers and video conferencing capabilities and maintaining a targeted small class size for focused learning.



Maker Space, West Michigan Aviation Academy

Community Building Spaces

Adding flexible group study and gathering space near classrooms is a way to attract students, promote group work and enhance community. These spaces exist in the Student Union and the Belk Library and are a commodity to students, often sought after with demand higher than supply. Attendees suggest replacing the conference center at Broyhill Inn to host symposiums and seminars that attract members of the global community.



Duke Wellness Center, NC

Responsible Growth

Responsible growth was a prevalent topic in the Student Government Listening Session. A low student-to-faculty ratio and an intimate teaching environment was discussed as an important factor in recruitment and enrollment. “Being seen as an individual, caring about one’s fellow man and maintaining a tight-knit community” are all values described as unique to Appalachian State from a student’s perspective.



Student Volunteers, Appalachian State University

ADA Accessibility

Multiple student tour guides and staff at the Listening Sessions noted concerns regarding disabled visitors, students, faculty and staff on campus. Improving ADA accessibility would foster a safe and inclusive environment for all individuals.



Stairs & ADA Ramps, Duke School of Medicine

Sustainable, Multi-Modal Transportation Options

Listening Session participants suggested devising a multi-modal, pedestrian and cycling friendly campus framework to reduce vehicular traffic, promote sustainability, and create efficient and safe connections throughout the Appalachian State campus. This will benefit current students, faculty and staff, but will also appeal to prospective students and staff at Appalachian State.



Go Triangle Bikes on Buses, NC

Clear Wayfinding & Signage

Listening Session participants suggested the inclusion of a clear environmental signage standard throughout campus to help visitors, new students and staff to make their way around campus. Signage placement should masterfully guide anyone as they drive onto campus, park, and walk to access facilities and navigate to rooms once inside.



School of Performing Arts, University of Central Florida

Listening Session Findings: Improvements for Enrollment, Recruitment & Retention

Access to Support Services

Student participants often cited the importance of making essential student services, such as counseling and student health, available and visible to all students. The current facility has been described as outdated, unpleasant and unsettling for students that may want anonymity while seeking help. A similar sentiment was expressed about the visibility of campus organizations that support economically and ethnically marginalized students.

Additional Support for Staff & Graduate Students

Among the most common recruitment and retention factors indicated by staff and graduate students at the Listening Sessions were the availability of support services such as affordable childcare, housing search assistance and a central location for new employee set-up. Staff and faculty often noted that more faculty office and research space is needed to attract and retain top faculty.

A Multitude of Housing Options

A diverse campus environment requires a variety of housing options for non-traditional students such as foreign exchange students, married students and veterans. Additional traditional student housing was also suggested due to increasing demand by students who wish to live on campus. Many participants also noted that housing assistance is also needed for new staff and faculty members. Establishing a forum to assist new staff and faculty members relocate to Boone may be one way to accomplish this.



Duke Faculty Club, NC



Childcare



Mountaineer Hall, Appalachian State

Vibrant Campus Edges, Gateways, & Entrances

Listening Session participants often noted the need for vibrant edges to enhance the image of Appalachian State and its relationship with the Town of Boone. Clear gateways and entrances are opportunities to orient and welcome prospective students, faculty and other visitors.



Gateway Signage, UNC School of Arts

Visual Appeal

The idea of a visually appealing and stylistically consistent campus came up throughout many of the Listening Session prompts as a way promote the Appalachian State brand and spirit. This includes highlighting historically important buildings, repairing buildings in disrepair and showcasing community spaces, such as Sanford Mall. Design guidelines for new buildings and open spaces will ensure that a cohesive identity is maintained throughout campus.



Emory University Campus

Visibility of Diversity

Student participants often voiced that reserving memorial and monument spaces for minority organizations is a way to make the value of diversity visible and appealing to newcomers to campus.



Fraternity & Sorority Plots

Listening Session Findings: Inspiring Campuses

High Quality Architecture & Academic Spaces

Listening Session participants offered many examples of campuses that include thoughtful and functional building designs. The UNC Wilmington College of Education was noted for its incorporation of a historic train station. Others noted buildings which foster a sense of community, such as the Virginia Tech Graduate Life Center and the Wake Forest School of Business. Rogers Hall at the Queens University of Charlotte and buildings at the University of Michigan and at Loughborough in the UK were cited for their use of green walls and striking designs. Cornell University and the University of Washington were noted for their sensitive placement and zoning of buildings, which is another important consideration in campus planning.

Vibrant Outdoor Spaces

As outdoor space is one of the main assets of Appalachian State's campus, many participants cited examples of universities with vibrant and inspiring outdoor spaces. Paved outdoor spaces mentioned include The Pit at UNC Chapel Hill and the outdoor spaces of NC State. Other universities, such as the University of South Carolina, and Brooklyn College, were noted for their effectively placed walking paths and malls which incorporate retail. Appalachian State was also noted for its natural beauty, which many agreed should be preserved and maintained.

Thoughtful Master Planning & Circulation

Two campuses were noted for their thoughtful master planning strategies. The University of Cincinnati was noted for its plan, in which green space and support buildings are placed at the heart of the campus and encircled with academic and residential buildings on the periphery. James Madison University was noted because its campus is split by an interstate, but has mitigated this condition by ensuring both sides of campus remain developed and by placing wide and well-lit pedestrian tunnels for crossing campus. It was mentioned the tunnels under Rivers Street are an undesirable route across campus.

A Clear Identity & Brand

The importance of a clear campus identity and visible gateways was discussed many times in response to this Thought Starter. Among the campuses noted for their cohesive visual appearance and design details were UNC Chapel Hill, NC State, and Penn State. I.U. Bloomington was also mentioned for its effective gateways and entrances. Campus identity can also be fostered through the incorporation of university-specific icons, such as the Old Well at UNC Chapel Hill. It was suggested several times that perhaps for Appalachian State, green space is its "icon", rather than a building or monument; however, many agreed the Steam Plant Tower is a recognizable icon on campus.



Old Well, UNC Chapel Hill



Durham Park, Appalachian State University



Milstein Hall, Cornell University



Gateway, Indiana University Bloomington



James Madison University Campus



University of Michigan Campus

Listening Session Findings: Transportation Priorities

Strategic Parking & Streets Planning

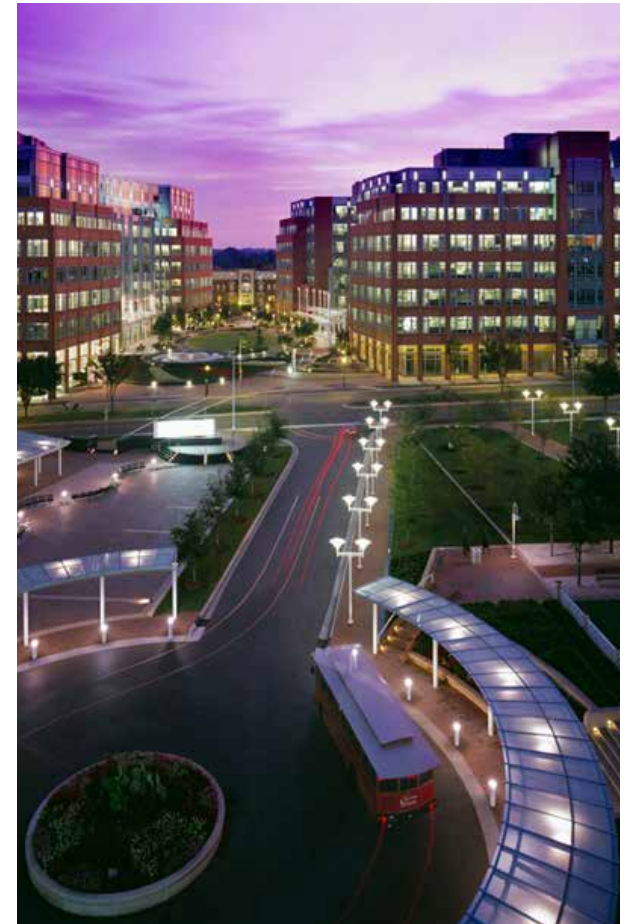
Many Listening Session participants expressed concern with regard to Appalachian State's parking policies, particularly regarding the design and placement of parking. As parking is near capacity, there is a need to reduce vehicular traffic on campus, though there were varying opinions as to which strategies should be employed to mitigate this problem. Suggestions included moving parking to the periphery of campus, creating vertical decks in lieu of surface lots, strategically co-locating parking decks and academic buildings for faculty, providing cheaper parking passes for those who carpool, and restricting freshmen from bringing their vehicles to campus. It was also noted that as the university constructs new buildings, the appropriate traffic studies should be conducted to ensure streets and lots can handle changes to traffic.

Cycling Routes & Alternative Transportation Modes

Many requests for dedicated cycling routes installed throughout campus, along with support such as covered bicycle parking, repair access, lockers, showers, and bike-friendly building design resounded through all the sessions. Alternative modes of transportation mentioned include electric vehicles and golf carts. These suggestions are consistent with Appalachian State's goal of sustainability.

Mass Transit Improvements

The interface between cars, pedestrians and buses is troubled and unsafe. The safety and comfort of bus stops and shelters during inclement weather was a common concern listed during the Listening Sessions. Participants often listed the Peacock Lot turnaround and College Street turnaround at Appalachian State as particular concerns, along with the lack of parking space for buses on Rivers Street. Another common concern was the need for a service that provides transportation to campus, but also around campus. To this end, participants suggested that AppalCart increase the number of stops on routes and bus frequency, but they also suggested that a campus shuttle be instituted to transport students, faculty, staff, and visitors throughout campus. The convenience of a shuttle on campus may reduce traffic on campus by precluding the need for a car, and also ensure greater safety during large events and game days.



Roundabout, Gateway Village Technology Center

Pedestrian Safety & Routes

Participants expressed concern with regard to unsafe or non-existent pedestrian routes through campus. Particularly problematic areas include various points at Rivers Street, including the crossing between JET Hall and Durham Park, and the crossing at Bodenheimer Drive near Walker Hall. The multitude of parking lots on Rivers Street also makes it a dangerous area for pedestrians that are not alert. In addition, more pedestrian routes to access the campus after crossing Rivers Street, as well as a pedestrian route near the Child Development Center are needed. Other recommendations included the need for paint on steps, and lighting and sidewalk repair throughout campus.

Thoughtful Building & Entry Placement

Prescribing the appropriate placement of buildings, along with clear signage throughout campus will aid in reducing both confusion and travel time between buildings. Of notable concern is the distance between Walker and Sanford Hall, which is problematic for students taking Math and English classes back to back as part of their General Education requirements. Buildings on the northern side of Rivers Street turn their backs to the road, and a lack of pedestrian route planning along buildings such as BB Dougherty were also noted as concerns.



Hillsborough Street Crossing, North Carolina State University

Listening Session Findings: Sustainability at Appalachian State

Developing Campus Sustainability Incentives

Listening Session participants discussed several campus-wide incentives that would aid Appalachian State in promoting its values of sustainability. These include: more mass transit options and connectivity, dedicated cycling routes, cheaper parking passes for students and staff who carpool, and instituting ride-share programs.

‘Greener’ Open Spaces

Suggestions to make campus open space ‘greener’ included pedestrian and cycling route connections to the Winkler Creek Greenway, finding alternatives to salt brine for melting snow (as this process increases salinity in storm water to an undesirable level), and incorporating storm water management strategies that can filter and absorb rain water. Several times, daylighting Boone Creek came up as an opportunity to enhance the landscape.

Sustainable Building Design

Many Listening Session participants mentioned buildings on campus that do not use energy efficiently due to faulty HVAC systems, a lack of passive design strategies, or both. Tying chilled water and steam loops together and capturing energy from “rejected” heat can create a more efficient utility system. Instituting a LEED policy for campus buildings could help reduce their carbon footprint.



Talley Student Center Rain Gardens, North Carolina State University

Engaging the Local Community

Participants suggested promoting locally grown food on campus by institutionalizing campus farms and supporting local farmers. The idea of engaging students and faculty in academic projects and research that improve the sustainability performance of the campus was also mentioned.

Installing ‘Green’ Infrastructure

Listening Session participants listed various examples of infrastructure that could be installed throughout campus to reduce energy and water consumption, and promote clean energy. These include: water bottle filling stations in buildings, solar charging stations, wind turbines, dedicated cycling routes, composting bins, and energy harvesting devices to capture solar energy, rainwater, and kinetic energy from recreation center users.

Promoting Awareness

In addition to instituting research programs on energy and sustainability, Listening Session participants want to share and promote current Appalachian State successes to a wider audience. Promoting Appalachian State’s private utility company, New River Light & Power, and its success in increasing energy and water-use efficiency throughout campus could help to raise awareness. Preserving and improving green spaces can make Appalachian State’s commitment to sustainability evident.



Solar Panels, Appalachian State



Solar Charging Station, University of Texas



Duke University Gardens, North Carolina

09 APPENDIX: WORK SESSIONS

Work Session Findings: Campus Services

Campus Services: Meeting Summary

This meeting with Campus Services was arranged to discuss campus issues that might be addressed in the Master Plan 2025. Topics discussed included:

- more efficient servicing strategies for campus vehicles and equipment
- improvement to several major bus stops near the State Farm and Peacock lots
- the need for additional infrastructure to serve expanding housing buildings
- suggestions to fix roads that Landscape Services rely on for servicing green spaces

Attendees also suggested instituting a policy for organizations that wish to acquire memorial plots on campus, as well managing and planning the campus tree canopy and historic sites.



Motor Fleet, North Carolina State University



Physical Plant Tree Planting, Appalachian State



Physical Plant Composting, Appalachian State

Work Session Findings: Business Affairs

Business Affairs: Meeting Summary

In this meeting, Business Affairs discussed funding and other priorities to be addressed in the Master Plan 2025. The discussion covered topics including, but not limited to:

- department specific needs, including additional dining and mixed-use athletics facilities
- funding for projects, including the possibilities and limitations of public-private funding and funding priorities, such as academic space
- campus improvements that would aid with enrollment, such as open space improvements, campus sustainability measures, the need for a conference center, the importance of dedicated cycling routes, financial sustainability measures, pedestrian friendly streets, and additional transit options

To move these projects forward, a combination of funding and data analysis, creative funding solutions, and a strong relationship with the Town of Boone are needed.



Appalachian State Campus

Work Session Findings: Infrastructure & Utilities

Infrastructure & Utilities:

Meeting Summary

The purpose of this Work Session was to meet with Appalachian State Planning, Infrastructure and Transportation Staff, as well as members of the Town of Boone to discuss issues regarding transportation, parking, utilities, and general infrastructure at the Appalachian State campus that might be addressed in the **Master Plan 2025**. The main topics addressed are as follows:

Transportation:

- **Mass Transit:** Participants discussed the current state of AppalCart, including plans to fill gaps or increase frequency on select routes, improvement to bus stops and safety, and connectivity to other modes of transportation.
- **Parking:** Attendees conducted a basic run through of parking lot capacity and current construction projects. The possibility of reducing cars on campus and servicing far-away parking lots with mass transit was also discussed.
- **Vehicular Traffic:** The possibility of constructing Boone Bypass to reduce vehicular traffic on Rtes. 105 and 321 was discussed, but this will not take place in the near future.

- **Pedestrian Routes:** It was acknowledged that more pedestrian routes are needed in and around campus. This can be accomplished by establishing connections to the Greenway and reconfiguring streets that would better serve pedestrians. Safer crossings are also being explored for busy streets such as Rivers Street.
- **Wayfinding:** Better wayfinding and signage is needed throughout campus to direct both visitors and locals.

Water, Sewage & Steam:

- Water infrastructure on campus, including waste water treatment, will need to be upgraded and expanded as the university grows. New storm water management trends are being explored, but there are some outstanding issues that need to be addressed in the Appalachian State storm water network, including the relocation of sensitive infrastructure, such as generators, away from flood prone areas.

Technology:

- There is demand for the Wi-Fi canopy at Appalachian State to expand, but additional fiber networks need to be built in order to do so. Providing Wi-Fi to spaces that Appalachian State rents makes this trickier. An IT Master Plan is being developed to examine needs and capabilities.

Energy:

- **Chilled Water:** There is a desire to tie together buildings that use chilled water to reduce the amount of plants needed to cool the water.
- **Energy Efficiency:** Mechanisms that reuse expelled heat from buildings and installations of solar thermal hot water heaters would be ideal.
- **Reducing the Carbon Footprint:** The new New River Light & Power wholesale purchase power agreement to become effective in 2021 will allow the inclusion of large renewable energy resources on campus and eliminates coal fired generation from our power portfolio.



Hillsborough Street Roundabout, NC State University

Work Session Findings: Interdisciplinary Planning

Interdisciplinary Planning: Meeting Summary

In this meeting, staff and faculty from various departments of Appalachian State discussed both big-picture and department-specific concerns regarding the Master Plan 2025. Participants discussed a variety of topics and possible projects, including:

- an event and innovation space for conferences, special events, and research
- the possibility of constructing an all-purpose, flexible classroom building that can serve a variety of departments
- strategies for preserving green space, such as limiting on-campus parking and daylighting the stream
- pedestrian safety on various streets and bus stops
- the need for clear gateways and nodes to signal arrival on campus
- efficient zoning and placement of academic departments; addressing housing needs
- the need for renovation and efficient use of classroom spaces based on departmental needs

A general comment was also made about the need for clear design standards on the Appalachian State campus.



The Blue Ridge Parkway Corps is a partnership between Appalachian State and the National Park Service. Volunteers along the Parkway trails educate visitors on how they can preserve the environment in the area and encourage its responsible use.

Work Session Findings: Student Services

Student Services: Meeting Summary

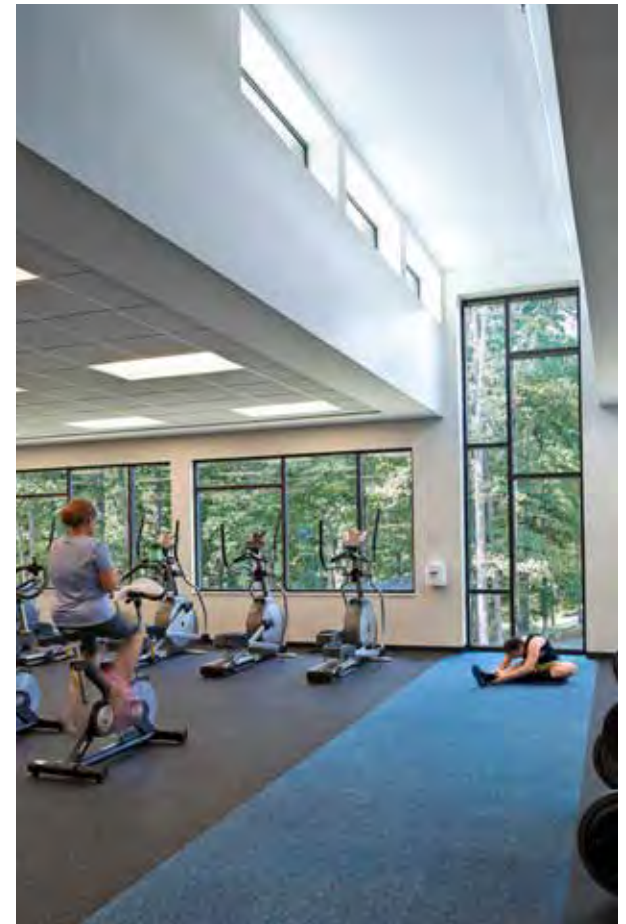
During this meeting, Student Services discussed issues regarding housing, student programs and development, and recreation that might be addressed in the Master Plan 2025. Topics discussed in this meeting include:

- residence halls that are currently being renovated, and others that may be constructed in collaboration with other departments, such as athletics
- the need for an events space to replace Legends and provide conference space
- the idea of integrating wellness with health services to create a holistic recreation facility
- strategies for using outdoor spaces for more months during the academic year
- ideas for preserving and beautifying green spaces and sacred spaces, such as Sanford Mall
- increasing visibility of, and access to the Broadstone property
- the need for cycling routes and pedestrian safety strategies and concerns regarding cars and parking on campus

- the need for safely lit areas at night; strategies for making campus more sustainable, including cycling and green space designations
- the need for academic support space throughout campus and non-academic buildings.



Wellness & Rec Center, GA College & State University



Duke Faculty Club, NC

Work Session Findings: Athletics

Athletics: Meeting Summary

The purpose of this Work Session with the Athletics Department was to discuss goals for the master planning process, as well as Athletics-specific issues affecting the Master Plan 2025. Topics discussed include:

- the need for more indoor and outdoor practice facilities
- the possibility of moving the soccer, hockey, and tennis facilities closer to campus
- the need for additional practice time in the football stadium
- the potential for athletics facilities to aid in recruitment
- the overtaxing of, and lack of space in certain facilities, such as Convocation Center
- the potential for athletics to partner with other departments to construct new facilities
- the potential for new women's sports programs and space needed to implement these programs



Kidd Brewer Stadium, Appalachian State

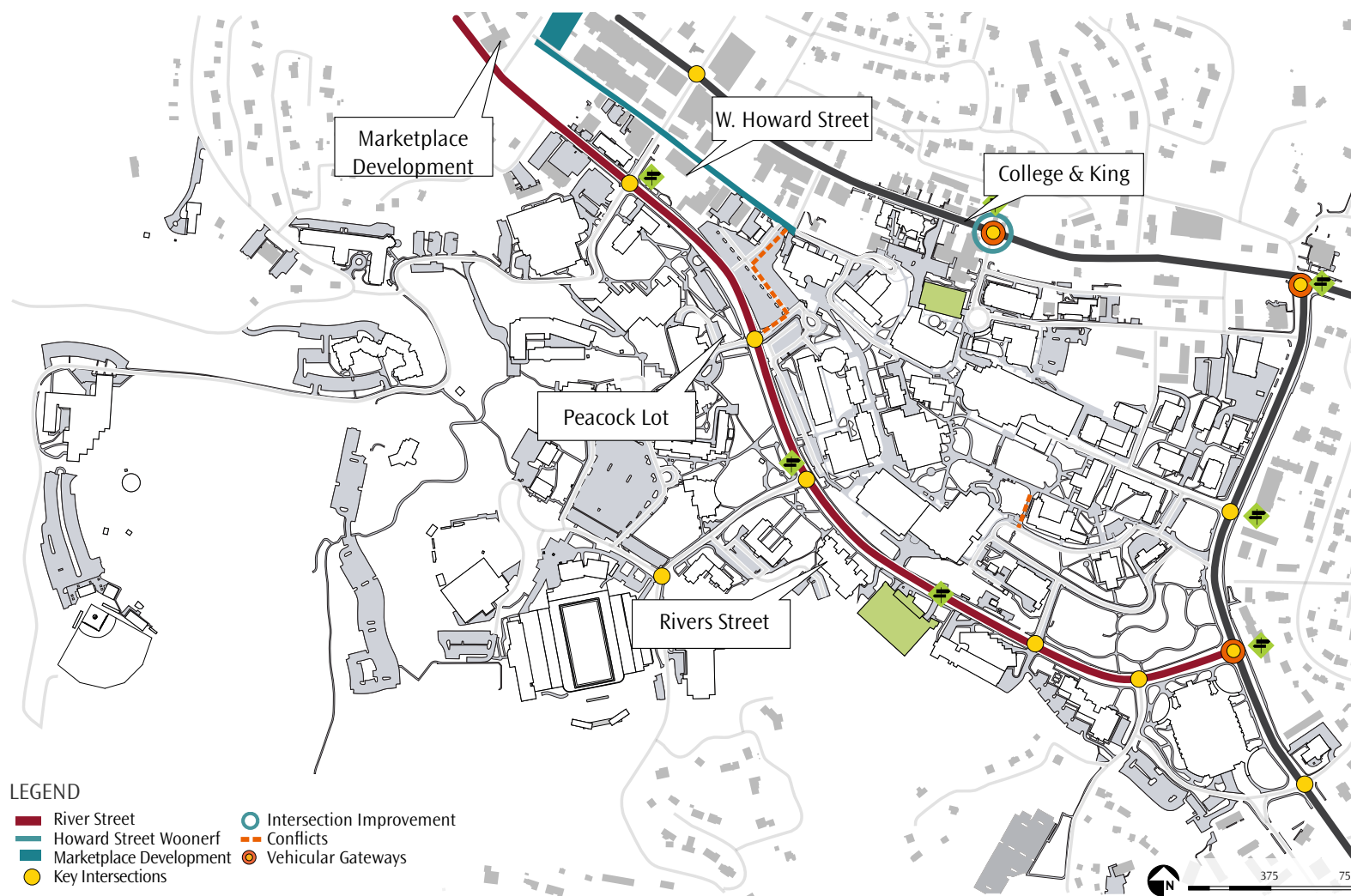
09 APPENDIX: SITE ANALYSIS

Throughout the summer of 2016, Duda Paine Architects and their consultants visited campus a number of times to collect information about the campus and conduct site analysis. In addition to site analysis, the design team held a series of meetings with the Master Planning Committee, which is composed of various faculty and staff at Appalachian State, to discuss more specific aspects of Appalachian State, such as the needs of various divisions, as well as the buildings, open spaces, streets, infrastructure, and utilities that serve them. Together with the design team's mapping analysis, all input received was documented in the following series of maps.



Appalachian State University
*Photographer Unknown*⁶

Transportation: Main Problem Areas



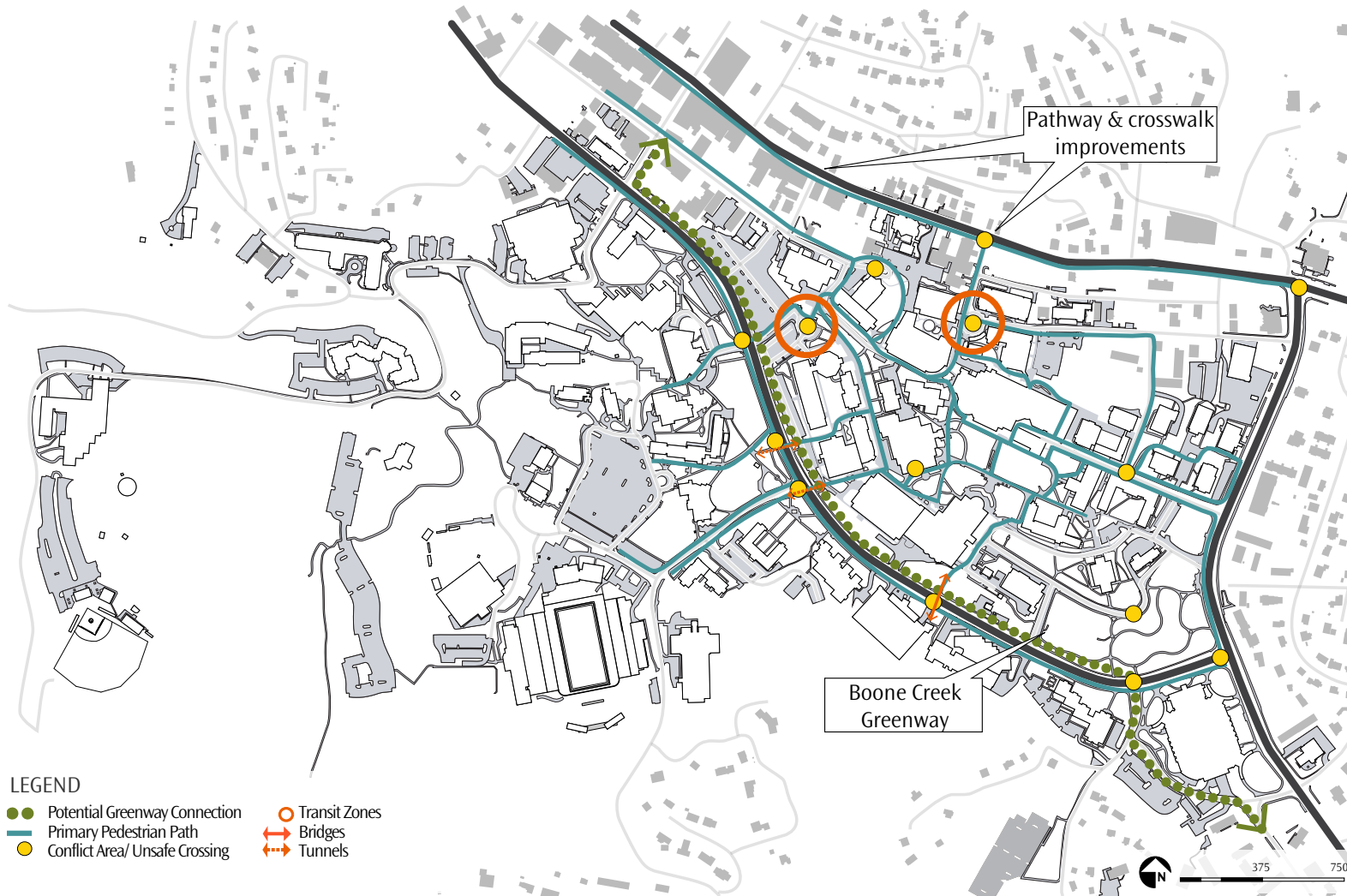
Currently, the main vehicular circulation concerns on campus are:

- Vehicle-pedestrian conflicts on Rivers Street
- Unauthorized vehicular circulation on main campus
- A need for clear wayfinding signage at key intersections and gateways
- Dangerous cut-through traffic in the Peacock Lot

The following are committed transportation improvements:

- West Howard Street woonerf and improvements by the Town of Boone
- A private Marketplace Development on W. Howard Street
- Intersection improvements at College and King Streets by NCDOT

Transportation: Pedestrian Circulation



Currently, the main pedestrian circulation concerns on campus are:

- Vehicle-pedestrian conflict zones that require crosswalks, signage, and traffic-calming strategies

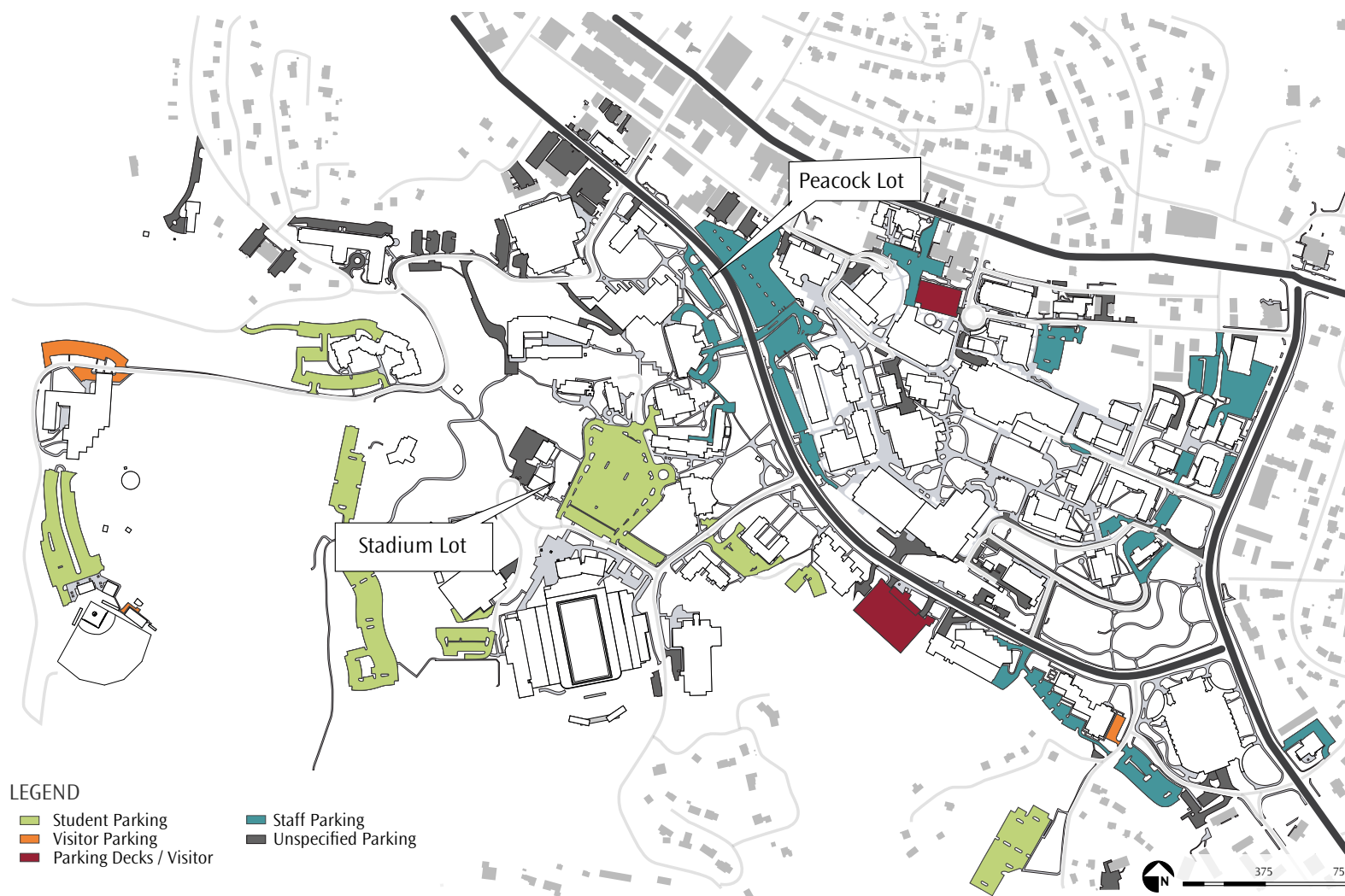
- Discontinuity between the Greenway, downtown Boone, and the College of Health Sciences, which should be linked through main campus
- Topography that presents challenges for navigating throughout campus for individuals in who are handicapped

Transportation: Current Parking Conditions

Current Enrollment
18,000
Current Ratio
.34

2020 Enrollment
20,000
Recommended Ratio
.4

Future Spaces Needed
1,800
*The total parking count would be 8,000 to meet ideal ratio in 2020

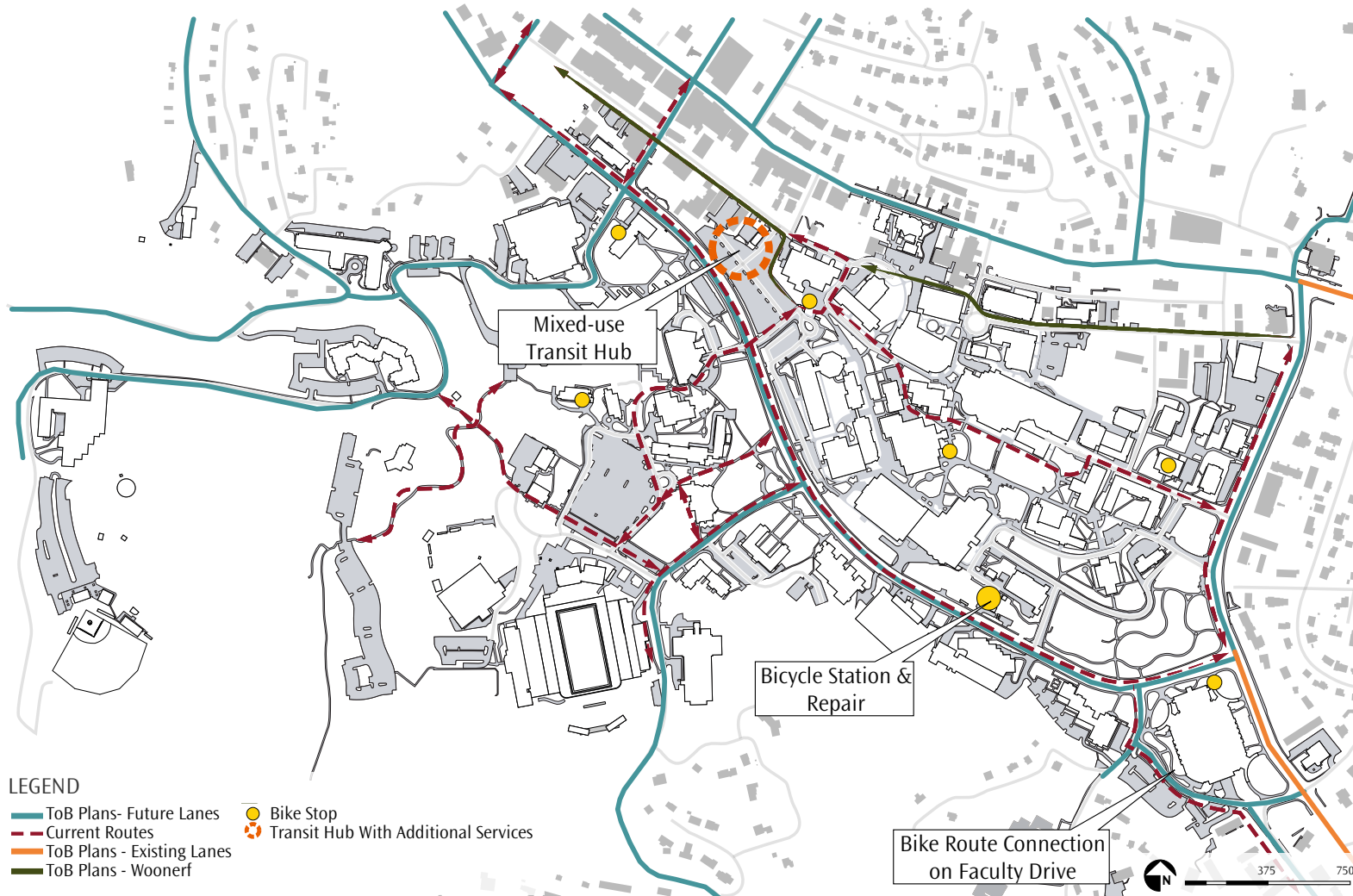


The majority of parking on campus is low-density surface lots. Small surface lots scattered through main campus break the continuity of pedestrian routes. Though there are many surface parking lots, campus does not have adequate parking capacity, as it does not meet the recommended **parking ratio** of .4 parking spaces per person on campus.

Parking improvements that might mitigate some of these issues include:

- The construction of **mixed-use** parking decks, which will provide greater parking capacity, free up build-able area, and provide facilities on campus
- The inclusion of pedestrian walkways, trees, and stormwater management systems in existing surface lots

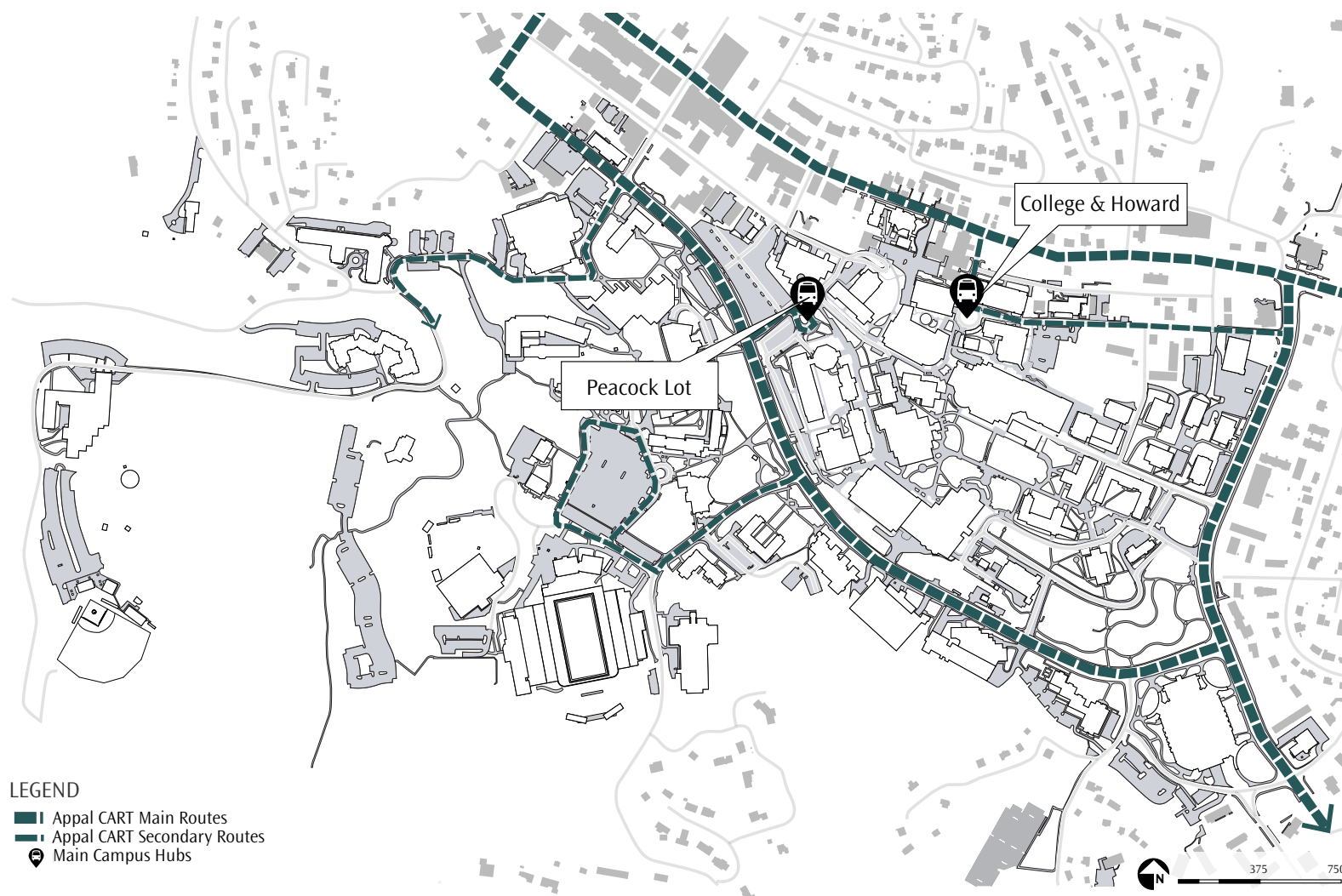
Transportation: Cycling Route Improvements



The bike route and infrastructure improvements that are needed include:

- The addition of dedicated bike and skateboard lanes on all major streets and through key areas on campus to provide access between the exterior and interior areas of campus
- More bicycle infrastructure, such as parking and pump stations, throughout campus
- A Bicycle Station for repairs, maintenance, & other needs near the Bell Tower on Rivers Street

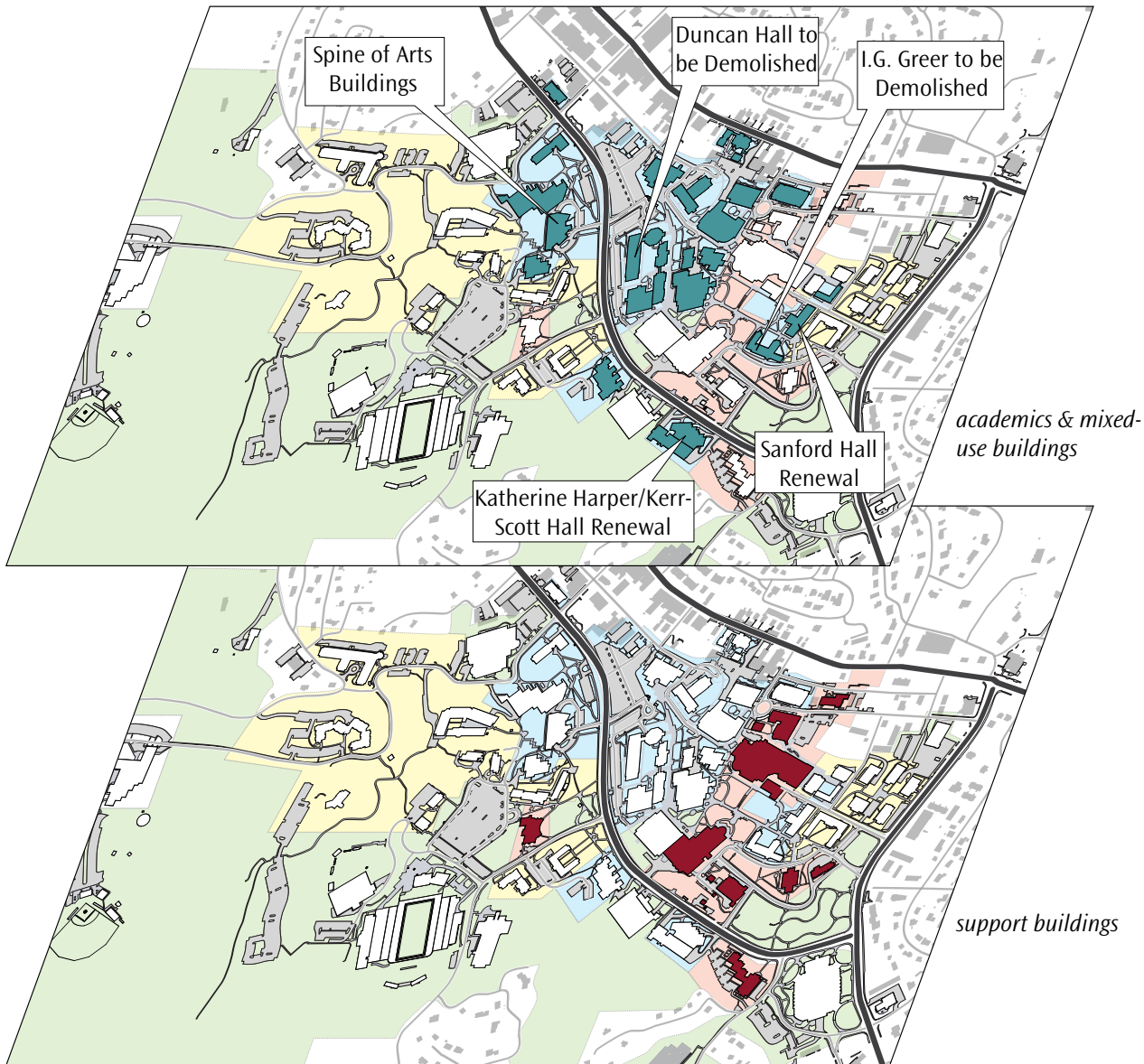
Transportation: Current AppalCart Routes



Currently, the main mass transit circulation concerns on campus are:

- Bus, vehicle and pedestrian conflict at Peacock circle and College Street transit hubs
- Transit hub locations that do not provide easy and efficient access to service throughout campus
- A need for more capacity and service on Pop 105
- Bus shelters that do not provide adequate protection from inclement weather
- A need to expand the convenience of transit to reduce car dependency

Campus Built Environment & Program Distribution



Academic & Mixed-Use Buildings

The current conditions of academic and mixed-use buildings on campus are as follows:

- Most of the academic buildings are located in the center and western portion of campus
- A spine of arts buildings cross campus, spanning from King Street and across Rivers Street to West Campus
- I.G. Greer and Duncan Hall are slated for demolition and both Sanford Hall and Katherine Harper Hall/ Kerr Scott Hall need a complete renewal
- Additional high-bay space, research and lab facilities are needed on campus
- There are few mixed-use buildings on campus

Support Buildings

The current conditions of support buildings on campus are as follows:

- Academic support buildings are concentrated in the southwest corner of Main Campus on either side of Rivers Street
- Additional study areas are needed on campus, as Belk Library and Plemmons Student Union are often at capacity
- Additional faculty offices are needed on campus
- Trivette Hall and Roess Hall are the main dining support buildings
- West Campus requires additional dining facilities

Campus Built Environment & Program Distribution



Housing Buildings

The current conditions of housing on campus are as follows:

- Housing bookends the east and west sides of campus
- A new Winkler Hall is being constructed and East Hall will be demolished
- Many housing facilities that border Kidd Brewer Stadium on West Campus require a significant number of repairs or complete renewal
- There are plans to increase the total bed count to 6,047 by adding 362 new beds in the coming years

Athletics & Recreation Facilities

The current conditions of athletics and recreation facilities on campus are as follows:

- Separate facilities are needed for Athletics and Student Recreation, as there are scheduling conflicts in shared facilities, such as the Varsity Gym and Holmes Convocation Center
- Additional recreation facilities are needed, as many are often at capacity
- Several athletics facilities and fields also need renovation to meet required standards and provide extra space for practice. These include Soefield Practice Facility, Owens Fieldhouse, the football field, track, softball field, and soccer field
- Upgrades and signage are needed at existing trails and outdoor recreation facilities
- The Stadium Lot requires renewal

Utilities: Chilled Water and Steam Conditions

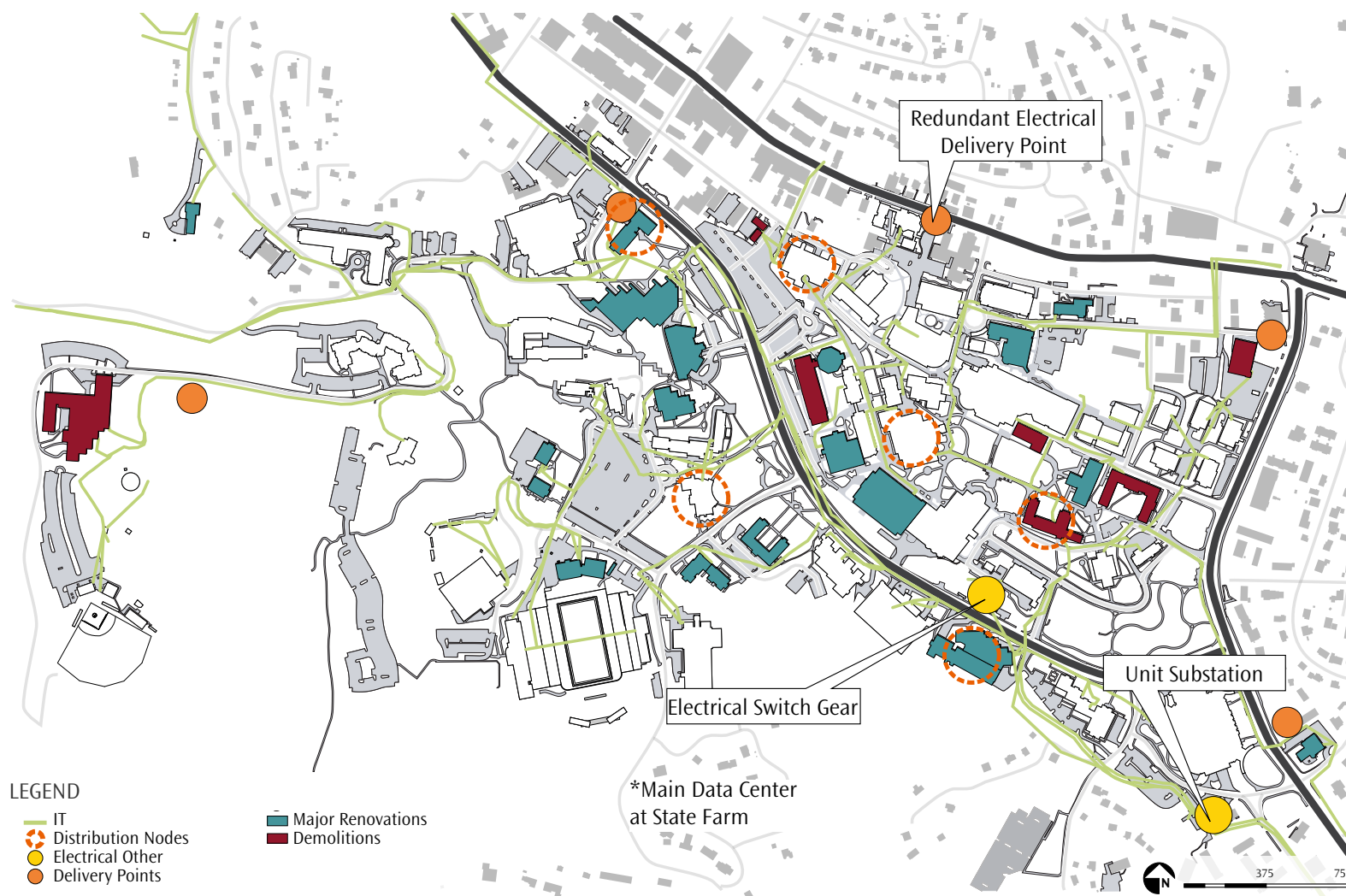


Steam loops supply heat and hot water throughout campus. Over the last 10 years, over \$20 million has been invested in steam infrastructure improvement. Chiller plants are used to cool water air throughout buildings. Currently, there are four chiller plants that service multiple buildings.

The steam and chiller plant improvements that are needed include:

- Steam infrastructure upgrades along Locust Street, East Hall, and the Stadium Lot
- The addition and expansion of chiller plants to make them more efficient
- An increase in renewable energy on campus where possible

Utilities: IT and Electrical Utilities Conditions



The primary electrical distribution system on campus is operated by New River Light and Power. There is capacity for IT and electrical utility growth throughout campus.

The electrical and IT improvements that are needed include:

- Incorporate photovoltaics in the electrical system
- Upgrade the IT network and expand Wi-Fi coverage throughout campus

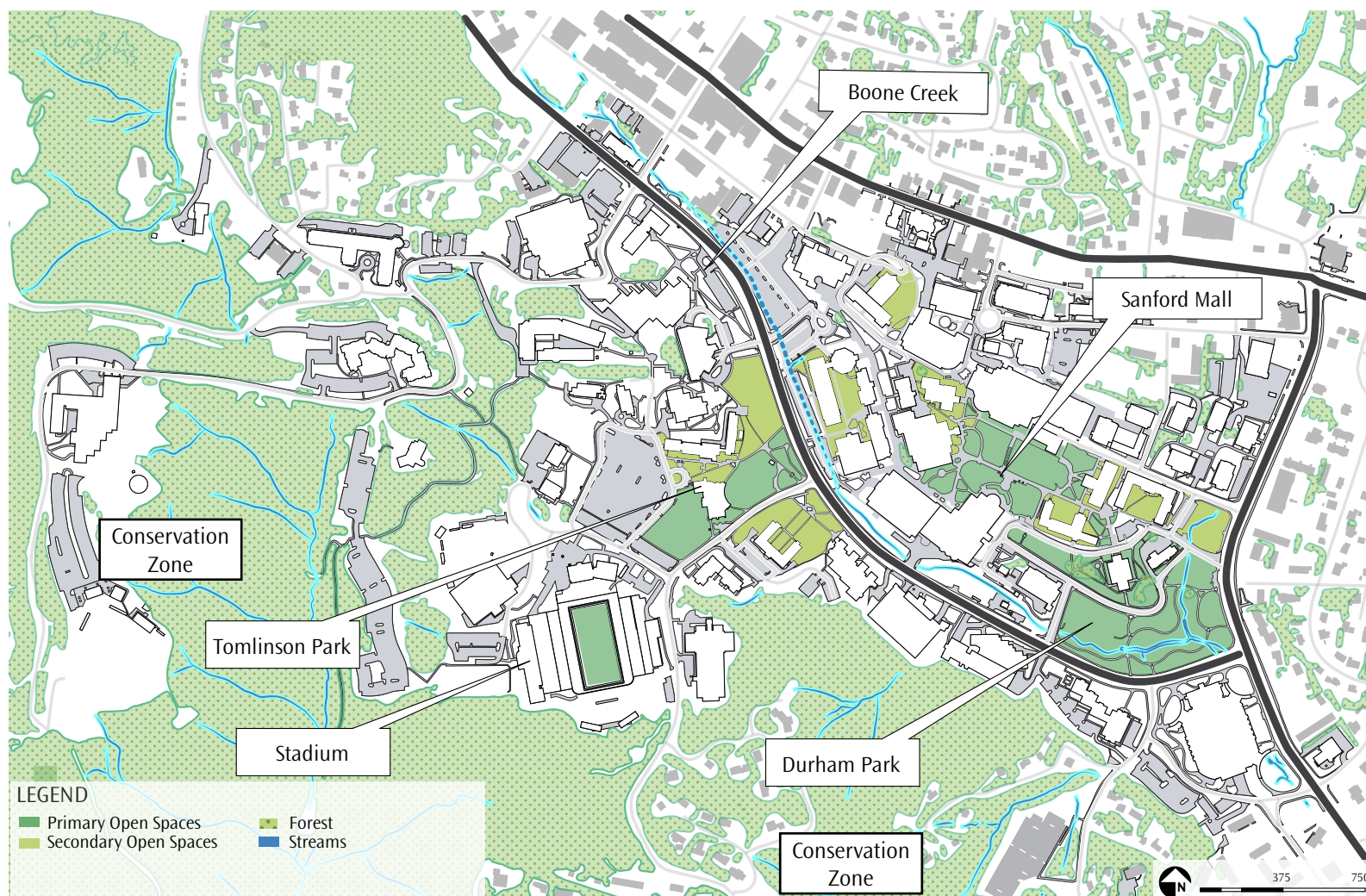
Sustainability: Current Conditions and Campus Initiatives



This map illustrates current sustainable features on campus, including wind turbines, photovoltaic arrays, solar-thermal systems, and LEED certified buildings on campus. It also shows possible sites for sustainable features to be installed in the future.

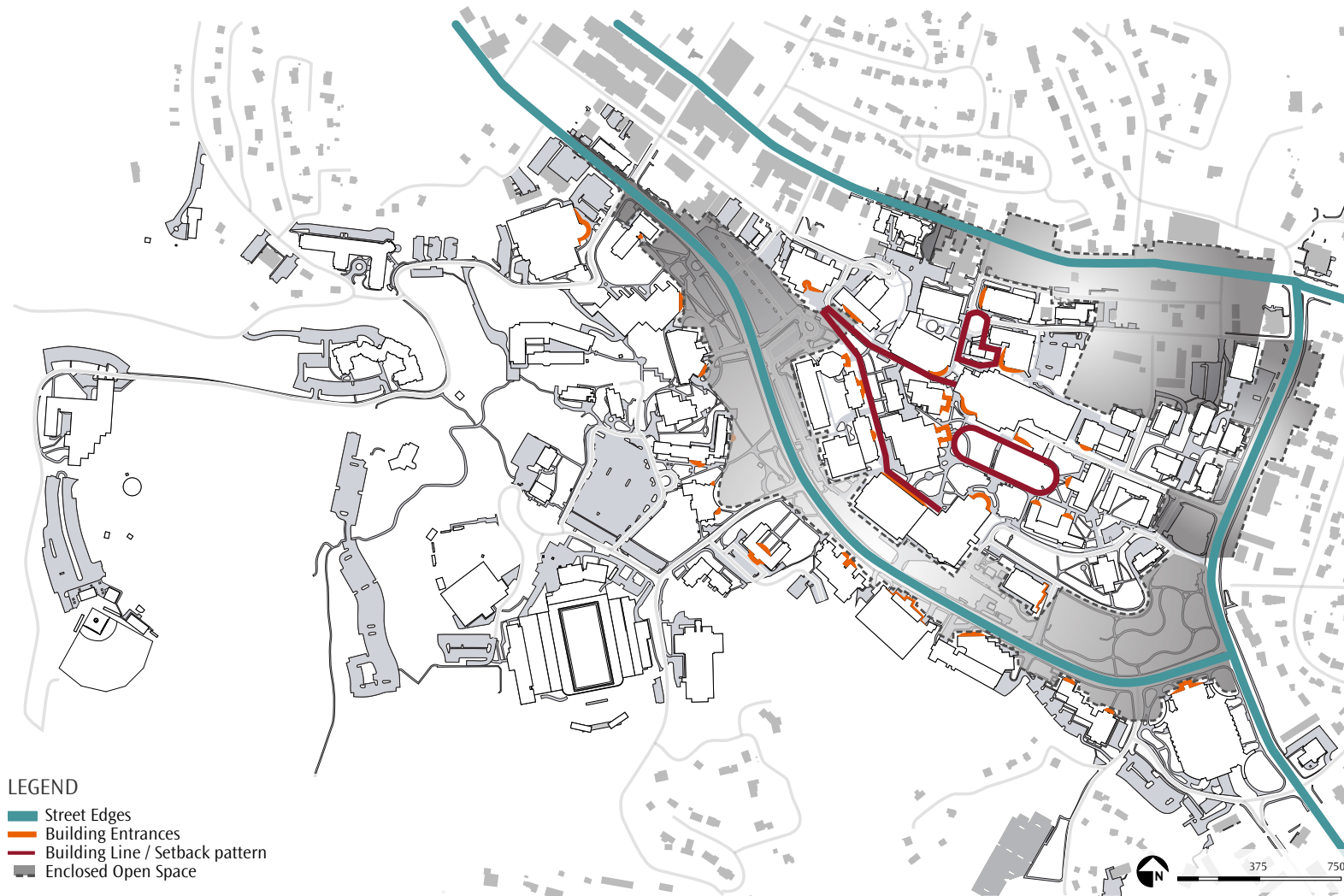
There are a number of photovoltaic arrays on campus. Once complete, the new College of Health Sciences will also feature a large photovoltaic system (65 kWh). In addition, several sites on campus have the potential to include innovative renewable energy, such as geothermal wells, which use the earth's energy to heat and cool buildings.

Open Space: Hierarchy & Improvement Opportunities



The primary spaces on campus are the largest, most active, and most used open spaces. Secondary visible spaces include the lawns by Chapell Wilson and Duncan Hall, and the courtyard of East Hall. Several secondary spaces require renovations and programming to encourage more use.

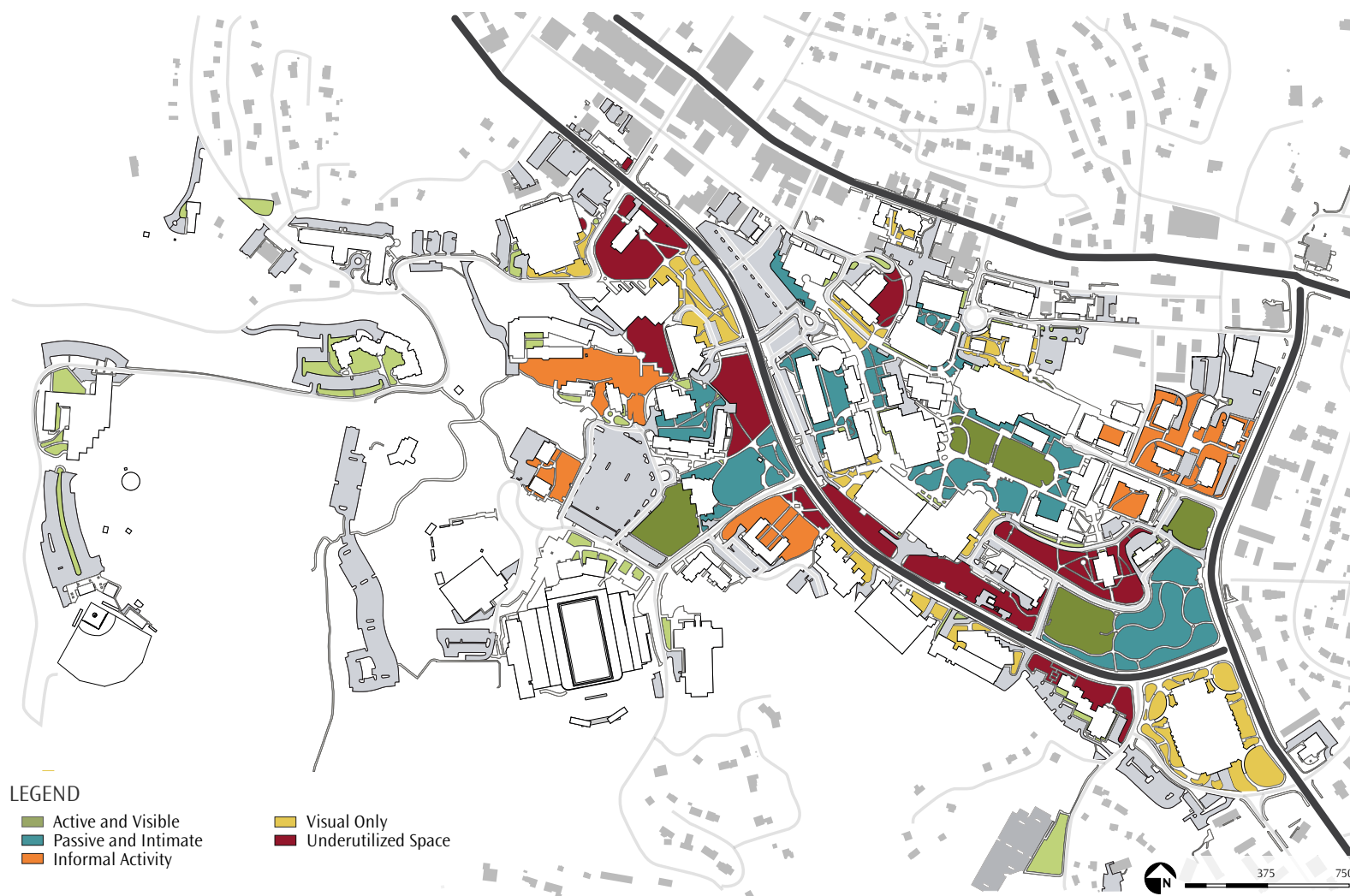
- Areas with tree cover coincide with steep terrain and should be preserved and integrated with outdoor classrooms, formalized trails, and signage
- The restoration of Boone Creek should be extended
- Preservation areas where buildings are not permitted should be denoted

Edges & Pathways: Current Conditions

The campus buildings framing the external streets of campus create large, open corridors. Building entries in the heart of campus largely face the internal edges of open spaces and circulation paths. The location of building entries plays a large role in orienting pedestrians and launching them into campus.

This is apparent at Rivers Street, where pedestrians prefer to walk on the south side of the road. Building entrances on the northern portion of Rivers Street should be reoriented toward the road to activate the sidewalk flanking campus and create a sense of place.

Open Space: Programming and Improvement Opportunities



The current programming conditions of open space on campus are as follows:

- **ACTIVE & INFORMAL** | A space like Sanford Mall does not exist on West Campus and is needed.

- **PASSIVE & VISUAL** | Some passive space should be programmed to become more active and some visual space requires improvements
- **UNDERUTILIZED SPACE** | Many underutilized spaces are along Rivers Street. They require aesthetic and physical enhancements to support new activities.

09 APPENDIX: DESIGN CHARRETTE



Design Charrette Overview

In a two-day event during October 2016, the Master Planning Committee, the Office of Institutional Research, Assessment and Planning (IRAP), Duda | Paine Architects, and their consultants held a public Design Charrette to discuss and envision future plans for the Appalachian State campus. Attendees included Appalachian State students, faculty, and staff; local government, transportation, and planning professionals; and members of the surrounding community.

Duda | Paine Architects and their consultants (the Design Team) presented several design options for the development of six areas on campus. Following the presentation, the Design Team led discussion at six different work stations, one for each area presented. Participants were encouraged to visit the work stations corresponding to each area to provide comments, discuss options, and generate alternative solutions. This process culminated in a series of sketches that synthesized the comments received into revisions for each design option.

The following provides a record of the designs presented and sketches generated during this portion of the master planning process. Input received during the Design Charrette, along with information collected from all other phases of the planning process, has been used to inform the vision of the Master Plan 2025.

Sanford Mall & the Academic Core Design Charrette Options

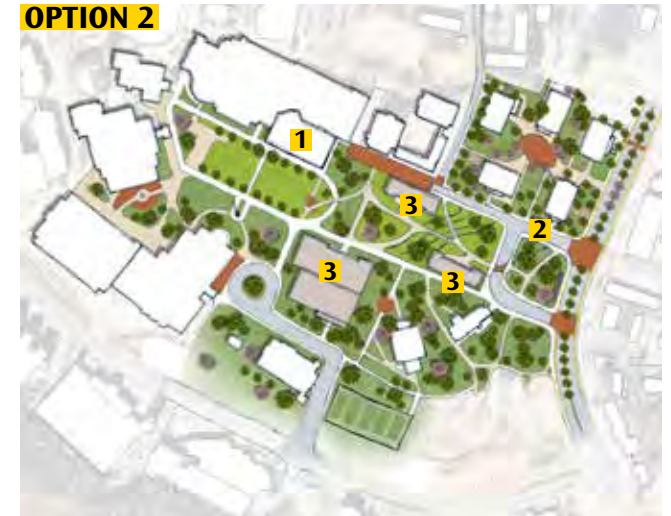
OPTION 1



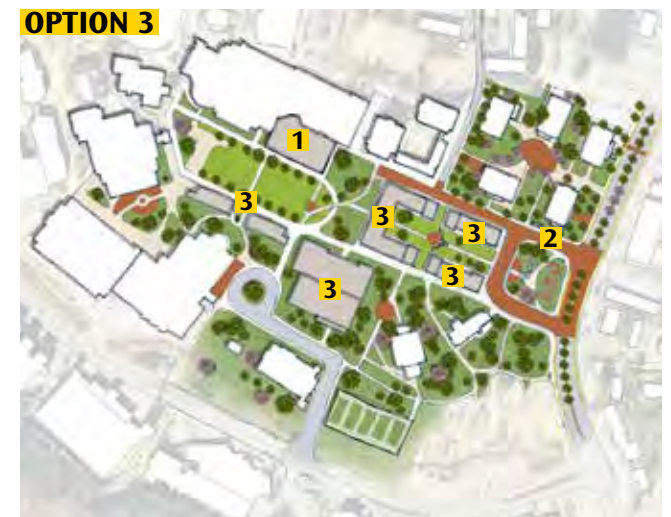
OPTION 1

- 1** Sanford Mall Master Plan
- 2** Center & Academy Street Loop Road
- 3** New Academic Buildings (2)
- 4** Ecological Garden
- 5** New Loop Road
- 6** Hardin Street Improvements
- 7** Donor Memorial

OPTION 2



OPTION 3



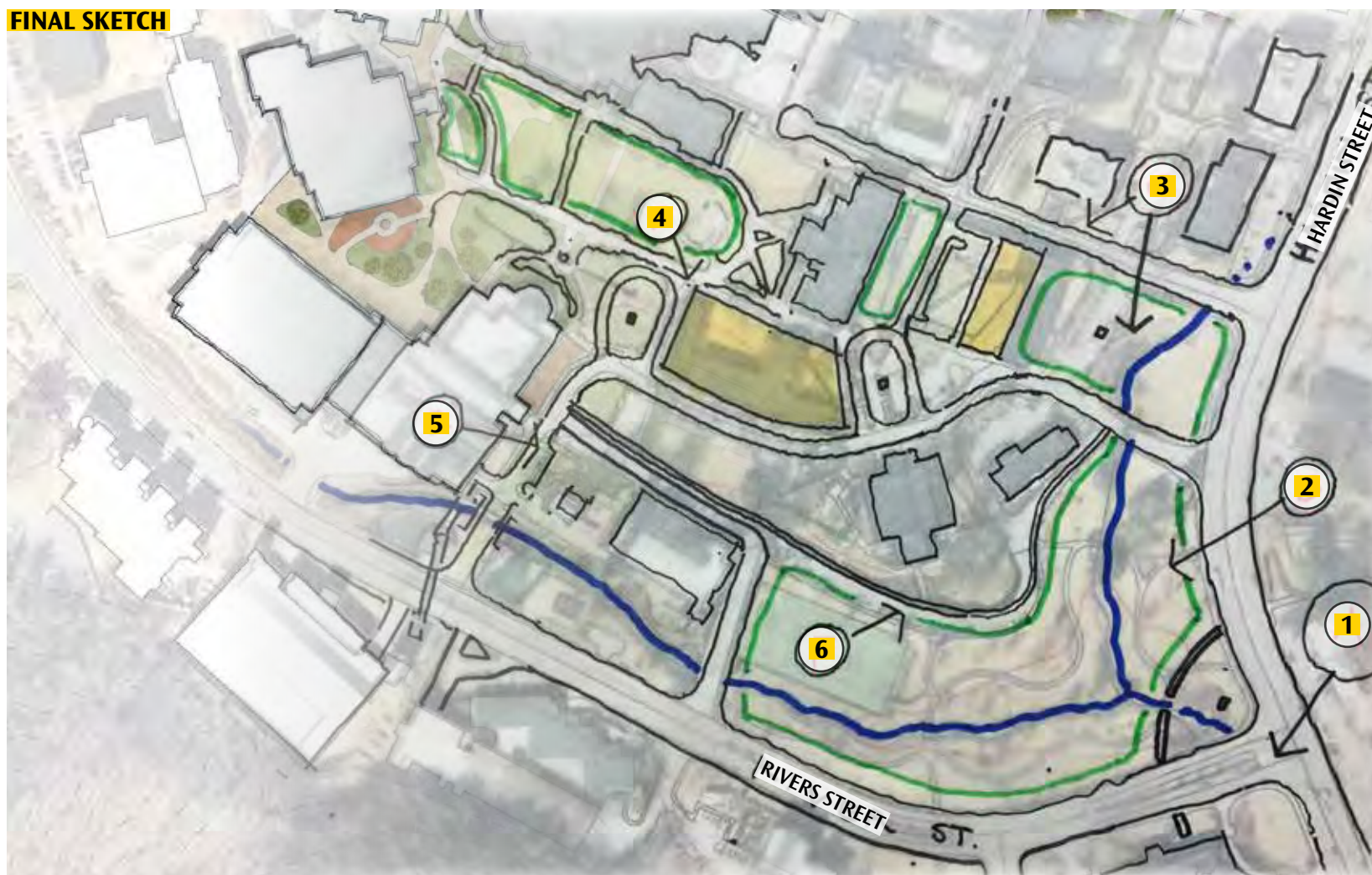
OPTION 2 MAIN CHANGES

- 1** PSU Outdoor Veranda
- 2** New Loop Road
- 3** New Academic Buildings

OPTION 3 MAIN CHANGES

- 1** PSU Addition
- 2** New Loop Road (woonerf)
- 3** New Academic Buildings

Sanford Mall & the Academic Core Design Charrette Final Sketch



FINAL SKETCH

- 1** Primary Campus Entrance
- 2** Durham Park Enhancements
- 3** Ceremonial Campus Entrance

- 4** I.G. Greer Renewal
- 5** New Connection to Rivers Street
- 6** University Drive Becomes Pedestrian Promenade

Rivers Street & the River Walk Design Charrette Options

OPTION 1



OPTION 1

- 1** Broyhill Music Center Expansion
- 2** Duncan Octagon Renewal
- 3** Outdoor Pavilion
- 4** Roess/Varsity Veranda
- 5** Transit Hub
- 6** Boone Creek Daylighting & Bus Loop
- 7** Complete Streets Improvements
- 8** New Parking Decks
- 9** Greenway Connection

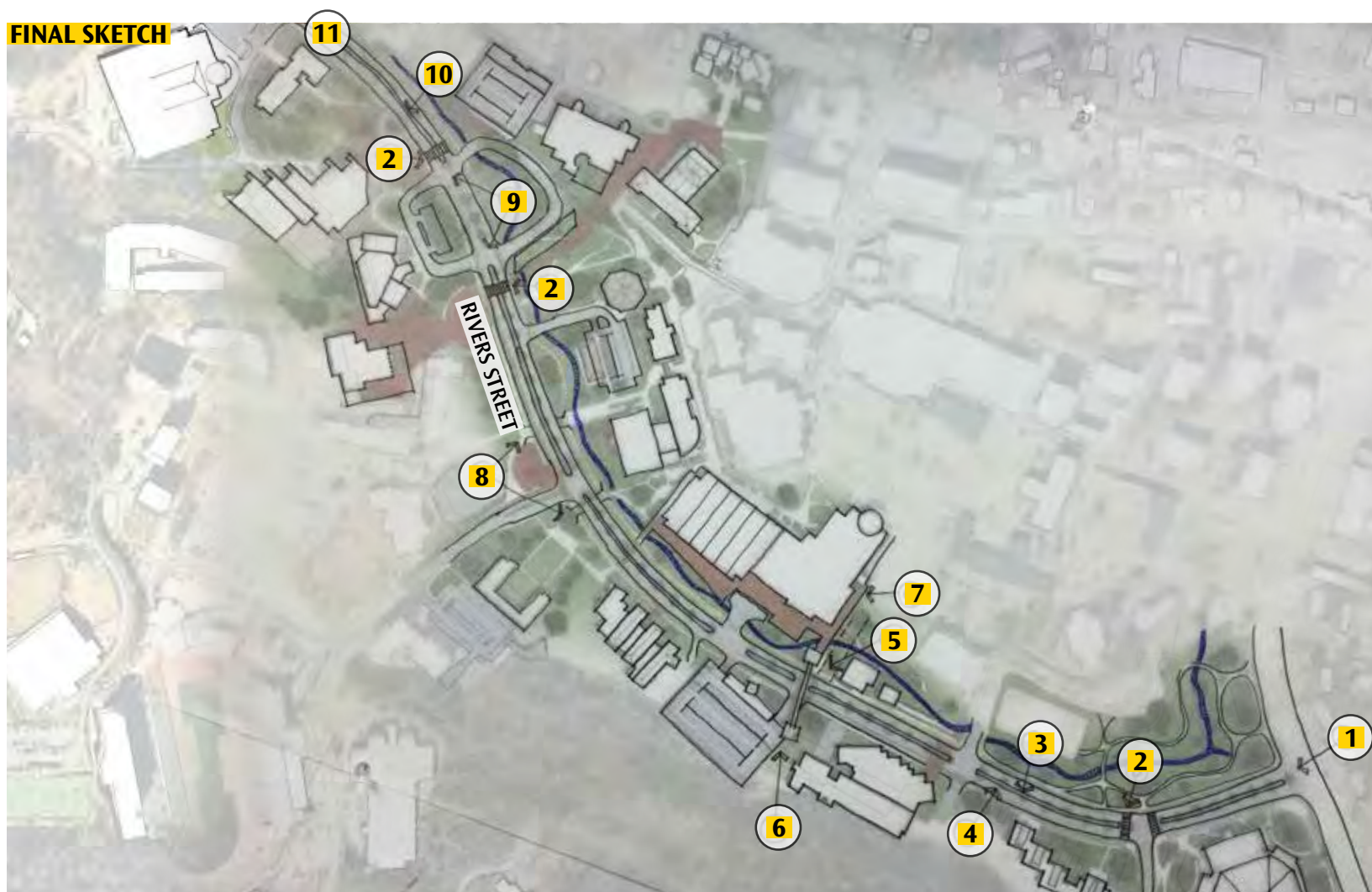
OPTION 2



OPTION 2

- 1** Academic Building Expansion (3)
- 2** Academic Building Renewal (2)
- 3** Housing Renewal
- 4** Roess/Varsity Veranda
- 5** Transit Hub Pavilion
- 6** Boone Creek Daylighting & Bus Loop
- 7** Complete Streets Improvements
- 8** New Parking Decks
- 9** Greenway Connection

River Street & the River Walk Design Charrette Final Sketch



FINAL SKETCH

- 1** Enhanced Intersection
- 2** New Crosswalk
- 3** New Median

- 4** Four Traffic Lanes & Two Bike Lanes
- 5** New Signalized Intersection
- 6** Exterior Access to Skywalk

- 7** Widen Sidewalk at Dining Hall
- 8** Maintain Pedestrian Tunnels
- 9** New Signalized Intersection at Transit Hub

- 10** Remove Crosswalk Signal
- 11** Western Gateway

Peacock Lot & the Arts Walk Design Charrette Options

OPTION 1



OPTION 1

- 1** Broyhill Music Center Expansion
- 2** Duncan Octagon Renewal
- 3** Outdoor Pavilion

- 4** Wrapped Parking Deck & Transit Hub
- 5** Boone Creek Daylighting & Bus Loop
- 6** Transit Hub
- 7** Improved Plazas (2)
- 8** Arts Walk

OPTION 2

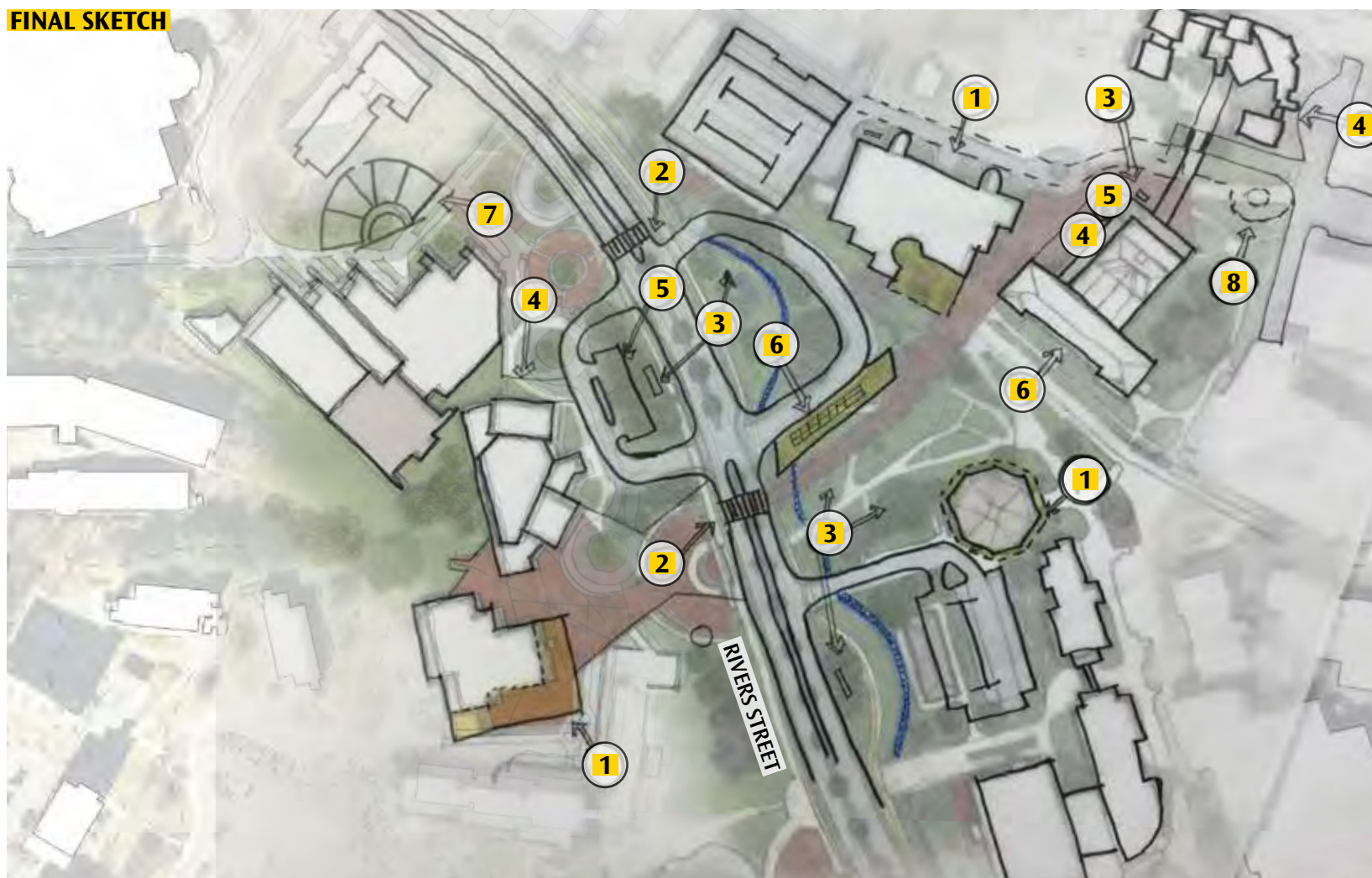


OPTION 1

- 1** Broyhill Music Center Expansion
- 2** Duncan Octagon Renewal
- 3** Surface Parking with Storm Water Management System

- 4** Wrapped Parking Deck with Retail
- 5** Boone Creek Daylighting & Bus Loop
- 6** Transit Hub Pavilion
- 7** Improved Plazas (2)
- 8** Arts Walk & W. Howard Street Roundabout

Peacock Lot & the Arts Walk Design Charrette Final Sketch



FINAL SKETCH

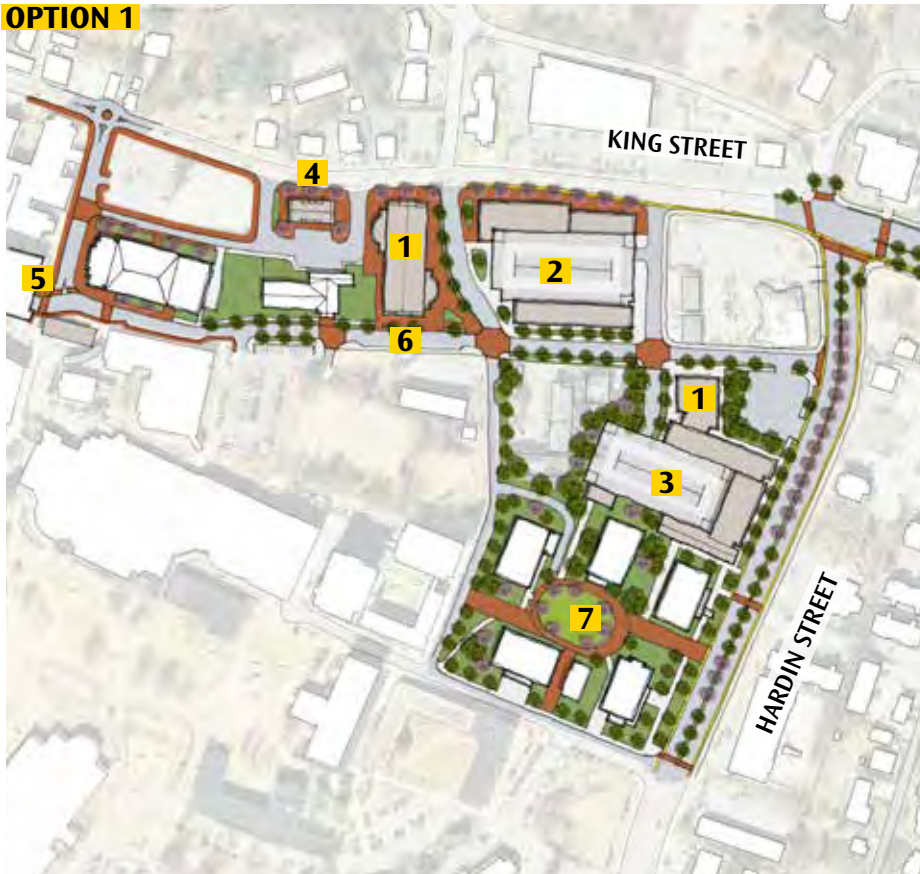
- 1** Peacock Hall Expansion
- 2** Pedestrian Crosswalks (2)

- 3** Art & Wayfinding Signage
- 4** Loading Zones
- 5** ADA Accessible Parking
- 6** New Transit Hub Pavilion

- 7** Amphitheater
- 8** W. Howard Street Roundabout

King Street & the Legends Conference Center Design Charrette Options

OPTION 1



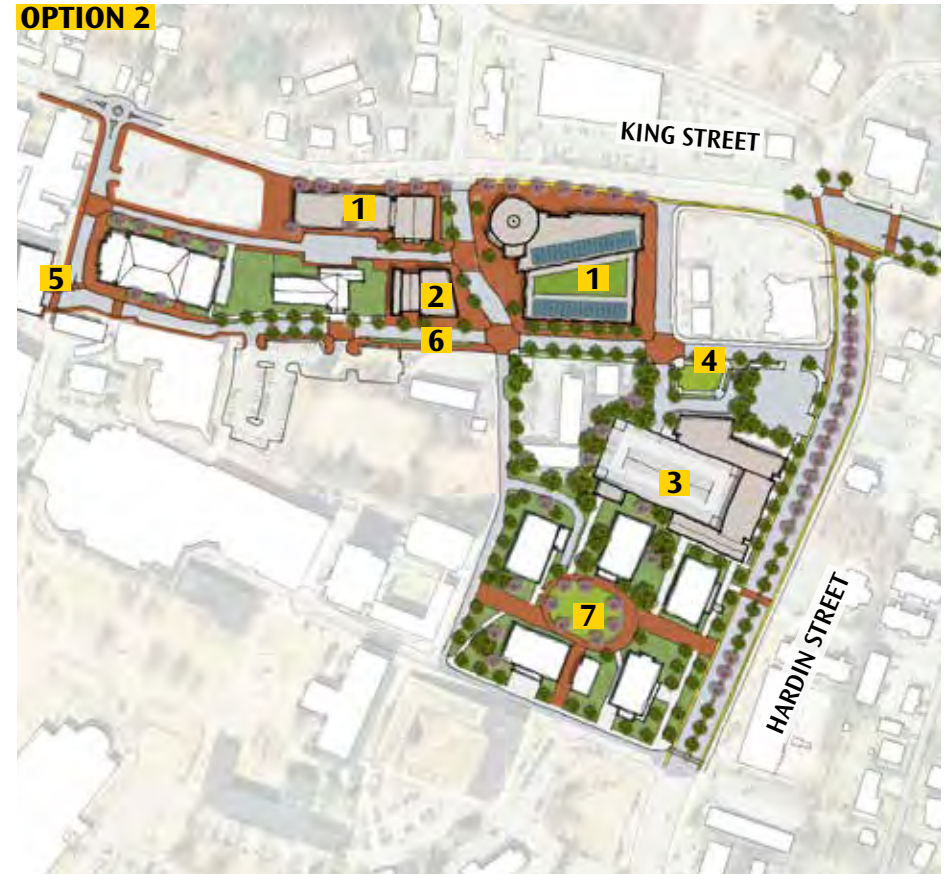
OPTION 1

- 1 Conference & Academic Center (2)
- 2 Wrapped Parking Deck with Retail, Offices, and Hotel

- 3 Wrapped Parking Deck with Housing

- 4 Transit Hub
- 5 Intersection Improvements
- 6 East Howard Street Woonerf
- 7 Renovations to The Pit

OPTION 2

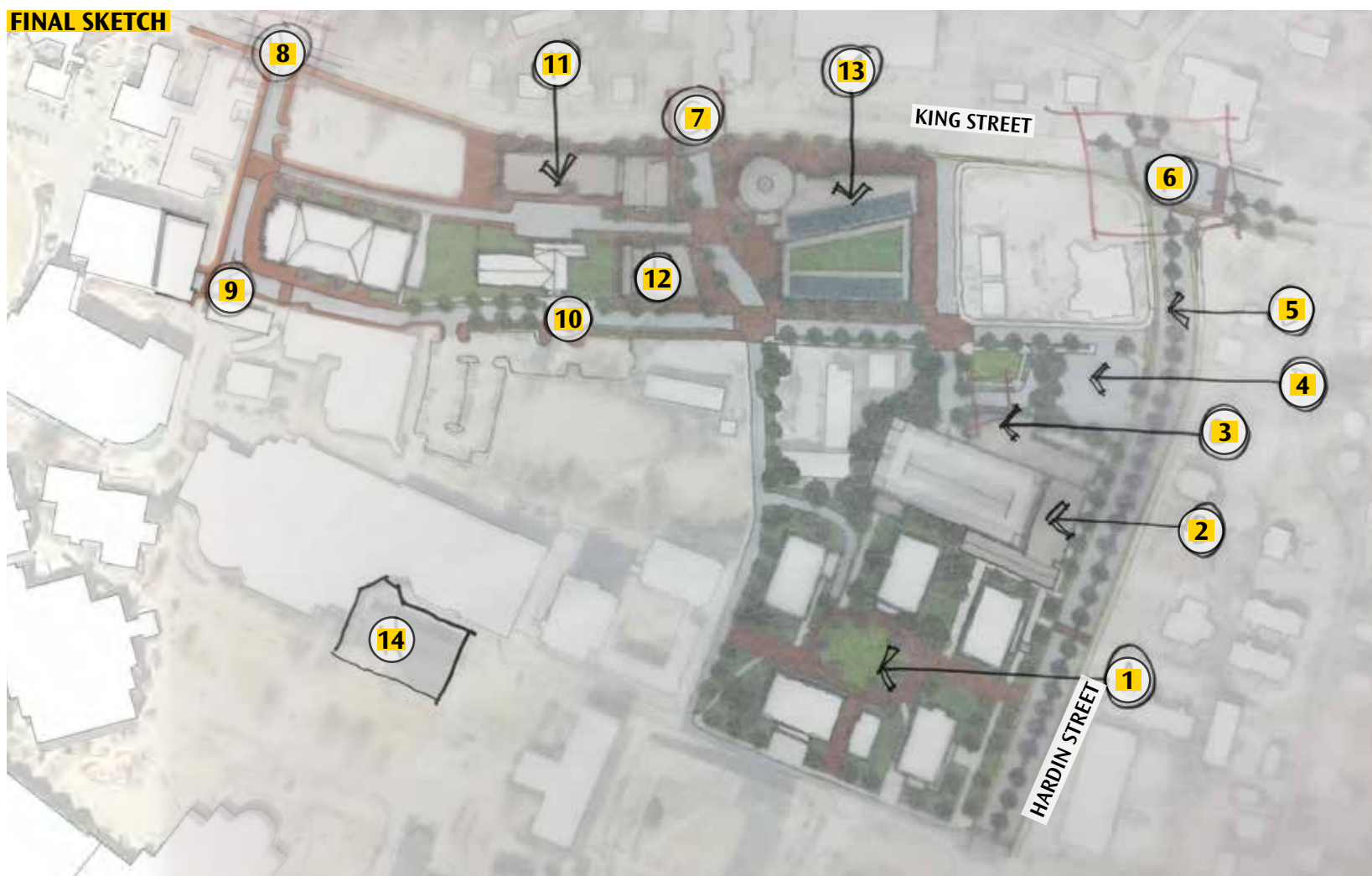


OPTION 2

- 1 Conference & Academic Center (2)
- 2 Student Housing
- 3 Wrapped Parking Deck with Offices & Housing

- 4 Transit Hub & Open Space
- 5 Intersection Improvements
- 6 East Howard Street Woonerf
- 7 Renovations to The Pit

King Street & the Legends Conference Center Design Charrette Final Sketch



FINAL SKETCH

- 1** Renovations to The Pit
- 2** Wrapped Parking Deck with Retail, Housing, & Hotel

- 3** Transit Hub
- 4** Gas Station Property Acquisition
- 5** Hardin Street Improvements
- 6** Gateway at King & Hardin Streets

- 7-8** Traffic Signal & Intersection Improvements
- 9** College Street Renovations
- 10** East Howard Street Woonerf

- 11-12** Mixed-Use Buildings (2)
- 13** Academic Conference Building
- 14** New Legends Event Venue

Broyhill Innovation District Design Charrette Options

OPTION 1



OPTION 1

- 1** Innovation Center Research Facilities (2)
- 2** High-Bay Building
- 3** Track & Field

4 Softball Field

- 5** Athletics Facilities

- 6** Baseball Field Renewal

- 7** Wide Pedestrian Walkway

- 8** Parking Deck

OPTION 2



OPTION 2

- 1** Innovation Center Research Facilities (5)
- 2** High-Bay Building
- 3** Softball Field

4 Baseball Field Renewal

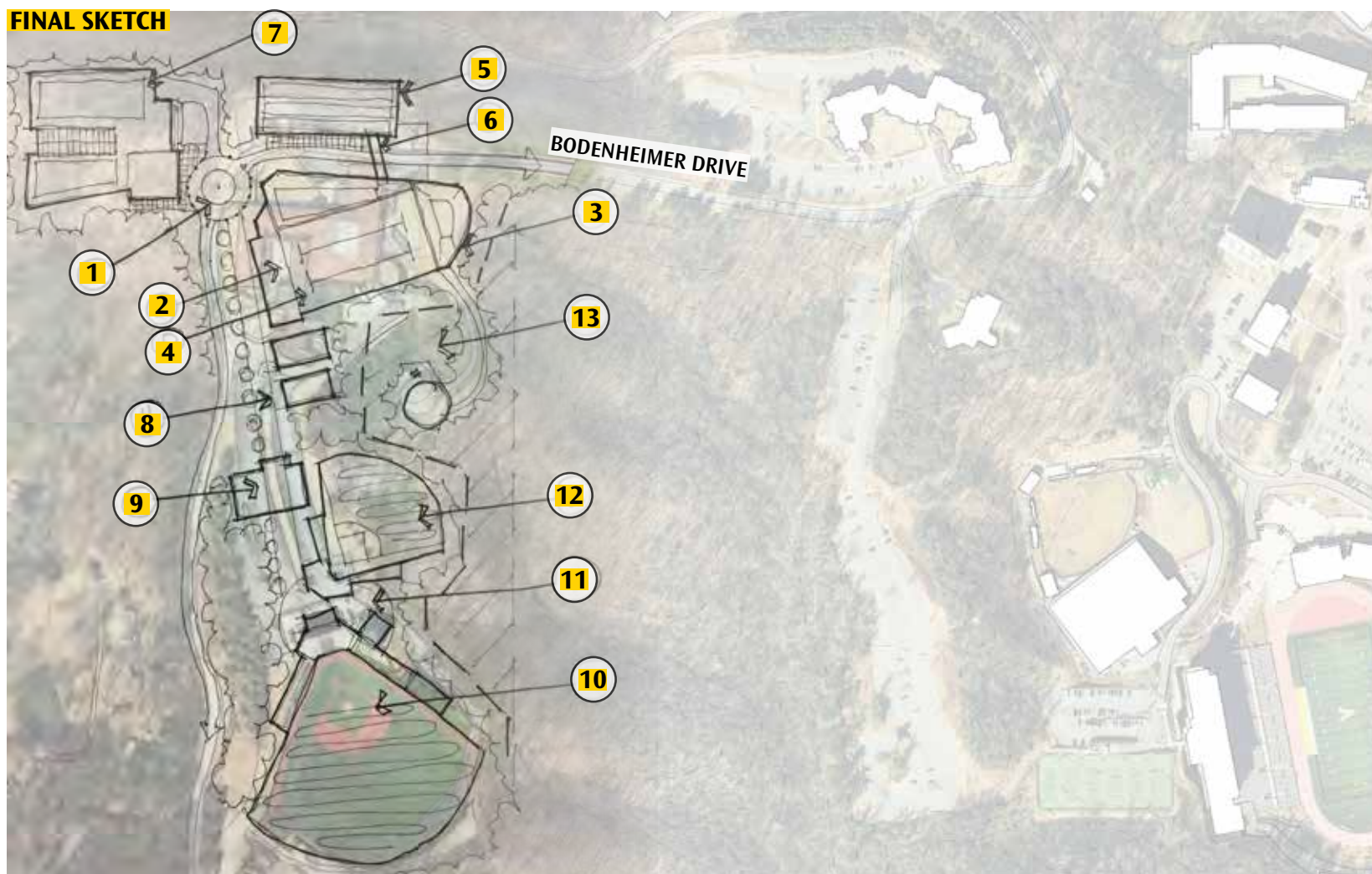
- 5** Tennis Courts

- 6** Athletics Facilities

- 7** Pedestrian Promenade

- 8** Parking Deck

Broyhill Innovation District Design Charrette Final Sketch



FINAL SKETCH

1 Innovation Roundabout & Entrance

2 Office & Academic Functions

3 Conservatory

4 Parking Deck

5 High-Bay Building

6 Sky Bridge Link

7 Research Lab

8 Pedestrian Promenade

9 Athletics Facility

10 Baseball Field & Geothermal Zone

11 Athletics Plaza

12 Softball Field & Geothermal Zone

13 Tree Conservation Zone

The Recreational Village Design Charrette Sketch

OPTION 1



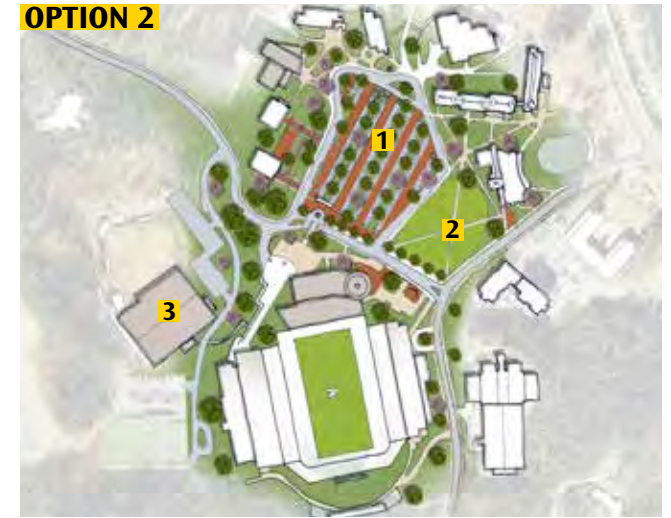
OPTION 1

- 1 Winkler Hall Renewal
- 2 Stadium Parking Deck
- 3 Wrapped Parking Deck

4 Renovated Tailgate Parking Lot

- 5 New Open Space & Esplanade
- 6 Owens Field House Renewal
- 7 Athletics Master Plan Implementation

OPTION 2



OPTION 3



OPTION 2 MAIN CHANGES

- 1 Renovated Tailgate Parking
- 2 Tomlinson Lawn Renewal
- 3 Soefield Facility Renewal

OPTION 3 MAIN CHANGES

- 1 Wrapped Tailgate Deck
- 2 New Mixed-Use Building
- 3 Soefield Expansion

The Recreational Village Design Charrette Final Sketch

FINAL SKETCH



FINAL SKETCH

- 1** Reinforced Turf Field & Tailgate Lot
- 2** Wrapped Parking Deck
- 3** Pedestrian Stadium Approach

- 4** Parking Ramp Connection to
- 5** Greenwood Lot
- 6** Owens Field House Renewal &
- 7** Mixed-Use Building

09 APPENDIX: KEY TERMS

Campus shuttle – A university provided mass-transit service provided operating on a defined route within campus boundaries.

Complete Street – A street designed and operated to enable safe access for all users; ensures pedestrians, bicyclists, motorists, and transit riders of all ages and abilities can safely move along and across a street.

Densification – An increase in the density of people utilizing available built and build-able space. Corresponds with an increase in the ratio of total building floor area to area of build-able land.

Edge - A boundary that defines space; can be natural or man-made and include walls, buildings, and shorelines.

HAWK beacon – High-intensity Activated Crosswalk (HAWK). A protected pedestrian activated mid-block signalized crossing. When not in use, the signal heads remain dark.

Hearth – A interior or outdoor gathering area and social center of various scales and functions.

Infill building – New construction occurring within already developed areas.

Landmark – Readily identifiable objects that orient passers-by and serve as reference points.

Mixed-use – a type of development that blends residential, commercial, cultural, institutional, or industrial uses, where those functions are physically and functionally integrated. The integration of a variety of uses in open spaces and buildings to encourage communication between people and maximize space.

Node – A focal point, intersection, locus, or gathering place.

Open Space - A large, well-defined outdoor area that gives definition to campus neighborhoods and is considered a part of the public realm.

Parking Ratio – Total number of parking spaces on campus divided by the campus population. The minimum recommended parking ratio for a university the size of Appalachian State is 0.4 parking spaces per person on campus.



Complete Streets, UCLA



HAWK Crosswalk

Pathway – Any transportation route, from a footpath to a major transit route. These are mainly pedestrian-oriented routes.

Pedestrian-Oriented – An environment that is safe, accessible, and comfortable for pedestrians so that they can move efficiently from one destination to another without the use of a vehicle. A strategy for reducing dependence on vehicles.

Precinct - A key planning area of campus. Precincts may have diverse characteristics and include multiple neighborhoods, but all contain a mix of uses and instill a sense of place.

Transit hub - The effective center of activity related to a transit network.

Unit Substation - Electrical equipment that transforms electrical energy from a transmission level voltage to a distribution level (12,470 volts).

Wi-Fi Canopy - A wired IT infrastructure that provides wireless access to the campus network and Internet.

Wayfinding – Signs, maps, and other visual or audible orientation devices and methods used to convey location and directions to travelers.

Woonerf - A street shared among pedestrians, bicyclists, and motor vehicles; however, pedestrians have priority equal to cars. The street is designed without a clear division between pedestrian and auto space, so motorists are forced to slow down and travel with caution.



Founders Way Path, ECU



Landmark, Santa Clara



Transit Hub, UNLV

09 APPENDIX: PHOTO SOURCES

1. Freeman, Marie. Appalachian State University. Digital image. *US News & World Report*. U.S. News & World Report L.P., n.d. Web. 19 Jan. 2017.
2. Appalachian State University. Digital image. *Our State: Celebrating North Carolina*. Our State Magazine, 29 Dec. 2015. Web. 20 Jan. 2017.
3. *Still From*: Appalachian State University (Institutional Ad 2014). *YouTube*. Appalachian State University, 5 Sept. 2014. Web. 20 Jan. 2017.
4. Appalachian State University. Digital image. *Rochester*. Rochester and Associates, n.d. Web. 23 Jan. 2017.
5. Appalachian State University. Digital image. *Twitter*. Lift Aerial, 17 Feb. 2016. Web. 23 Jan. 2017.
6. Appalachian State University. Digital image. *Appalachian State University*. Appalachian State University, n.d. Web. 23 Jan. 2017.

