CATAWBA COLLEGE

CAMPUS AS FOREST CONCEPT REPORT
REGENERATIVE CAMPUS LANDSCAPE PLAN

ACKNOWLEDGEMENTS

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We thank those individuals who have contributed time, interest and experience in shaping a successful plan.

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CATAWBA COLLEGE

REGENERATIVE CAMPUS LANDSCAPE PLAN REPORT

CATAWBA COLLEGE

CONCEPT REPORT

Catawba College's Regenerative Campus Landscape Plan establishes the foundation for a transformative vision that unites the College's academic mission with ecological regeneration and community resilience. The plan synthesizes campus and community stakeholder insights to frame a comprehensive approach rooted in eco-systems and place-based design.

The Campus as Forest vision aims to cultivate a campus that functions as a living-learning laboratory, integrating community, ecology, education and innovation. Rooted through foundational Principles, Goals, and Strategies, **the Catawba Canopy plan** incorporates three overarching frameworks: campus experience, natural regeneration, and academic research to achieve nature-positive impact. Integrating a regenerative tool kit and Fully Integrated Thinking framework structures a **Regenerative Roadmap** for Catawba, employing data-driven feedback loops to guide adaptive and measurable progress.

Drawing from the Piedmont's distinct landscape, the plan translates regional ecology into actionable programmatic elements that advance learning and environmental stewardship. Integrated frameworks, programming and phasing strategies create achievable pathways toward implementation. Campus zones are defined by thematic characteristics that bridge landscape, culture and curriculum, demonstrating how regeneration can be both practical and inspirational.

Ultimately, this **Conceptual Plan** serves as the blueprint for creating a regenerative campus: one that restores natural systems, enriches the student experience, and positions Catawba College as a national leader in environmental stewardship.

CATAWBA COLLEGE REGENERATIVE CAMPUS LANDSCAPE PLAN

REGENERATIVE DESIGN PROCESS

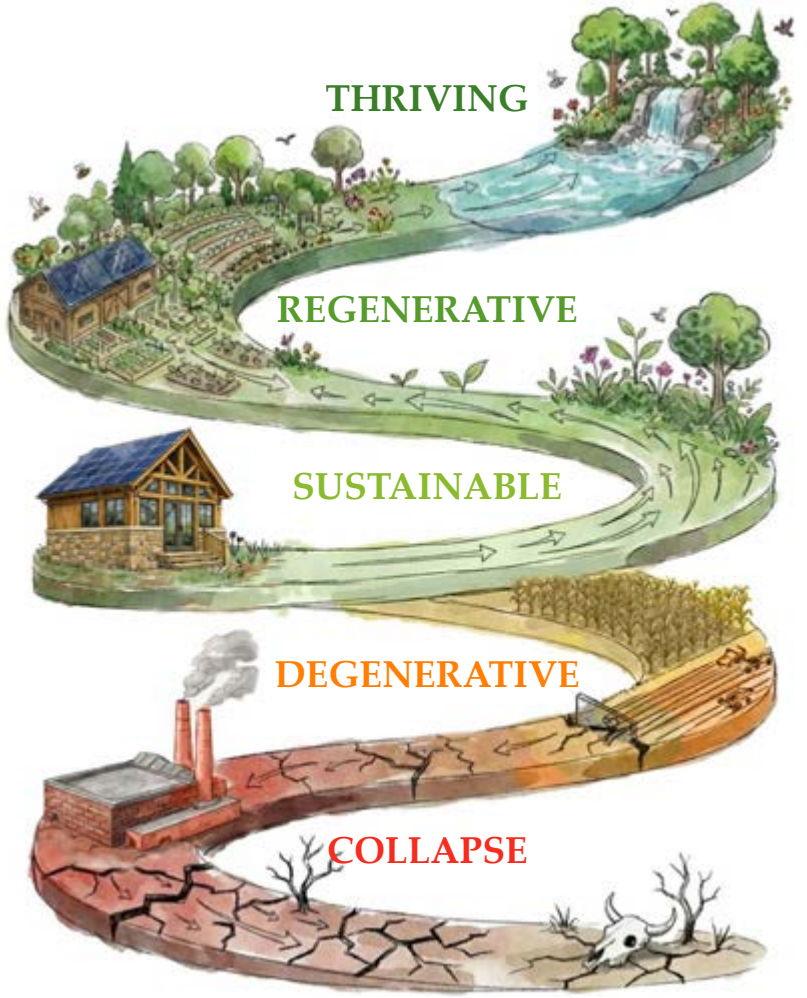
REGENERATIVE DESIGN PROCESS

ECOSYSTEMS THINKING

Regenerative Design *brings new life to something that has been depleted. A regenerative development enhances an ecosystem beyond the conditions of nearby healthy habitats. Ultimately, the environment thrives as a result of human interaction, enabling mutual conditions for each to co-evolve as one.*

Regenerative Design follows an integrative design process that is derived from holistic ecosystems thinking: a **Positive Performance Methodology**. The approach below demonstrates the overall methodology applied to bring Catawba College's "Campus as Forest" Vision into reality, integrating the goals of regenerative landscape with the genius of the environment and engagement with Catawba's students, staff and community. Built upon a spirit of collaboration, the design team, campus leadership, academic scholars and students holistically integrated the expertise and input from all stakeholders to deliver a regenerative campus landscape plan for Catawba College.

The Positive Performance Methodology galvanized the design team comprised of HOK's Regenerative Design and Landscape Planning teams, to facilitate visioning, the regenerative framework and regenerative campus landscape plan. Ecologists and ecosystems modeling specialists from EcoMetrix Solutions Group (EMX) and biomimicry strategic thinkers from Biomimicry 3.8 (B3.8) worked to unify the genius of place, ecological systems, and regenerative campus practices. The design team worked with Catawba College's leadership, faculty, staff, students and other stakeholders to ensure that all attributes of the design of the landscape supported the central driver: *"creating a living-learning laboratory that is a national leader in sustainable practices and operations."*



REGENERATIVE DESIGN PROCESS

PROJECT APPROACH

Regenerative design considers the interrelationship of the campus landscape, the ecological preserve and the built environment, to create a unique sense of place. The team unpacked programmatic opportunities to extend the classroom into nature to create living-learning laboratories. We studied the land and how to support its role as a unifying force, connecting a community of people in their everyday journey and experience, and enhancing health and wellbeing. To successfully implement a regenerative landscape campus plan, a two-phased approach was executed.

Phase 1 — Discovery established the project's regenerative foundation. Through kickoff, site analysis, and visioning workshops, the team engaged students, faculty, leadership and community partners to define goals, identify opportunities and constraints, and map holistic system flows across the campus. Insights informed a regenerative approach and initial roadmap aligning principles, captured in a Visioning and Discover Report.

Phase 2 — Create translated principles, goals, strategies and vision into frameworks rooted in a regenerative toolkit. Through workshops, concept development, and iterative refinement, the team shaped the "Campus as Forest" vision, integrating experiential environments, outdoor learning, and ecological systems into a cohesive plan and implementation roadmap that elevates Catawba College as a model of environmental stewardship.

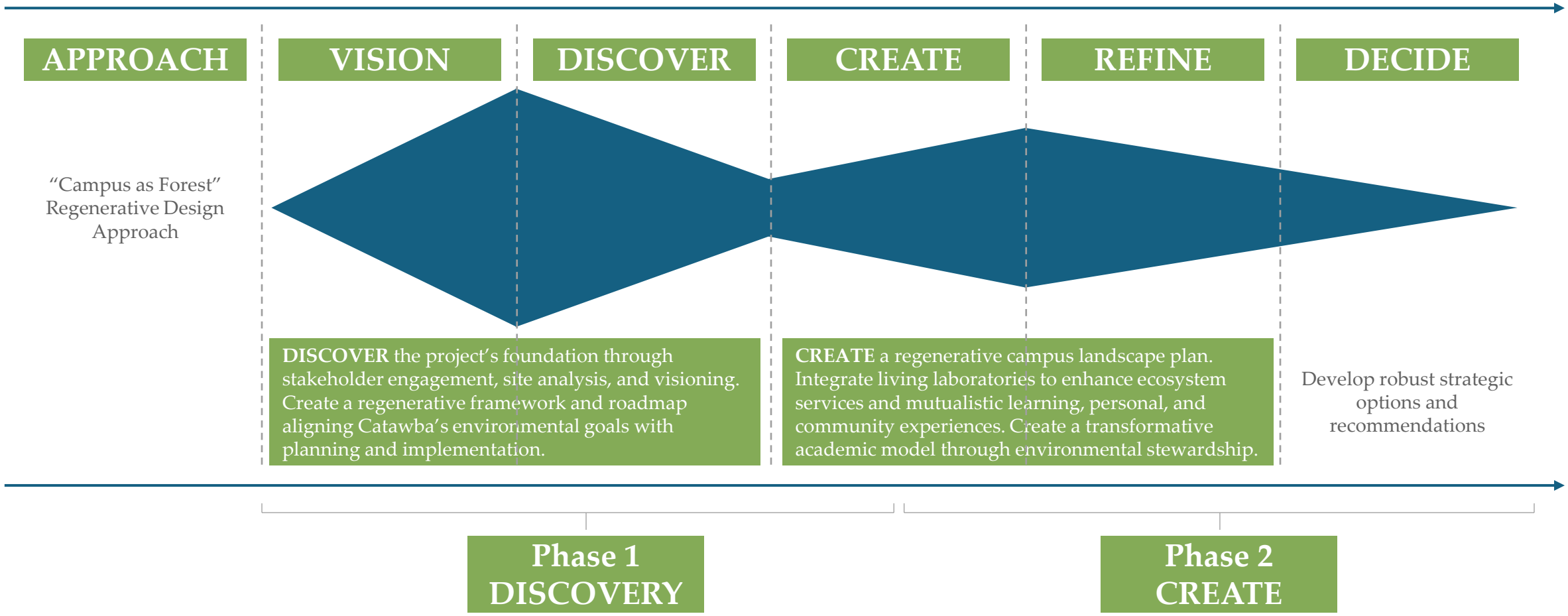
The frameworks were ultimately synthesized into a singular, actionable vision, a Regenerative Campus Landscape Plan as one coherent, future-ready vision for Catawba College.

Discovery: Site Analysis

Create: Regenerative Framework

REGENERATIVE DESIGN PROCESS

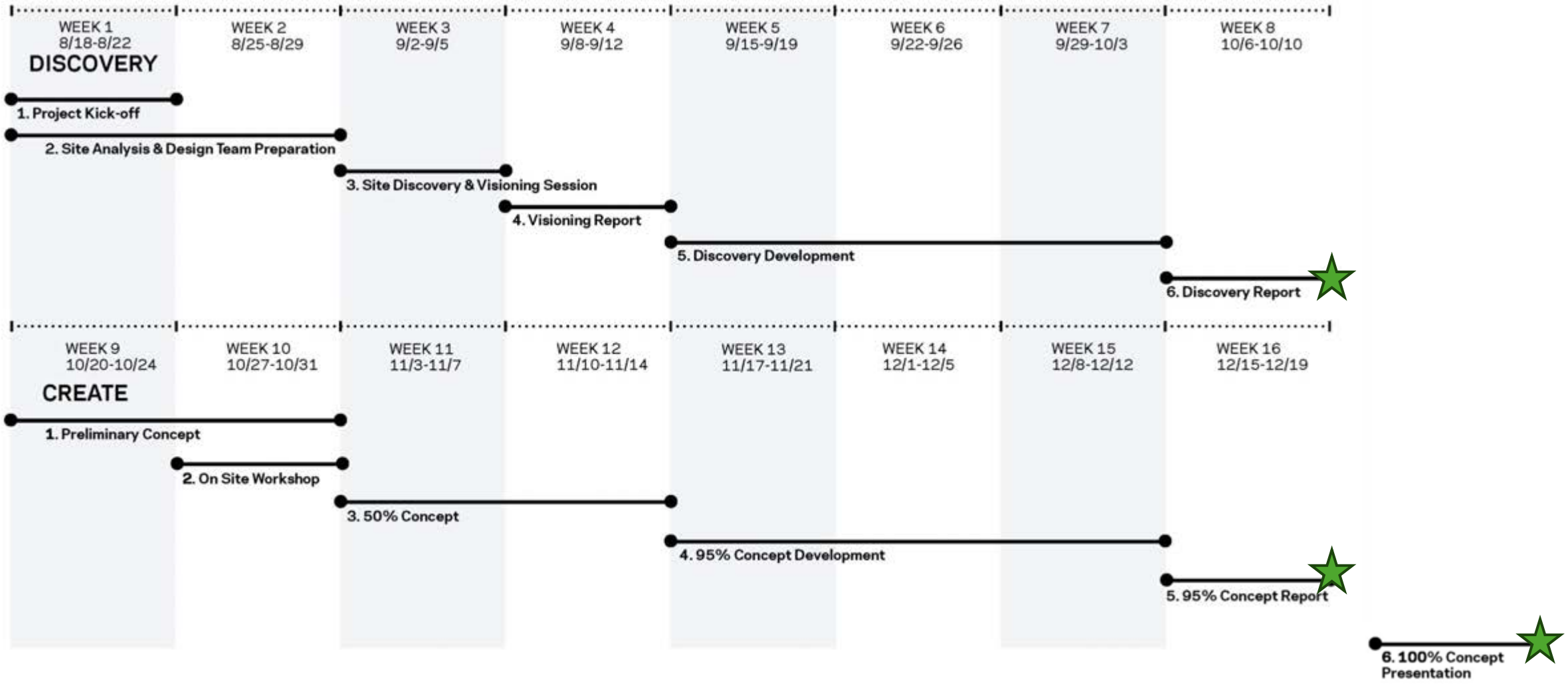
CAMPUS PLAN PROJECT APPROACH & PRIORITIZATION



Source: Adapted from The Copenhagen Method™

REGENERATIVE DESIGN PROCESS

PROJECT TIMELINE & SCOPE ROADMAP



REGENERATIVE VISION

CAMPUS AS FOREST

CAMPUS AS FOREST

REGENERATIVE SYSTEM FLOWS

VISIONING WORKSHOP SUMMARY

SITE DISCOVERY & COMMUNITY VISIONING

As part of Phase 1: Discovery, HOK facilitated a series of Site Discovery and Community Visioning activities on September 3-5, 2025, with the following goals:

- Gather stakeholder input and identify opportunities, constraints and issues of the campus and surrounding communities, and
- Establish the Regenerative Vision, Principles, and Goals for the campus

The Team met with Catawba College Executives, Faculty, Staff and Students, and leaders and members of the Salisbury and Spencer communities across eleven (11) Community Engagement Sessions, two Campus Tours and a Tour of Downtown Salisbury. The Team also explored both the Stanback Ecological Preserve and sections of the Greenway along Grants Creek.








CREATE WORKSHOP SUMMARY

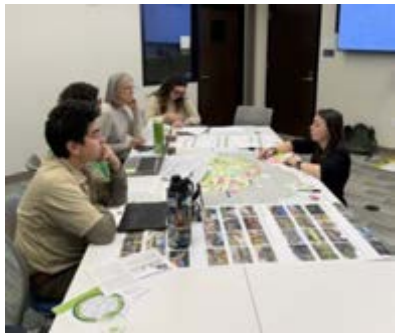
SITE DESIGN & COMMUNITY ENGAGEMENT

As part of Phase 2: Create, HOK facilitated a series of Site Design and Community Engagement activities, on October 27-28, 2025, with the following goals:

- Gather stakeholder input and identify key site differentiators, opportunities for open space programs and ecological systems
- Initiate Concept Design and
- Outline a roadmap for advancing the regenerative landscape framework

The Team met with Catawba College Leadership, Faculty, Staff and Students, and both leaders and members of the Salisbury and Spencer communities across five (5) Community Engagement Sessions. The Team also met with Catawba College's Capital Projects Consultants Little Design Co., LandDesign and Brailsford & Dunlevy Inc. and toured portions of the campus and sections of the Greenway along Grants Creek.




KEY THEMES

SITE DISCOVERY AND COMMUNITY VISIONING

Based on the input received from participants of the various Community Visioning sessions, the Team identified key themes that helped to define the opportunities and challenges to implement the "Campus as Forest" Vision.

ECOLOGY

- Natural environments & ecosystem services
- Increasing nature on campus
- Environmental stewardship

PLACE-MAKING

- Establishing a Sense of Place
- Creating unique features / destinations on Campus
- Campus activation

BIOPHILA

- Enhancing access to nature and outdoors
- Connecting people to nature, directly and indirectly
- Accessibility

HEALTH & WELLBEING

- Improving physical, mental and spiritual health
- Creating areas of respite and rejuvenation
- Creating areas that encourage physical activity

CONNECTIVITY

- Enhancing physical and community connections between the Campus, Salisbury and Spencer
- Integrating the Ecological Preserve and Greenway

WATER

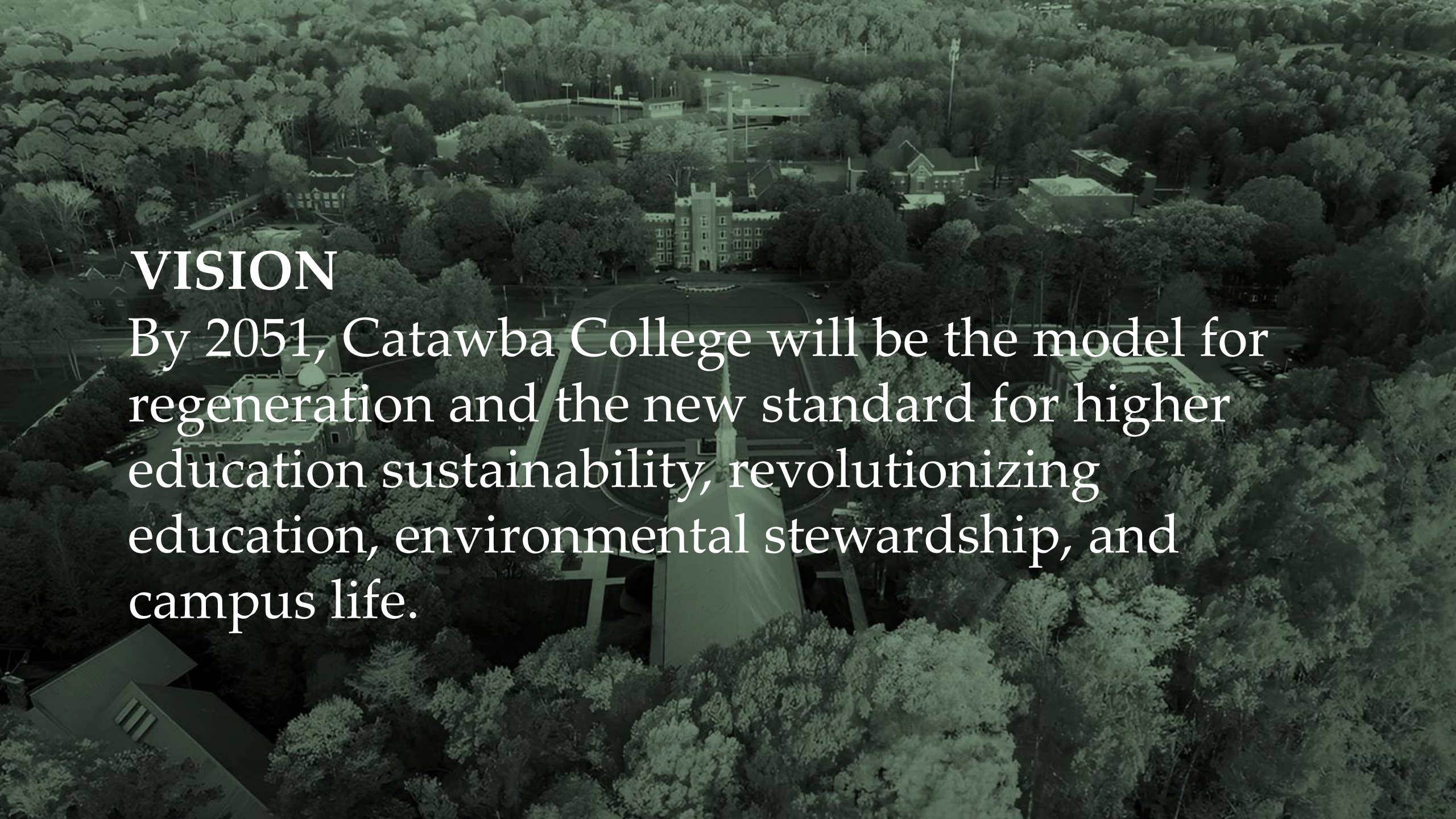
- Hydrology
- Stormwater management
- Water features

EDUCATION

- Living Learning Laboratories
- Integration with curriculum
- Education and outreach opportunities

OPERATIONS

- Impact to infrastructure and operations
- Maintenance and implementation
- Cost & time

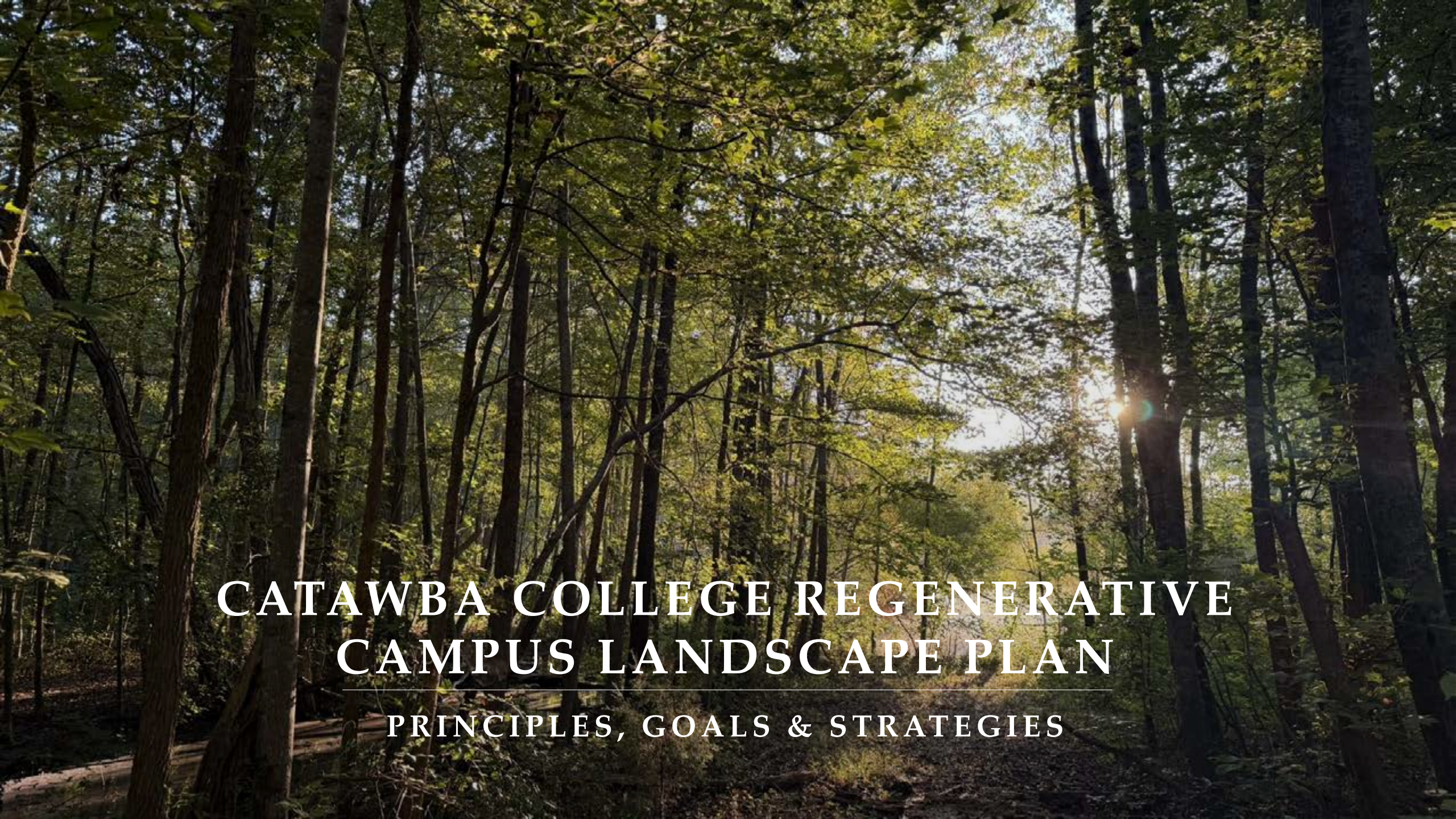


VISION

By 2051, Catawba College will be the model for regeneration and the new standard for higher education sustainability, revolutionizing education, environmental stewardship, and campus life.

CAMPUS AS FOREST

PROJECT VISION: IMPORTANCE TO THE REGION & BEYOND



CATAWBA COLLEGE REGENERATIVE CAMPUS LANDSCAPE PLAN

PRINCIPLES, GOALS & STRATEGIES

Roots

Principles

Building on the spirit of Campus as Forest and the pursuit of discovery and regeneration, the project principles are organized around the concept of four “Roots”: Experience, Regenerate, Learn and Canopy.

Mycelial networks are communication highways, where knowledge, culture, and ecology interconnect to generate new possibilities. By naming the principles under this banner, the campus positions itself and its living curriculum as a landscape where students, faculty and community are invited to thrive: anchoring, connecting and nourishing each other.

Experience

Campus Destination: Considerations of site, context, history, future, culture, identity, character and community that drive campus life.

Create a walkable campus core with continuous forest programs, transforming everyday life into an immersive experience.

EXPERIENCE

GOALS

DESTINATION: Prioritize Campus Experiences

- Create a walkable campus core with continuous forest programs, transforming everyday life into an immersive experience.
- Provide opportunities for physical movement and exercise through recreational activities and infrastructure.
- Contribute to human health and wellbeing by creating spaces for natural connections, mindfulness and comfort.
- Enhance the campus experience through engaging environments, events and programs.
- Create a welcoming campus by investing in the pedestrian experience, transit options and universal design.

Previous Image: Ubud National Forest Amphitheater, Bali, Indonesia

EXPERIENCE

STRATEGIES

INETENSITY OF IMPLEMENTATION

	PHYSICAL ACTIVITY & RECREATION	HEALTH & WELLBEING	CAMPUS LIFE	MOBILITY & ACCESSIBILITY
LOW	 Calisthenics & Outdoor Fitness	 Forest Bathing	 Hammocks & Tree Nets	 Bicycle & Board Racks
MEDIUM	 Bouldering	 Hydrological Respite	 Fire Pits & Gathering Areas	 Active Mobility Infrastructure
HIGH	 Tree Walks	 Camping & Night Sky Areas	 Outdoor Kitchen Area	 Universal ADA

Regenerate

Natural Ecology: Considerations of ecosystem services, nature, ecology, resources, regeneration and stewardship to create a cohesive campus.

Create a living landscape that supports natural systems, fosters resilience, biodiversity and a deep connection between people and the environment.

REGENERATE

GOALS

NATURE: Restore Surrounding Ecosystems

- Create a living landscape that supports natural systems, fosters resilience, biodiversity and a deep connection between people and the environment.
- Reintroduce natural hydrology and celebrate water cycles.
- Re-establish native plant communities to revive habitats and biodiversity.
- Rewild the campus through living buffers, ecological corridors and reforestation.
- Enhance nature's resilience by integrating nature-based land management practices and supporting infrastructure.

Previous Image: Grants Creek, Salisbury, NC

REGENERATE

STRATEGIES

INETENSITY OF IMPLEMENTATION

	HYDROLOGY	BIODIVERSITY	REFORESTATION	RESILIENCE
LOW	 Bioretention Media	 Pollinator Gardens	 Invasive Species Management	 Brush Clearing
MEDIUM	 Rain Gardens	 Tiny Forests	 Silviculture	 Livestock Grazing / Weeding
HIGH	 Stormwater Retention Ponds	 Rewilding Piedmont Prairies	 Wildlife Corridor	 Controlled / Prescribed Fires

Learn

Academia & Research: Considerations of hands-on experiences, nature-based learning environments and living-learning laboratories within the campus environment.

Foster a collegial campus atmosphere that cultivates collaboration, dialogue and shared experience alongside research, teaching and experimentation to solve complex challenges.

LEARN

GOALS

ACADEMIA & RESEARCH: Create a Living Learning Laboratory

- Foster a collegial campus atmosphere that cultivates collaboration, dialogue and shared experience alongside research, teaching and experimentation to solve complex challenges.
- Design interactive landscapes that reveal ecological process and provide self-guided, nature-based learning.
- Blend classrooms with the landscape to extend learning and gathering outdoors.
- Enable scientific research and study of natural performance, resilience and regeneration.
- Incorporate infrastructure that transforms the campus into a living-learning laboratory.

Previous Image: Fred Stanback, Jr. Ecological Preserve, Salisbury, NC

LEARN

STRATEGIES

INETENSITY OF IMPLEMENTATION

	SELF-LEARNING ENVIRONMENTS	NATURE-BASED LEARNING	NATURE-BASED RESEARCH	SUPPORTING INFRASTRUCTURE
LOW	 Learning Trails	 Nature Classrooms	 Wildlife Tracking	 Composting Facilities
MEDIUM	 Wayfinding Nodes	 Formal Outdoor Classroom	 Ecosystem Health Monitoring	 Wi-Fi & Electrical Infrastructure
HIGH	 Species Exhibition Areas	 Outdoor Amphitheater	 Greenhouse	 Regenerative Building

Canopy

Regenerative Landscape: Considerations of how landscape becomes the transformative bridge, blending ecological regeneration, scientific research and community engagement.

Restore campus lands to produce greater ecological value than they consume, positioning Catawba as a national model for regenerative development.

CANOPY

GOALS

CANOPY: Cultivate an Experiential Ecology

- Restore campus lands to produce greater ecological value than they consume, positioning Catawba as a national model for regenerative development.

- Establish the campus as a regional botanical destination that celebrates Piedmont biodiversity and communicates stories of mitigation, adaptation and ecological change.

- Develop a botanical-garden framework that serves as a cultural bridge, integrating scientific research, artistic expression and community engagement throughout the landscape.

- Integrate indigenous land practices and local cultural traditions to shape a regenerative, place-based vision for the college's outdoor environment.

Previous Image: Royal Botanic Garden Edinburgh Rock Garden, Edinburgh, Scottland

CANOPY

STRATEGIC APPROACH

The Canopy principle focuses on layering the three other principles of Experience, Regenerate and Learn into a strategic ecological landscape approach.

Like the interconnected structure of a forest canopy, this principle is focused on overlaying complementary layers across every space on campus. From these roots grow a holistic canopy that nurtures wellbeing, advances resilience and creates a dynamic campus for inquiry, creativity and cultural connection.

Together, these values form a holistic experiential ecology, where ecological restoration, personal calling and civic responsibility coexist under a shared canopy, cultivating graduates prepared to lead meaningful, service-oriented and environmentally informed lives.

CATAWBA COLLEGE REGENERATIVE CAMPUS LANDSCAPE PLAN

REGENERATIVE TOOLKIT

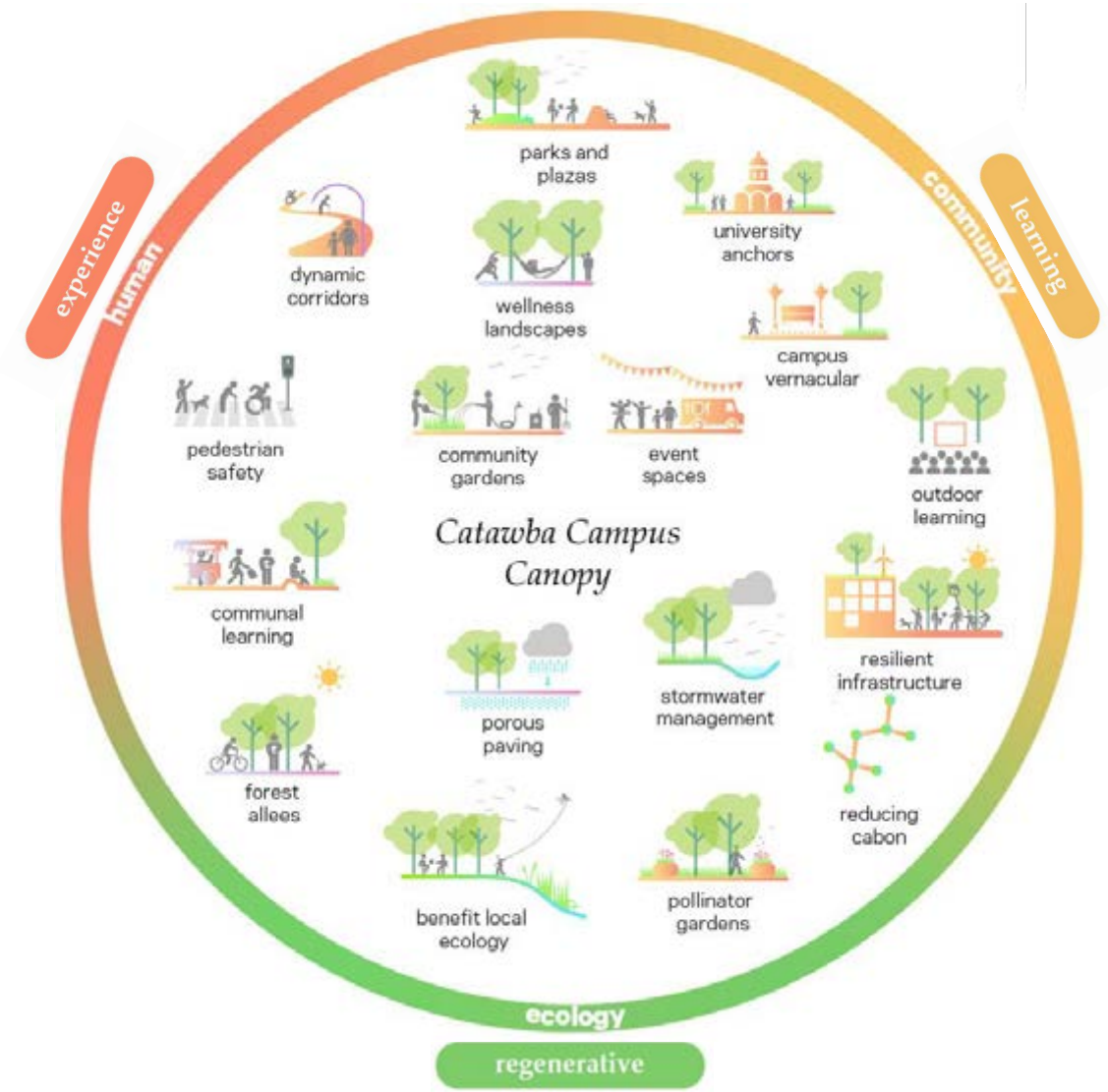
REGENERATIVE TOOLKIT

CATAWBA CANOPY – CULTIVATE

Regenerative landscapes, human-centered design, and outdoor learning environments shape the future of Catawba College as a living campus that nurtures people and the planet. Rooted in the Campus as Forest vision, **the Regenerative Toolkit** turns aspiration into action through scalable strategies that unite community, ecology, and academia. It supports a campus as a true living laboratory, translating the Piedmont's ecology into an environment where nature enriches daily life, learning, and identity.

The Toolkit is guided by the principles and gives rise to organizing frameworks. **Prioritizing campus experiences** emphasizes a walkable, welcoming core with forested paths, recreation opportunities, and spaces that promote comfort, mindfulness, and wellbeing. **Regenerating surrounding ecosystems** focuses on restoring hydrology, expanding native plant communities, and rewilding the landscape to enhance biodiversity and resilience. **Creating a living-learning laboratory** integrates academics into the outdoors through interactive, interpretive, and nature-based spaces that support collaboration and hands-on inquiry.

Together, the toolkit shapes holistic frameworks for the campus, elevating student experience, restoring natural systems, and providing an adaptive pathway toward net-positive development. Through the Regenerative Toolkit, Catawba College strengthens its role as a leader in sustainability and environmental stewardship.



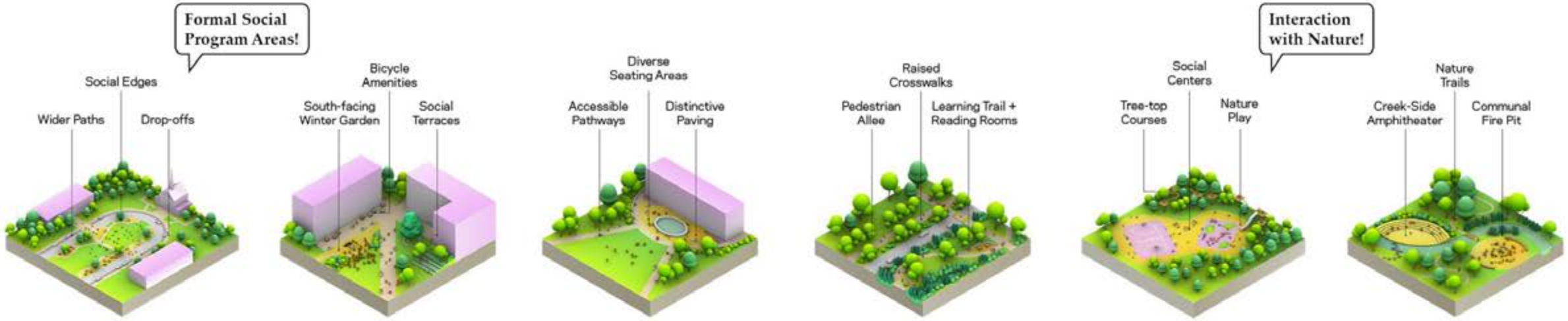
REGENERATIVE TOOLKIT

PROJECT PHILOSOPHY

The toolkit transforms vision into action, offering design ideas that can scale across campus, connecting people, place and purpose.

REGENERATIVE TOOLKIT

EXPERIENCE



REGENERATIVE TOOLKIT

REGENERATE

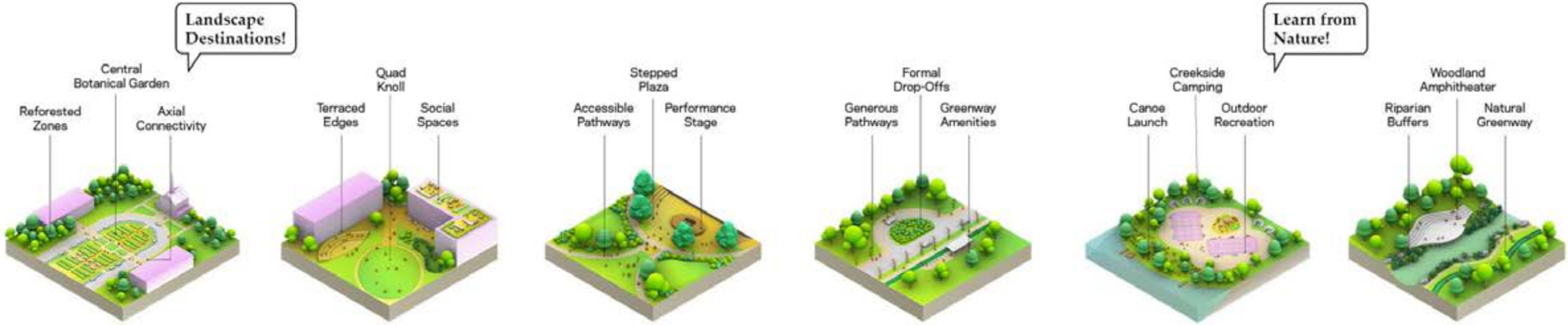
The Living Green | **The Dynamic Quad** | **The Forest Corridor** | **The Forest Room** | **Forest Sports Courts** | **The Regenerative Creek**

Built Environment ← → **Natural Environment**

regenerative

REGENERATIVE TOOLKIT

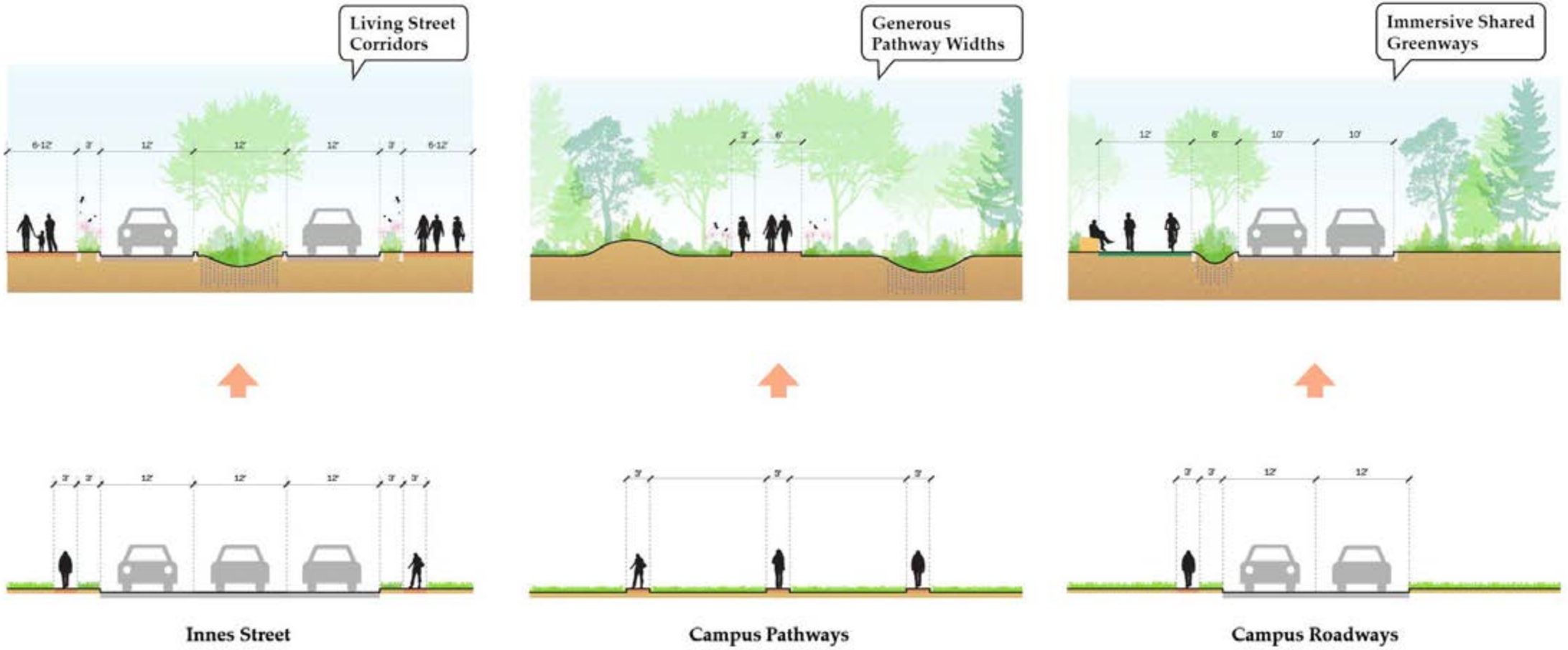
LEARN



learning

REGENERATIVE TOOLKIT

ECOLOGICAL MOBILITY SECTIONS



CATAWBA COLLEGE REGENERATIVE CAMPUS LANDSCAPE PLAN

CAMPUS PLANNING FRAMEWORKS

CAMPUS PLANNING FRAMEWORKS

PLANNING APPROACH – INTRODUCTION TO FRAMEWORKS

The Campus as Forest Vision aspires to cultivate a model for regeneration and the new standard for higher education sustainability, revolutionizing education, environmental stewardship, and campus life.

Catawba's core value, *Scholarship with Character and Culture for Service*, guides the establishment of missions to realize such a vision:

- **Connect campus life** and the community to nature daily
- **Regenerate ecosystem services** and celebrate the Piedmont ecology
- **Create a living-learning laboratory** that provides nature-based education and research and
- **Instill within every graduate the capacity to be stewards of the world**

CAMPUS PLANNING FRAMEWORKS

PLANNING APPROACH – INTRODUCTION TO FRAMEWORKS

Design Approach

The Regenerative Landscape Campus Plan's overall design approach comprehensively considers a variety of elements and processes to create a complete ecological approach to the campus landscape, blending nature, the built environment and people's interactions to create a unique and positive experience. Our goal is to create landscapes that integrate nature into the everyday life of students, faculty, staff and visitors. Here, nature will shape the experience, education and identity of Catawba College. The Team developed three guiding frameworks—Campus Experience, Regenerative Ecology and Academic Environment—to shape campus improvements. Each identifies scalable interventions that enhance ecological impact and integrate sustainability into the College's identity and daily life.

EXPERIENCE

The Experience Framework organizes the campus around a central pedestrian axis, seamlessly linking the forest landscape to academic and social cores

REGENERATE

Rooted in the idea of Campus as Forest, the Regenerative Framework redefines the College's character through restoration, balance and belonging to the land

LEARN

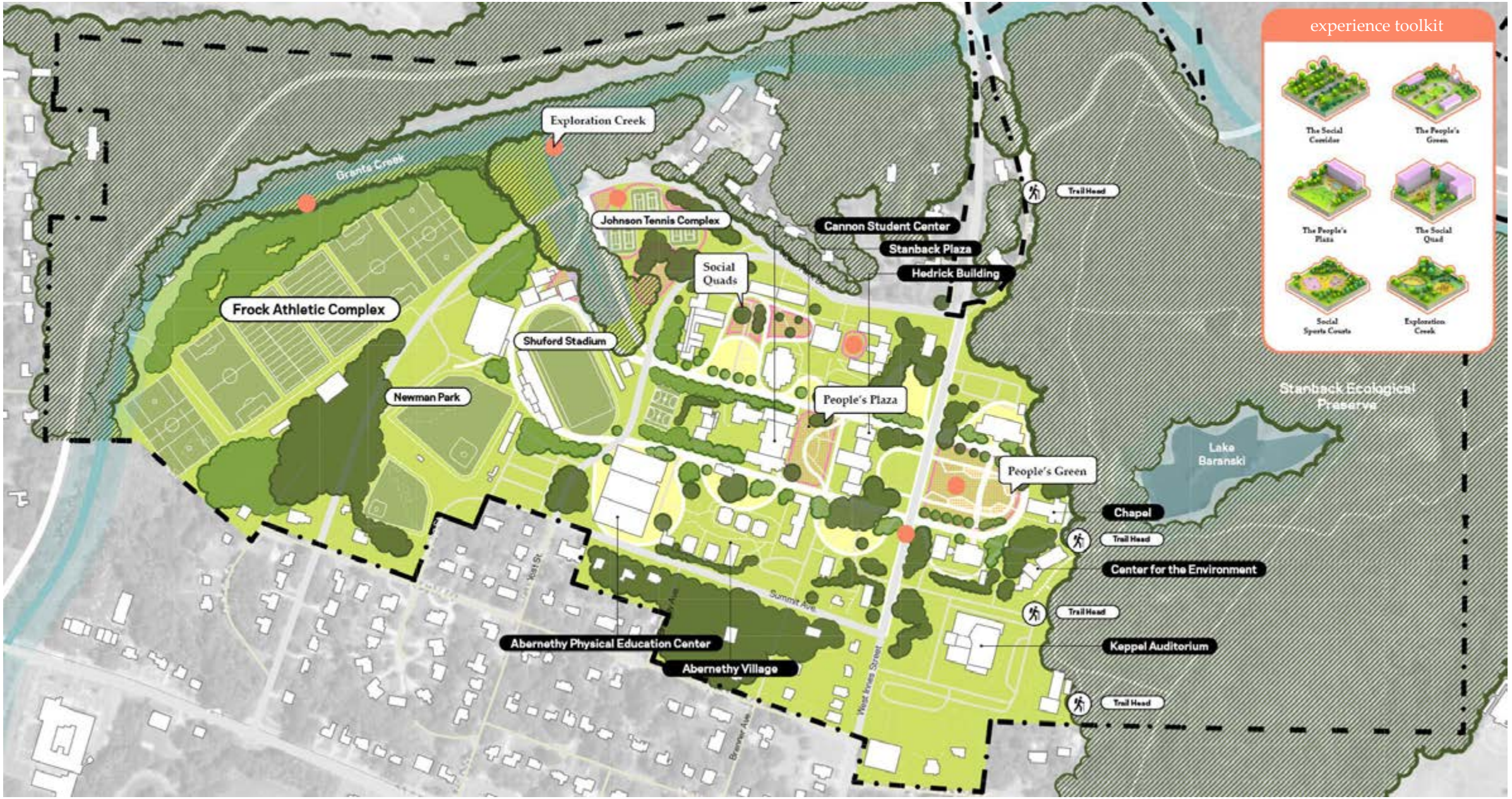
The Learning Framework establishes a pedestrian loop, linking diverse destinations that blend learning, community and nature into a seamless campus experience

CAMPUS PLANNING FRAMEWORKS

CAMPUS DESTINATIONS - EXPERIENCE

Campus Destinations: *The Experience Framework* centers on the human scale, shaping how people move through, interact with, and feel within the Catawba College landscape. This plan envisions a cohesive, connected and inclusive campus environment that celebrates activity and recreation, health and wellbeing, campus life, and mobility and accessibility. Pedestrian connections through the core of the campus emphasize safety and accessibility. How do students connect to programmatic areas as it relates to campus life, social gathering spaces and recreation?

Placemaking serves as the cornerstone to the creation of campus life and meaningful student experiences on campus. What are the spaces for socialization and recreation that can be integrated into the landscape in a way that brings nature to the forefront? These spaces can serve multiple roles, from passive areas for quiet contemplation to active zones for recreation and social programming, enhancing both physical and emotional wellbeing. By weaving nature into the heart of the student experience, through shaded walks, social landscapes and immersive environments, the campus may generate dynamic personal experience through an ecosystem that supports physical, emotional and ecological health.

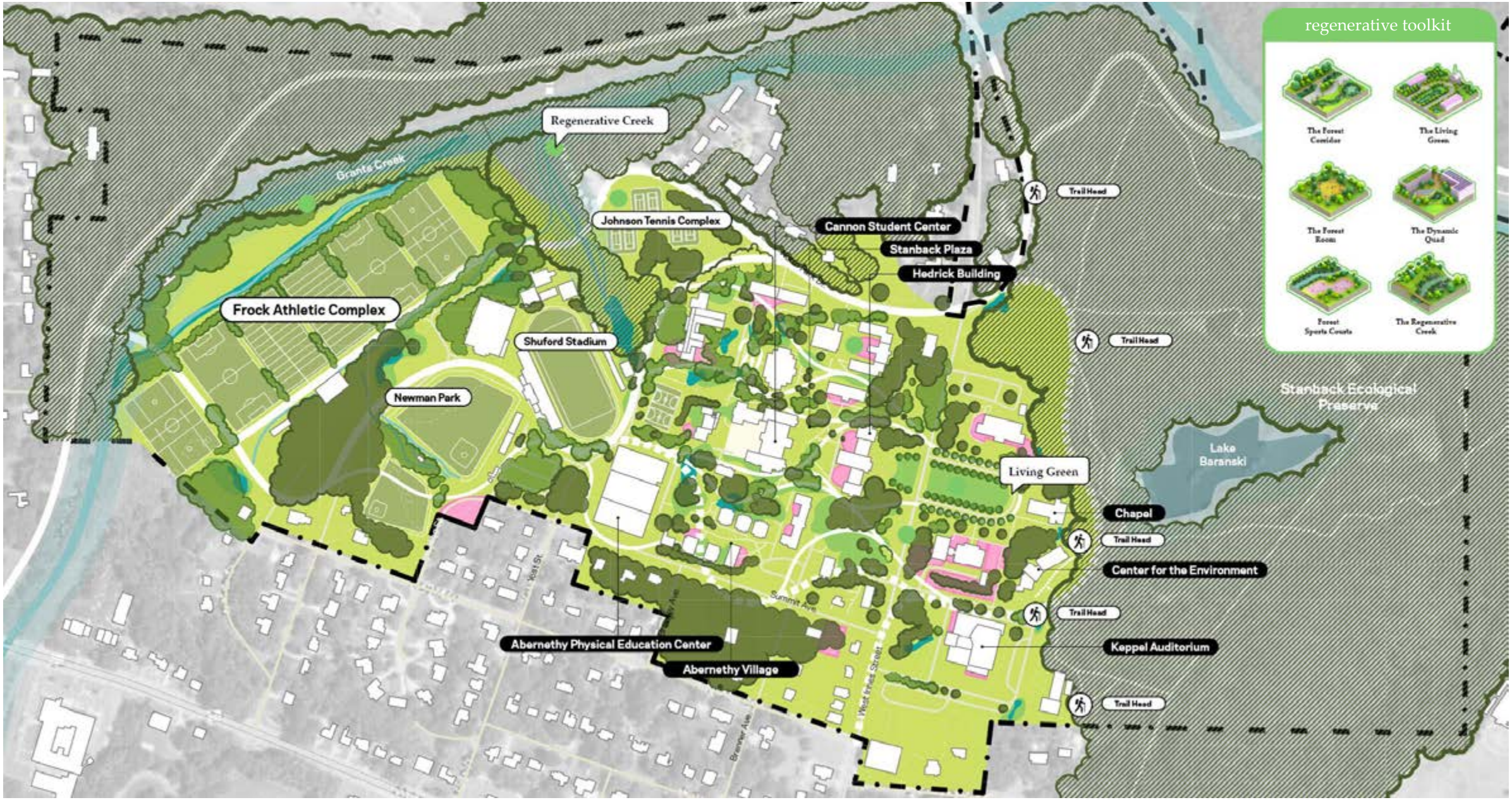

experience toolkit
The Social Corridor
The People's Green
The People's Plaza
The Social Quad
Social Sports Courts
Exploration Creek
Exploration Creek
Grants Creek
Johnson Tennis Complex
Cannon Student Center
Stanback Plaza
Hedrick Building
Trail Head
Social Quads
Frock Athletic Complex
Shuford Stadium
Newman Park
People's Plaza
People's Green
Stanback Ecological Preserve
Lake Baranski
Chapel
Trail Head
Center for the Environment
Trail Head
Keppel Auditorium
Trail Head
Abernethy Physical Education Center
Abernethy Village
West Kreis Street
Summit Ave
Brewer Ave

CAMPUS PLANNING FRAMEWORKS

NATURAL ECOLOGY - REGENERATE

Natural Ecology: *The Regenerative Framework* focuses on the comprehensive consideration of what landscape projects can do to help restore and regenerate the natural ecosystem. How can we leave the campus better than we found it; functioning better ecologically? Our approach must be multi-faceted. For instance, how can we plan with the natural hydrology of the land to manage and celebrate water? How can our plant selections lead to a more habitable space for both people and wildlife? What maintenance strategies can be put in place to ensure our landscape is resilient? Where can we increase forest cover within the campus core?

Our framework explores how topography can guide the placement of trails and paths to integrate people's campus experience with nature, connecting regenerative projects with the social and learning experience on campus. Nature trails weave through these systems, offering immersive learning opportunities where science, ecology and recreation intersect. Each intervention treads lightly on the land, minimizing impervious surfaces and maximizing ecological productivity. The Regenerative Framework positions the campus as a living laboratory, a model for sustainability that demonstrates environmental stewardship, fosters climate resilience and provides students, faculty and visitors with daily experiences of ecological interdependence.


regenerative toolkit
The Forest Corridor
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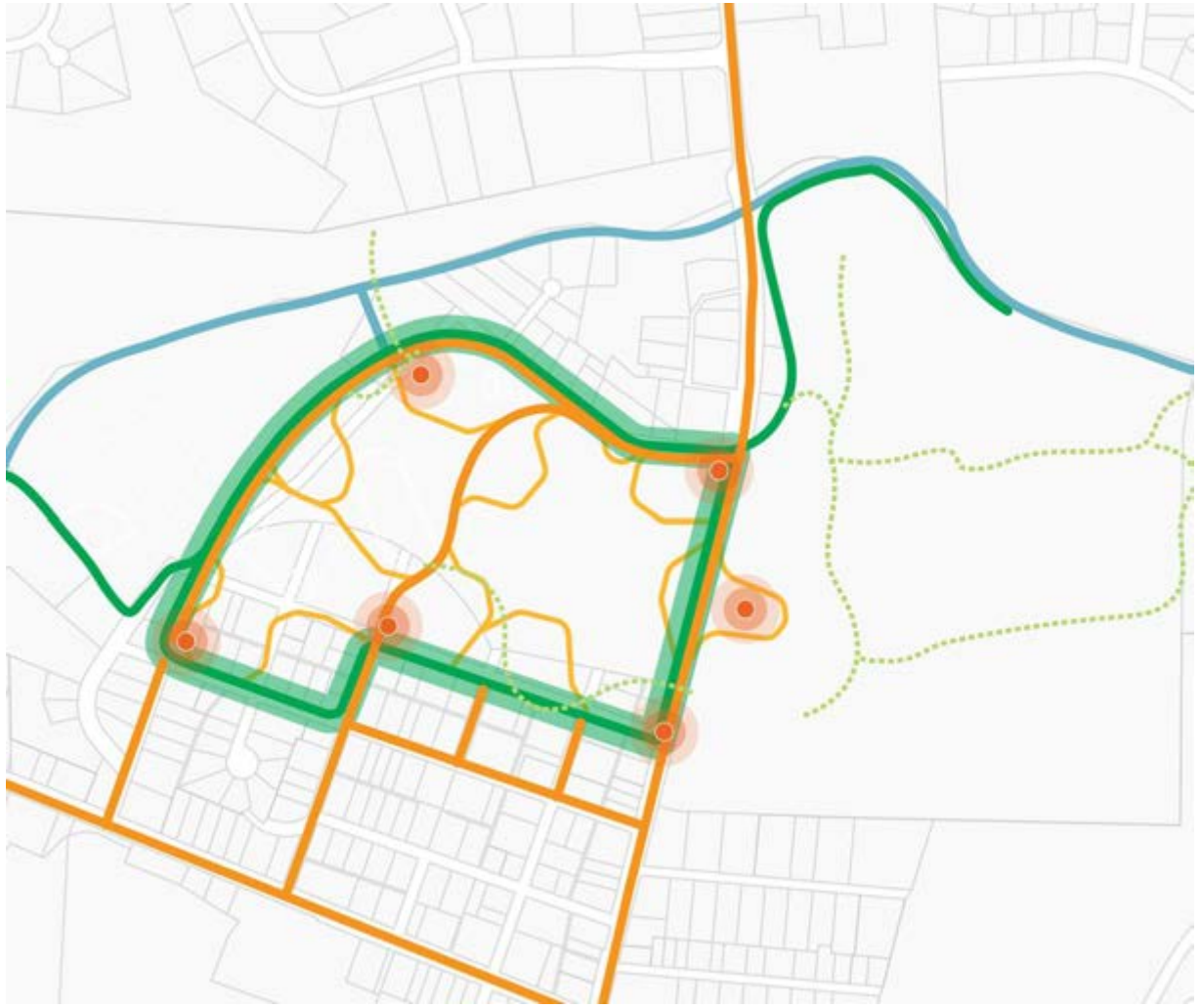
Keppel Auditorium
Abernethy Physical Education Center
Abernethy Village
West Kendall Street
Summit Ave
Brewer Ave
West St

CAMPUS PLANNING FRAMEWORKS

ACADEMIA & RESEARCH - LEARN

Academia & Research: *The Learning Framework* strengthens the academic core of Catawba College by transforming the campus into a living-learning laboratory. Through outdoor classrooms, structured plazas and pedestrian corridors, it creates a cohesive landscape that enhances circulation and collegiate character. Expansive tree-lined walkways connect academic, residential and cultural hubs, fostering a sense of procession and identity. This framework addresses both external and internal dimensions of campus life. First, what is the civic expression of the overall campus? Externally, campus edges and gateways express Catawba College's civic presence and values, with nature-rich entrances welcoming visitors and reinforcing the College's identity.

Internally, the campus becomes a dynamic educational environment where nature and academics are seamlessly integrated. A variety of passive, active and interactive spaces support experiential learning. Passive learning occurs in butterfly gardens, micro-forests and rain gardens with interpretive signage. Active learning takes place in outdoor classrooms, nature-based recreation areas, and greenhouses. Interactive research opportunities emerge through the study of ecological performance, resilience and regeneration. Together, these elements foster interdisciplinary exploration, hands-on engagement and a deeper connection to place. The Learning Framework positions Catawba College as a leader in nature-based education, cultivating a campus where landscape and learning are inseparable.




learning toolkit
The Campus Corridor
The Campus Green
The Academic Plaza
The Celebration Quad
Celebration Courts
The Living Lab
Living Lab
Grants Creek
Johnson Tennis Complex
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Brevard Ave
York St

CATAWBA COLLEGE REGENERATIVE CAMPUS LANDSCAPE PLAN

REGENERATIVE CAMPUS PLAN

CATAWBA CANOPY

The campus plan illustrates the **Catawba Canopy** as the unifying expression of a regenerative campus: an integrative landscape where experience, ecology and learning come together as a thriving environment and community. Integrating the frameworks of Experience, Regenerate, and Learn, the canopy weaves together dynamic landscapes, forests, outdoor classrooms and research spaces to shape a campus that nurtures both people and the planet.

As this canopy grows, it forms a dynamic ecology that links the academic core to the nature preserve, restoring biodiversity and strengthening resilience, while defining Catawba College's evolving identity. As the Greenway branches through campus, **Catawba Corridors** emerge as dynamic linear sequences of gardens, micro-forests and vernal pools to connect daily destinations, transforming movement into an immersive experience with nature. Courtyards and clearings become adaptable environments for student life and learning, while the establishment of the **Catawba College Botanical Garden** offers a native landscape celebrating Piedmont ecology, community gathering and place-based discovery.

The Catawba Canopy lays the foundations for a regenerative roadmap. By integrating hydrology, habitat, culture and academic life, the Catawba Canopy grows into a living campus where nature is both teacher and host, positioning Catawba College as a model of stewardship, experiential education and ecological belonging.

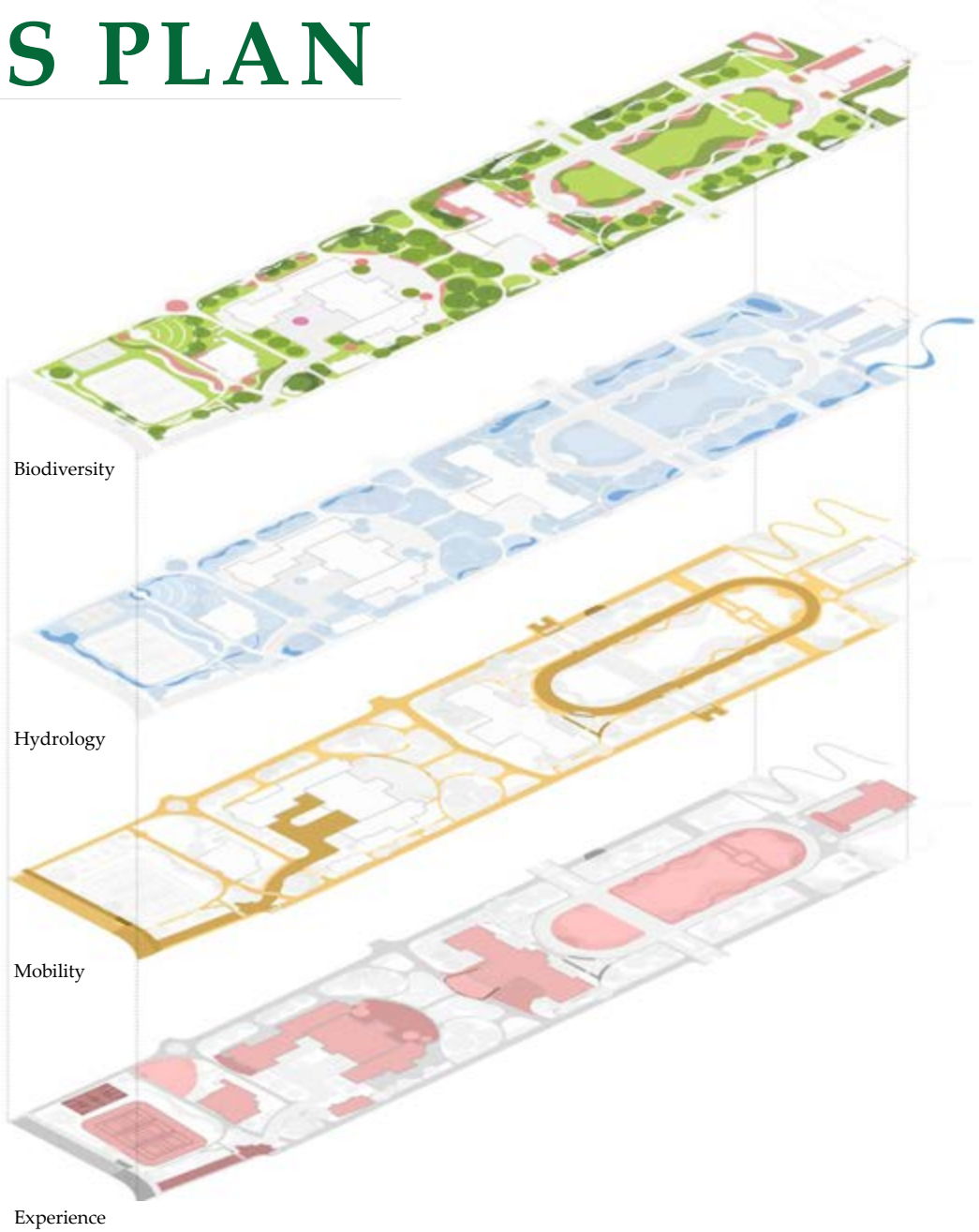
REGENERATIVE CAMPUS PLAN

FRAMEWORKS INTEGRATION

The integration of frameworks translates the vision of the Catawba Canopy into place-based strategies across eight key campus zones, each with a distinct programmatic theme. Together, these zones demonstrate how the principles and frameworks of Experience, Regenerate, and Learn intersect to create a cohesive, regenerative campus environment. Within each zone, the plan illustrates how movement systems, ecological restoration and outdoor learning environments layer together to shape meaningful daily interactions with the landscape.

The following key plans highlight zone-specific strategies, ranging from enhanced pedestrian corridors and habitat restoration areas to gardens, social spaces and outdoor learning environments. Accompanying visual matrices illustrate how amenities, destinations and ecological features work in concert, forming a seamless network of immersive natural experiences.

Collectively, these integrated zones demonstrate how the Catawba Canopy functions as a unifying framework, guiding the evolution of a campus that nurtures community connection, ecological resilience and a culture of learning rooted in place.



ILLUSTRATIVE PLAN

CAMPUS LEGEND

COLOR	LANDSCAPE CHARACTERISTIC
	Managed Landscape
	Sports Field
	Prairie
	Woodland Understory
	New Woodland Canopy
	Existing Woodland Canopy
	Flowering & Fruit Trees
	Wildflowers
	Garden
	Riparian Corridor
	Stream Channel / Thalweg
	Activity Area
	Courtyard / Primary Pathways
	Secondary Pathways
	Pedestrian Priority Road
	Pervious Paved Road
	Asphalt Road
	Building
	Solar Canopy
	Trellis

0′ 80′ 160′ 320′ 640′

CAMPUS ZONES

KEY AREAS

The Catawba College's "Campus as Forest" vision into place-based strategies across seven key campus development zones, each with a distinct programmatic theme.

1. Campus Green
2. Performing Arts
3. Hoke Village
4. Campus Heart
5. Abernethy Village
6. Grants Camp
7. Athletics

STRATEGIES & PLACES

FRAMEWORK LEGEND

EXPERIENCE

- E1 Outdoor Fitness
- E2 Hiking Trail
- E3 Slide, Swings & Play Zone
- E4 Fishing
- E5 Water Recreation
- E6 Tree Walk
- E7 Zipline
- E8 Bouldering
- E9 Forest Bathing
- E10 Meditation Area
- E11 Hydrological Respite
- E12 Campsite
- E13 Night Sky Access
- E14 Planted Terrace
- E15 Covered Pavilion
- E16 Hammocks & Tree Nets
- E17 Sculptural Landmarks
- E18 Fire Pits
- E19 Outdoor Dining
- E20 Events Stage
- E21 Terraced Seating
- E22 Social Plaza
- E23 Outdoor Kitchen
- E24 Engraved Pavement
- E25 Platforms & Ramps
- E26 Noise Buffer
- E27 Vegetated Nook
- E28 Moon Garden

REGENERATE

- R1 Permeable Pavement
- R2 Rain Garden
- R3 Bioswale Channels
- R4 Rainwater Collection Barrel
- R5 Check Dam
- R6 Stormwater Retention Pond
- R7 Terraced Wetland
- R8 Subsurface Infiltration Gallery
- R9 Riparian Buffer
- R10 Bird & Bat Boxes
- R11 Community Garden
- R12 Pollinator Garden
- R13 Beehives & Insect Hotels
- R14 Edible Garden
- R15 Living Wall
- R16 Forest Permaculture
- R17 Tiny Forest
- R18 Formal Botanical Garden
- R19 Rock / Boulder Garden
- R20 Rewilding Piedmont Prairies
- R21 Rewilding Piedmont Uplands & Forest
- R22 Ecological Preserve Ecotone
- R23 Landscape Composting
- R24 Seed Bank
- R25 Vermiculture
- R26 Biochar Production
- R27 Nursery
- R28 Wildlife-Friendly Agriculture
- R29 Bio Generator
- R30 Greenhouse

LEARN

- L1 Wayfinding Node
- L2 Ethnobotany Garden
- L3 Zen Garden
- L4 Bird Blinds
- L5 Biome Exhibition Area
- L6 Food Forest
- L7 Contemplation Garden
- L8 Nature Classroom
- L9 Study / Social Nook
- L10 Indoor / Outdoor Library
- L11 Formal Outdoor Classroom
- L12 Cabins
- L13 Outdoor Amphitheater
- L14 Outdoor Performance Venue
- L15 Wildlife Trackers
- L16 Wildfire Sensors
- L17 Weather Station
- L18 Soil & Water Quality Sensors
- L19 Nurse Logs / Cadaver Lab
- L20 Aquaponics
- L21 Regenerative Building
- L22 Chicken Coop
- L23 Garden Center
- L24 Processing Kitchen
- L25 Brew Center
- L26 Permaculture Education Center
- L27 Learning Trail
- L28 Treehouses

CAMPUS GREEN

KEY PLAN

CAMPUS GREEN

PROGRAMMATIC THEME

THE BOTANICAL GARDEN

The Campus Green celebrates the natural beauty and biodiversity of the Piedmont Region.

Through the establishment of a formal Botanical Garden and the rewilding of Piedmont forests, prairies, uplands and lowlands, the Campus Green is transformed into a vibrant and verdant ecosystem where the Catawba community can gather, learn from and experience the native flora and fauna of the region. The Campus Plan restores and enhances the ecotone along the eastern edge of campus, connecting the Campus Green with the adjoining Ecological Preserve. This creates habitat and migration corridors for fauna and pollinators.

CAMPUS GREEN

FRAMEWORKS PLAN

EXPERIENCE

- E2 Hiking Trails
- E9 Forest Bathing
- E13 Night Sky Access
- E17 Natural / Sculptural Landmarks
- E24 Engraved Paving
- E26 Noise Buffer

REGENERATE

- R1 Permeable Pavement
- R2 Rain Garden
- R4 Rainwater Collection Barrel
- R13 Beehives & Insect Hotels
- R18 Formal Botanical Garden
- R21 Rewilding Piedmont Uplands & Forest
- R22 Ecological Preserve Ecotone
- R30 Greenhouse

LEARN

- L1 Wayfinding Node
- L4 Bird Blind
- L5 Biome Exhibition Area
- L11 Formal Outdoor Classroom
- L15 Wildlife Trackers
- L16 Wildfire Sensors
- L18 Soil & Water Quality Sensors
- L25 Regenerative Building

CAMPUS GREEN

EXPERIENCE STRATEGIES & PLACES

The Campus Green offers an immersive botanical landscape where the Catawba community can gather, stroll and connect with the beauty and diversity of the Piedmont Region.

Piedmont Wildflowers

Upland Forest

Forest Bathing

Piedmont Forest

Hiking Trails

Night Sky Access

Light Garden

Sculptural Landmarks

CAMPUS GREEN

REGENERATE STRATEGIES & PLACES

Through rewilded forests, prairies, uplands and lowlands, the Campus Green restores native habitats and strengthens ecological corridors that link the campus to the adjoining nature preserve.


Permeable Pavement


Beehives & Insect Hotels


Ecological Preserve Ecotone


Bioswale Channels


Greenhouse


Rewilding Piedmont Prairies


Rain Gardens


Botanical Garden


Rewilding Piedmont Uplands & Forest

CAMPUS GREEN

LEARN STRATEGIES & PLACES

The formal Botanical Garden and surrounding restored ecologies create a living classroom where students and visitors can study, interpret, and experience the region's native flora and fauna.

Biome Exhibition Area

Bird Blinds

Wildlife Tracking

Formal Outdoor Classroom

Soil & Water Quality Sensors

Wayfinding Node

Regenerative Building

Wildfire Sensors "Pyri"

PERFORMING ARTS

KEY PLAN

PERFORMING ARTS

PROGRAMMATIC THEME

THE AMPHITHEATER

The Performing Arts District invites the Catawba Community to gather and celebrate in nature.

Nestled between the Center for the Environment and Keppel Auditorium, a lush outdoor amphitheater offers a formal setting for ceremonies, performances, and shared cultural moments. This expressive landscape blends art and ecology through native plantings, sculpted landforms and integrated water-management features, supported by an edible garden, moonlight garden and flexible rehearsal and performance spaces.

As the southern gateway to campus, strengthened pathways and visual connections create a cultural corridor that supports daily creativity, spontaneous gathering and programmed events. Together, these elements cultivate a dynamic environment where performance and nature harmonize.

PERFORMING ARTS

FRAMEWORK LEGEND

EXPERIENCE

- E3 Slides, Swings & Play Zone
- E26 Noise Buffer
- E27 Vegetated Nook
- E28 Moon Garden

REGENERATE

- R2 Rain Garden
- R3 Bioswale Channels
- R4 Rainwater Collection Barrel
- R5 Check Dam
- R10 Bird & Bat Boxes
- R18 Formal Botanical Garden
- R14 Edible Garden
- R22 Ecological Preserve Ecotone

LEARN

- L1 Wayfinding Node
- L11 Formal Outdoor Classroom
- L13 Outdoor Amphitheater
- L14 Outdoor Performance Venue
- L18 Soil & Water Quality Sensors
- L19 Nurse Logs / Cadaver Lab

PERFORMING ARTS

EXPERIENCE STRATEGIES & PLACES

The Performing Arts District offers vibrant spaces, anchored by an amphitheater, where the community can enjoy performances, celebrations and informal creative expression within a lush natural backdrop.

Moon Garden

Shaded Pathways

Noise Buffers

Summer/Winter Garden

Outdoor Performance Space

Outdoor Campus Play Area

Vegetated Nooks

PERFORMING ARTS

REGENERATE STRATEGIES & PLACES

Integrated water management landscapes, native plantings and ecologically-supportive features such as an edible garden and moonlight garden restore environmental function while creating climate-adaptive performance environments.

Check Dam

Rain Garden

Edible Garden

Rainwater Collection Barrel

Ecological Preserve Ecotone

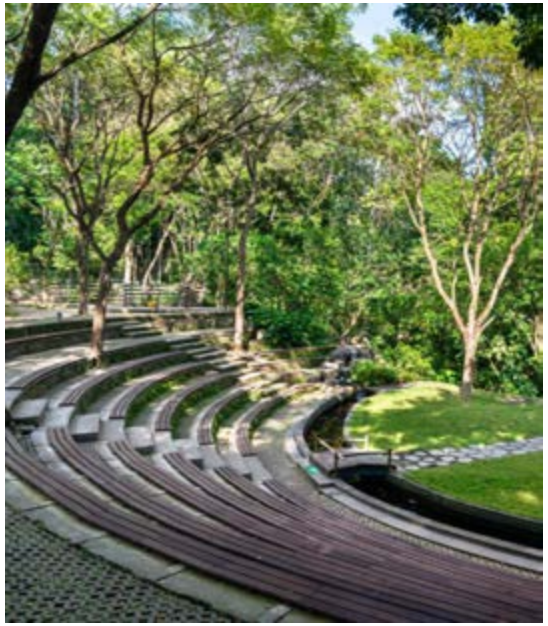
Bioswale Channels

Bird & Bat Boxes

PERFORMING ARTS

LEARN STRATEGIES & PLACES

Outdoor stages, rehearsal lawns, interpretive plantings and working landscape features provide hands-on opportunities for students to study performance, ecology and sustainable design within a living, open-air classroom.



Outdoor Amphitheater

Outdoor Performance Venue

Formal Outdoor Classroom

Wayfinding Node

Nurse Logs

Soil & Water Quality Sensors

HOKE VILLAGE

KEY PLAN

HOKE VILLAGE

PROGRAMMATIC THEME

THE PATIO

Hoke Village serves as Catawba's outdoor living room, a welcoming, flexible landscape extending the comfort of residential life into the open air.

The Patio anchors the northern residential zone as a lively hub for learning, wellness and tradition, offering shaded seating, hammocks and restorative niches that invite reflection and unhurried downtime. Tiny forests define the northwest edge, while a northern grove opens into a rolling native landscape threaded with an alluvial stream and meditation garden, enriching the rewilded understory.

Outdoor kitchens, fire pits and communal spaces strengthen daily connection, while adjacency to the Greenway and Grant's Creek nature preserve deepens walkability, ecological engagement and the harmony of residential life.

HOKE VILLAGE

FRAMEWORK LEGEND

EXPERIENCE

- E3 Slides, Swings & Play Zone
- E10 Meditation Area
- E16 Hammocks & Tree Nets
- E18 Fire Pits
- E22 Social Plaza
- E23 Outdoor Kitchen Area
- E33 Platforms & Ramps

REGENERATE

- R1 Permeable Pavement
- R2 Rain Garden
- R3 Bioswale Channels
- R10 Bird & Bat Boxes
- R12 Pollinator Garden
- R15 Living Wall
- R17 Tiny Forest
- R20 Rewilding Piedmont Prairies
- R21 Rewilding Piedmont Uplands & Forest

LEARN

- L1 Wayfinding Node
- L11 Formal Outdoor Classroom
- L14 Outdoor Performance Venue
- L17 Weather Station
- L18 Soil & Water Quality Sensors

HOKE VILLAGE

EXPERIENCE STRATEGIES & PLACES

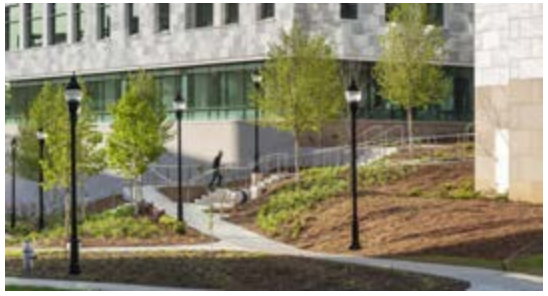
Hoke Residential Village offers patios, play areas, outdoor living rooms, hammocks, fire pits and meditation areas where students can relax, connect, and participate in traditions within a warm, home-like environment linked to the campus greenway.

Slides, Swings & Play Zone

Hammocks & Tree Nets

Fire Pits & Gathering Areas

Meditation/Reflection Areas



Platforms & Ramps

Social Plaza

Outdoor Kitchen Area

HOKE VILLAGE

REGENERATE STRATEGIES & PLACES

Native plantings, rewilded understories, tiny forests and restored hydrologic features, including an alluvial stream, enhance habitat quality, strengthen ecological corridors, and connect Hoke Village to the Grant's Creek inlet.

Permeable Pavement

Pollinator Garden

Native Ground Cover / No Bare Soil

Bioswale Channels

Rewilding Piedmont Prairies

Tiny Forest

Rain Garden

Bird & Bat Boxes

HOKE VILLAGE

LEARN STRATEGIES & PLACES

Outdoor kitchens, study terraces, interpretive landscapes and the meditation garden offer residents hands-on opportunities to engage with ecological processes, hydrology and community stewardship in a living residential environment.

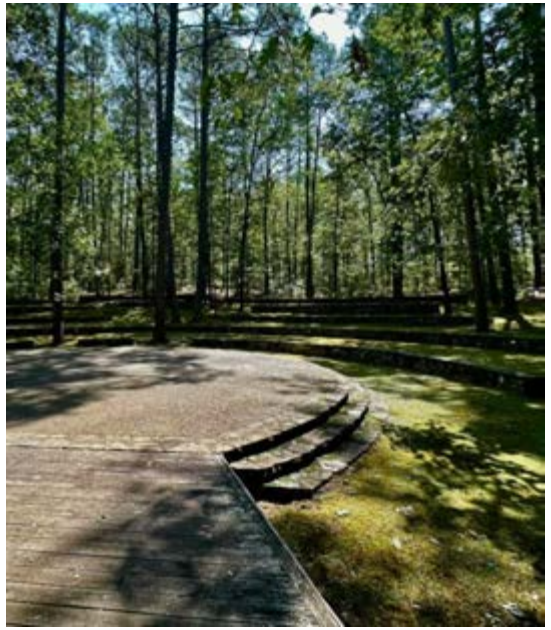
Small Outdoor Classroom

Solar Benches

Study / Social Nooks

Weather Station

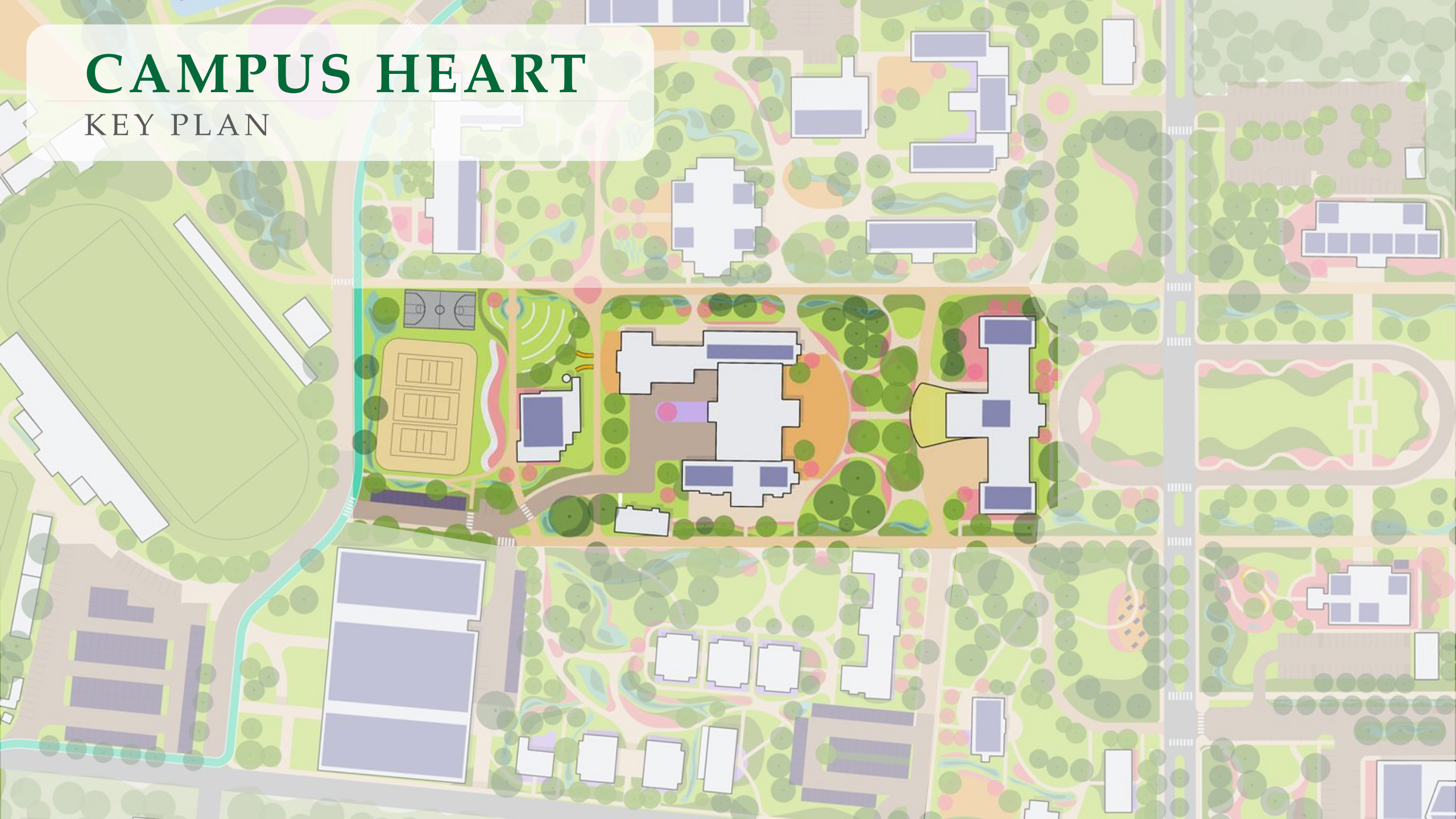
Pollinator Gardens

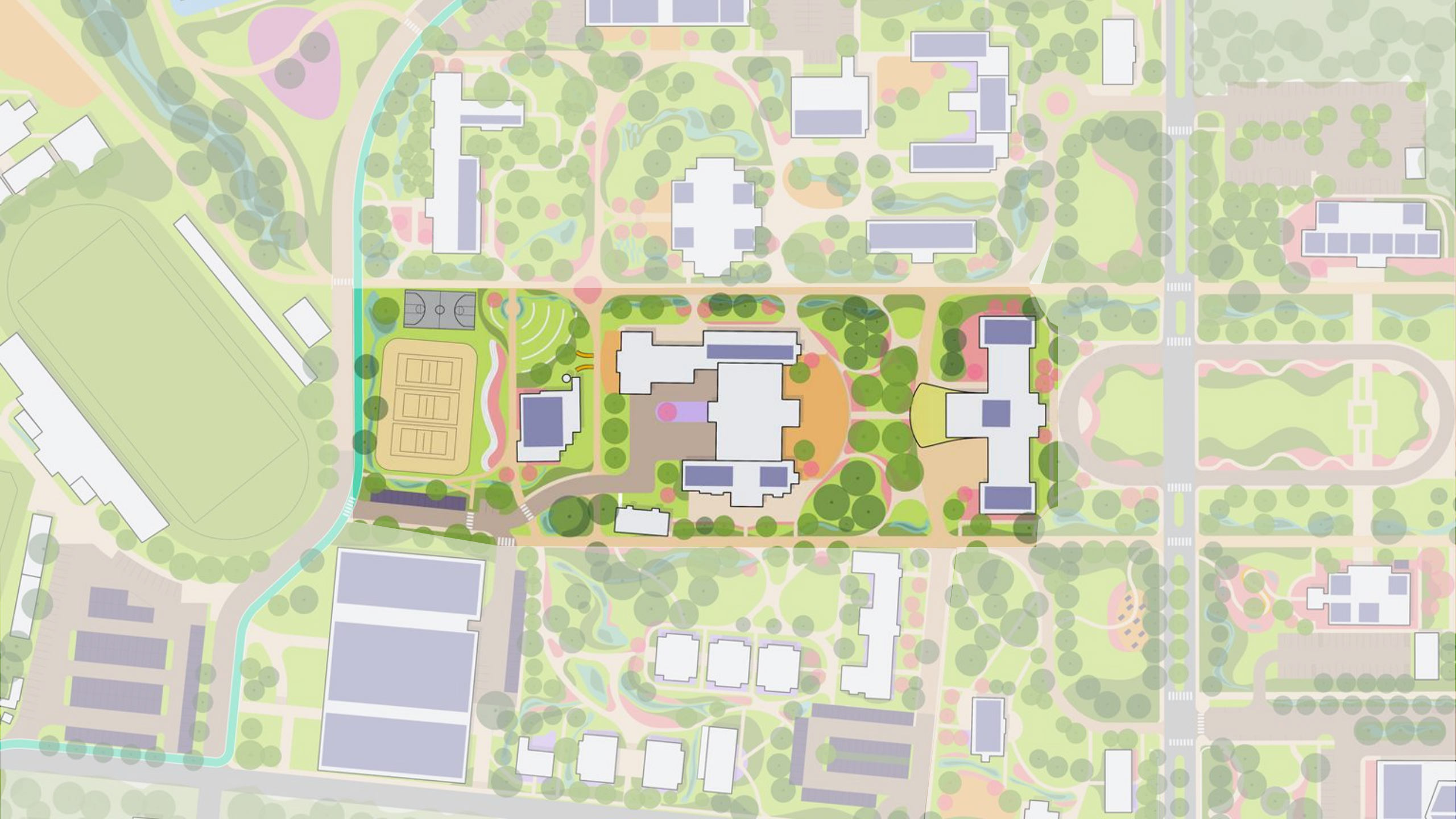


Informal Outdoor Venue

CAMPUS HEART

KEY PLAN





CAMPUS HEART

PROGRAMMATIC THEME

THE SOCIAL PLAZA

The Campus Heart is the social, academic and cultural crossroads of Catawba College: a dynamic, people-centered landscape that celebrates community life and the vitality of the student experience.

Transforming Stanback Plaza and the Smokestack fields creates an active, welcoming commons where nourishment, collaboration, celebration and daily rhythms converge. Terraced lawns, shaded plazas, and flexible gathering spaces invite students, faculty, and visitors to meet, share meals, study outdoors, and engage in campus traditions.

Strengthened pedestrian connections link academic, residential and student-life districts, creating seamless movement through a human-scaled environment. Native plantings, restored understories and vernal water features embed the Campus Heart within the broader regenerative landscape framework.

CAMPUS HEART

FRAMEWORK LEGEND

EXPERIENCE

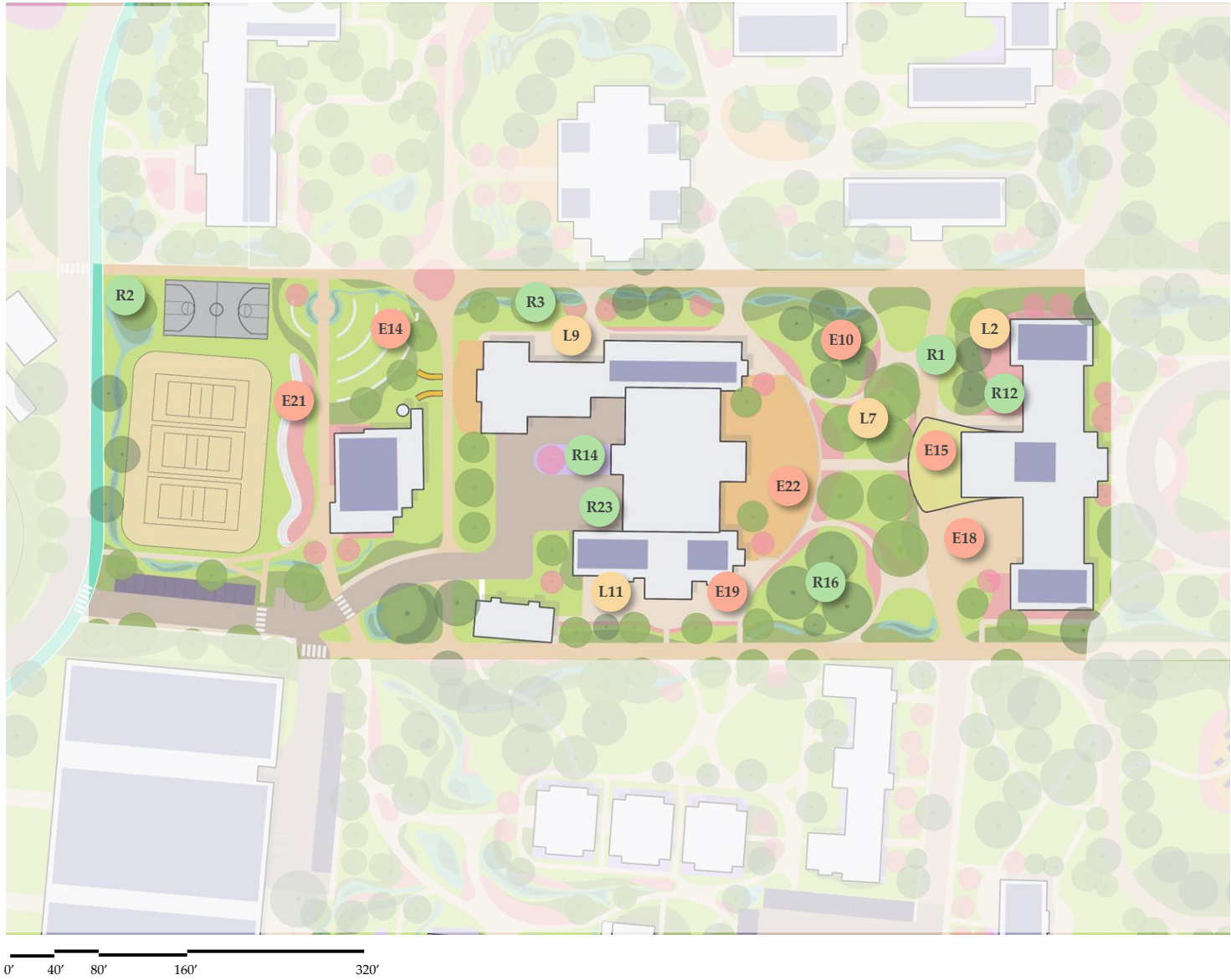
- E10 Meditation Area
- E14 Planted Terrace
- E15 Covered Pavilion
- E19 Outdoor Dining
- E18 Fire Pits
- E21 Terraced Seating
- E22 Social Plaza

REGENERATE

- R1 Permeable Pavement
- R2 Rain Garden
- R3 Bioswale Channels
- R12 Pollinator Garden
- R14 Edible Garden
- R16 Forest Permaculture
- R23 Landscape Composting

LEARN

- L2 Ethnobotany Garden
- L7 Contemplation Garden
- L9 Study / Social Nook
- L11 Formal Outdoor Classroom



CAMPUS HEART

EXPERIENCE STRATEGIES & PLACES

The Campus Heart offers lively plazas, outdoor dining terraces, shaded lawns and flexible gathering zones where the Catawba community can meet, celebrate, study and share daily life at the crossroads of campus.

Site Furnishing / Varied Seating Choices

Unique Gathering Spaces

Slides & Play Zone

Social Plaza

Fire Pits

Outdoor Dinning

Terraced Seating / Amphitheater

CAMPUS HEART

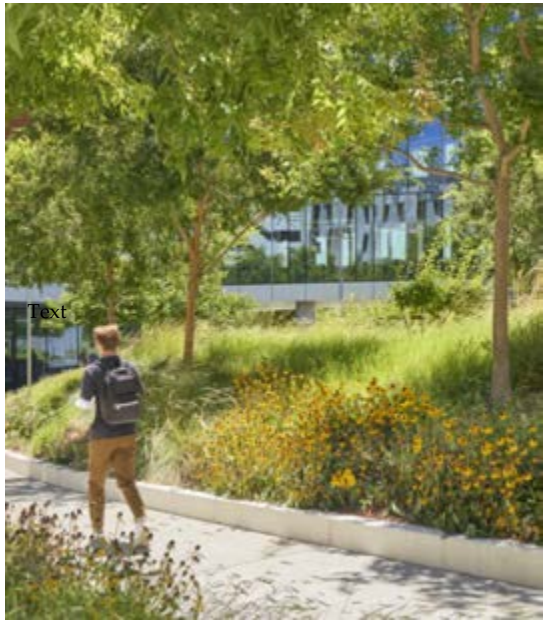
REGENERATE STRATEGIES & PLACES

Native plantings, rewilded understories and integrated stormwater elements weave ecological function into the campus core, strengthening environmental performance and linking the Heart to the broader regenerative landscape network.

Pollinator Gardens

Sponge Surfaces

Permeable Pavement



Text

Reforestation

Bioretention Media

Intensive Green Roofs

Bioswale Channels

Landscape Composting

CAMPUS HEART

LEARN STRATEGIES & PLACES

Interpretive plantings, outdoor classrooms, and collaborative study environments around Hedrick and the Cannon Center create opportunities for students to engage with community life, environmental systems, and interdisciplinary learning in an active campus hub.

Pollinator Gardens

Edible Garden

Solar Benches

Transitional Environments

Study / Social Nooks

Contemplation Garden

A/V Equipment

Solar Panels

ABERNETHY VILLAGE

KEY PLAN

ABERNETHY VILLAGE

PROGRAMMATIC THEME

THE BACKYARD

Abernethy Village is Catawba's backyard: an inviting, nature-rich living landscape where the community can feel at home within nature.

Native plantings, shaded courtyards, community gardens and rewilded understories create a vibrant residential ecosystem that supports daily life. Open lawns host informal recreation, from lawn games to yoga, while woodland edges and quiet niches offer respite with hammocks and shaded seating. Social lawns, outdoor study terraces and flexible gathering spaces knit residence halls together, fostering comfort and belonging. Enhanced ecological edges and pedestrian corridors link Abernathy Village to surrounding landscapes, creating a welcoming residential zone where nature supports wellbeing, community and everyday campus life.

ABERNETHY VILLAGE

FRAMEWORK LEGEND

EXPERIENCE

- E3 Slides, Swings & Play Zone
- E8 Bouldering / Rock Climbing
- E15 Covered Pavilion
- E16 Hammocks & Tree Nets
- E19 Outdoor Dinning
- E21 Terraced Seating

REGENERATE

- R1 Permeable Pavement
- R2 Rain Garden
- R3 Bioswale Channels
- R10 Bird & Bat Boxes
- R12 Pollinator Garden
- R21 Rewilding Piedmont Uplands & Forest

LEARN

- L9 Study / Social Nook
- L10 Indoor / Outdoor Library
- L14 Outdoor Performance Venue
- L11 Formal Outdoor Classroom
- L18 Soil & Water Quality Sensors

ABERNETHY VILLAGE

EXPERIENCE STRATEGIES & PLACES

The Abernethy Village offers inviting courtyards, play lawns, hammocks, and social spaces where students can gather informally, relax and feel at home within a landscape and forest area designed for comfort and community.

Slides, Swings & Play Zone

Social Spaces

Terraced Seating

Hammocks & Tree Nets

Illuminated Grove

Outdoor Dinning

ABERNETHY VILLAGE

REGENERATE STRATGIES & PLACES

Native plantings and restored understories enhance habitat, strengthen ecological connectivity and integrate residential life into the campus's broader regenerative systems.

Permeable Pavement

Pollinator Garden

Native Ground Cover / No Bare Soil

Bioswale Channels

Rewilding Piedmont Prairies

Tiny Forest

Rain Garden

Bird & Bat Boxes

ABERNETHY VILLAGE

LEARN STRATEGIES & PLACES

Community gardens, interpretive landscapes and outdoor study areas create opportunities for students to learn from the living environment and develop stewardship practices woven into daily residential life.

Formal Outdoor Classroom

Solar Benches

Pollinator Gardens

Reading Lounge Greenhouse

Study / Social Nooks

Informal Outdoor Venue

Small Outdoor Classroom

Weather Station

Soil & Water Quality Sensors

GRANTS CAMP

KEY PLAN

GRANTS CAMP

PROGRAMMATIC THEME

THE FRONTIER

Grants Camp creates an immersive nature experience for the Catawba Community, celebrating the rugged and ecological richness of the Grant's Creek corridor.

The Campus Plan establishes a campground along Grants Creek on the edge of campus dedicated to outdoor recreation and engagement with the natural world. Grants Camp invites the Catawba Community to foster meaningful relationships with nature, develop their confidence and skills in navigating the outdoors and support environmental stewardship and advocacy.

Rehabilitating the riparian buffer along Grants Creek provides opportunities for water recreation, hydrological respite, wildlife observation and foraging. By reconnecting the creek corridor to surrounding forests and meadows, the Campus Plan strengthens habitat continuity and expands the regenerative network that links Grants Camp to the Greenway and adjoining preserve.

GRANTS CAMP

FRAMEWORK LEGEND

EXPERIENCE

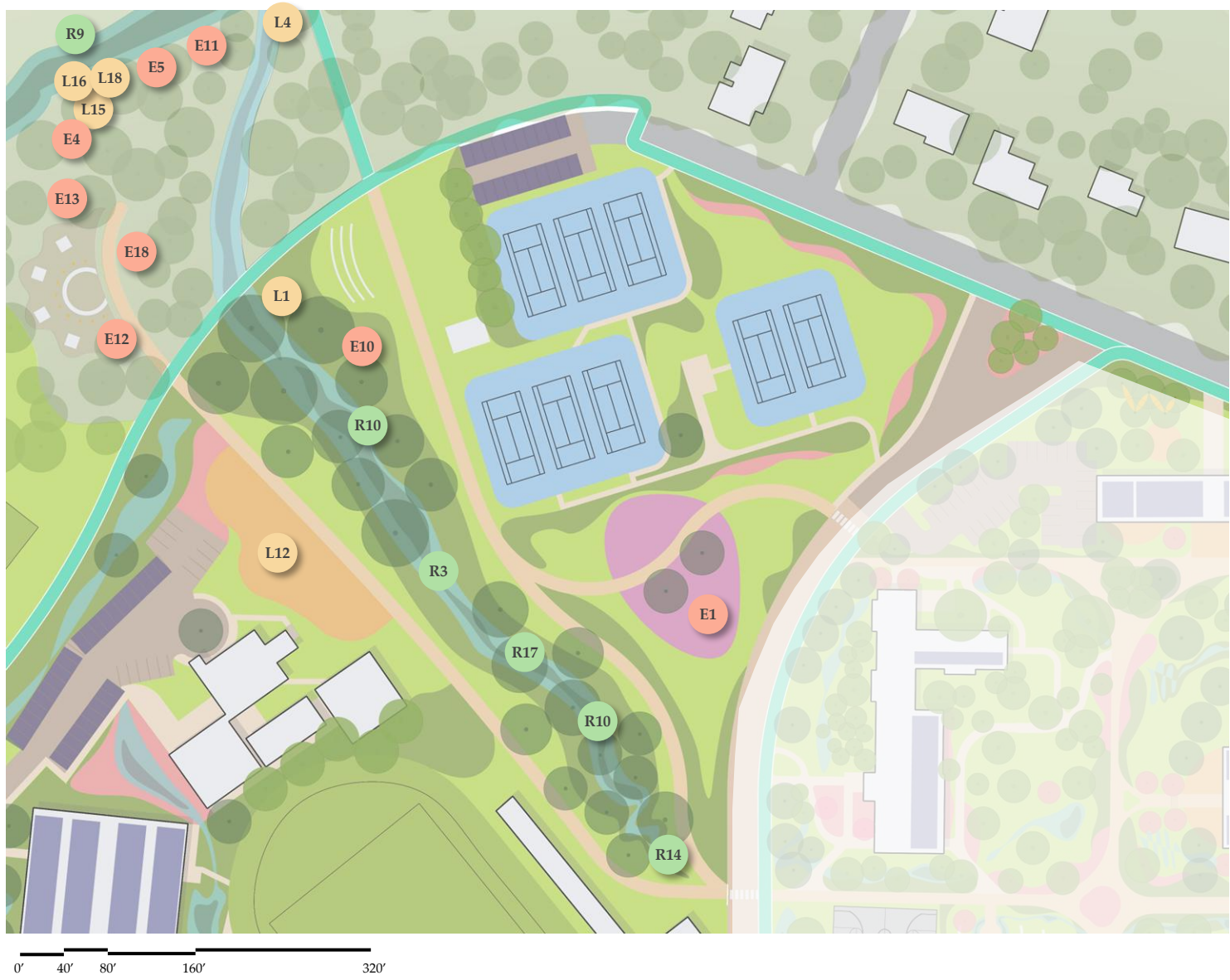
- E1 Outdoor Fitness Zone
- E4 Fishing
- E5 Water Recreation
- E10 Meditation Area
- E11 Hydrological Respite
- E12 Campsite
- E13 Night Sky Access
- E18 Fire Pits

REGENERATE

- R2 Rain Garden
- R3 Bioswale Channels
- R9 Riparian Buffer
- R10 Bird & Bat Boxes
- R13 Beehives & Insect Hotels
- R14 Edible Garden
- R17 Tiny Forest

LEARN

- L1 Wayfinding Node
- L4 Bird Blind
- L8 Nature Classroom
- L12 Formal Outdoor Classroom
- L15 Wildlife Trackers
- L16 Wildfire Sensors
- L18 Soil & Water Quality Sensors



GRANTS CAMP

EXPERIENCE STRATEGIES & PLACES

The Frontier offers an immersive landscape where the Catawba community can camp, hike, paddle, forage, observe wildlife and explore the living dynamics of the Grant's Creek corridor.

Campsite

Hydrological respite

Outdoor Fitness Zone

Fishing

Trail Infrastructure

Fire Pits

Water Recreation

Night Sky Access

GRANTS CAMP

REGENERATE STRATEGIES & PLACES

Riparian rehabilitation, rewilded meadows and restored creek habitats improve water quality, expand wildlife pathways and strengthen ecological connections throughout the northern campus edge.

Riparian Support

Rain Gardens

Bird & Bat Boxes

Tiny Forest

Brush Clearing

Invasive Species Management

Silviculture

GRANTS CAMP

LEARN STRATEGIES & PLACES

Campgrounds, stewardship zones and interpretive ecological areas create a hands-on learning environment where students can study restoration ecology, watershed systems and the practices of environmental stewardship.

Nature Classroom

Formal Outdoor Classroom

Wayfinding Node

Birding

Wildlife Trackers

Wilderness Training

ATHLETICS

KEY PLAN

ATHLETICS

PROGRAMMATIC THEME

FOREST-FRAMED FIELDS

Forest-Framed Fields create an immersive nature experience for the Catawba Community, celebrating the rugged and ecological richness of the Grant's Creek corridor.

Restored woodlands, native meadows, uplands, and creekside buffers create a living ecological framework around fields, courts and training areas. Recreation, celebration and competition, including pep rallies, tailgating and concerts, unfold within a landscape that highlights regional biodiversity and strengthens connections between sport, wellness and nature.

The Campus Plan enhances wooded edges and the riparian corridor along Grant's Creek, improving water quality, expanding habitat and linking the Forest-Framed Fields to the campus greenway and Ecological Preserve. This continuous ecotone supports wildlife movement and reinforces the regenerative campus network.

ATHLETICS

FRAMEWORK LEGEND

EXPERIENCE

- E3 Slides, Swings & Play Zone
- E6 Tree Walk
- E11 Hydrological Respite
- E15 Shaded Pavillion
- E19 Outdoor Dinning
- E20 Events Stage
- E23 Outdoor Kitchen Area

REGENERATE

- R2 Rain Garden
- R6 Stormwater Retention Pond
- R8 Subsurface Infiltration Gallery
- R9 Riparian Buffer
- R10 Bird & Bat Boxes
- R12 Pollinator Garden
- R16 Forest Permaculture
- R19 Rock / Boulder Garden

LEARN

- L1 Wayfinding Node
- L4 Bird Blind
- L5 Food Forest
- L11 Outdoor Performance Venue
- L15 Wildlife Trackers
- L16 Wildfire Sensors
- L18 Soil & Water Quality Sensors

ATHLETICS

EXPERIENCE STRATEGIES & PLACES

The Forest-Framed Fields offer a dynamic setting where athletes, students, alumni and visitors can train, compete, tailgate, attend pep rallies and concerts and gather within a landscape shaped by native forests, meadows and the character of the Piedmont, all connected by the Salisbury Greenway.

Outdoor Performance Venue

Shaded Pavillion

Fitness Equipment

Food Trucks

Bouldering / Rock Climbing

Yoga Platforms

Outdoor Kitchen Area

Ropes Course

ATHLETICS

REGENERATE STRATEGIES & PLACES

Restored woodland edges, creekside buffers and native meadows protect Grant's Creek, enhance habitat value and strengthen ecological corridors that connect seamlessly to the campus preserve and surrounding natural systems.

Rock / Boulder Garden

Bird & Bat Boxes

Rain Garden

Pollinator Garden

Riparian Buffer

Forest Permaculture

Subsurface infiltration Gallery

ATHLETICS

LEARN STRATEGIES & PLACES

Interpretive woodland trails, field-edge plantings and ecological buffers create opportunities for students and visitors to explore native ecosystems, understand riparian and watershed stewardship and experience the relationship between performance, ecology and place.

Events Stage

Bird Blind

Wildlife Trackers

Wayfinding Node

Wildfire Sensors

Food Forest

Soil & Water Quality Sensors

CATAWBA COLLEGE REGENERATIVE CAMPUS LANDSCAPE PLAN

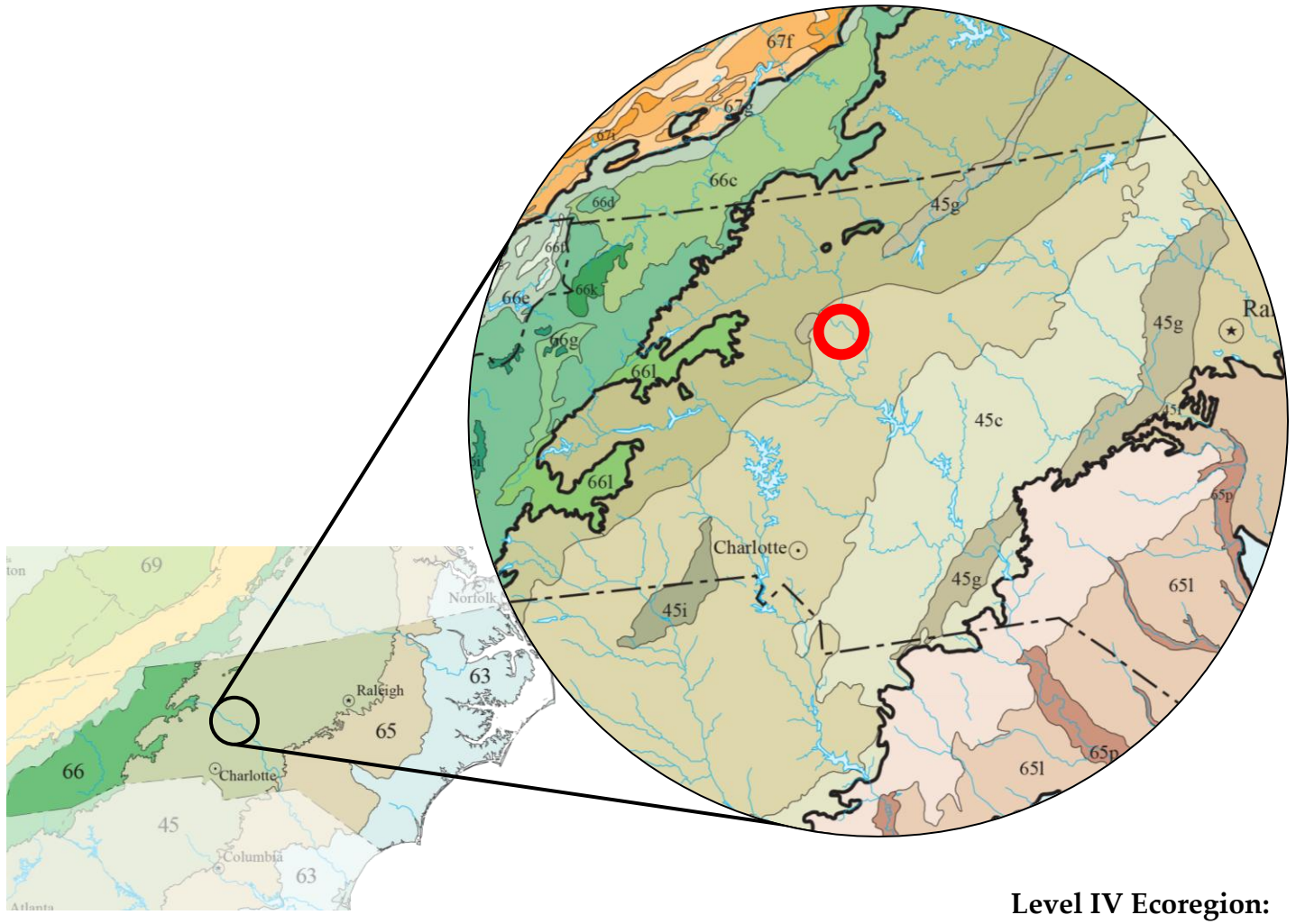
KEY LANDSCAPE CHARACTERISTICS

KEY LANDSCAPE CHARACTERISTICS

PIEDMONT REGION

North Carolina's Piedmont Ecoregion offers a rich ecological foundation that deeply informs and inspires Catawba College's Regenerative Campus Landscape Plan. Situated between the Coastal Plain and the Appalachian Mountains, the Piedmont is characterized by **warm-temperate climate, rolling topography, and deeply weathered clay soils** that support resilient and diverse ecosystems. Catawba College lies within the Appalachian Piedmont Forests Ecoregion, specifically the **Southern Outer Piedmont**, where native vegetation historically included **oak-hickory and pine woodlands interspersed with prairies, savannas, and diverse understory habitats.**

These landscape characteristics provide a clear **ecological blueprint** for regeneration on campus. The structure of Piedmont forests, the hydrology of upland streams, and the adaptability of native plant communities guide strategies for reforestation, water management, and habitat enhancement. By aligning campus design with these **natural patterns**, the regenerative plan seeks to restore ecosystem services, strengthen biodiversity, and ensure that Catawba's landscape becomes a living expression of its surrounding regional ecology.



Level III Ecoregion:
APPALACHIAN PIEDMONT FORESTS

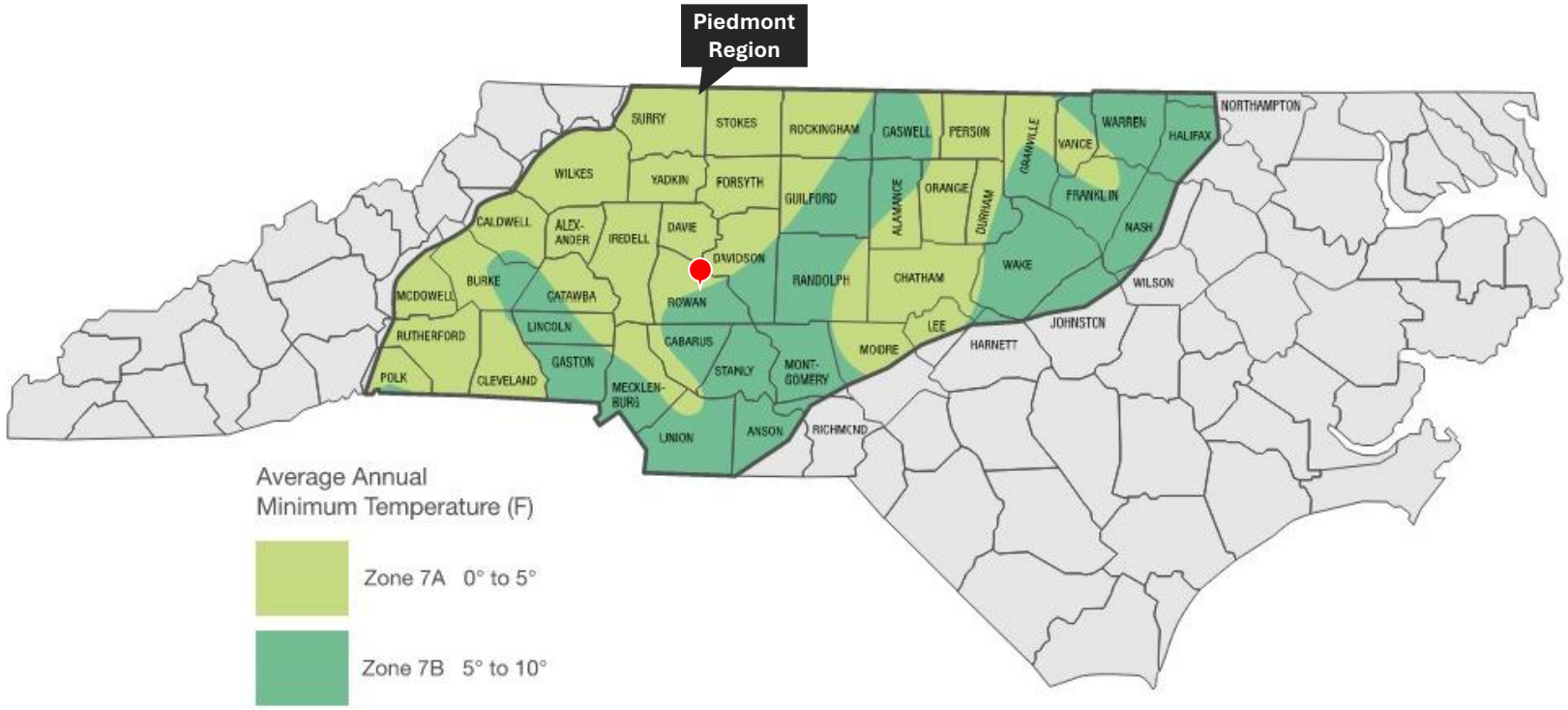
Level IV Ecoregion:
SOUTHERN OUTER PIEDMONT

Source: U.S. Environmental Protection Agency, 2013, Level III and IV ecoregions of the Continental United States: Corvallis, Oregon, U.S. EPA, National Health and Environmental Effects Research Laboratory, map scale: 1:3,000,000 Level III and IV Ecoregions of the Continental United States | US EPA

KEY LANDSCAPE CHARACTERISTICS

PIEDMONT REGION

- The campus and Rowan County fall within **Plant Hardiness Zones 7a and 7b** – both temperate climate zones that can host a large variety of plants and shrubs.
- Zones 7a and 7b both have a **medium-length growing season** (120-180 days)
- Warm, humid summers provide sufficient rainfall for plant growth, while winter temperatures rarely reach minimum temperatures for too long.



Source: NC Piedmont Landscaping, A Native Plant Guide Provided by the North Carolina Native Plant Society.
Used with Permission from The North Carolina Native Plant Society.

KEY LANDSCAPE CHARACTERISTICS

PIEDMONT REGION

- **North Carolina's Piedmont Region** is characterized by low, rolling hills with elevations ranging from about 300 to 1,800 feet.

- The bedrock is covered in most places by deep, heavily weathered soils, with **red clay soil closest to the surface.**

- Natural Communities present in the Piedmont Region include:
  - Dry-Mesic Oak--Hickory Forest
  - Loblolly-shortleaf Pine forests
  - Piedmont Alluvial Forests
  - Piedmont Prairie

Credits: Used with Permission from The North Carolina Native Plant Society and Photographer (Lisa Lofland Gould - LFG).

KEY LANDSCAPE CHARACTERISTICS

PIEDMONT REGION

Dry Oak-Hickory Forest (Piedmont Subtype)

Ecosystem:

- Upland hardwood forest of acidic soils occurring in the driest environments produced by normal Piedmont topography – **mostly south slopes**
- Shrubs range from sparse to dense, while the herb layer tends to be sparse

Dominant Species:

- Dominated mostly by **White Oaks** (*Quercus alba*), along with **Post Oak** (*Quercus stellata*), and **Southern Red Oak** (Quercus falcata)
- Other frequent species include White Hickory (*Carya tomentosa)*, Pignut Hickory (*Carya glabra)*, Virginia Pine (*Pinus virginiana)* and Loblolly Pine (*Pinus taeda)*.

Context:

- It grades to Dry Mesic Oak-Hickory Forest in less dry sites downhill on **different slope aspects**

White Oak

Virginia Pine

Credits: Used by Permission of The North Carolina Native Plant Society and Photographers (Bettina Darveaux-BD, Will Stuart-WCS)

KEY LANDSCAPE CHARACTERISTICS

PIEDMONT REGION

Loblolly-shortleaf pine forests

Ecosystem:

- One of the **major native forest** type in the Southern Outer Piedmont Region – occur naturally throughout most of the Piedmont with tolerance for heavy clay soils
- Important as habitat for white-tailed deer, northern bobwhite, wild turkey, and grey fox squirrels

Dominant Species:

- Shortleaf pine (*Pinus echinata*), Virginia pine (*Pinus virginiana*) and Loblolly pine (*Pines taeda*)

Context:

- Widely planted for timber plantations –these plantations are well suited for some fauna
- After farms were abandoned, most of the Piedmont seeded in naturally

Loblolly Pine

Shortleaf Pine

Credits: Used by Permission of The North Carolina Native Plant Society and Photographers (Bettina Darveaux-BD, Lisa Lofland Gould-LFG)

KEY LANDSCAPE CHARACTERISTICS

PIEDMONT REGION

Piedmont Alluvial Forests

Ecosystem:

- These are forests that occur along narrow floodplains and are bordered by any Piedmont upland community
- These forests occur on floodplains that lack levees, bottomlands, and swamps large enough to support distinct communities – which are intermittently flooded for brief periods

Dominant Species:

- A mixture of alluvial and upland species - most of the canopy is of widespread species such as **Sweetgum** (*Liquidambar styraciflua*) and **Tulip Poplar** (*Liriodendron tulipifera*)
- The herb layer is highly variable, with a broad range of potential species.

Context:

- Soils are fertile, loamy or sandy alluvial soil with limited horizon development

Polystichum acrostichoides

C. latifolium

Tulip poplar

Credits: Used by Permission of The North Carolina Native Plant Society and Photographers (Bettina Darveaux-BD, Larry Mellichamp-TLM, Jack Spruill-JS)

KEY LANDSCAPE CHARACTERISTICS

PIEDMONT REGION

Piedmont Prairies and Savannas

Ecosystem:

- **Grassland ecosystems** dominated by **grasses and herbaceous plants (non-woody**), with scattered or isolated trees
- Supports numerous species of po**llinators, birds, and small mammals**
- Prairies and savannas in the Piedmont are often associated with soils high in calcium, magnesium, and iron.

Dominant Species:

- A mix of grasses, wildflowers, and shrubs, with grasses like big bluestem (*Andropogon gerardii*) and little bluestem (*Schizachyrium scoparium*) as dominant species

Historic Context:

- Maintained by controlled grazing and fire – historically Native Americans played a key role in maintaining these grasslands using fire as land management tool

Andropogon gerardii

Credits: Used by Permission of The North Carolina Native Plant Society and Photographers (Bettina Darveaux-BD, Lisa Lofland Gould-LFG, Will Stuart-WCS)

KEY LANDSCAPE CHARACTERISTICS

PIEDMONT REGION AND CLIMATE ADAPTATION

Southeast Savannas & Riparian Forests

Ecosystem:

- This region falls within plant hardiness zones with a higher min. temperatures – Zones 8 or higher
- Are characterized by a mix of open, grassland areas with scattered trees and forests along rivers
- Key features include the dominance of fire-adapted species like longleaf pine, a subtropical or humid subtropical climate

Dominant Species:

- They have a diverse, multi-layered structure with moisture-dependent trees as the dominant feature
- Canopy is primarily dominated by the longleaf pine

Context:

- Potential reference biome for the Piedmont Region reflecting anticipated ecological shifts due to rising global temperatures in the coming decades.

Credits: Used by Permission of The North Carolina Native Plant Society and Photographers (Bettina Darveaux-BD, Lisa Lofland Gould-LFG)

CATAWBA COLLEGE REGENERATIVE CAMPUS LANDSCAPE PLAN

CONCEPTUAL LANDSCAPE PLANTING PALETTE

LANDSCAPE PLANTING PALETTE

INTRODUCTION

The Landscape Planting Palette provides a strategic plant selection framework that celebrates the key landscape characteristics of the Piedmont Region and contributes to the overall ecological, aesthetic and functional performance of the Catawba College Campus.

This Palette features a curated list of plant species that are native to the region, categorized across five (5) Landscape Zones:

1. Piedmont Woodland Canopy
2. Piedmont Woodland Understory
3. Riparian / Alluvial Zones
4. Piedmont Prairie / Wildflowers
5. Managed Landscape (Turf / Lawn)

Each plant species responds to the specific site conditions on campus, supports ecological function, provides wildlife habitat, establishes visual cohesion, and improves maintenance efficiency and long-term performance.

The palette serves as a decision-making framework that guides plant selection based on key criteria and helps guide design and construction coordination for landscape projects across the campus.

LANDSCAPE PLANTING PALETTE

LANDSCAPE ZONES

Piedmont Woodland Canopy

Piedmont Woodland Understory

Riparian / Alluvial

Piedmont Prairie / Wildflowers

Managed Landscape

LANDSCAPE PLANTING PALETTE

PLANTING PALETTE

	Plant Layer	Common Name	Botanical Name	Native (N) /Adapted (A)	Piedmont Woodland / Silviculture	Piedmont Woodland Understory	Riparian / Alluvial	Piedmont Prairie / Wildflowers	Managed Landscape
	CANOPY LAYER								
1,2	Large Trees	American Beech	*Fagus grandifolia*	N					
2	Large Trees	White Oak	*Quercus alba*	N					
2	Large Trees	Southern Red Oak	*Quercus falcata*	N					
2	Large Trees	Virginia Pine	*Pinus virginiana*	N					
2	Large Trees	Loblolly Pine	*Pinus taeda*	N					
2	Large Trees	Shortleaf pine	*Pinus echinata*	N					
1,2	Large Trees	American sycamore	*Platanus occidentalis*	N					
1,2	Large Trees	Sugar maple	*Acer saccharum*	N					
1,2	Large Trees	Tulip Poplar	*Liriodendron tulipifera*	N					
	MID-UNDERSTORY LAYER								
2	Small to Medium Trees	White Hickory	*Carya tomentosa*	N					
2	Small to Medium Trees	Pignut Hickory	*Carya glabra*	N					
2	Small to Medium Trees	River Birch	*Betula nigra*	N					
1	Small to Medium Trees	Wildfire tupelo	*Nyssa sylvatica 'Wildfire'*	N					
1	Small to Medium Trees	Sweetgum	*Liquidambar styraciflua*	N					
1	Small to Medium Trees	Sweetbay magnolia	*Magnolia virginiana*	N					
1,2	Small to Medium Trees	Sourhthern magnolia	*Magnolia grandiflora*	N					
1,2	Small to Medium Trees	American Hornbeam	*Carpinus caroliniana*	N					
1	Small to Medium Trees	Eastern Redbud	*Cercis canadiensis*	N					
	SHRUB - GROUND COVER LAYER								
	Shrubs	Red Chokeberry	*Aronia arbutifolia*	N					
1	Shrubs	Dwarf Fothergilla	*Fothergilla gardenii*	N					
1	Shrubs	Black Chokeberry	*Aronia melanocarpa*	N					
1	Shrubs	American Beautyberry	*Callicarpa americana*	N					
1	Shrubs	Hummingbird Summersweet	*Clethra alnifolia 'hummingbird'*	N					
1	Shrubs	Catawba Rhododendron	*Rhododendron catawbiense*	N					
	Shrubs	Northern Spicebush	*Lindera benzoin*	N					
	Shrubs	Pinxterbloom azalea	*Rhododendron periclymenoides*	N					
	Shrubs	Smooth black haw viburnum	*Viburnum prunifolium*	N					
	Flowering Perennials	Hollow Joe-Pye Weed	*Eutrochium fistulosum*	N					
	Flowering Perennials	Smooth Oxeye	*Heliopsis helianthoides*	N					

LANDSCAPE PLANTING PALETTE

PLANTING PALETTE

	Plant Layer	Common Name	Botanical Name	Native (N) /Adapted (A)	Piedmont Woodland / Silviculture	Piedmont Woodland Understory	Riparian / Alluvial	Piedmont Prairie / Wildflowers	Managed Landscape
	Flowering Perennials	Carolina Phlox	*Phlox carolina*	N					
	Flowering Perennials	Eastern bluestar	*Amsonia tabernaemontana*	N					
	Grasses & Sedges	Splitbeard Bluestem	*Andropogon ternarius*	N					
	Ferns	Cinnamon Fern	*Osmundastrum cinnamomeum*	N					
	Ferns	Christmas Fern	*Polystichum acrostichoides*	N					
2	Flowering Perennials	Gaillardia	*Gaillardia pulchella*	N					
2	Flowering Perennials	Blue cardinal flower	*Lobelia siphilitica*	N					
1	Flowering Perennials	Meadow Sage	*Salvia x sylvestris*	A					
1	Grasses & Sedges	Prairie Dropseed	*Sporobolus heterolepis*	N					
1	Grasses & Sedges	Northern Seat Oats	*Chasmanthium latifolium*	N					
1	Flowering Perennials	Yarrow	*Achillea millefolium*	N					
	Flowering Perennials	Orange Coneflower	*Rudbeckia fulgida*	N					
1	Flowering Perennials	Black-eyed Susan	*Rudbeckia hirta*	N					
1	Grasses & Sedges	Zoysiagrass	*Zoysia spp.*	A					
1	Grasses & Sedges	Pink Muhly grass	*Muhlenbergia capillaris*	N					
1	Grasses & Sedges	Carex Sedge	*Carex cherokeensis*	N					

[1] Consistent with LandDesign's palette for the New Residence Hall

[2] Present in the Fred Stanback Jr. Ecological Preserve/Catawba College Campus Grounds

All recommended plants are native or adapted to the Piedmont Region

LANDSCAPE PLANTING PALETTE

PIEDMONT WOODLAND CANOPY

Piedmont Woodland Canopy

CANOPY TREES

American Beech
Fagus grandifolia

White Oak
Quercus alba

Southern Red Oak
Quercus falcata

Virginia Pine
Pinus virginiana

Loblolly Pine
Pinus taeda

Shortleaf pine
Pinus echinata

Wildlife Value:
= attracts butterflies/ pollinators
= attracts songbirds
= attracts insects
= small mammals

LANDSCAPE PLANTING PALETTE

PIEDMONT WOODLAND UNDERSTORY

Piedmont Woodland Understory

MID-UNDERSTORY TREES

White Hickory
Carya tomentosa

Pignut Hickory
Carya glabra

SHRUBS

Red Chokeberry
Aronia arbutifolia

American Hornbeam
Carpinus caroliniana

Eastern Redbud
Cercis canadiensis

Dwarf Fothergilla
Fothergilla gardenii

Wildlife Value:
= attracts butterflies/ pollinators = attracts songbirds = attracts insects = small mammals

LANDSCAPE PLANTING PALETTE

PIEDMONT WOODLAND UNDERSTORY

Piedmont Woodland Understory

SHRUBS

Black Chokeberry
Aronia melanocarpa

Hummingbird Summersweet
Clethra alnifolia 'hummingbird'

Pinxterbloom azalea
Rhododendron periclymenoides

American Beautyberry
Callicarpa americana

Catawba Rhododendron
Rhododendron catawbiense

Northern Spicebush
Lindera benzoin

Wildlife Value:
= attracts butterflies/ pollinators
= attracts songbirds
= attracts insects
= small mammals

LANDSCAPE PLANTING PALETTE

RIPARIAN / ALLUVIAL

Riparian / Alluvial

CANOPY TREES

American Sycamore
Platanus occidentalis

Tulip Poplar
Liriodendron tulipifera

River Birch
Betula nigra

MID-UNDERSTORY

Sugar Maple
Acer saccharum

Wildfire Tupelo
Nyssa sylvatica 'Wildfire'

Sweetgum
Liquidambar styraciflua

Wildlife Value:
= attracts butterflies/ pollinators = attracts songbirds = attracts insects = small mammals

LANDSCAPE PLANTING PALETTE

PIEDMONT PRAIRIE / WILDFLOWERS

FLOWERING GRASSES

Piedmont Prairie / Wildflowers

Hollow Joe-Pye Weed
Eutrochium fistulosum

Smooth Oxeye
Heliopsis helianthoides

Carolina Phlox
Phlox carolina

Eastern bluestar
Amsonia tabernaemontana

Splitbeard Bluestem
Andropogon ternarius

Gaillardia
Gaillardia pulchella

Blue Cardinal Flower
Lobelia siphilitica

Meadow Sage
Salvia x sylvestris

Orange Coneflower
Rudbeckia fulgida

Yarrow
Achillea millefolium

Wildlife Value:
= attracts butterflies/ pollinators
= attracts songbirds
= attracts insects
= small mammals

LANDSCAPE PLANTING PALETTE

MANAGED LANDSCAPES

Managed Landscapes

TREES

Sweetbay magnolia
Magnolia virginiana

Sourhthern magnolia
Magnolia grandiflora

SHRUBS, FERNS AND GRASSES

Smooth black haw viburnum
Viburnum prunifolium

Prairie Dropseed
Sporobolus heterolepis

Black-eyed Susan
Rudbeckia hirta

Pink Muhly grass
Muhlenbergia capillaris

Cinnamon Fern
Osmundastrum cinnamomeum

Northern Seat Oats
Chasmanthium latifolium

Zoysiagrass
Zoysia spp.

Carex Sedge
Carex cherokeensis

Wildlife Value:

= attracts butterflies/ pollinators = attracts songbirds = attracts insects = small mammals

CATAWBA COLLEGE REGENERATIVE CAMPUS LANDSCAPE PLAN

PARKING STRATEGY

PARKING STRATEGY

EXISTING PARKING FACILITIES

EXISTING PARKING FACILITES	
ID	**FUNCTION**
P-1	Visitors, Commuter Students, Faculty, Staff
P-2	Visitors, Commuter Students, Faculty, Staff
P-3	Visitors, Commuter Students, Faculty, Staff
P-4	Faculty and staff only
P-5	Faculty, staff and Library/Chapel Visitors
P-6	Faculty, Staff, Resident Students
P-7	Admissions Visitors Only
P-8	Admissions Visitors Only
P-9	Resident students
P-10	Faculty and staff only
P-11	Public Safety, Student Affairs & Physical Plant
P-12	Public Safety, Student Affairs & Physical Plant
P-13	Faculty and staff only
P-14	Faculty and staff only
P-15	n/a
P-16	Faculty and staff only
P-17	n/a
P-18	-
P-19	Faculty and staff only
P-20	Faculty and staff only
P-21	Faculty and staff only
P-22	Commuter students, Faculty, Staff Only - close during game days
P-23	General: Students, Faculty & Staff
P-24	Staff & Visitors

PARKING STRATEGY

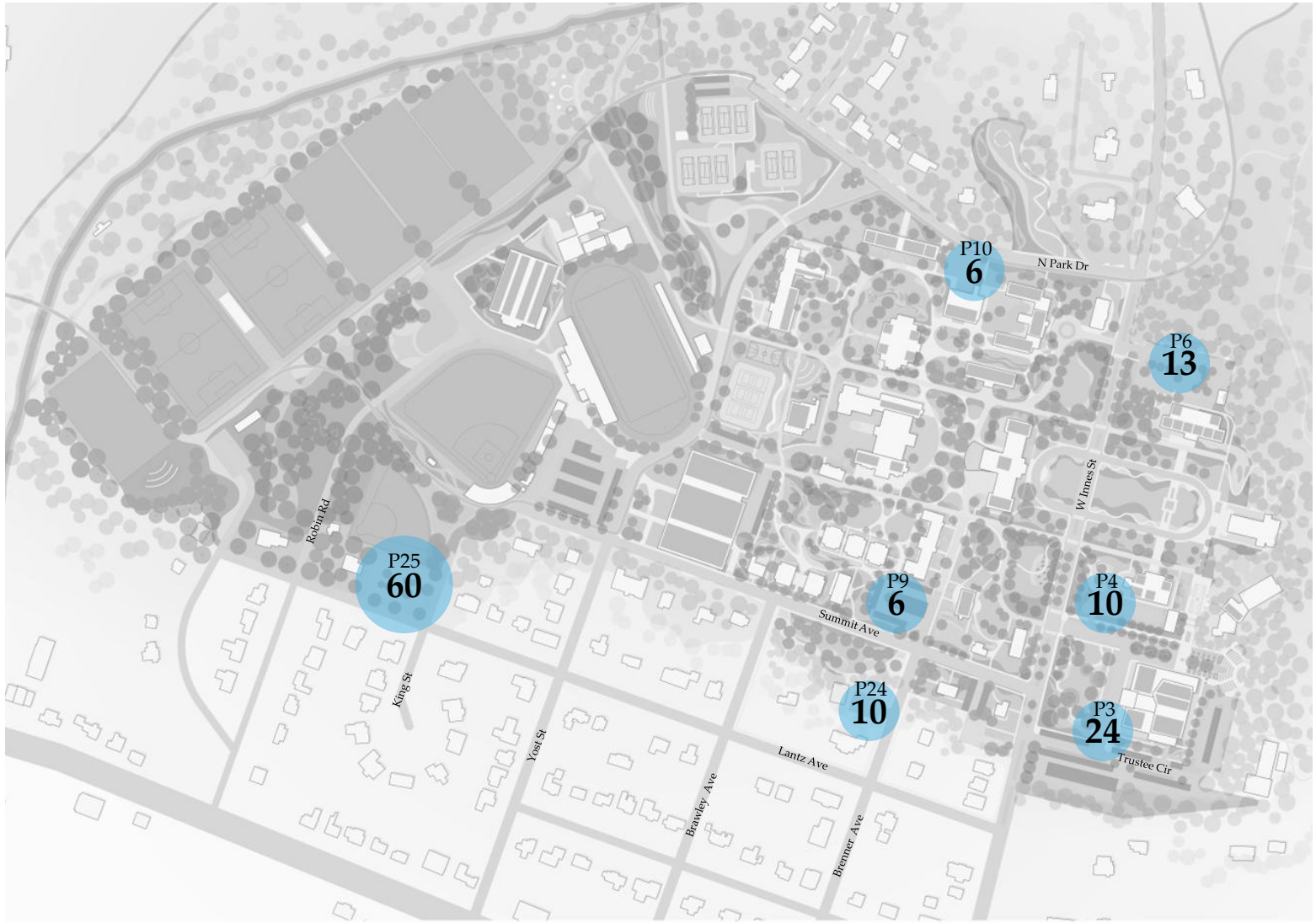
PARKING SPACES REMOVED

PARKING DEMO		
ID	**DESCRIPTION**	**COUNT**
P-1	Loss of parking spaces for addition of amphitheater	-8
P-3	Loss of parking spaces for addition of amphitheater	-13
P-5	Pedestrianized driveway along Campus Green	-93
P-14	Loss of parking spaces for added circulation	-2
	TOTAL DEMO	**-116**

PARKING STRATEGY

PROPOSED PARKING IMPROVEMENTS

PARKING IMPROVEMENTS		
ID	**DESCRIPTION**	**COUNT**
P-3	Re-configured curbside parking, angled to straight parking layout	24
P-4	Added spaces (10)	10
P-6	Added spaces (13), retaining wall needed	13
P-9	Re-configured parking layout	6
P-10	Re-configured parking layout	6
P-24	Added spaces (10)	10
P-25	New parking – End of Summit Ave	60
	TOTAL EXPANSION/REPLACEMENT	**129**



PARKING STRATEGY

PROPOSED PARKING IMPROVEMENTS

Performing Arts Parking Lots

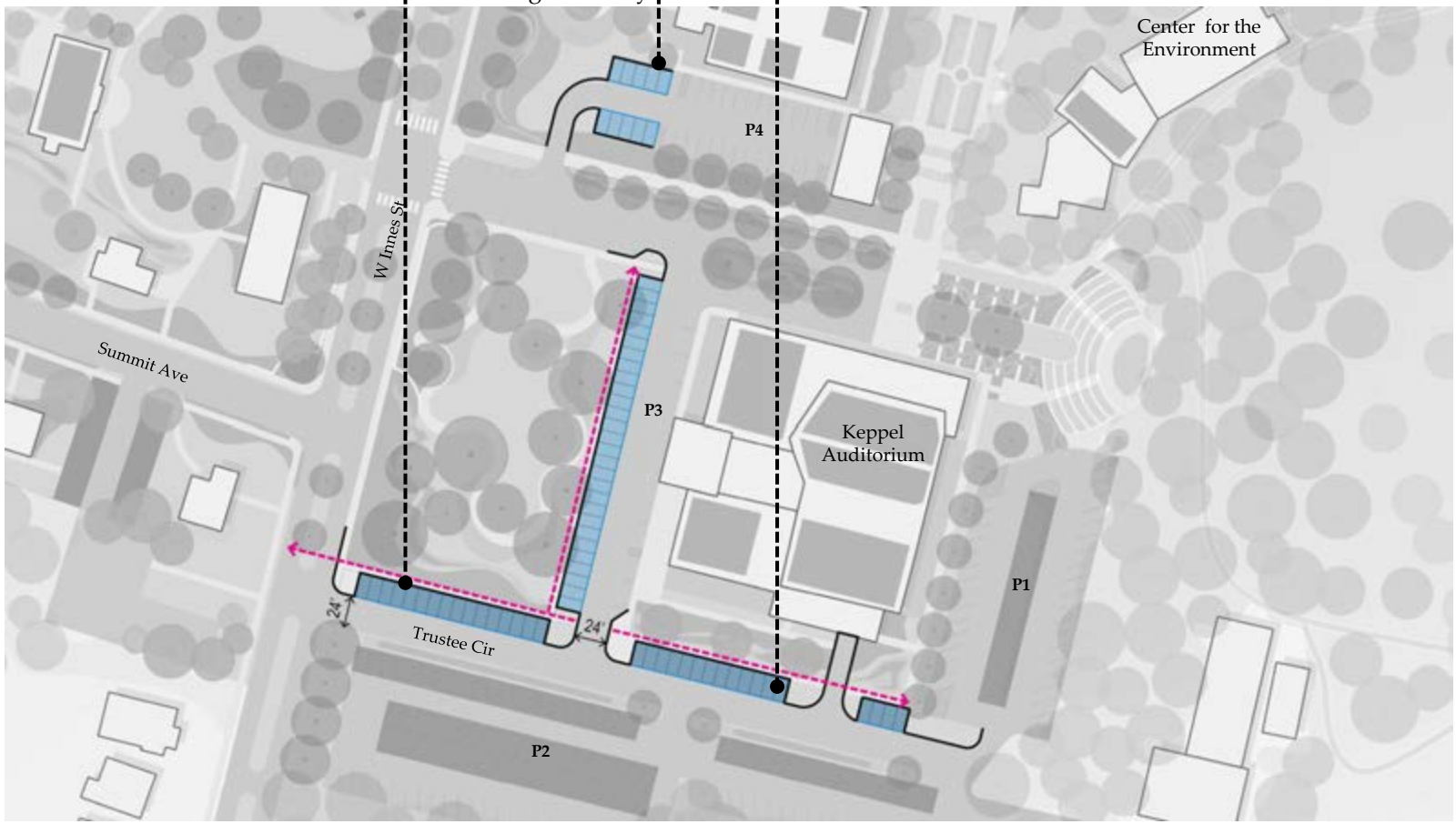
Existing conditions – P3 Trustee Circle Angled Parking

Existing conditions – P4 Access Driveway

<u>P3 Improvements</u>
Reconfiguration of angled parking spaces along Trustee Circle (+7 spaces)

<u>P4 Expansion</u>
Addition of (10) parking spaces along existing driveway

<u>P3 Expansion</u>
17 new parking spaces along the south side of the Keppel Auditorium



PARKING STRATEGY

PROPOSED PARKING IMPROVEMENTS

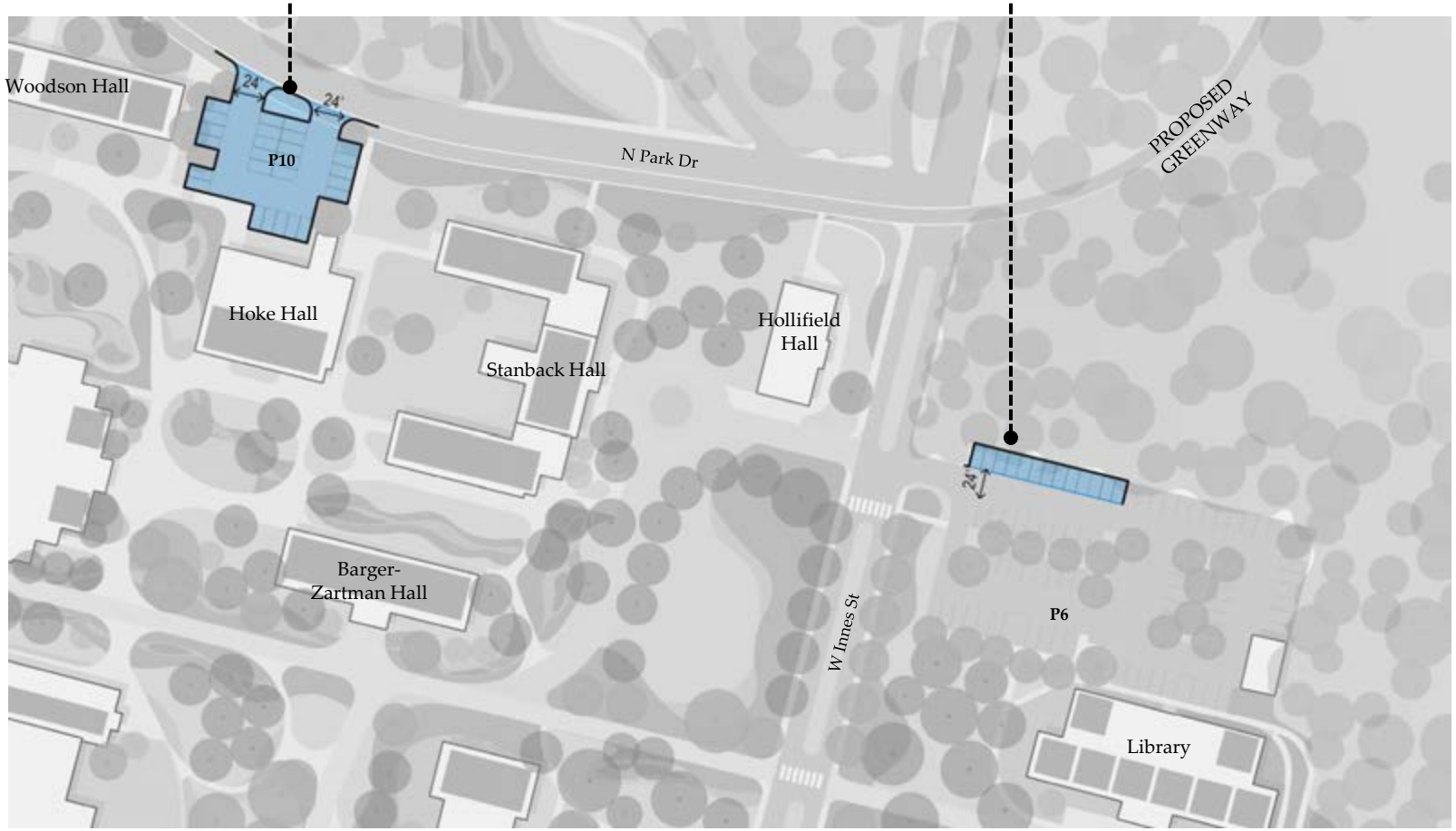
Hoke's Village Parking Lots

Existing conditions – P6 Library Parking

Existing conditions – P10 Hoke Hall Parking

P10 Expansion
Reconfiguration of existing parking lot – 6 spaces added

P6 Expansion
Addition of parking spaces and retaining wall along the north



PARKING STRATEGY

PROPOSED PARKING IMPROVEMENTS

Abernathy Village Parking Lots

Existing conditions – P9 Abernathy Village Parking Lot

P9 Expansion
Reconfiguration and expansion of existing parking layout – 6 spaces added

PARKING STRATEGY

PROPOSED PARKING IMPROVEMENTS

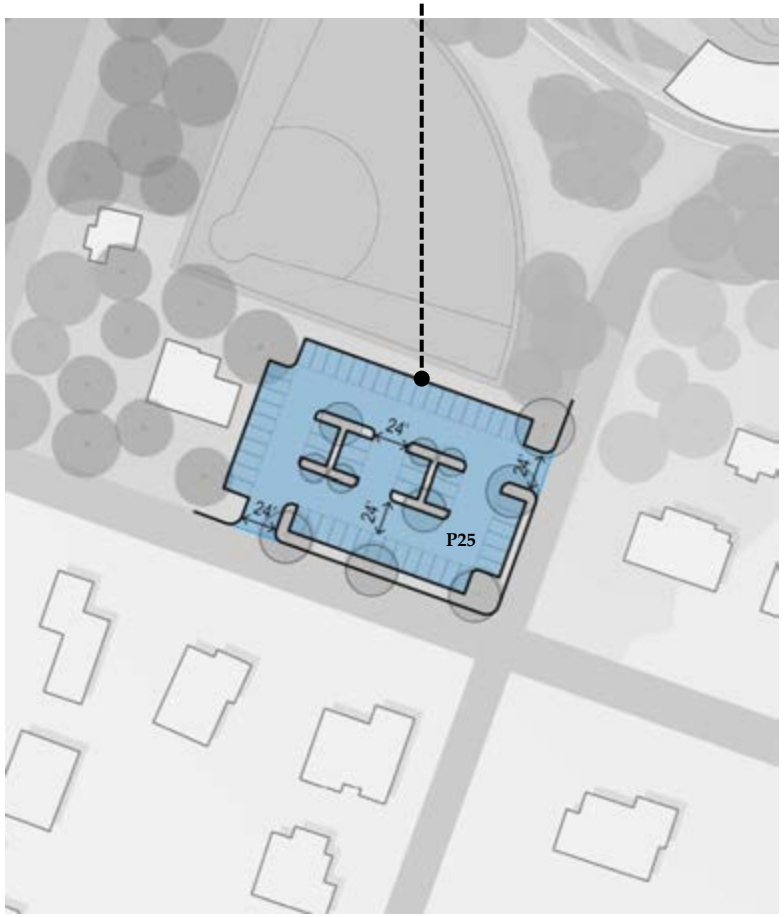
Softball + Abernethy South Parking Lots

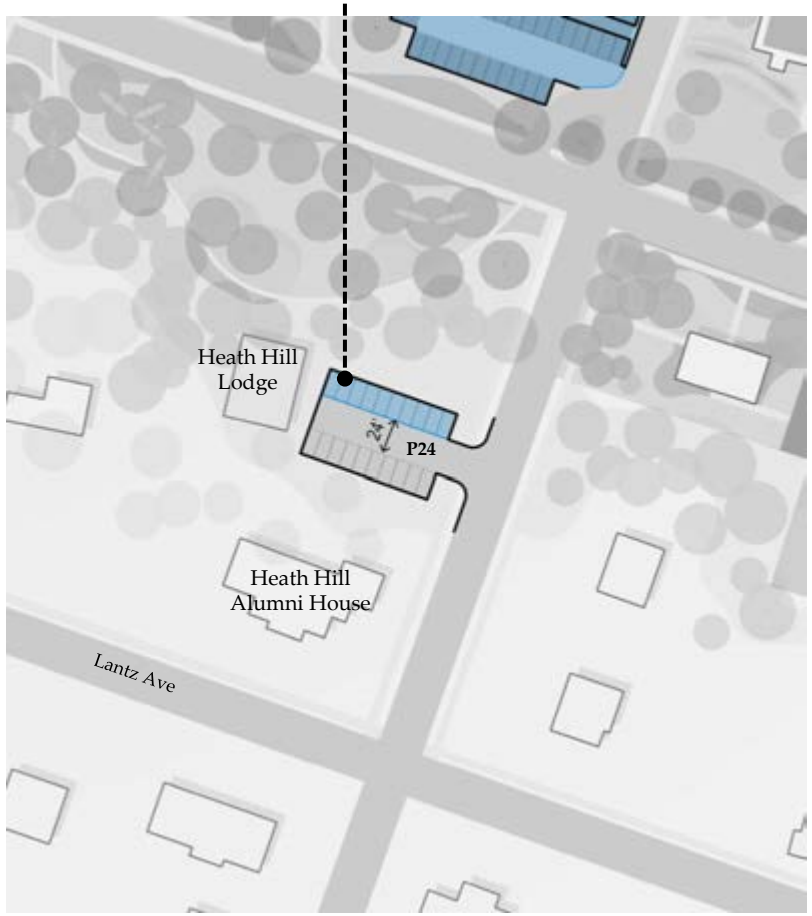
Existing conditions – P24 Heath Hill Alumni House

Existing conditions – P25 Lantz Ave/Innes St Site

P25 Addition
Addition of 60 spaces in new parking lot

P24 Expansion
Addition of 10 spaces to existing parking lot





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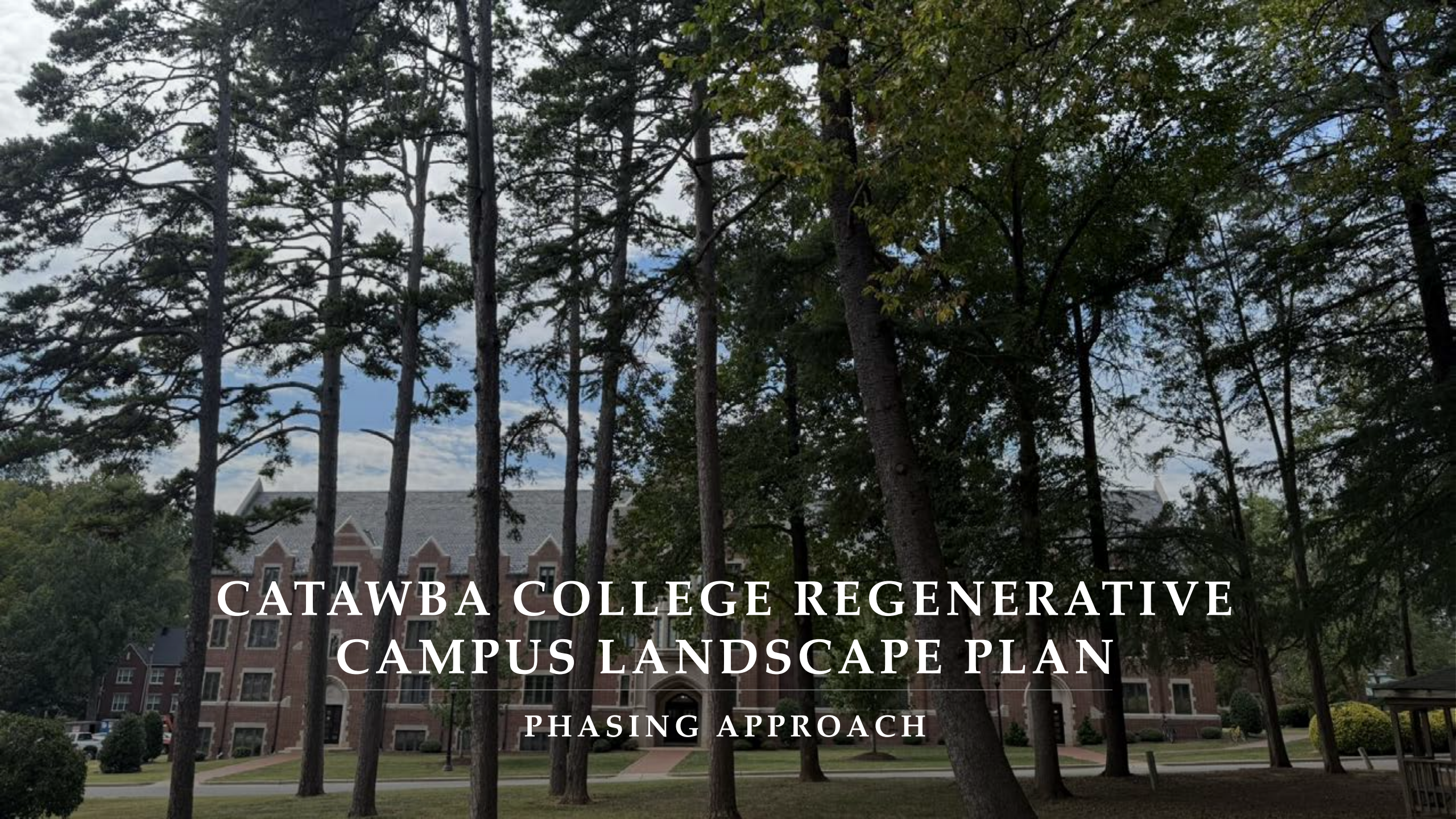


CATAWBA COLLEGE REGENERATIVE CAMPUS LANDSCAPE PLAN

PHASING APPROACH

PHASING

OVERARCHING PLANNING DIRECTION

Catawba College's Regenerative Campus Landscape Plan is guided by a long-term vision rooted in ecological restoration, community engagement, and educational transformation. The plan unfolds across four interconnected phases.

Phase 1: Foundation Roots establishes core ecological systems and pilot projects.

Phase 2: Connective Canopy strengthens campus-wide connections between nature, people, and infrastructure.

PHASE 1:
FOUNDATIONAL ROOTS
(0-4 YEARS '25-'29)

FOCUS:

Establishing core ecological systems, pilot projects and building momentum (quick wins); visibility, community engagement, and complementary improvement to ongoing capital projects and academic / athletic intersections

PHASE 2:
CONNECTIVE CANOPY
(4-8 YEARS '29-'33)

FOCUS:

Strengthening campus-wide systems, larger capital projects, and connectivity between ecology, people and infrastructure

PHASING

OVERARCHING PLANNING DIRECTION

Phase 3: Campus as Forest envisions the campus as a living, adaptive ecosystem that supports biodiversity and learning.

Phase 4: Regenerative Futures projects a resilient, climate-positive landscape that continuously evolves through innovation and stewardship.

Together, these phases create a dynamic roadmap for embedding regeneration into the college's identity and everyday experience.

PHASE 3:
CAMPUS AS FOREST
(8-15 YEARS '33-'40)

FOCUS:

Fully regenerative campus landscape, botanical garden + arboretum, resilience hub and living laboratory supporting biodiversity and learning

PHASE 4:
REGENERATIVE FUTURE
(15-25 YEARS '40-'50)

FOCUS:

Projecting a resilient, climate-positive landscape that continuously evolves through innovation, stewardship and adaptation

CATAWBA COLLEGE REGENERATIVE CAMPUS LANDSCAPE PLAN

REGENERATIVE DESIGN ROADMAP

REGENERATIVE DESIGN ROADMAP

INTRODUCTION

The Regenerative Campus Landscape Plan establishes the foundation for a **Regenerative Design Roadmap** that is both actionable and measurable. Grounded in the Campus as Forest vision, the positive performance methodology has been applied using rigorous ecological assessment to understand current ecosystem services, project their restoration, and chart a path toward mutual growth between Catawba College, the community and the environment. The roadmap translates planning into action through a cyclical, feedback-driven sequence.

- **Identify**: Benchmark ecosystem metrics by identifying the context and conditions of the site; understand the biocapacity of the site where a project is being designed.
- **Quantify:** Use a relatively health ecosystem nearby to serve as a reference to understand the contrasting conditions of those two systems: nature that is untouched versus current site conditions. Quantify performance standards to identify and learn how to close the gap.
- **Create:** Design using nature's guidance and create design strategies intended to match ecosystem performance metrics.
- **Implement:** Create an implementation roadmap, partnering with developers, contractors and suppliers to enable those strategies to move to positive performance.

By coupling design with ecosystem analysis, through collaboration with EcoMetrix Solutions Group, the roadmap ensures each intervention measurably restores ecosystem services, while enhancing experience, wellbeing, and learning. Over time, this adaptive process aligns campus development with ecological regeneration, enabling Catawba College and its landscapes to thrive together.

Main Campus – Baseline (2025)

Main Campus Plan (2050)

REGENERATIVE DESIGN ROADMAP

POSITIVE PERFORMANCE METHODOLOGY

1

IDENTIFY

local context and conditions of place and/or site

2

QUANTIFY

baseline performance and targets based on local reference ecosystems

3

CREATE

design guidelines and strategies to emulate ecosystem performance metrics

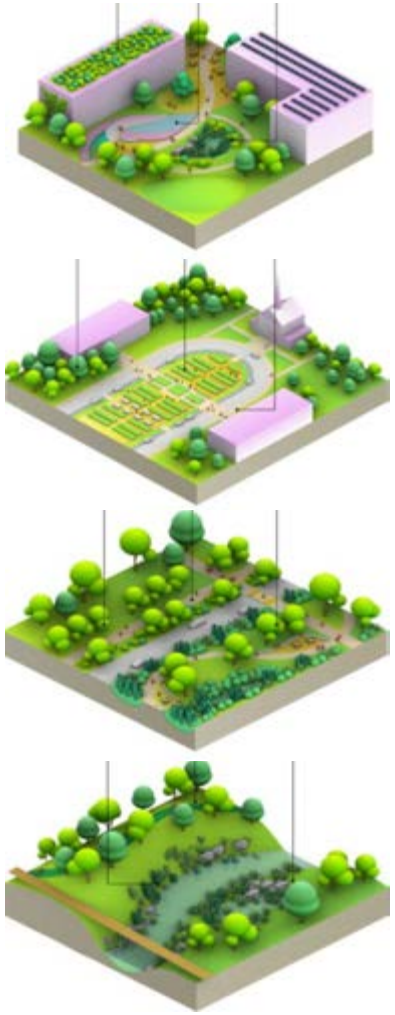
4

IMPLEMENT

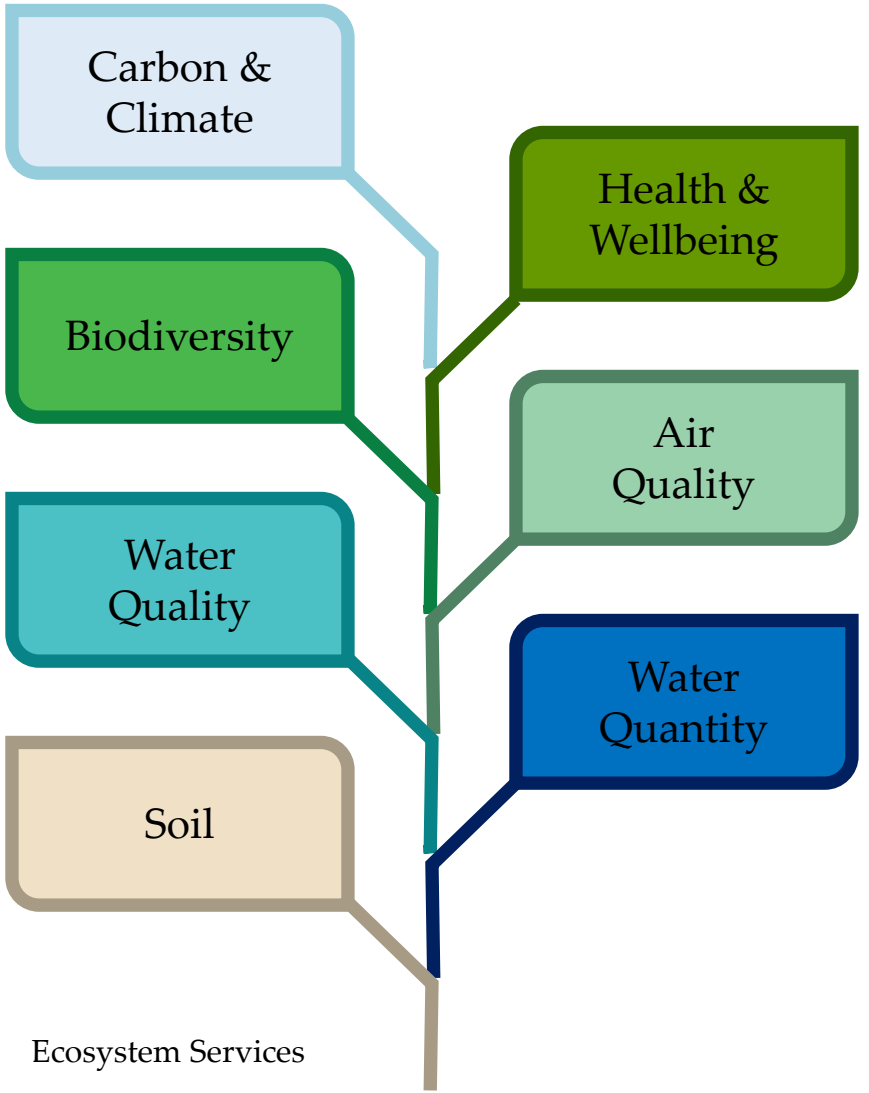
strategies to move toward positive performance

REGENERATIVE DESIGN ROADMAP

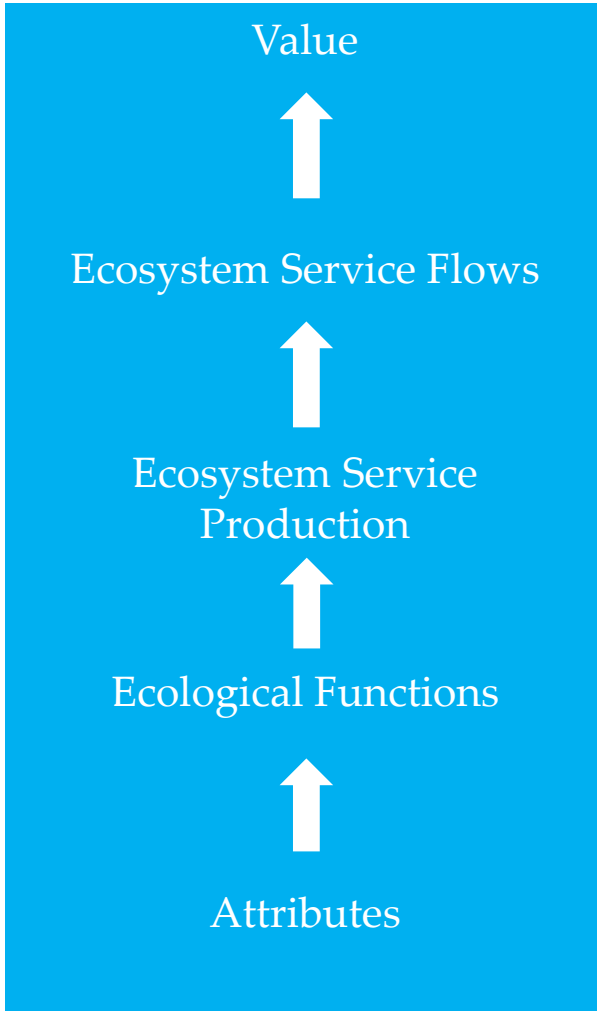
ECOSYSTEM SERVICE CASCADE



Regenerative Strategies

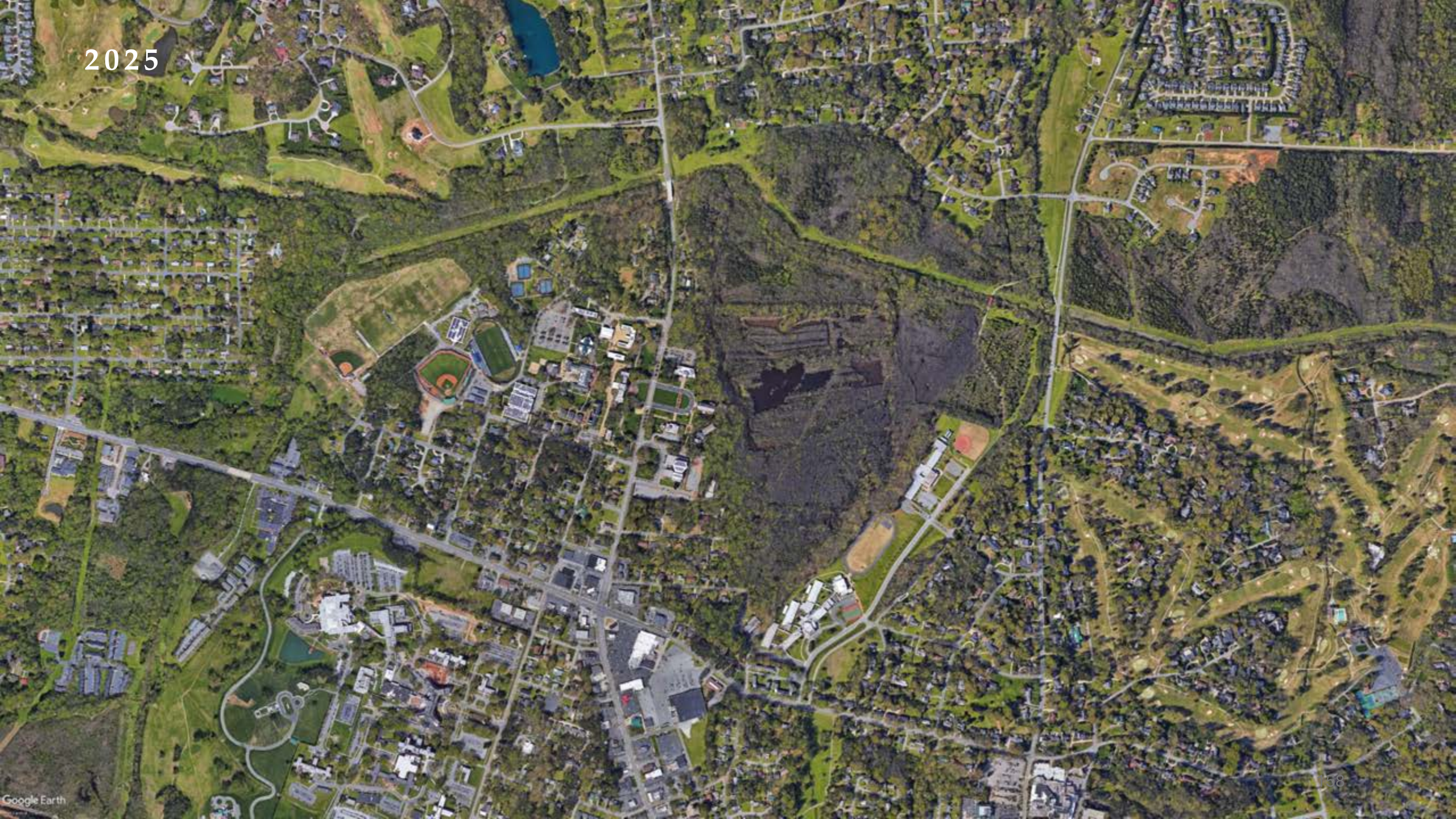


Ecosystem Services



Ecosystem Service Cascade


1980
Google Earth


2025
Google Earth


2050
Google Earth

REGENERATIVE ROADMAP

ECOSYSTEM BENCHMARKING & TARGETING

1980

2025

2050

REGENERATIVE ROADMAP

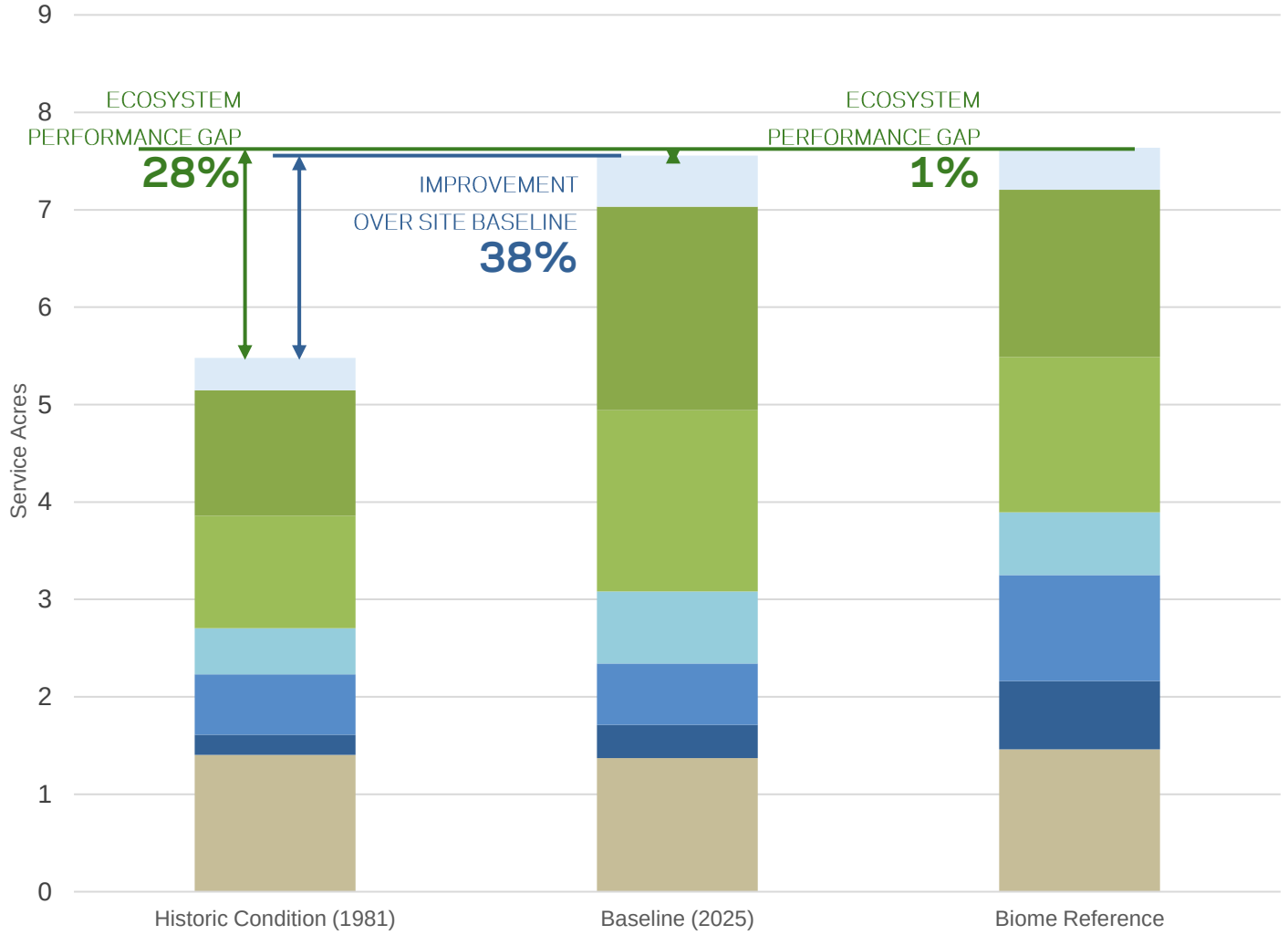
ECOLOGICAL PRESERVE PERFORMANCE (1980-2025)

Ecological Preserve: Historic Condition (1980)

Combining historic imagery, illustrations and satellite photography (with AI), the team was able to establish a historic condition of the farm and demonstrated the ecological restoration occurring over 45 years, eventually achieving ecological parity with the Temperate Broadleaf Forest Biome reference.

Ecological Preserve: Present Condition (2025)

Reference Biome: Temperate Broadleaf



REGENERATIVE ROADMAP

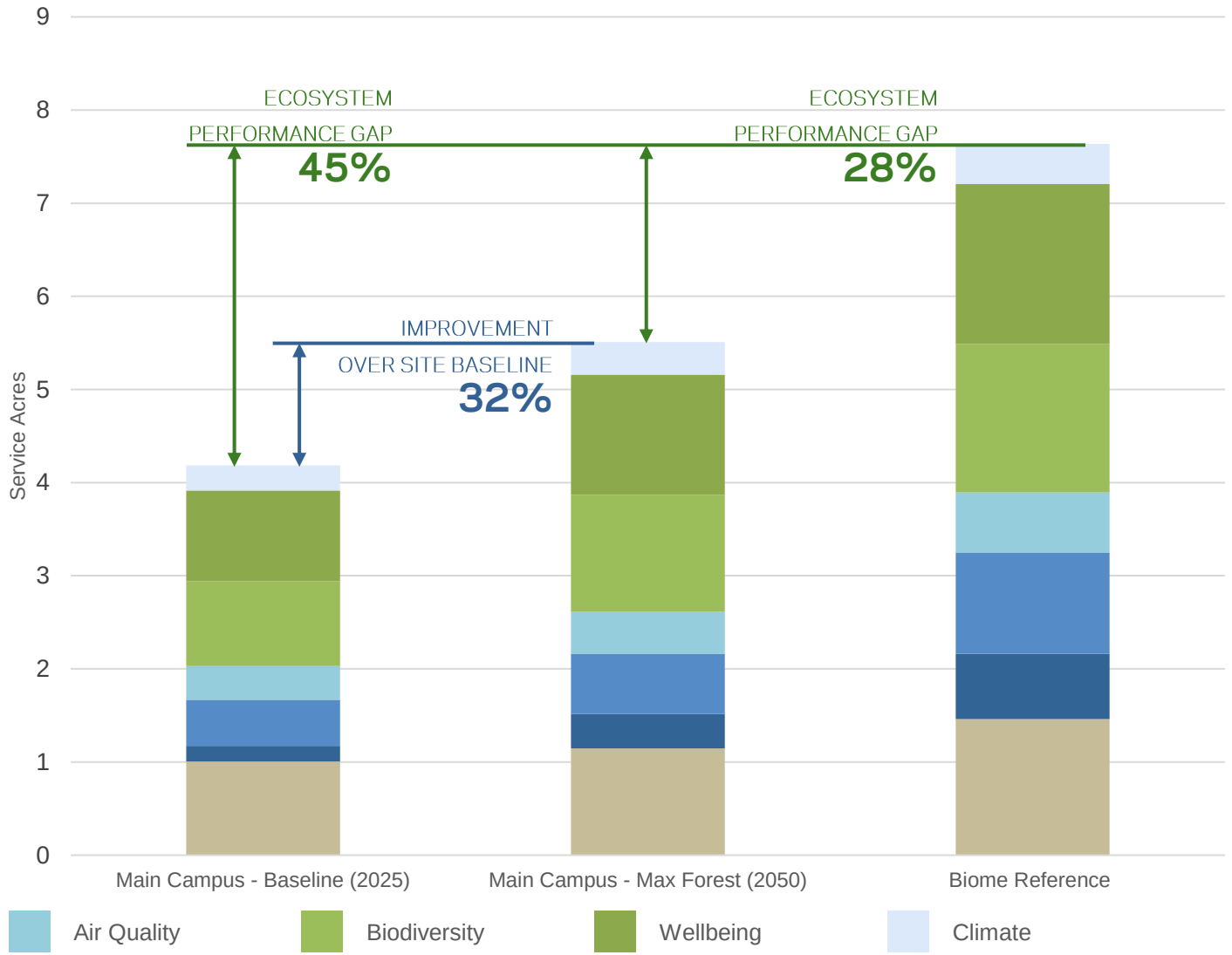
MAIN CAMPUS PERFORMANCE TARGETS

Main Campus: Baseline Condition (2025)

A baseline condition was established for main campus, as well as an ecological target by projecting a "Forest as Campus" condition (using AI) that infilled all available open space as forest. This provided an initial target and gap with the biomic reference; and allowed identification of key services to emphasize in the plan.

Main Campus: Max Forest Condition (2050)

Reference Biome: Temperature Broadleaf



REGENERATIVE ROADMAP

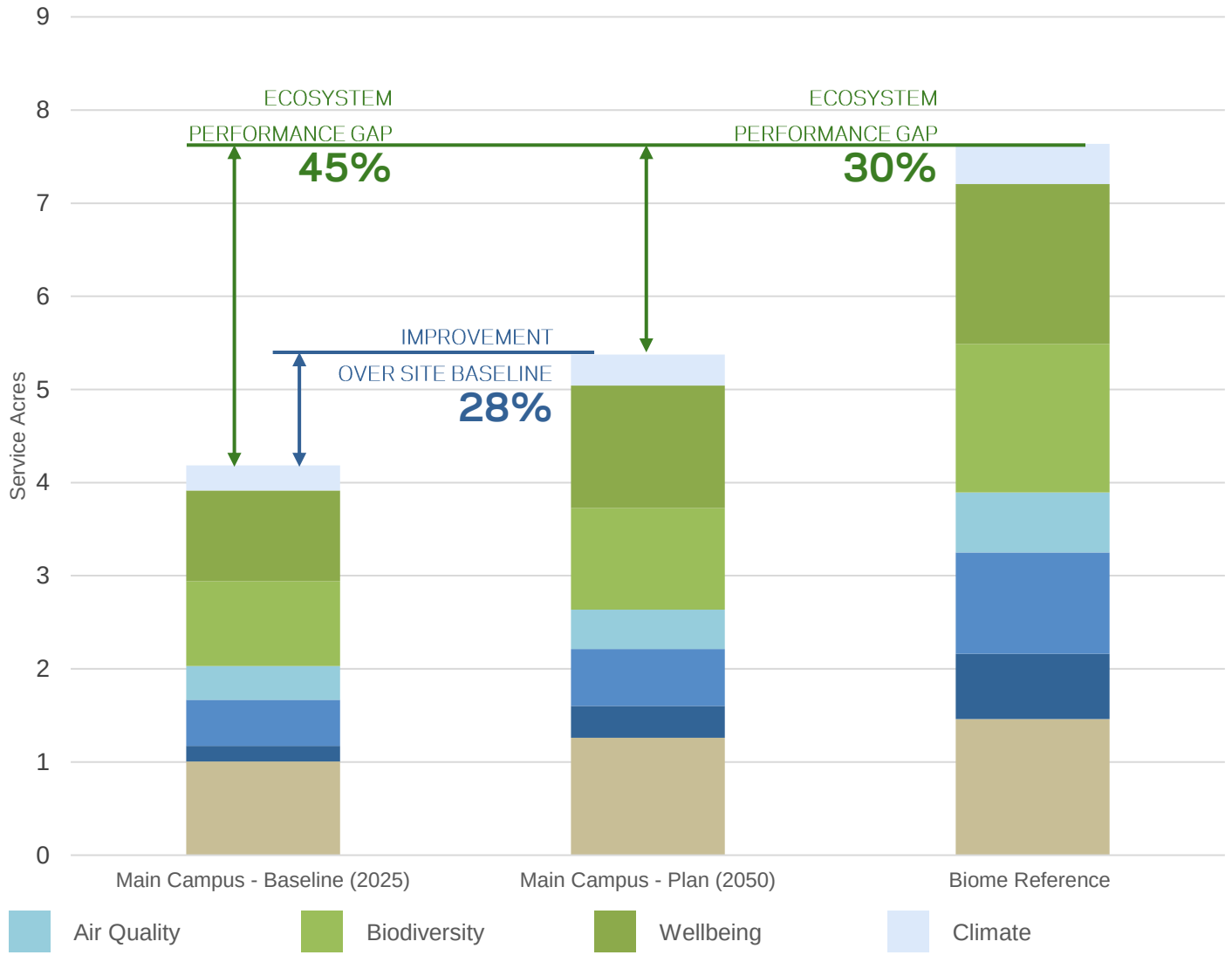
MAIN CAMPUS PERFORMANCE RESULTS

Main Campus: Baseline Condition (2025)

History and targeted help to identify critical services and areas for integration. The proposed Campus as Forest plan was mapped, demonstrating a 28% ecosystem performance benefit; and an EI score of ~70. The remaining gap largely lies in water management, biodiversity and wellbeing.

Main Campus: Plan (2050)

Reference Biome: Temperature Broadleaf



REGENERATIVE ROADMAP

MAIN CAMPUS PERFORMANCE RESULTS

Biodiversity Support

The plan increases biodiversity by expanding structurally diverse habitats (prairie, riparian, woodland, wildflower, and canopy-enhanced zones). It is recommended to further strengthen support by confirming maintenance practices, refining soil and planting assumptions, and ensuring long-term succession and canopy expansion are stewarded.

Pollinator Support

The plan enhances pollinator support by expanding diverse herbaceous habitats (prairies, wildflower areas, gardens, and canopy-enhanced zones) with increased plant richness, extended bloom periods, and reduced disturbance. Further gains require confirming low-mow practices, ensuring native species selection, and coordinating long-term maintenance to preserve floral continuity.

Main Campus – Baseline (2025)

Main Campus Plan (2050)

REGENERATIVE ROADMAP

MAIN CAMPUS PERFORMANCE RESULTS

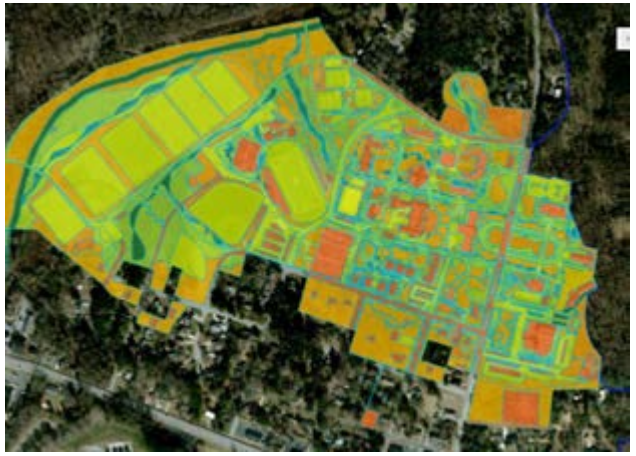
Water Quality Service

The plan improves water quality by expanding permeable surfaces, enhancing riparian and bioswale functions, increasing canopy cover, and reducing soil disturbance to slow runoff and boost infiltration. Further improvement relies on material permeability, aligning maintenance with low-disturbance assumptions, and strengthening hydrologic coordination across campus.

Water Quantity Control

The plan improves water quantity control by expanding permeable surfaces, enhancing riparian corridors and bioswales, increasing soil organic matter, and adding canopy to slow runoff. Further gains depend on pathway material permeability, maintaining minimal compaction, and aligning long-term management with hydrologic performance.

Main Campus – Baseline (2025)



Main Campus Plan (2050)

REGENERATIVE ROADMAP

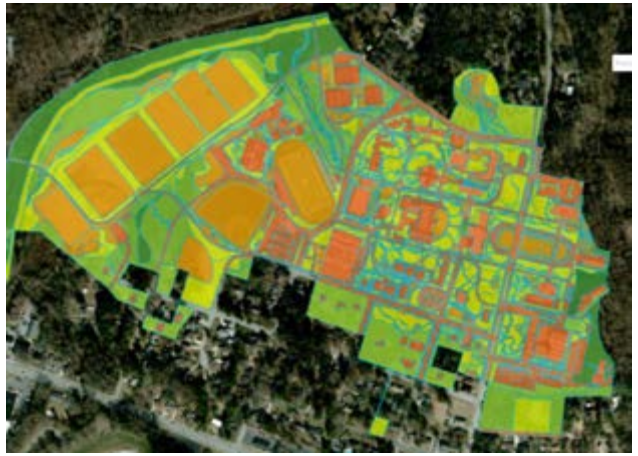
MAIN CAMPUS PERFORMANCE RESULTS

Aesthetics: Visual Service

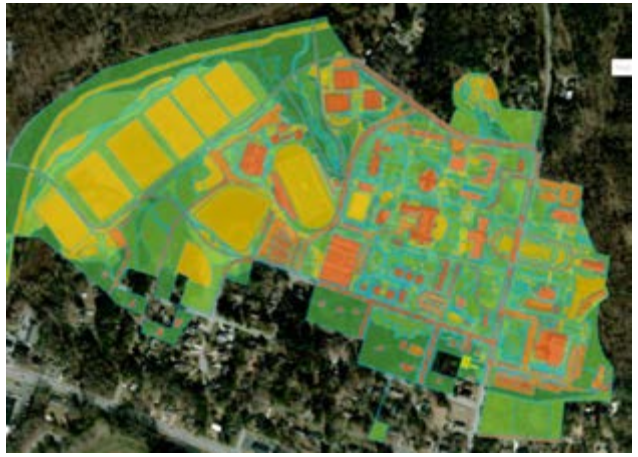
The plan enhances visual aesthetics by increasing canopy coverage, adding structurally diverse plantings, and introducing prairies, wildflowers, and riparian features that create richer textures and seasonal interest. Further improvement depends on material choices, managing maintenance intensity, and ensuring plant diversity.

Air Temperature Regulation

The plan strengthens air temperature regulation by expanding tree canopy, increasing groundcover, and enhancing soil moisture retention, collectively boosting shading and evapotranspiration. Additional gains require confirming long-term canopy establishment, minimizing compaction, and aligning maintenance to preserve vegetation density and permeable surfaces.



Main Campus – Baseline (2025)



Main Campus Plan (2050)

REGENERATIVE ROADMAP

MAIN CAMPUS PERFORMANCE RESULTS

Carbon Uptake / Air Quality Service

The plan improves carbon uptake and air quality by expanding tree canopy, enhancing herbaceous and shrub layers, and reducing soil disturbance to support biomass. Gains require increased canopy density, ensuring low-disturbance management, and prioritizing native, high-sequestration species in planting.

Carbon Sequestration

The plan boosts carbon sequestration by expanding woody biomass through increased tree canopy, adding layered vegetation, and enhancing soil health with reduced disturbance and higher organic content. Further improvement depends on achieving canopy maturity, minimizing compaction, and prioritizing species and management practices.

Main Campus – Baseline (2025)

Main Campus Plan (2050)

REGENERATIVE ROADMAP

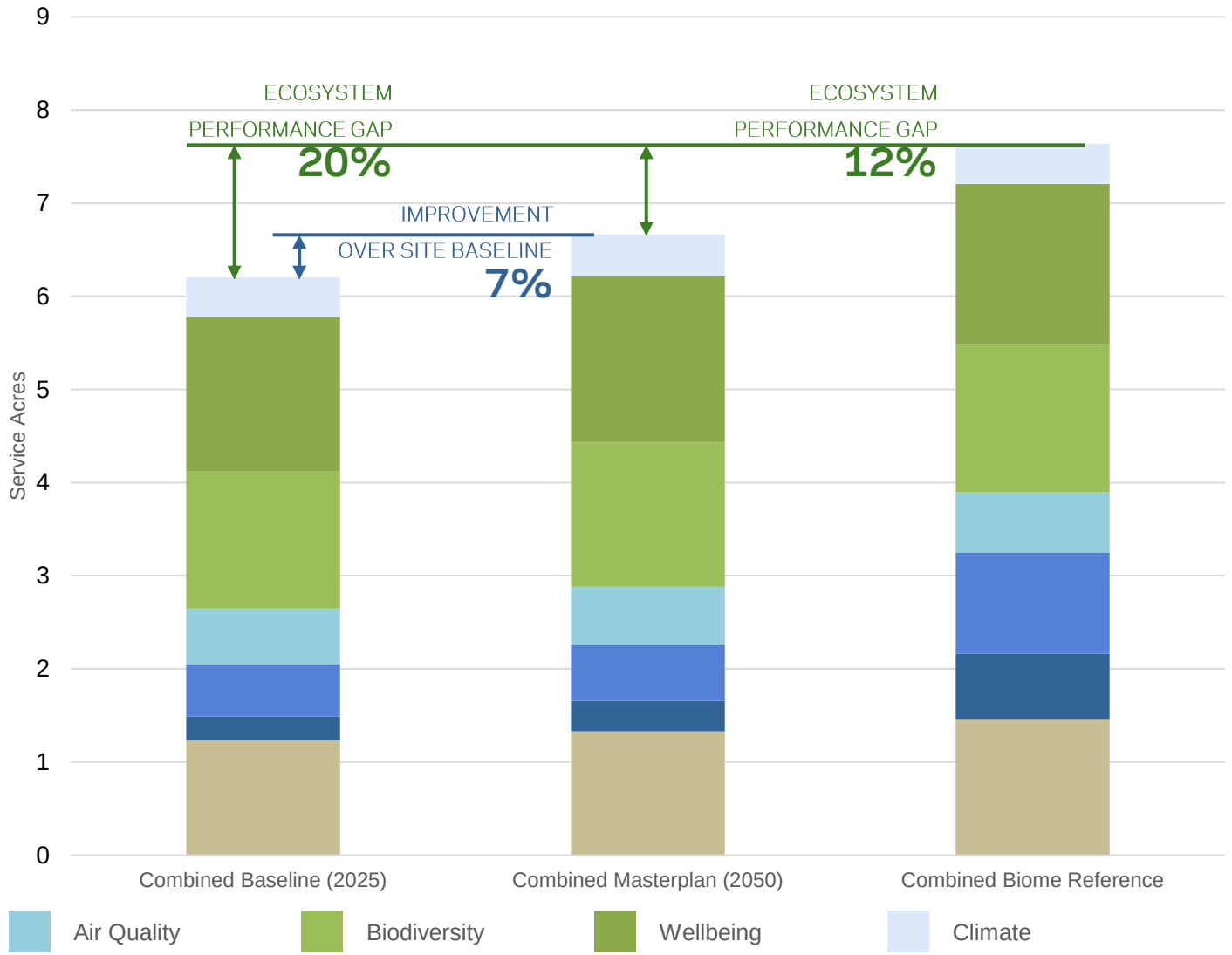
CAMPUS & PRESERVE COMBINED RESULTS

Main Campus: Baseline Condition (2025)

A unified main campus and nature preserve form a resilient, biodiverse landscape that maximizes habitat connectivity, strengthens ecological functions, and delivers exceptional long-term ecosystem performance. Enhancing natural drainage areas and enhanced soils can close the remaining gap.

Main Campus Plan + Nature Preserve (2050)

Reference Biome: Temperature Broadleaf

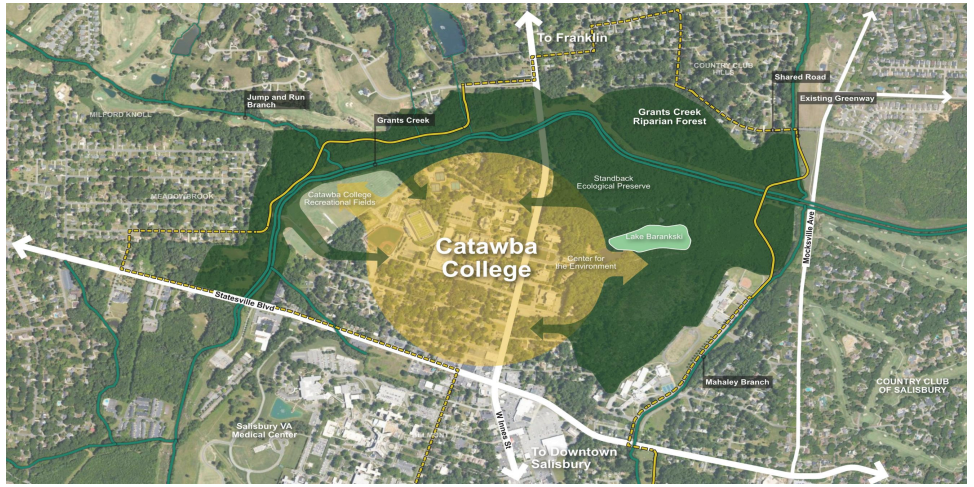


REGENERATIVE ROADMAP

CAMPUS & PRESERVE PERFORMANCE RESULTS

The Regenerative Campus Landscape Plan for Catawba College creates a strong ecological foundation that naturally extends into the adjacent ecological preserve, allowing the entire extended campus to function as one interconnected living system. By restoring soils, increasing native plant diversity, expanding tree canopy, and improving hydrologic processes on the core campus, these interventions set the stage for healthier ecological flows: cleaner water entering the preserve, richer habitat connections for wildlife, and more resilient vegetation communities that emulate the dynamics of the surrounding natural areas. As these restored zones mature, they begin to act as ecological "corridors" and "bridges," carrying functional benefits, like improved pollinator movement, expanded forest edge habitat, and stabilized hydrology, directly into the preserve.

Long-term stewardship of the preserve further strengthens this relationship. Thoughtful management practices such as invasive species management, understory growth, and adaptive trail maintenance may ensure that the preserve can continue to evolve in response to shifting environmental conditions. Over time, the combined effect of an ecologically restored campus core and a managed preserve helps close the performance gap with the Temperate Broadleaf Forest biome's reference conditions and achieve nature positive impact. Ultimately, this fully integrated campus ecosystem creates the conditions for a regenerative state, where the college community and the natural systems surrounding it continually shape and strengthen one another. In this model, campus life, ecological vitality, and stewardship, become inseparable, illustrating how the community can co-evolve with the living systems it depends on, and create conditions for both to thrive.



Regenerative System Flows

Fully Integrated Campus Ecosystem

CATAWBA COLLEGE REGENERATIVE CAMPUS LANDSCAPE PLAN

FULLY INTEGRATED THINKING

FULLY INTEGRATED THINKING

LIVING SYSTEMS FRAMEWORK

Catawba College's regenerative design framework is built around the pursuit of **nature positive impact:** a commitment to restoring ecological function, strengthening community wellbeing, and ensuring the campus and its ecosystems thrive together over time. At the heart of this approach is **Fully Integrated Thinking (FIT)**, a living systems framework that establishes shared goals and strategies while continuously adapting to the factors that influence development pace, priorities, and opportunities.

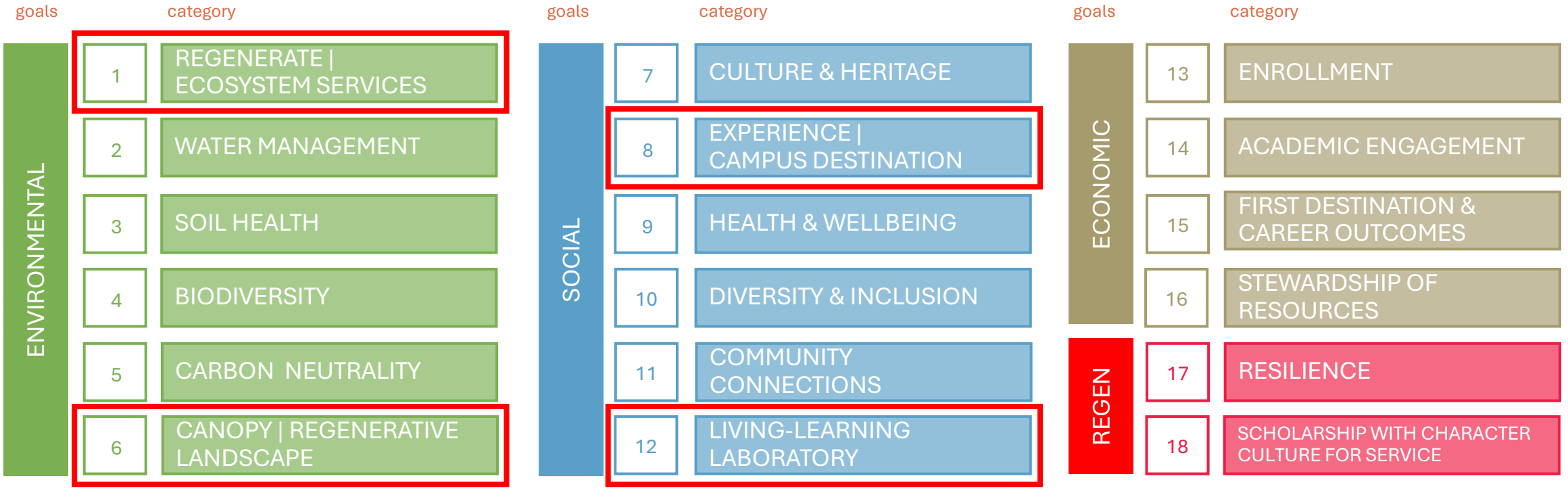
FIT functions as a dynamic tool for understanding the mutual relationships between the environment, community, and built campus. By examining natural and manmade resources through interconnected filters, FIT allows stakeholders to evaluate each design challenge within the context of the whole system. This reveals regenerative pathways that elevate ecological performance while supporting the College's academic and social mission.

Because FIT is intentionally flexible, it can evolve as campus needs, environmental conditions, funding opportunities, and community priorities shift. Layered with Catawba College's environmental assets and established Frontiers, FIT frames a forward-looking strategy that guides decision-making and shapes interventions capable of delivering measurable, nature-positive outcomes. Through this adaptive, fully integrated process, Catawba College advances a regenerative future in which people and nature flourish together.

FULLY INTEGRATED THINKING

FIT: LENSES

FIT Framework



Evidence Based Design: The system centers around "lenses" that evaluate a project's environmental, social, and economic sustainability by asking key questions regarding environmental, social, economic and regenerative drivers.

FIT frames these strategies to leverage the site's research efforts and campus life to serve environmental, social and economic goals in mutual balance.

FULLY INTEGRATED THINKING

LIFE'S PRINCIPLES

The regenerative strategies align with Biomimicry 3.8's **Life's Principles**, a set of overarching design guidelines distilled from patterns found across Earth's most enduring and resilient ecosystems.

To be **locally attuned and responsive**, the plan restores the Piedmont's hydrology with campus-wide water corridors that reconnect and enhance natural flows, improving water quality and resilience. It **integrates development with growth** by weaving biodiversity corridors and reforestation into movement networks and outdoor learning spaces, supporting flora and fauna while enriching daily campus life. To **use life-friendly chemistry and rebuild foundational cycles**, the strategy prioritizes soil health, native plant communities, and mycelial networks that drive nutrient cycling and erosion control.

Resource efficiency is advanced through electrification of facilities and balancing residual emissions via regional forest management and carbon sequestration. This climate positive plan **adapts to changing conditions** by structuring an evidence-based living-learning laboratory that embeds research, monitoring, and feedback loops into design and operations, allowing strategies to evolve with new data, funding, and priorities.

To evolve to survive, the framework links ecological regeneration with social and economic goals: health and wellbeing, inclusion and belonging, community connections, academic engagement, resilience, and stewardship, so that each intervention delivers multiple co-benefits and strengthens institutional capacity over time. The resultant strategy leverages FIT to operationalize Life's Principles across campus systems creating an adaptive, measurable pathway toward nature-positive outcomes.

FULLY INTEGRATED THINKING

FIT MATRIX: STRATEGIES & GOALS

sector		category	strategy (what)	goal (why)
ENVIRONMENTAL	1	REGENERATE | ECOSYSTEM SERVICES	transform campus into a living system that restores ecological health, fosters community resilience, and serves as a model for nature-based learning	restore ecological vitality, enrich student learning, and position the campus as a living model of climate-positive leadership
	2	WATER MANAGEMENT	implement a campus-wide hydrological corridor network that reconnects and enhances natural water flows	restore ecological function, improve water quality and resilience, manage erosion, and create a living landscape
	3	SOIL HEALTH	enhance soil health and manage erosion by integrating native plantings that establish a mycelial network that support nutrient cycling	regenerate the foundational living systems of the campus, enhancing biodiversity, carbon sequestration, and long-term ecological vitality
	4	BIODIVERSITY	establish diverse and interconnected corridors and habitats to support flora and fauna biodiversity	enhance biodiversity and restore the campus's natural balance
	5	CARBON NEUTRALITY	operate campus facilities as fully electric; and balance all carbon emissions it does produce with regional forest management to sequester the equivalent amount of carbon emissions**	maintain Catawba' standing as the first carbon-neutral college campus in the Southeast
	6	CANOPY | REGENERATIVE LANDSCAPE	blend ecological regeneration, scientific research, and community engagement	heal ecosystems, inspires learning and strengthen human-nature connections
SOCIAL	7	CULTURE & HERITAGE	enhance the College's civic awareness and reputation by consistently telling our story clearly, authentically, and compellingly*	reinforce Catawba's reputation as a leading small college in the Southeast, a model DII institution, and a national center for environmental sustainability*
	8	EXPERIENCE | CAMPUS DESTINATION	create meaningful, inclusive experiences that foster connection, wellbeing, and a sense of place	transform the campus into a destination for learning, community, and inspiration
	9	HEALTH & WELLBEING	create spaces for natural connections, mindfulness, and physical comfort	invite natural interaction, encourage mindfulness, and provide spaces of physical comfort for all
	10	DIVERSITY, EQUITY, INCLUSION & BELONGING	establish a campus environment optimized for creative and collaborative experiences, where people from varied backgrounds, cultures, and perspectives live, learn, work, and play on campus*	enable a sense of belonging and wellbeing and recognize the campus as student-ready*
	11	COMMUNITY CONNECTIONS	establish collaborative partnerships that complement academic programs*	strengthen ties to Salisbury, Rowan County, and the surrounding regions*
	12	LIVING-LEARNING LABORATORY	provide nature-based education and research opportunities that provide compelling learning experiences that inspire an enduring commitment to creativity, curiosity, service, and leadership*	position Catawba as a living-learning laboratory that is a national leader for sustainable operations*
ECONOMIC	13	ENROLLMENT	revise the academic Catawba Core, reflecting 21st-century skills and ideas through the breadth of our interdisciplinary education*	optimize recruitment, retention, and completion*
	14	STEWARDSHIP OF RESOURCES	implement resourcing and decision-making processes that maximize financial sustainability*	ensure that resources are wisely stewarded, the endowment is continually growing, and annual revenues fully support the annual budget*
	15	ACADEMIC ENGAGEMENT	develop academic programs that equip students and lifelong learners to lead in the regional economy and beyond*	support every student and employee as they explore what they are skilled to do, what they love to do, and where their skills and passions meet the world's needs*
	16	FIRST DESTINATION & CAREER OUTCOMES	foster experiential learning to enhance community engagement, and to inspire collaboration, creativity, and innovation*	enable graduates to have a distinct sense of vocation and use their knowledge, skills, and abilities to enrich the world and address its greatest challenges*
REGEN	17	RESILIENCE	integrate nature-based land management practices and supporting infrastructure	ensure long-term ecological health, climate adaptability, and sustainable resource management
	18	SCHOLOARSHIP WITH CHARACTER; CULTURE FOR SERVICE	provide compelling learning experiences that inspire an enduring commitment to creativity, curiosity, service, and leadership*	create a campus culture of excellence grounded in our Mission and Values with students at the center*

*Source: Catawba College Strategic Plan 2023-2028

**Source: Catawba College Campus Master Plan 2023

FULLY INTEGRATED THINKING

INTERPRETATIONS

The Catawba College Regenerative Campus Landscape Plan advances the Campus as Forest vision by restoring ecological function, enriching the student experience, and positioning the campus as a living model of environmental stewardship.

Central to this vision, the Catawba Canopy unifies landscape systems that reconnect forest structure, expand habitat corridors, and frame daily campus life within a cohesive woodland, understory and prairie identity. The canopy acts as both ecological infrastructure and educational platform, supporting immersive, place-based learning.

The plan enables a multitude of interpretations, transforming the natural environment into a continuous learning landscape: passive engagement through shaded paths, interpretive signage, and quiet overlooks; active learning in outdoor classrooms and nature-based recreation areas; and focused engagement through faculty-led monitoring, long-term ecological research, and co-curricular fieldwork. These experiences may be supported by a network of wayfinding nodes that orient visitors while highlighting natural processes, cultural history, and biodiversity.

Storytelling plays a major role in building momentum for this regeneration, linking experience, art, ecology, and insights into environmental transformation. The campus itself can deepen awareness of flora and fauna, seasonal change, and ecological relationships. Together, the Catawba Canopy plan, regenerative roadmap, and Fully Integrated Thinking lenses aim to bring reality to the Catawba College vision of a campus where community, ecology, and education continually reinforce one another.

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CATAWBA COLLEGE EST. 1851

HOK

GLOSSARY

A

Accessibility - environments that can be used, understood and enjoyed by people of all abilities

ADA - American Disabilities Act: U.S. Federal Standards for Accessible Design requiring buildings or facilities to be physically accessible to people with disabilities

Alluvial stream - a river or stream that flows through and shapes a channel made entirely of loose, mobile sediment (alluvium) like sand, gravel, and silt, which it has deposited over time

Aquaponics - a system of growing plants in the water that has been used to cultivate aquatic organisms

B

Bio generator - a device or system that uses living organisms, biological components or organic matter to create energy or produce useful substances

Biochar - a form of charcoal that is produced by exposing organic waste matter to heat in a low-oxygen environment and that is used especially as a soil amendment

Biodiversity - biological diversity in an environment as indicated by numbers of different species of plants and animals

Biome - a major ecological community type (such as tropical rainforest, grassland, or desert)

Bioretention - a nature-based stormwater management technique that uses soil, mulch, and vegetation to treat water runoff

Bioswale channel - a channeled depression or trench that receives rainwater runoff and has vegetation such as grasses, flowering herbs, and shrubs and organic matter to slow water infiltration and filter out pollutants

Botanical garden - a garden often with greenhouses for the culture, study, and exhibition of special plants

C

Canopy - the top layer of leaves, branches, and stems that creates shade and acts as a complex habitat

Carbon Sequestration - a method or process for capturing and storing carbon dioxide from the atmosphere by natural or artificial means

Carbon uptake - a natural process of permanently sequestering CO2 from the atmosphere

Check dam - an improvised barrier in a channel to retard the flow of water especially for controlling soil erosion

Climate-adaptive - the process of adjusting natural or human systems to actual or expected climate change impacts, such as sea-level rise, extreme heat, or floods, to moderate harm or exploit beneficial opportunities

Commons - land or resources belonging to or affecting the whole of a community

E

Ecology - the totality or pattern of relations between organisms and their environment

Ecosystem Integrity (EI) Score - a single measure of how well a site mirrors the ecosystem service production of a high-functioning reference habitat

Ecosystem service cascade - the production and flow of ecosystem service benefits across a landscape

Ecosystem service(s) - the direct and indirect life-sustaining benefits humans receive from nature, including clean air and water, pollination, and food production

Ecotone - a region of transition between two biological communities

Ethnobotany garden - a cultivated space that showcases the relationships between plants and people, featuring plant species used by specific cultures for medicine, food, shelter, clothing, and rituals

GLOSSARY

F

Fauna - animals characteristic of a region, period, or special environment

Flora - plant, bacterial, or fungal life

Forest bathing - a Japanese practice of immersing oneself in nature to improve health, reduce stress, and boost immunity

Forest permaculture - a holistic design system for creating sustainable, regenerative human settlements by mimicking the patterns, relationships, and resilience of natural ecosystems such as forests

Fully Integrated Thinking (FIT) - a living systems framework that establishes shared goals and strategies while continuously adapting to the factors that influence development pace, priorities, and opportunities

G

Greenway - a corridor of undeveloped land preserved for recreational use or environmental protection

Ground cover - a planting of low plants that covers the ground in place of turf

H

Hydrological respite - the psychological, physical, and environmental relief provided by interacting with or restoring water-based ecosystems

Hydrology - the properties, distribution and circulation of water on or below the earth's surface and in the atmosphere

I

Interdisciplinary - involving two or more academic, scientific, or artistic disciplines

Interpretive ecological areas - educational landscapes featuring curated plants, often native, accompanied by signage or storytelling elements that explain ecological, cultural, or historical context

Interpretive plantings - curated plants, often native, accompanied by signage or storytelling elements that explain ecological, cultural, or historical context

Iterative - cyclical process of refinement

L

Living wall - a vertical structure featuring living plants grown in panels attached to interior or exterior walls, often using hydroponics or modular systems

Living-Learning Laboratory - an educational or research approach that turns physical spaces like university campuses, city districts, or buildings into real-world testbeds for innovation and sustainability

M

Managed landscapes - an intentionally designed, installed, and maintained outdoor area, such as a garden, park, or commercial property

Mindfulness - the practice of maintaining a nonjudgmental state of heightened or complete awareness of one's thoughts, emotions, or experiences on a moment-to-moment basis

Moonlight garden - a specialized, sensory garden designed to be enjoyed from dusk through the night

Mycelial network- a vast, underground web of fungal filaments (hyphae) that connects plant roots, acting as a natural, symbiotic communication and nutrient-sharing system

GLOSSARY

M

Mycelium - a mass of interwoven fungal filaments (hyphae) that is often submerged in another body of soil, organic matter or the tissues of a host

N

Nature-based - the use of nature and natural processes to address diverse socio-environmental issues such as climate change, water security and disaster risk mitigation

Nature-Positive - a measurable increase in the health, abundance, diversity, and resilience of species, populations, and ecosystems

Night sky access - ability of the public to experience a dark night sky, free from significant artificial light pollution, to observe celestial phenomena like the Milky Way, stars, and planets

P

Pedestrian corridor - a designated pathway designed for safe, convenient, and unobstructed foot traffic, connecting various urban, commercial, or residential areas

Permaculture - an agricultural system or method that seeks to integrate human activity with natural surroundings to create highly efficient self-sustaining ecosystems

Permeable pavement - a sustainable surface material that allows stormwater to infiltrate through to the soil below, reducing runoff, filtering pollutants, and mitigating flooding

Placemaking - a people-centered approach to planning, designing, and managing public spaces that strengthens the connection between people and the places they share

Plant Hardiness Zone – U.S. Department of Agriculture-defined Hardiness Zones based on 30-year averages of annual extreme minimum winter temperatures and sets the standard for determining which perennial plants can survive winter in a specific location

P

Positive Performance Methodology - a four-step, science-based framework designed to align business goals with ecological health, aiming for "nature-positive" outcomes rather than just reducing harm, developed by the Project Positive collective

R

Rain garden - a depressed area in the landscape that collects rainwater from a roof, driveway or street and allows it to soak into the ground

Regeneration - the process of renewal or restoration of a biological system after injury or as a normal process

Rewilding - to return to a more natural or wild state

Riparian buffer - a vegetated area of trees, shrubs, and grasses along a waterbody (stream, lake, or river) designed to protect water quality, stabilize banks, and provide wildlife habitat

S

Sense of Place - environments that foster deep emotional, social, and cultural connections between people and their surroundings

Service Acre - unit of measure of ecosystem services

Subsurface infiltration gallery - an underground stormwater management system that captures runoff, temporarily stores it in void spaces (rock, plastic chambers, or pipes), and allows it to percolate into the surrounding soil to recharge groundwater

GLOSSARY

T

Tiny forest - small-scale, densely planted, native urban forests consisting of trees and shrubs

U

Understory / Understories - the vegetative layer and especially the trees and shrubs between the forest canopy and the ground cover

V

Vermiculture - the cultivation of annelid worms (such as red worms or bloodworms) especially for use as bait or in vermicomposting

W

Watershed - a region or area bounded peripherally by a divide and draining ultimately to a particular watercourse or body of water

Wayfinding node - information system that guides people through a physical environment and enhances their understanding and experience of the space