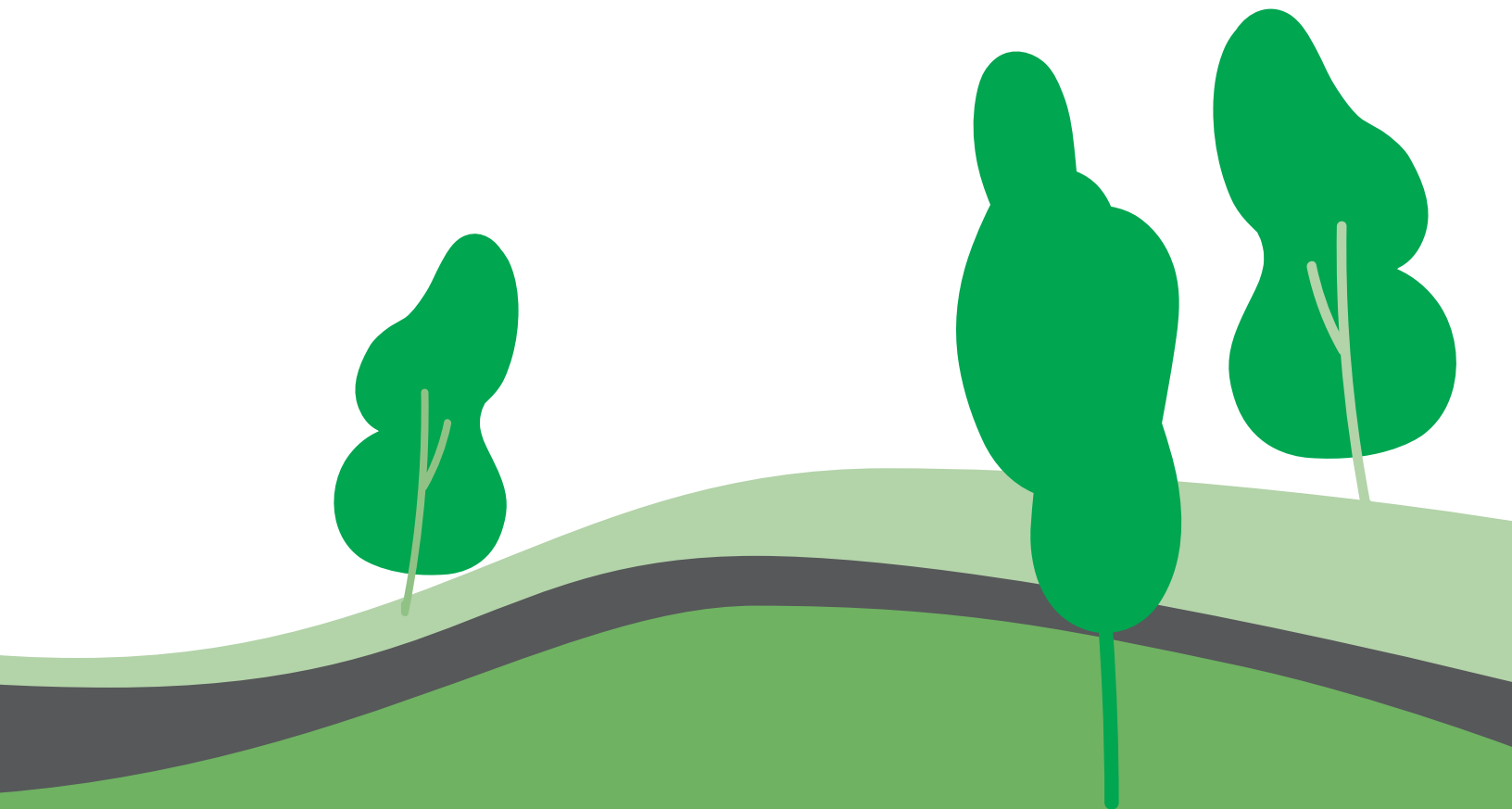




APPENDIX 1. CITY OF HENDERSONVILLE GREENWAY PLAN



INTRODUCTION

OVERVIEW

This Greenway Plan serves as an appendix to the 2024 Hendersonville Parks & Greenspace Master Plan and builds on the city's system-wide vision for parks, trails, and open space.

Greenways are an essential part of Hendersonville's parks and greenspace system—continuous corridors that connect people and places while protecting valuable natural resources. Often following rivers, creeks, utility easements or former rail lines, greenways provide space for recreation and active transportation, support flood mitigation, and help preserve the city's natural character. They also play an important role in improving water quality, supporting habitat, and contributing to community health and local economies.

While Hendersonville has made significant progress, opportunities remain to better connect existing trail segments, parklands, and neighborhoods. This Greenway Plan outlines a phased strategy for expanding the network—building on current initiatives, identifying new connections, and establishing a long-term vision for a cohesive and resilient system that links natural corridors and key destinations across the city.

Bringing this vision to life will take time and collaboration. Continued investment, partnerships, and community support will be essential. The plan is intended as a flexible framework—one that guides near-term priorities while positioning the city for future growth and adaptation.

Greenways are central to achieving the broader vision of the Parks & Greenspace Master Plan: creating meaningful connections between neighborhoods, parks, and open spaces to form a system that serves the entire community.

PARKS & GREENSPACE MASTER PLAN VISION STATEMENT:

Hendersonville will have a park and greenspace system we love—with high-quality neighborhood parks accessible to all; **connectivity between parks, open space and where people live and work**; leadership in sustainable practices and preservation of the natural environment; destination parks and placemaking that promote local character, community vibrancy, safety and sense of place.

COMMUNITY ENGAGEMENT & VISIONING

This plan is built on the collaborative efforts and community input gathered through the Hendersonville Parks and Greenspace Master Plan process and the Gen H Comprehensive Plan. Community feedback played a critical role in identifying priorities, desired trail destination types, and gaps in the existing network. Public input emphasized a strong desire for safe, accessible, and connected trails that link neighborhoods to parks, schools, downtown, and other important community assets.

The following key takeaways were identified through community input related to greenways and trails:

- » When asked what to prioritize over the next 10 years, **protecting and preserving parks and natural land** as well as **creating connections between parks, waterbodies and neighborhoods** (paved trails) were the top two responses.
- » **Natural features and scenic views are highly valued.** When asked which destinations they'd most like to access by greenways, nature/scenic views, natural water features and regional trail connectivity were among the top responses.
- » The most two most important amenities to households included **paved and unpaved walking and biking trails.**

[Need a] riding path to downtown...

Interconnected hiking and biking trails to natural areas

Build bike trail connections to Hendersonville, Flatrock, Chimney Rock, and other cities...



GOALS & STRATEGIES

To translate community values and greenway benefits into action, this plan identifies the following interrelated goals and strategies:

LINK TRAILS THROUGHOUT THE CITY AND REGION:

Create a cohesive network that connects greenways to parks, neighborhoods, schools, downtown, and regional systems.

COMPLETE MISSING LINKS:

Fill critical gaps in the network to provide uninterrupted trail experiences and improve connectivity.

ENSURE SAFETY AND ACCESSIBILITY:

- » **Separate** trails from vehicular traffic and enhance crossings at intersections.
- » **Improve** the trail experience for all mobility needs and recreation preferences.

ENHANCE USER EXPERIENCE:

- » **Maintain** and improve wayfinding and signage.
- » **Provide** high-quality trail amenities such as restrooms, water fountains, bike racks, benches, picnic shelters, and repair stations at trailheads, intersections, and scenic areas.

PLANNING CONTEXT

Hendersonville's greenway system's growth and success are shaped by the community's needs and values, by adopted city and county plans, and by connections to regional and local projects already underway. This section highlights the benefits greenways provide to Hendersonville, summarizes the relevant planning frameworks that guide investment, and describes the existing and planned trails that form the foundation for the future system.

BENEFITS OF GREENWAYS

Greenways offer numerous benefits to Hendersonville and the surrounding region, including:

- » **Health and Wellness:** Encouraging active lifestyles by providing safe places for walking, running, and biking.
- » **Recreational Access:** Expanding access to parks and nature for both residents and visitors.
- » **Safe and Inclusive Mobility:** Supporting accessible, non-motorized transportation for all ages and abilities.
- » **Environmental Protection:** Preserving riparian corridors, improving stormwater management, reducing flood risk, and enhancing habitat connectivity.
- » **Economic Growth:** Attracting tourism, enhancing real estate values, and supporting local businesses—reflecting the documented economic value of shared-use paths across North Carolina.

These broad benefits provide the foundation for why Hendersonville and its partners continue to invest in expanding the greenway system.

RELEVANT PLANS

Hendersonville's Greenway Plan builds on a strong foundation of recent local and regional planning efforts. Together, these plans recognize greenways not only as recreational amenities but as essential community infrastructure that supports mobility, environmental stewardship, and quality of life.

- » **Gen H Comprehensive Plan (2024):** Establishes a forward-looking vision based on livability, connectivity, and sustainability. The plan identifies greenways as critical infrastructure for active transportation and environmental resilience, supporting the City's goal to reduce greenhouse gas emissions by 30% by 2035.
- » **Henderson County 2045 Comprehensive Plan (2024):** Outlines regional priorities for open space preservation, trail connectivity, and sustainable growth. It encourages interjurisdictional partnerships and highlights greenways as tools to enhance public health and protect natural resources.
- » **Hendersonville Parks & Greenspace Master Plan (2024):** Focuses on improving access, reinvesting in existing parks, and stewardship of natural resources, positioning greenways as key connectors across the parks and greenspace system.
- » **Walk Hendo Pedestrian Plan (2023):** Centers on pedestrian infrastructure, accessibility, and safety. While emphasizing on sidewalks and street crossings, the plan supports greenways as vital components of a walkable, connected city and aligns with Complete Streets principles.

EXISTING GREENWAY PROJECTS & REGIONAL COLLABORATION:

Hendersonville currently maintains approximately 3.5 miles of greenway trails, with several local and regional projects underway to expand and connect the network. Collectively, these efforts form the backbone of a growing system that links neighborhoods, parks, downtown destinations, and surrounding communities.

- » **Oklawaha Greenway:** This 10-foot-wide, paved, multi-use path connects five City parks and features ADA accessibility, emergency call boxes, benches, water fountains, and bike repair stations. It is one of Hendersonville's most beloved recreation and transportation corridors. Portions of the greenway are maintained by Henderson County and are periodically impacted by flooding, requiring ongoing maintenance to ensure safety and accessibility.
- » **Clear Creek Greenway:** An extension of the Oklawaha corridor that follows Clear Creek. Currently in design, the project is anticipated for completion in 2026 and will expand opportunities for walking, biking, and wildlife observation while improving neighborhood connectivity.
- » **Ecusta Trail:** A transformative 20-mile rail-trail connecting downtown Hendersonville to Brevard, serving as a regional spine for future trail connections.
 - *Local Segment: The first six-mile section, linking downtown Hendersonville to Horse Shoe, is under construction and expected to open in mid-2025.*
 - *Future Segments: Approximately five miles in Henderson County and eight miles in Transylvania County are in design and engineering. Once complete, the trail will connect "Main Street to Main Street," linking the downtowns of Hendersonville and Brevard.*
 - *Trail Partnerships: Local businesses along the corridor have committed to providing shared amenities such as*

restrooms, water, and parking—creating a collaborative model for future projects.

- » **Above the Mud (local segment):** A feasibility study funded by NCDOT is evaluating a connection between the Ecusta Trail and Oklawaha Greenway along the Mud Creek corridor. The project reflects Hendersonville's ongoing commitment to integrating greenways with floodplain restoration and natural resource management.
- » **Hellbender Regional Trail Network:** A multi-county initiative aimed at connecting existing and planned trails across Western North Carolina. Hendersonville's system, particularly the Oklawaha and Ecusta corridors, will serve as key connectors within this broader regional framework.
- » **Saluda Grade Trail:** A proposed 31-mile rail-trail linking Inman, SC to Zirconia, NC. It represents a significant future opportunity for southern regional connectivity. Led by Conserving Carolina, the project represents a major future opportunity for southern regional connectivity and would link Hendersonville to communities across the Upstate and beyond.

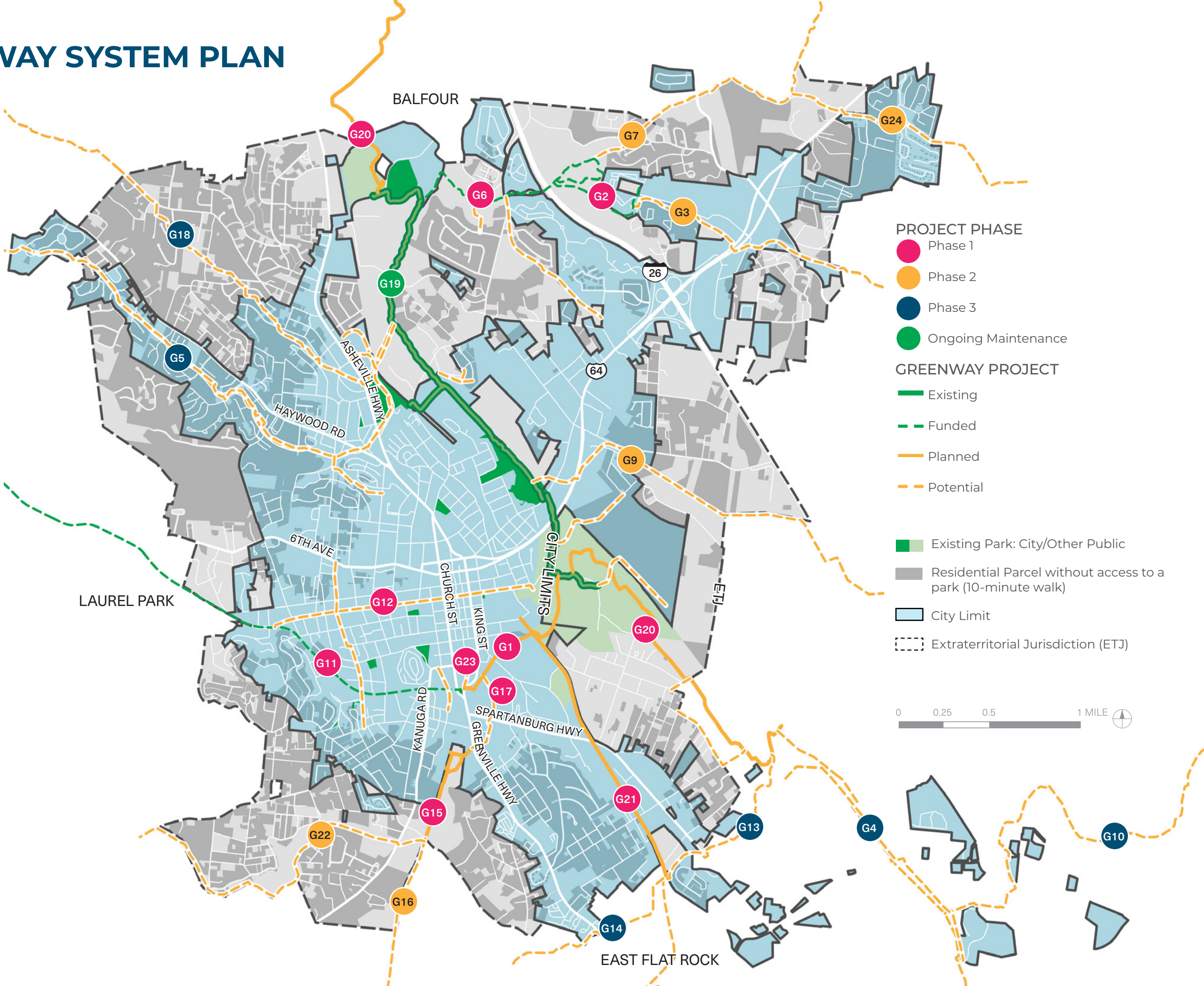
These initiatives together position **Hendersonville as a critical hub** in Western North Carolina's regional trail system—expanding local mobility options, supporting active recreation, and fostering a connected, resilient, and environmentally sustainable greenway network.

FUTURE GREENWAY SYSTEM PLAN

The Future Greenway System Plan Map, illustrates the vision for a fully connected network of greenways across Hendersonville. The vision includes existing greenways to be enhanced and maintained, greenway projects that are funded and moving toward construction, planned corridors in need of funding, and potential greenway corridors to consider in the long-term.

To guide decision-making, each proposed greenway has been prioritized using a set of criteria that balance community needs, connectivity, natural resource protection, feasibility, and potential for partnership.

As a result of prioritization, projects are organized into three phases, beginning with the most feasible and impactful connections and building toward more ambitious corridors over time. Taken together, the phased approach represents **more than 20 additional miles of greenways** in the City of Hendersonville. Phase 1 projects set in motion over 10 new miles of greenway trails. This vision sets up Hendersonville to exceed national benchmarks for trail mileage relative to population, advancing its position as a leader in greenway systems.



IMPLEMENTATION APPROACH

GREENWAY PROJECT PRIORITIZATION CRITERIA

The following list outlines priorities to focus on as the City implements this plan.

Nature

The project supports the protection, preservation or restoration of natural features.

Investment Zones

The project serves the areas of the City identified as Priority Investment Zones.

Population Density

The project would serve more people in areas with relatively higher population density.

Future Development

The project anticipates future growth areas and the need for connectivity.

Feasibility

The project is feasible given current ownership and land use.

Support / Opportunity

The project aligns with other community priorities and funding sources.

The results of the greenway project prioritization evaluation are summarized in the table below, providing a framework for phasing investment and implementation. This should be considered a **flexible guide** that may be adjusted as opportunities, partnerships, and funding become available.

ID	Greenway Name	Project Type	Phase
G06	Clear Creek Greenway	Funded	1
G01	Above the Mud Greenway	Planned	1
G02	Allen Branch Greenway (Clear Creek)	Funded	1
G15	Mud Creek Greenway Feasibility Study	Planned	1
G21	Saluda Grade Connector	Planned	1
G23	South Main Greenway Connector	Planned	1
G11	Ecusta Rail Trail	Funded	1
G20	Oklawaha Greenway North and South Extensions	Planned	1
G17	Mud Creek and Ecusta Greenway Connector	Potential	1
G12	Fourth Ave Greenway (Westbound Lane)	Potential	1
G24	Wolfpen Creek Greenway	Potential	2
G09	Devils Fork Greenway	Potential	2
G03	Allen Branch Greenway Extension	Potential	2
G07	Clear Creek Greenway Extension	Potential	2
G16	Mud Creek Greenway Extension	Potential	2
G22	Shepherd Creek Greenway	Potential	2
G13	King Creek Greenway	Potential	3
G14	Kings Creek Tributary Greenway	Potential	3
G04	Bat Fork Greenway	Potential	3
G05	Britton Creek Greenway	Potential	3
G18	Mud Creek Tributary Greenway	Potential	3
G10	Dunn Creek Greenway	Potential	3
G19	Oklawaha Greenway	Existing	Maintain

REGIONAL COORDINATION, FUNDING AND PARTNERSHIPS

Delivering on the full Greenway Plan will require strong collaboration across multiple partners. While the City typically manages trails within its limits, Henderson County and local partners also supports funding, planning, and regional alignment. NCDOT and federal agencies play key roles in funding and regulatory compliance. Nonprofits and private partners often support acquiring land, and supplement community engagement and ongoing stewardship support.

Successful implementation will rely on a mix of local, state, federal, and private investment. At the local level, capital improvement funding, public bonds, and developer contributions can provide support for construction. State and federal programs—such as the Parks and Recreation Trust Fund (PARTF), Transportation Alternatives Program (TAP), Congestion Mitigation and Air Quality (CMAQ), and the Land and Water Conservation Fund (LWCF)—also offer several funding opportunities. Federal infrastructure and resiliency grants, such as those delivered by NCDOT or FHWA, can also be leveraged. Because these sources are competitive and ongoing, the City should pursue multiple funding streams and position itself to act quickly when opportunities arise. Partnerships with nonprofits and private sponsors can continue to provide supplemental funding and stewardship support.

COST ASSUMPTIONS:

Greenway development costs vary based on corridor type, site conditions, and design complexity. As a planning-level assumption, Hendersonville should consider:

- » \$2-3 million per mile for a typical 10-14 foot asphalt-paved greenway
- » \$3-4 million per mile in constrained or urbanized settings requiring bridges, boardwalks, or higher level of design finish

- » \$0.5-1 million per mile for natural surface or crushed stone aggregate trails in less developed settings

These ranges do not include design, land acquisition or construction of major buildings or structures, which can substantially increase costs. The City should also plan for inflation costs when planning out longer-term implementation.

IMPLEMENTATION SEQUENCE

While the future greenway system map provides an overall framework for developing greenway trails and approximates alignment and corridors, implementation typically advances through a series of steps that move projects from vision to reality. The overall plan and priorities will likely adjust as changes in development patterns, funding opportunities and community needs occur. More detailed feasibility studies for each project will need to be conducted to understand the unique challenges, cost and opportunities for each corridor. This often includes a detailed evaluation of land and easement acquisition potential, environmental analysis and permitting, topography analysis, grading and drainage studies, safety and user experience studies. The general implementation sequence includes:

Greenway Master Plan → Feasibility Studies → Project Design and Engineering → Project Bidding/Award → Construction and Delivery

MAINTENANCE AND STEWARDSHIP

Sustaining Hendersonville's greenway network will require ongoing investment in operations and upkeep. As the system expands over time, staffing and investment will need to be planned for and anticipated. Routine maintenance includes mowing, vegetation management, resurfacing, drainage clearing, and signage repair. Trailheads and amenities

(benches, drinking fountains, repair stations) also require inspection and upkeep.

Hendersonville already benefits from a strong network of partner organizations and volunteer groups that contribute to ongoing greenway care, funding, and advocacy:

- » **City of Hendersonville Adopt-A-Park/Trail Program:** The City's existing program enables community groups, nonprofit organizations, and local businesses to adopt segments of parks or trails for routine litter removal, reporting maintenance needs, and supporting beautification efforts. Segments of the Oklawaha Greenway are currently maintained under this program by partners such as the Blue Ridge Bicycle Club, Rotary Club of Hendersonville, and the Carolina Mountain Land Conservancy.
- » **Friends of the Ecusta Trail:** A volunteer-driven nonprofit that provides fundraising, advocacy, and community outreach for the Ecusta corridor, organizes cleanup days, events, and provides local match funding for grants.
- » **Conserving Carolina:** A regional land trust leading conservation and stewardship efforts along multiple trail corridors, including the Ecusta and Saluda Grade Trails. Conserving Carolina's work in land acquisition, easement negotiation, and environmental restoration has been instrumental to protecting sensitive habitats and advancing trail construction in the region.
- » **Henderson County Parks and Recreation Department:** Provides ongoing maintenance and management support for the Oklawaha Greenway and collaborates with the City to ensure consistent standards and upkeep across jurisdictional boundaries.

- » **Ecusta Trail Partner Program:** Collaboration between Henderson County and several local businesses and other entities to provide shared amenities such as restrooms, parking, bike racks, fix-it stations, and drinking water refill stations, in exchange for marketing in the official Ecusta Trail materials. This is a temporary solution until amenities are permanently built along the trail.
- » **North Carolina Department of Transportation (NCDOT):** Provides technical guidance and funding support for greenway projects that are included in adopted State, regional, or local transportation plans, and NCDOT funding typically covers preliminary engineering, right-of-way acquisition, and construction costs.

To sustain long-term operations, the City should continue to expand and formalize these partnerships to standardized maintenance expectations and agreements for community partners.

Extreme weather in Hendersonville is also a concern and can lead to conditions where erosion, washouts, landslides and flooding, make trails and greenways temporarily unusable, requiring repair. Establishing a dedicated annual maintenance fund and contingency reserve for emergency repairs,

particularly along flood-prone corridors, can help to ensure the system remains safe and resilient.

SPECIAL APPLICATION: SAFE ROUTES TO PARKS AND SCHOOLS

Greenways are not only recreational amenities—they can serve as safe, everyday routes that connect people to schools, parks, and other community destinations. Integrating the principles of Safe Routes to School (SRTS) and Safe Routes to Parks ensures trails function as both recreation infrastructure and essential mobility.

Key opportunities include:

- » Providing safe, off-street travel corridors for children and families.
- » Reducing traffic near schools and improving crossings.
- » Linking neighborhoods to parks, schools, retail destinations and downtown.
- » Encouraging daily physical activity and healthy lifestyles.
- » Expanding access for residents without reliable vehicle transportation.

Designing for safe connections should include: 10–14 foot paved widths where feasible, durable surfaces, buffers from roadways, lighting at crossings and trailheads, bike parking, benches, shade, and ADA-compliant features. The City should coordinate with Henderson County Public Schools and park system staff to map travel patterns, identify key trail connections,

conduct walk audits, and apply for funding programs such as SRTS, TAP, or CMAQ.

MEASURING SUCCESS: LEVEL OF SERVICE & BENCHMARKING

As Hendersonville expands its greenway system, it will be important to measure success over time. Benchmarks provide accountability and ensure trails are distributed across the community.

Currently, Hendersonville has approximately 6 miles of paved greenways, or about 0.5 miles per 1,000 residents—already above peer communities of a similar size. Full implementation of this plan would add more than 20 miles, raising the City above national benchmarks.

Potential metrics for the City of Hendersonville to consider tracking:

- » Access: Percentage of residents within a half-mile of a greenway or trail access point.
- » Connectivity: Extent to which greenways link key destinations such as parks, schools, and downtown.
- » Safety: Perceived and actual safety features. Number of safety incidents reported.
- » Trail Quality of Experience: Surface types, continuous trail lengths, art and interpretive installations and ADA accessibility.
- » Condition and Use: Percentage of trails rated in “good” condition and annual increases in use.
- » User Satisfaction: Surveys and intercept interviews to gauge trail user satisfaction with condition and experience.
- » Ecological health: Impact on native vegetation, wildlife habitat, air quality, and floodplain capacity.
- » Economic impact: Increase in property values, tourism and local spending, and job growth.

BEST PRACTICES

DESIGN STANDARDS

Designing safe, accessible, and sustainable greenway trails should be guided by best practices that reflect current thinking in multi-use trail planning and design. Local context will always influence trail design, however these standards offer a reliable foundation to support high-quality trail development. Many of these standards are currently used throughout North Carolina and are referenced by NCDOT and local governments statewide.

Hendersonville should align its greenway development with the latest versions of the following standards:

AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES, 5TH EDITION (2024)

Published by the American Association of State Highway and Transportation Officials, this newly updated guide serves as the definitive national standard for bicycle facility design, including shared-use paths and multi-use trails commonly used in greenway systems. It emphasizes flexibility for both urban and rural contexts and provides detailed specifications for path width, surface types, signage, and intersection treatments.

NACTO URBAN BIKEWAY DESIGN GUIDE, 3RD EDITION (2025)

Developed by the National Association of City Transportation Officials, this guide highlights innovative and inclusive design strategies for urban bikeways, many of which are applicable to high-use greenway corridors or trail connections in denser environments. It includes recommendations for intersections,

separated bike facilities, and treatments for emerging micromobility modes like e-bikes and scooters.

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 11TH EDITION (2023)

Published by the Federal Highway Administration (FHWA), the MUTCD defines the national standards for signage, pavement markings, trail crossings, and signalization. It is critical for ensuring uniformity and safety, particularly where greenways intersect with roadways or public rights-of-way. MUTCD compliance is often required when federal funds are used. FHWA also provides an official rulings database to address treatments not explicitly covered: MUTCD Rulings Database.

NCDOT COMPLETE STREETS PLANNING & DESIGN GUIDELINES (2012)

These guidelines support the planning and design of streets that safely accommodate all users—pedestrians, cyclists, motorists, and transit users—regardless of age or ability. While not greenway-specific, the principles can inform trail-road integration, crossings, and facility transitions. NCDOT endorses the integration of AASHTO, MUTCD, and ADA standards throughout Complete Streets implementation.

ADDITIONAL NATIONAL AND REGIONAL RESOURCES

Other relevant resources include:

- » FHWA Small Town and Rural Multimodal Networks Guide (2016)
- » CDC Parks and Trails Health Impact Toolkit
- » Rails-to-Trails Conservancy and American Trails technical guides
- » Pedestrian and Bicycle Information Center (PBIC)
- » IMBA Guidelines for trail sustainability

Hendersonville’s greenway network can benefit from a coordinated approach to design that integrates these standards while remaining flexible to the city’s evolving needs. It is recommended that the City of Hendersonville develop its own Greenway Design Management Manual to standardize design features across projects, streamline coordination with Henderson County and NCDOT, and ensure future trails meet the highest accessibility and safety standards. The table below provides a summary of best practices.

Table 1: Summary of Trail Design Best Practices

Design Element	Best Practice	Based On
Trail Width	10-14 feet for shared-use trails	AASHTO, FHWA
Surface Material	Asphalt or concrete preferred; stabilized gravel for low-traffic/natural areas	AASHTO, FSORAG
Shoulders/Clear Zones	Minimum 2 feet on either side	AASHTO, NCDOT
ADA Accessibility	<5% grade preferred; compliant surfaces, railings and guardrails as required and signage	ADA, PROWAG, FSORAG
Separation from Roadways	5-6 feet preferred, with landscaping or barriers	NACTO, AASHTO
Trail Crossings	High-visibility striping, refuge islands, signals where warranted	MUTCD, NCDOT
Wayfinding & Signage	Consistent branding, directional signage, mileage markers, regulatory signage	MUTCD, PBIC
Amenities	Restrooms, benches, water fountains, repair stations, trash bins at trailheads and destination nodes	NACTO, Community Input

EXAMPLE GREENWAY TYPOLOGIES

Following national and state design guidance, Hendersonville's greenways can take several forms depending on corridor type and setting. The sections shown on the following pages are illustrative examples, not mandated or adopted design guidelines. They demonstrate how best practices can be applied in different contexts, offering flexible options that balance recreation, mobility, and environmental stewardship.

- » **Multi-Use Greenway Trail:** A 12–14 foot paved asphalt or concrete trail. Supports walking, running, biking, and ADA access. Some locations may also include a separated walking path to accommodate different speeds of use. Often along wildlife corridors, vegetative buffers and located within a dedicated easement or public-utility right-of-way.
- » **Streamside Greenway Trail:** Stream corridor trails are greenways located along rivers, creeks, or other water bodies—often within floodways or floodplains. These alignments offer recreational and ecological value but also require careful coordination and design.
- » **Floodway or Floodplain Trail (Boardwalk):** Trails within flood-prone areas or wetlands, often at stream or drainage crossings.
- » **Steep Slope Trail:** Greenways in steep slope conditions require stabilization such as retaining walls or switchbacks designed for hillside conditions, balancing accessibility with erosion control.
- » **Urban Linear Park and Trail:** A greenway integrated into a broader interconnected park corridor. May offer more gathering spaces than a typical greenway, enhanced landscaping, and park amenities such as benches, lighting, entertainment and play features.



Existing Multi-use Trail at Oklahawa Greenway at Jackson Park, Hendersonville.

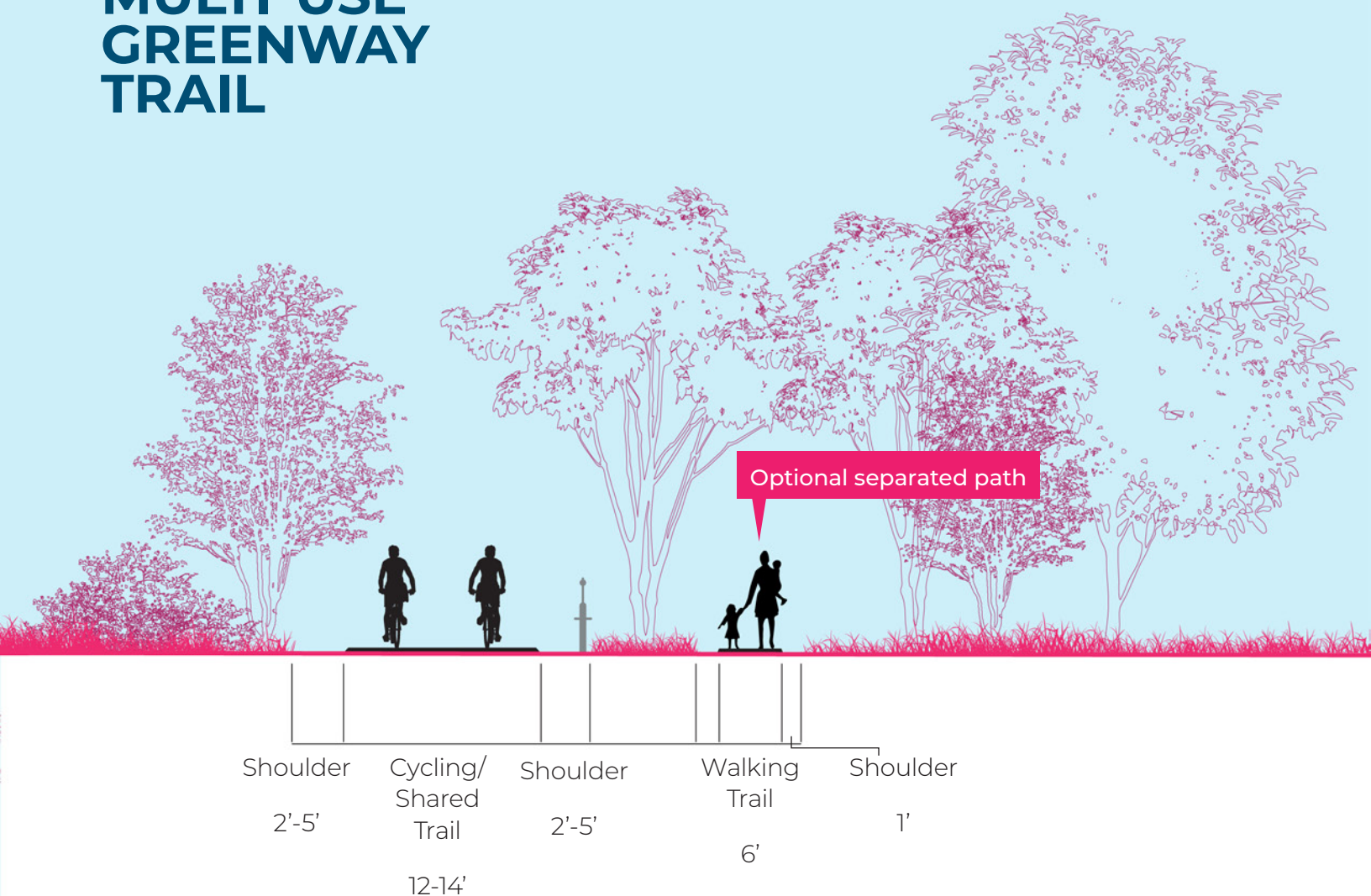


Bicyclists on the Ecusta Multi-use Greenway trail, Hendersonville.



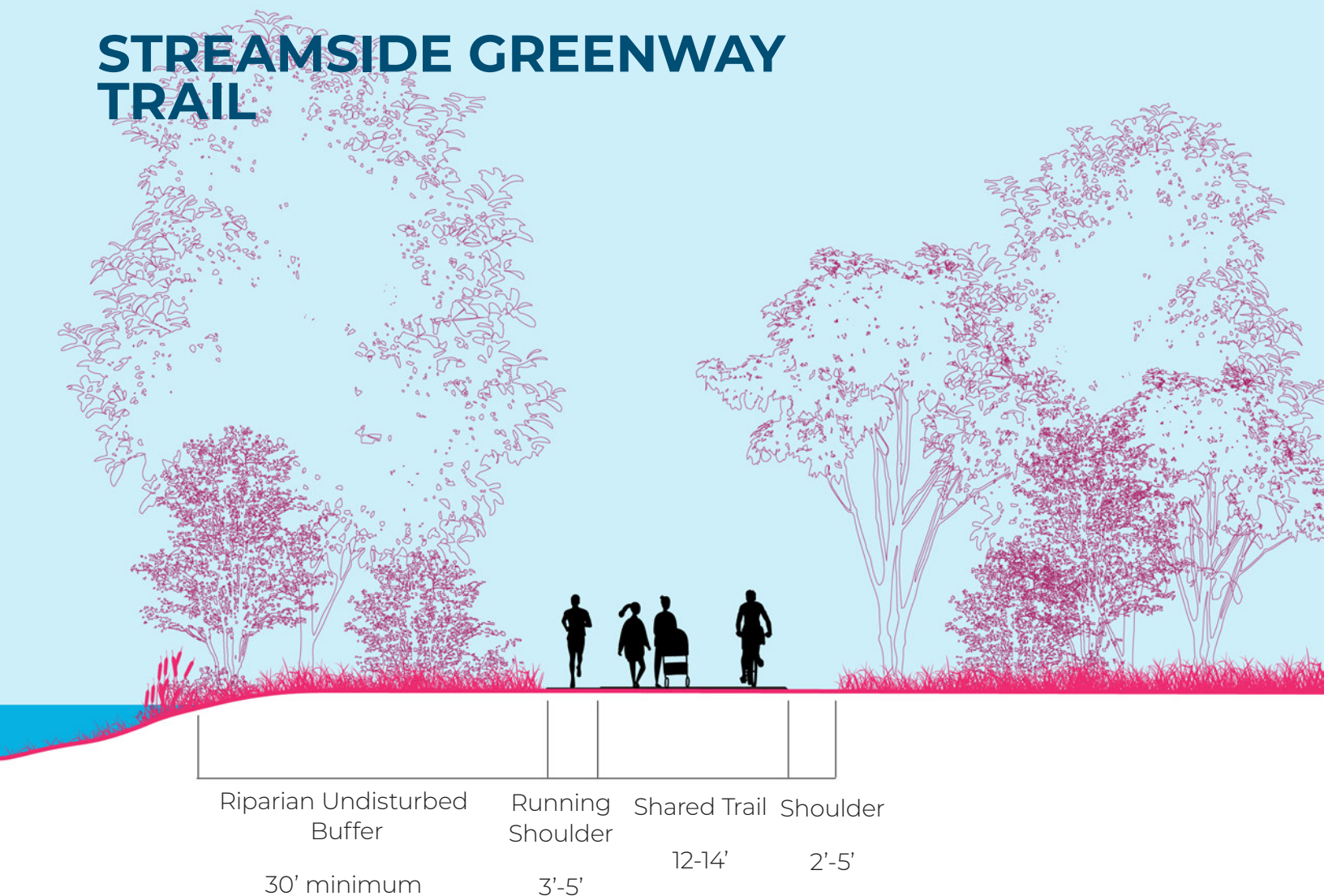
Improved wayfinding and amenities such as bike tuning stations and bike racks, will help to formalize trailheads and destination nodes.

MULTI-USE GREENWAY TRAIL



Context	Utility right-of-way (R.O.W.), easement, former railway
Typical Tread Width	12-14' preferred (10' minimum); 6-8' (3' minimum) optional separated path for walking, 2% maximum cross slope
Shoulder	2' minimum, 3-5' preferred.
Materials	Asphalt or concrete surface, optional separated walking path in softer surface (crushed stone, stabilized aggregate)
Amenities	Benches, drinking fountains, shaded rest areas, dog bag dispensers, waste receptacles, bike repair stations, regulatory and wayfinding signage

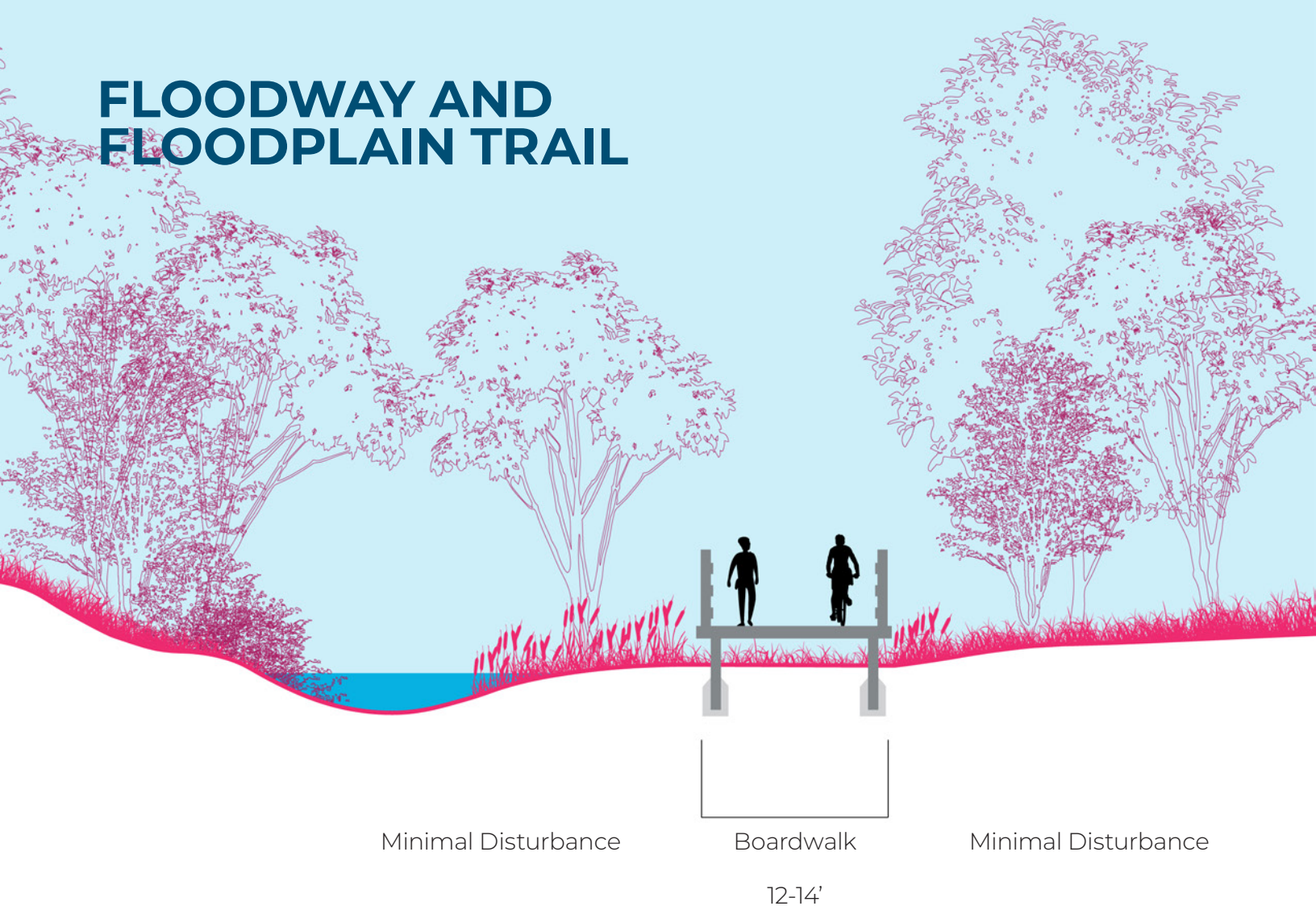
STREAMSIDE GREENWAY TRAIL



Context	Riparian corridors, stream buffers, and natural edges connecting parks and neighborhoods.
Typical Tread Width	12-14' preferred (10' minimum), 2% maximum cross slope, narrow natural-surface alignments possible in sensitive areas
Shoulder	2' minimum, 3-5' preferred.
Materials	Asphalt or concrete where flood-resilient surfaces are needed; crushed stone or stabilized aggregate for running shoulder
Amenities	Benches, shaded rest areas, dog bag dispensers, waste receptacles, bike repair stations, regulatory and wayfinding signage

Note: Trail construction in these areas typically involves collaboration with the North Carolina Department of Transportation (NCDOT) for bridge underpasses and compliance with U.S. Army Corps of Engineers (USACE) and Federal Emergency Management Agency (FEMA) regulations to address environmental and floodplain impacts.

FLOODWAY AND FLOODPLAIN TRAIL



Context

Floodway, floodplain, drainage crossings

Typical Tread Width

12-14' (10' minimum), 2% maximum cross slope

Materials

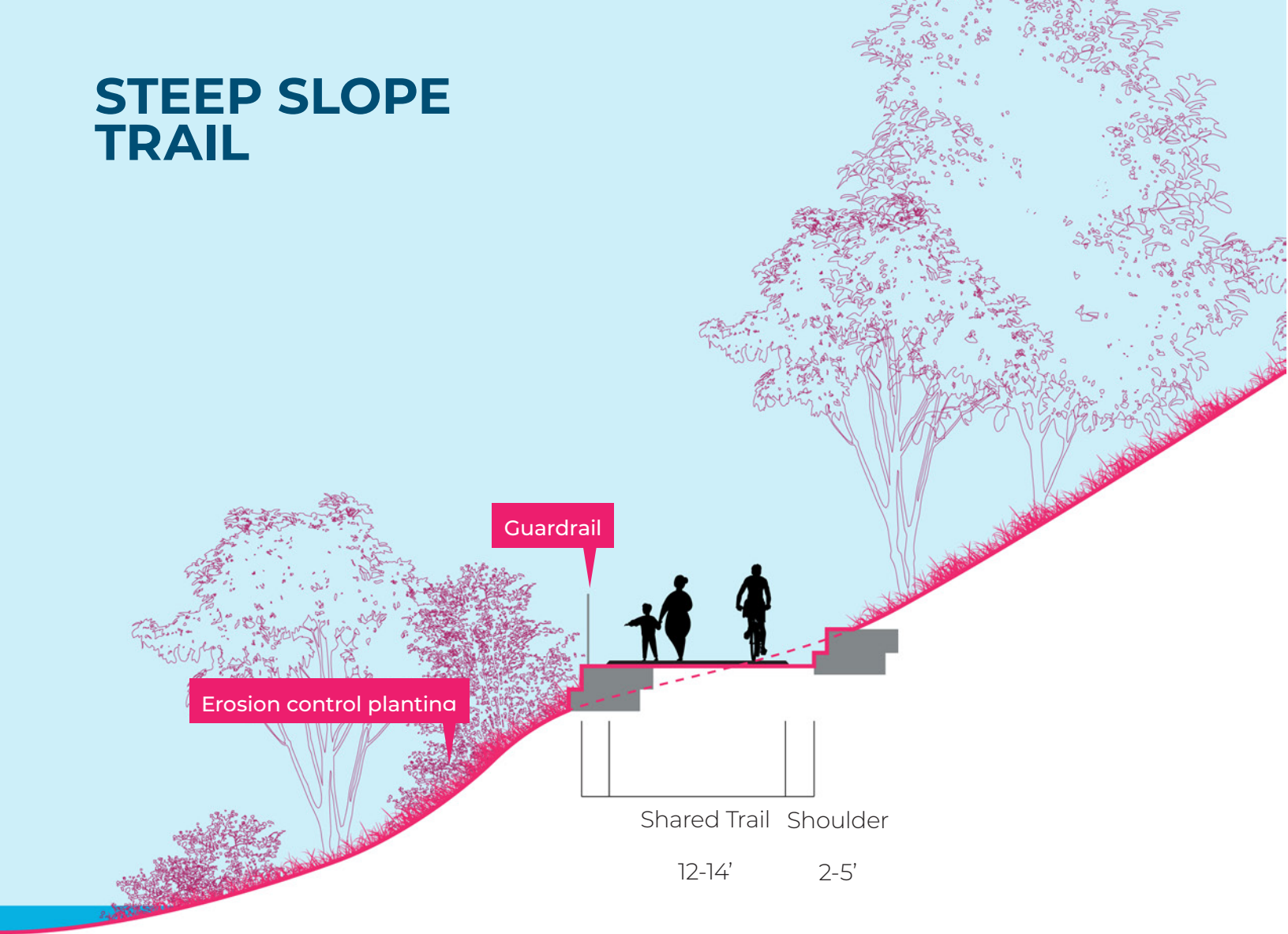
Wood, composite wood or concrete

Amenities

Interpretive signage, viewing binoculars

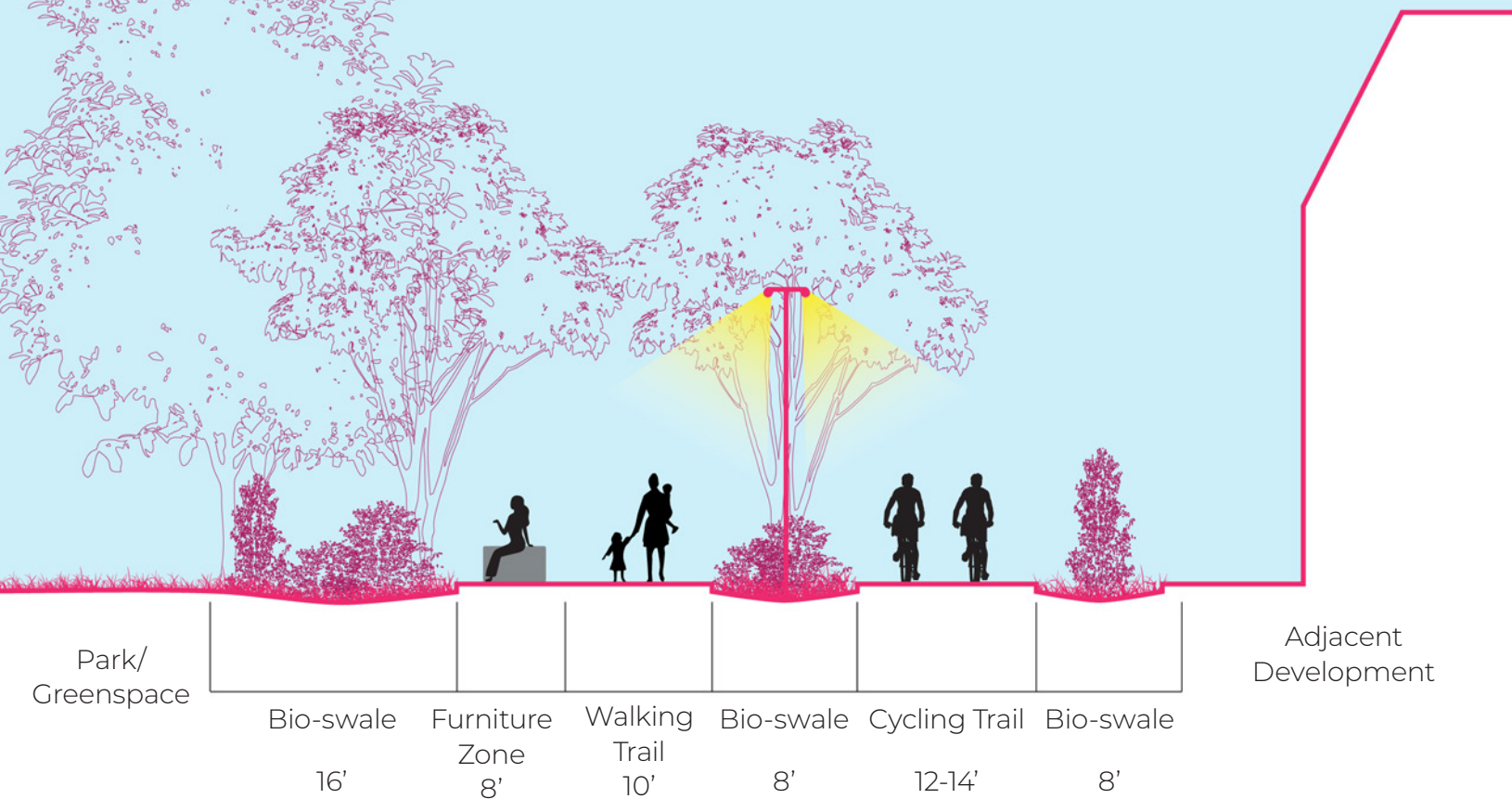
Note: Trail construction in these areas typically involves collaboration with the North Carolina Department of Transportation (NCDOT) for bridge underpasses and compliance with U.S. Army Corps of Engineers (USACE) and Federal Emergency Management Agency (FEMA) regulations to address environmental and floodplain impacts.

STEEP SLOPE TRAIL



Context	Steep slopes
Typical Tread Width	12-14' (10' minimum), 2% maximum cross slope
Shoulder	2' minimum, 3-5' preferred.
Materials	Asphalt or concrete
Amenities	Viewing platform, regulatory and wayfinding signage

URBAN LINEAR PARK AND TRAIL



Context

Urban with adjacent development and connected to park or square; road R.O.W. converted from vehicular to pedestrian and cyclist use

Typical Tread Width

Varies (10' minimum), 2% maximum cross slope

Materials

Asphalt, concrete, unit-paving, brick

Amenities

Benches, tables/seating, pop-up vendor areas, power access, lighting, drinking fountains, bike repair stations, trash and recycling receptacles, informational and wayfinding signage

