



FINAL REPORT

2022

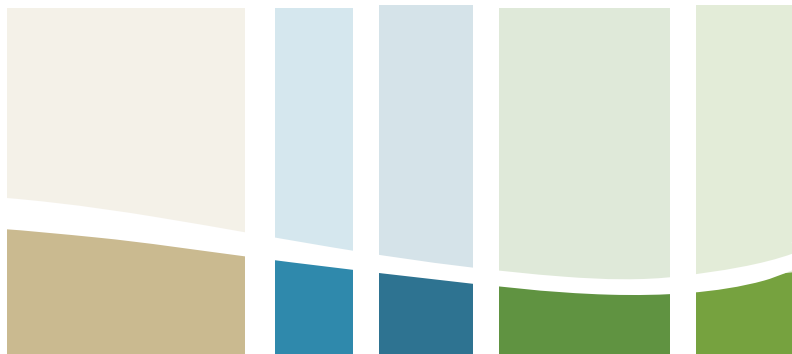


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I. EXECUTIVE SUMMARY



I. Executive Summary



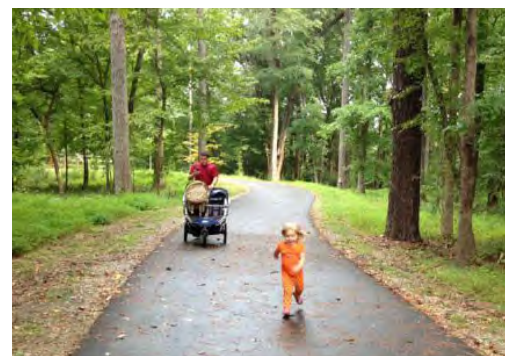
ONE HUNDRED COUNTIES. ONE GREAT TRAILS STATE.

The Great Trails State Plan will connect communities to the great outdoors while creating opportunities for active transportation, conservation, recreation, health, tourism and economic prosperity. This plan draws upon existing plans and new recommendations to identify a network of shared-use paths that will connect every county in North Carolina.

PLAN GOALS

The Great Trails State Plan and network seeks to connect all counties and key destinations throughout the state to a growing network of strategic greenways. Other principal goals of the plan include:

- Foster connections between urban and rural areas in all 100 counties
- Provide transportation options between where people live, work and play for people of all ages, backgrounds and abilities
- Create opportunities for conservation, recreation, education, physical health, environmental health, tourism, and economic prosperity
- Identify resources needed to plan, design, construct and connect the system
- Facilitate multi-jurisdictional partnerships to support, develop, manage, and maintain the system



KEY INPUTS

- Existing Trails
- Existing Trail Plans
- Key Destinations/State Parks
- Steering Committee Kick-Off Meeting
- Bicycle Level of Service Network
- Green Infrastructure Network

PRELIMINARY NETWORK

- 14 Division-Level Stakeholder Meetings
- Confirmation of Network
- Identification of Gaps and Alternatives
- Connecting Across Divisions

DRAFT PLAN NETWORK

- Review of Gaps and Alternatives by Steering Committee & Stakeholders
- Rail Division Meetings
- Public Input

GTS NETWORK (see following pages)

PLANNING PROCESS



40 STEERING COMMITTEE MEMBERS provided direction to the process, representing each of NCDOT's 14 Divisions, seven RPOs and MPOs, and relevant statewide departments and organizations.



HUNDREDS OF STAKEHOLDERS provided detailed reviews of the proposed corridors, including town and county managers, planners, parks directors, land trusts, advocacy organizations, and many others.



THOUSANDS OF NC RESIDENTS expressed support and shared ideas in public surveys, online input maps and plan review, including thousands of impressions on social media that generated awareness of the plan and process.

A VISIONARY PLAN FOR NORTH CAROLINA

Decades in the making, through hundreds of local plans and initiatives, the Great Trails State (GTS) is ready to become a reality. This plan, *for the first time in the state's history*, identifies a proposed network of trails that would:

- Connect all 100 counties throughout the state;
- Create lasting investments in rural and urban areas;
- Provide a return on investment of \$1.72 annually, for every \$1 of initial trail construction, from sales revenue at local businesses, sales tax revenue, and benefits related to health and transportation (source: NCDOT and ITRE, <https://itre.ncsu.edu/focus/bike-ped/sup-economic-impacts>);
- Provide opportunities for healthy, active transportation (responding to a surge in trail use during the COVID-19 pandemic);
- Provide infrastructure to support North Carolina's \$28 billion outdoor recreation industry; and
- Improve health, safety, mobility, recreation, environment, and economic development, benefiting North Carolinians for generations.

Building A Great Trails State

Building a Great Trails State will take time and a coordinated effort to plan, design, fund, construct and maintain greenways across the state. However, demand for trails is on the rise. Long-distance regional trails are already taking shape. The Great Trails State map shown below represents a long-term network of trails reaching every county in North Carolina. The Great Trails State Report describes how this map was developed, the goals of the network, key connections and implementation strategies.



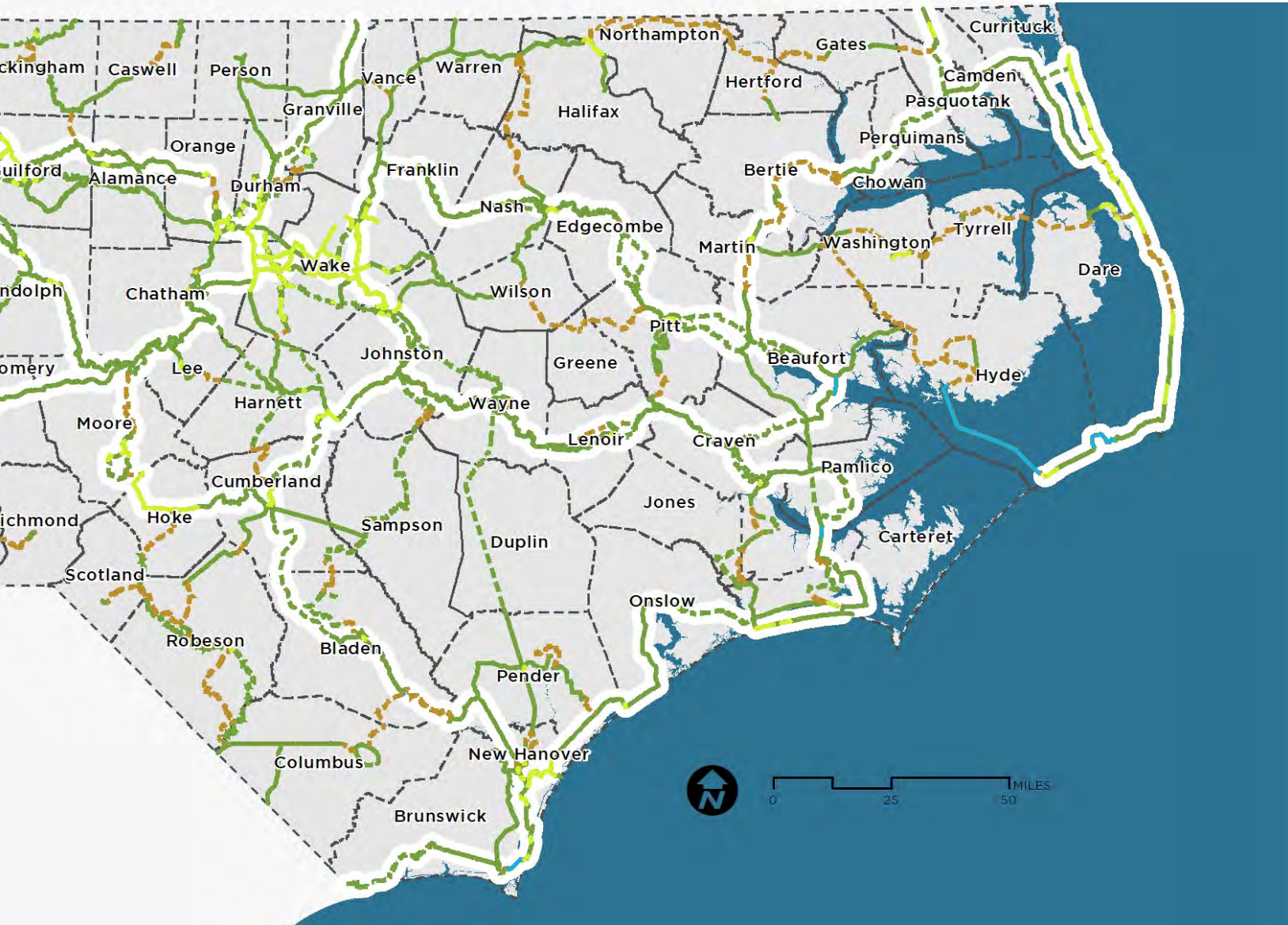
GREAT TRAILS STATE NETWORK MAP



Implementation Highlights

The GTS Plan recommends additional planning, feasibility studies, right-of-way acquisition, design, and construction to advance efforts to expand trails in North Carolina. A GTS Advisory Committee will be led by the N. C. Department of Transportation and North Carolina State Parks to implement the plan. Individual strategies described in Chapter V and VI include:

- Refine and Design Connections
- Trail Designation, Branding and Wayfinding
- Policy Updates
- Coordinate with Implementation Partners
- Create Accountability
- Evaluate and Update the GTS Plan
- Tourism and Engagement



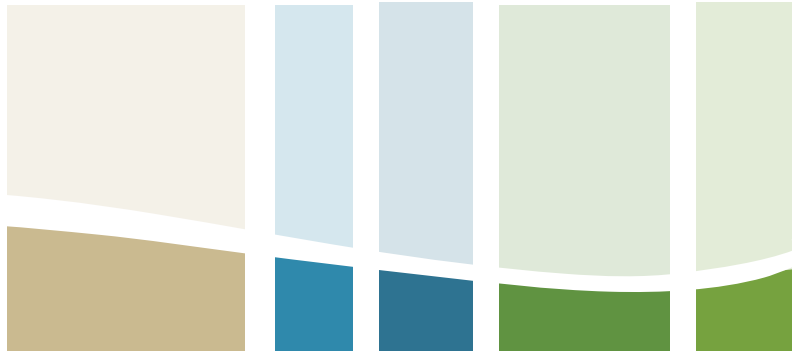
YADKIN MEMORIAL PARK LOOP

YADKINVILLE



Yadkin Memorial Loop
Image Credit: Brianna Haferman

II. VISION & GOALS



Vision

The Great Trails State (GTS) is a planned network of shared-use trails of statewide significance connecting North Carolina's counties and population centers with state parks and important recreational assets. It is founded upon extensive local and regional efforts to plan and build trails.

Goals of the Great Trails State

The Great Trails State Plan and network seeks to connect all counties and key destinations throughout the state to a growing network of strategic greenways. Other principal goals of the plan include:

- **Foster connections between urban and rural areas** in all 100 counties
- **Provide transportation options** between where people live, work and play for people of all ages, backgrounds and abilities
- **Create opportunities** for conservation, recreation, education, physical health, environmental health, tourism, and economic prosperity
- **Identify resources** needed to plan, design, construct and connect the system
- **Facilitate multi-jurisdictional partnerships** to support, develop, manage, and maintain the system

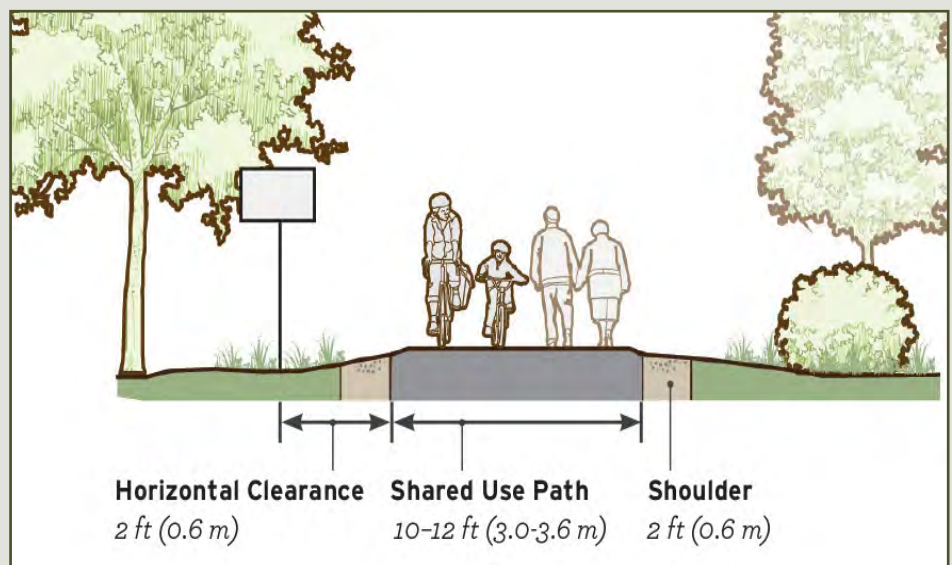
The Great Trails State Plan will link communities to the great outdoors, while creating opportunities for transportation, conservation, recreation, education, physical health, environmental health, tourism, and economic prosperity.

The Great Trails State

For this plan, "Trails" refer to shared-use paths, also known as greenways, multi-use trails, sidepaths (along roadways) and rail-trails (along rail corridors).

Trails can be paved or unpaved, but support both bicycling and walking (as opposed to hiking-only trails or footpaths)

Limited on-road connections may be necessary for connectivity or for interim network routing.



The Great Trails State Plan envisions a network of shared-use paths that connect major destinations throughout North Carolina and can be used for transportation and recreation.

Network Principles

This version of the Great Trails State Plan includes plans for a statewide network of shared-use paths that can be used for transportation and recreation. Parallel efforts are underway by other agencies and organizations to expand other types of trails (including hiking only, mountain biking and paddle trails).

The design and long-term development of the Great Trails State will be guided by five fundamental network planning principles: Coherence, Attractiveness, Directness, Safety, and Comfort. Each of these principles are of varying importance depending on the function a given portion of the trail serves and the interests of the primary users. These principles are described in further detail below.

Coherence

At the most basic level, a high-quality trail network should connect frequently traveled origins and destinations. This means that the network provides sufficient continuity that users can access their destinations without having to deviate from the network. For this to be possible however, consistent signage, wayfinding, and trail design must also ensure that the trail network is recognizable statewide and as navigable as possible. This avoids confusion that can not only lead to frustration in users, but also unsafe riding or walking conditions.

Attractiveness

While North Carolina's picturesque landscapes bode well for making an attractive trail network, beautiful scenery alone is not enough. Especially for recreational trips, fostering a small-scale environment that provides sufficient variation in the landscape as to remain stimulating for users is important. An attractive trail causes as little stress as possible on the part of its users. For instance, in places where the sun can become overly intense, areas of shade make the trail attractive, either by means of trees or built structures. Ensuring social safety through good lighting and the presence of people in the surroundings is also important for attractive trails.

Directness

Connections between origins and destinations should also be as direct as reasonably possible. Routes that meander unnecessarily only lead to frustration in users who simply want to get from A to B. In recreational trails however, directness and attractiveness are often at odds. For most recreational trips, attractiveness is a more important criterion than directness. Given that the trail will also

be used for commuter trips, a balance must be struck on a case-by-case basis. Directness should also not come at the cost of usability. For instance, a trail section through a high-grade slope may be the most direct route but is quite impractical for trail users.

Safety

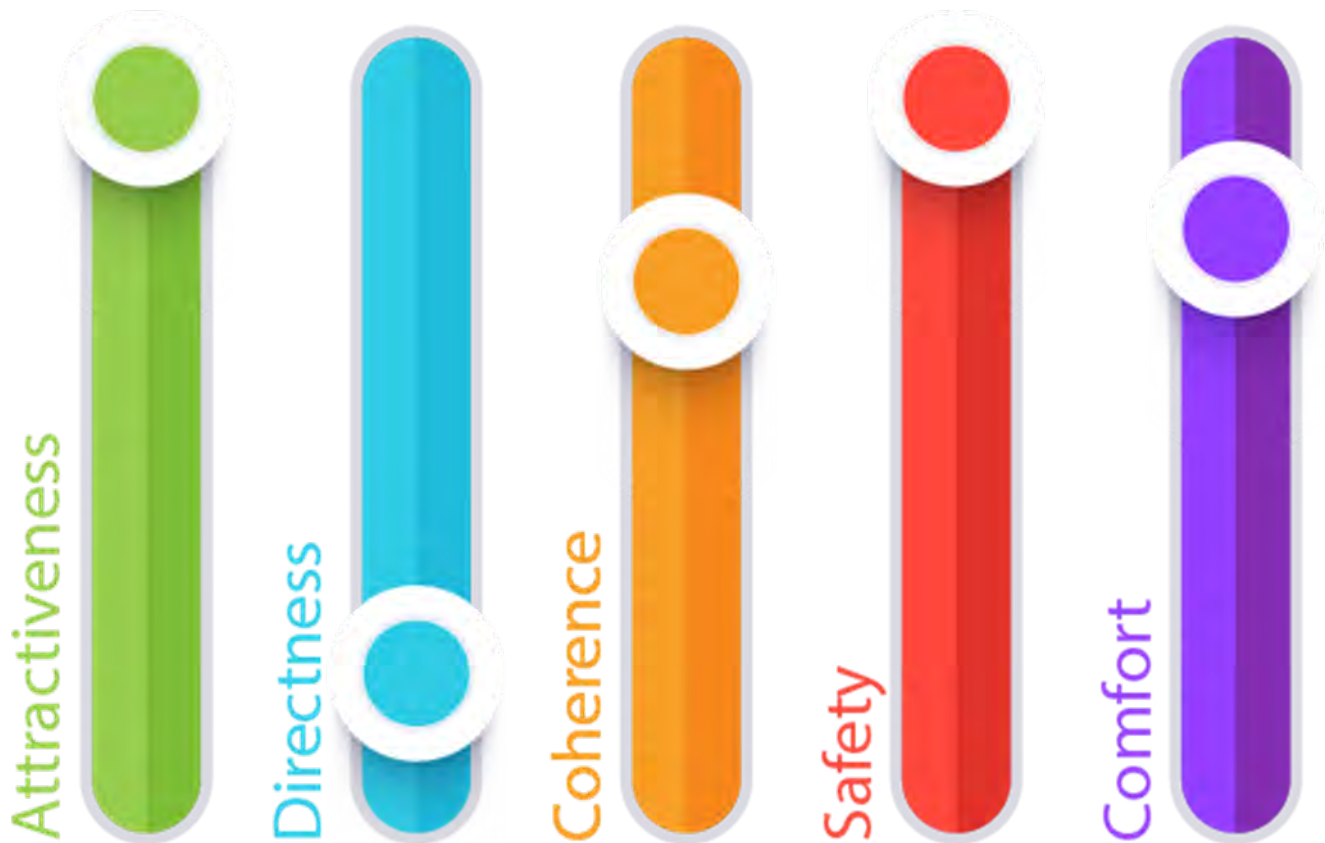
Often overlooked is the role that the network can play in ensuring the safety of trail users. While trails are often already segregated from car traffic, separation between pedestrians can also improve (perceived) trail safety. Even still, trails will almost inevitably need to cross roadways at one point or another. Careful consideration should therefore be paid to intersection treatments to ensure each modality behaves in a way that respects the safety of more vulnerable users. Designing to accommodate human error (i.e. safety margins), reduced speeds at points with conflicting movements, and ensuring visibility between users are just a few examples of safety integrated design. The safety measures taken should be of high quality and applied consistently throughout the network (see Coherence).

Comfort

To encourage people to actually make use of the trail network, trails should provide users a reliable level of comfort. Because active modes require more physical effort to start and continue moving, repeated stops along the route lead to uncomfortable riding conditions. Trail design should limit the amount of energy needed to navigate it. Smooth road conditions as well as minimal gradients help to ensure



Comfort, safety and attractiveness should be guiding priorities when identifying routes that will be part of the Great Trails State system. Image from Shelly Lake Greenway in Raleigh, NC.



The design and long-term development of the Great Trails State network should be guided by the five fundamental principles of Coherence, Attractiveness, Directness, Safety and Comfort. When conflicts arise between route choices or alignments, attractiveness and safety should take precedent over the directness of the route.

a comfortable trail experience. Furthermore, the route itself can play a role in comfort by avoiding the need for risky or uncomfortable maneuvers to navigate the trail. In short, riding the trail should be made as easy as possible.

GTS Principle Prioritization: A User-Oriented Design

Not all of these five principles can be maximized at all times. In fact, some of them can work against each other. For instance, achieving the most attractive route might involve a detour through a scenic forested area, but would come at the price of directness between two points of interest. Principles should therefore be prioritized according to the needs of the users the trail is intended to serve. For example, young people make use of trails for vastly different reasons than the elderly, as do commuters and recreational riders. For the elderly, comfort is often an important factor, however commuters might place more value on directness. Prioritizing particular characteristics is therefore a matter of determining the primary intended user and designing the trail network according to their needs. Shown above is an indication of the priority of principles for recreational trail network design. Attractiveness and Safety are rated the highest. If either one of those is lacking, people will not use the trail for recreational purposes. Comfort and Coherence are rated just below, as the trail needs to be comfortable for an enjoyable riding experience, and coherent as to ensure people will be able to ride longer stretches of the network. Directness is not as important. For some sections closer to (or within) urban areas, this principle might be more important, depending on the expected users.



Great Trail State Work Session
at Jordan Lake State Park

III. DEVELOPMENT OF GREAT TRAILS STATE NETWORK



The Great Trails State is a culmination of numerous statewide, regional and local initiatives to build opportunities to improve and maintain physical health, provide transportation options, give access to economic opportunity and prosperity, and to link residents and visitors with the abundant recreational opportunities that North Carolina has to offer. The result will be a high-quality, networked and expansive system of trails for North Carolinians.

NCDOT Initiatives

NCDOT has undertaken a number of initiatives to bring the Great Trails State to the present day:

Pedestrian & Bicycle Infrastructure Network (PBIN)

The PBIN includes geospatial data on all known existing and proposed bicycle and pedestrian facilities throughout North Carolina. Since 2015, municipalities have been encouraged to view, use, and submit data to develop this statewide repository which has been instrumental in the development of the Great Trails State network mapping. The GTS will be represented within the PBIN. Updates to the PBIN by the NCDOT will remain on-going and will be critical for development of local trail connections to the GTS network and tracking progress.

Branding NC as the Great Trails State

An initiative was undertaken by NCDOT in 2016 with support and feedback from the NC Division of Parks

to showcase North Carolina's state, regional and local trails. This initiative is the foundation of the present-day Great Trails State branding and marketing and compliments North Carolina's history as the Good Roads State.

Economic Impact of Trails in North Carolina

Using quantitative research methods, NCDOT commissioned a study of a subset of the great trails in North Carolina to determine an estimate of realistic benefits of trails developed in different parts of the state. The report explores economic impacts of trail user expenditures, retail sales tax benefits, capital expenditure, operational expenditure, property value impacts as well as benefits to the trail user and society through health, safety, pollution reduction and congestion benefits. The report demonstrates trail development as an economic strategy for towns and cities in North Carolina.

INSPIRING STATEWIDE INVESTMENT

COMBINED STUDY RESULTS

A one-time **\$26.7M** capital investment in the four greenways supports:



\$19.4M

Estimated annual sales revenue at local businesses along the four greenways



\$684K

Estimated annual local and state sales tax revenue from businesses along the greenways



\$25.7M

Estimated annual savings due to more physical activity, less pollution and congestion, and fewer traffic injuries from use of the greenways



\$48.7M

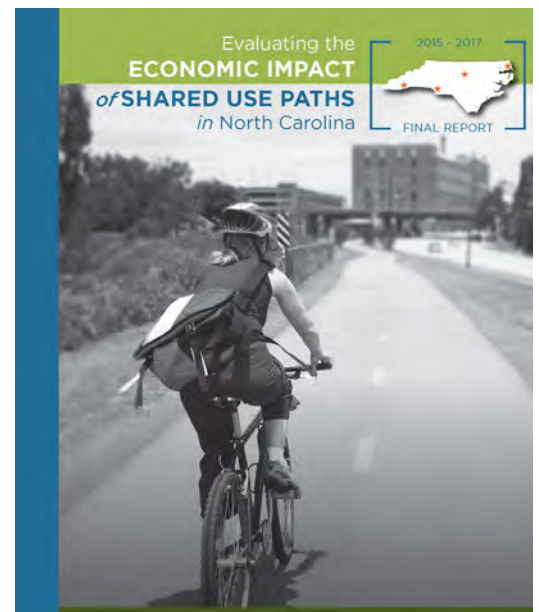
Estimated business revenue from greenway construction



790 JOBS

Are supported annually through greenway construction

RETURN ON INVESTMENT: Every **\$1.00** of trail construction supports **\$1.72 annually** from local business revenue, sales tax revenue, and benefits related to health and transportation.



Planning Grant Initiative (PGI)

Since 2004, NCDOT has funded over 200 bicycle and pedestrian plans for towns and cities throughout North Carolina through a matching grant program. The program has evolved to fund the development of county plans and project acceleration plans. A thorough review of these plans was conducted to support recommendations for the Great Trails State. As of 2021, \$7 million has been awarded through the PGI. The competition for these grants shows the demand for bicycling, walking and greenway facilities and a recent report summarizing program successes and challenges indicates common barriers to implementation and where further resources and technical support can be committed.

Complete Streets

The 2019 NCDOT Complete Streets Policy requires NCDOT planners and designers to consider and incorporate multi-modal facilities in the design and improvement of all appropriate transportation projects in North Carolina and document exceptions.

Great Trails State corridors should be considered during the project development process and constructed as incidental projects. A number of bridge, highway and roadway projects will be critical to development of the GTS network. The GTS should be included as a factor at the inception of the transportation planning process. A standard set of design guidelines for use with GTS projects will aid in street design and uniformity.

TRENDS INFLUENCING PROGRESS:



COMMUNITY SIZE

Smaller communities have fewer resources to dedicate, design and construct projects



PLAN ADOPTION YEAR

Communities with more recently adopted plans have had less time for implementation, relative to other communities.



COMMON BARRIERS

The most commonly reported barriers to implementation were: 1) Funding, 2) Limited Right-Of-Way and 3) Feasibility of Project Scope.



POLICY & PROGRAM SUCCESS

Communities are using plans to implement bicycle and pedestrian policies and programs that support their goals.

Long-Distance Trail Networks

These networks of statewide importance existed prior to the development of the Great Trails State as an initiative or brand. As communities across the state have recognized these future trails as important future routes and included them in local and regional plans, they have been essential inputs to the network development in this plan.

East Coast Greenway

Arguably one of the most impactful cross-state routes for paved trail development and planning in North Carolina and the nation, the East Coast Greenway has envisioned 365 total miles of spine route and has 101 miles of protected greenway on the ground (Source: Greenway.org, January 2021). In addition, a Historic Coastal Route extends south from Virginia on the Dismal Swamp Canal Trail and follows the North Carolina coast linking communities in Eastern North Carolina that have generally lacked trail development. The Great Trails State has taken into account the Envisioned Route of the East Coast Greenway in its planning process.

Mountains-to-Sea State Trail (MST)

The Mountains-to-Sea State Trail is the flagship project of the NC State Trails Program. As the MST surpasses four decades of evolution, it has been an important consideration for the Great Trails State to look at the particular challenges in developing portions of this trail, especially as they pertain to Eastern North Carolina where on-the-ground trail construction has lagged behind other parts of the state. Connecting the MST to key areas within the Great Trails plan could spur trail development in coastal areas where footpaths are more likely to require boardwalks, flood considerations, greater land negotiations, and longer bridges over streams and rivers.

NC Bike Routes

Since 1974, North Carolina's bicycle route system has provided an expanse of roadways that are popular among recreational cyclists who want to experience the beautiful rural nature that defines many parts of North Carolina. The system was evaluated for potential sidepath upgrades during the planning process. As identified in the WalkBikeNC Plan, the routes should connect with major cities in NC, and separated greenways identified in the Great Trails State can be the best and safest way to achieve this.

East Coast Greenway and the Great Trails State

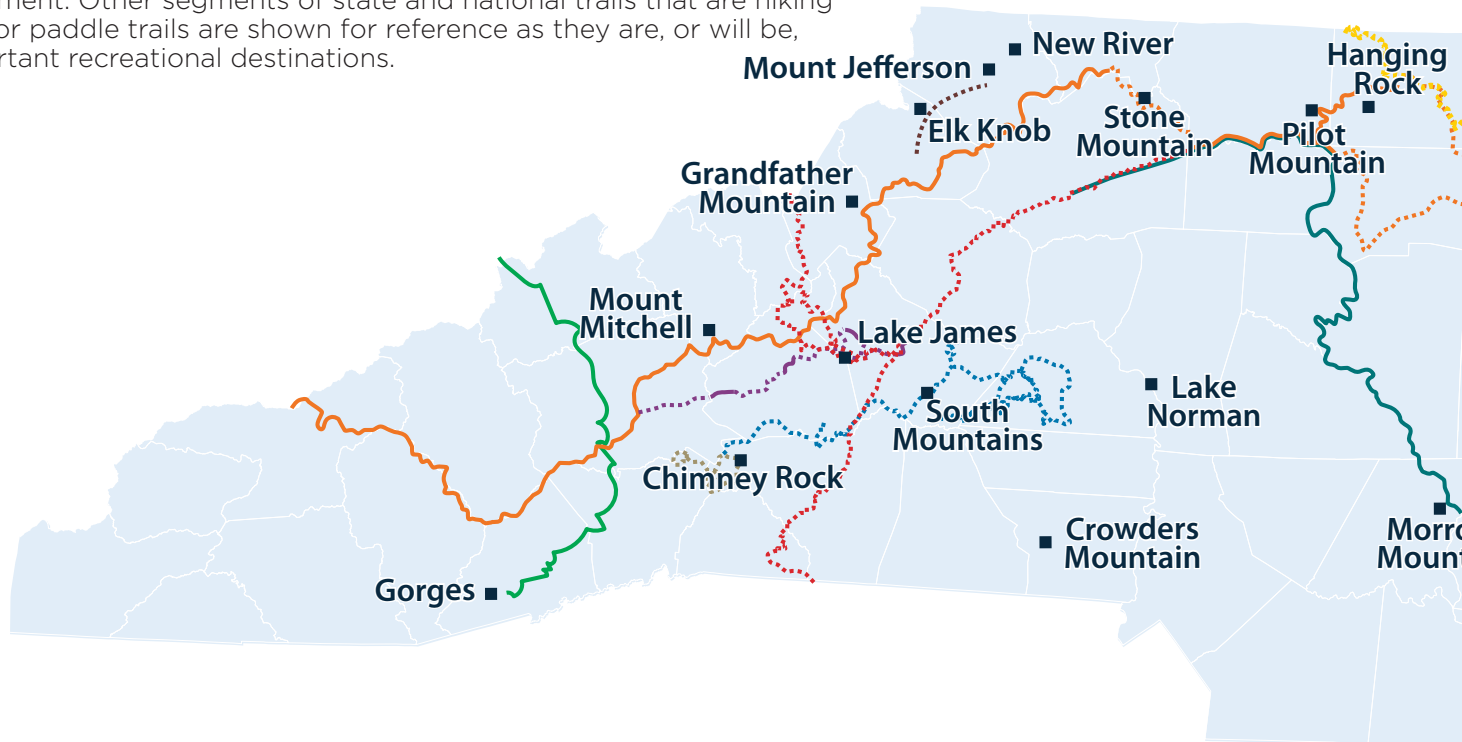
The Great Trails State Plan and network recommendations were developed with input from the East Coast Greenway Alliance (ECGA), regional planning organizations and local governments. The GTS routes mostly follow planned ECG routes, except where local planning efforts have clarified viable routes for separated facilities. Moving forward, the exact alignment of the designated Great Trails State routes can be modified based on local preferences, project funding and coordination between the ECGA and the GTS Advisory Committee.



NC State Trails

As the graphic details, North Carolina has 11 state trails, including the Mountains-to-Sea State Trail and recently dedicated East Coast Greenway. Most of these trails are located in the central and western part of the state. All of the trails within the NC State Park System were considered when planning the Great Trails State.

Trail segments identified as candidates for shared-use paths are included in the Great Trails State network shown on maps in this document. Other segments of state and national trails that are hiking only or paddle trails are shown for reference as they are, or will be, important recreational destinations.



State Trails Legend

- Dan River State Trail
- Deep River State Trail
- East Coast Greenway State Trail
- Fonta Flora State Trail
- French Broad River State Trail
- Hickory Nut Gorge State Trail
- Mountains-to-Sea State Trail
- Northern Peaks State Trail
- Overmountain Victory State Trail
- Wilderness Gateway State Trail
- Yadkin River State Trail

Map Legend

- ★ State Park
- Existing state trail segments
- Planned state trail segments



division of parks and recreation

NC TRAILS



Regional Planning

The backbone of the Great Trails State network is underpinned by the incredible amount of collaboration that has occurred to develop trail plans at the regional level. While not an exhaustive list, important systems that were considered during the development of the Great Trails State network include the Cross Charlotte Trail, Carolina Thread Trail, Hellbender Trail System, Piedmont Legacy Trails, Buncombe County Greenways, Triangle Trails, and the Wake County Greenway System. These efforts represent the desire for trails to transcend local boundaries and broad support for trails from varied stakeholders across the state.

In addition to regional trail collaboration, a number of Regional Bike Plans have brought together stakeholders in support of regional trail development as these plans focus on both on-road and off-road connections. These plans were also consulted during development of the network and provided key connections in areas that generally fall outside the reach of the state's larger metropolitan areas: Blue Ridge, Isothermal, Western Piedmont, Yadkin Valley, Central Park, Sandhills, Cape Fear, Croatan, Albemarle, Lakes District, North Stanly and High Point.

With two cross-state trails, 8 state trails, 6 metropolitan trail systems, 14+ regional plans and trails represented in over 200+ local bicycle and pedestrian plans, you can't argue:

North Carolina IS a GREAT TRAILS STATE!

East Coast



Greenway



Key Inputs to the Network



Current Recommendations from Existing Plans

A thorough review of plans that contain information on trails was conducted systematically across the state. Plans included but were not limited to: Comprehensive Transportation Plans (CTPs), Metropolitan Transportation Plans (MTPs), Bicycle and Pedestrian Plans, Land Use and Comprehensive Plans, Feasibility Studies, Regional Bike Plans, State Trail Planning efforts and regional trail plans. This research was used in the development of the Preliminary Network and supplementary information shared at the Division Workshops.

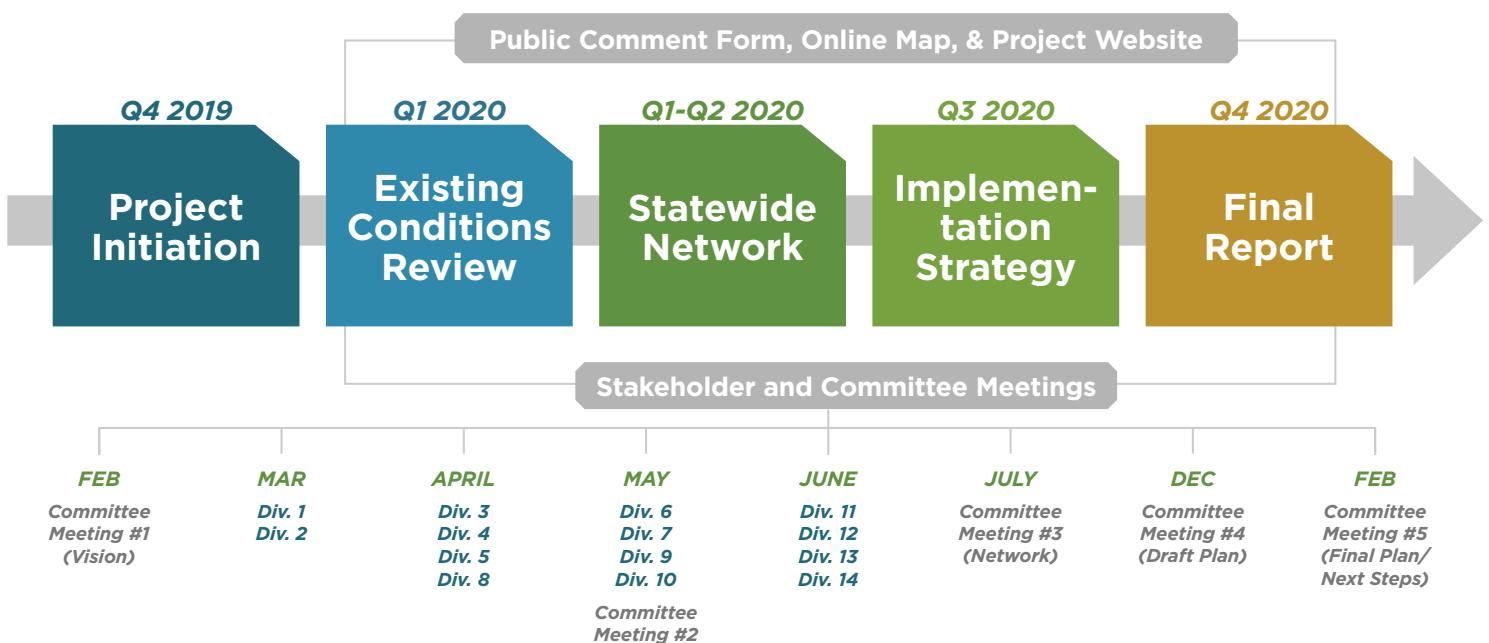
Existing Trails and Designated Routes

The project team gathered information on existing trails as well as state and local bike routes for consideration in development of the Preliminary Network. In addition, a bicycle level-of-service network was created to aid in the identification of low-stress routes as well as a green infrastructure map which could serve as a guide for identifying areas of conservation concern and potential future partners.

Steering Committee Input

The Great Trails State Plan's Steering Committee was made up of nearly 40 representatives covering each of NCDOT's 14 Divisions, seven RPOs and MPOS, relevant statewide government departments, and relevant statewide organizations. The Steering Committee met five times over the course of the project to discuss the following topics:

- Vision and Goals of the Plan
- Case Studies and Funding
- Draft Network
- Draft Plan and Implementation Recommendations
- Final Plan and Next Steps



Great Trails State Plan Steering Committee

- | | | |
|-------------------------------------|--|---|
| All 14 Divisions | NC Division of Public Health | Piedmont Legacy Trails |
| Albemarle RPO | NC Department of Commerce | Friends of the Mountains-to-Sea Trail / Fonta Flora State Trail |
| Kerr-Tar RPO | NCDOT Transportation Planning Division | Friends of the Mountains-to-Sea Trail |
| Isothermal RPO | NCDOT Rail Division | The Conservation Fund |
| Charlotte Regional TPO | WalkBikeNC | Cycle North Carolina |
| Wilmington MP | North Carolina Conservation Network | FHWA |
| Fayetteville MPO | East Coast Greenway Alliance | |
| French Broad River MPO | Carolina Thread Trail | |
| NC Division of Parks and Recreation | | |
| NC Trails | | |

Division-Level Stakeholder Input

A series of fourteen workshops were held between March and July with key stakeholders from each of NCDOT's infrastructure planning regions, which are referred to as Divisions. All workshops had approximately the same format. The project team gave a broad overview of the project, discussed case studies (elaborating on efforts by Florida and New York in particular) and described the GTS planning progress to date. This was followed by a series of slides showing research on trails collected from state, regional and local plans, and county-wide CTPs relevant to the Division. Areas were grouped geographically to aid in the discussion and assist in refinement of routes. A Preliminary Network map, resulting from the local plan research, was shared to assist in identifying long-distance routes and regional connections. Each workshop was documented, and meeting summaries were provided to all attendees. The project team followed up individually with stakeholders where requested or required to gain more detail or clarification.

Direction from NCDOT and State Parks

The involvement of representatives across NCDOT and State Parks was central in the development of this plan, especially in determining relevant take-aways from case studies and applying policies and strategies to aid in the implementation of the network. The NCDOT Integrated Mobility Division also led meetings with the Rail Division to determine the extent to which rail corridors could be considered for inclusion in the plan. Regular monthly meetings were held between the Project Team, NCDOT Integrated Mobility Division and State Parks throughout the plan development.

GTS Network Development

- Existing Trails
- Existing Trail Plans
- Key Destinations/State Parks
- Steering Committee Kick-Off Meeting
- Bicycle Level of Service Network
- Green Infrastructure Network



- 14 Division-Level Stakeholder Meetings
- Confirmation of Network
- Identification of Gaps and Alternatives
- Edge Analysis/Connecting Across Divisions



- Review of Gaps and Alternatives by Steering Committee & Stakeholders
- Rail Division Meetings
- Public Input



Public Input Process

The NCDOT Communications Office maintained a webpage and worked with the project team to develop a comprehensive Outreach Plan for the Great Trails State project. Public engagement was conducted during the coronavirus pandemic and relied on digital input tools and social media. The social media outreach efforts led to over 850,000 impressions. In addition there was an extensive effort to engage media outlets to further spread the word about the survey to the public. A press release was issued statewide. This was followed up with coordination with local media outlets by each division's Communication Officer. This resulted in 49 news pieces being published about the project. Additional coordination with outside agencies, non-profits, environmental groups, and municipalities was successful in getting the word out across the state. As a result of these outreach efforts the goal of 10,000 survey responses was exceeded with a final tally of 11,127 respondents. Survey questions included:

- What trails do you use and like the most?
- What would make that experience better?
- What are the most important new trail connections that should be made?

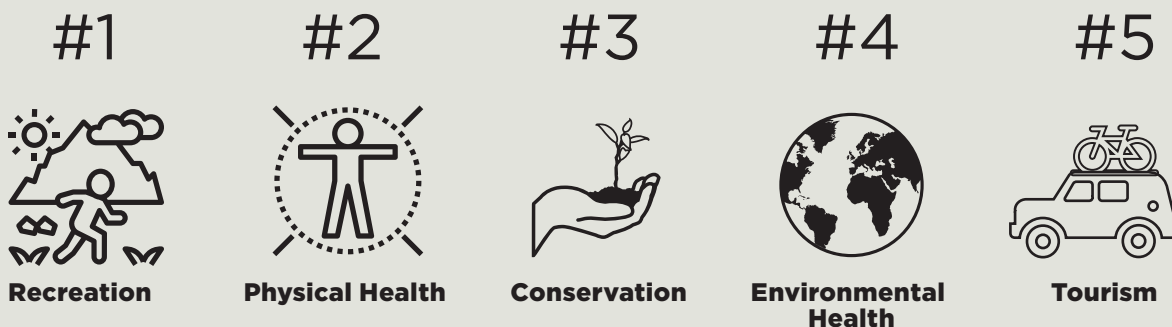
Public Input Survey and Interactive Map

A ten-question survey and an interactive map were launched in the early phases of the plan to gather public input and help guide the project. 11,127 participants responded to the survey and there were 2,995 comments on the interactive map. Over 86% of respondents who completed the survey indicated that the Great Trails State Project was extremely or very important to them. Most responses indicated that trails should focus on recreation (88%), physical health (79%), environmental health (65%) and conservation (65%).

Most popular destinations for people currently walking and bicycling



Highest-priority benefits for trails



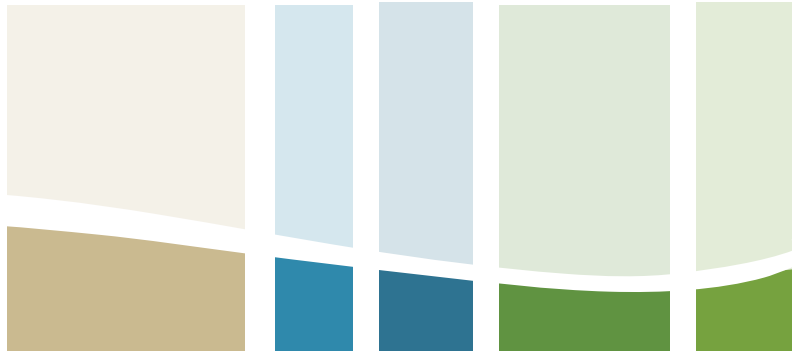
BICENTENNIAL GREENWAY

GREENSBORO



Image Credit: Tiffany Stodart

IV. GREAT TRAILS STATE NETWORK RECOMMENDATIONS



Data Analysis

The following data were developed and analyzed to assist in creating the Draft Plan Network and subsequent refinement into the Great Trails State Network.

- **Origins & Destinations:** Where are the major points where a trip on the network would begin and end? These included population centers, county seats, state parks, regional attractors or other recreational assets.
- **Ecological Corridors:** A GIS based suitability analysis was used to determine where gaps in greenway systems overlap with ecologically significant areas.

- **Connectivity:** Does a trail make a connection between key origins and destinations or with other proposed trails or trail networks?
- **Edge Analysis:** When looking at the proposed Draft Plan Network across adjacent divisions, do the trails line up?
- **Gap Review:** What planning gaps exist between origins and destinations where connections are desired?
- **Identification of Alternatives:** What potential routes are there to get between origins and destinations?

GTS Network Segments

The result is the Great Trails State Network which is broken down into six classes:

- **Existing Shared Use Path:** Existing shared-use facilities within the Great Trails State Network.
- **Proposed Shared Use Path:** Best route for a shared-use path based on existing plans and input to-date.
- **Draft Alternate Route:** This route or another parallel route should be selected, if available. Some alternates may require feasibility studies to determine most viable alternate. Rail corridor opportunities are shown as alternates.
- **Potential Spine Network:** These routes have the greatest potential for regional connections.
- **Gap:** Connection desired, but limited previous planning means more study is necessary to determine alignment and feasibility.
- **Ferry:** Connection through existing NCDOT Ferry Division route.

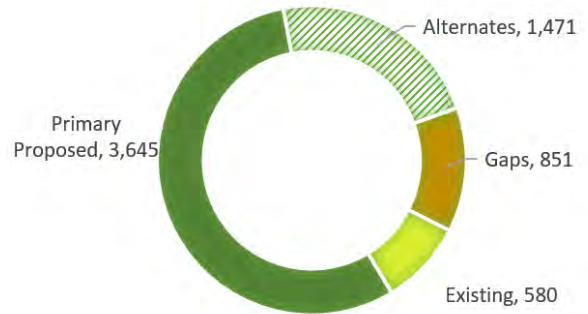


Exact alignment are subject to change based on coordination with and planning efforts by local governments, regional planning organizations, land owners and land managers. **See 5-Year Action Plan for details.**

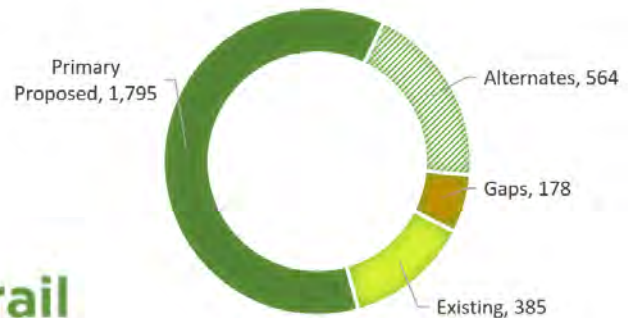
Draft Network Maps

The following pages include an overall map of the planned Great Trails State network and maps by division that identify existing segments, key destinations, proposed paths, alternate routes and gaps. The GTS network spans all 100 counties and represents a connected system of planned trails of regional and state-wide significance. The corridors are conceptual and are meant to be refined by local, regional and state planning efforts. The GTS network map represents a synthesis of planning efforts and reflects current local and regional priorities for trails that connect multiple municipalities, counties and population centers to key historic, recreational and cultural destinations. Recommendations on refining the network and key steps needed to make the vision a reality are identified in the next chapter.

GTS ENTIRE NETWORK MILEAGE



GTS SPINE NETWORK MILEAGE



The proposed trail network connects...



ALL 100
NC COUNTIES &
85 COUNTY SEATS



504
NATURAL
HERITAGE AREAS



199 MUNICIPALITIES,
INC. EVERY MAJOR NC CITY



5 MAJOR NC
TRAIL SYSTEMS
(ECG, MST, CTT, PLT, TTI)



26
NC BEACH TOWNS



26
NC STATE PARKS

Draft GTS Network Statistics

Entire Network Mileage

- Existing = 580
- Primary Proposed = 3,645
- Alternate = 1,471
- Gap = 851

Spine Network Mileage

- Existing = 385
- Primary Proposed = 1,795
- Alternate = 564
- Gap = 178

TIDELAND TRAIL



Image Credit: Kristy Jackson

OVERALL NETWORK MAP



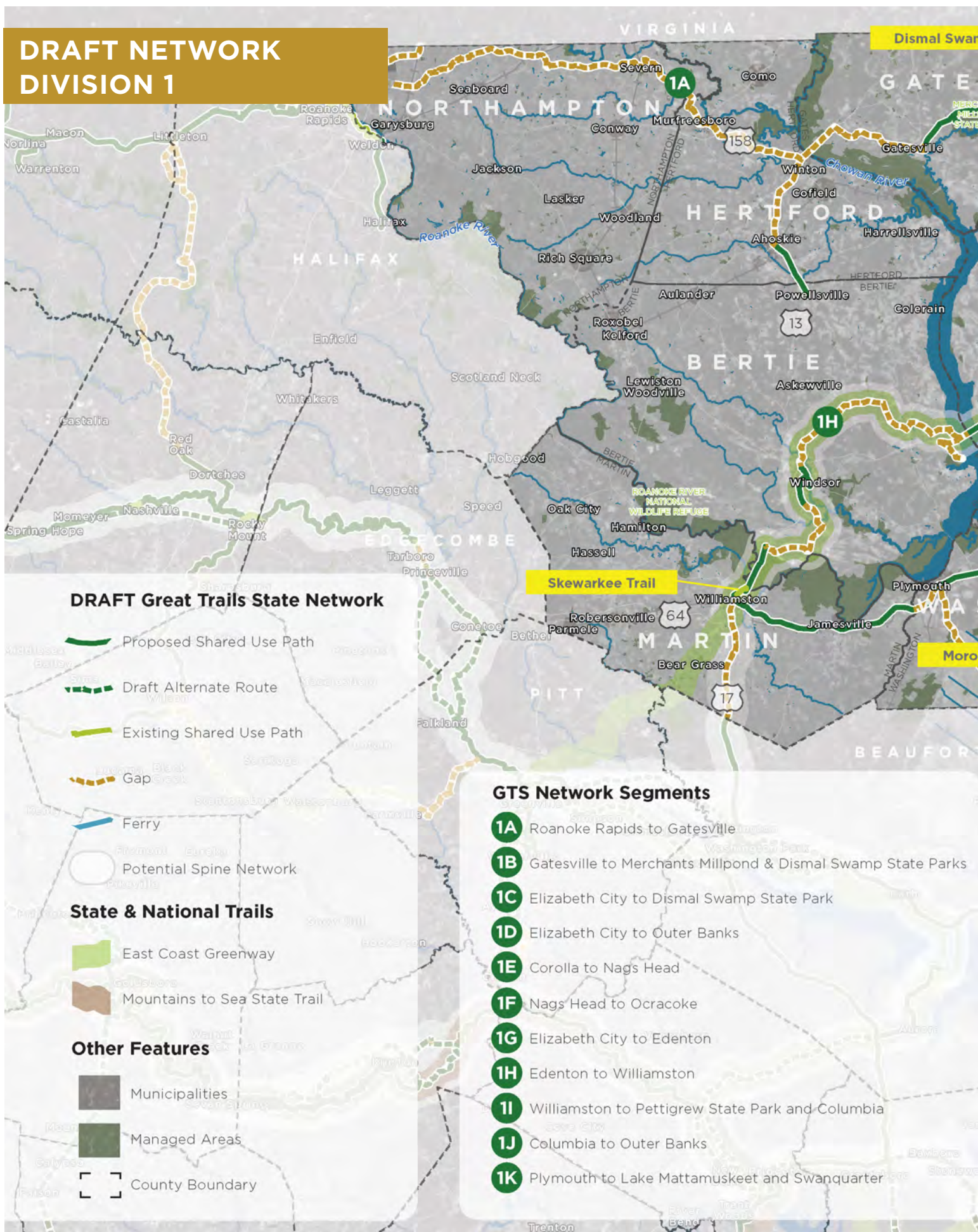
 **Proposed Shared Use Path**
Best route based on existing plans and input to-date

 **Draft Alternate Route**
This or another parallel alternate should be selected



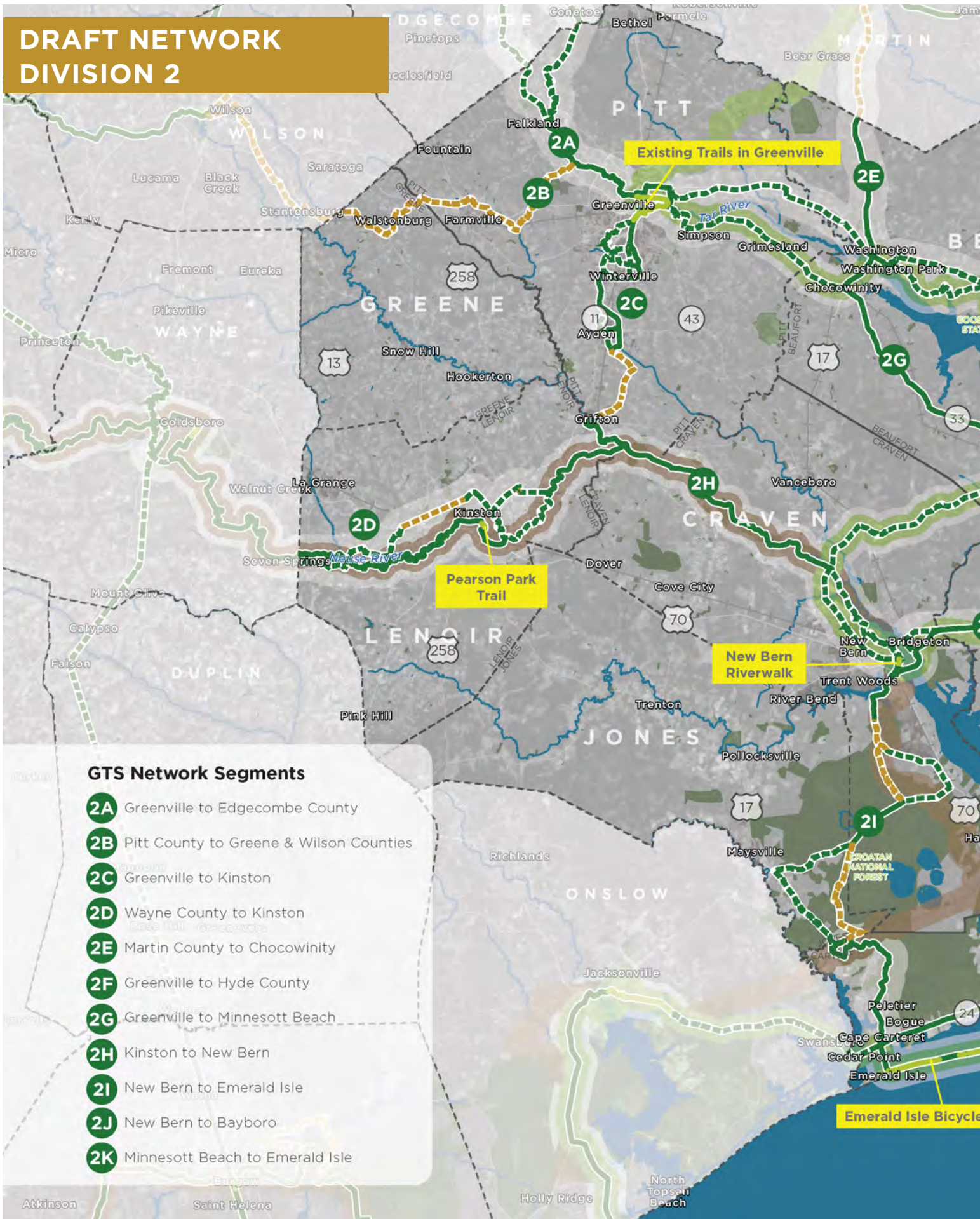
Exact alignment are subject to change based on coordination with and planning efforts by local governments, regional planning organizations, land owners and land managers. **See 5-Year Action Plan for details.**

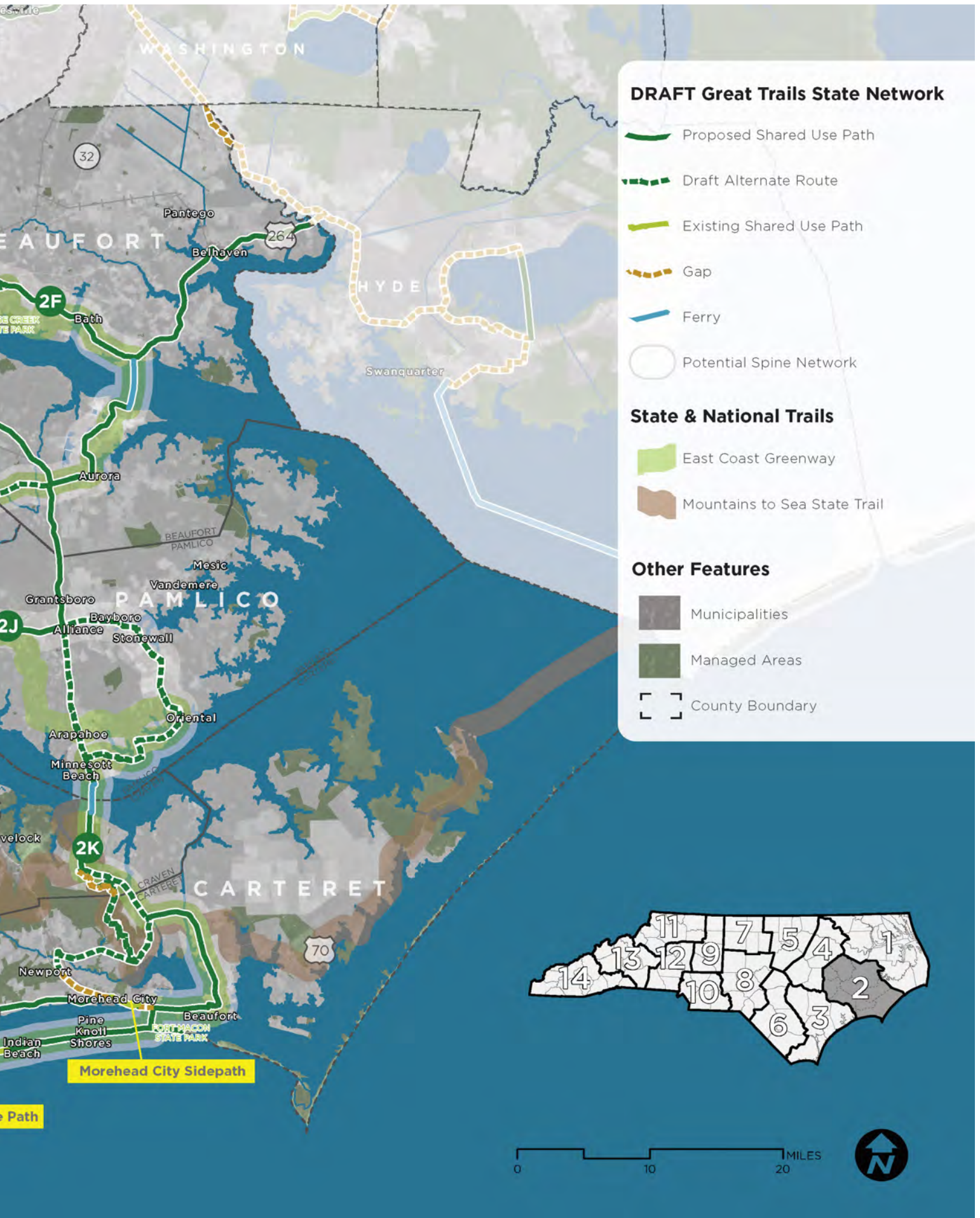
DRAFT NETWORK DIVISION 1





DRAFT NETWORK DIVISION 2





DRAFT Great Trails State Network

- Proposed Shared Use Path
- Draft Alternate Route
- Existing Shared Use Path
- Gap
- Ferry
- Potential Spine Network

State & National Trails

- East Coast Greenway
- Mountains to Sea State Trail

Other Features

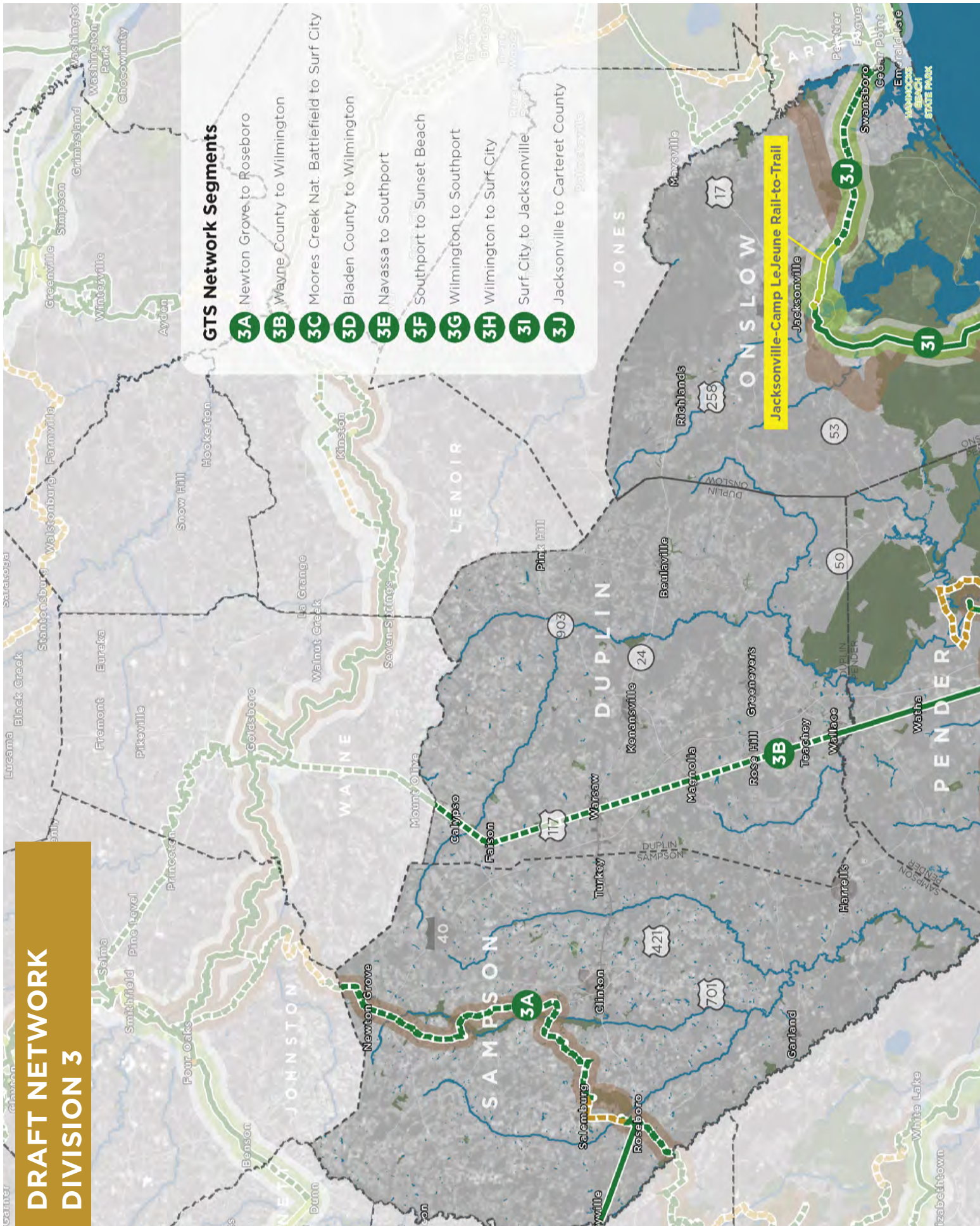
- Municipalities
- Managed Areas
- County Boundary

DRAFT NETWORK DIVISION 3

GTS Network Segments

- 3A** Newton Grove to Roseboro
- 3B** Wayne County to Wilmington
- 3C** Moores Creek Nat. Battlefield to Surf City
- 3D** Bladen County to Wilmington
- 3E** Navassa to Southport
- 3F** Southport to Sunset Beach
- 3G** Wilmington to Southport
- 3H** Wilmington to Surf City
- 3I** Surf City to Jacksonville
- 3J** Jacksonville to Carteret County

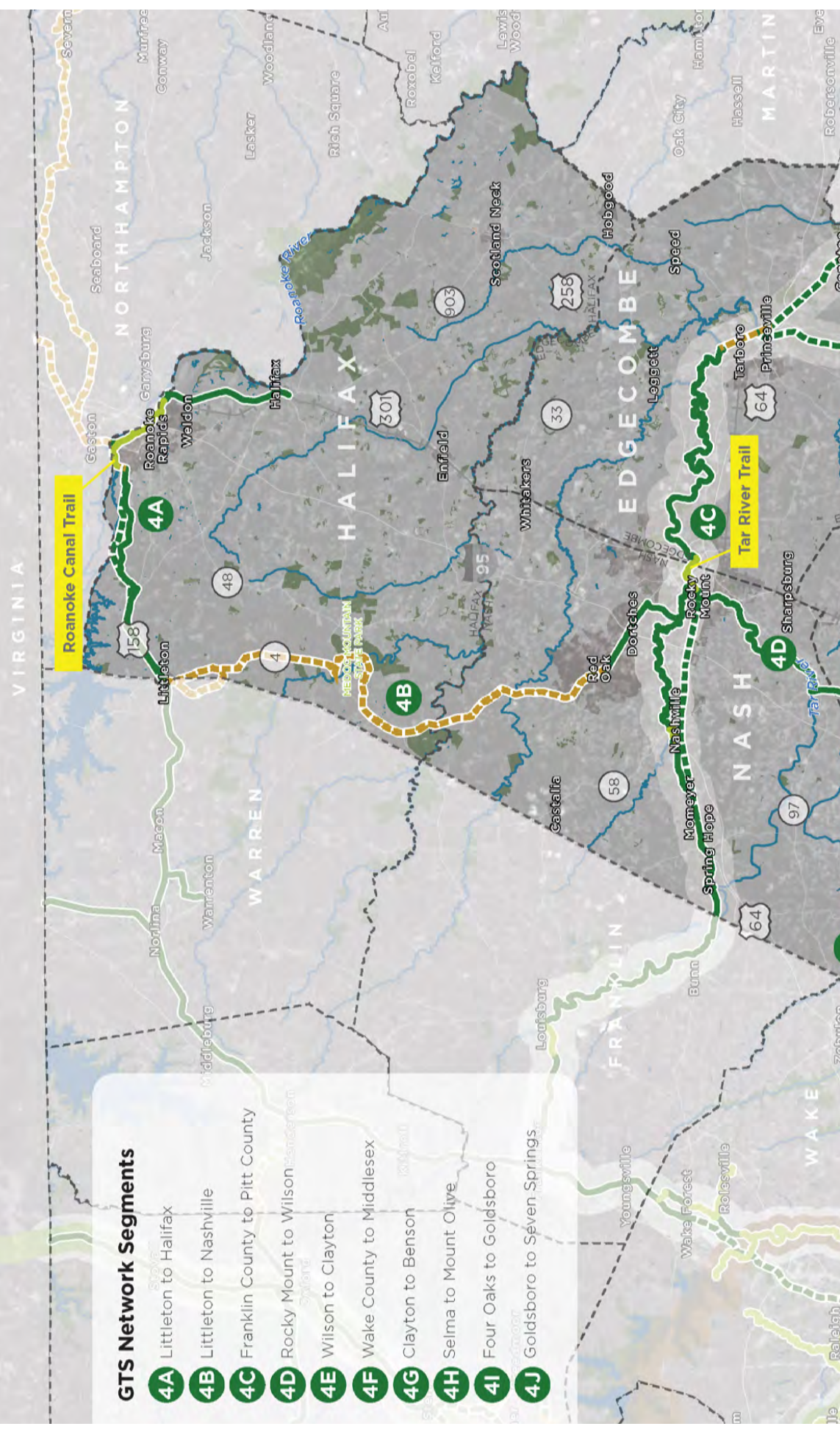
Jacksonville-Camp LeJeune Rail-to-Trail

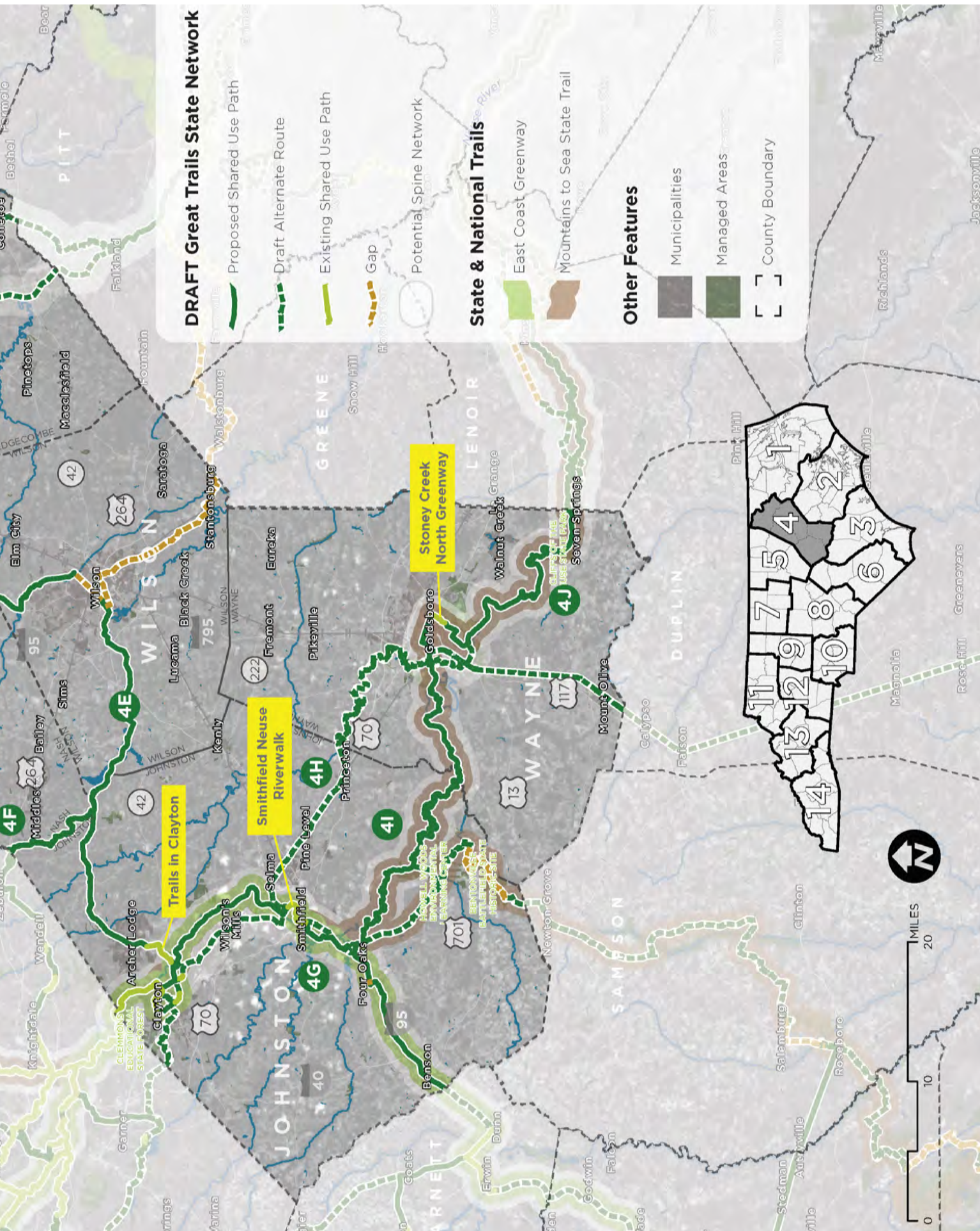


DRAFT NETWORK DIVISION 4

GTS Network Segments





- 4A Littleton to Halifax
- 4B Littleton to Nashville
- 4C Franklin County to Pitt County
- 4D Rocky Mount to Wilson
- 4E Wilson to Clayton
- 4F Wake County to Middlesex
- 4G Clayton to Benson
- 4H Selma to Mount Olive
- 4I Four Oaks to Goldsboro
- 4J Goldsboro to Seven Springs





DRAFT NETWORK DIVISION 5



DRAFT Great Trails State Network

-  Proposed Shared Use Path
-  Draft Alternate Route
-  Existing Shared Use Path
-  Gap




Potential Spine Network

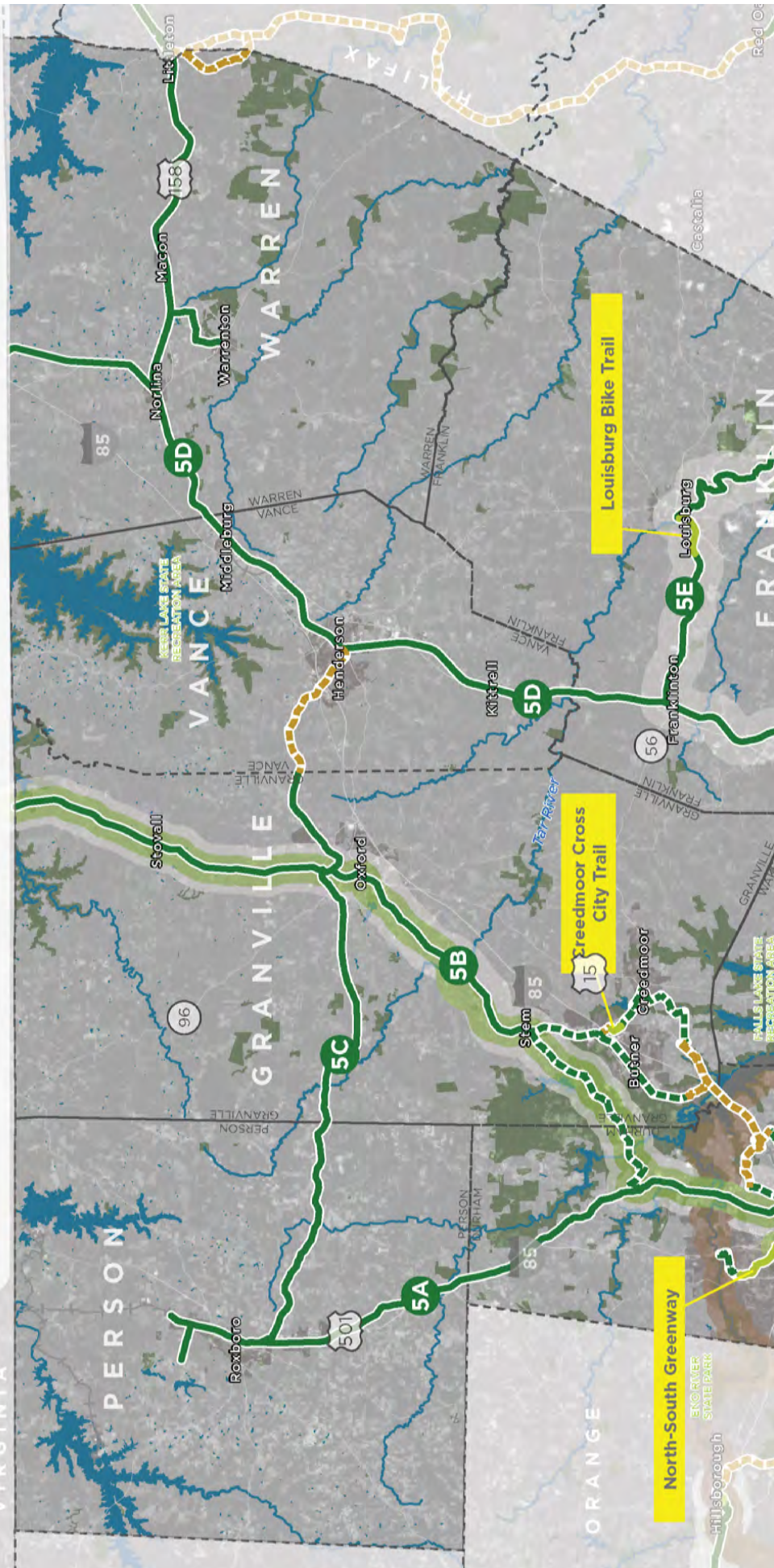
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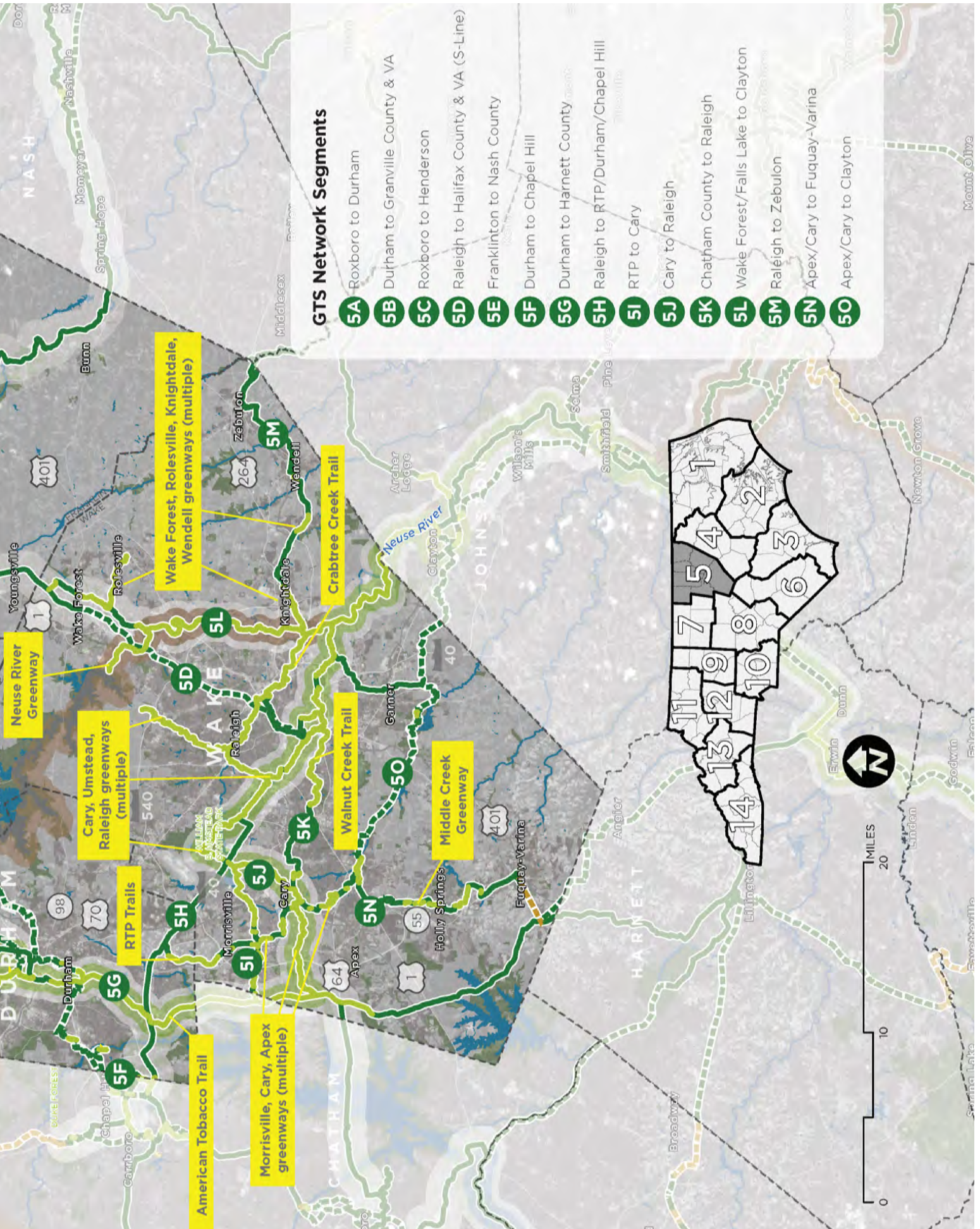
State & National Trails

-  East Coast Greenway
-  Mountains to Sea State Trail

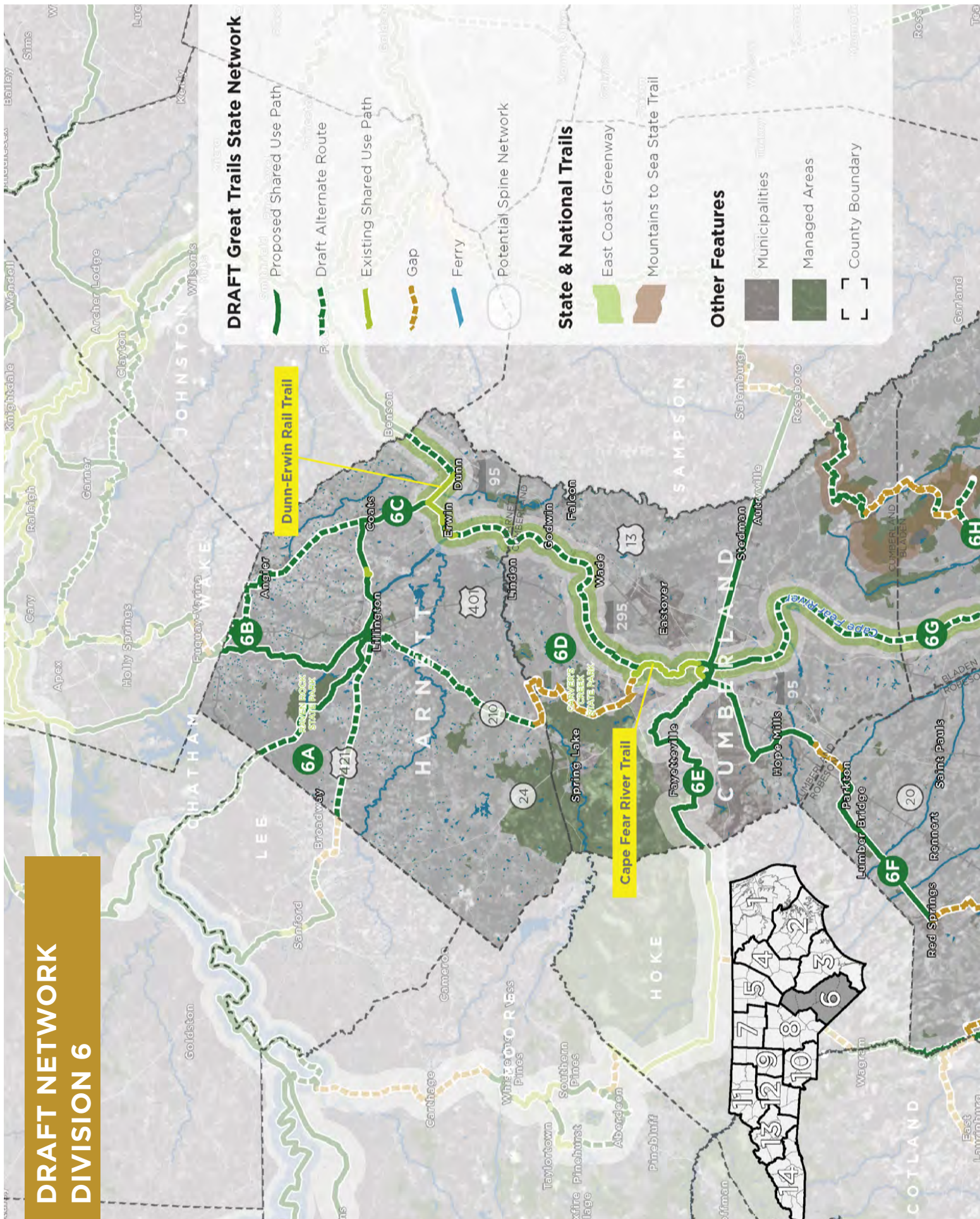
Other Features

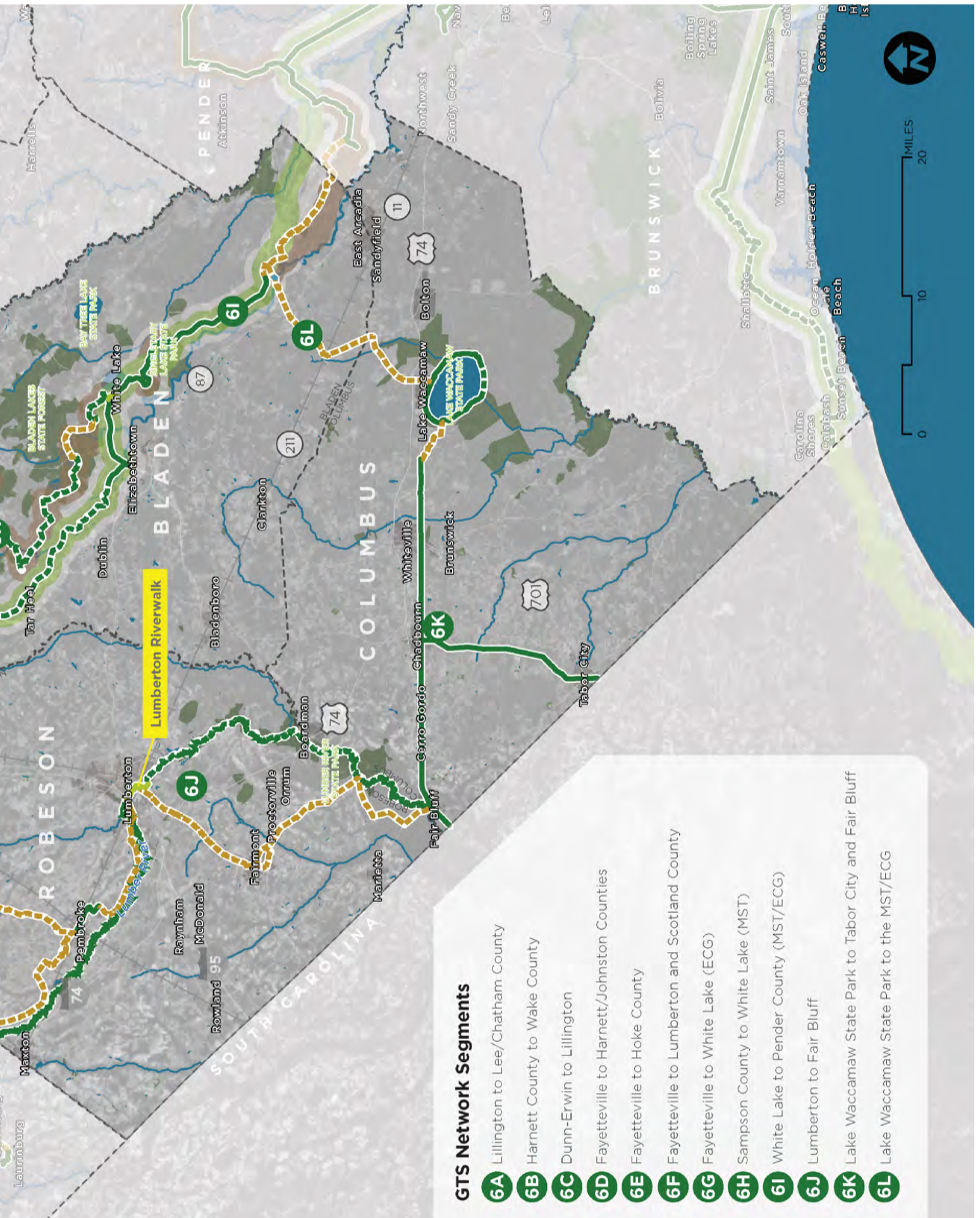
-  Municipalities
-  Managed Areas
-  County Boundary





DRAFT NETWORK DIVISION 6

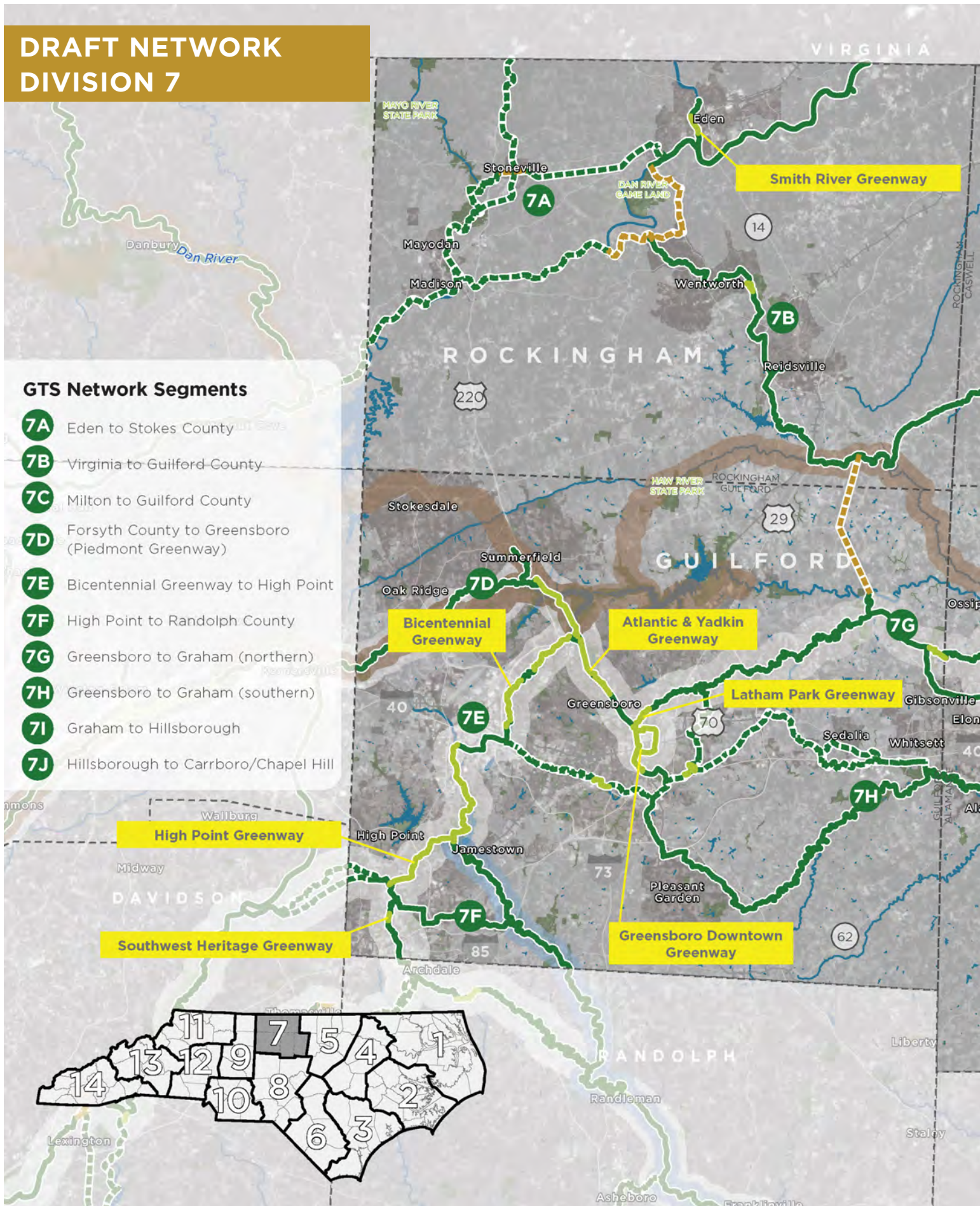




GTS Network Segments

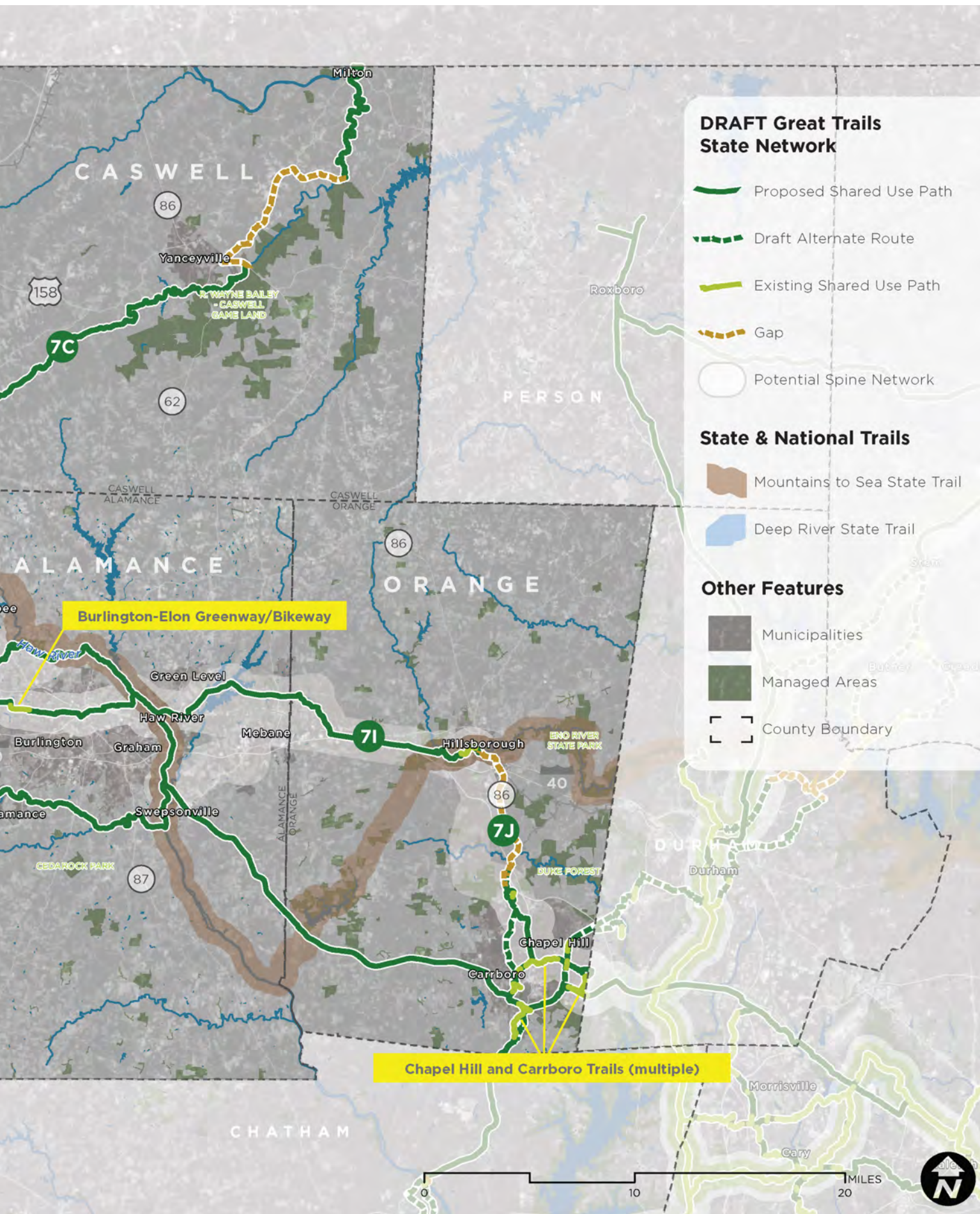
- 6A** Lillington to Lee/Chatham County
- 6B** Harnett County to Wake County
- 6C** Dunn-Erwin to Lillington
- 6D** Fayetteville to Harnett/Johnston Counties
- 6E** Fayetteville to Hoke County
- 6F** Fayetteville to Lumberton and Scotland County
- 6G** Fayetteville to White Lake (ECG)
- 6H** Sampson County to White Lake (MST)
- 6I** White Lake to Pender County (MST/ECG)
- 6J** Lumberton to Fair Bluff
- 6K** Lake Waccamaw State Park to Tabor City and Fair Bluff
- 6L** Lake Waccamaw State Park to the MST/ECG

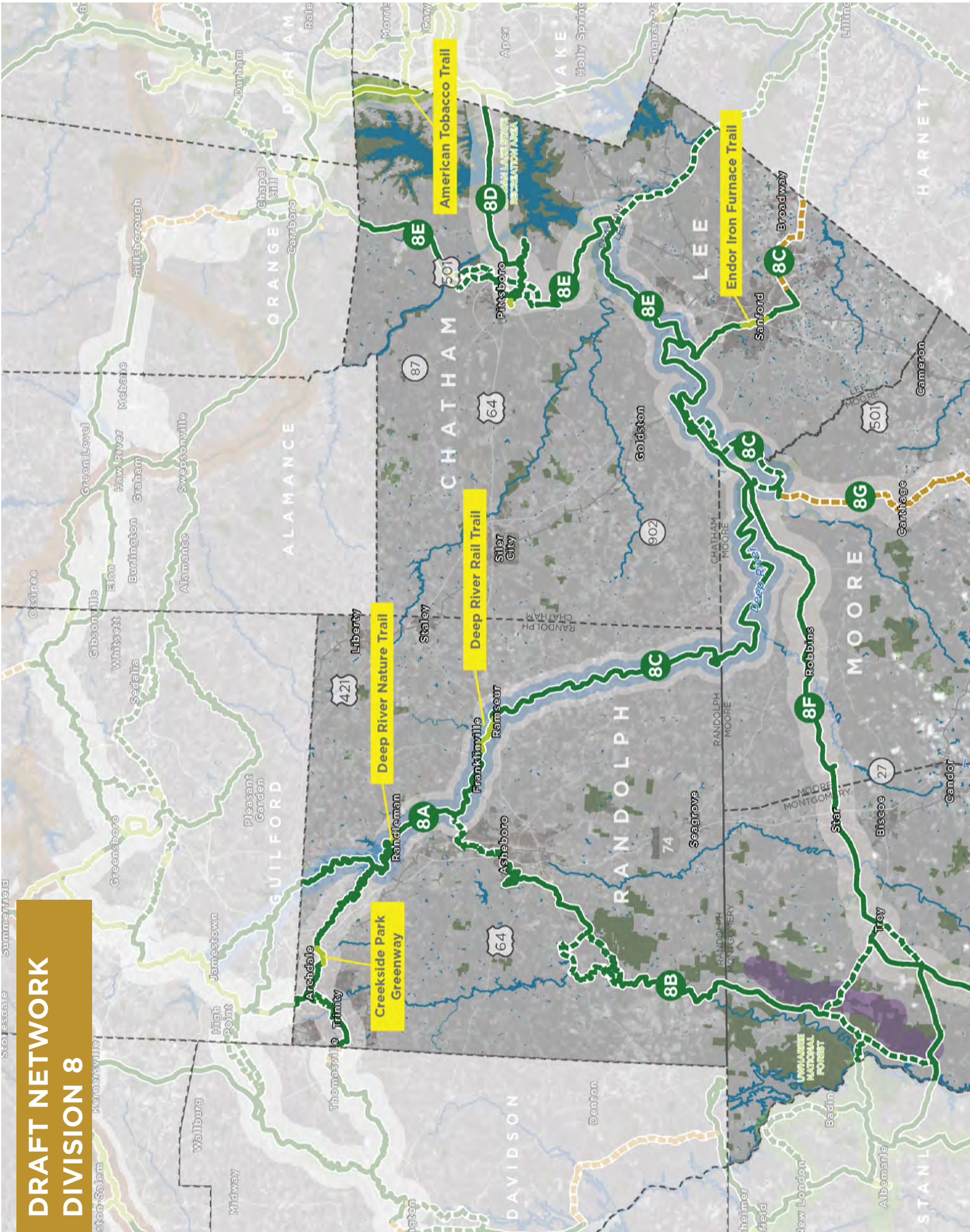
DRAFT NETWORK DIVISION 7



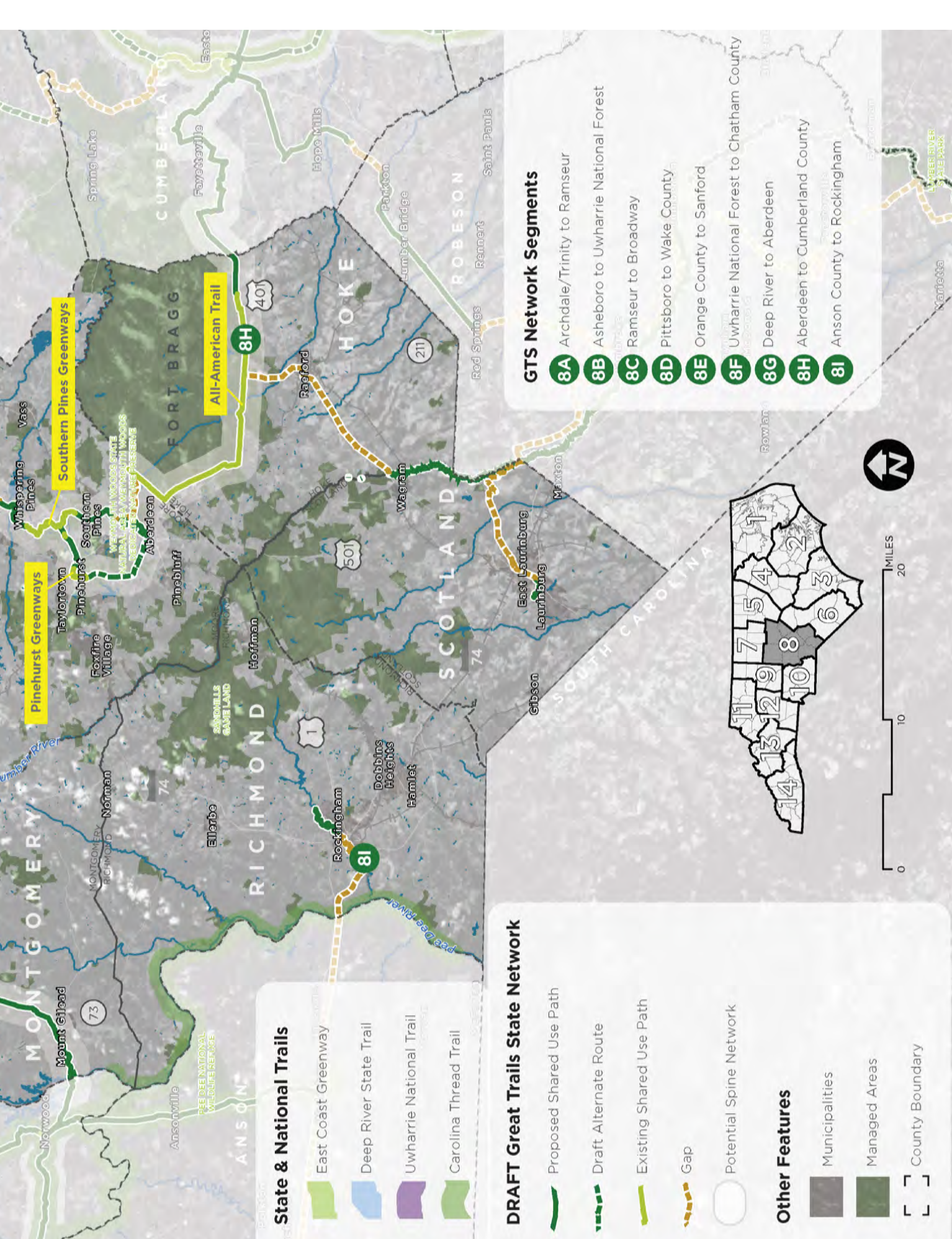
GTS Network Segments

- 7A** Eden to Stokes County
- 7B** Virginia to Guilford County
- 7C** Milton to Guilford County
- 7D** Forsyth County to Greensboro (Piedmont Greenway)
- 7E** Bicentennial Greenway to High Point
- 7F** High Point to Randolph County
- 7G** Greensboro to Graham (northern)
- 7H** Greensboro to Graham (southern)
- 7I** Graham to Hillsborough
- 7J** Hillsborough to Carrboro/Chapel Hill





**DRAFT NETWORK
DIVISION 8**



State & National Trails

- East Coast Greenway
- Deep River State Trail
- Uwharrie National Trail
- Carolina Thread Trail

DRAFT Great Trails State Network

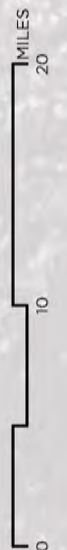
- Proposed Shared Use Path
- Draft Alternate Route
- Existing Shared Use Path
- Gap
- Potential Spine Network

Other Features

- Municipalities
- Managed Areas
- County Boundary

GTS Network Segments

- 8A Archdale/Trinity to Ramseur
- 8B Asheboro to Uwharrie National Forest
- 8C Ramseur to Broadway
- 8D Pittsboro to Wake County
- 8E Orange County to Sanford
- 8F Uwharrie National Forest to Chatham County
- 8G Deep River to Aberdeen
- 8H Aberdeen to Cumberland County
- 8I Anson County to Rockingham

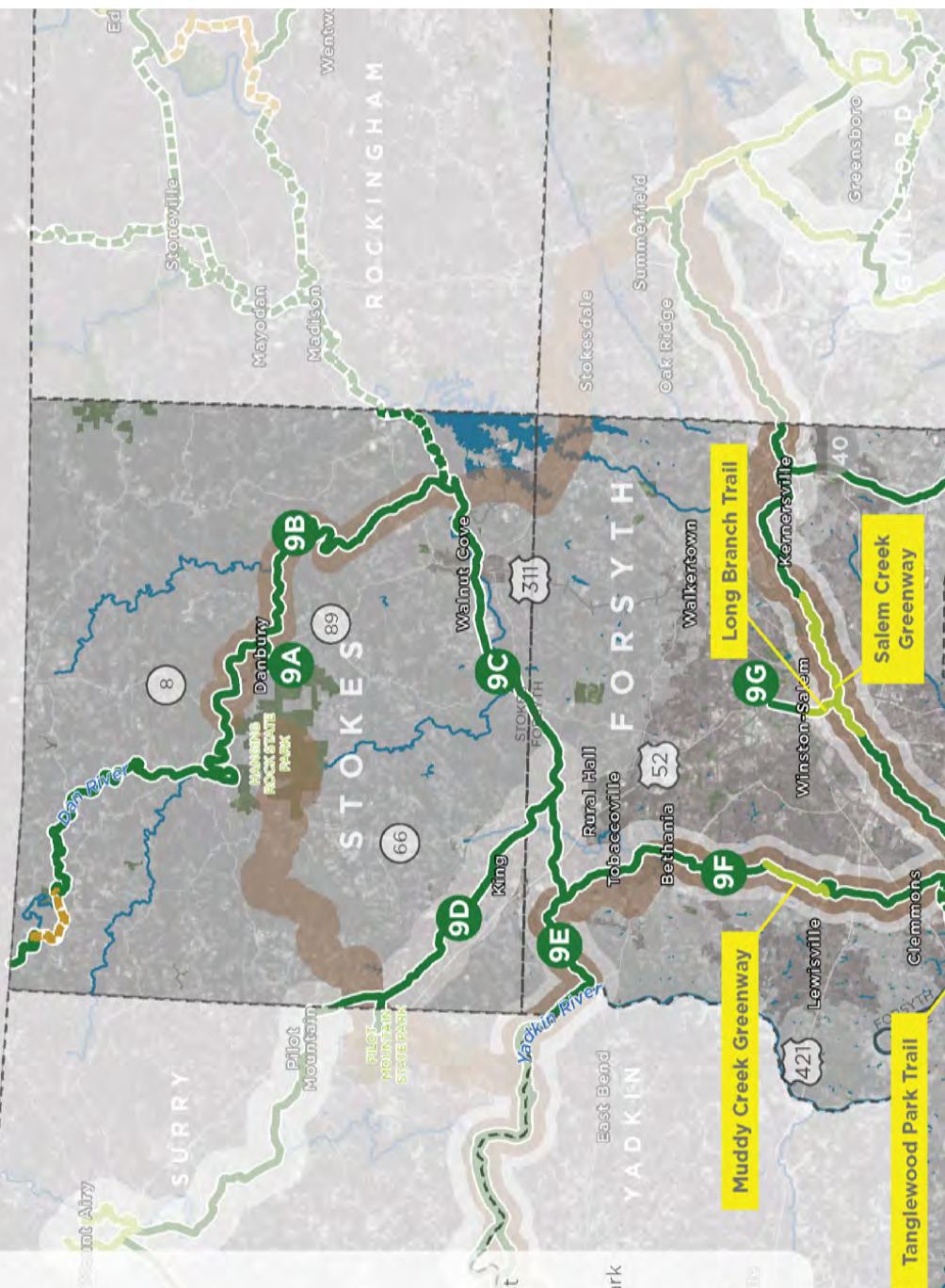


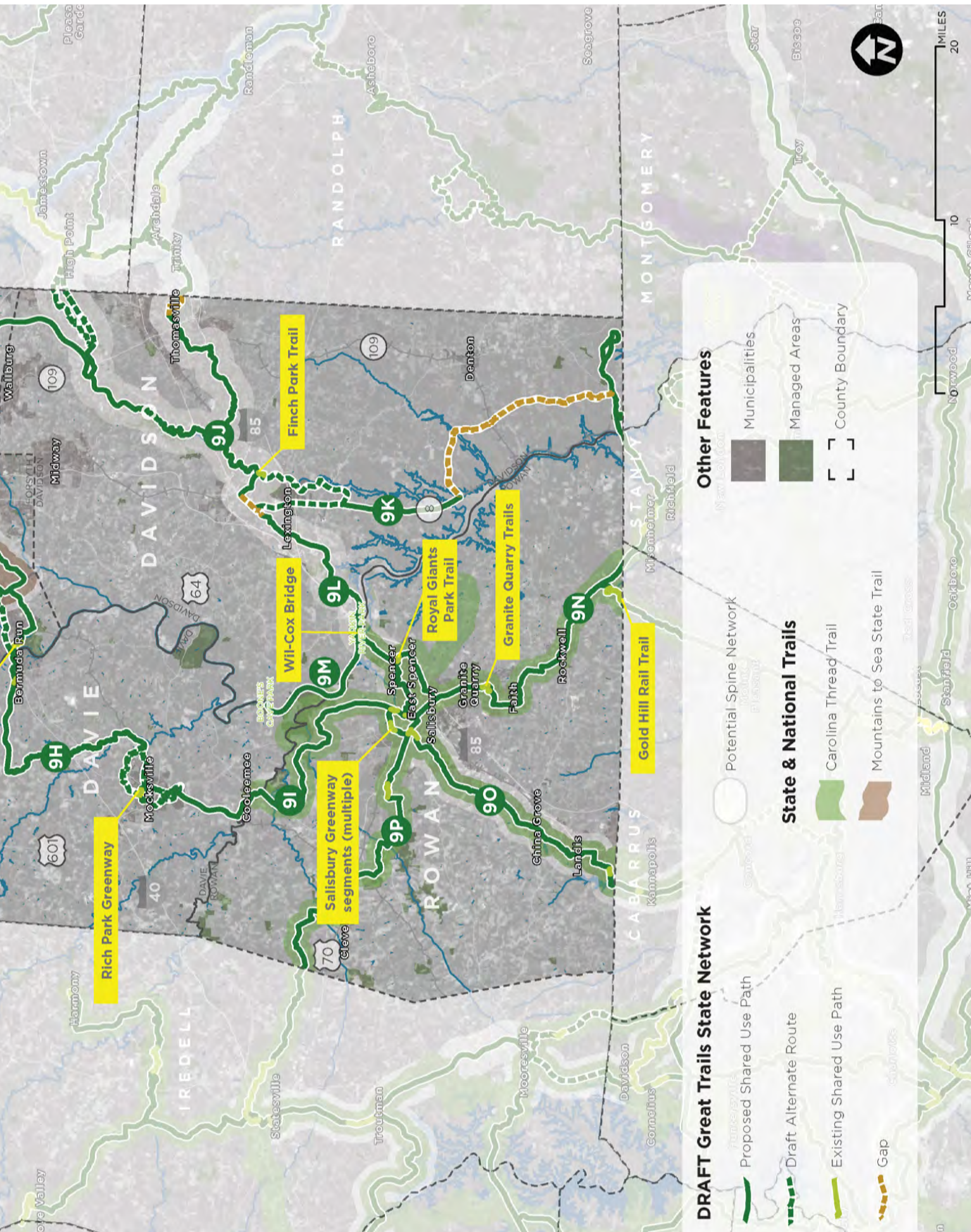
DRAFT NETWORK DIVISION 9



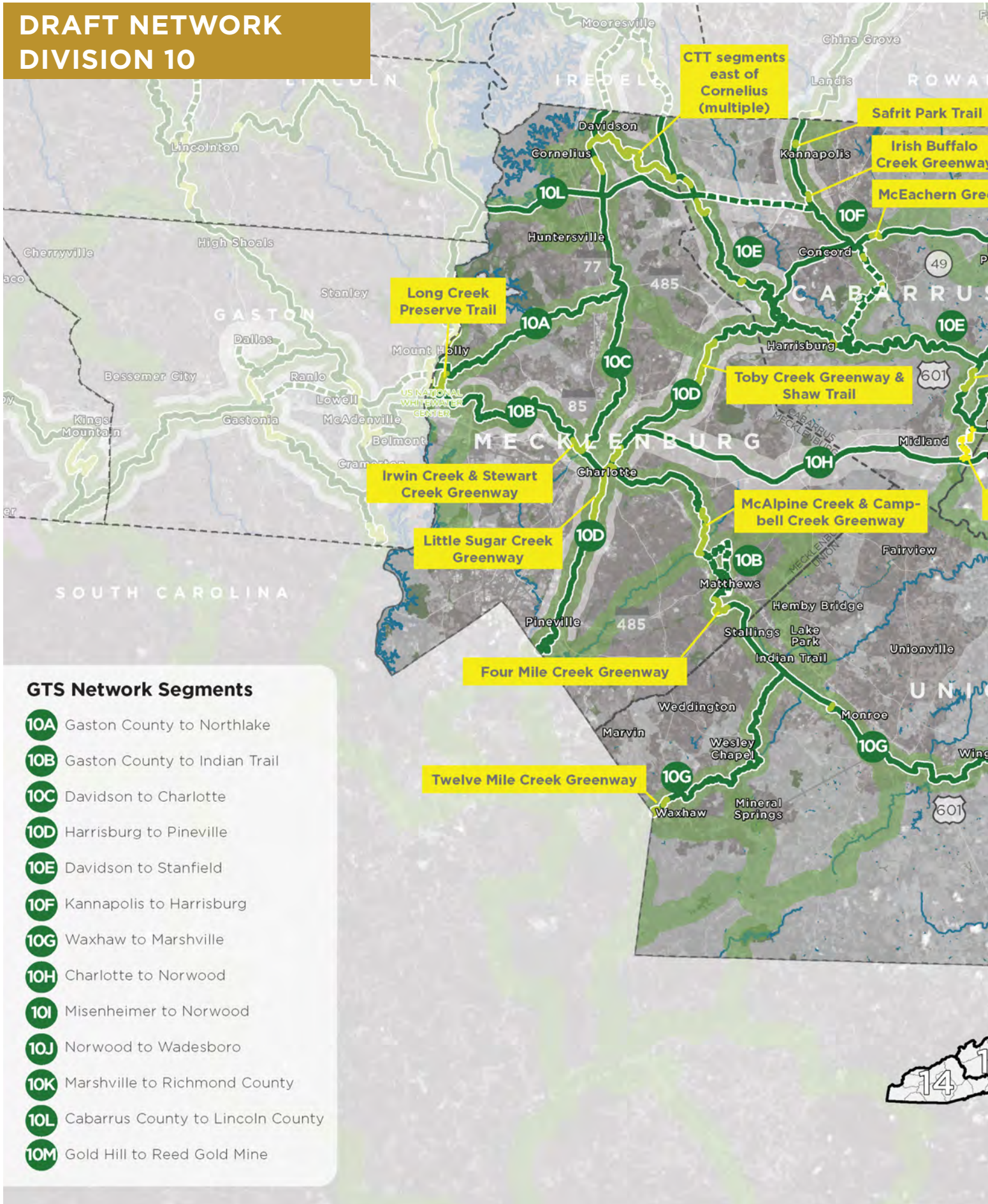
GTS Network Segments

- 9A** Danbury to Hanging Rock State Park
- 9B** Dan River corridor through Stokes County
- 9C** Rural Hall to Walnut Cove
- 9D** Rural Hall to Pilot Mountain
- 9E** Rural Hall to Yadkin/Surry County
- 9F** MST through Winston-Salem
- 9G** Long Branch Trail through downtown W.S.
- 9H** Clemmons to Mocksville
- 9I** Mocksville to Salisbury
- 9J** Lexington to MST and Thomasville
- 9K** Davidson County to Uwharrie National Forest
- 9L** Lexington to Salisbury
- 9M** Yadkin River Park to Boones Cave County Park
- 9N** Salisbury to Stanly County
- 9O** Salisbury to Cabarrus County
- 9P** Salisbury to Iredell County










DRAFT NETWORK DIVISION 10







DRAFT NETWORK DIVISION 11

DRAFT Great Trails State Network

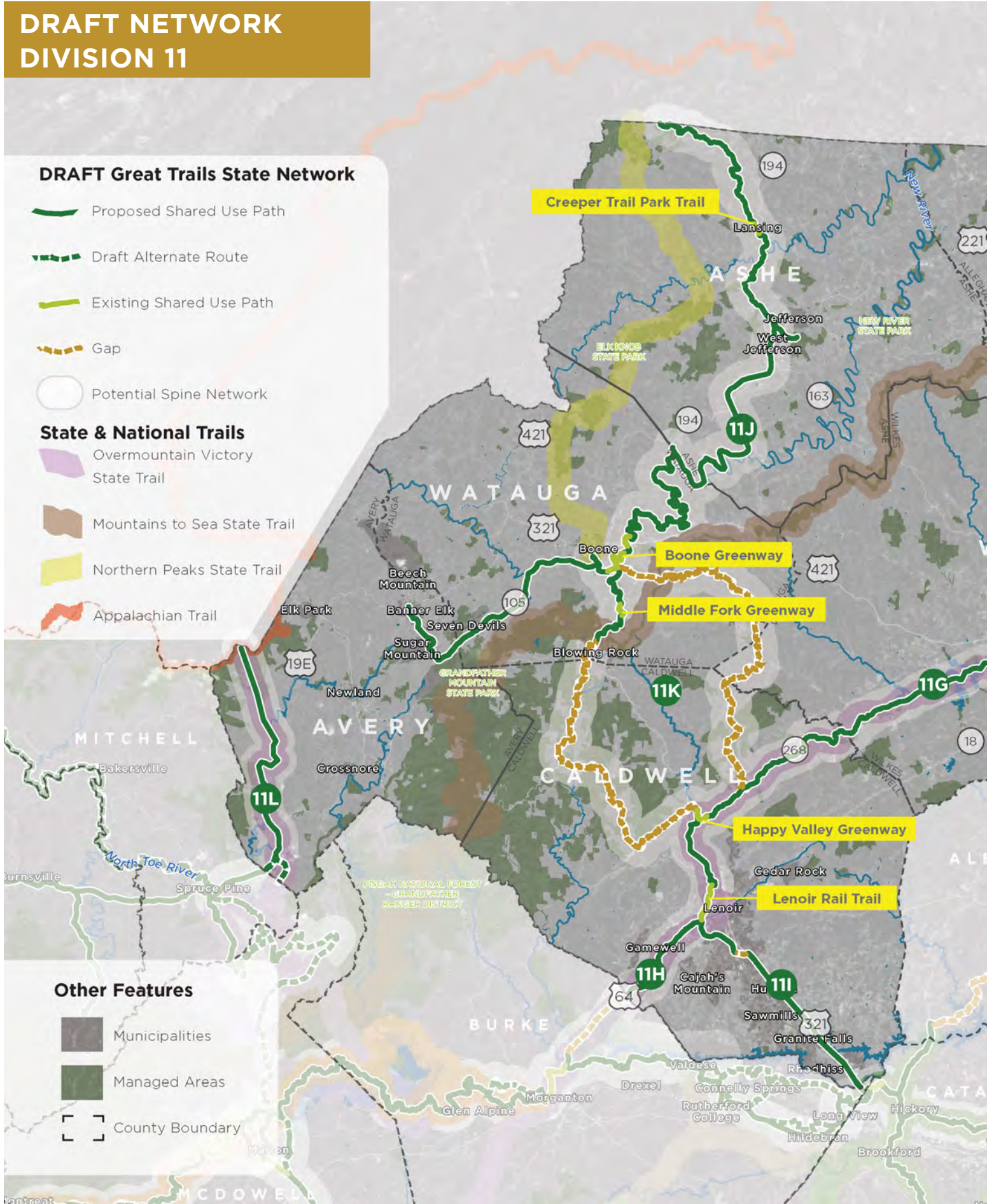
-  Proposed Shared Use Path
-  Draft Alternate Route
-  Existing Shared Use Path
-  Gap
-  Potential Spine Network

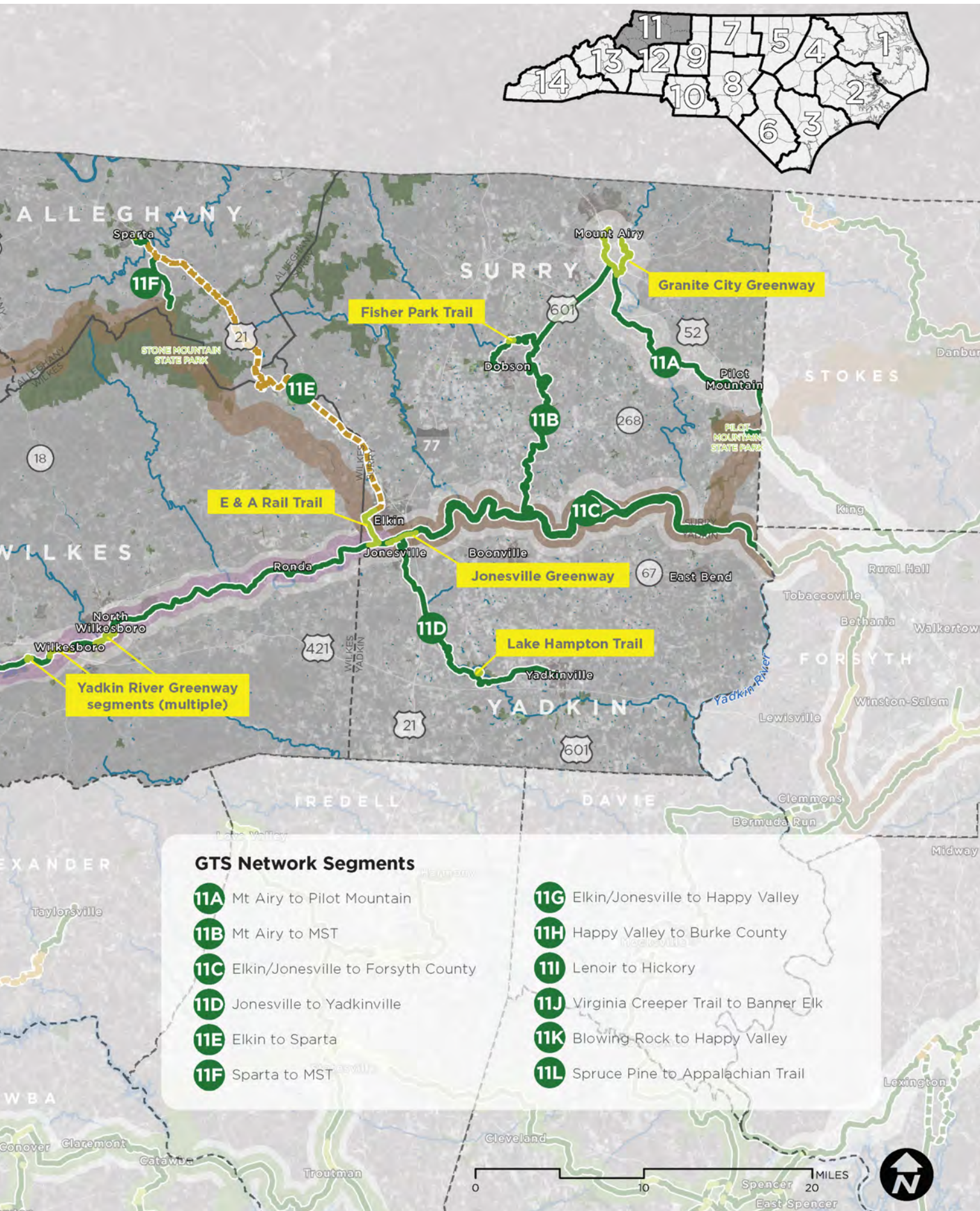
State & National Trails

-  Overmountain Victory State Trail
-  Mountains to Sea State Trail
-  Northern Peaks State Trail
-  Appalachian Trail

Other Features

-  Municipalities
-  Managed Areas
-  County Boundary





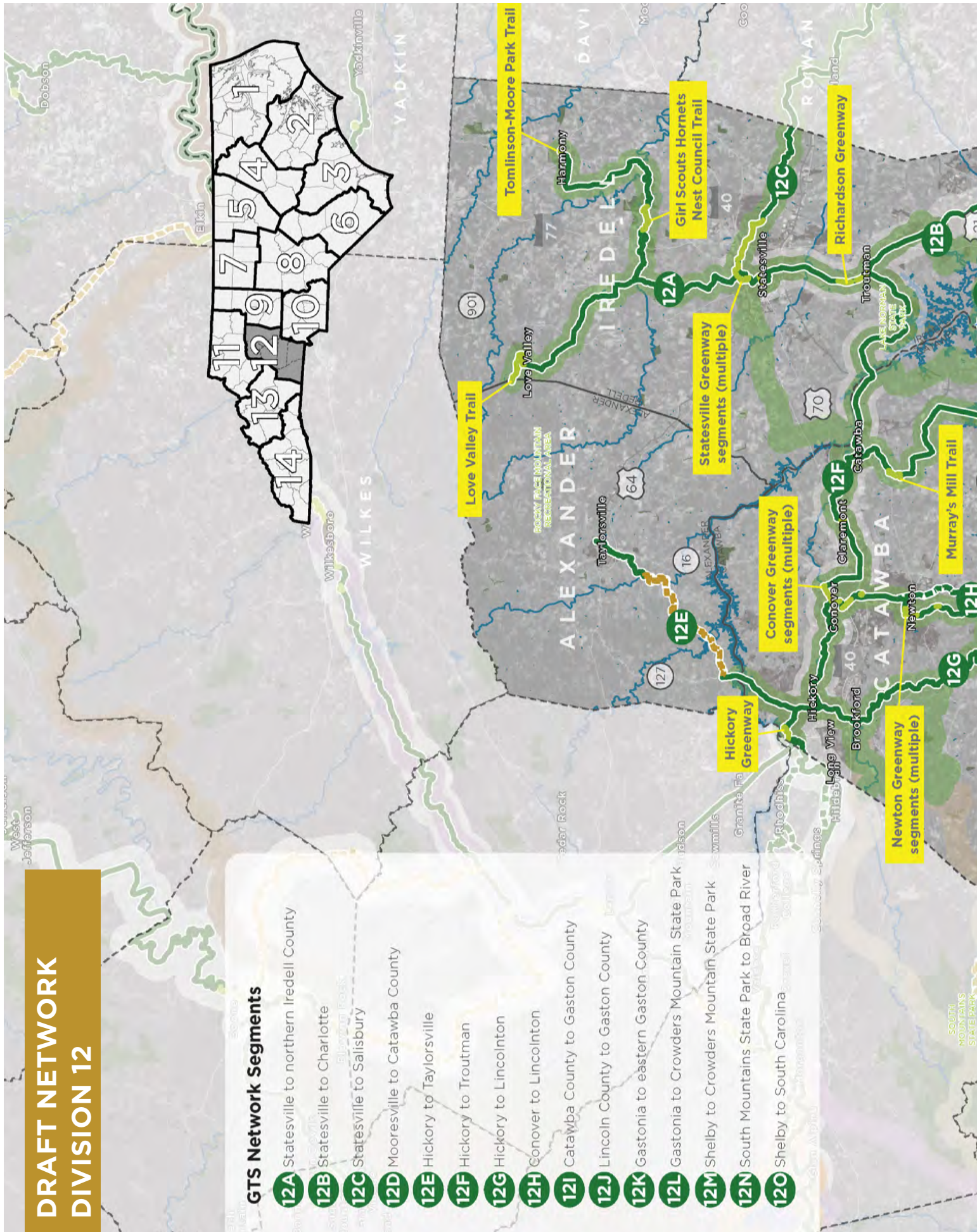
GTS Network Segments

- 11A** Mt Airy to Pilot Mountain
- 11B** Mt Airy to MST
- 11C** Elkin/Jonesville to Forsyth County
- 11D** Jonesville to Yadkinville
- 11E** Elkin to Sparta
- 11F** Sparta to MST
- 11G** Elkin/Jonesville to Happy Valley
- 11H** Happy Valley to Burke County
- 11I** Lenoir to Hickory
- 11J** Virginia Creeper Trail to Banner Elk
- 11K** Blowing Rock to Happy Valley
- 11L** Spruce Pine to Appalachian Trail

DRAFT NETWORK DIVISION 12

GTS Network Segments






- 12A Statesville to northern Iredell County
- 12B Statesville to Charlotte
- 12C Statesville to Salisbury
- 12D Mooresville to Catawba County
- 12E Hickory to Taylorsville
- 12F Hickory to Troutman
- 12G Hickory to Lincolnton
- 12H Conover to Lincolnton
- 12I Catawba County to Gaston County
- 12J Lincoln County to Gaston County
- 12K Gastonia to eastern Gaston County
- 12L Gastonia to Crowders Mountain State Park
- 12M Shelby to Crowders Mountain State Park
- 12N South Mountains State Park to Broad River
- 12O Shelby to South Carolina





DRAFT NETWORK DIVISION 13

DRAFT Great Trails State Network

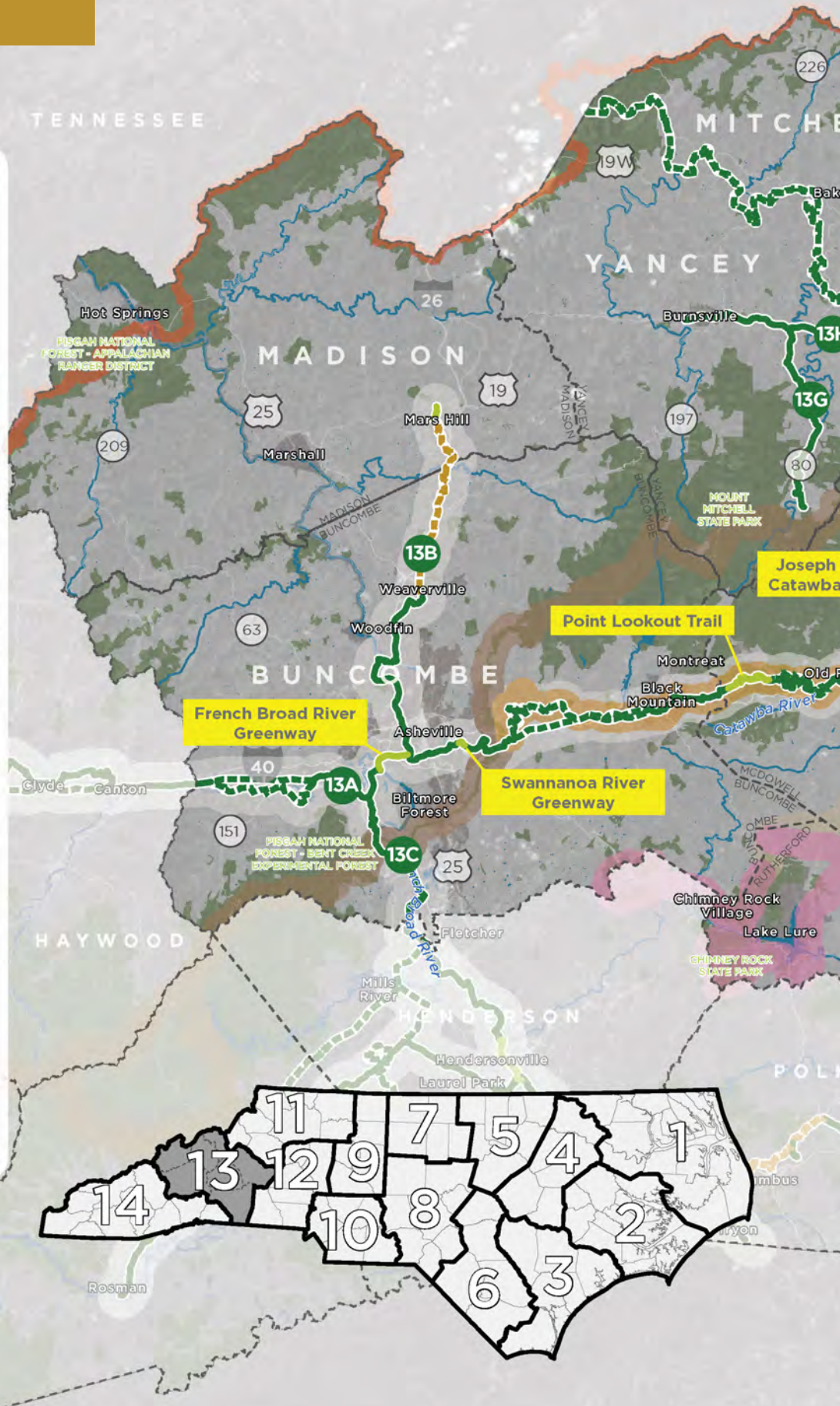
-  Proposed Shared Use Path
-  Draft Alternate Route
-  Existing Shared Use Path
-  Gap
-  Potential Spine Network

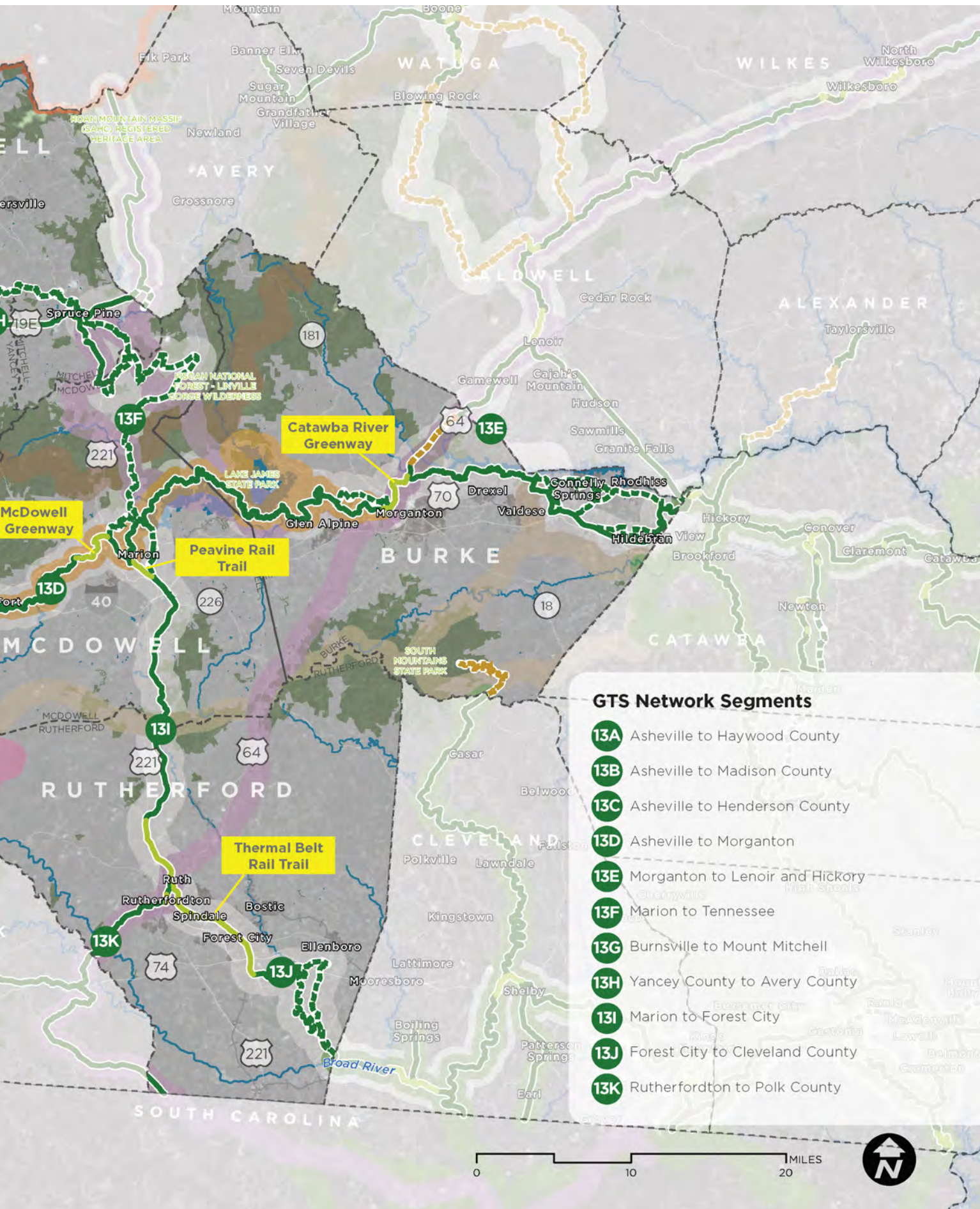
State & National Trails

-  Overmountain Victory State Trail
-  Mountains to Sea State Trail
-  Fonta Flora State Trail
-  Wilderness Gateway State Trail
-  Hickory Nut Gorge State Trail
-  Appalachian Trail

Other Features

-  Municipalities
-  Managed Areas
-  County Boundary

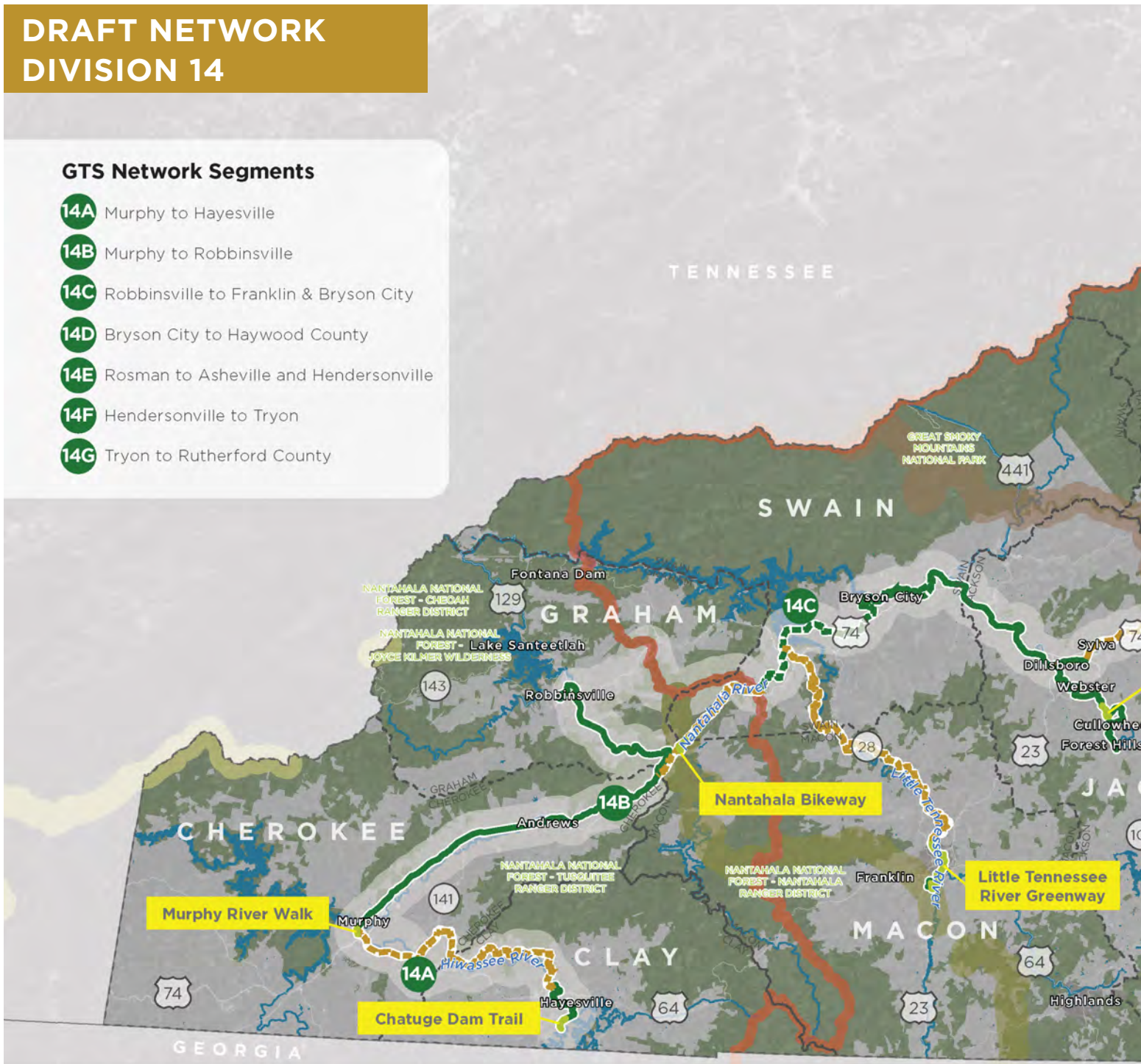




DRAFT NETWORK DIVISION 14

GTS Network Segments

- 14A** Murphy to Hayesville
- 14B** Murphy to Robbinsville
- 14C** Robbinsville to Franklin & Bryson City
- 14D** Bryson City to Haywood County
- 14E** Rosman to Asheville and Hendersonville
- 14F** Hendersonville to Tryon
- 14G** Tryon to Rutherford County



DRAFT Great Trails State Network

- Proposed Shared Use Path
- Draft Alternate Route
- Existing Shared Use Path
- Gap

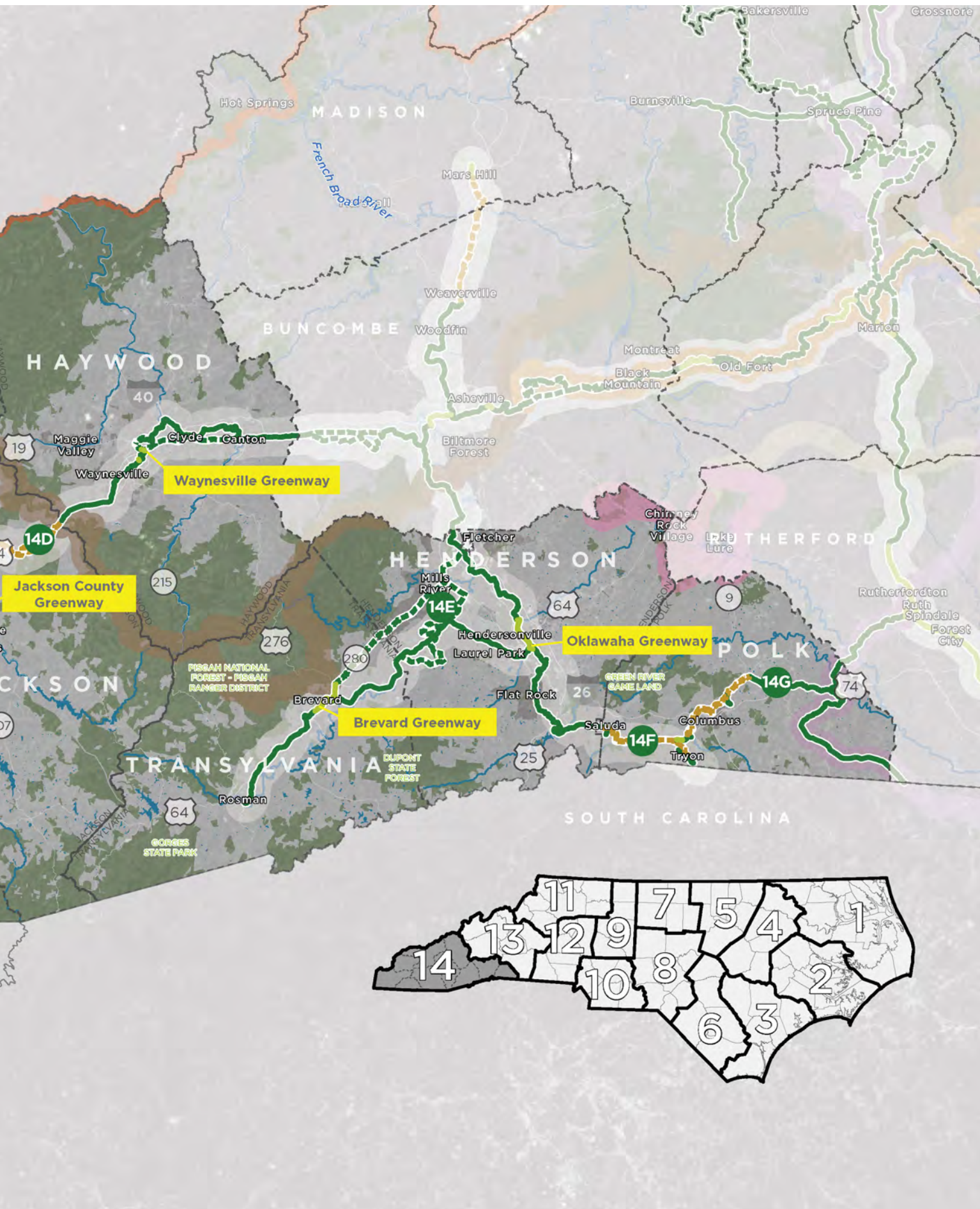
Potential Spine Network

Other Features

- Municipalities
- Managed Areas
- County Boundary

State & National Trails

- Mountains to Sea State Trail
- Appalachian Trail
- Hickory Nut Gorge State Trail
- Bartram National Trail
- Benton Mackaye National Trail

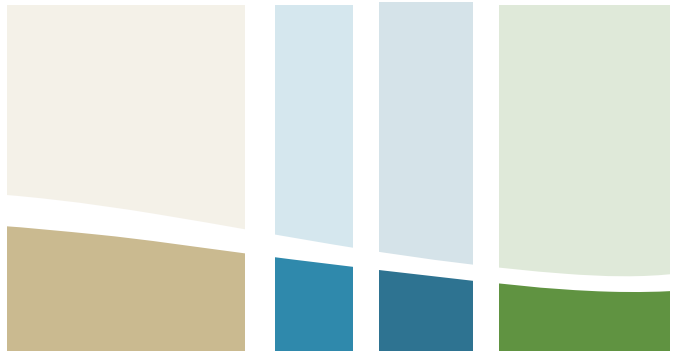


TUCKASEGEE RIVER GREENWAY

CULLOWHEE, JACKSON COUNTY



V. IMPLEMENTATION STRATEGIES



Building a Great Trails State

Building a Great Trails State will take time and a coordinated effort to plan, design, fund, construct and maintain greenways across the state. However, demand for trails is on the rise. Long-distance regional trails are already taking shape, and local governments of every size are working on expanding trail systems. This chapter outlines key policies and implementation strategies to refine the network, focus statewide and regional efforts, expand funding, create accountability and evaluate and update the GTS Network with the aim of building a Great Trails State.

Individual strategies described more in this chapter include:

- Refine and Design Connections
- Advance Trails in All Project Phases
- Ensure GTS Friendly Policies
- Trail Designation, Branding and Wayfinding
- Coordinate with Implementation Partners
- Create Accountability
- Evaluate and Update the GTS Plan
- Encouragement and Engagement

Refine and Design Connections

Planning, Technical Assistance, Data

Responding to North Carolina's growing population and the influx of new technologies, NCDOT created the Integrated Mobility Division (IMD) by merging the Public Transportation and Bicycle and Pedestrian divisions. The Integrated Mobility Division improves project planning to better serve people where they are, from the first to last mile. This new structure simplifies the processes to plan, enhance, and implement bicycle, pedestrian, and public transportation into the existing transportation network.

A key focal point of this new division is to provide comprehensive technical assistance for local and

regional partners. Planning staff are assigned to one of four regions across the state, creating experts within NCDOT on local bicycle and pedestrian issues. Through the new organizational structure, IMD better assists communities in trail planning efforts, coordinates with partners to improve trail connectivity between neighboring communities, and enhances project delivery for STIP projects.

Existing bicycle and pedestrian programs remain within IMD and could be enhanced to support Great Trails State initiatives. The Bicycle and Pedestrian Planning Grant Initiative, a program that funds municipal and county bicycle and pedestrian plans, may be utilized to fund plans within Great Trails State communities to further refine and close gaps in the network. The Pedestrian and Bicycle Infrastructure Network (PBIN), a statewide geodatabase that includes data on existing and proposed bicycle and pedestrian facilities, undergoes periodic changes to ensure that planned and existing trail facilities are reflected in the database. IMD will also partner with the NCDOT GIS Unit and Project Atlas to coordinate with municipalities on annual updates. Through expansion of the Non-Motorized Volume Data Program there may be opportunities to collect bicycle and pedestrian count data along shared use paths in the Great Trails State network. Similarly, IMD can explore research opportunities to collect bicycle and pedestrian economic impact data, building on the 2017 Economic Impact Report of Shared Use Paths in North Carolina to further justify investments in bicycle and pedestrian facilities.

Advance Trails in All Project Phases

Phases of Trail Development

Existing funding sources should prioritize GTS trail segments and additional funding may be needed to support the completion of the greenway network. See Chapter VI for descriptions of existing funding sources and funding needs.

It is recommended that Great Trails State projects are considered for inclusion in transportation projects as part of the Complete Streets Policy. NCDOT has developed a Project Development Network (PDN) process that specifically identifies the stages in project development where state, regional and local plan recommendations will be considered and evaluated. Periodic updates to the PDN will provide opportunities to ensure consistent consideration of plan recommendations. On the next page is a table with detailed recommendations for each phase of the project development process.

The Trail Development Process



These are the steps typically involved in trail development. Certain funding sources may have additional requirements, and some steps may occur simultaneously.

Considerations in the Project Development Process

	PHASE	DETAILS	KEY CONSIDERATIONS
1	Feasibility (FS)	<p>A Feasibility Study, also referred to as a planning or corridor study, includes the development of a purpose and need; an evaluation of existing conditions in the study area; the development and evaluation of trail routes (also known as corridors or alternatives); identification of logical termini; facility type decisions; cost estimation; public involvement and agency coordination.</p> <p><i>Note: A Feasibility Study may not be required for some routes if sufficient planning has been conducted and the corridor and facility type has been identified.</i></p>	<ul style="list-style-type: none"> • Prior planning efforts • Inclusion of a diverse group of stakeholders • Recognition of and buy-in for maintenance agreement • Potential for multiple jurisdictional involvement • ROW minimization or avoidance • Focus on one preferred corridor or viable alternative to be carried into the next phase • Cost estimates • Clear and concise documentation
2	Project Development and Environmental (PDE)	<p>An environmental and engineering process to determine social, economic, natural and physical environmental impacts associated with a proposed project. It includes the development and evaluation of trail concepts, known as alternatives, environmental evaluations, and additional public involvement and agency coordination. The PDE follows procedures found in the National Environmental Policy Act of 1969 (NEPA), as well as federal and state laws and regulations.</p>	<ul style="list-style-type: none"> • Continued inclusion of stakeholders • Ongoing discussion with local/state/federal governments regarding maintenance agreements • ROW minimization, and avoidance • Cost estimates • Clear and concise documentation
4	Right-Of-Way (ROW)	<p>Planned multi-use trail routes may be within existing public lands, while others may be on or adjacent to private land. For projects not in public ownership, acquisition of the real property/land for trail Right-Of-Way (ROW) through fee-simple acquisition or acquiring an easement will be necessary.</p>	<ul style="list-style-type: none"> • Feasibility studies may be needed to define design and Right-Of-Way needs for trails • The width of surface and ROW for a new trail segment should vary based on projected usage, topography, etc. • Standard width of ROW for GTS trail segments should be established (20-25ft is suggested) • Trail construction and/or maintenance easements may be needed
5	Construction, Engineering, and Inspection (CON+CEI)	<p>This phase includes the construction, engineering, and inspection of the facility. Construction or reconstruction of trail surfaces and bridges should meet NCDOT design standards, drainage, land stabilization and safety controls.</p>	<ul style="list-style-type: none"> • Funded trail projects must meet NCDOT defined standards for construction administration, material testing and inspection

Trail Designation and Wayfinding

Designation of GTS Trail Segments

Designation of Great Trails State segments of existing trails is a near-term priority, following the completion of this plan. Designation of GTS routes segments can be an important component of community buy-in and helps illustrate how local greenways can be connected to regional destinations and create linkages in a statewide network. NCDOT IMD may want to consider establishing a designation process for existing GTS segments and a standard for signage and access improvements along designated GTS routes. In addition, a formal process for designating GTS routes should be considered for incorporation into the Comprehensive Transportation Plan (CTP) update process. Regional planning organizations, counties and communities will need a process to amend their CTPs to include the GTS network and to prioritize the designation of existing trail segments.

Branding and Wayfinding

In order for greater numbers of people to enjoy the Great Trails State, North Carolina should consider a branding strategy that will market its greenways to residents, visitors and potential funders. For a greenway, a brand can include user experience (including expectations of safety and comfort), logo, signage, purpose, programming and sponsorship opportunities.

Branding the GTS network has multiple benefits, including:

- Creating awareness of the greenways
- Increased numbers of bicycle and walking trips
- A greater sense of security and comfort
- Improving navigation of the trail system
- Defining the system within the larger context of trails, bicycle routes and pedestrian routes

Branding would establish a logo for the greenway system to be placed on signs, brochures, and maps would give the system a distinct identity. Branding of the GTS network would set the statewide system apart from traiother trail and greenway systems while also improving connectivity and navigation. For example, having signage in place to alert motorists of crossings will improve safety for pedestrians and bicyclists.

The overall experience of trail users will be enhanced with wayfinding that ties the whole system together. As the GTS trail network expands, residents and visitors will have increased access to longer recreation routes, state parks, cities and towns, commercial centers, and green spaces. Wayfinding elements such as signage and mile markers will help users navigate the trails and discover nearby offerings.



This example signage for the Great Rivers Greenway trail system in St. Louis County, Missouri shows a simple, yet effective, use of signage and branding that lets the user know the name of the trail, distance to nearby destinations, the types of uses permitted, and has a reminder to share the trail. Photo by the Great Rivers Greenway.

Wayfinding Case Study - North Holland

The Province of North Holland, in the Netherlands, covers approximately 1,580 square miles, which is roughly the size of Division 5. While population densities are more similar to North Carolina's piedmont, the province is similar to Eastern North Carolina in its flat landscape, much of which is at or below sea level. There is a history of bicycle planning and construction of protected bicycle infrastructure dating back to the early 1970s. The bicycle network in North Holland features over 2,600 miles of bicycle facilities.

Recent upgrades and designation of North Holland's extensive provincial bike network was established with \$40 million of funding spread over a period of three years and divided among various route types. Dutch cycling network utilize a spoke and node wayfinding system that helps guide both commuters and recreational cyclists. The spoke and numbered node 'knooppunt' system uses intersection-based route numbers to navigate the network. Routes are marked with signs and maps along the paths. This numbered node system can be useful for regional and inter-urban routes that span larger distances.

For more information on this and other case studies see the Appendix.



North Holland 'knooppunt' signage and a map of numbered junctions for route planning

Ensure Trail-Friendly Policies

Policies related to transportation improvements should be implemented and updated as needed to prioritize the accommodation of Great Trails State segments when opportunities present themselves or other projects are constructed. Below is a list of topics related to policies that should be implemented, reviewed and updated as needed.

- **Complete Streets** - Implement current Complete Streets policy by including key segments of the GTS trail network in planned roadway projects
- **Maintenance** - Implement existing policy of establishing maintenance agreements with municipalities and counties with capacity and maintaining trail segments within NCDOT right-of-way
- **Bridges** - Coordinate with Roadway Design on updates to the Roadway Design Manual to support trail inclusion and construction.
- **No New Deficiencies** - Seek a goal of no new deficiencies along identified Great Trail State routes
- **Vision Zero** - The GTS initiative can support efforts to reduce fatalities on our roadways by building infrastructure that separates pedestrians and bicyclists from motor vehicles

Complete Streets Policy

Implementation of the NCDOT Complete Streets Policy is especially important to establishing a statewide network of shared-use paths. The existing Complete Streets policy provides an opportunity to ensure key segments of sidepaths are completed in tandem with planned roadway improvements. The uniqueness of the GTS network as a facility of statewide significance and a potential generator of recreational trips and economic development for rural communities once connected, should discourage exceptions unless a satisfactory alternative route is determined preferable.

Maintenance

Many GTS trail segments traverse very rural counties with limited capacity to maintain longer segments of sidepaths and greenway facilities. Future updates to Complete Streets implementation guidance will establish a formalized structure for determination of maintenance responsibilities among NCDOT, local governments and other partner organizations.

North Carolina Strategic Highway Safety Plan

The North Carolina Strategic Highway Safety Plan (SHSP) is essential to addressing highway safety in our state. The Plan is a key component of North Carolina's Highway Safety Improvement Program, a core-federal-aid program directed at reducing fatalities and serious injuries on all public roads. North Carolina's Executive Committee for Highway Safety first developed the SHSP in 2004. There are eleven emphasis areas included within the SHSP including pedestrians, bicyclists, and personal mobility. The goal of the SHSP is to reduce fatalities and serious injuries in North Carolina by investing time and resources into projects, policies, and programs that target the most significant contributing factors to crashes. Each emphasis area within the SHSP includes a detailed action plan for safety partners to implement strategies and programs over the next 5 years.

Bridges

The inclusion of safe trail facilities on and under bridges will have a dramatic impact on the state-wide trail network due to the longevity of bridge-related improvements and the significant cost of retrofitting or circumventing structures with adequate facilities.

Continued coordination is needed between NCDOT IMD and Roadway Design to make updates to the Roadway Design Manual to support the completion of future trail segments during bridge projects.

For existing guidelines for greenway accommodations see: www.ncdot.gov/divisions/bike-ped/Documents/GuidelinesForGreenwayAccommodations.pdf.

No New Deficiencies

In order for the Great Trails State network to be used broadly, its facilities must be safe, reliable, and sufficiently connected so they create a consistent and predictable standard of expectations for trail users.

One effective way to reach this complete and connected network is through the pursuit of project development/delivery process that has a goal of avoiding any new deficiencies along the proposed GTS network. This approach would aim to ensure that any time new plans, construction or reconstruction occurs, the situation is never worsened for trail users. All new project and developments would at least maintain the existing level of comfort, safety, directness and accessibility for people using the trail.

Vision Zero

Planning efforts and funds devoted to transportation improvements should support efforts to reduce fatalities on our roadways. The Great Trails State initiative can help support this goal by building infrastructure that separates pedestrians and bicyclists from motor vehicles along routes that connect destinations throughout the state.

The Importance of Trail Crossings

Maintaining and improving crossing safety should be considered a priority along the Great Trails State network of greenways and shared-use paths. Trail crossing improvements should be incorporated into regular road maintenance and reconstruction that takes place near or adjacent to trails. For example, if a road widening project were to happen, additional steps are required to ensure the Great Trails crossing is made safer than before. This can be achieved through a crossing improvement or grade separation for example.

Examples of at grade trail crossing improvements may include:

- *Pedestrian and cyclist priority crossings*
- *Raised crossing*
- *Traffic calming measures in advance of the crossing, like chicanes and speed bumps*
- *Narrowed roadway*
- *Changes in surfacing material*
- *Pedestrian/cyclist refuge or island*



Grade separated crossing at I-40 on the American Tobacco Trail in Durham

Coordinate with Implementation Partners

North Carolina's Year of the Trail | 2023

On August 10, 2021, NC Senate passed HB 554, designating 2023 as "North Carolina Year of the Trail." This designation is supported by the North Carolina Great Trails State Coalition and the group will be spearheading the plans for the year. NC is the first to announce the designation with extensive plans to showcase, promote and celebrate our trails. Special trail programs and events are planned throughout 2023 for all 100 counties, with a goal to increase awareness of trails and boost local trail use and tourism. North Carolina's hiking, biking, paddling, off road vehicle, and equestrian trails showcase the splendor of our natural and urban landscapes. They provide significant health, economic and transportation benefits and are the cornerstone of North Carolina's \$28 billion outdoor recreation industry, the 6th largest in the US.

2023 marks the 50th anniversary of the 1973 North Carolina Trails System Act. This act created North Carolina's Trails Program which is housed in the Division of Parks and Recreation and is assisted by the North Carolina Trails Committee, a group of citizens representing users of different types of trails, including hiking, biking, paddling, horseback riding and off road vehicles. It also envisioned a State Trail System of long-distance State Trails that would be units of the North Carolina Park System. That trail system now includes 11 State Trails, with the Dan River State Trail and East Coast Greenway gaining State Trail status in July 2021. The North Carolina State Parks' annual theme in 2023 will also focus on trails.

Outdoor Recreation

Founded in 2017, the North Carolina Outdoor Recreation Coalition provides a unified voice for North Carolina's outdoor recreation industry. The Coalition is a non-profit trade association made up of member companies and organizations that advocate on behalf of the industry at the North Carolina General Assembly and within executive agencies. It


Case Study - Virginia Long Distance Trail Plan

In 2009, the Greenways and Trails Task Force developed a statewide trail action plan called Virginia's Long-Distance Trail Network. The plan focuses on the long distance "trunkline trails" that will provide the framework for connecting regional and community trails. It was developed in collaboration with numerous local planners and trail interest groups. The creation of a state trails committee by the Virginia DCR (Department of Conservation and Recreation) is the primary organizing and sustaining element in moving forward the implementation of the plan.

Cumulative demand for trails across the state led the General Assembly to craft legislation in 2015 directing DCR to establish a State Trails Advisory Committee (STAC) to *"assist the Commonwealth in developing and implementing a statewide system of attractive, sustainable, connected and enduring trails for the perpetual use and enjoyment of the citizens of the Commonwealth and future generations."*

The STAC is appointed by DCR's director. A review of the meeting minutes from April 2019 indicated over 40 STAC attendees and 11 staff. It includes representatives from key partners and responsible agencies as well as technical experts:

- Virginia Department of Game and Inland Fisheries
- Virginia Department of Transportation
- Virginia Outdoors Foundation
- U.S. Forest Service
- U.S. National Park Service
- Director of the Chesapeake Bay Commission
- Non-legislative citizen members from the Virginia Outdoors Plan Technical Advisory Committee
- Other members with technical expertise in trail planning, construction, maintenance, use and management



promotes existing outdoor recreation companies, recruits new companies to locate in North Carolina, and increases public access to outdoor recreation. Members include manufacturers, retailers, guide companies, and conservation NGO's. For more information, visit ncorec.com. In 2019 the Economic Development Partnership of NC (EDPC) established the NC Outdoor Recreation Industry Office to work in concert with the Coalition to support outdoor recreation economies in NC.

Partnerships with Land Trusts and Resource Agencies

Regional trails can provide a corridor for multiple uses, including biking, hiking, running and equestrian uses. They also can provide a connected ribbon of open space that can link conservation areas, parks and natural communities.

Partnership opportunities with resource management organizations and conservation organizations, such as land trusts, should be sought in order to leverage multiple potential funding sources. For instance, there are planned trail corridors that traverse and link ecologically significant areas. In these cases land conservation funding could be paired with transportation funds to preserve open space and construct a greenway on a portion of the property.

Coordination with resource agencies and regional conservation organizations is recommended to identify trail segments where there are partnership opportunities as well as determine the feasibility of constructing a trail in an environmentally sensitive manner.

Create Accountability

Great Trails State Advisory Committee

An advisory committee for the Great Trails State should be established to create inter-agency communication and momentum for the development of the statewide trails network.

The Great Trails State Advisory Committee will be responsible for guiding the implementation of the Great Trails State Plan by making recommendations on relevant programs, policies and funding priorities regarding North Carolina’s statewide trail network. The advisory committee will be developed by the NCDOT Integrated Mobility Division in partnership with NC State Parks. Both agencies will assign a designated staff member to coordinate with committee members on project prioritization of the Great Trails State network, develop an annual Great Trails State work plan and progress report, and lead quarterly committee meetings. Committee membership will be comprised of representatives

from regional and local governmental agencies, partnering state agencies, NCDOT Divisions, and non-profit and community organizations.

Suggested goals and objectives for the GTS Advisory Committee include:

- Provide inputs to an annual progress report of activities and accomplishments related to performance measures established in this plan
- Oversee and guide plan updates
- Update policies, practices, standards, statutes and guidelines to enhance the effectiveness of trail planning and development
- Develop strategies to enhance trails in communities and close the gaps in the Great Trails State plan
- Integrate approaches to promote and market trail values and benefits
- Foster communication and networking among trail stakeholders
- Increase tourism and commercial activities associated with statewide trail system

Potential Composition of the Great Trails State Advisory Committee

Transportation Planning Branch

Rail Division

Integrated Mobility Division

Representative from each of the 14 Divisions (ideally Division Planning or Corridor Engineer)

State Parks

US Forest Service

Representatives from regional trail systems

East Coast Greenway

NC Dept of Commerce

NC DHHS

MPOs/RPOs

Local Governments

Non-profit partners

Economic development, outdoor recreation, social and environmental justice representatives



Evaluate and Update the GTS Plan

A process should be established for updating the GTS network that allows for regional planning organizations to request a modification of planned trails based on newly adopted plans. In addition, every 4 years the GTS Plan should be updated to review progress against goals, performance metrics and address barriers to implementation. The plan update could also summarize success of the first 1-4 years and refine the planned greenway network.

NCDOT Research Program

Studies to understand trail usage trends and quantify benefits afforded to the communities they serve will be important to evaluating progress made toward being the Great Trails State. The Research & Development Office oversees transportation-related research for NCDOT. The Office solicits ideas and proposals and determines funded research on an annual cycle. In-state colleges and universities typically perform the research. The existing research program can be used as a venue for submitting research needs statements, conducting data collection and performing analysis related to topics of concern for the GTS Project. Topics include but are not limited to: Trail Usage, Economic Development, and Health Outcomes. Research should be tied to progress reporting where possible. More economic

impact research and data is needed for cost/benefit analysis of bicycle and pedestrian projects. This type of data will be important to justify standalone funding for statewide trail projects and potential STI amendments.

Tourism and Engagement

Tourism Guide for the Great Trails State

The Great Trails State Booklet should be expanded based on the work of the Great Trails State Plan. Include highlights by region that showcase existing trails, destinations and build excitement for recent progress and future planned connections.

Public Engagement and Equity

The Integrated Mobility Division can assist local governments to conduct equitable engagement and outreach activities to help refine GTS connections and guide other greenway and transportation planning activities. Project prioritization and performance metrics should factor in geographic equity as well as racial and income equity. Great Trails State projects should benefit all communities, balance the needs of urban and rural counties, and make sure that communities with vulnerable populations get their fair share of investment in trails.



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