



COBB COUNTY GREENWAYS & TRAILS MASTER PLAN

FINAL DRAFT PLAN - MAY 2018





ACKNOWLEDGMENTS

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City of Smyrna	Cobb Travel and Tourism	Improvement Coalition
Cumberland CID	Connect the Comet	Trust for Public Land

And the many individual residents and community members who participated in meetings, events, online survey and mapping activities, and comments.

PREPARED BY:



This is the FINAL DRAFT Plan presented to the Board of Commissioners for adoption in June 2018.

IN PARTNERSHIP WITH:





COBB COUNTY GREENWAYS & TRAILS MASTER PLAN

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"Cobb County... Expect the Best!"

Cobb County Department of Transportation
1890 County Services Pkwy, Marietta, GA 30008
www.CobbCounty.org



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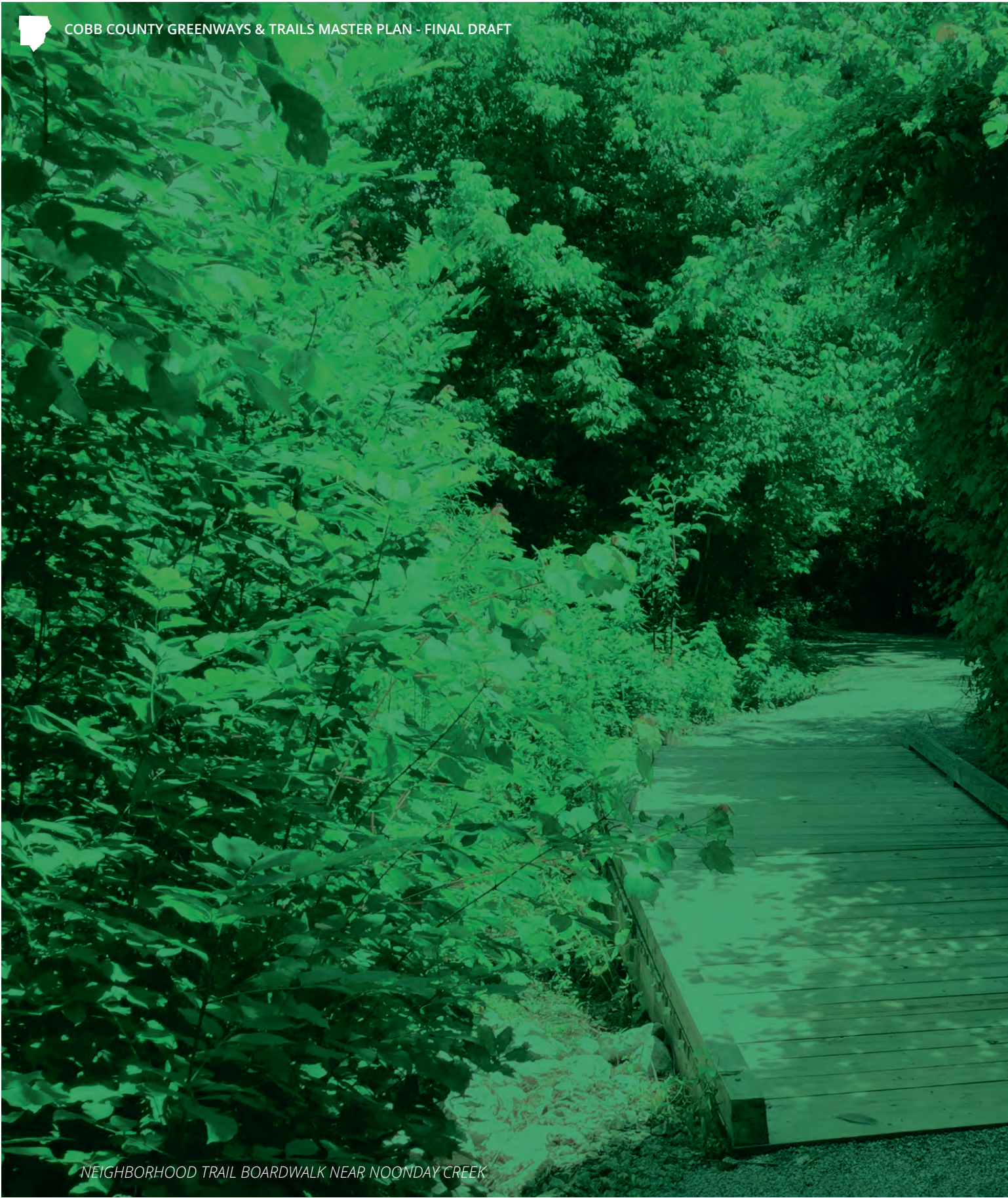
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NEIGHBORHOOD TRAIL BOARDWALK NEAR NOONDAY CREEK

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INTRODUCTION & BACKGROUND

PURPOSE, APPROACH, GOALS AND OBJECTIVES

This chapter provides an introduction to the *Greenways and Trails Master Plan*, summarizing the reasons for undertaking this effort, the *Plan's* overarching framework, goals, objectives, and principles developed to guide the planning process and outcomes.



GAINING MOMENTUM

AN INVESTMENT IN COMMUNITY

Greenways and trails are investments in community, in transportation, in economic development, and in health. Seeking to create opportunities for physical and social activity, to expand travel options, and to foster economic development, Cobb County set out to create its first-ever *Greenways and Trails Master Plan*. Recognizing the myriad benefits of greenways and trails, the County sought to establish a framework for future investment in the countywide trail network. Beyond identifying potential locations for future trails, Cobb County wanted the plan to spell out an intentional and cohesive approach to prioritizing trail connections and allocating funding for new projects.

With over 84 miles of existing multi-use greenway trails and sidepath trails, Cobb County has an extensive active transportation network that provides opportunities for people to make trips to parks, shopping, offices, and schools, as

well as for recreation and exercise. Yet, most people continue to drive, even for short trips, and many are not aware of greenways and trails in their communities. Furthermore, while functional from a transportation perspective, the typical design and configuration of many trails leaves something to be desired in terms of user comfort and experience, and therefore does not likely attract as many users as it could.

There has been, and continues to be, strong interest in greenways and trails throughout the Metro Atlanta region and within Cobb County, despite a history of development patterns and transportation investments that have favored automobile transportation. In the past ten years, more than 50 miles of new greenways and trails have been constructed throughout Cobb County. As of December 2017, nearly two miles of trails were actively under construction, with another 29 miles of trails in the design and feasibility study stage.



Bike lanes offer healthier transportation options and opportunities for recreation



Good design encourages more walking, helping pedestrians feel safer

This momentum is driven in part by changing patterns and preferences in terms of how people get around and a strong desire for people to live and work in walkable, bike-friendly communities. It is also driven by a recognition of the positive impacts and benefits trails can have on residents, visitors, and communities:

- Research shows that trails encourage physical activity among inactive residents and greater physical activity for those who are already active.
- A study by the University of Massachusetts found that **every \$1 million spent on multi-use trails yields nine jobs**¹ and AARP estimates that building bike infrastructure creates an average of 11.4 jobs for every \$1 million spent, compared to only 7.8 jobs per \$1 million spent on road-only projects.²
- Bike facilities and trails are good for business: by 2013, bicycle tourism in Outer Banks, NC had generated \$60 million in economic activity on a \$6.7 million investment, and the \$63-million-Indianapolis Cultural Trail contributed \$864 million to the local economy in the first year after it was completed.³
- The National Association of Realtors® (NAR) and National Association of Home Builders have found that **walking and biking trails are the top amenity desired by home-buyers**.⁴
- The 2015 National Community and Transportation Preference Survey, conducted by NAR®, found that **Americans prefer walkable communities more now than they have in the past**: in fact, 79% of respondents value being within easy walking distance of places.⁵
- The American Heart Association estimates that **every \$1 spent on trails could save nearly \$3 in medical expenses**.⁶
- Greenways and trails contribute significantly to economic, social, and physical health and well-being, as part of the broader outdoor recreation market. According to the Outdoor Industry Association, Georgia residents are more likely to participate in trail or road running than the average American, and outdoor recreation in the state generates \$27.3 billion in consumer spending and supports 238,000 direct jobs.⁷



The Silver Comet Trail traverses fairly remote areas, providing important access to nature and greenspace



Fix-it stations near businesses and offices make biking to shop, dine, or work more convenient



GREENWAY & TRAIL BENEFITS



Alternative to automobile transportation to parks, schools, jobs, business districts, community facilities, and other destinations



Improve health and quality of life



Source for recreation and physical activity



Increase property value



Protect and preserve the natural environment

Many households across Cobb County rely on walking and biking as low-cost options for getting around, while others choose to bike or walk to improve or maintain health and wellness. Increasingly, employers and real estate developers recognize the appeal of walkable and bikeable areas to employees and residents and acknowledge that active transportation options help attract and retain employers, residents, and visitors alike.

Walking and biking can serve as forms of transportation on their own or can be used in combination with other forms of transportation for faster connections. Walking and biking are also relatively inexpensive ways to improve health and fitness and can be a way to experience nature and wildlife. Throughout the region and across Cobb County, communities have built trail segments that provide access to key destinations, expand opportunities for recreation and fitness, and that have provided places for people of all ages and abilities to be physically and socially active. However, some segments of trail are not yet fully connected, leaving gaps between trails, and some important destinations and areas of Cobb County are not yet served by trails.

The *Greenways and Trails Master Plan* provides a framework and strategy for connecting existing segments of trail, for connecting key places, and providing alternative options for people to get where they want to go. By linking individual greenway and trail segments and expanding the reach of trails, Cobb County will be able to create a true countywide network that feeds into the regional system.

PROVIDING A ROADMAP

PLAN PURPOSE

The *Plan* serves as a roadmap for Cobb County, providing guidance for building upon and expanding the existing network to make greenways and trails more accessible to everyone and to encourage more people to bike and walk. Key purposes of the plan include:

- Establish a vision and goals to guide future development of greenways and trails in Cobb County
- Document the existing state of greenways and trails in Cobb County
- Identify opportunities and challenges associated with expanding the greenway and trail network
- Promote decision-making and trail development grounded in guiding principles and best practices
- Establish a tiered list of potential future projects to improve the greenway and trail network
- Provide guidance on potential future partnerships, funding strategies, and operations and maintenance of greenways and trails
- Identify priority trail corridors and projects on which to focus resources for near-term expansion of the existing greenway and trail network

The *Plan* is a countywide document intended to guide the planning and development of new trails and greenways to enhance active transportation connectivity. It is not a detailed design and engineering study of individual trails, but a documentation of guidance and best practices designed to improve countywide connectivity, enhance access to key destinations, provide opportunities for physical and social activity, and give people greater choice in how they get around. The *Plan* also helps inform future decisions about greenway and trail projects by providing guidance on design and strategies for implementation and offering recommendations on prioritization of future trail projects.

Furthermore, the *Plan*, through its publication and the planning process, helps communicate to residents, visitors, and other stakeholders about the existing greenway and trail network, helping increase usage and promote community engagement. This *Plan* and associated trail maps will periodically be updated to reflect current and ongoing projects within the County.

What are Greenways and Trails?

Both are linear pathways or corridors that provide travel options for recreational, social, health and exercise, and transportation purposes. They can be paved or unpaved and are designed to accommodate a variety of users, generally including pedestrians and cyclists. Some trails follow roadways while others are located in more natural settings, such as along a creek or through open space.

Greenway trails are generally in more natural settings, through less developed open spaces, and some help protect water quality and wildlife corridors. Other trails may be more transportation-oriented and follow roadway corridors, providing access to key destinations and other transportation options.



Why are we investing in greenways and trails?

How are we going to get more people biking and walking?

What will this look like in the future?



To make it easier and more convenient for people to choose to bike and walk for travel and recreation. A more bike- and walk-friendly Cobb County will have myriad benefits ranging from improved health and economy to reduced congestion and positive impacts on the environment and equity.



By focusing on improving connectivity, making short trips possible on foot or bike, improving access to places people want to go, creating trails and greenways that are destinations, making it easier to bike and walk to get to or from transit, and by designing greenways and trails that are safe and comfortable for all users.



Cobb County will have a safe, well-connected network of greenways and trails that provides access to destinations, choices in how people get around, contributes to a sense of place and community, is an economic driver, and that is used by a range of people.

FRAMEWORK

APPROACH TO THE GREENWAYS AND TRAILS MASTER PLAN

This section outlines the overarching framework and approach to Cobb County's Greenways and Trails Master Plan. It provides guiding principles, a vision, goals and objectives, and an approach that Cobb County can take to get more people biking and walking.

Cobb County has an extensive network of trails that provides opportunities for recreation and travel, and that connects people to parks, shopping, offices, and schools. This *Plan* provides a roadmap for the County – examining what is already built, what is currently underway, and where to go from here. It identifies priority corridors for new greenways and trails and provides recommendations for building upon and improving the existing network to make trails more convenient and accessible to everyone.

Successful trail systems are multi-faceted and take into consideration not only the physical characteristics of the greenways and trails themselves, but also the user experience, the types of people who use the facilities, and how they relate to one another. This plan addresses each of those components, and as well as less direct considerations in creating a successful system, such as health and safety, economic activity, and branding, as articulated in the guiding principles listed below and in Chapter 5.

The primary focus of this *Plan* is on creating and enhancing connectivity - between destinations, counties, cities, business districts. It will connect Lakes Acworth and Allatoona to Kennesaw Mountain and the Chattahoochee River.

The *Plan* provides a cohesive and strategic set of priorities for expanding and improving the network of greenways and trails throughout Cobb County in the short-term and into the future. It does so by first identifying priority projects on which to concentrate over the next five to ten years. Beyond that, the *Plan* provides a framework for decision-making about longer-term projects, guidance and consideration for design of facilities, maintenance, policy priorities, and complementary projects.

As the first-ever *Greenways and Trails Master Plan* for Cobb County, this study considers and builds upon the many plans and studies adopted and approved previously. The vision, goals, and objectives articulated on the following pages are derived in part from previous planning efforts, considering the types of goals and objectives set for increasing active transportation, such as bicycling and walking, and establishing connectivity.



GUIDING PRINCIPLES

POSITIVE IMPACT FOR ALL

The strategic approach of the *Greenways and Trails Master Plan* is to encourage investment in projects and initiatives that will have a significant positive impact on creating connectivity and enabling more people to bike and walk for short daily trips as well as to get to work, transit, and/or to key destinations. This, in turn, will have a positive impact on health and well-being, the transportation network, economic competitiveness, and the overall quality and sense of place and community in Cobb County. By following the approach laid out in the three questions on the previous page and following the guiding principles at right, Cobb County can develop a strategy for investing in high quality greenways and trails that will get more people biking and walking while simultaneously improving community health, economic competitiveness, and providing choices in how people get around.

To achieve this overall objective, this plan is guided by several key principles:

- **Safety and Security**
- **Accessibility**
- **Economic Competitiveness**
- **Connectivity and Access to Destinations**
- **Comfort and Design for Everyone**
- **Equity**
- **Environmental Sustainability**
- **Prioritization/Opportunistic Implementation**

Guiding principles are discussed further in Chapter 5.

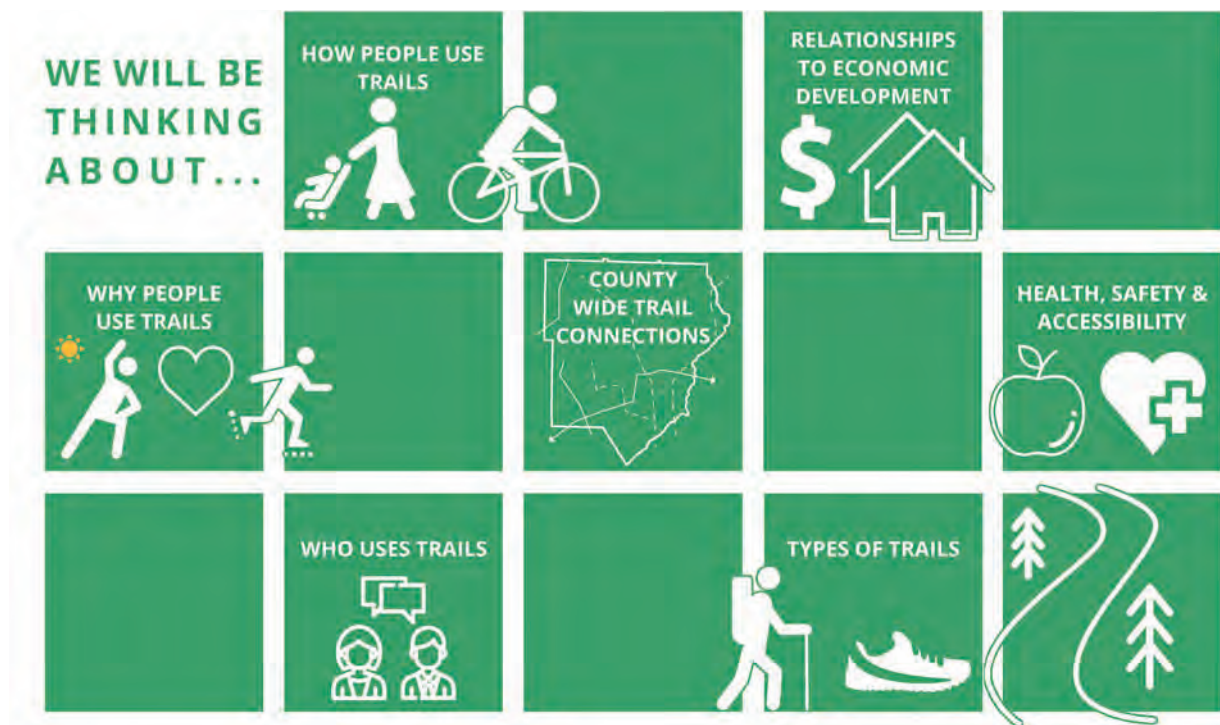


FIG. 1-1 FACTORS CONSIDERED DURING THE PLANNING PROCESS



COBB COUNTY VISION FOR GREENWAYS AND TRAILS

“Cobb County is a leader among Metro Atlanta counties in providing a safe, well-connected network of greenways and trails for active transportation to improve accessibility, economic competitiveness, and health for residents and visitors.”

A FAMILY PARTICIPATES IN AN ACTIVITY AT THE GREENWAYS AND TRAILS PLAN BOOTH AT MABLETON DAY



GOALS & OBJECTIVES

CHARTING A PATH TOWARD THE VISION OF A SAFE, WELL-CONNECTED NETWORK

IMPROVE CONNECTIVITY

Implementing the *Plan* will establish a cohesive network that links existing trails and provides connections to communities and destinations throughout Cobb County.

- Provide connections to each of the six cities and three community improvement districts (CIDs) within Cobb County, as well as to regional attractions, such as Lakes Acworth and Allatoona, Kennesaw Mountain National Battlefield Park, the Chattahoochee River National Recreation Area, and the Chattahoochee River itself.
- Maintain and enhance connections to regional trails, including those that provide access to regional attractions in adjacent communities.
- Fill gaps in the existing trail network, including in areas currently underserved by active transportation opportunities.
- Provide trail connections that allow residents and visitors to walk or bike to work, shopping, school, transportation facilities (transit stops, park and ride), and other key destinations.

IMPROVE MOBILITY AND ACCESSIBILITY

Implementing the *Plan* will provide options for people of all ages and abilities who bike and walk for any reason as part of their daily life, and will increase access to public transportation where possible, providing people with choices in how they get around.

- Ensure a variety of users including pedestrians, joggers, bicyclists, skaters, wheelchair users, and other non-motorized recreational users and commuters are able to access the greenway and trail system.
- Create opportunities for biking and walking in every part of the County with a focus on underserved areas.

Expand the trail network in ways that make it more convenient and normal for people to bike and walk for day-to-day activities more frequently.

- Encourage direct connections between offices, retail centers, community facilities, and neighborhoods where appropriate to make it easier for people to use trails and greenways without getting in a car.
- Incorporate signage and design elements that clearly communicate where trails are located, how to get to them, and that provide safe and accessible connections.

ENSURE COMFORT AND SAFETY

Implementing the *Plan* will contribute to a safer and more comfortable system for all greenway and trail users through design, infrastructure improvements, signage, and education.

- Reduce potential conflicts between vehicles and trail users.
- Ensure the greenway and trail network is easy to navigate.
- Implement safety improvements where greenways and trails meet with roadways.
- Provide a combination of facilities that are appropriate for users of all levels and abilities, from elite athletes to young children and older adults.
- Create a comfortable environment for all users through the use of landscape, canopy trees, wayfinding signage, places to rest, vegetative buffers, and other comfort amenities.



GOALS & OBJECTIVES

CONTINUED

SUPPORT AND DRIVE ECONOMIC DEVELOPMENT

Implementing the *Plan* will produce facilities that make Cobb County a place where people want to spend time and money, sustaining and enhancing it as an attractive place for businesses, residents, and visitors. Currently throughout Metro Atlanta, the most walkable and bikeable places are also economic drivers.

- Provide access to visitor and tourist destinations such as Kennesaw Mountain National Battlefield Park, SunTrust Park, Cobb Energy Performing Arts Centre, the Chattahoochee River National Recreation Area, and others.
- Provide connections to and support the integration of biking and walking into activity centers, such as business districts, employment centers, downtowns, entertainment districts, and cultural landmarks or sites.
- Design and construct trails that may become destinations in their own right and attractors for residents and visitors.
- Work with businesses, Chambers of Commerce, CIDs, and economic development professionals to ensure the greenway and trail system serves as a catalyst for attracting and retaining business and economic development.
- Encourage “trail oriented development” that draws attention to greenways and trails as important components of great places with safe opportunities to bike and walk.
- Promote key trails as destinations for visitors.

PROTECT AND ENHANCE THE NATURAL ENVIRONMENT

Implementing the *Plan* will promote a well-designed greenway and trail network that simultaneously provides access to nature and environmental assets and improves environmental and ecological conditions. Landscapes that pose a challenge to conventional development, such as flood plains and steep topography, are often great opportunities for public open space, landscaping, and trails as well as cutting-edge infrastructure such as innovative stormwater management systems or other green practices.

- Provide access to natural resources such as Lake Acworth, Lake Allatoona, the Chattahoochee River, Kennesaw Mountain, and the numerous streams and creeks across the County.
- Design and construct low impact trails that avoid environmentally sensitive areas while providing residents and visitors controlled access to natural areas, for passive or active recreation, as appropriate.
- Foster environmental awareness and stewardship through educational materials and signage, especially at trailheads.
- Identify opportunities for trails to improve conditions of the Etowah and Chattahoochee Watersheds and their streams through the use of green infrastructure to reduce stormwater runoff and the removal of invasive species.

FOSTER HEALTHY BEHAVIOR

Implementing the *Plan* will provide safe opportunities for residents and visitors to engage in physical activity for recreational and transportation purposes, with the goal of enhancing overall public health. Well planned trail and greenway systems are often cited as key opportunities for improved health conditions for residents.

- Create more opportunities for people to bike or walk for short trips.
- Expand opportunities for people to bike or walk to trails and greenways, rather than drive.
- Provide opportunities for residents and visitors throughout the County to have easy access to facilities where they can mobilize for health and exercise purposes.
- Provide viable commute options and connect trail systems to local and regional transit opportunities to help reduce overall reliance on vehicles and contribute to improved local and regional air quality and reduced vehicle congestion.

INCREASE AWARENESS OF GREENWAYS AND TRAILS

Implementing the *Plan* will increase awareness of greenways and trails among residents and visitors to Cobb County by helping people understand where trails are located and how to get to them. While many people are aware of the regionally significant trails within the County, there is a vast network of lesser-known trails.

- Work with local partners to develop and implement a marketing campaign that includes maps, brochures, and educational materials to promote Cobb County's greenways and trails.

- Implement programs and activities that encourage use of greenways and trails, such as group rides, exercise classes, pop-up events, and art programs.
- Encourage the use of branded wayfinding signs and mile markers along trails and greenways to help users navigate the system and understand how various trails are linked.

MAINTAIN A STATE OF GOOD REPAIR

Implementing the *Plan* will ensure that trails and greenways remain in a state of good repair by following guidelines for and identifying potential sources of funding for regular maintenance. Maintenance and upkeep of greenways and trails are key to their longevity and sustaining the value of the County's investment in these facilities. Well maintained public trails can help reduce issues of liability, vandalism, litter, and other unwanted behavior by activating streets and placing eyes on the community. Promoting their continued use, in turn helps to deter criminal activity.

- Increase investment in ongoing repair and maintenance of trails and greenways.
- Establish partnerships with public and private entities to improve maintenance.
- Leverage private development to assist with construction and ongoing maintenance of trails alongside new development projects.
- Establish maintenance protocol and standard intergovernmental or partnership agreements to guide ongoing maintenance responsibilities.
- Consider community involvement programs and partnerships such as "Adopt a Trail" programs to assist with maintenance and upkeep.



THE VALUE OF TRAILS

The following are **potential metrics** that could be tracked in order to gauge the value of trails to the Cobb County community and to track progress toward established goals. Specific, measurable targets could be set for a concrete time frame (e.g., by 2040) for each of the potential metrics:

- *Trail Usage*
- *Frequency of Use*
- *Ratio of Trails to Residents*
- *Trail Access Points*
- *Trail Programs*
- *Proximity to Transit*
- *Service to Lower Income Communities*
- *Job Access*
- *Value of New Investment*
- *Proximity to Trails and/or Parks*
- *Walkable Access to Trails*
- *Amounts of Physical Activity*
- *Air Quality*
- *Water Quality*

The Atlanta Regional Commission (ARC) will use the following measures to evaluate progress on regional trails. Similar metrics could be tracked for Cobb County:

- *Number of trail miles constructed per year*
- *Funding allocated to trails in the TIP per year*
- *Trail scoping studies completed per year*
- *Percentage of identified gaps undergoing scoping studies*
- *Trail use per month*
- *Percentage of people that live within a five-minute walk or bike ride of a trail*
- *Percentage of people that work within a five-minute walk or bike ride of a trail*

POTENTIAL METRICS



TRAIL USE AND EXTENT OF NETWORK

- **Trail Usage** – Number of people who use trails (measure by survey)
- **Frequency of Usage** – Percentage increase in how often people report using trails (measure by survey) or number of visits to a specific facility during a period of time
- **Ratio of Trails to Residents** – Ratio of trail miles per resident in Cobb County
- **Trail Access Points** – Number or percentage increase in number of trailheads
- **Trail Programming** – Number of organized events that take place on the trail system each year

CURRENTLY, 45% OF SURVEY RESPONDENTS REPORT USING TRAILS AT LEAST A FEW TIMES EACH WEEK AND 32% REPORT USING TRAILS A FEW TIMES PER MONTH



TRANSPORTATION ACCESS

- **Proximity to Transit** - Percentage increase in miles of existing, under construction, and programmed trails within one mile of CobbLinc bus stops
- **Service to Lower Income Communities** - Percentage increase in miles of existing, under construction, and programmed trails within or connected to communities with incomes under 80% area median income (AMI)

PUBLIC HEALTH

- **Trail/Park Access** - Percentage of population living within a half-mile of a trail corridor
- **Walking Access** - Percentage of the population within a half-mile walk to a public park or trail (this should follow known walkable routes, not simply a half-mile buffer)
- **Physical Activity** - Percentage of residents or users engaged in various levels of physical activity (could be measured countywide via a survey or at specific facilities)



ECONOMIC DEVELOPMENT

- **Job Access** - Percentage of jobs within a one-mile-radius of existing trails
- **New Investment** - Monetary value of new businesses, development, etc. within a one-mile-radius of existing trails

ENVIRONMENTAL

- **Air Quality** - Tons of carbon sequestered by trees/vegetation planted along trails
- **Water Quality** - Gallons of stormwater filtered by trees and other vegetation planted along trails



RELATIONSHIP TO OTHER PLANNING INITIATIVES

SUMMARY OF KEY PLANS

Planning is done at multiple levels and scales, for a variety of purposes. It is important to understand how a countywide master plan relates to other plans and studies, and where applicable, to strive for consistency and alignment of policies and recommendations. This section briefly describes related plans and studies, and how they affect or are affected by this planning effort.

ATLANTA REGIONAL COMMISSION – WALK.BIKE.THRIVE!

The Atlanta Regional Commission’s (ARC’s) regional biking and walking plan, *Walk.Bike.Thrive!* seeks to “increase active transportation within the Atlanta region and reduce the risks and barriers that currently inhibit walking and bicycling.”⁸ The plan is a framework intended to guide ARC’s decision-making and to describe how local jurisdictions and regional partners can develop high-quality, low-stress walking and biking networks, supporting policies, and programs. As one of ten counties in the Metro Atlanta Region, Cobb County is at the forefront of efforts to increase active transportation and reduce barriers to biking and walking and to develop a high-quality, low-stress network. As such, this plan takes cues and guidance from the regional and local framework set forth in *Walk.Bike.Thrive!* and goals and strategies in this *Plan* are in line with those of *Walk.Bike.Thrive!*, albeit at a different scale.

COBB COUNTY P.A.R.K.S. COMPREHENSIVE MASTER PLAN

The most recent Cobb County Parks Recreation and Cultural Affairs (P.A.R.K.S.) *Comprehensive Master Plan* was updated at the same time as the *Greenways and Trails Master Plan*. It addresses overall department wide planning, budget, and priorities and largely focuses on park properties and facilities themselves. With regard to trails, the P.A.R.K.S. department is responsible for those within P.A.R.K.S. property, while the *Greenways and Trails Master Plan* focuses on trails outside of P.A.R.K.S. property, such as

along creeks, utility corridors, and roadways. The *Greenways and Trails Master Plan* has coordinated closely with P.A.R.K.S. efforts to ensure that recommendations are consistent and to identify opportunities for connectivity between the two systems.

COBB COUNTY 2040 COMPREHENSIVE PLAN UPDATE

Cobb County recently updated its Comprehensive Plan - a long-range, community designed strategy to continue to make the County an attractive place to invest, conduct business, and raise a family. The previous plan covered the period from 2007 to 2030. The updated plan extends the outlook to 2040. The *2040 Comprehensive Plan Update* will help Cobb County manage expected population and employment growth and coordinate major investments in Public Safety, Transportation, Community Facilities, and other important elements. The *Greenways and Trails Master Plan* is in keeping with overall transportation goals from the Comprehensive Plan and may be incorporated into future updates.

2040 GEORGIA DOT STATEWIDE PLAN

The *Greenways and Trails Master Plan* has been developed in accordance with the policies set out in the 2040 Georgia DOT *Statewide Strategic Transportation Plan*. The Statewide Plan supports bicycle and pedestrian accommodations along state highways when applicable. GDOT’s Complete Streets Policy, adopted in 2012 and incorporated into the Statewide Plan, “aims to incorporate pedestrians, bicyclists, and transit users/vehicles into transportation infrastructure projects.”

GEORGIA OFFICIAL BICYCLE MAP

Last updated in 2010, GDOT’s Official Bicycle Map is published as an “aid for transportation, recreational, and touring cycling.” It indicates traffic levels on state roadways, shows State Bicycle Routes, and roads with minimum four-foot shoulders

“Cobb County will implement the Complete Streets concept by considering safe access for all users, to include motorists, bicyclists, pedestrians, and transit users, including individuals with physical disabilities and senior citizens, in the planning, design, construction, and operation of streets within its jurisdiction.”

- Cobb County Complete Streets Policy, 2009

COBB COUNTY COMPLETE STREETS POLICY

In 2009, in recognition of the fact that some roadways where walking and bicycling are common lack the appropriate infrastructure to make these forms of transportation safe and comfortable, the County adopted a **Complete Streets Policy**. The policy is in keeping with recommendations of the Atlanta Regional Commission’s *Atlanta Region Bicycle Transportation and Pedestrian Walkways Plan* (the regional biking and walking plan at the time), which called for incorporating routine accommodation and Complete Streets into planning, design, and construction of all future roadways, among other policies and practices. The purpose of the Cobb County Complete Streets Policy is:

“To assure that new roadway construction and existing roadway improvement projects on County roadways include consideration for adequate infrastructure, where appropriate and feasible, for bicyclists, pedestrians, users of public transit of all ages and abilities, and the physically disabled.”

to help cyclists choose roads that meet their level of comfort and experience. The *Greenways and Trails Master Plan* takes into consideration the location of State Bicycle Routes, four-foot shoulders, and general traffic levels in considering connections between greenways, trails, and on-street biking facilities to create a cohesive biking and walking network.

The *Greenways and Trails Master Plan* takes the Complete Streets Policy to the next level by spelling out specific strategies and actions to design and construct infrastructure that provide safe, comfortable options for all users.



FIG. 1-2 COMPLETE STREETS ARE FOR EVERYONE AND EVERY MODE



A FAMILY LOOKS AT A MAP OF POTENTIAL TRAILS AT TASTE OF EAST COBB

2 PLANNING PROCESS

OVERVIEW OF PLANNING AND COMMUNITY ENGAGEMENT ACTIVITIES

The *Greenways and Trails Master Plan* serves as a framework for planning and development of trail facilities in Cobb County. To develop this framework, the project team conducted research, engaged community members and stakeholders, and performed assessments, analysis, and field work. This chapter summarizes key components of the overall planning process.



PROCESS IN BRIEF

PHASE 1

INVENTORY & DATA COLLECTION

Phase I included data collection and an inventory of the existing trails and greenways network and data about Cobb County and the communities and people within the County.

- Review of previous plans and studies
- Review and confirm inventory of existing greenways and trails and ongoing or upcoming projects
- Collection of Geographic Information Systems (GIS) data
- Stakeholder outreach
- Public engagement events, launch of website and survey

PHASE 2

ASSESSMENT & FINDINGS

Following the initial data collection and confirmation of the status of existing, ongoing, and proposed trail projects, the team began to assess the results of initial community engagement and stakeholder feedback. It was also important to take a closer look at some potential future trail projects to understand opportunities and challenges posed by these proposed trails.

- Field visit to look at existing greenway and trails as well as potential future trail locations
- Establish vision and goals
- Review of national best practices
- Assess indicators, demographic data and countywide patterns
- Develop framework to guide plan recommendations
- Intercept surveys and stakeholder meetings

PHASE 3

RECOMMENDATIONS & IMPLEMENTATION

Recommendations and implementation studies were developed using findings from previous phases of the plan. Work during this phase focused on identifying future trail projects, policy and other recommendations, as well as assembling guidance on trail design, operations and maintenance, and potential sources of funding and project partnerships.

- Develop criteria to use in project prioritization
- Phasing and scoring of potential future projects
- Confirmation of local priorities
- Development of preliminary and final recommendations, including priority projects
- Operations and maintenance guidance
- Design guidance

The following pages detail the components of the planning process and summarize the take-aways from key activities.

FIELD WORK AND
OBSERVATION OF EXISTING CONDITIONS



STAKEHOLDER ENGAGEMENT



CONFIRMATION OF LOCAL PRIORITIES





REVIEW OF PRIOR PLANS AND STUDIES

SUMMARY OF FINDINGS

Although this is the first time the County has undertaken a master plan for its trails and greenways, there have been numerous trail planning initiatives by the Atlanta Regional Commission (ARC), the County, cities, Community Improvement Districts (CIDs), and non-profit and advocacy groups. One of the first tasks of the *Greenways and Trails Master Plan* was a comprehensive review of more than 25 previously completed planning studies related to greenways, trails, and connectivity within and surrounding Cobb County. These plans represent years of planning and public input providing important context to the development of the this plan. In addition to this review was close coordination with the County's P.A.R.K.S. Comprehensive Master Plan, which is currently in process.

The following plan types reviewed cover a broad scope of planning applications that impact or connect to Cobb County:

Regional Connectivity Plans:

These plans, run by regional advocacy groups and regional planning organizations, apply to multiple jurisdictions, counties and the like. Regional Connectivity Plans are all about creating comprehensive regional trail/connectivity systems that prioritize a comprehensive approach across political boundaries.

Comprehensive System Plans:

This plan type consists of planning projects that look at a system-wide approach to bike, pedestrian and trail connectivity throughout an entire county, city or other jurisdiction. These plans typically make broad recommendations focused on prioritization of facility improvements, design standards and other systems-based improvements.

Alignment Specific Plans:

These plans are more detailed in nature and focus on one specific trail/facility. Alignment/Location specific plans often provide detailed spatial recommendations like trail widths, intersection design and other details in addition to actual alignment recommendations and often come with budget estimates and timelines for implementation.

Facility Guideline Plans:

Facility Guideline Plans work to set standards for dimensions, materials, signage and other trail and connectivity features to ensure quality and consistency.

Goals and Policy Recommendations from Related Planning Efforts:

Many plan documents, including LCI plans, City and County Comprehensive Plans etc. are prepared with goals and recommendations related to trail/greenway plans. These recommendations may be broad and simply promote open spaces and connectivity, or may include detailed goals and policy recommendations such as promoting transportation alternatives.

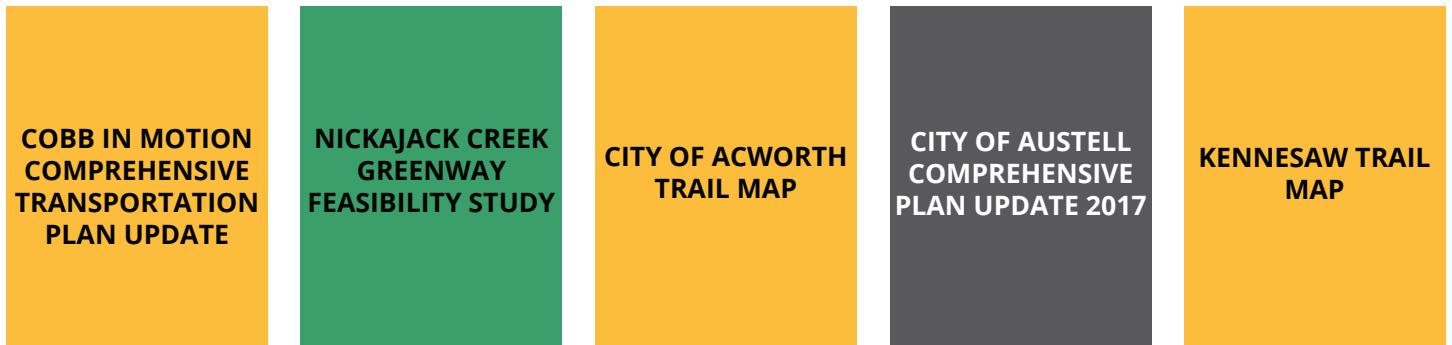
Review of each planning document has revealed a pattern of decision-making based on a strong foundation of community input, upon which this *Plan* will build. From these documents, clear priorities have been identified from residents, stakeholders and experts from across Cobb County and the region, that establish the importance of greenways and trails to their respective communities and the region.

These plans highlight the importance of trails and greenways to overall community strategies for improving health, safety, economic opportunity and environmental conditions, which are imperative issues for the future success of Cobb County.

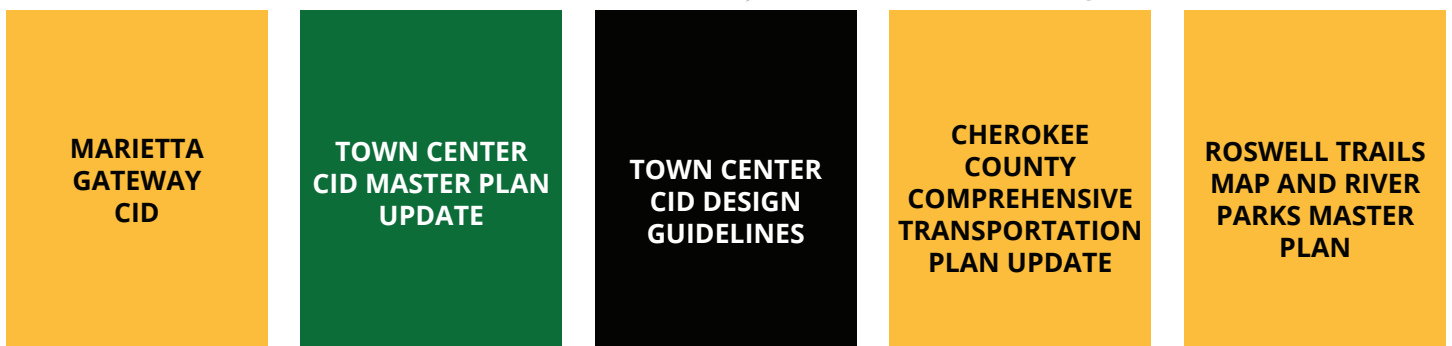
COBB COUNTY PLANS



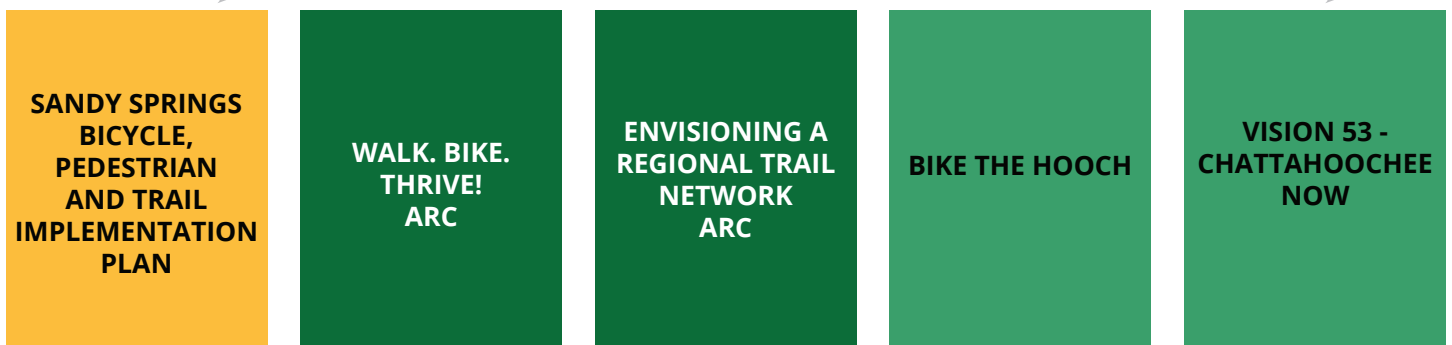
PLANS FROM JURISDICTIONS WITHIN COBB COUNTY



NEIGHBORING JURISDICTION PLANS



REGIONAL PLANS





PLANNING INDICATORS

TRAIL CONNECTIVITY

- *Gaps in local trails*
- *Regional connectivity*

LAND USE

- *High density residential areas*
- *Commercial nodes*
- *Walkable districts*

CULTURAL & ENVIRONMENTAL AMENITIES

- *Cultural points of interest*
- *Open space areas*

KEY INSTITUTIONS

- *Schools*
- *Universities, colleges and trade schools*
- *Civic centers*

EQUITABLE MOBILITY

- *Vehicle ownership*
- *Household income and poverty level*
- *Major workforce centers*
- *Public transit service*

LANDSCAPE SENSITIVITY

- *Steep slopes*
- *Flood-prone areas*
- *Key habitats*
- *Highly impervious areas*

PUBLIC HEALTH

- *Walkable access to open spaces*
- *Proximity to bicycle facilities*

EXISTING CONDITIONS

REVIEW OF DATA AND PLANNING INDICATORS

The project team identified a series of “indicators” to assess existing conditions, and to identify issues and opportunities for the expansion of the trail network. The intent behind the use of indicators was to identify overall patterns across the County, indicating places where biking and walking are more prevalent and areas in need of more or better biking and walking facilities, as well as places where greenways and trails may or may not be appropriate. These indicators were developed through the strategic overlay of multiple data layers in Geographic Information Systems (GIS) format and observations based on the data and maps. Key findings from the indicators include:

- Most existing trails are located west of I-75 in the Cumberland and Town Center areas, as well as Marietta, Powder Springs, and Vinings/Smyrna. Portions of unincorporated South Cobb are served by the Silver Comet Trail. There are few trails in East Cobb, West Cobb, and south of the Silver Comet Trail in South Cobb.
- Jobs are generally concentrated along interstate corridors and in city centers such as Marietta. Areas with the highest employment densities are generally well-served by existing, programmed, and proposed trails. In large part, this is due to the investments in trail planning, as seen in Cumberland, Town Center, and central Marietta. There are also hubs of employment in unincorporated areas such as East Cobb, Vinings, and northeast of Austell that are somewhat served either by existing trails or programmed and proposed trails.
- Not all universities, colleges and trade schools are served by existing trails, but many of these are located along proposed and programmed trail alignments. There is a need to provide better trail connections to post-secondary schools in Marietta and Smyrna near I-75, east of Austell, and in East Cobb.

FIELD VISITS

- Cobb County has over 130 public and private elementary, middle and high schools. Because these are interspersed across the entire county, there are numerous schools that are not well-served by the existing trail network. Even among the 18 schools that have partnered with the Safe Routes to School program, only five are located within roughly a mile of an existing trail outside of a park.
- Within the county, commercial nodes are generally located along interstate, state routes, and major arterials, as well as city centers. Some of these commercial areas are not well-served by trails – these include Veterans Memorial Hwy (US 278/ US 78/SR 8), the Canton Rd corridor and Cobb Pkwy (US 41/SR 3) west of the Town Center area.
- Parks and open spaces in the county are well-served by trails; there are opportunities, however, to improve these connections. While the national parks and US Army Corp of Engineers property (Allatoona Creek Park) have direct trail connections, there is a need to create better trail connections to smaller neighborhood parks, particularly in East Cobb and West Cobb.
- The county's extensive creek system presents a tremendous opportunity to develop scenic trails across the county. Because of much of the county is built-out, one of the primary challenges will be coordinating with private property owners, particularly where creeks adjoin residential properties.

The full series of indicator maps are included in Appendix B.

In addition to the maps analysis, the project team conducted field visits to observe the existing trail network and how it is used, identify deficiencies and gaps, and note opportunities to connect key destinations within Cobb County. Due to the size of the County, the project team visited select locations that represent the variety of trail and community types present throughout the County. These included the Cumberland CID/SunTrust Park area, sidepaths and trails in Smyrna, Kennesaw, and Marietta, the Noonday Creek Trail in north Cobb, and the areas around Kennesaw State University (KSU), KSU Marietta, and Life University. Separately, the team also visited potential trail locations in Austell, along Allatoona Creek, and in East Cobb, between Lower Roswell Rd and the Chattahoochee River.

During the field visits, the team observed a number of opportunities for better trail connectivity, particularly for access to natural and recreational areas, commercial corridors, city centers, and schools. Several challenges were also noted, including limited right-of-way; hazardous road crossings; high traffic volumes; and potentially challenging coordination with private property owners.

Observations made during field visits helped inform recommendations and identification of priorities. The potential alignments investigated during the initial field visit showed different degrees of suitability; they did not, however, become priority projects. Because the potential trails investigated during the field visit warrant further study, they have been recommended as longer-term projects. Subsequent field visits helped to verify information about potential priority projects.



PUBLIC & STAKEHOLDER ENGAGEMENT

SUMMARY OF OUTREACH EVENTS AND ACTIVITIES

Public and stakeholder engagement played an integral role in the development of the Greenways and Trails Master Plan. This section summarizes activities and mechanisms used to get input and inform the planning process and recommendations.

The County's existing trail map in large part reflects the priorities of individual cities and communities within the County. To that end, it was critical to engage with stakeholders to identify priority trail projects and examine how to create better connectivity on a countywide basis. There is strong interest in trails and trail planning among Cobb County residents. Many people are already active on the County's 80+ miles of trails, some on a daily or weekly basis. In developing a *Greenways and Trails Master Plan*, the County worked to ensure that these users, as well as other residents, had a variety of ways to provide feedback.

Early in the planning process, the project team spoke with staff and leaders in each City and CID to identify ongoing planning initiatives, trail priorities, and other projects underway that may have a bearing on trails for the community. These initial discussions helped the project team to understand the

status of ongoing projects and to update the overall countywide trail map. They also helped to identify trail priorities, including both previously proposed alignments and new trail concepts.

The project team also met with representatives of Cobb Travel and Tourism, who spearheaded a "Greenway Group" initiative several years ago, intended to convene various entities – County, Cities, and CIDs – to think about how to create a cohesive network of trails that provides access to important destinations and opportunity zones, as a way to connect more people with attractions and trails. The vision for the group was, "to create a sense of connectivity through developing a network of multi-use trails, greenspace and public art to connect our many neighborhoods directly to each other, from Acworth to the Cumberland Area." Furthermore, the group sought to develop ideas for branding and marketing the County's network of trails and greenways. The ideas set forth and the group convened for this project were considered as part of the *Greenways and Trails Master Plan* and Cobb Travel and Tourism will continue to play a role in promoting trails and greenways and convening stakeholders.

ONLINE ENGAGEMENT

WEBSITE AND SOCIAL MEDIA

The study's website (www.cobbtrailplan.com) provides an overview of the planning process, upcoming events, project deliverables, and features an interactive map where users can draw desired trail alignments and note areas that should be connected by trails.

As of December 31, 2017, **1,446 individual users** had visited the site during **2,034 sessions**. Approximately **71%** of all users represented **new visitors** to the website. The interactive map was the most popular page on the site, with about 46% of site visitors clicking on the map page. Collectively, community members suggested more than **300 miles of additional trails and neighborhood bikeways**.

There were a variety of other online avenues to interact with the project team, including email (info@CobbTrailPlan.com), via Instagram ([@CobbCountyTrailPlan](https://www.instagram.com/CobbCountyTrailPlan)) as shown at left, and through a contact form on the project website.



**1,446
INDIVIDUAL WEBSITE
VISITORS**

Welcome to the **Cobb County Greenways and Trails Master Plan** interactive map. Thank you for visiting! As part of this study, we want to learn more about where residents and visitors would like to see greenways and trails in Cobb County, how you would like to use those trails, and what destinations you think should be connected. Use this interactive map to submit your suggestion – just click the button below.

[Get Started](#)

[Visit Project Page](#)



FIG. 2-1 INTERACTIVE ONLINE MAP TO CAPTURE COMMUNITY SUGGESTIONS



SURVEY RESULTS

INTERCEPT SURVEYS

Over a period of several weeks during the spring of 2017, the project team conducted brief in-person interviews called “intercept surveys” to capture needs of trail users and to understand what types of amenities and improvements they would like to see in the future. The team selected seven different locations on or near prominent trails in Cobb County, including trailheads, parks, parking lots, or entrances to trails, such as the Silver Comet Trail, Noonday Creek Trail and, East Cobb Park. Interviewers approached people arriving, leaving, resting, or actively using trails. By varying the time and day of the surveys, a wide range of trail users provided valuable input to the *Greenways and Trails Master Plan*. In total, **126 people participated in the intercept surveys.**

Key findings include:

- **The majority of people surveyed are using the trails for health and exercise purposes (74%), followed by social and leisure activities (14%) and the scenic qualities (10%) of the location.**
- **A little over half of all people surveyed (52%) use trails once a week or less, but nine percent use trails 20 or more times in a given month.**
- **People choose to use particular trails most often due to proximity and accessibility to their home or work.**
- **The overwhelming priorities are for more trails and for trails that accommodate both bicycles and pedestrians.**

ONLINE SURVEYS

The project also sought to collect data on and gain a better understanding of trail usage patterns and preferences, barriers to usage, and the types of improvements people would like to see in the future through an online survey. To encourage participation in the survey, announcements were sent out through the Cobb County countywide newsletter, via email directly to the project contact database, and by individual groups and organizations within Cobb County, including, but not limited to the City of Smyrna, City of Austell, and the City of Powder Springs. Flyers were also handed out at community events and through local organizations. In total, **more than 260 people took the online survey.**

Key findings include:

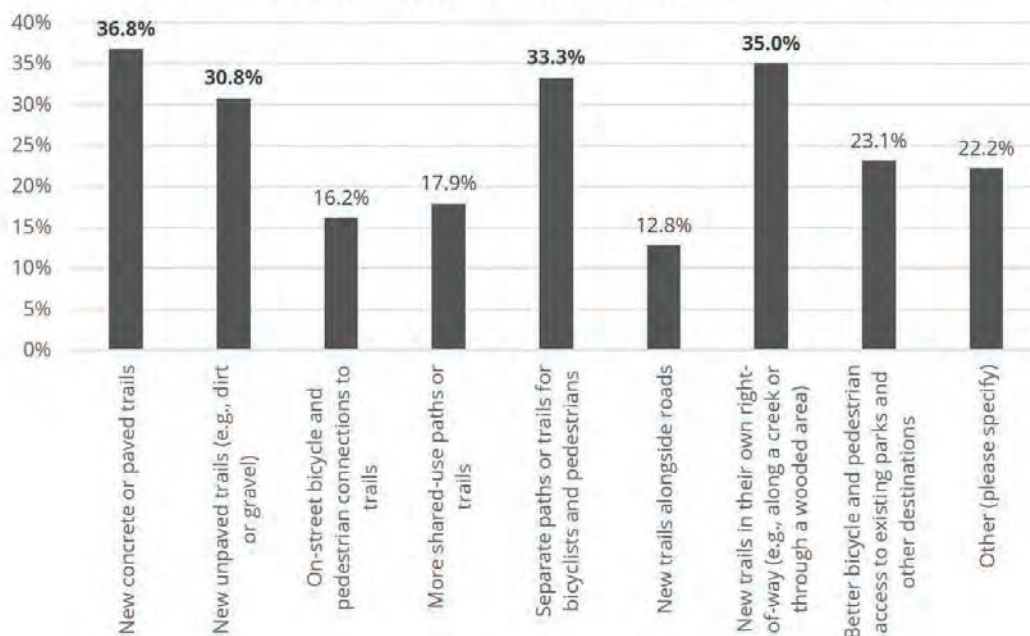
- **The overwhelming majority of respondents typically use trails for recreation/leisure (90%), health/exercise (85%), and to experience nature and wildlife (67%). Only 6% of participants responded that they use trails to travel to work or school.**
- **The majority of respondents (65%) travel to trails by car. Twenty-six percent reach trails by walking, and nine percent travel to trails on bike.**
- **The most popular trails in Cobb County include the Silver Comet Trail, Chattahoochee River NRA Trails, and Kennesaw Mountain National Battlefield Park Trails.**

Summaries of intercept and online survey results are located in Appendix C.





What are your top three (3) priorities for improvements to trails throughout Cobb County? (pick three)



Other Responses

- Slow bikes down
- More restrooms
- More parking at the beginning of trails
- On-street protected bike lanes at bridges
- Wider trails/paths (x3)
- Education/signage for trail users
- Benches
- Shaded trails
- More secluded
- Connected systems
- Art or sights
- Connection from East Cobb to Cumberland
- Trail along Nickajack Creek near Whitefield Academy
- Over or under passes at intersections

FIG. 2-2 SAMPLE OF RESULTS FROM ONLINE COMMUNITY SURVEY



KEY ONLINE SURVEY THEMES

Part of the public engagement and outreach approach for the Cobb County *Greenways and Trails Master Plan* was to collect data broadly through an online survey. This survey asked pointed questions about how trails are used, barriers to trail/greenway use, preferences for trail facilities, and how these facilities and the system could be improved in the future.

Survey Demographics

The survey was taken by people from all over Cobb County as illustrated in Figure 2-3. Respondents were evenly distributed in age from 25 to 54 years old, but included people from 18 to 65+. Roughly one-third (34%) of respondents have children in the household, while 86% do not have anyone over 65 years of age in their home. Men and women participated nearly equally in the survey. More than two-thirds (68%) of respondents report annual household income over \$75,000 while just 4% report income under \$35,000. More than 80% of respondents live in households with two or more cars. Six participants reported living outside of Cobb County.

SURVEY RESPONSES

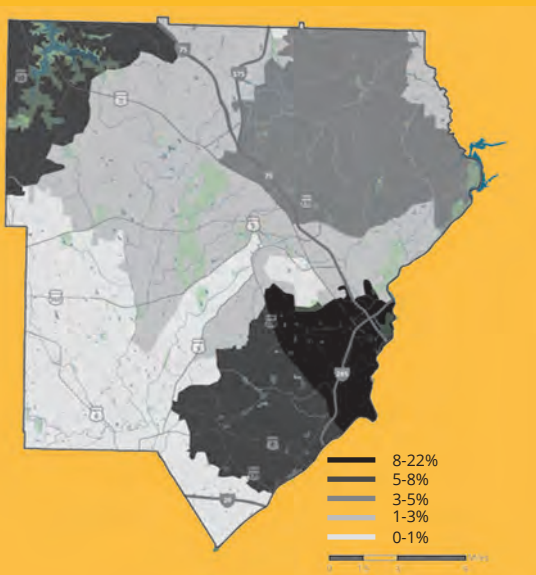


FIG. 2-3 SURVEY RESPONDENTS MAPPED BY ZIP CODE



95% of Respondents Use Trails and Greenways

While the use varies from weekly to annually, Cobb County residents use and value these facilities with 75% of respondents using the facilities weekly or monthly.



< 1% of Respondents Use Trails to Commute to School

More can be done to encourage safe routes to school, including providing more access to schools through greenways and trails.



65% of Respondents Arrive to Trails by Car

A constant talking point among survey takers was the desire to not have to “drive to ride.” Most respondents agreed that better connectivity to trails is a priority and will allow trails to rely less on parking.



95% of Respondents Primarily Travel by Car Day-to-Day

Trails and greenways represent an important transportation alternative that can positively impact congestion, health and air-quality.



71% Cited Access and Connectivity as a Barrier

A lack of connectivity to neighborhoods, commercial centers and other key destinations could be reducing the potential benefits of these systems.



72% of Respondents Support More Trails and Greenways

There is strong support for new greenways and trails across a broad spectrum of the population, indicating that these facilities should be a priority for Cobb County.



55% of Respondents Want More Shade/Trees Along Trails

Creating places/environments that are comfortable given the local climate should be a priority. Trees can also provide many other environmental and economic benefits.



46% of Respondents Want More Seating Along Trails

Places to stop rest or take in a view are important for creating safe and welcoming environments for trail users. Amount of seating is a key indicator of successful public spaces which includes linear public space.



70% of Respondents Want Restrooms at or Along Trails

While restrooms are not appropriate for all trail segments, they can be vital for attracting broad ranges of users especially along stretches that are popular for long recreational walks/bike rides.



COMMUNITY EVENTS

TRAILS & FOOD FESTIVALS - A NATURAL MATCH

In an effort to reach a broad spectrum of current and potential trail users, the project team participated in four community food-related festivals at various locations throughout the County. Food festivals, as it turns out, are great venues for people who like to hike and bike - during these **four events**, the project team talked with **more than 440 people** representing a range of backgrounds and communities.

Activities were designed to inform people about the plan; gather input about needs and opportunities for trails; and drive people to the project website to submit comments, take the online survey, and make suggestions using the interactive map. At each event, the project team had a table with multiple activities to engage visitors:

- Two large maps, one at the county level and the other at the community scale, showed existing trails as well as planned and programmed trail projects.

Participants marked which planned or proposed trails they supported and drew new suggested trail alignments.

- On a large poster, participants used stickers to indicate how they like to use trails and their primary reason for using trails. Overall, 47% of participants walk, hike, push strollers, or walk dogs on trails. The majority (68%) use trails to get healthy or train for running, walking, or biking events.
- Tablets were also available for taking the online survey and using the interactive map for any visitors who wished to share their ideas right away.
- Copies of a project overview/fact sheet and project business cards were available for participants to take home and distribute to friends, family, or neighbors to encourage visiting the website and taking the survey.



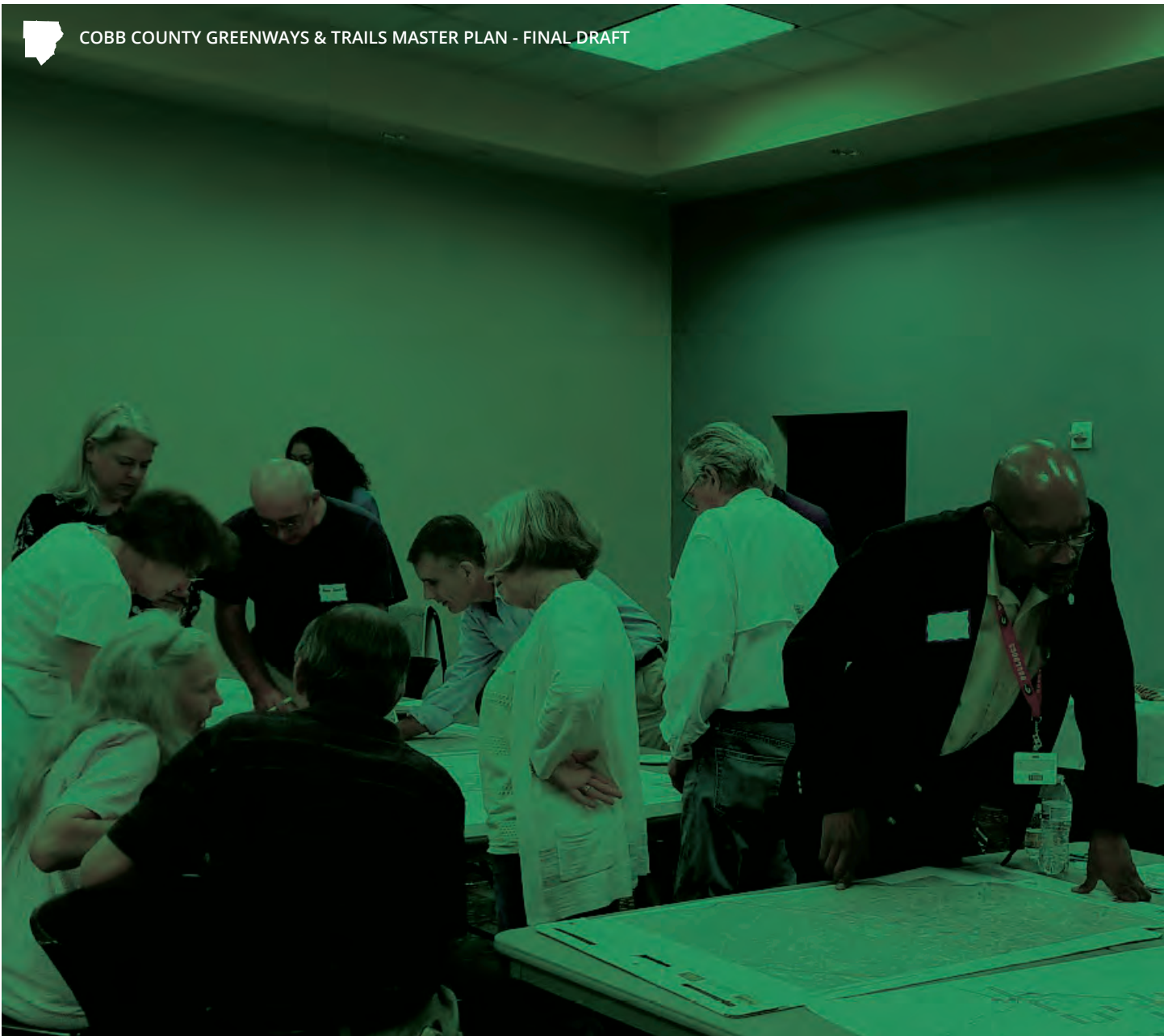
RESIDENTS MARK WHERE THEY WOULD LIKE TO SEE NEW TRAILS DURING THE SMOKE ON THE LAKE BBQ FESTIVAL IN ACWORTH

COMMUNITY EVENTS



APRIL '17 TASTE OF MARIETTA
MAY '17 TASTE OF EAST COBB
MAY '17 SMOKE ON THE LAKE FESTIVAL
MAY '17 MABLETON DAY

PROJECT TEAM MEMBERS TALK WITH ATTENDEES AT TASTE OF EAST COBB IN MAY 2017



***JULY '17 EAST COBB LIBRARY
JULY '17 COBB COUNTY DOT
JULY '17 COVENANT PRESBYTERIAN CHURCH
AUGUST '17 CITY OF AUSTELL THREADMILL COMPLEX***

LIVELY DISCUSSION ABOUT POTENTIAL TRAIL LOCATIONS AT EAST COBB LIBRARY

CITIZEN STAKEHOLDER MEETINGS

COMMUNITY MAPPING AND GROUP DISCUSSION

The Cobb County *Greenways and Trails Master Plan* project team facilitated four meetings for interested citizens and stakeholders throughout July and August 2017. Several locations throughout the county were selected to ensure that a variety of people could participate. In total, **57 people attended the four meetings.**

The meetings consisted of a brief presentation by the project team followed by break-out sessions during which attendees drew on maps of existing, planned, programmed, and proposed trails, and offered suggestions and comments. Specifically, the project team invited suggestions for trail access points, activity centers that should be connected to trails, places where people would like to see new trails, and general comments. Following the break-out sessions, individuals and small groups reported back to the entire group the

key points from their discussion. Attendees also had the opportunity to submit written comments on a questionnaire.

In large part, these meetings revealed strong interest in new greenways and trails, particularly for recreational and socializing purposes. Access to parks, schools, and areas currently lacking trails were of particular interest to attendees. Better neighborhood connectivity was also an important topic. In some cases, neighborhood connections may be better facilitated by on-street bikeways rather than greenways or trails, and these suggestions can be revisited as part of future plans and studies. Suggested trail locations were mapped along with those submitted online and during community events.

A full summary of key discussion points and suggestions from the citizen stakeholder meetings are presented in Appendix C.





STAKEHOLDER WORK SESSION

ENGAGING CITIES, CIDS AND OTHER GROUPS

On July 18, 2017, the project team conducted a stakeholder work session for representatives of the six Cities, CIDs, and other key organizations within Cobb County to provide an overview of the study and solicit input about expanding Cobb County's trail network. Attendees included representatives of the following communities and organizations:

- City of Acworth
- City of Austell
- City of Marietta
- City of Powder Springs
- City of Smyrna
- Cobb County PARKS Department
- Cobb Travel and Tourism
- Connect the Comet / River Line Historic Area, Inc.
- Cumberland CID
- Kennesaw State University
- Marietta Visitors Bureau
- National Park Service
- The Trust for Public Land
- Town Center CID

Attendees provided feedback on important considerations for trail planning, amenities that should be included on trails, and programming and activities that would draw the community to trails, among other topics.

The team gave an overview presentation that briefly discussed the purpose of the project, summarized key findings from the process to-date, provided an update on ongoing trail projects, and highlighted best practices with regard to branding, signage, programming and other ways to leverage a trail system.

Key discussion points among the group included the importance of branding and wayfinding for trails; ideas for programming, such as workplace walking or biking challenges; activities at trailheads and along trails; preferred trail types; the desire for more trail oriented development; and the need for continued coordination between the County, Cities, and adjacent communities.

A full summary of the stakeholder work session is presented in Appendix C.

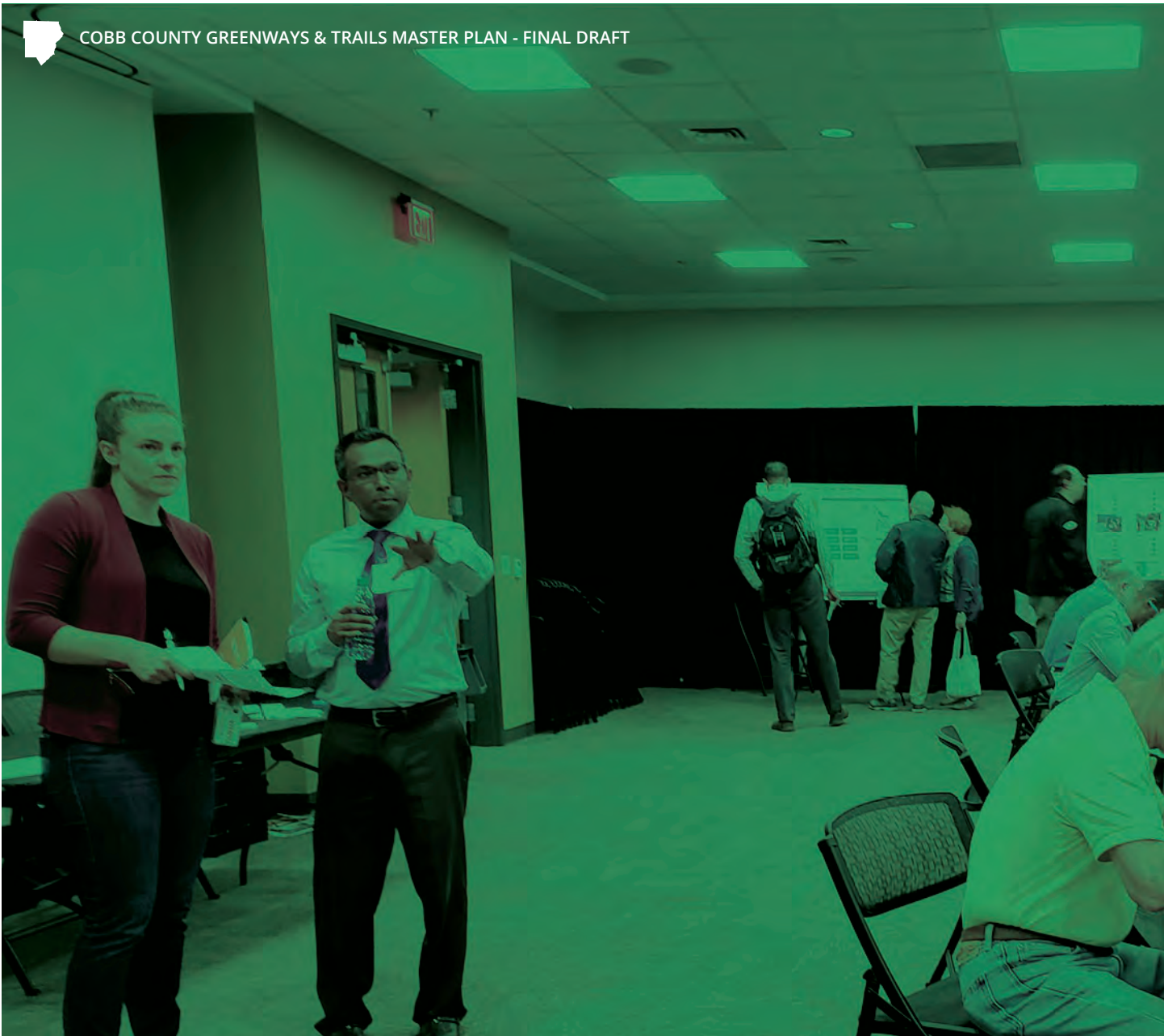


PRESENTATIONS AND GROUP DISCUSSION WERE PART OF THE WORK SESSION WITH THE CITIES AND CIDS.



***THERE IS A STRONG DESIRE FOR
PROGRAMMING AND ACTIVITIES
AMONG CORE STAKEHOLDERS***

GROUP DISCUSSION DURING THE STAKEHOLDER WORK SESSION



AMONG PRIORITY PROJECTS, ATTENDEES EXPRESSED STRONGEST INTEREST IN THE SILVER COMET CONNECTOR, ALLATOONA CREEK GREENWAY, AND THE NOONDAY CREEK TRAIL

A PROJECT TEAM MEMBER EXPLAINS HOW THE OPEN HOUSE IS ORGANIZED TO AN ATTENDEE

PUBLIC OPEN HOUSE

PRESENTING DRAFT RECOMMENDATIONS

On April 10, 2018, Cobb County Department of Transportation (DOT) hosted a Public Open House at the Cobb County Civic Center. Over three dozen individuals attended, representing a range of neighborhoods and communities across the County. The purpose of the Open House was to provide background on the *Master Plan* and solicit feedback on the draft recommendations. In a series of displays, attendees had the opportunity to: learn about the planning process, community engagement activities, different types of trail facilities, and potential strategies to implement trails; review recommendations for priority projects and other proposed trails; and provide feedback on which trail projects were most important to them.

Several mechanisms were available for attendees to provide feedback. Members of the project team, including the Cobb County DOT Planning Division Manager, were on-hand to discuss the *Plan*, answer questions, and collect feedback. The proposed greenways and trails network was shown at a countywide scale as well as by Commission District, allowing individuals to take a closer look at the proposed trails within the context of their communities. Each attendee was given three sticker dots to use to indicate which of the proposed trails they would most like to see implemented in the future. Sticky notes were provided to further explain their preferences as needed. Comment cards were also available to provide additional feedback.

The overall response to the recommendations was positive; community members are eager to see more greenways and trails built throughout the County. Among the priority projects, the greatest interest was expressed for the **Silver Comet Connector**, **Allatoona Creek Greenway**, and **Noonday Creek Trail**.

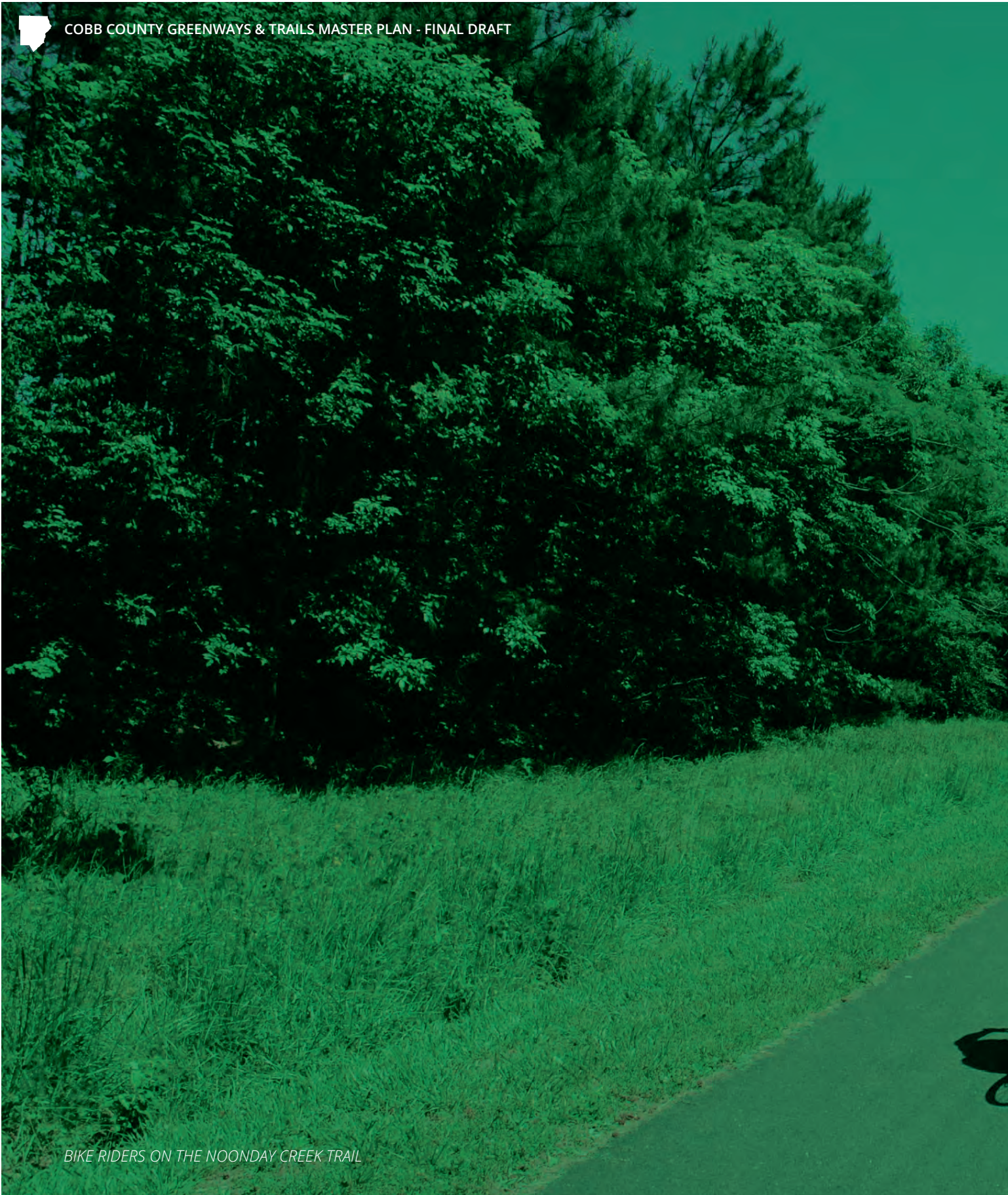
Attendees expressed a range of preferences for other proposed future greenway and trail projects; in each District, those with the most “votes” included:

- **Allatoona Creek Greenway** (D1-Northwest Cobb)
- **Akers Drive Trail and Hyde Farm-Johnson Ferry Trail** (D2-Northeast Cobb)
- **Noonday Creek Trail and Polk Street Trail** (D3-North-Central Cobb)
- **Nickajack Creek Greenway and Austell-Powder Springs Road Trail** (D4-South Cobb)

Among the comments received, several overarching desires were expressed:

- Greater trail connectivity to the Chattahoochee River and units of the CRNRA, and with Fulton County
- More trail connections between schools and parks
- More trails between Austell and Powder Springs
- Online route- or trip-planning maps and services for wayfinding on greenways and trails, and maps showing the location of bus stops in proximity to trails
- Be explicit that greenways and trails are multi-use facilities, appropriate for both cyclists and pedestrians
- Enhance the aesthetics and user experience of trails, particularly those that parallel major roads, with improvements such as vegetation, seating, signs, and public art
- More complementary on-street bike facilities as designated bikeways to align with and connect to trails

A full summary of the public open house activities and feedback are located in Appendix C.



BIKE RIDERS ON THE NOONDAY CREEK TRAIL

3

COMMUNITY CONTEXT

OVERVIEW OF EXISTING CONDITIONS

This chapter contains an overview of existing data and conditions throughout Cobb County. Data and information gathered as part of the data collection and analysis phase of the project provides context in which to understand and assess the current and future trail network. Findings from the community context assessment help inform identification of priority projects, development of recommendations, and implementation of future projects. For additional details, refer to the Community Context Technical Memorandum in Appendix B.



COBB COUNTY OVERVIEW

SETTING & DEMOGRAPHICS

Cobb County, Georgia is part of the ten-county Atlanta Region and is situated northwest of Atlanta, along the Chattahoochee River. It comprises 345 square miles and its terrain is characterized by gentle slopes, ridges, and valleys. Two lakes, Allatoona and Acworth, along with several smaller ponds and man-made lakes, numerous creeks and streams, and dozens of parks offer recreational opportunities across the County. Several small mountains, including Blackjack, Kennesaw, Little Kennesaw, Lost, Pine, and Sweat, provide scenic views as well as recreational opportunities. The presence of National Park Service properties – Kennesaw Mountain National Battlefield Park and Chattahoochee River National Recreation Area – are tremendous assets and well-utilized by residents and visitors alike. These natural and scenic qualities coupled with the County’s location in Metro Atlanta make it a desirable place to live, work, shop, visit, and play.

Cobb County is currently home to 748,150 persons, according to 2016 estimates by the US Census Bureau. The county has grown by approximately 23% from the year 2000 (607,751 persons) and almost nine percent from 2010 (688,078 persons), making it one of the fastest growing counties

in metro Atlanta and the state of Georgia. Population projections from the Atlanta Regional Commission (ARC) indicate that the County will continue to grow at a rapid pace, reaching 885,062 persons by 2040, an increase of roughly 21%.

In Cobb County, population is most densely concentrated along interstates (I-75 and I-285) and in and near city centers including Marietta, Smyrna, and Kennesaw. Portions of unincorporated Cobb County, including Vinings, East Cobb, and South Cobb near I-20, have areas of higher density. Generally, unincorporated West Cobb is less densely populated.

While the existing trail network serves a substantial portion of these population centers, Figure 3-1 shows that there are some population centers without good access to trails, particularly in the northeast and west parts of the County. This includes portions of Kennesaw and Marietta, and unincorporated East and South Cobb. Based on an analysis conducted in December 2017 (using data from the 2011-2015 American Community Survey), approximately 277,340 people, or roughly 39% of the Cobb County population, lives within approximately one mile of an existing, programmed, or under construction trail.

Cobb County by the Numbers

Mobility

1.2%

Commuters who walk to work

0.1%

Commuters who bike to work

1.3%

Commuters who commute by transit

2.2%

Workers 16 and over who have no vehicle available

Proximity

77%

Jobs within 1 mile of an existing, under construction, or programmed trail

39%

People who live within 1 mile of an existing, under construction, or programmed trail

85%

Parks accessible within 1 mile of an existing, under construction, or programmed trail

53%

Households with no vehicle available that are within 1 mile of an existing, under construction, or programmed trail

Includes Cobb County multi-use trails and trails in National Parks. Source: Atlanta Regional Commission, U.S. Census Bureau's American Community Survey 2011-2015 5-year Estimates, 2015 Employment data, and project team calculations, as of December 2017.



ACCESS TO JOBS

ARC estimates that in 2015, there were roughly 399,486 jobs in Cobb County. This represents a 10% increase over 2010 jobs. The agency projects that Cobb will continue to expand the number of jobs available and will be home to 535,185 jobs by 2040, a roughly 34% increase over 2015. According to an analysis of 2015 Census-tract-level data, there were 313,362 jobs in Cobb County and approximately 77% of them are within one mile of an existing, under construction, or programmed trail. For the most part, the areas with the highest concentration of jobs are well-served by the existing trail network, as shown in Figure 3-2.

High-job areas such as Cumberland and Town Center have good access to trails. Areas such as central Marietta and the area around Dobbins Air Reserve Base, Kennesaw State University - Marietta, and Life University are somewhat less well-served but do have access to trails and greenways, with more on the way. Areas such as portions of Acworth, Kennesaw, northeast Marietta, and the southern part of Smyrna have moderate concentrations of jobs but are less well-served by trails. This means that many workers throughout the County have access to trails, although their location and connectivity, or lack thereof, may not be conducive to commuting via trails and greenways.

ACTIVITY CENTERS

Understanding points of interest and the location of activity centers relative to residential areas, commercial areas, and other potential destinations is essential in planning for trails and greenways. There are dozens of activity centers such as commercial districts and corridors, significant parks and recreational facilities, mixed-use districts, and performance venues and attractions throughout the County, including but not limited to:

- Chattahoochee River National Recreation Area
- Cobb Energy Performing Arts Centre
- Cobb Galleria Centre
- Cumberland Mall
- Kennesaw Mountain National Battlefield Park
- Kennesaw State University
- Six Flags Over Georgia
- SunTrust Park and the Battery
- Town Center at Cobb

These places tend to be clustered primarily, but not exclusively, along major roadways. Often, activity centers are good representatives of the types of places where people want to get to and from, serving as potential origin and destination points that should be connected by high quality walking and biking facilities. While people mainly travel to such locations by car, there is growing interest in being able to bike and walk, particularly for shorter distance trips.

Key activity centers, shown in Figure 3-3, were identified using data from ARC on Livable Centers Initiatives – studies that focus on creating vibrant walkable communities – along with municipal downtowns, significant regional centers, commercial and mixed-use land uses, and key recreational facilities or sites. Activity centers are present in nearly all parts of the County and are somewhat well-served by the existing trail network; however, there is room to better connect these centers via the greenway and trail network in the future.

These areas provide ample opportunity to draw people into the biking and walking network through the use of good design and creating seamless connections between parking lots, buildings, and sidewalks.

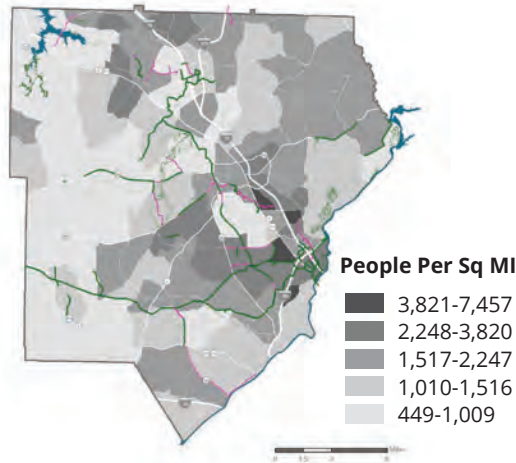


FIG. 3-1 POPULATION DENSITY

Approximately 277,340 people, or roughly 39% of the Cobb County population, lives within one mile of an existing, programmed, or under construction trail.

- Existing Trail
- Under Construction Trail
- Programmed Trail

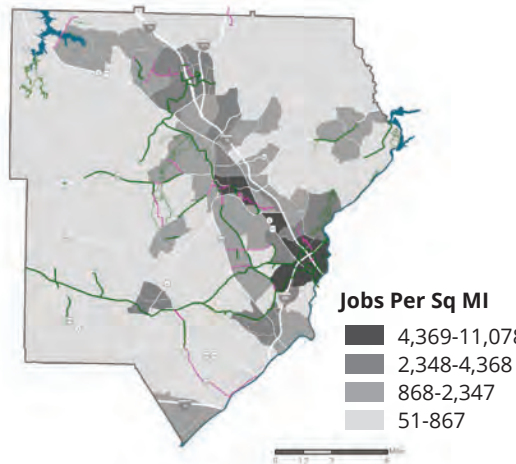


FIG. 3-2 JOB DENSITY

Approximately 241,260 jobs, or roughly 77% of jobs in Cobb County are within one mile of an existing, under construction, or programmed trail.

- Existing Trail
- Under Construction Trail
- Programmed Trail

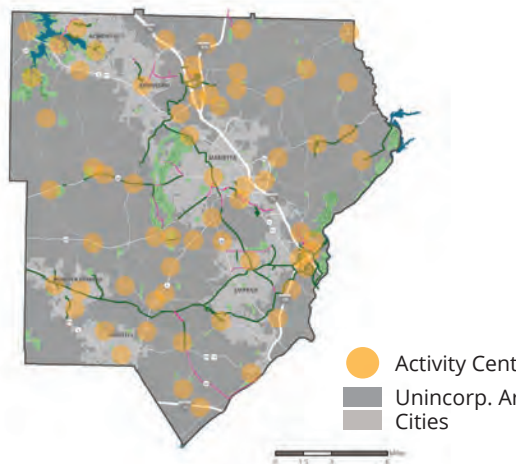


FIG. 3-3 ACTIVITY CENTERS

Activity centers are present in nearly all parts of the County and are somewhat well-served by the existing trail network; however, there is room to better connect these centers via the greenway and trail network in the future.

- Activity Center
- Unincorp. Area
- Cities
- Existing Trail
- Under Construction Trail
- Programmed Trail



EQUITABLE TARGET AREAS

ARC's Equitable Target Area (ETA) Index is a tool to help measure impacts of programs and investments on historically disadvantaged and underserved communities, focused on areas characterized by high levels of people and households with income below the poverty level and high proportions of non-white people. The index can inform project prioritization, resource allocation, and decision-making, helping guide decisions about where investments might be warranted and where there may be opportunities to create more equitable communities.

While median household income in Cobb County (\$65,873 according to the 2015 American Community Survey) is among the highest in the state, there are disparities within the County: approximately 12% of all people and 17% of all children under age 18 live below the poverty level.

ETA scores are derived from regional data on poverty and distribution of non-white population taken from the U.S. Census Bureau's 2008-2012 American Community Survey and are shown in Figure 3-4. The ETA is a composite index of Census-tract-level data and is grouped into four categories:

- Very High (1)
- High (2)
- Medium (3)
- Non-ETA (4)

In Cobb County, areas classified as high or very high ETAs – those with high concentrations of non-white people and people earning below poverty levels – are generally not well-served by trails. In particular, the ETA areas just north and south of I-20 have almost no access to existing trails; however, Cobb County recently secured funding to design an construct sidewalk and a multi-use trail along Mableton Pkwy (SR 139) between the Chattahoochee River and Factory Shoals Rd, skirting the eastern edge of this moderate ETA area. Similarly, the ETAs just east of the I-75 corridor near Delk Rd and S. Cobb Dr are also not well-served by trails at this time. It should be noted that this area contains Dobbins Air Reserve Base and is therefore not a high-population area, although Kennesaw State University's Marietta Campus is just to the north, also in an ETA. Additional investment in active transportation in these areas would help improve conditions for these historically disadvantaged populations.

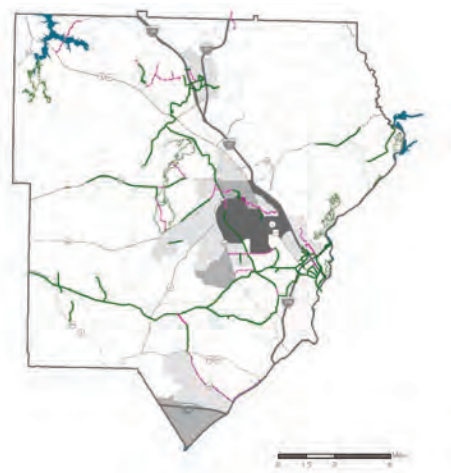


FIG. 3-4 EQUITABLE TARGET AREAS

In Cobb County, areas classified as high or very high ETAs – those with high concentrations of non-white people and those earning below poverty levels – are generally not well-served by trails. In particular, the high and moderate ETA areas just north and south of I-20 have no access to trails.



ACCESS TO TRANSPORTATION

Cobb County is served by an extensive roadway network comprised of two major interstates (I-75, I-575, and I-285), numerous US and state routes, and thousands of miles of collector and local roadways. While a vast majority of households have access to personal vehicles, approximately 10,000 households (3.5% of all households) do not.

Cobb County is served by three public transportation services: CobbLinc, the Metropolitan Atlanta Rapid Transit Authority (MARTA), and the Georgia Regional Transportation Authority (GRTA) Xpress service. CobbLinc is county-operated and provides local and express transit service via 13 local and express routes. Three flex routes provide on-demand service from three collection points (two in Powder Springs and one in Austell). MARTA provides local bus service between the Cumberland Transfer Center and Midtown MARTA Station, and between Six Flags over Georgia and the Hamilton E. Holmes MARTA Station. GRTA Xpress provides commuter bus service three routes that operate during the peak periods. There are three routes between Acworth and Downtown Atlanta, Town Center Perimeter Center, and Woodstock/Town Center and Midtown Atlanta.

Despite the provision of multiple transit routes, access is limited primarily to the I-75 and Cobb Pkwy corridors, including Cumberland, Kennesaw, and portions of Marietta, Smyrna, Austell, and south Cobb. There is no transit service in East Cobb or north of Powders Springs in West Cobb. There is also a gap in transit service in Vinings adjacent to the Fulton County line.

The existing trail network is relatively well-aligned with CobbLinc, providing opportunities for people to walk or bike to or from bus stops as part of their daily trips. As of December 2017, there are roughly 73 miles of existing, programmed, or under construction trails that can be accessed within a half-mile of a CobbLinc bus stop and roughly 159 miles of existing, programmed, or under construction trails that can be reached within three miles of a CobbLinc bus stop. Of the roughly 40 trailheads currently in Cobb County, more than half (21 trailheads) are within a half-mile of a CobbLinc Stop, providing access to 37 existing trails.

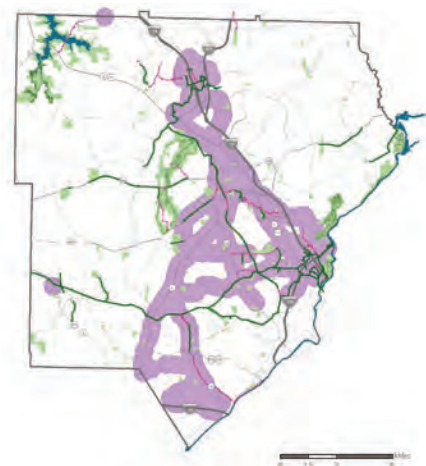
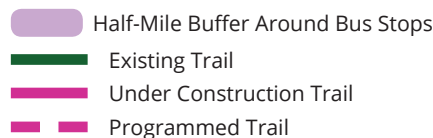


FIG. 3-5 ACCESS TO TRANSPORTATION

Within half-mile of CobbLinc service*

- **33,700 jobs**
- **9,300 workers**
- **17,600 residents**
- **7,400 households**
- **73 miles of existing, under construction & programmed trails**



**Source: Atlanta Regional Commission, <http://neighborhoodnexus.org/maps-and-data/profiles/county-profiles/cobb-county-profile/#transportation>, and project team calculations*



ACTIVE COMMUTING

BIKING AND WALKING TO WORK

Cobb County, like most of the Atlanta region, is highly auto-dependent. The majority of commuters (age 16 and older) travel to work by driving alone or riding in a carpool. Nearly 80% of workers drive alone to work and the percentage of workers who commute on foot or bike is low. Cyclists comprise just a portion of the 1.8% of Cobb County workers who travel by means other than driving, carpooling, walking, or using public transportation. Figure 3-7 shows the percent of workers who commute on bike across the County. Within Cobb County, the highest incidences of workers commuting by bike are in Acworth (2.2%) and in southwest Austell (3%). There are also concentrations of cycling commuters in the Cumberland area and Marietta (both 1.6%).¹ There are also some bike commuters in northeast Cobb, around Canton Rd, Blackwell Rd, and Piedmont Rd. As shown in Figure 3-6, few workers throughout the County walk to work. In fact,

just over 1% of workers in Cobb County report walking to work, and this remains largely unchanged over the past five years. The greatest incidence of people walking to work is in Marietta, where it is estimated that 10.6% of workers commute by foot. Higher incidences of people commuting by foot are also found in north and south of Marietta and in Kennesaw west of I-75.

The more Cobb County and other communities throughout the region can provide options for people making short trips, the better for all. Nearly everyone is a pedestrian at some point, whether walking for exercise, going to meet friends, getting off of a bike, or getting out of a car. Communities and residents benefit from increased choice, especially among modes that improve health while reducing the burden on area roadways and the environment.

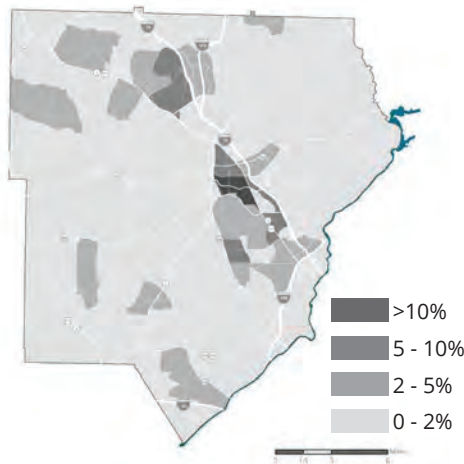


FIG. 3-6 WALK TO WORK

Just over 1% of workers in Cobb County report walking to work, and this remains largely unchanged over the past five years. The greatest incidence of people walking to work is in Marietta, where it is estimated that 10.6% of workers commute by foot.

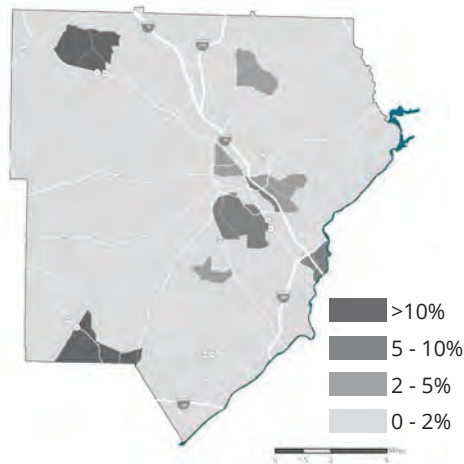


FIG. 3-7 BIKE TO WORK

Fewer than 2% of workers commute via bicycle in Cobb County. The highest concentrations of commute cyclists live in Acworth, southwest Cobb, Marietta, and parts of Cumberland.

MODES OF COMMUTING



Commuter cyclists in Louisville, KY



Safe pedestrian facilities make a big difference in encouraging people to walk.



Trails with amenities provide resting places for longer trips or shade on a hot day



Trails near homes and destinations like grocery stores make walking and biking more viable options



WALKABILITY AND BIKEABILITY

COUNTYWIDE PATTERNS

Walking and biking, whether for transportation or recreational purposes, should be safe, enjoyable, and convenient. Although data is somewhat limited, national, regional, and local sources indicate that biking and walking are on the rise across the country and throughout the region. Despite the increase in biking and walking, these modes still make up a relatively small proportion of total trips – just 5% in the Atlanta Metro region, and fewer in Cobb County. These trips are not evenly distributed, given land use and development patterns, and it should be noted that some areas are more conducive to walking than others. It should also be noted that while walking and biking comprise a small proportion of total trips, they account for a higher proportion of injury and fatality roadway crashes.

As more people are biking and walking, the State of Georgia and other places are unfortunately experiencing higher numbers of serious crashes involving people on foot and on bike. Good design and engineering of greenway and trail projects can go a long way toward creating safer environments for pedestrians and cyclists.

In *Walk. Bike. Thrive!*, ARC assessed walking and propensity for the region, based on population, employment and retail density, and proximity to trails, parks, schools, and transit service. Within Cobb County, the highest walking and biking propensity is centered around the Cumberland area, particularly east of I-75 and north of I-285. There are also pockets of high propensity in Marietta, the Town Center area, and Smyrna/Vinings. West Cobb has several pockets of low walking and biking propensity.

Walk Score, produced by an independent organization of the same name, is a tool that scores the pedestrian-friendliness of areas based on measures such as population density, block length, and intersection data, and proximity to nearby amenities. Among downtown areas in Cobb County, Marietta received the highest score (81), indicating it is very walkable. Downtown Kennesaw and Smyrna each scored 61, or somewhat walkable, and the remaining downtown areas are classified as car-dependent. The County's major university, Kennesaw State University, was scored as car-dependent on both of its two campuses in Kennesaw and Marietta. The County's two primary malls, Town Center at Cobb and Cumberland Mall, also fall within the car-dependent category, though Cumberland Mall area is on the cusp of the "somewhat walkable" classification. Most notably, the lowest scores are seen in West Cobb, where almost all errands require a car.

ARC identified high-risk areas for biking and walking crashes by Census tract in *Walk. Bike. Thrive!* There are several tracts in Cobb County with moderate-to-high risk of bicycle crashes, around Windy Hill Rd and Austell Rd, near the south end of Barrett Pkwy, and in the Mableton area. Moderate and high-risk walking areas are more widespread and encompass portions of Marietta south of SR 120/Roswell Rd, parts of Mableton, and the southwest and northwest corners of the County. While safety is important in all areas of the County, these areas in particular should be targeted for safety improvements, as part of future greenway and trail projects.

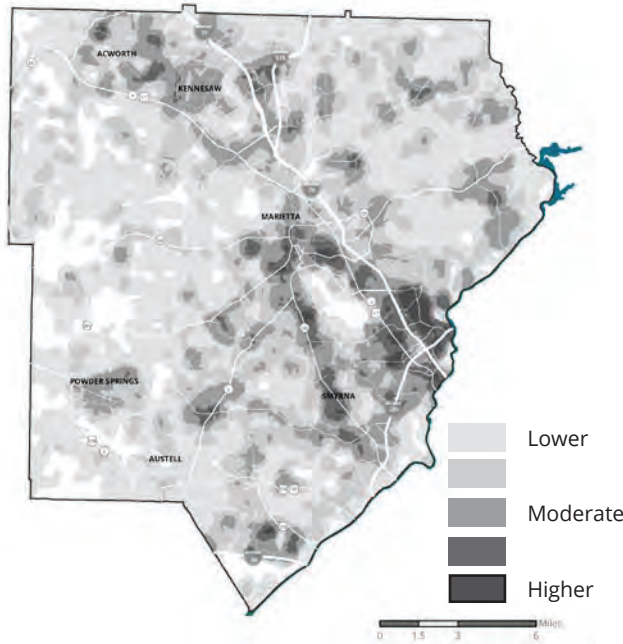


FIG. 3-8 WALK & BIKE PROPENSITY
 SOURCE: ATLANTA REGIONAL COMMISSION, WALK.BIKE.
 THRIVE! (2016), PART 1

Within Cobb County, the highest walking and biking propensity is centered around the Cumberland area, particularly north of I-75 and east of I-285.

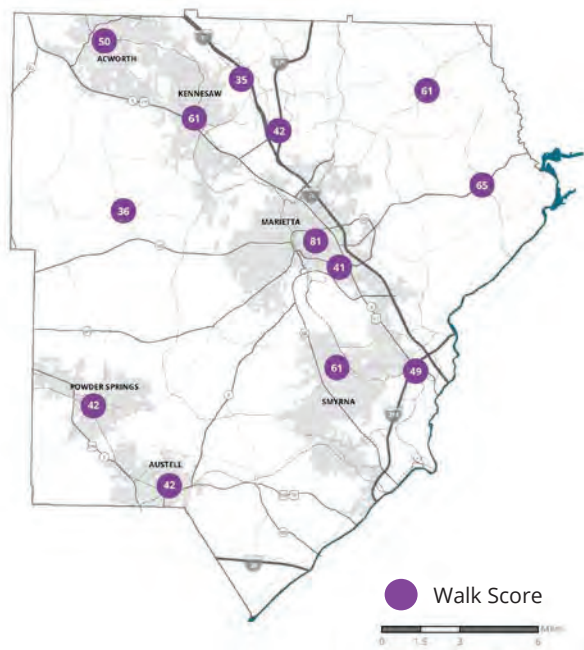


FIG. 3-9 WALK SCORE

Among downtown areas in Cobb County, Marietta received the highest Walk Score (81), indicating it is very walkable. Downtown Kennesaw, commercial areas in East Cobb, and Smyrna all scored in the low 60s, or somewhat walkable, and the remaining downtown areas are classified as car-dependent.

TABLE 3-1 WALK SCORE CATEGORIES

Walk Score	Description
90-100	Walkers Paradise <i>Daily errands do not require a car</i>
70-89	Very Walkable <i>Most errands can be done without a car</i>
50-69	Somewhat Walkable <i>Some errands can be done without a car</i>
25-49	Somewhat Car-Dependent <i>Most errands require a car</i>
0-24	Car-Dependent <i>Almost all errands require a car</i>



SENSITIVE AREAS

NATURAL FEATURES AND IMPERVIOUS SURFACES

Cobb County is approximately 345 square miles in area, including roughly four square miles of water and 3,200 miles of stream channels. It is bisected by the Kennesaw Mountain ridgeline, which runs roughly northeast to southwest. Water north of the ridgeline flows into the streams of the Etowah River Watershed, while water south of the ridgeline flows into streams of the Chattahoochee River Watershed.

Due to the presence of the Chattahoochee River and its many tributaries, Cobb County has extensive wetlands. These are primarily concentrated along the Chattahoochee River, Ward Creek, and Sweetwater Creek. Cobb County does not allow land disturbing activity within delineated wetlands except when in compliance with permits issued by the U.S. Army Corps of Engineers; recreational uses are, however, acceptable uses of wetlands.

Due to the extensive coverage of creeks and streams, floodplains are present throughout the County. Areas near the Chattahoochee River and Sweetwater Creek are particularly susceptible to flooding. The County closely regulates development in floodplains and adjacent areas and requires permits for any improvement or development, including grading and filling within an area of Special Flood Hazard.

Cobb County's Stormwater Management program has been actively acquiring

floodplain land along major waterways to help preserve water quality and wildlife habitat, and to provide residents and visitors with opportunities for recreation in areas protected from commercial development. The County has set minimum 50-foot buffers for all streams; buffer requirements vary depending on the contributing drainage area. Floodplain areas present key opportunities for recreationally-oriented trails across the County.

Cobb County has approximately 3,400 miles of roadway, excluding private roads and interstate highways, 2,400 of which are maintained by the County. In addition, there are more than 60.96 square miles of impervious surfaces, such as driveways, structures, sidewalk, and parking lots throughout the County. Large portions of the county are relatively developed and built out. Development patterns tend to follow major roadway corridors, as shown in the map of highly impervious areas in Figure 3-10. These are areas where trails may be more difficult to site due to the close proximity of driveways, intersections, and other features that may not be conducive to trails and greenways. However, clusters of impervious surface and development do not preclude the building of trails, particularly sidepaths. It just makes it more important that the user experience is considered during the design process to ensure comfort and safety.

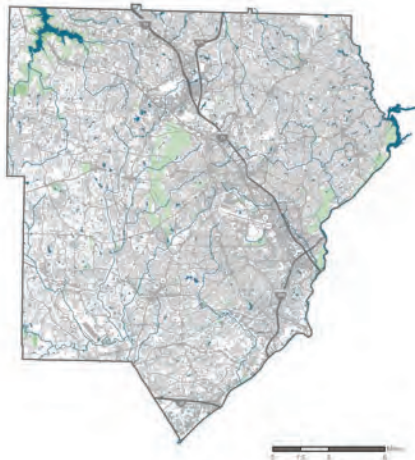
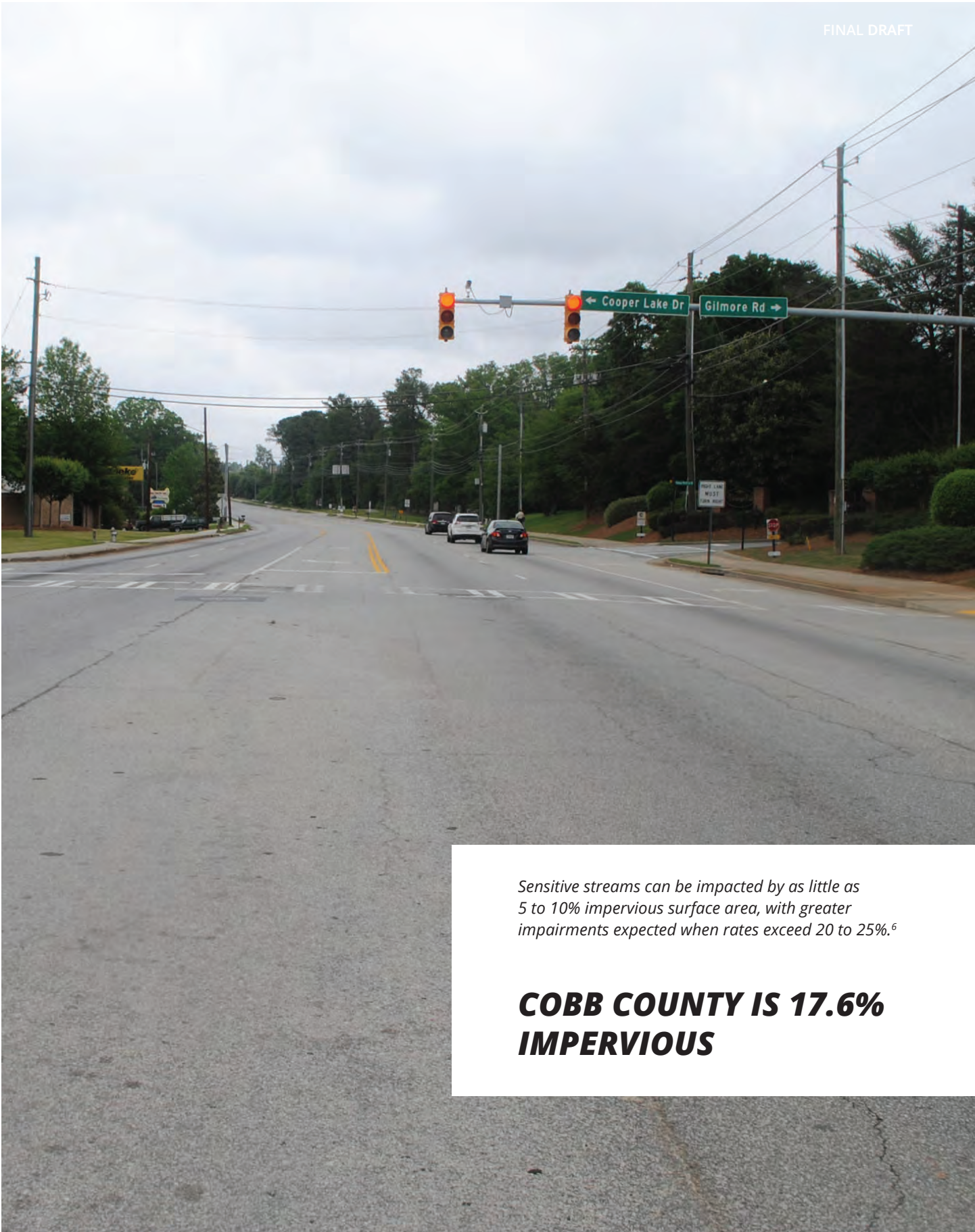


FIG. 3-10 IMPERVIOUS SURFACES

Impervious surfaces raise ambient temperatures and dramatically impact stormwater management and water quality. There are more than 60 square miles of impervious surfaces, such as driveways, structures, sidewalk, and parking lots, throughout Cobb County.



Sensitive streams can be impacted by as little as 5 to 10% impervious surface area, with greater impairments expected when rates exceed 20 to 25%.⁶

**COBB COUNTY IS 17.6%
IMPERVIOUS**



PARK CONNECTIVITY & ACCESS

PARKS OVERVIEW

Cobb County's P.A.R.K.S. Department manages 82 individual properties with a total land area of approximately 5,632 acres, including Allatoona Creek Park, the Army Corps property in the northwest corner of the County. Currently, 61 of the 82 parcels are developed. According to the P.A.R.K.S. *Comprehensive Master Plan*, considering all forms of open spaces, Cobb County currently has a surplus of open space (based on the ratio of acres to population) compared to national standards; however, not all open spaces can be developed as park facilities. Considering only County and City parks, there is a deficit of nearly 219 acres, a trend which, the plan projects, will continue in the future without additional acquisitions.

Within County-managed park properties, there are more than 47 miles of unpaved or natural surface trails and nearly two miles of

paved trails. The P.A.R.K.S. Department is also responsible for management of the Silver Comet and Noonday Creek Trails, accounting for 20 additional miles of paved trail. For details about park facilities in Cobb County, refer to the P.A.R.K.S. *Comprehensive Master Plan*.

Cobb County is fortunate to also have two major federal parklands: Kennesaw Mountain National Battlefield Park and the Chattahoochee River National Recreation Area (CRNRA). Figures 3-11 and 3-12 illustrate trails within these parks. Both areas have significant and popular hiking trails and CRNRA has some biking trails as well. Both parks are among the most popular hiking destinations in the County. Throughout the planning process, community members repeatedly indicated these locations are where they hike or bike most often.



THERE ARE 47 MILES OF UNPAVED TRAILS IN COBB COUNTY PARKS AND 2 MILES OF PAVED TRAILS

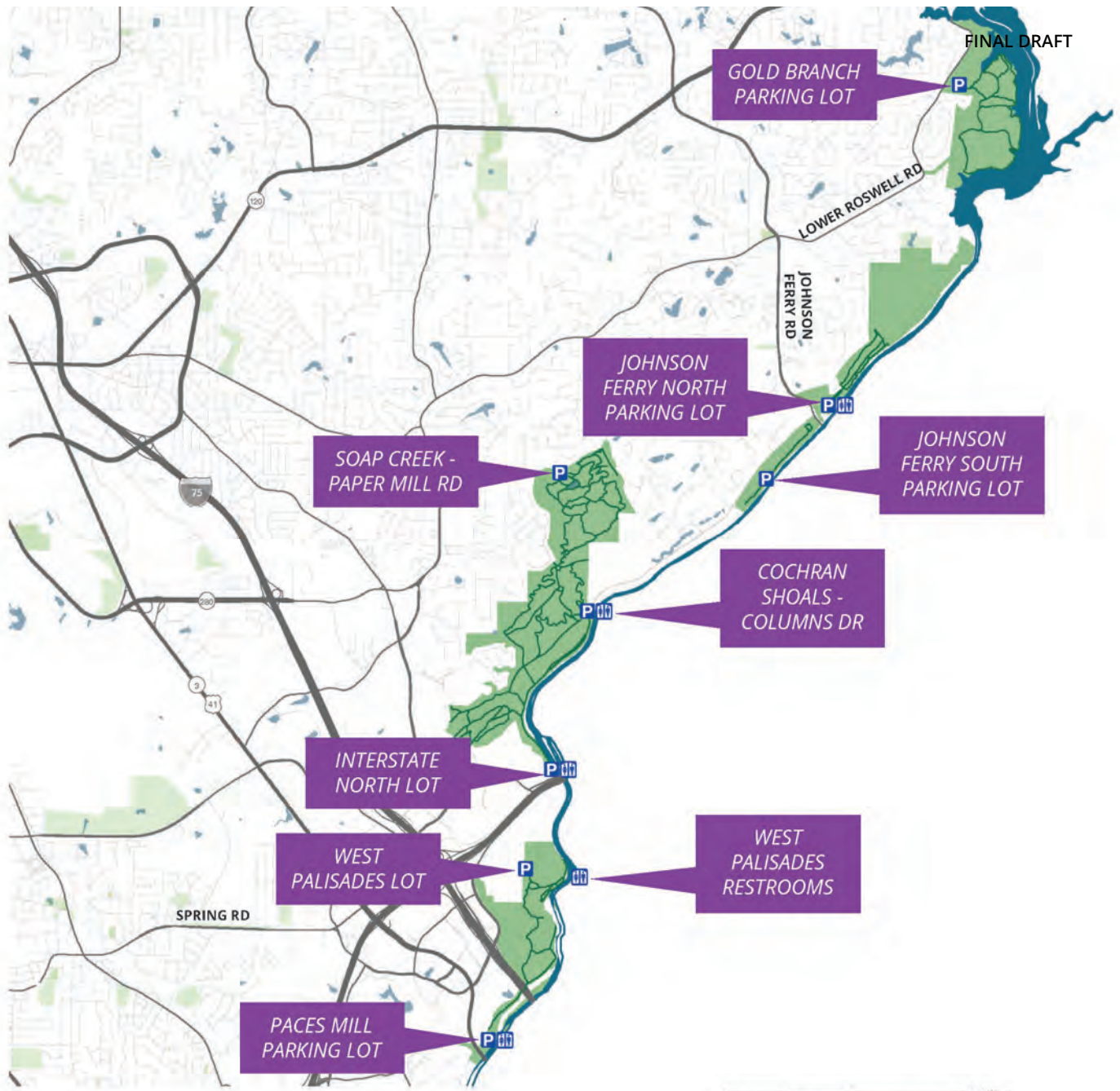


FIG. 3-11 CHATTAHOOCHEE RIVER NATIONAL RECREATION AREA TRAILS

CHATTAHOOCHEE RIVER NATIONAL RECREATION AREA

There are four Chattahoochee River National Recreation Area park units in Cobb County. Collectively, they host more than 35 miles of trails for use by a combination of biking and hiking, or hiking only:

- West Palisades - four miles of hiking-only and hiking/biking trails.
- Cochran Shoals - more than 18 miles of

- hiking-only and hiking/biking trails.
- Johnson Ferry (North and South) - over eight miles of hiking trails.
- Gold Branch - nearly five miles of hiking trails.

These units are immensely popular and parking is limited. Often, parking lots are full at peak times, especially on weekends.

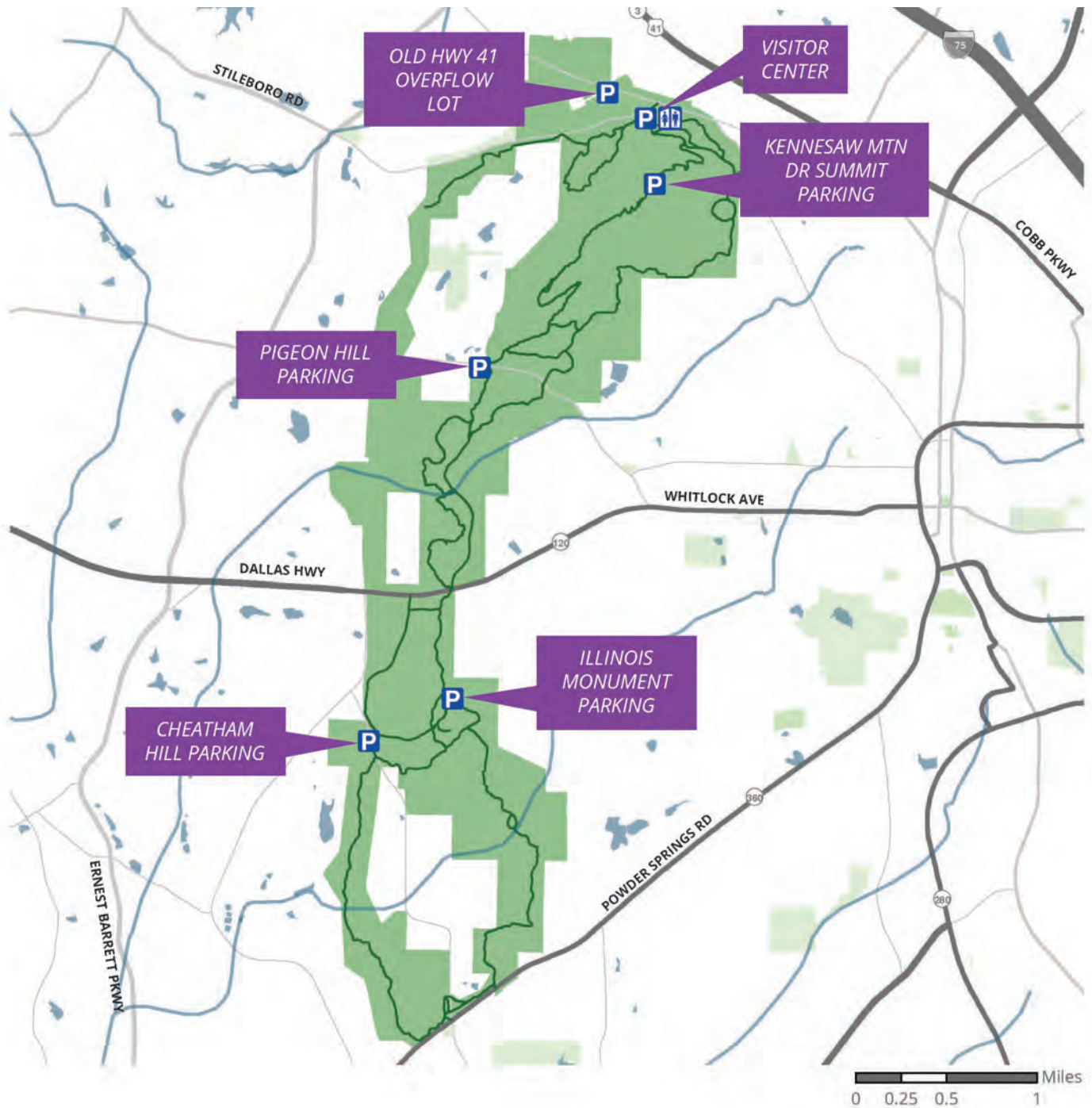


FIG. 3-12 TRAILS AT KENNESAW MOUNTAIN NATIONAL BATTLEFIELD PARK

KENNESAW MOUNTAIN NATIONAL BATTLEFIELD PARK

Kennesaw Mountain National Battlefield Park has more than 22 miles of unpaved trails for hiking and jogging. These trails provide access to historic sites throughout the battlefield, including the Georgia Monument, US Army Monument, Eaton House, New Salem Church, and Kolb Farmhouse.

Several trailheads provide access from areas surrounding the park. Despite numerous

parking lots, they are often full, especially on weekends and holidays. The parking lot at the summit of the mountain is only open to personal vehicles on weekdays. More people might be more likely to use these already popular trails if they did not have to drive to get to them. Increasing non-motorized access to Kennesaw Mountain would be a tremendous benefit to the community.

- 1 Voodoo
- 2 Moflo
- 3 Mumbo Jumbo
- 4 Driftwood
- 5 Turtleback
- 6 Masons Conn.
- 7 Masons Bluff
- 8 Masons Bridge Loop
- 9 Red Baron
- 10 Rusty Bucket
- 11 Hocus Pocus
- 12 Knuckle Sandwich
- 13 Whipper Snapper

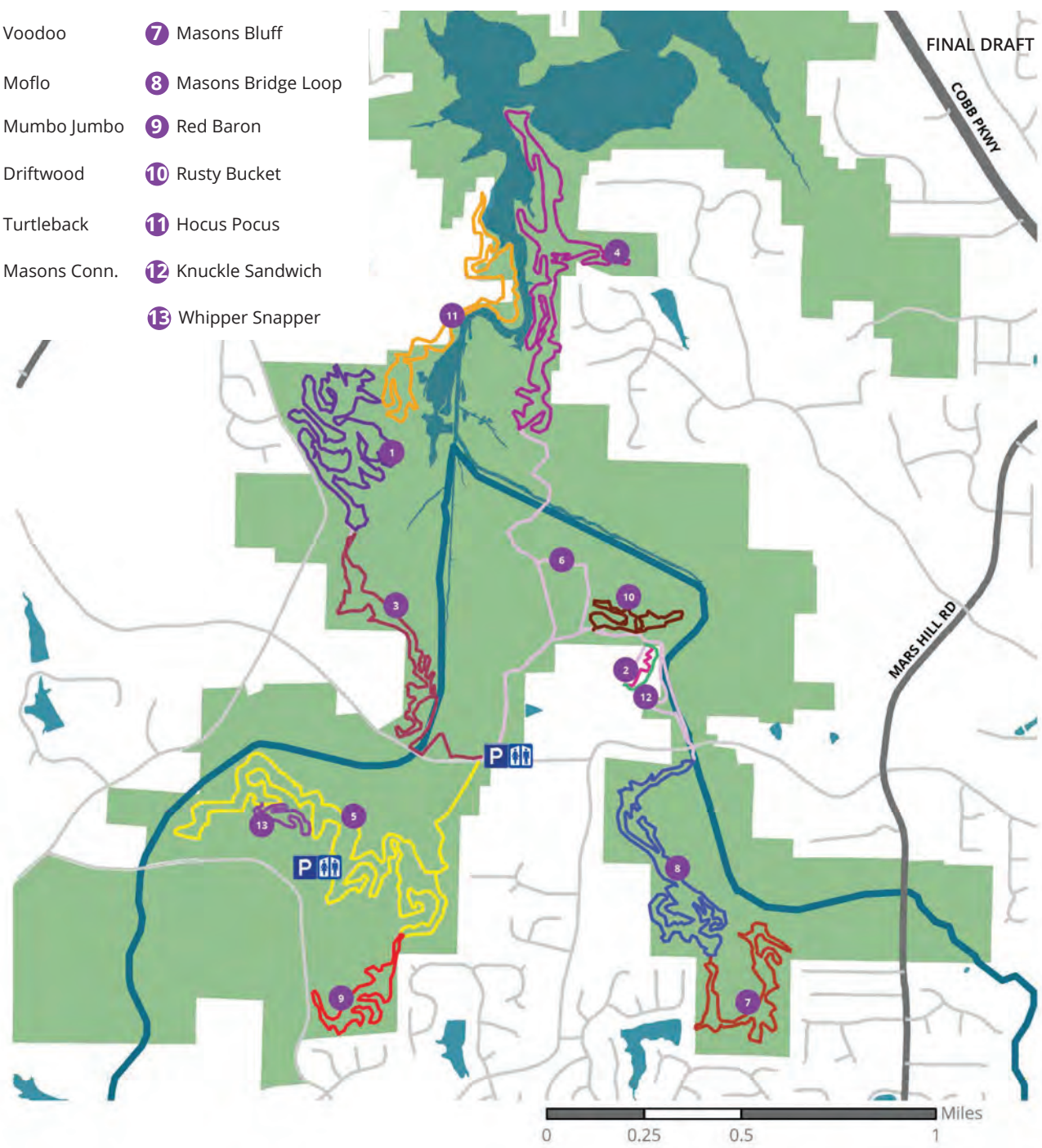


FIG. 3-13 ALLATOONA CREEK PARK TRAILS

ALLATOONA CREEK PARK

In addition to the federal parklands, Cobb County is home to a large tract of land in the northwest portion of the County, often referred to as the Corps Property. Officially called Allatoona Creek Park, the park is comprised of 1,450 acres of land leased by Cobb County from the US Army Corps of Engineers and several hundred acres of County-owned property.

Allatoona Creek Park is home to a network of more than 25 miles of trails suitable for walking, jogging, and mountain biking. These trails were built by Cobb County and are maintained in partnership with SORBA West Georgia. The park is open to the public for use except during hunting season, in November and December.



**IN GEORGIA, BETWEEN 9 AND
18% OF PEOPLE LIVE WITHIN
A HALF-MILE OF A PARK - 30%
BELOW THE NATIONAL AVERAGE**

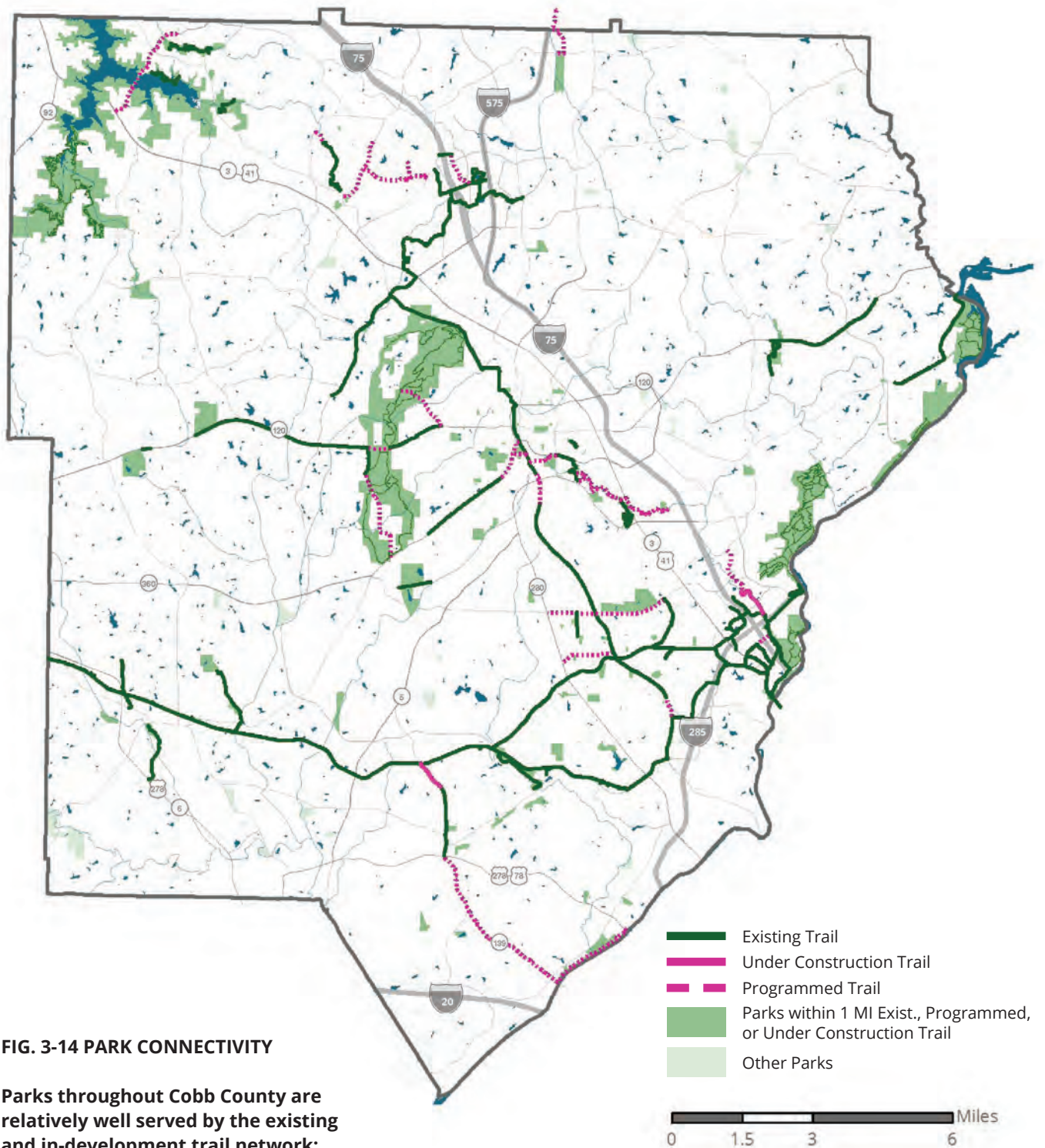


FIG. 3-14 PARK CONNECTIVITY

Parks throughout Cobb County are relatively well served by the existing and in-development trail network: roughly 85% of parks are within one mile of an existing, programmed, or under construction trail.



PUBLIC HEALTH

MENTAL & PHYSICAL HEALTH

Only about half of American adults and less than one-third of youth get the recommended amount of physical activity. One out of every two American adults lives with a chronic disease, like heart disease, diabetes, or cancer.² Many chronic diseases such as obesity, heart disease, and others have been linked to a lack of physical activity. According to the Centers for Disease Control and Prevention (CDC), these diseases and other conditions account for over \$1 billion in annual health care costs.³

Cobb County fares better than the state as a whole on a number of measures of public health. Over the past five years, obesity rates in Cobb County have been consistently lower than the statewide average, as has the rate of diagnosed diabetes among the whole population, and the rate of leisure-time physical inactivity. Although rates of diabetes and obesity have risen from 2005, data from the CDC show more people are getting physical activity now than they did in 2005. There have also been some improvements in these three health indicators for Cobb County since 2010, as shown in Table 3-2.

In a recent survey, Cobb and Douglas Public Health found that 58% of Cobb County adults report being either overweight or obese. This is likely due to lack of physical activity and poor nutritional habits. Heart and vascular disease, which can be attributed in large part to inactivity and poor nutrition, is the leading cause of death in the county, mirroring the trend in the state and nationwide.

To combat these and other illnesses, the Cobb Department of Public Health has identified access to physical activity as a major focus area. In 2015 the U.S. Surgeon General issues a “Call to Action on Walking” in recognition of the importance of physical activity for all people. It calls on Americans to be more physically active by incorporating more walking in their daily lives and creating more walkable communities and places. In keeping with broader national trends, the University of Georgia (UGA) Cooperative Extension established Walk Georgia (www.walkgeorgia.org), a free, online program that allows participants to track physical activity and encourages people to move more. An average of just 22 minutes of physical activity per day can significantly reduce the risk of heart disease and diabetes.⁴


Physical activity, particularly in an outdoor setting, has been shown to have positive impacts on mental health as well as disease prevention. Numerous studies have documented improvements in psychological well-being as a result of increased physical activity, and outdoor activity even more-so than indoor activity.⁵

Increasing opportunities for safe, outdoor physical activity - whether strolling with friends, training for races, or walking to nearby destinations for daily errands - will no doubt have a positive impact on community and public health, both mental and physical,

TABLE 3-2 HEALTH INDICATORS FOR COBB COUNTY, 2005 AND 2010-2013

CDC County Health Statistics	2005	2010	2011	2012	2013
Diagnosed Diabetes	7.2%	8.8%	8.9%	8.9%	8.5%
Obesity	21.8%	23.4%	22.3%	22.4%	22.9%
Leisure-Time/Physical Inactivity	19.9%	20.1%	19.4%	18.3%	18.3%

Source: Centers for Disease Control and Prevention County Health Statistics, <https://www.cdc.gov/diabetes/data/county.html>



EXPANDING GREENWAYS AND TRAILS CAN INCREASE OPPORTUNITY FOR PHYSICAL ACTIVITY, HELPING OFFSET AND REDUCE RISK OF CHRONIC DISEASES AND OTHER HEALTH ISSUES





EDUCATIONAL INSTITUTIONS

SCHOOLS, COLLEGES, & UNIVERSITIES

The Cobb County School District (CCSD) is the second largest school system in Georgia and the 23rd largest in the nation. It serves more than 112,000 students at 112 schools. District facilities include 67 elementary schools, 25 middle schools, 16 high schools, one charter school, one special education center, one adult education center, and one performance learning center.

These schools and centers are located throughout the County and are somewhat well-served by the existing greenway and trail network. In total, 91 miles of existing, programmed, or under construction trails can be accessed within a half-mile of K-12 schools and 46 schools are within a half-mile of an existing, programmed, or under construction trail. Several trails provide nearly direct access to schools: 23 public and private K-12 schools are located within 1,000 feet of a trail.

SAFE ROUTES TO SCHOOLS

Out of the 112 total public schools in Cobb County, only 18 are partners in the national Safe Routes to School program. Being a partner in the program indicates the school is making progress towards implementing Safe Routes to School programs and schools agree to accomplish specific goals during each year based upon the partner levels – bronze, silver, or gold. Partner schools also officially partner with the Safe Routes to School Resource Center by completing a profile and appointing a school champion.

Partner schools are encouraged to prepare travel plans documenting existing conditions around the school and identifying recommendations for improvements to walking routes to and from the school. Of the 18 partner schools, only one (shown in bold) has completed a travel plan:

- Addison Elementary (1)
- Baker Elementary (2)
- Bells Ferry Elementary (3)
- Cheatham Hill Elementary (4)
- Daniell Elementary (5)
- East Side Elementary (6)
- Floyd Middle (7)
- Garrison Mill Elementary (8)
- Hightower Trail Middle (9)
- Kincaid Elementary (10)
- Lovinggood Middle (11)
- Mount Bethel Elementary (12)
- **Mountain View Elementary (13)**
- Murdock Elementary (14)
- Powder Springs Elementary (15)
- Shallowford Falls Elementary (16)
- Sope Creek Elementary (17)
- Still Elementary (18)

COLLEGES AND UNIVERSITIES

Cobb County is also home to several colleges and universities. The most well-known is Kennesaw State University (KSU), which has its main campus in Kennesaw and another campus in Marietta. The school has more than 35,000 students and offers more than 150 degrees. The university's alumni network has over 100,000 members.

Other college campuses in Cobb County include Life University, Strayer University, Gwinnett College, Chattahoochee Technical College, Fortis College – Smyrna, and Lincoln College of Technology – Marietta. These schools collectively enroll more than 15,000 students. According to estimates from the American Community Survey for 2011-2015, there are more than 56,000 students enrolled in college or graduate school who call Cobb County home.

There are a number of trails – both existing and proposed – in and around the two main campus areas in Kennesaw and Marietta. KSU is an active partner in development of walking and biking facilities on and around their campuses.



ONLY 1 SCHOOL OUT OF 112 HAS COMPLETED A SAFE ROUTES TO SCHOOL PLAN

Source: Cobb County School District, http://cobbcast.cobbk12.org/wp-content/uploads/2017/07/IMG_6539.jpg

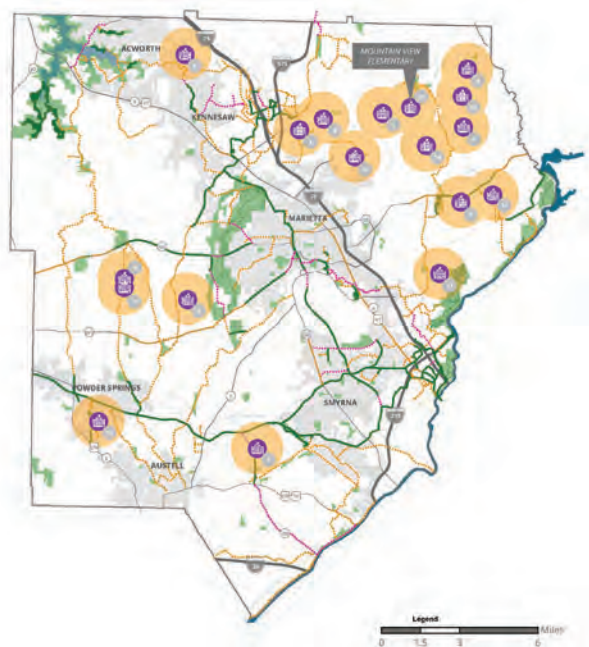


FIG. 3-15 SAFE ROUTES TO SCHOOL PARTNER SCHOOLS

Only 18 of 112 Cobb County Schools are Partners with the Safe Routes to Schools Program. Only one, Mountain View Elementary School, has implemented a Safe Routes Travel Plan.

- Existing Trail
- Under Construction Trail
- Programmed Trail
- Proposed Trail
- SRTS Partner School
- 1 MI Buffer (Approx. Walking Distance)



THE NOONDAY CREEK TRAIL IS A POPULAR SEGMENT OF THE COBB COUNTY TRAIL NETWORK

INVENTORY OF EXISTING FACILITIES

OVERVIEW

This section provides an inventory of the existing greenway and trail network, including descriptions of regionally significant trails, ongoing trail projects, trailheads, and bike share stations. It also summarizes opportunities and challenges associated with expansion of and improvements to the greenway and trail network. Existing conditions, context, and other findings informed the development of guiding principles, recommendations, and the identification of priority projects for future implementation.

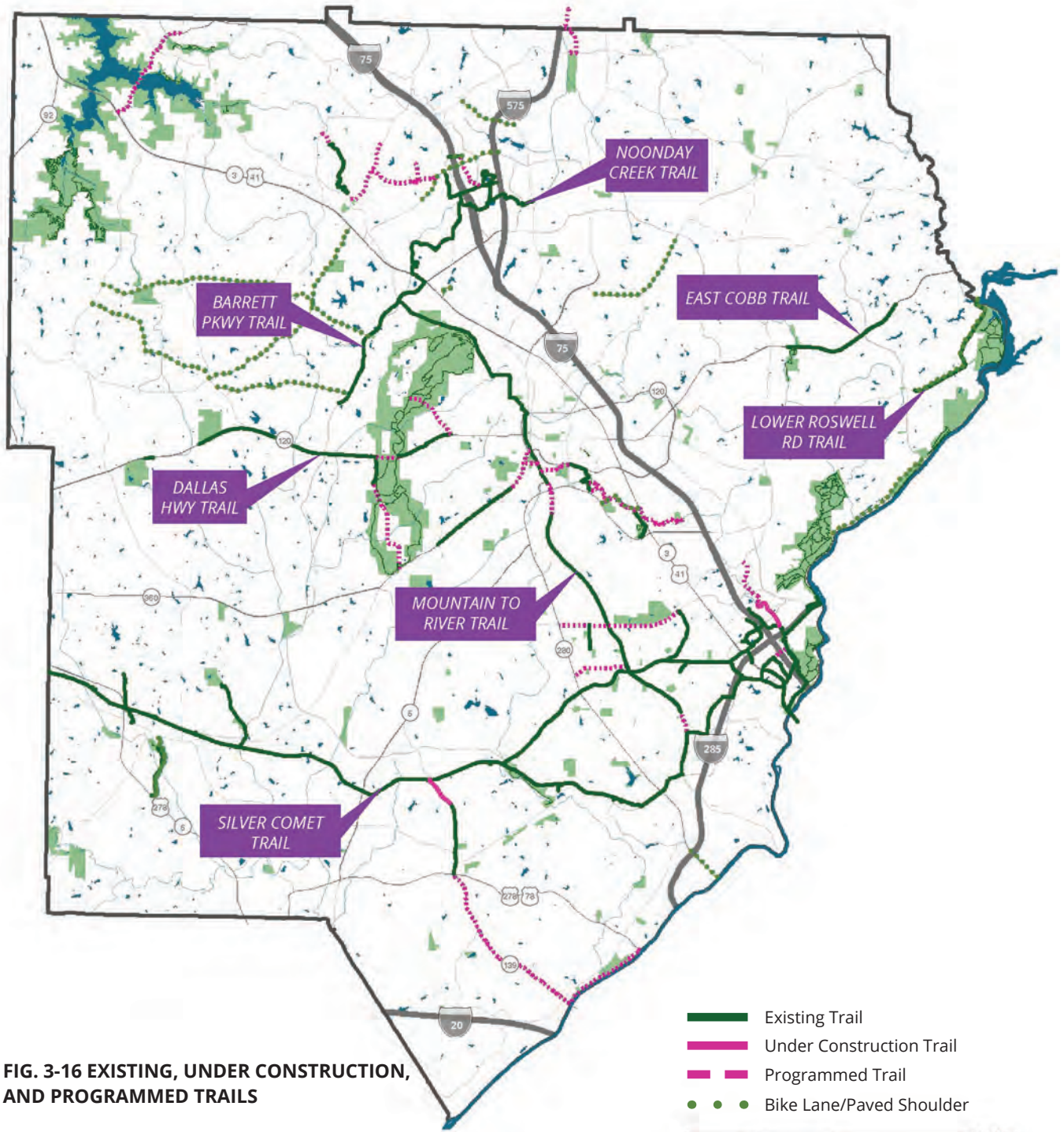


FIG. 3-16 EXISTING, UNDER CONSTRUCTION, AND PROGRAMMED TRAILS

Cobb County has more than 84 miles of completed multi-use greenways and trails along 47 corridors outside of park properties.

GREENWAY & TRAIL NETWORK

EXISTING, UNDER CONSTRUCTION, & PROGRAMMED TRAILS

Collectively, Cobb County is home to more than 180 miles of multi-use trails, including those inside and outside of park properties. Compared to surrounding counties, Cobb has a relatively high total mileage of trails outside parks. According to the 2014 Metro Atlanta Bicycle Facility Inventory prepared by ARC, Cobb has more trails than Gwinnett, DeKalb, and Paulding Counties, but fewer than Cherokee.

As of December 2017, there are more than 84 miles of existing multi-use trails throughout Cobb County, along 47 corridors outside of park properties. These include greenways in their own right-of-way, such as the Noonday Creek Trail and Silver Comet Trail, as well as sidepath trails alongside roadways, like the Mountain to River Trail or Concord Road Trail. Figure 3-16 shows trails that are existing (built and in use), under construction, and programmed, meaning funding has been identified for design and/or construction. A table of existing trails is provided in Appendix D.

Existing trails follow two primary spines: the Mountain to River Trail which travels from Kennesaw Mountain to the Chattahoochee River in the Cumberland area, along Atlanta Rd; and the Silver Comet Trail from the Alabama state line to East-West Connector, where it then connects into Cumberland and eventually, is proposed to cross over the river into Fulton County. The Noonday Creek Trail is connected to the Mountain to River Trail at the north end, connecting Kennesaw Mountain to Town Center and KSU, and will eventually continue north into Cherokee County.

There are also two fairly interconnected networks of greenways and trails in the Cumberland CID and in the Town Center CID. In Cumberland, key trails include the Bob Callan Trail, segments on Cumberland Blvd, Circle 75 Pkwy, Interstate N Pkwy, and Akers Mill Rd. Trails throughout Town Center CID mainly link to Noonday Creek, and include facilities on Big Shanty Rd, the KSU Walking Trail, and Town Point Pkwy.

Other important segments of existing greenways and trails in Cobb County include, but are not limited to:

- **Concord Rd Trail** between Silver Comet Trail and Atlanta Rd
- **Dallas Hwy/Whitlock Ave Trail** between Burnt Hickory Rd on the east to Cheatham Hill Dr and from John Ward Rd to the vicinity of Oregon Park
- **East Cobb Trail** on Roswell Rd from Shady Hill Rd to East Cobb Park
- **Kennesaw Trail System** parallel to Moon Station Rd from Main St to Winchester Forest Park
- **Lower Roswell Rd Trail** from Davidson Rd to the County line at Willeo Rd
- **Barrett Pkwy Trail** (sometimes referred to as West Cobb Trail) along the east side of Barrett Pkwy from Old Hwy 41 to just south of Burnt Hickory Rd

There are more than 25 miles of unpaved hiking and mountain biking trails in Allatoona Creek Park in northwest Cobb County, over 50 miles of trails in the national parks, and dozens of miles of trails within County and City parks as described earlier in this chapter. The *Greenways and Trails Master Plan* is focused primarily on trails outside of park properties, although it does consider park trails with regard to opportunities for connectivity and enhanced access.



REGIONAL CONNECTIVITY

REGIONALLY SIGNIFICANT TRAILS

In 2016, as part of the development of regional biking and walking plan, ARC designated certain trails as “Trails of Regional Significance.” In Cobb County, these include the Silver Comet Trail; the NW Corridor Trail, which includes the entire Noonday Creek Trail network and the Mountain to River Trail, comprised of several segments of existing, programmed, and proposed trail; connections across the Chattahoochee River to the Atlanta BeltLine; and the Lower Roswell Road Trail, which will soon connect across county lines to link up with the Big Creek Greenway system.

SILVER COMET TRAIL

The Silver Comet Trail is perhaps the most well-known of all trails in Cobb County. Popular especially among cyclists, the trail is on the bed of a former rail line that was abandoned in 1989. Completed in 2008, the trail runs 61.5 miles through Cobb, Paulding, and Polk Counties in Georgia, and connects to the 33-mile Chief Ladiga Trail at the Georgia-Alabama line, which extends to Anniston, Alabama. The Silver Comet Trail currently begins at the Mavell Rd trailhead in Smyrna and ends at the state line, near Cedartown and the Esom Hill trailhead. Plans have been proposed to extend the trail eastward to the Chattahoochee River and into the City of Atlanta, where it would eventually link to the BeltLine. The Silver Comet Trail is open to non-motorized traffic and is accessible to wheelchairs.

NOONDAY CREEK TRAIL

The Noonday Creek Trail is a seven-mile trail between Kennesaw Mountain and Bells Ferry Rd in the Town Center area, constructed to be accessible for a variety of recreational users, including cyclists, walkers, and joggers.

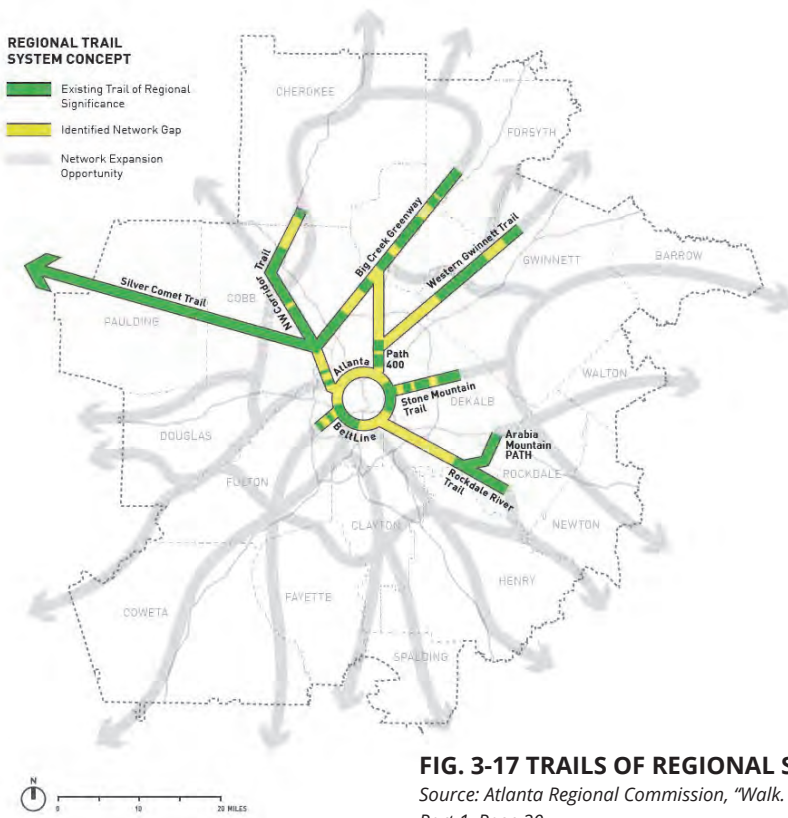
It begins at Kennesaw Mountain, on Old Hwy 41, where mile marker 0 is located, and ends at the Bells Ferry Rd trailhead, at mile marker 6.78. The trail project was a partnership between Town Center CID, Cobb County, GDOT, and National Park Service (NPS). Opened in September of 2014, the trail has been a tremendous asset to the surrounding community and has spurred new development and amenities in the area. These include the addition of the Zagster Town Center Bike Share Program, launched in 2015, and the construction of a new trailhead at 2995 Bells Ferry Rd. The trailhead was recently updated and now includes lighting, restrooms, drinking fountains, and shade trees, as well as a 60-space parking lot, seating, and a Zagster docking station. Three parks are also in development along the trail.

MOUNTAIN TO RIVER TRAIL

More than 15 years in the making, the Mountain to River Trail stretches from Kennesaw Mountain through Marietta Square and down Atlanta Rd to the Cumberland area and the Chattahoochee River. With just one small $\frac{3}{4}$ -mile gap in unincorporated Cobb County left to fill, the trail will connect pedestrians and cyclists from the mountain to the river, linking separated trail systems throughout the County. Travelers are currently able to begin their journey on the Noonday Creek Trail and travel south to Kennesaw Mountain and into Marietta Square. South of the gap on West Atlanta St, travelers can connect from Dobbins Air Reserve Base into Cumberland, Cobb County's most active business and entertainment district, and to the Chattahoochee River National Recreation Area.



SILVER COMET TRAIL





TRAILHEADS & BIKE SHARE

INCREASING TRAIL ACCESS

Trailheads are generally formal points of entry to a greenway or trail. These frequently are provided at the beginning or end of trails, but they can also be mid-point locations where access is possible and desired. The purpose of trailheads is to give the public access to greenways and trails. Trailheads can be both formal and informal, depending on the surrounding context and setting. Because of the nature of sidepath trails, located alongside roadways, there are often multiple informal access points that are not designated trailheads. Formal trailheads often provide public facilities, such as parking, drinking fountains, seating, trail signage, and sometimes restrooms.

Throughout Cobb County there are at least 38 existing trailheads or access points, with many more informal access points at parks and along sidepath trails. The majority of these trailheads provide parking, and just over half have restrooms. Six trailheads are walk-up only. Several trailheads serve multiple purposes, functioning as parks or playgrounds as well as trail access points. In addition, trailheads have been proposed as part of plans and projects for other jurisdictions. Additional details are available in the Community Context Technical Memo in Appendix B.

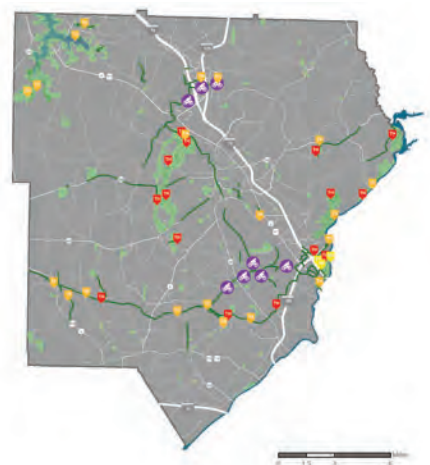
In the past few years, the City of Smyrna and the Town Center CID have partnered with Zagster to launch bike share programs. Bike share is a membership-based program in which people use a mobile phone application (app) to rent bikes by the hour or day (there are options for using text message as well for individuals without smartphones). Prices vary by program, but in both Town Center and Smyrna, the first hour is free. Bikes must be returned to a docking station within the system from which it was rented, meaning riders are currently not able to rent a bike at Town Center and return it to Smyrna, or vice-versa.






There are three bike share stations in the Town Center area, and five in Smyrna. All existing bike share stations are located directly on trails, several of which are at designated trailheads, both encouraging use of the trails and increasing use of bike share bicycles. Each of the programs draws thousands of users each year.

The Zagster program in Town Center consistently has among the highest number of users at a given station (Bells Ferry Trailhead) of all Zagster stations. As of December 2017, the program has 8,600 active members who have collectively taken 22,000 rides. Of the three Town Center stations, the Bells Ferry Trailhead on the Noonday Creek Trail is by far the most well-used; 56% of trips start at this location.

FIG. 3-18 BIKE SHARE & TRAILHEADS

There are nearly 40 trailheads and designated trail access points throughout Cobb County along with two bike share programs offering eight docking stations and more than 40 bikes.



-  Walk-Up Trailhead
-  Parking & Restrooms
-  Restrooms Only
-  Bikeshare Station
-  Existing Trail

TWO ZAGSTER PROGRAMS IN COBB COUNTY OFFER 8 STATIONS AND MORE THAN 40 BIKES



ZAGSTER BIKESHARE STATION IN SMYRNA



COMPLEMENTARY FACILITIES

ON-STREET BIKE FACILITIES

Cobb County has several miles of existing on-street bicycle facilities, including dedicated bike lanes, paved shoulders, and shared roadways. Existing on-street bike lanes are present on some roads in the Town Center area, such as Chastain Rd, the Skip Spann Connector, and a portion of Barrett Lakes Blvd. In Powder Springs, there are bike lanes on Lewis Rd and Murray Ave. Bike lanes are also present on Columns Dr between the Johnson Ferry and Cochran Shoals units of the Chattahoochee River National Recreation Area, and on Lower Roswell Rd, among other locations. Paved shoulders suitable for biking are found on roads such as Stilesboro Rd, portions of North Marietta Pkwy, and others.

The Cobb County *Bicycle and Pedestrian Improvement Plan* (BPIP), completed in 2010, included recommendations for additional on-street bike facilities, including re-striping for bike lanes (no new construction, only placement of pavement markings and spot improvements), the addition or widening of paved shoulders, and detailed corridor studies. At the time of the BPIP, several segments of bike lane and paved shoulder were under construction. Since the time of that plan, some new on-street facilities have been implemented, although there are many more opportunities for improvements to be made to the on-street network, in order to complement the off-street network of greenways and sidepaths.

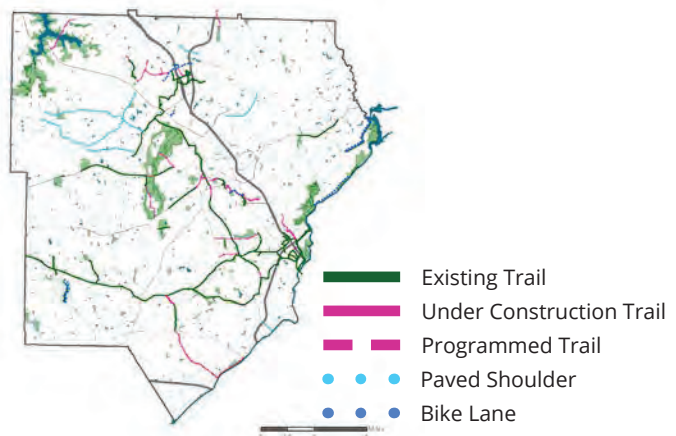
This *Greenways and Trails Master Plan* offers some recommendations for identifying additional on-street facilities, like neighborhood bikeways, that can complement the greenway and trail network (see Chapter 5 and 6). A detailed inventory of existing on-street bicycle facilities is needed in order to better understand how the on-street network interacts with the greenway and trail network, in order to paint a full picture of the biking network throughout Cobb County.

BIKE RACKS

Cobb County's Sustainable Practices Policy, adopted in February, 2009, is designed to facilitate good stewardship of County assets and enhance long-term energy conservation and environmental sustainability. The policy's Sustainable Building Standards includes provisions for Bicycle Friendly Facilities (Section I. E.), which states that all new community facilities shall have bicycle racks available for public and employee use and that lockers and shower facilities should be considered for new facilities where appropriate. While community facilities are to be defined by the County Manager, examples of these types of facilities include: libraries, parks, recreation centers, community and aquatic centers, and transit park-and-ride lots.

All Cobb County P.A.R.K.S. facilities have at least one bike rack, each of which can generally accommodate up to seven bicycles. Each CobbLinc bus can accommodate up to two bicycles at a time. In addition, public facilities such as administrative offices and court buildings, park-and-ride lots, and libraries also have bike racks.

FIG. 3-19 ON-STREET BIKE NETWORK
Cobb County is working to expand its system of on-street biking facilities, including bike lanes, paved shoulders, and shared roadways to complement greenways and trails.



**ON-STREET BICYCLE FACILITIES ARE
IMPORTANT COMPLEMENTS TO A
SUCCESSFUL GREENWAY AND TRAIL
NETWORK**



GROUP RIDES OFTEN TAKE ADVANTAGE OF BIKE LANES, LIKE THOSE ON LOWER ROSWELL RD (ABOVE) WHILE SOME CYCLISTS PREFER RIDING WHEREVER THEY FEEL COMFORTABLE (HERE ON WHITLOCK AVE, NEAR KENNESAW MOUNTAIN)



THE FUTURE TRAIL NETWORK

PROJECTS LIKELY COMPLETED BY 2020

For the purposes of inventory and planning, Cobb County tracks and categorizes trails and greenways by their status in the planning, design, and construction process. This helps with identifying areas of need or gaps and to prioritize projects or target investment where needed. For the purposes of this plan, trail status is defined as follows:

- **Existing trails** are built and in use.
- **Under construction trails** are in the process of being built.
- **Programmed trails** are those for which funding has been identified, either for design or construction.
- **Proposed trails** are those that have been identified or recommended in this or previously approved plans or studies, but for which no funding has yet been identified (these are discussed in more detail in the Recommendations chapter of this report).

Currently, 29 miles of trails are programmed, two miles are under construction, and there are more than 207 miles of proposed trails. Generally speaking, trails tend to parallel major roadway or rail corridors or are concentrated in business districts and town center areas. There are few trails in East Cobb, northwest Cobb, west Cobb between Dallas Highway and the Silver Comet Trail, and south of the Silver Comet Trail. There are several gaps in the existing trail network where no project has yet been programmed.

Cobb County and the six cities and three CIDs within the County are continuously working to expand and enhance the existing greenway and trail network. In Georgia, many counties use the Special Purpose Local Option Sales Tax, or SPLOST, to fund capital projects for parks, schools, roads, and other public facilities. This is Cobb County's primary source of funding for most DOT projects, including sidewalks, bikeways, greenways, and trails. Several greenway and trail projects were approved as part of the 2016 SPLOST, which was a one percent local sales tax that provided funding to reduce traffic congestion, replace and repair bridges, and a host of other initiatives. The 2016 SPLOST, approved on November 4, 2014, is collecting taxes from January 1, 2016 through December 31, 2021. Of the total estimated \$750,000,000 in sales tax collection, roughly \$287.3 million will go toward transportation projects, including \$35 million for pedestrian improvements, such as sidewalks and multi-use trails.

As this *Plan* is being developed, several greenway and trail projects are underway and nearing completion. It is largely anticipated that these projects will be complete by the time the current SPLOST expires at the end of 2021 and the County can then begin focusing on the next round of trail projects. Figure 3-20 shows what the likely trail network might look like by the end of 2020, if most of the projects currently under construction and programmed are completed. Additional descriptions about key projects are provided below. (For details about future recommendations, see Chapter 5 of this plan.)

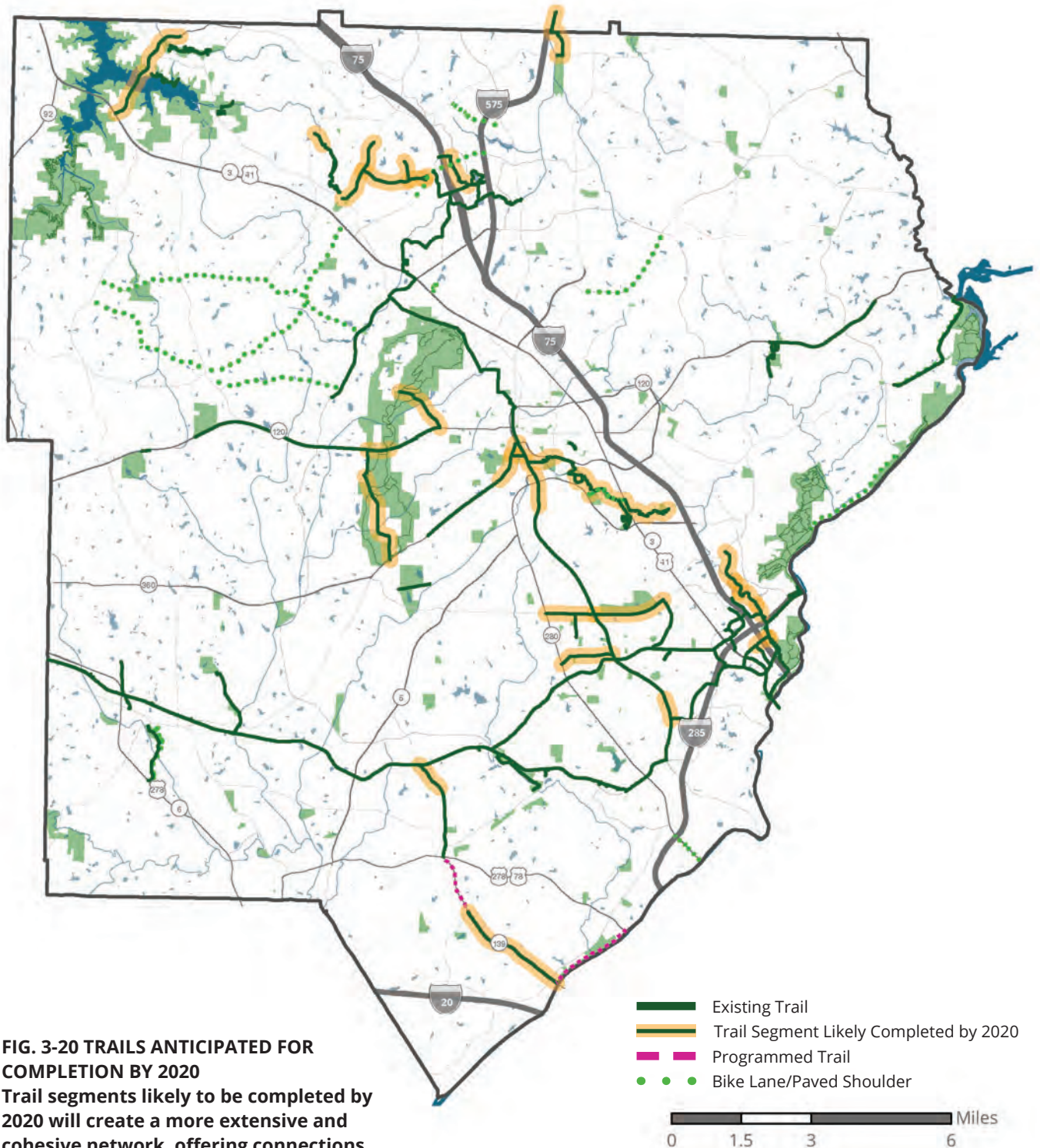


FIG. 3-20 TRAILS ANTICIPATED FOR COMPLETION BY 2020
 Trail segments likely to be completed by 2020 will create a more extensive and cohesive network, offering connections from Kennesaw to Cumberland, Paulding County to Fulton County, and more connected trails in between.



COBB COUNTY PROJECT HIGHLIGHTS

KENNESAW MOUNTAIN AREA TRAILS

In 2017, Cobb County received \$4 million in Federal Land Access Program (FLAP) funds, along with \$1.6 million from the National Park Service, and \$1.2 million from GDOT to design and construct trails in and around Kennesaw Mountain National Battlefield Park. The 3.2 miles of new trails will complement the nearly 20 miles of hiking, running, walking, and horseback trails already in the park. The project is being done in cooperation with NPS, GDOT, and the City of Marietta and will consist of design and construction of three segments of trail on Burnt Hickory Rd, Whitlock Ave, and Cheatham Hill Rd:

WHITLOCK AVE TRAIL

The Whitlock Ave Trail will be an eight to 10 foot-wide multi-use sidepath trail on the south side of Whitlock Ave between Cheatham Hill Rd and John Ward Rd, a distance of roughly half-mile. The sidepath trail would be separated from the roadway by a two foot-wide grass strip, curb, and gutter. The project would connect to sidewalks outside KMNBP, improving access to the park. The estimated cost for this project is \$1.75 million.

CHEATHAM HILL RD TRAIL

The Cheatham Hill Rd Trail will be an eight to 10 foot multi-use sidepath trail on the east side of Cheatham Hill Rd, between Powder Spring Rd and John Ward Rd. The 1.7-mile trail will be separated from the roadway by a grass strip, curb, and gutter and will taper to a five-foot-wide sidewalk where it connects with the existing sidewalk on John Ward Rd, outside of the limits of the project. The estimated cost for this project is \$8.16 million.

BURNT HICKORY RD TRAIL

The Burnt Hickory Rd Trail will be an eight to 10 foot multi-use sidepath on the west side of Burnt Hickory Rd between Whitlock Ave and Old Mountain Rd. The one-mile trail would connect with existing sidewalk on Whitlock Ave and would be separated from the roadway by a grass strip, curb, and gutter. The project will also relocate the existing pedestrian crossing from New Salem Church/ Camp Brumby Trail to a place further west on Burnt Hickory Rd to improve visibility and safety. The estimated cost for this project is \$3.86 million.



THERE IS A NEED FOR A TRAIL ALONG WHITLOCK AVE AS SEEN IN THE DESIRE LINE PARALLEL TO THE ROAD

FLOYD ROAD TRAIL

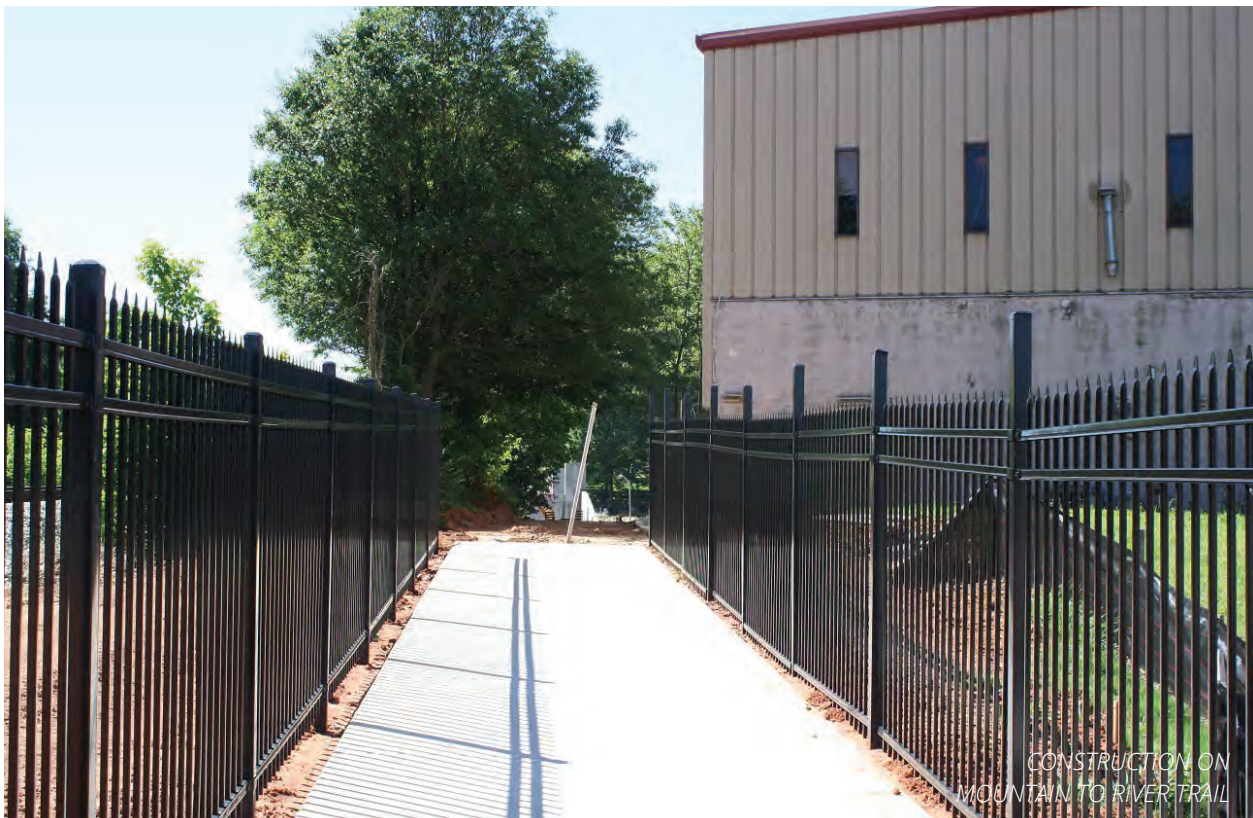
Construction is underway on a 10 foot-wide trail on the west side of Floyd Rd, between Hicks Rd, where the existing sidepath trail ends, and the Silver Comet Trailhead (near Bates Rd). The **Floyd Rd Trail** is slated for completion by the end of 2017.

MABLETON PARKWAY TRAIL

In 2017, Cobb County was awarded nearly \$4 million in federal funding from ARC to design and construct improvements on Mableton Pkwy from Factory Shoals Rd to the Chattahoochee River. The 2.4-mile **Mableton Pkwy Trail** will include a 10 foot-wide shared-use sidepath trail on the west side of Mableton Pkwy and a five-foot-wide sidewalk on the east side of the road. The project is a critical link to the Chattahoochee River.

MOUNTAIN TO RIVER TRAIL

The City of Marietta has just finished work on its section of the 13.5 mile-long **Mountain to River Trail**, having just installed bridges over North and South Marietta Pkwy in 2017. This section nearly completes a gap that will connect Kennesaw Mountain to the Chattahoochee River in the Cumberland area through a network of trails along Kennesaw Ave, through Downtown Marietta, Atlanta Rd, Spring Rd, Cumberland Blvd, and Cobb Pkwy. There is just a small portion of the Mountain to River Trail left to finish in unincorporated Cobb County, just south of the City of Marietta, along West Atlanta St. In 2017, the county was awarded for \$1.7 million from ARC to finish this roughly ¾-mile segment.



CONSTRUCTION ON
MOUNTAIN TO RIVER TRAIL



REGIONAL CONNECTOR PROJECTS

NOONDAY CREEK TRAIL

The **Noonday Creek Trail** project would construct a 10-foot-wide shared use path extension for a length of roughly two miles, from Noonday Creek Park at Shallowford Rd in northern Cobb County north into Cherokee County, where it would link up with the existing Woodstock Noonday Creek Trail at SR 92 in Woodstock.

This project is currently in the planning and scoping stages. A Limited Scope Concept Report was approved in December 2017. The report sought to identify potential alternative alignments given the physical constraints along the corridor, such as the proximity of I-575, private property, wastewater treatment facilities, floodplains, and utility corridors. The purpose of the report is to provide pre-engineering documentation that can help secure funding and the necessary property easements and/or acquisitions to finalize design engineering and advance to construction. The preferred trail alignment crosses Shallowford Rd at-grade with a rectangular rapid flashing beacon, then runs along the eastern side of the Noonday Creek Water Reclamation Facility, west towards Noonday Creek, and then north, generally along the creek – crossing under the SR 92 bridge – and tying in to the existing Woodstock Noonday Creek Trail.

The trail itself would consist of a two mile-long 10 foot-wide concrete path buffered by a three foot-wide shoulder on either side. The estimated cost of the project is \$3,403,318. The City of Woodstock was awarded more than \$2.5 million in federal funds through the Transportation Improvement Program.

ROSWELL RIVERWALK AND WILLEO RD BRIDGE REPLACEMENT

In July 2017, the City of Roswell approved a transportation enhancement agreement to construct the fifth and final phase of the **Roswell Riverwalk**, from the Chattahoochee Nature Center to the Cobb County line, at the south end of Willeo Park. This project is

complemented by a joint project between Cobb County and the City of Roswell to replace the bridge on Willeo Rd over Willeo Creek, just north of the Timber Ridge Rd/ Lower Roswell Rd/Willeo Rd roundabout. The current bridge has no sidewalks or capacity for bikes, although it is a critical link between existing and under construction trail facilities. It is anticipated that construction will begin within the next 18 months or so.

With this connection, walkers, joggers, and cyclists will have access to the full Roswell Riverwalk system and the Big Creek Greenway, which spans 13.5 miles through Roswell, Alpharetta, and Forsyth County. From Roswell's Don White Memorial Park and GA 400 underpass, it is a short two-mile trek to Roswell's Big Creek Park, where the Big Creek Greenway begins. A conceptual greenway has been proposed to connect the Riverwalk Trail to Big Creek Park.

PROCTOR CREEK GREENWAY

The **Proctor Creek Greenway** is a seven mile-long trail envisioned to connect the Atlanta BeltLine to the Chattahoochee River. The PATH Foundation, Emerald Corridor Foundation, Atlanta BeltLine, Inc., and the City of Atlanta are partnering to create this system totaling 50 acres of linear park and 400 acres of public greenspace adjacent to the creek. The trails will begin at Maddox and Proctor Park and connect through West Side and Grove Parks, linking multiple schools along the way to the Chattahoochee River. Construction recently began on Phase I of the Greenway, between the Bankhead MARTA station and the Grove Park neighborhood in west Atlanta. The project features trail segments and green infrastructure to improve water quality and the health of the creek. The trail is envisioned to end at the Chattahoochee River, just south of I-285, where a proposed pedestrian bridge would link the Cobb County and Atlanta trail systems.

CHALLENGES & OPPORTUNITIES

A PATH TOWARD IMPROVEMENT

The existing greenway and trail system presents many opportunities and challenges for expansion and improvement. There are limitations to the development of greenways and trails in Cobb County in terms of the topography, driveways and roadway crossings, right-of-way and land acquisition, and private development. However, there are also a number of opportunities to expand the network and leverage existing assets through the use of existing

infrastructure, by focusing on strategic connections to existing facilities, tying into roadway projects, seeking connectivity across jurisdictional boundaries, and taking advantage of publicly owned land. This section briefly discusses some of these challenges and opportunities and how they help frame an overall approach to implementing improvements that meet the ultimate goal of getting more people biking and walking.



CHALLENGES

OVERCOMING OBSTACLES

Cobb County has significant ridges and hills associated with land formations related to the Chattahoochee and Etowah River watersheds and their tributaries, Allatoona Lake, Kennesaw Mountain, and other geologic features. While engineering work can be done to properly grade surfaces to accommodate trails and greenways, this comes at a cost and is not doable in all situations. For example, in areas close to the Chattahoochee River, many roadways are characterized by steep hills not suitable to average runners or cyclists.

Roadway and driveway crossings are another potential challenge. The dominant trail type in Cobb County is currently a sidepath trail alongside roadways. While these do serve many functions and enhance access to important destinations, they also present potential challenges in terms of ensuring safety and comfort for users when crossing driveways and intersections. Driveway and intersection crossings tend to be more frequent on sidepath trails than on other types of trails, given the nature of sidepaths adjacent to roadways. Pedestrian countdown crossing signals, proper striping, and other features can improve safety at such locations. Chapter 4 of this plan document provides additional guidance on design of crossings. Retrofitting existing roadways may prove difficult, but relatively minor changes to the design as part of routine projects can be achieved incrementally.

Other challenges to greenway and trail projects revolve around the available right-of-way in a given corridor and the need to acquire right-of-way or easements. Projects that require acquisition of rights-of-way or property are more complex than those that

do not and in cases where federal funding is used, federal guidelines must be followed. In cases where projects are funded locally or through the State of Georgia, but the project is not on a state highway system, the local agency may use its own acquisition policies and procedures, often speeding up the process. Many greenway and trail projects can fit largely within public rights-of-way, but in some situations, there may be a need to acquire land or easements to complete trails and provide good connectivity to existing development.

Coordination with ongoing and future private development is also an important component of planning greenway and trail projects. New development can be both an opportunity and an obstacle to a greenway or trail project. In some cases there may be opportunities to have portions of trails constructed as part of new projects, in lieu of a standard sidewalk, for example. In other cases, it may be more appropriate to work out an arrangement for dedication of land or an easement. Easements allow landowners to convey to another entity, such as the County, the rights to use land for public purposes, such as a trail, and maintain it without giving up ownership of the land itself. Easements are useful tools, particularly for riparian or greenway trails. Additional discussion of easements and other land acquisition tools is provided in Chapter 6.



COORDINATION WITH ONGOING AND FUTURE PRIVATE DEVELOPMENT IS AN IMPORTANT COMPONENT OF PLANNING AND IMPLEMENTING GREENWAY AND TRAIL PROJECTS

BARRIERS LIKE RETAINING WALLS AND THE PLACEMENT OF UTILITY INFRASTRUCTURE CAN HINDER DESIGN OF GREENWAYS AND TRAILS - THIS SIDEPATH TRAIL PROVIDES LITTLE SEPARATION BETWEEN USERS AND THE ROADWAY



OPPORTUNITIES

LEVERAGING EXISTING ASSETS

Within the existing landscape and context of Cobb County as it is today, there are many opportunities for expanding and growing the greenway and trail network by taking advantage of existing infrastructure and natural features, and by targeting investment to opportunistic projects and logical connections to existing or future facilities.

One of the most intuitive opportunities for expansion of the greenway and trail network is to look at places where there are gaps between existing or programmed facilities. Figure 3-21 shows the network of existing trails along with trails currently under construction, programmed (funded for design or construction) trails, and proposed trails. Between these segments, there are several gaps, highlighted in yellow, where opportunities are available to create a more connected network and provide trails that can accommodate longer rides and get people to more destinations. As shown in the map, trails have been proposed to fill most of the gaps, so while there may not be a strategic need to identify new projects to fill gaps, it will be important to prioritize at least some of these locations for implementation in the future.

Another strategic opportunity to expand the trail network lies in places where trails can provide regional connectivity and stretch across County boundaries to connect with other communities. Of these, several correspond to locations where future trails are proposed or planned, such as near South Atlanta Rd where a connection could be made via the Silver Comet Connector project to trails that link to the Atlanta BeltLine and near Roswell Rd, where a connection could be made into Roswell, improving access to the Chattahoochee Nature Center and Roswell Riverwalk.

Another obvious opportunity exists in the form of recreational facilities and parks. As mentioned previously, Cobb County

currently manages roughly 5,632 acres of parkland. These are logical places for new trails and greenways, extending their reach into the community and making existing facilities more accessible to a wider audience of potential users. Connecting parks and existing facilities to schools and other daily destinations is another key opportunity that should be a strategic focus in the future.

Publicly owned land can streamline the process of building a trail by precluding the need for easements or property acquisition. Cobb County has been strategically acquiring property throughout the County and there are a number of parcels that represent good opportunities for expansion of existing trails or suitable locations for new greenways. Many such publicly owned parcels contain or are adjacent to stream corridors, utility easements, and some floodplains, all of which can be suitable environments for greenway trails, especially considering that they are often restricted in terms of development.

There are also opportunities within the built environment to make strategic investments in new trails and greenways in places where they are likely to serve more users and get more people walking and biking. Following transit corridors, bikeways, and providing access to transit stops are all ways to make the network more accessible and reach a broader user base. Cobb County's transit system already provides opportunities for multimodal trips by providing bike racks on all transit vehicles and by virtue of the sidewalk and trails that are within close proximity of the transfer centers at Marietta and Cumberland. Targeting trail projects within close proximity of bus stops and high transit-use areas can encourage use of both systems – trails and transit.

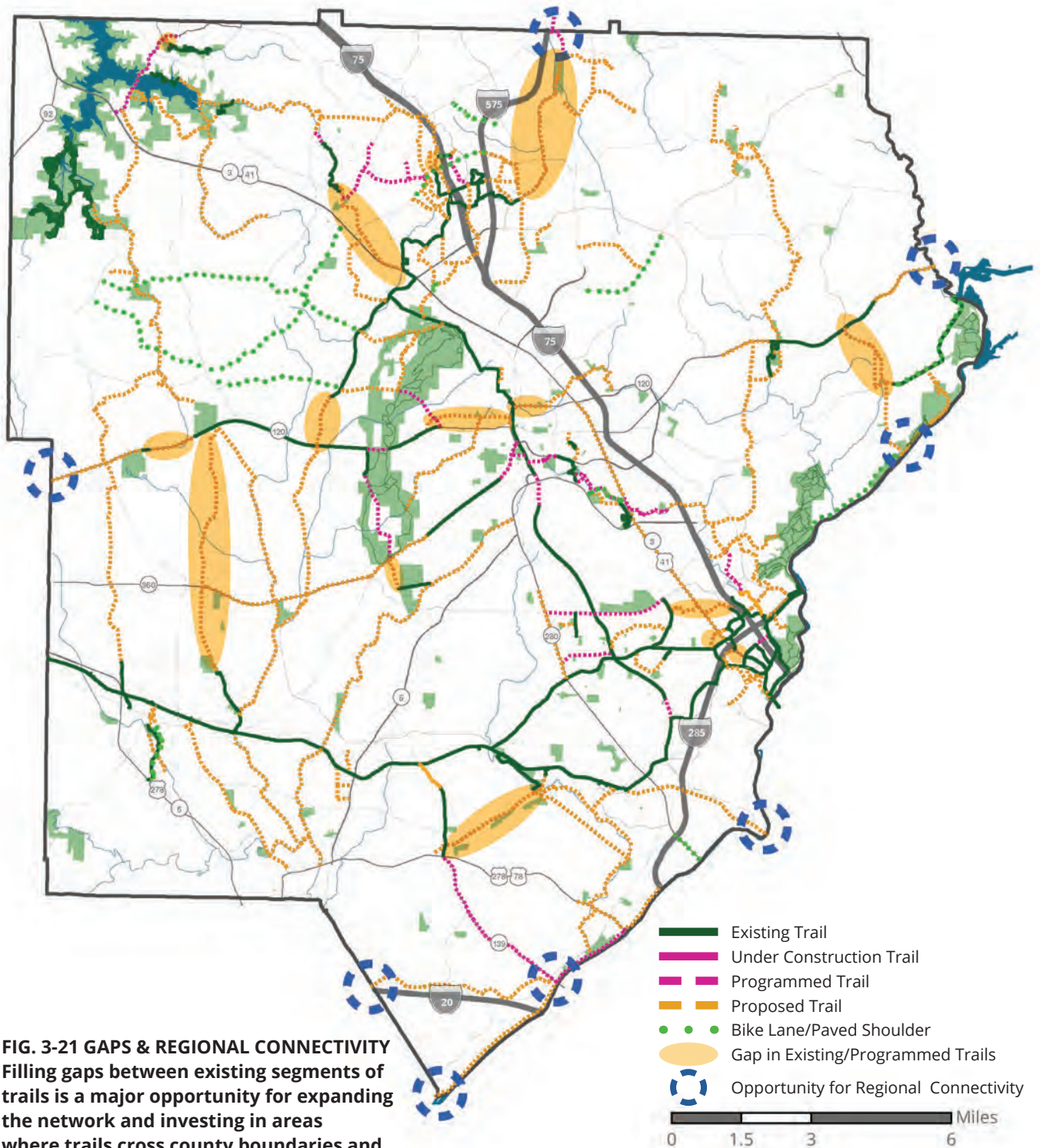


FIG. 3-21 GAPS & REGIONAL CONNECTIVITY
 Filling gaps between existing segments of trails is a major opportunity for expanding the network and investing in areas where trails cross county boundaries and enhance regional connectivity, attracting more users.



THE INDIANAPOLIS CULTURAL TRAIL IS A PREMIER TRAIL FACILITY

4 DESIGN GUIDANCE

BEST PRACTICES AND RECOMMENDATIONS FOR FACILITY DESIGN

Successful trail systems have several common characteristics. The most successful systems embrace a multi-faceted approach that addresses not only physical characteristics and design of trails and greenways, but also considers the people who use them, where they want to go, and how to communicate the way to get there.

This chapter summarizes best practices with regard to design and policy for greenways and trails and using those best practices, offers guidance for Cobb County on the design of greenway and trail facilities as well as intersection and crossing treatments, and greenway and trail signage.



BEST PRACTICES

OVERVIEW

This section summarizes best practices and guidance from national, state, and regional sources.

Convenience, comfort, safety, and accessibility are prerequisite features of vibrant greenway and trail networks. Making people feel safe requires adequate width to allow passing as needed and proper surface material to accommodate a variety of modes of travel. Trail systems should make users of all ages and abilities feel comfortable and welcome. It is essential that beyond concrete or asphalt, a trail include wayfinding, seating, shade, and lighting as appropriate, to encourage and attract users. Ideally, a trail system should provide a variety of experiences that efficiently and conveniently connect residents and visitors to neighborhoods, commercial centers, schools, parks, and other destinations, and provides access to nature and wildlife. Not all of these destinations must be served by the same trails, so long as there is a variety throughout the overall network.

Beyond the trails themselves, successful networks make use of partnerships between local and regional government, local community groups, advocacy organizations,

and other partners to assist with outreach, marketing, programming, and maintenance. Partnerships are important for marketing trails and hosting programs to attract and increase users. While trails can be immensely popular, simply installing a wide, paved surface is not necessarily enough to attract people to use it – creating a welcoming experience and organizing events or activities to raise awareness is also important.

Lastly, it is crucial that greenways and trails are complimented by an on-street network that considers pedestrians' and bicyclists' abilities and infrastructure that is appropriate for the roadway context. Identifying low-stress connections can be difficult in suburban communities given potentially challenging land uses, development patterns, lack of connectivity, and major thoroughfares that divide and isolate neighborhoods. However, a suburban context does not preclude a community from developing an inviting and comfortable pedestrian and bicycle network to complement the existing and future greenway and trail system; the selection of appropriate choices must balance ability levels and context. This *Plan* recommends a combination of new facility types to improve connectivity and get more people biking and walking.

PROVIDE A VARIETY OF EXPERIENCES



TAKE PEOPLE WHERE THEY WANT TO GO





ELEMENTS OF A SUCCESSFUL TRAIL NETWORK

- GOOD DESIGN
- TAKE PEOPLE WHERE THEY WANT TO GO
- VARIETY OF EXPERIENCES FOR ALL AGES & ABILITIES
- SAFE & COMFORTABLE
- RANGE OF TRAIL TYPES FOR ALL USERS
- SUPPORTIVE AMENITIES
- BRANDING & MARKETING
- WAYFINDING & ART
- CONSISTENT, LEGIBLE SIGNAGE
- TRAIL ORIENTED DEVELOPMENT
- USER FRIENDLY MAPS ACTIVITIES & PROGRAMMING
- COMMUNITY PARTNERSHIPS

USER PREFERENCES

Successful trail systems attract a diverse set of users with varied trip purposes. Greenways and trails should be designed to accommodate all users – from the solo skater headed to work, to friends pushing strollers while chatting, to groups of recreational bicyclists out for a ride. Each trip mode and purpose has inherent design considerations based on expected speed, travel, user behavior, and user preferences. For example, people walking or rolling in wheelchairs may require supporting facilities at more frequent intervals along a trail compared to people on bikes who cover greater ground in less time. The following describes general trip purposes and a range of preferences for people making these types of trips:

CASUAL SOCIALIZING

- Wider trails that allow users to walk or ride side by side, or that could accommodate a double stroller
- Supporting facilities like restrooms, water fountains, wayfinding, benches, trash cans, public art, shade trees, and bike parking
- Safe, convenient crossings that minimize delay and out-of-direction travel

COMMUTING/UTILITARIAN TRIPS

- Wider trails that allow for comfortable passing
- Supporting facilities like lighting, secure bike parking, and fix-it stations
- Safe, convenient crossings that minimize delay and out-of-direction travel

EXERCISING AND FITNESS

- Wider trails that allow for comfortable passing
- Supporting facilities like restrooms, water fountains, wayfinding, shade trees, trash cans, and public art
- Longer, contiguous segments of trails

OUTDOOR/NATURAL RECREATION

- Context-sensitive hiking and biking trails in natural settings with varied terrain
- Supporting facilities like restrooms, water fountains, and wayfinding
- Longer, contiguous segments of trails



THE MOST SUCCESSFUL TRAILS SERVE MANY NEEDS, INCLUDING SOCIAL ACTIVITY, UTILITARIAN TRIPS, AND EXERCISE.



NATIONAL GUIDELINES

SUMMARY OF KEY RESOURCES

Transportation design standards and best practices are evolving quickly in the US. As cities and regions compete for economic growth, transportation professionals and decision-makers are increasingly looking for innovative ways to meet the multi-modal transportation needs of communities today and the future. Below is a summary of current references for the design of greenway and trail facilities. The summary is not exhaustive and is meant to highlight important reference documents and resources used in practice. In all cases, engineering judgment is recommended to ensure that the application makes sense for the context of each treatment, given the many complexities of streets, trails, and greenways.

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

The Federal Highway Administration's (FHWA) MUTCD defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic. The MUTCD is the primary source for guidance on lane striping requirements, signal warrants, and recommended signage and pavement markings. The 2009 edition is the most current version, and includes guidance on bike lanes, shared lane markings, and signage related to walking and biking. FHWA also maintains a webpage specifically dedicated to providing official interpretations of which innovative bicycle facilities are allowable, subject to the agency's experimentation process, and disallowed according to the MUTCD.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) GUIDES

The AASHTO Guide for the Development of Bicycle Facilities, updated in June 2012, provides guidance on dimensions, use, and layout of specific bicycle facilities.

The standards and guidelines presented by AASHTO provide basic information, such as minimum sidewalk widths, bicycle lane dimensions, detailed striping requirements and recommended signage and pavement markings. The forthcoming 5th edition of the AASHTO Guide will build on existing guidance and include designs for new and emerging bikeway design treatments.

Offering similar guidance for pedestrian design, the 2004 AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities provides comprehensive guidance on planning and designing for people on foot.

AMERICANS WITH DISABILITIES ACT (ADA)

Meeting the requirements of the Americans with Disabilities Act (ADA) is an important part of any bicycle and pedestrian facility project. The United States Access Board's proposed Public Rights-of-Way Accessibility Guidelines (PROWAG) and the 2010 ADA Standards for Accessible Design (2010 Standards) contain standards and guidance for the construction of accessible facilities. This includes requirements for sidewalk curb ramps, slope requirements, and pedestrian railings along stairs.

NATIONAL ASSOCIATION OF CITY TRANSPORTATION OFFICIALS (NACTO)

The NACTO Urban Bikeway Design Guide (2012) and the Urban Street Design Guide (2013) are nationally recognized urban street and bicycle-specific design guidelines, and offer excellent guidance on the current state of the practice designs. The intent of the guides is to offer substantive guidance for cities seeking to improve transportation in places where competing demands for the use of the right of way present unique challenges.

While different from engineering standards, many NACTO guides are supported by the FHWA when used in conjunction with standard engineering manuals and the MUTCD. FHWA expressed support for the Urban Street Design Guide in 2014 and endorsed the Bikeway

Design Guide in 2013. All NACTO Guide treatments are in use internationally and in many cities around the US.

SMALL TOWN AND RURAL MULTIMODAL NETWORKS

The FHWA's Small Town and Rural Multimodal Networks guide (2016) is a design resource and idea book for small towns and rural communities. It is intended to provide a bridge between existing guidance on bicycle and pedestrian design – often focused on urban places – and rural practice. The guide seeks to encourage innovation and showcases case studies of implementation in peer communities.

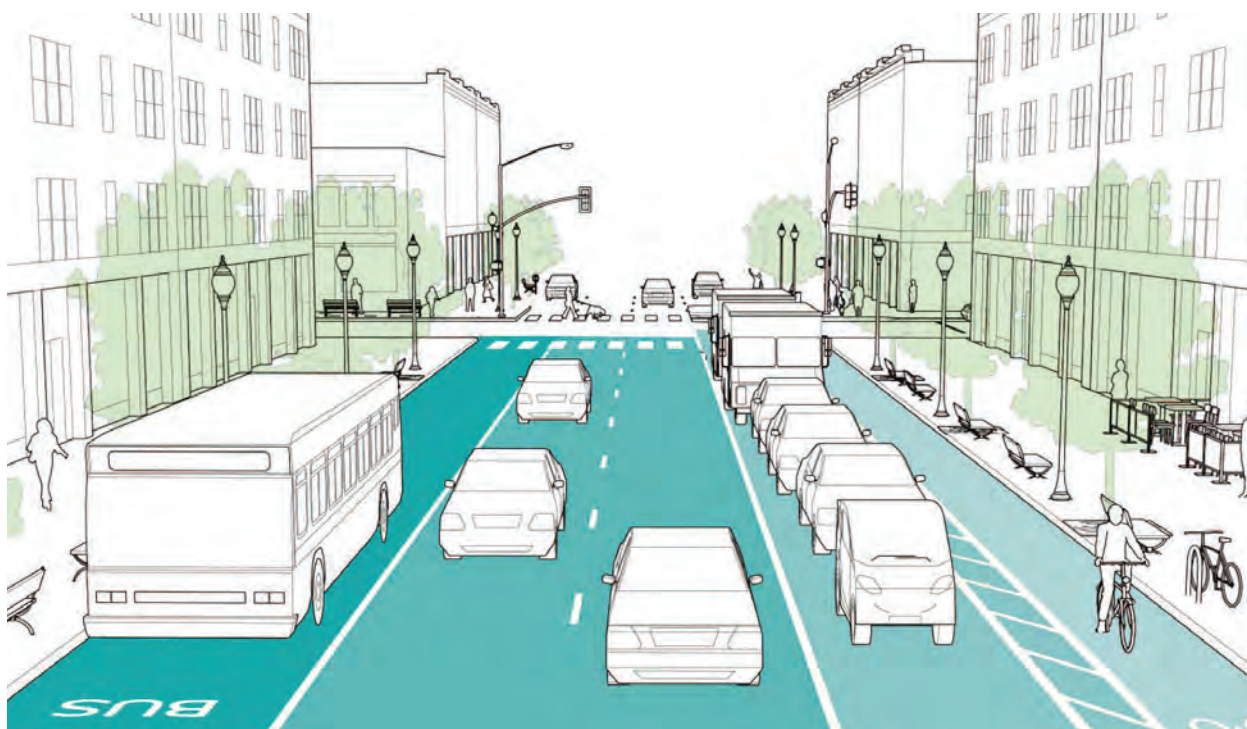
SEPARATED BIKE LANE PLANNING AND DESIGN GUIDE

The FHWA's Separated Bike Lane Planning and Design Guide (2015) outlines planning considerations for separated bike lanes (also sometimes called “cycle tracks” or “protected bike lanes”) and provides a menu of design

options covering typical one and two-way scenarios. It highlights different options for providing separation, while also documenting mid-block design considerations for driveways, transit stops, accessible parking, and loading zones. It provides detailed intersection design information covering topics such as turning movement operations, signalization, signage, and on-road markings. Case studies highlight best practices and lessons learned throughout the document.

MEMORANDUM ON BICYCLE AND PEDESTRIAN FACILITY DESIGN FLEXIBILITY

The FHWA Memorandum on Bicycle and Pedestrian Facility Design Flexibility (2013) expresses the FHWA's support for a flexible approach to bicycle and pedestrian facility design. The memo endorses the use of AASHTO's bicycle and pedestrian facility design guidelines in addition to the NACTO Urban Bikeway Design Guide and the Institute of Transportation Engineers' (ITE) Designing Walkable Urban Thoroughfares: A Context Sensitive Approach.



Source: NACTO Urban Street Design Guide,
<https://nacto.org/publication/urban-street-design-guide/street-design-elements/lane-width/>



STATE & LOCAL GUIDELINES

SUMMARY OF KEY RESOURCES

GEORGIA DEPARTMENT OF TRANSPORTATION PEDESTRIAN & STREETScape GUIDE

The Georgia Department of Transportation's (GDOT) Pedestrian and Streetscape Guide, currently being updated from the 2003 publication, includes a literature review on current best practices and research, provides content for the local and state level, and provides guidance on the design of accessible pedestrian facilities. The document also includes a crossing treatment matrix that considers appropriate treatments based on a variety of extensively research criteria like number of lanes, posted and observed speeds, and roadway geometry.

GDOT DESIGN POLICY MANUAL

GDOT's Design Policy Manual serves as the primary resource for design guidelines and standards adopted by GDOT on all modes of transportation. The manual is updated regularly and lives on the GDOT website. The most recent version, at the time of this writing, is from 2017. It is intended to present both recommended and required design criteria, including accommodations for bicycles and pedestrians. The document encourages a balance of roadway users and local context. Criteria is based on FHWA and AASHTO standards.

ARC'S STRATEGIC REGIONAL THOROUGHFARE PLAN

Although development and facility design are handled at the local level, ARC has developed a resource for local governments on design for active transportation on regional thoroughfares. As part of the 2011 Strategic Regional Thoroughfare Plan, ARC developed Management and Design Guidelines for the Regional Thoroughfare Network, which includes considerations for bicycle corridors (Section 3.4) and "Tool Kits" on Designing for Bicycles and Designing for Pedestrians on Regional Thoroughfares. These guides may be good resources for some corridors.

WALK. BIKE. THRIVE!

In addition, ARC's *Walk. Bike. Thrive!* (2016) provides a toolkit to help local communities become more walk- and bike-friendly. The plan includes guidance on design elements and other criteria that will help projects qualify for funding from the agency

LOCAL GUIDELINES

Trails that are developed within local municipalities or CIDs will need to conform to design guidelines specific to those districts, where they exist. Zoning, development, and land use are controlled at the local level and individual regulations should be consulted for projects within incorporated cities.

While not municipal governments, many CIDs have developed their own design guidelines to shape and inform development within their districts. Examples of recent plans and guidelines include the 2016 Town Center CID Design Guidelines and the 2016 Cumberland CID Bicycle Connectivity Implementation Plan, which summarizes existing design standards and identifies a number of bikeway recommendations, including trail crossing treatments and signage guidance.

Additionally, 15 Livable Centers Initiatives (LCI) studies have been conducted for areas in Cobb County since 2001 (most have also completed subsequent updates to the initial studies). These studies identify land use and transportation improvements for communities and business districts that often include facility design recommendations and build on local character.



***WHERE AND HOW TRAILS
CROSS ROADWAYS ARE
IMPORTANT DESIGN
CONSIDERATIONS***



FACILITY TYPES & CLASSIFICATION

OVERVIEW

This section provides design guidance for several greenway and trail types. The purpose of classifying greenway and trail types is to both inform user choices as well as decision-making about design and implementation, based upon user characteristics and surrounding context, demand, cost, accessibility, and limitations.

Cobb County's current greenway and trail system provides a variety of user experiences via several different types of trails. Its system includes both paved and unpaved trails, some that have boardwalk, some that are along roadways, and others that follow creeks or streams. This *Plan* recommends a classification system that acknowledges the physical settings of trails as well as their connectivity functions and purposes. The classification system also intends to address plan goals for improving connectivity, increasing access to destinations and activity centers, and expanding transportation and recreation options.

Within the realm of greenways and trails, distinctions are often drawn between trails alongside roadways, often called sidepaths, and trails within their own right-of-way; however, there are many other ways to think about and classify trails and greenways, such as the surface type (paved or unpaved), the user type (hikers, cyclists, or both), or the physical setting of the trail (urban area,

natural area or greenspace). The following pages offer a set of recommended greenway and trail classifications with design guidance for each typology. These classifications provide a useful way of thinking about the various types of facilities and connections that can be used to create a cohesive, connected network, linking greenways and trails to bike lanes, sidewalks, and other active transportation facilities.

Trail categorization can be used for existing and proposed trails, and help establish which types of trails are appropriate or suitable for a particular corridor. Trail categories account for a range of factors, including usability, experience, safety, and providing comfort options where accessibility is still necessary but resources or priority levels may not be high. Identifying key destinations and neighborhood connections will help determine where adequate and inadequate conditions exist for trails' respective user types. Designated trails may vary in width based upon their context and adjacencies. For instance, if a trail adjoins a stream, is along steep topography, or near a rail corridor, width may need to be adjusted to accommodate these features and allow the system to function. The corridor width may also vary based upon the amount of existing development, the existence of significant sensitive environmental areas, and patterns of property ownership.

Cobb County's current typical multi-use trail cross-section is an eight to 12-foot two-way concrete paved trail, generally located alongside a roadway. These typically have a three-foot buffer or median between the trail and the road curb or edge, although in many cases, the buffer is two feet wide or less. In order to make cyclists and pedestrians feel safer and more comfortable, and therefore increase trail usage, it is recommended to expand the buffer between the roadway and trail wherever possible.

To develop a comprehensive and interconnected trail network, Cobb County should also work to preserve greenway corridors, provide adequate land for trails where appropriate, and balance privacy and connectivity to adjacent land uses. Cobb County should also make reasonable attempts to protect the various greenway corridors by encouraging preservation and/or trail-oriented development, where appropriate based upon location and context,

through local and county policy. Such policy may include limitations on development, dedications of land for greenways, restrictions on driveways and curb-cuts, and the use of easements for planned and proposed trails.

For all Cobb County trail types, a consistent fit and finish should be established for trail amenities such as lighting (where appropriate), seating, bicycle parking, landscape, wayfinding signage, and other site furnishings to enhance experience and encourage use. An established "look" for Cobb County trails will also enhance the trail system brand and identity. The fit and finish package should be developed as a standalone guide. It should include information about materials, colors, and placement of amenities that are compatible with other county facilities. Ideally, the fit and finish guide provides more detailed guidance that can be used by developers, county staff, neighboring jurisdictions, and trail consultants as the County's system is implemented.





GREENWAY TRAILS

DESCRIPTION & GUIDANCE

Greenway Trails are recreationally focused trails that fall outside the roadway network in a more natural setting. The trails themselves are bi-directional paths for all non-motorized user types. Greenway Trails may cross roadways, but do not typically follow roadway routes for more than a short distance. Greenway Trails are paved, typically off-street paths between ten and 14 feet wide. Sometimes utilizing right-of-way or public park space, they are accessible paths for a variety of active transportation and recreational activities.

Greenway Trails can sometimes provide easier and faster access for pedestrians and bicyclists compared to the on-road network because they can take more direct routes through certain types of lands, but are primarily beneficial for comfort and safety reasons. Because Greenway Trail users are not typically traveling adjacent to a roadway, there are generally fewer potential conflicts between vehicles and trail users, creating a safer environment. Where roadway crossings do occur, they should focus on trail user visibility, minimizing the length of crossing distance, and increasing motorists' awareness of Greenway Trail users.

Greenway Trails represent the highest order of comfort and safety in the trail classes and are often preferred over sidepath configurations given the opportunity to reconnect with the natural environment and reduced interaction with motor vehicles.

A good example of a Greenway Trail in Cobb County is the **Noonday Creek Trail** in the Town Center area, as shown on the following page.

USER TYPES

- Balance of commuter and recreational use with high volumes
- Pedestrians, bicyclists, dog walkers, runners, strollers, skaters, wheelchair and Segway users

POTENTIAL CONFLICTS

- High user volumes
- Wide range of multiple user types with sometimes high speed differentials
- Inadequate width on some existing Greenway Trails
- Environmental constraints (e.g. streams, property ownership)

GUIDANCE

- Standard width: 12 feet minimum (up to 16 feet in areas with projected high use volumes to minimize user conflict)
- Lighting may be installed as necessitated by use and location
- Wayfinding, regulatory, and etiquette signage is critical to minimize the impacts of high user volumes, bicycle speeds, inappropriate uses, and multiple uses and activities
- Prioritized amenities include restrooms, water fountains, waste receptacles, seating, art, and lighting
- Surface tread material: concrete or asphalt
- Yellow dashed centerlines can indicate direction of travel and remind users that the path is intended for multiple modes
- Maintain vegetation and landscaping to provide a buffer on both sides of the trail to enhance safety, visibility and comfort for the user

It is also recommended to document and log any problems and identify trends or problem spots for mitigating user conflict.



FIG. 4-1 GREENWAY TRAIL



NOONDAY CREEK TRAIL



SIDEPATH TRAILS

DESCRIPTION & GUIDANCE

Sidepath Trails are primarily transportation focused trails that run adjacent or parallel to the roadway and are often within the roadway right-of-way. They aim to create specific connections between residential, commercial, and interest areas, such as schools or parks. Sidepath Trails provide access to adjacent land uses, since they use the existing roadway network. These corridors typically connect to Greenway Trails and collect users from adjacent trails and on-road bicycle and pedestrian facilities.

Sidepath Trails should be 12 to 14 feet wide with a minimum five-foot buffer between the sidepath and the curb, according to the *AASHTO Guide for the Development of Bicycle Facilities 4th Ed.* Sidepath Trails offer a more comfortable experience than conventional bicycle lanes because they are behind the curb, and they tend to be more comfortable than sidewalks because they are wider and have a larger buffer. Among trail typologies, Sidepath Trails offer fewer safety and comfort benefits compared to off-road trails, but can offer many safety, comfort and access improvements over a corridor with minimal biking or walking infrastructure.

Examples of Sidepath Trails in Cobb County include portions of the Mountain to River Trail, **Concord Road Trail** (see following page), and East Cobb Trail on Roswell Rd.

USER TYPES

- Balance of commuter and recreational use with moderate to high volumes
- Pedestrians, bicyclists, dog walkers, runners, strollers, skaters, and wheelchair and Segway users

POTENTIAL CONFLICTS

- Frequent conflict points at roadway intersections and driveways
- Speed differential between trail users and roadway users – sidepaths are sometimes located along roads with posted speed limits of 40 MPH or more,

posing potential comfort and safety risks, especially at crossings

- High volumes of roadway users
- Lack of protection from adjacent roadway
- Multiple trail user types with potentially high speed differentials
- Best practices conflict with typical roadway design standards – for example, depending on posted or design speed, trees may not be allowed in the clear zone, thereby potentially reducing user comfort levels and limiting the potential for success of the sidepath

GUIDANCE

- Located within roadway rights-of-way
- Standard width: 12 feet (up to 14 feet in areas with projected high use volumes); five feet minimum buffer between sidepath and roadway
- Vegetation in the buffer between the sidepath and roadway can provide environmental benefits for urban heat island effects and stormwater collection and filtration; positive economic impacts on adjacent properties; beautification; and increased comfort and perception of safety for users
- Lighting may be installed at intersections as needed by use and location, including at intersections with other trails
- Wayfinding, regulatory, and etiquette signage is recommended to guide mix of uses and encourage trip planning
- Prioritized amenities include: water fountains, waste receptacles, seating, and art at periodic locations where collector trails or on-street facilities extend distances (recommended at over one mile)
- Surface tread material may be concrete or asphalt depending on existing conditions
- Consistent alignment, surface grading, crossing markings, and space allocation are important at intersection points and driveway crossings
- Intersections should be signalized, ideally for all users

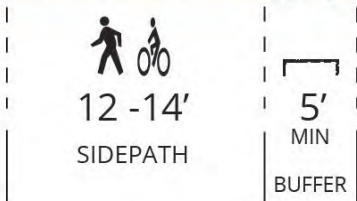


FIG. 4-2 SIDEPATH TRAIL





NEIGHBORHOOD CONNECTOR TRAILS

DESCRIPTION & GUIDANCE

In some cases, short segments of sidewalk fill gaps between greenway or trail segments, especially in residential areas; however, where appropriate and feasible, it is preferable to construct Neighborhood Connector Trails that can also accommodate bicyclists, as well as pedestrians.

Neighborhood Connector Trails are relatively short segments of trail or greenway that create links between otherwise disjointed parts of the low-stress walking and biking network. A Neighborhood Connector Trail may extend, for example, from a Sidepath Trail into an adjacent retail center or between otherwise disconnected neighborhood streets to extend the low-stress walking and biking network. Their primary purpose is to enhance connectivity and recreation by creating shortcuts that reduce the need for pedestrians and cyclists to travel out of their way or use high-stress roadways.

Neighborhood Connector Trails are shorter segments that provide a high level of access to targeted destinations, such as residential areas, parks, retail, employment, transit service, and entertainment destinations where there is no existing connection in the road network. They often resemble sidewalks but are wider and intended for multiple uses. They tend to pass directly through or adjacent to residential areas in order to improve access to nearby amenities. Surface materials vary based upon the specific setting and context.

Examples of Neighborhood Connector Trails in Cobb County include the connector between East Cobb Park and Robinson Road, the Dillard Street Silver Comet Connector, and the **Whispering Lake Trail** in Kennesaw, shown on the following page, which weaves its way between parks, neighborhoods, and other destinations.

USER TYPES

- Primarily recreational use with moderate volumes by local residents
- Some transportation use, particularly in areas near destinations like schools, grocery stores, or community facilities
- Pedestrians, bicyclists (depending on trail surface), dog walkers, runners, strollers, wheelchair users (depending on surface)

POTENTIAL CONFLICTS

- Trail intersection conflicts
- Entrances to parking lots or neighborhood streets

GUIDANCE

- Corridor widths should allow for sufficient buffering (vegetative or fencing) between adjacent properties
- Provide connections to adjacent land uses, existing or planned sidewalks, and bicycle facilities
- Connections are sometimes made between lots in subdivisions where appropriate and where easements allow
- Width: 12 feet preferred, 10 feet minimum,* 14 feet in highly specific locations where space, environmental conditions, and DOT judgment allows
- Surface tread material: concrete, asphalt, granite fines, or bare earth depending on existing conditions, projected volume of use, and location in floodplain
- Prioritized amenities include waste receptacles and public art
- Proper wayfinding signage, consistent with other trail signage, for the connecting use with orientation or directional signage for visitors who may not be as familiar with the area

**AASHTO's 2018 update is anticipated to include a 12-foot minimum width for multi-use trails.*



FIG. 4-3 NEIGHBORHOOD CONNECTOR TRAIL



6 -14'

TRAIL

WHISPERING LAKE TRAIL





GREENWAY CONNECTORS

DESCRIPTION & GUIDANCE

Greenway Connectors are on-street bikeways, ideally accompanied by parallel sidewalk for pedestrians, that are considered part of the trail network. They serve to connect greenway or trail access points, so they are considered part of the trails system even though they are not necessarily in a dedicated right-of-way.

Greenway Connectors may be in the form of shared paved shoulders, shared lanes, or dedicated bike lanes, and are more transportation-oriented in character. They function to connect users to the larger greenway trail system, with few recreational amenities provided.

In some cases where a sidewalk already exists and provides a direct link to a greenway or trail, it may be considered a form of Greenway Connector; however, to truly be considered part of the trail network, a facility should be bike-able. Bicycles are generally not permitted on sidewalks, except in the case of children. Sidewalks are not to be considered a substitute for sidepaths or greenways because they are not designed as multi-use paths. Because they serve to close gaps between otherwise separated trail types, their design should focus on maintaining a continuity of the trail experience and as high a level of comfort, safety and access as possible.

An example of a Greenway Connector in Cobb County is **Columns Drive** between the Johnson Ferry South and Cochran Shoals CRNRA park units, shown on the following page.

USER TYPES

- Pedestrians, bicyclists, runners, wheelchair users

POTENTIAL CONFLICTS

- Roadway intersection/crossing conflicts
- Driveway access management (within roadway rights-of-way)
- Motorist and bicyclist/pedestrian conflicts
- Restricted right-of-way widths

GUIDANCE

- Factor in the distance between destinations, adjacent land use, and population density along roadways when designating active transportation facilities as part of the trail network
- Provide connections to adjacent land uses, existing or planned sidewalks, and bicycle facilities
- Roadway speed, traffic volumes, number of lanes, qualitative knowledge, connectivity, and access to destinations should be considered when querying and identifying potential facilities for Greenway Connectors.
- Bikeway width: six feet preferred, five feet minimum without a buffer
- Few recreational amenities are provided, except in the case of unique settings/situations
- Wayfinding, regulatory, and etiquette signage is recommended to encourage trip planning and reduce motorist and greenway trail user conflicts
- Where short segments of existing sidewalk provide direct connections to Greenway Trails or Sidepath Trails, provide wayfinding signage indicating the sidewalk is part of the trail network
- Sidewalks should not be substitutes for Sidepath Trails or Greenway Trails, except in limited applications that provide direct connections and/or where sidewalks already exists.

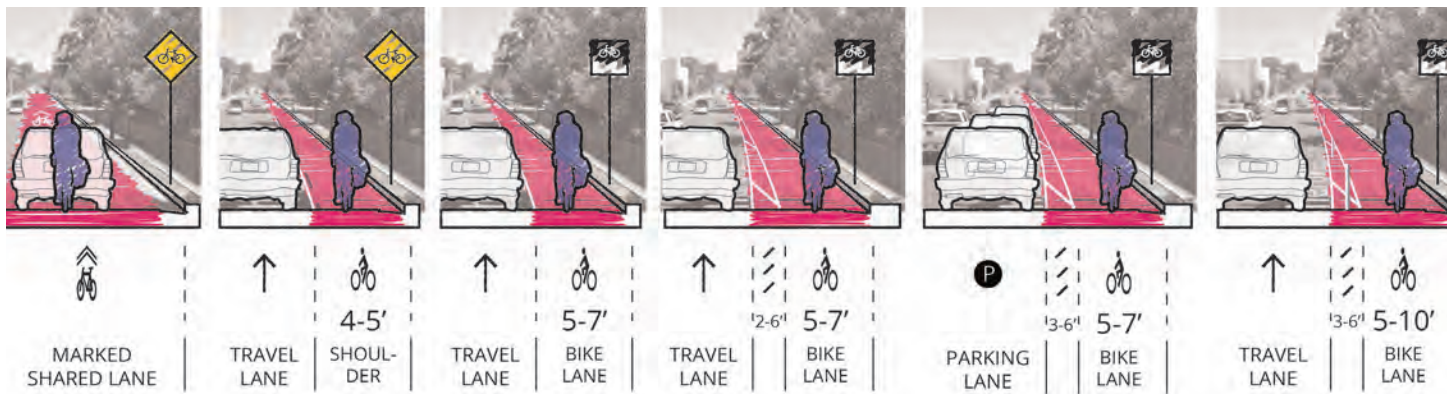


FIG. 4-4 VARIOUS TYPES OF GREENWAY CONNECTORS



COLUMNS DRIVE IS A GREENWAY CONNECTOR, LINKING TRAILS AT JOHNSON FERRY NORTH AND COCHRAN SHOALS CRNRA UNITS



UNPAVED RECREATIONAL TRAILS

DESCRIPTION & GUIDANCE

Unpaved recreational trail systems are divided into “single track” trails, which are 18 to 24-inch-wide treads and necessary to access rough, steep terrain or require a limited footprint, and “road width” or “double track” trails – which may use former utility easements that are adapted for use as trails. Generally speaking, most unpaved trail systems are intended for multiple uses. With the exception of mountain bike skills courses which are exclusive to their users, unpaved recreational trails are designed and constructed to accommodate both bicyclists and pedestrians, and some also accommodate horseback riding. However, not all unpaved recreational trails are open to bicyclists. Unpaved recreational trails occasionally link to other trail types, but for the most part they are recreational and considered to be their own destination.

Examples of unpaved recreational trails in Cobb County include trails in the Chattahoochee River National Recreation Area, Kennesaw Mountain National Battlefield Park, and Allatoona Creek Park. One of the **Sope Creek Trails** is shown on the following page.

USER TYPES

- Mountain bicyclists, hikers, trail runners

POTENTIAL CONFLICTS

- Biker/hiker conflicts
- Natural resource impacts
- Erosion/drainage issues

GUIDANCE

- Follow natural contours. Trails lie on the land in three ways: along the fall-line, along the contour, or on flat ground. Only the contour trail on the side-slope easily sheds water and is thus sustainable. It is also less steep, and more functional for a broad range of users.
- A trail’s gradient (percent slope) should not be any greater than half the grade of the side slopes (called the half rule). This

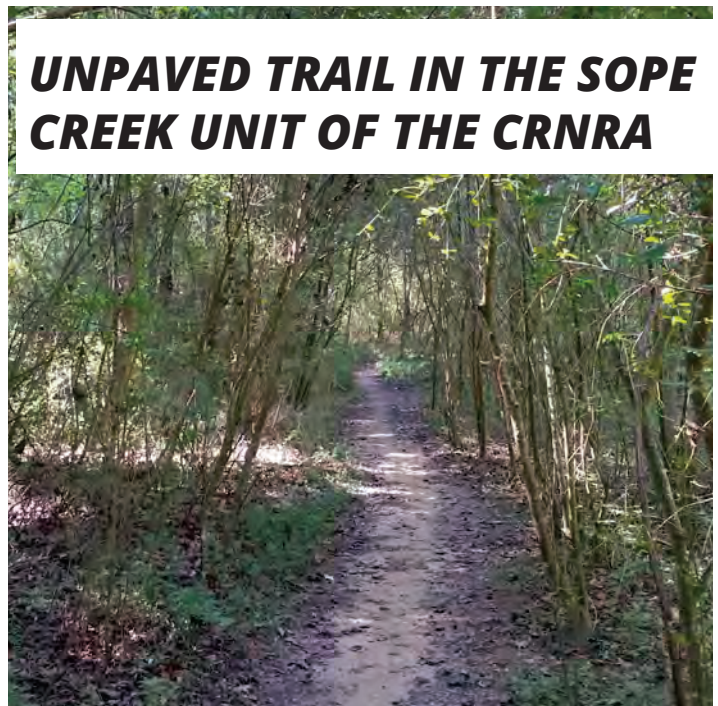
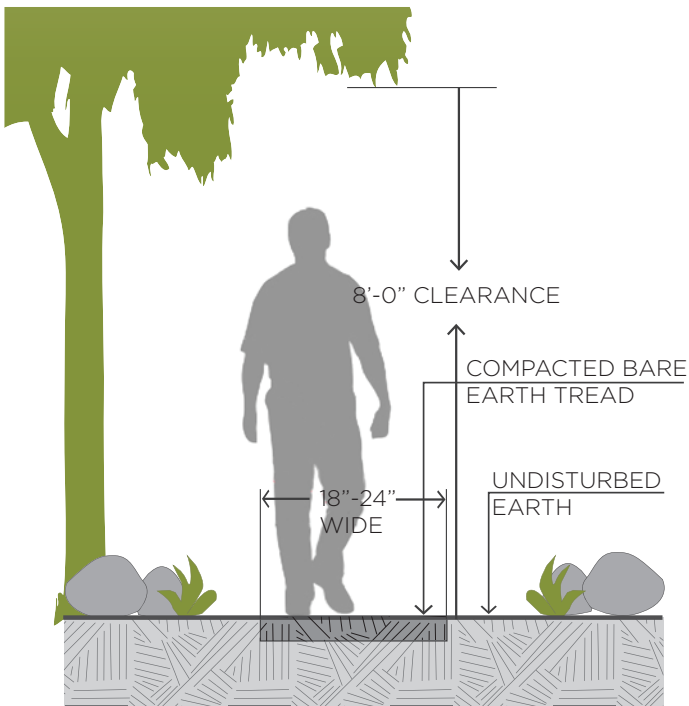
will allow water to sheet across the trail and continue down the outslope. This is especially important along gentle slopes.

- An average trail grade of 10% or less will be most sustainable on most soils and for most users. Typical maximum grades should be determined early in the planning process. They may vary from 15 to 25% and are site specific, depending upon factors such as soil, rainfall, grade reversals, and user characteristics.
- The trail tread should be outsloped (sloped away from the hillside) at three to four percent. This will allow water that comes on to the trail to flow off downhill and not be channeled down the trail.
- If feasible, use full bench (not half bench) trail construction on steep side slopes. The outside tread is much less likely to fail or be worn away. Partial bench trails are typically feasible only on slopes of 20 percent or less.
- Avoid fall lines (the shortest route down a hill), as this is the same path that water flows. Trails on fall lines strip the trail of soil, exposing roots, creating gullies, and scarring the environment.
- Avoid flat areas. Flat terrain may seem like easy trail construction; however, if a trail is not located on a slope, there is the potential for the trail to become a collection basin for water. The trail tread must always be slightly higher than the ground on at least one side of it so that water can drain properly.
- Consider a directional-by-day policy to limit conflict and reduce tread wear patterns.
- Post wayfinding signage on trails with complex courses. Include rules and regulations such as discouraging users to ride wet trails.

Note: For more information on sustainable unpaved trail construction, visit the International Mountain Bicycling Association (IMBA) website: <https://www.imba.com/resources/trail-building/designing-and-building-sustainable-trails>



FIG. 4-5 UNPAVED RECREATIONAL TRAILS





EQUESTRIAN TRAILS

DESIGN NEEDS

On trails that permit equestrian uses, riders on their mounts are the heaviest, widest and tallest potential user type. Mounts include horses, mules and donkeys, which all vary in size. Size depends on breed and age. Trail stock usually weigh between 800 and 1,500 pounds, and a well-conditioned horse or mule can carry up to 20% of their body weight.

Trails reserved exclusively for equestrians are also called “bridle trails”, “bridle paths”, or “bridleways”. The needs of equestrian trail users are unique due to the natural flight instinct of horses when startled.

In Cobb County, equestrian trails occur in remote or rural parts of the county. Riders in these settings are typically concerned with visibility, potential conflict with other users, and natural hazards. Where equestrian trails may occur in more urban settings, a shared trail will likely be necessary since single use trail opportunities are limited in the county. Shared-use equestrian trails can serve both pedestrians and equestrians, as they both travel easily on unpaved surfaces and move at relatively slow speeds. However, equestrians and bicyclists are not typically compatible on the same tread. For instance, quiet, fast-moving cyclists can startle a horse. In areas where trail user conflicts seem likely, efforts should be made to physically separate non-compatible user groups.

Riders may recreate individually or in groups for pleasure, exercise or challenge. While some equestrians prefer wide, gentle trails, others seek a technically challenging route.

USER TYPES

- All ages
- Leisure and professional riders
- Organized groups
- Range of abilities including novices and people with disabilities

POTENTIAL CONFLICTS

- Equestrian/biker conflicts, in some cases
- Erosion/drainage issues

GUIDANCE

- Horizontal clearance will vary based on the setting. Trails should provide enough space so that a horse feels at ease.
- Horses prefer to travel away from walls or barriers that they cannot see through or over and are most comfortable traveling in the tread that other stock have traveled. USDA/FHWA suggested widths for a standard single-track horse trails are shown on the following page.
- A horse on a single-track requires a minimum of 1.5 feet of tread width with two feet horizontal clear width on each side to accommodate horse and rider. Horses will often travel eighteen inches from a trail edge or tread surface. Single-track treads vary from 1.5 feet in wild areas to eight feet in urban areas.
- Many double-tracked equestrian trails are designed to be five to six feet wide with a two foot clear or shy distance on each side of the tread. A double-track tread allows equestrians to ride side by side while also providing a comfortable passing distance. This is a common configuration for moderately developed trails in rural settings. In developed areas, double-track treads are often eight to twelve feet wide.

TABLE 4-1. SUGGESTED WIDTHS AND CLEARANCE FOR A STANDARD, SINGLE-TRACK HORSE TRAIL

Trail Element	Low Development	Medium Development	High Development
Tread Width	1.5 - 2 ft	3 - 6 ft	8 - 10 ft
Clearing Width (horizontal)	5.5 - 8 ft <i>(Tread + 2-3 ft each side)</i>	9 - 12 ft <i>(Tread + 3 ft each side)</i>	14 - 18 ft <i>(Tread + 3 ft each side)</i>
Vertical Clearance	10 ft	10 - 12 ft	10 - 12 ft

Source: USDA/FHWA Equestrian Design Guidebook for Trails, Trailheads, and Campgrounds

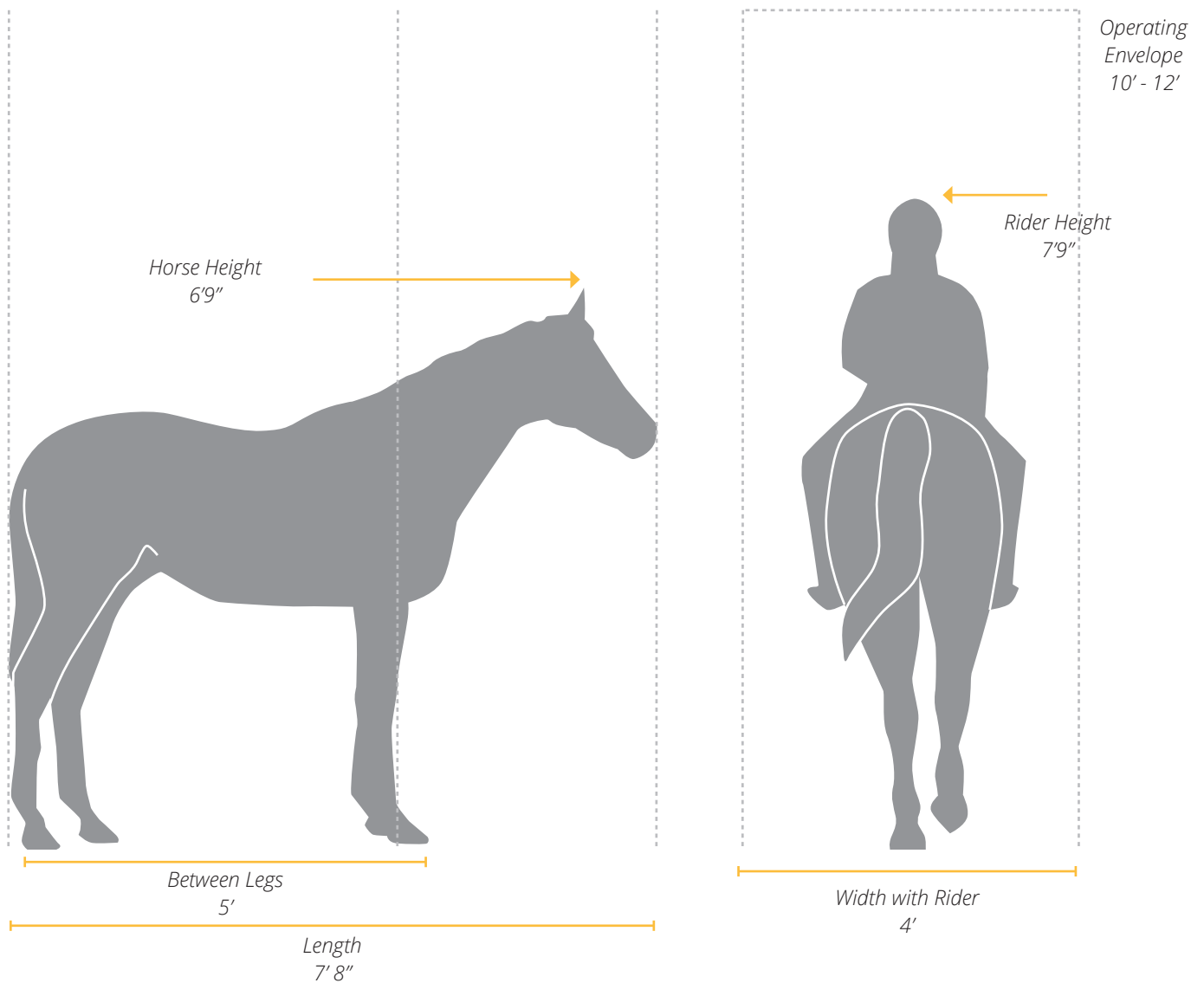


FIG. 4-6 EQUESTRIAN DIMENSIONS



OTHER TYPES OF TRAILS

PARK TRAILS

As described in Chapter 3, County and City parks are home to dozens of miles of trails. Trails within parks are generally designed to the specific local context of individual parks. As a plan of the Cobb County Department of Transportation, this plan is focused on trails outside of park properties. The County's Trail Planning map does illustrate the location of some park trails, especially where connections are provided to trails outside of parks properties. For guidance on park trail siting and design, consult the Cobb County P.A.R.K.S. Department *Comprehensive Master Plan Update*.



DIRTways

In an effort to increase access to recreation and expand the trail network in a quick and cost-effective manner, some communities have launched the practice of building rough, unpaved temporary trails while waiting for paved greenways and trails to be planned and built. Mecklenburg County, North Carolina uses land already set aside for paved greenway extensions to create natural surface trails, adding miles of trails more quickly and at lower cost. Called "DIRTways," the corridors are unpaved, rugged temporary trails located on Mecklenburg County greenway property.



Source: Charlotte Observer, <http://www.charlotteobserver.com/news/local/community/lake-norman-mooresville/article57728328.html>

Because it takes several years for a paved Greenway to be developed, DIRTways give citizens an opportunity to enjoy the undeveloped greenway property in the meantime. Users can expect a less manicured experience, such as mud puddles, tall grass, small creek jumping, and activities that may not be suitable on paved trails. DIRTways do not provide parking areas and are only accessible by foot. This practice is recommended in areas where it may take time to plan and design trails where land has already been acquired. For additional information about this recommendation, see Chapter 5.

INTERSECTIONS & CROSSINGS & INTERSECTIONS

SUMMARY AND GUIDANCE

The design and treatment of intersections where trails meet roadways is an important component of the overall greenway and trail network. Intersections can be challenging to navigate and may be some of the places trail users are most vulnerable. Vulnerability of bicyclists and pedestrians ought to be considered when designing facilities where non-motorized and motorized users interact. This section provides guidance on the design of various types of crossings and intersections with suggestions rooted in best practice.



ELEVATED CROSSINGS

DESCRIPTION & GUIDANCE

Grade-separated crossings provide critical non-motorized system links by joining areas separated by barriers such as deep ravines, waterways, or major transportation corridors. Safety should be the primary consideration in the design of such crossings. Specific design and construction specifications will vary for each elevated crossing and can be determined only after all site-specific criteria are known.

Trail overpasses can be very costly; as such, they should be targeted to the areas of greatest need. There are often opportunities to retrofit greenway and trail structures to existing roadway bridges, such as by cantilevering the trail onto the bridge, or attaching the trail to the substructure of the bridge, which may help reduce costs compared to constructing an entirely new bridge.

A 'signature' bridge should be considered in areas of high visibility, such as over major roadways. While often more expensive, a more artistic overpass will draw attention to the trail network, and could serve as a regional landmark.

Crisscrossed by a vast system of creeks and streams and major roadways, including interstate highways like I-75, I-285, and I-575, Cobb County has numerous bridges. Several such bridges already provide bicycle and pedestrian access. The Skip Spann Connector, trail bridge over South Marietta Pkwy, and pedestrian bridge at SunTrust Park are examples of signature bridges constructed with features specifically for bicyclists and pedestrians. As the future trail network is built out, it is likely additional trail overpasses will be needed to facilitate expanded connectivity.

GUIDANCE:

- 10 feet minimum clear width, 14 feet preferred. A separate five-foot pedestrian area may be provided for facilities with high anticipated use.
- 10 feet minimum vertical clearance on overpass decking. Vertical clearance from bridge cords to roadway will vary based on roadway type.
- Overpass decking should include centerline striping.
- Americans with Disabilities Act Accessibility Guidelines (ADAAG) strictly limit ramp slopes to five percent (1:20) with landings at 400 foot intervals, or 8.33% (1:12) with landings every 30 feet.
- Railings, fences, and barriers on shared-use greenways and trails must be of uniform height. AASHTO recommends a minimum height of 42 inches on stand-alone structures. Refer to local or state jurisdiction for guardrail specifications.
- Vertical woven wire curved fencing can be installed to protect both users and motorists below. Refer to local specifications for material and vertical height requirements.
- Always consult a structural engineer before completing bridge design plans, before making alterations or additions to an existing bridge, and prior to installing a new overpass.
- When bridging GDOT-owned roadways, air rights and other encroachment approvals will be required.



FIG. 4-7 ELEVATED CROSSING





UNDERPASSES

DESCRIPTION & GUIDANCE

Like elevated crossings, underpasses, or tunnels, provide options for greenways and trails to cross roadways without at-grade crossings. An underpass may be a good option where a greenway or trail follows a previously graded alignment like a rail corridor that has existing tunnels, or where the trail grade is significantly lower than the roadway.

Safety is a major concern with underpasses. Shared use path users may be temporarily out of sight from public view and may experience poor visibility themselves. Poorly maintained underpasses can create unsafe feeling conditions, discouraging use. To mitigate safety concerns, an underpass should be designed to be spacious, well-lit, and completely visible for its entire length from end to end.¹ Tunnels should be designed to allow maximum natural light and with wide openings to be more inviting to pedestrians and bicyclists. Longer underpasses should be equipped with emergency call boxes.

Examples of trail or greenway underpasses can be seen along sections of the Noonday Creek Trail, where it passes beneath busy roads and highways and along the Atlanta BeltLine, which follows a former rail corridor. There are locations in Cobb County where proposed and priority trails, such as the Silver Comet Connector and the Allatoona Creek Greenway will need to pass beneath existing roadway bridges. The photo at right shows one such location along the future Silver Comet Connector Trail.

GUIDANCE:

- Underpasses should have a minimum width of 14 feet, with greater widths preferred for tunnel lengths over 60 feet. As an exception, in constrained conditions, underpass width may be reduced to 10 feet minimum.
- Underpasses should have minimum 10 feet vertical clearance. A balanced ratio of 1.5:1 width to height is desired.
- Underpasses should include lighting for personal security and safety.
- Underpasses should not have blind curves.
- Access by emergency, patrol, and maintenance vehicles should be considered during design.
- Bridges along creeks or waterways may require special consideration due to the presence of floodplains and the need for enhanced treatments.
- **Typical application:** There are no minimum roadway characteristics for considering grade separation. Depending upon the type of facility or the desired user group, grade separation may be considered in many types of projects.

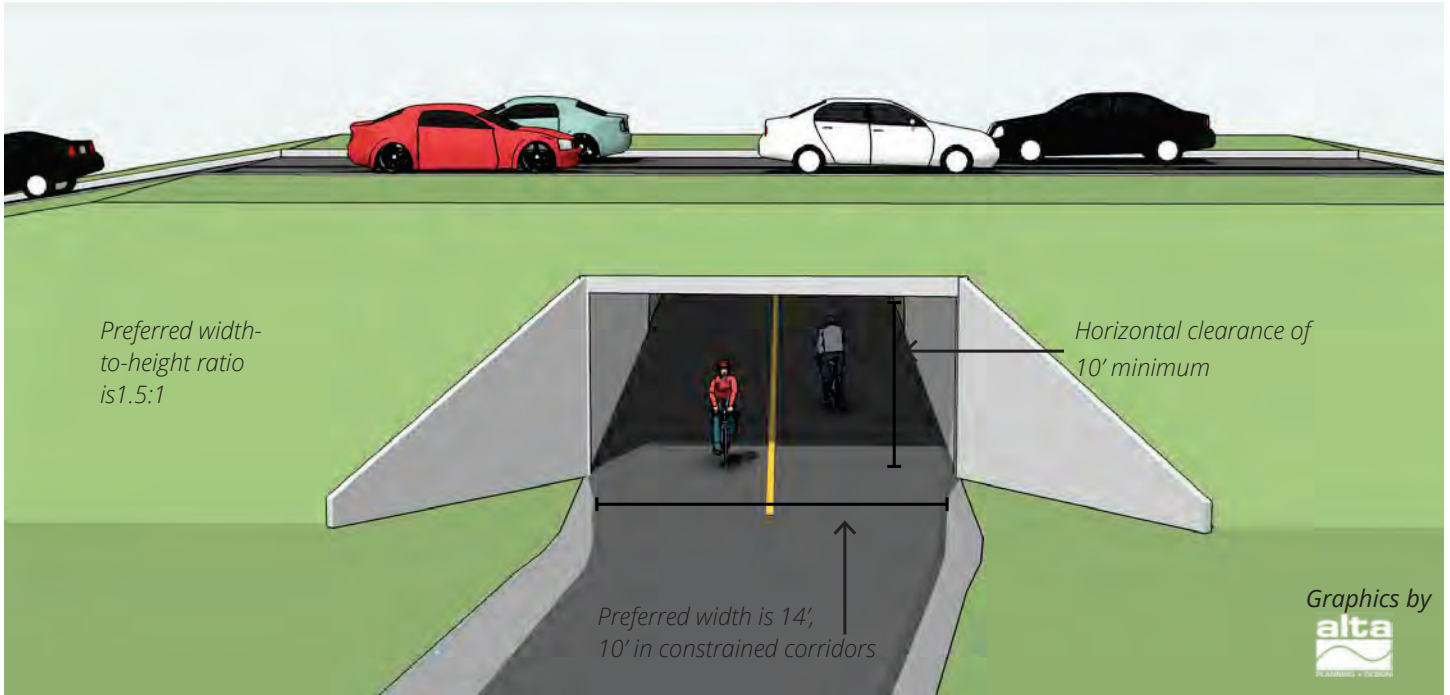


FIG. 4-8 UNDERPASS CROSSING





SIGNALIZED CROSSINGS

DESCRIPTION & GUIDANCE

Signalized crossings provide the most protection for users through the use of flashing beacons or red-signal indication to stop conflicting motor vehicle traffic. Signals can come in the form of rectangular rapid-flashing beacons, pedestrian hybrid beacons, or full traffic signals. Each signal should be paired with high-visibility crosswalk markings. Engineering judgment and the context of the location should be taken into account when choosing the appropriate allowable setback. Pedestrians are particularly sensitive to having to travel out of their way and undesired mid-block crossings may become prevalent if the distance is too great.

RECTANGULAR RAPID-FLASHING BEACON

- Rectangular Rapid-Flashing Beacons (RRFB) are “pedestrian-actuated conspicuity enhancements” intended to facilitate safe crossing at unsignalized intersections or mid-block marked crosswalks.² The FHWA gave interim approval (IA-21) and guidance for use of RRFBs in March 2018. They are used to supplement standard pedestrian, school, or trail crossing warning signs mounted on posts along the road or suspended overhead above travel lanes.
- RRFBs have been shown to increase motor vehicle yielding compliance at crossings of multi-lane or high-volume roadways.
- **Typical application:** Use RRFBs at high-volume shared-use path crossings.

PEDESTRIAN HYBRID BEACON

- A Pedestrian Hybrid Beacon (PHB), also called a HAWK Beacon, consists of a signal-head with two red lenses over a single yellow lens on the major street, and pedestrian signal heads for the shared-use path. A PHB is distinct from pre-timed traffic signals because it turns off when not in use and is only activated when needed.
- **Typical application:** Use PHBs at high-volume shared-use path crossings where there are also high vehicle volumes.

The FHWA *PHB Guide* states, “If a traffic control signal is not justified or warrants are not met through an engineering study...[Agencies must pursue solutions], such as PHBs, to improve safety for pedestrians and motorists” (p.11).

FULL TRAFFIC SIGNAL

- Full traffic signals provide the most protection for path users by stopping conflicting vehicular traffic with red-signal indication.
- Several signal phasing strategies may be used to improve trail user safety:
 - **Leading Pedestrian Intervals (LPI)** - Pedestrian WALK signal is displayed two to four seconds before the vehicular green indication to allow pedestrians time to establish a presence in the intersection before vehicles start turning (also referred to as Pedestrian Lead Time).
 - **Exclusive pedestrian walk phase** - WALK signals are provided without green indications for any conflicting vehicle movements.
 - **Protected-only Left Turn Signal Phase**- Protected left turn phases eliminate the left-hook crash risk. Permitted-only or Protected/ Permitted left turn phasing should not be allowed at crossings of high-priority bicycle and pedestrian routes.
 - **Protected-only Right Turn Signal Phase**- Protected right turn phases eliminate the right-hook crash risk.
 - **No Turn on Red**- right turns may be prohibited during the red vehicle indication in high pedestrian traffic locations.
- **Typical application:** Trail crossings within approximately 400 feet of an existing signalized intersection with crosswalks are typically diverted to the signalized intersection to avoid traffic operation problems when located so close to an existing signal.
- Full traffic signal installations must meet MUTCD warrants.

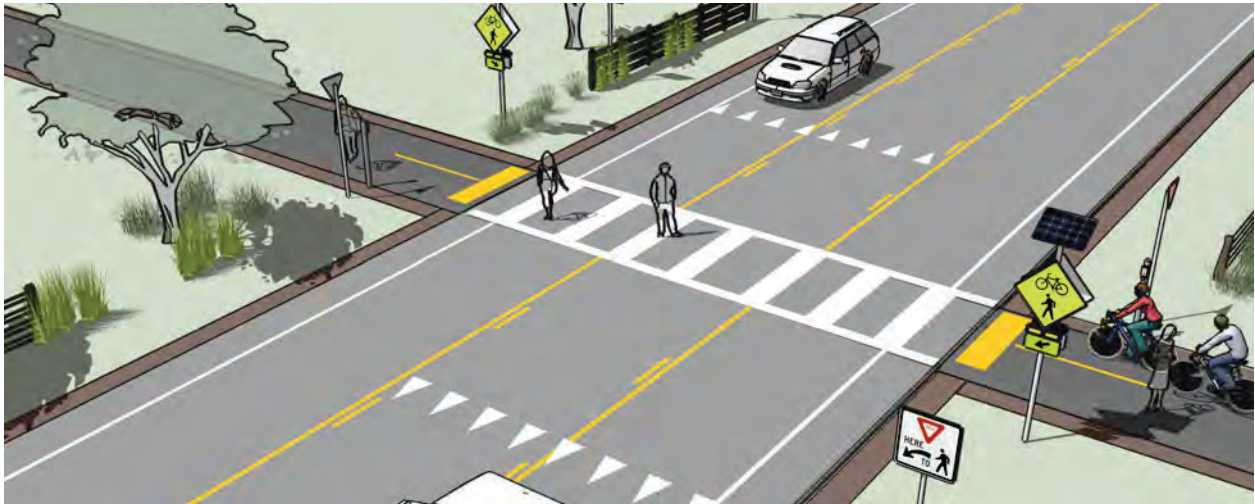


FIG. 4-9 RECTANGULAR RAPID-FLASHING BEACON

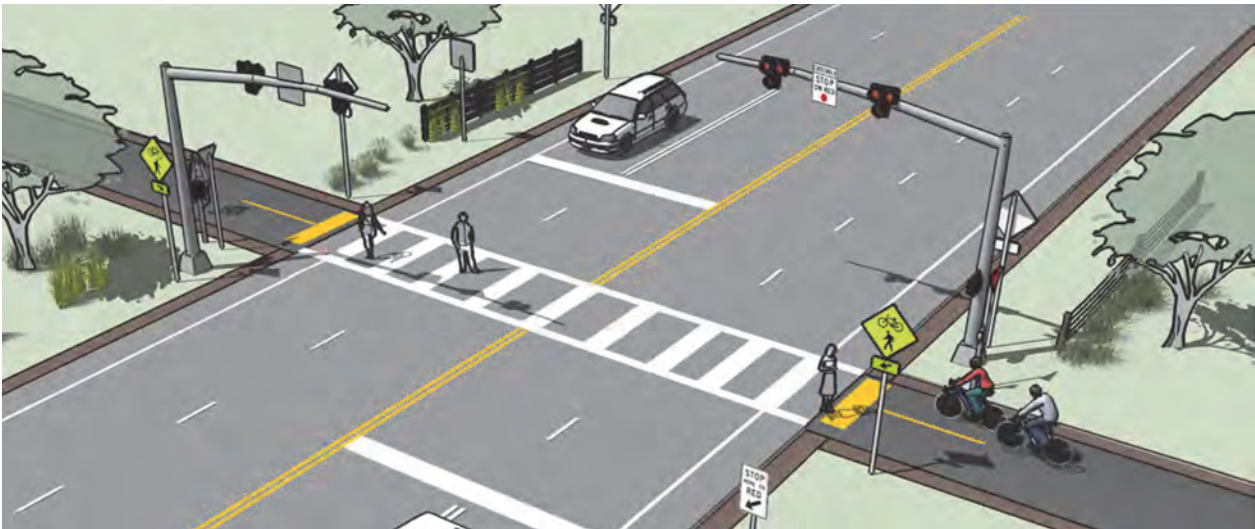


FIG. 4-10 PEDESTRIAN HYBRID BEACON



FIG. 4-11 FULL TRAFFIC SIGNAL



UNSIGNALIZED CROSSINGS

DESCRIPTION & GUIDANCE

Where a trail intersects a road more than 400 feet from an existing traffic signal, mid-block crossings can give users a dedicated, legal crossing without requiring them to travel or divert to an existing signal. Engineering judgment and the context of the location should be taken into account when choosing the appropriate allowable setback. Pedestrians are particularly sensitive to out of direction travel and undesired mid-block crossing may become prevalent if the distance is too great. Crosswalk markings must be used to establish a legal crosswalk.

The preferred treatment for a marked crossing without a signal consists of a median refuge island, high-visibility crosswalk markings, and signage and other markings to slow or stop traffic. High-visibility crosswalk markings and signage alone, or a speed table with crosswalk markings are alternatives for right-of-way constrained contexts. Advance warning, bicycle/pedestrian crossing, and/or trail crossing signs should be used in accordance with MUTCD guidelines (see Chapter 9B).

The approach to designing crossings at mid-block locations depends on an evaluation of vehicular traffic, line of sight, trail traffic, use patterns, vehicle speed, road type, road width, and other safety issues such as proximity to major attractions.

Preferred and alternative crossing configurations are described at right and illustrated in Figures 4-12 through 4-14 on the following page.

PREFERRED OPTION: MEDIAN REFUGE ISLAND CROSSING

- Median refuge islands are located at the midpoint of a marked crossing and help improve path user safety by allowing pedestrians to cross one direction of traffic at a time. Refuge islands minimize pedestrian exposure by shortening crossing distance and increasing the number of available gaps for crossing.
- **Typical application:** Any roadway with a left turn center lane or median that is at least eight feet wide, or where wide traffic lanes and/or shoulders can be narrowed to provide at least eight feet of space for the island.

ALTERNATIVE 1: RAISED CROSSING

- Raised crosswalks combine a marked crosswalk with raised speed-table geometry to increase yielding rates and clarify road user priority with geometric design.
- Speed tables are typically 22 feet long in the direction of travel with six-foot ramps on either end and a ten-foot flat section in between.
- **Typical application:** Local and collector streets or main roads through small communities.

ALTERNATIVE 2: MARKED CROSSING AND SIGNAGE

- The simplest marked crossing type uses high-visibility crosswalk markings with crossing warning signs.
- **Typical application:** Where shared-use paths intersect with collector or minor arterial streets.



FIG. 4-12 PREFERRED OPTION: MEDIAN REFUGE ISLAND CROSSING

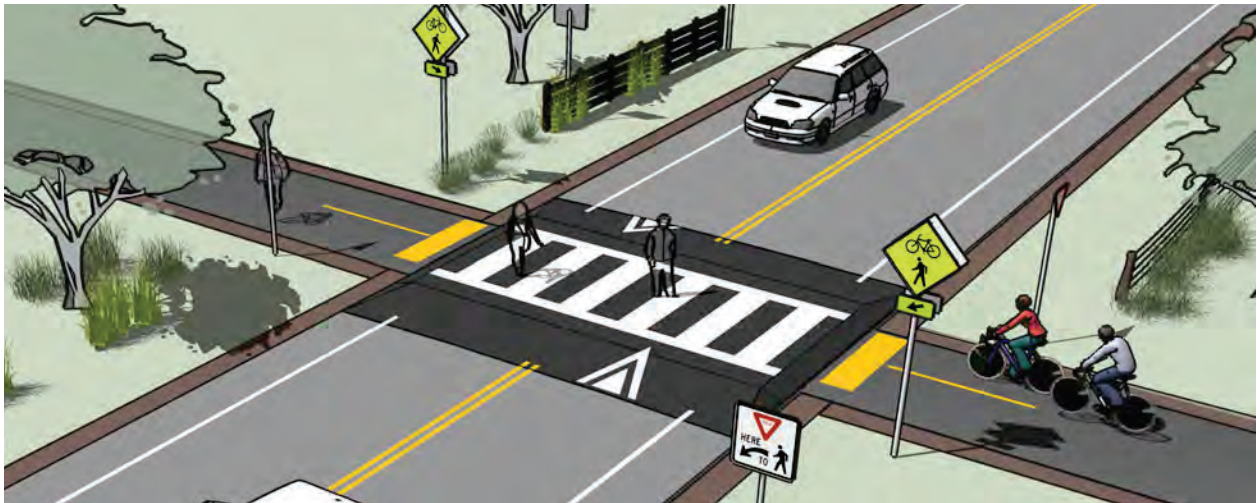


FIG. 4-13 ALTERNATIVE 1: RAISED CROSSING

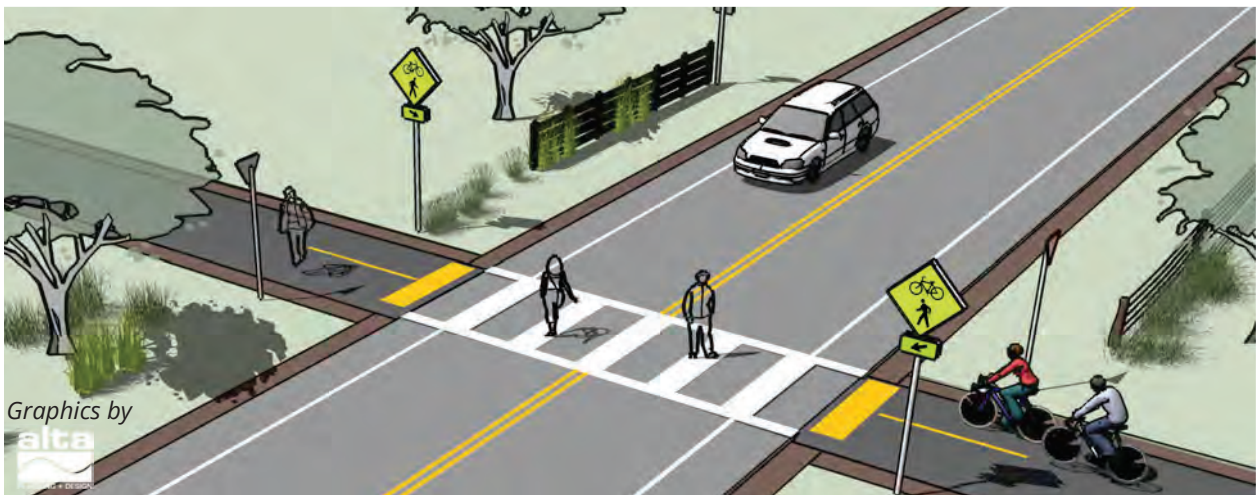


FIG. 4-14 ALTERNATIVE 2: MARKED CROSSING AND SIGNAGE