

Noonday Creek Trail Extension Scoping Study



Existing Conditions Analysis

October 2022





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Introduction

Study Overview

Located within the heart of northern Cobb County, the Noonday Creek Trail currently extends from near Kennesaw Mountain National Battlefield Park to an existing trailhead located immediately west of Bells Ferry Road (colloquially known as the Bells Ferry Trailhead), as seen in **Figure 1**. It is part of the larger Mountain-to-River (MTR) Trail network which connects Kennesaw Mountain to the Chattahoochee River. As shown in **Figure 2**, the trail traverses along arterial streets and portions of Noonday Creek while passing by – or in close proximity to – destinations such as Town Center Mall, Fifth Third Bank Stadium, Kennesaw State University (KSU), and commercial and office complexes. A second portion of the Noonday Creek Trail is located north of Cobb County within the City of Woodstock, providing a multimodal trail connection from State Route (SR) 92 to downtown Woodstock.

In addition to being a priority trail within Cobb County, the Noonday Creek Trail is a critical component of the Regional Trail Vision established by the Atlanta Regional Commission (ARC). ARC has identified the Northwest Corridor Trail, which includes the Noonday Creek Trail, its proposed extension, and the MTR Trail as a Regionally Significant Trail, making it a priority for regional and federal funding.

There is a 3.7-mile gap in the existing Noonday Creek Trail between Bells Ferry Road and SR 92. Some of this gap will be filled in a future project expected to begin in late 2022 or early 2023. When the gap is fully filled, it will complete a trail connection from Kennesaw Mountain to downtown Woodstock.

There is an approximately 3.7-mile gap in the existing Noonday Creek Trail between Bells Ferry Road and SR 92 which, if filled, can complete a trail connection from Kennesaw Mountain to downtown Woodstock. Some of this gap (between Shallowford Road and SR 92) is part of a programmed project which is expected to begin construction in late 2022 or early 2023. The remaining portion of trail alignment has yet to be fully determined, and the purpose of the Noonday Creek Trail Extension Scoping Study is to examine the feasibility of a proposed trail extension from the Bells Ferry Trailhead northward to Noonday Creek Park. The study area consists of the trail study corridor as originally designated in the Cobb County Greenways and Trails Master Plan, shown in **Figure 1** and **Figure 2**, and the surrounding land and roadway network within one mile of the creek. The original cut sheet from the Greenways and Trails Master Plan is included in **Appendix A**.

This study will evaluate various options for closing this critical gap in the regional trail network between Bells Ferry Road and Shallowford Road, both alongside the creek and along roadways in the surrounding area. This Existing Conditions Analysis report examines numerous aspects of the study area, including demographics, land use and development patterns, transportation infrastructure, and the natural environment, to inform the development of options for this portion of the Noonday Creek Trail.



View of Bells Ferry Road from the Bells Ferry Trailhead

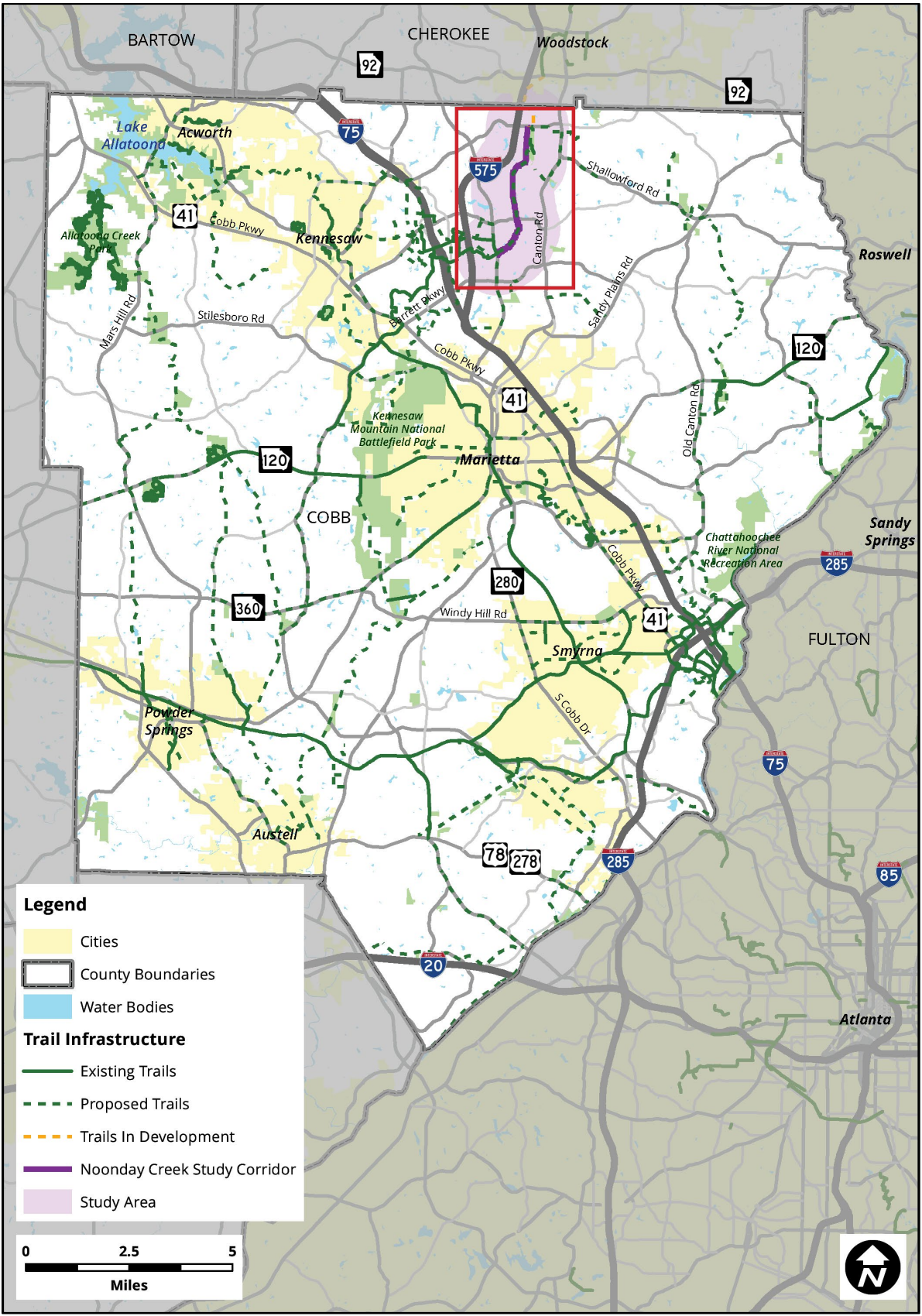


Figure 1: Noonday Creek Trail Extension Study Area Within Cobb County



Report Organization

The Existing Conditions Analysis document consists of the following sections:

- **Prior Plan and Project Review:** This section provides an overview of previous planning efforts that discuss Noonday Creek Trail and the feasibility of an extension towards Noonday Creek Park and Cherokee County. This section also discusses programmed projects by Cobb County DOT and the Georgia Department of Transportation (GDOT).
- **Applicable Policy, Regulations, and Guidelines:** This section provides an overview of local, state, and national publications and guidelines which may be relevant for the construction of a trail along Noonday Creek east of Bells Ferry Road towards Noonday Creek Park. This includes surface materials, width, permitting, and other relevant design considerations and requirements.
- **Demographic Analysis:** This section considers population characteristics such as population density, student population, median household income, poverty levels, and minority population. It also examines household vehicle ownership and commute characteristics.
- **Existing Transportation Infrastructure:** This section highlights the roadway network, including functional classification, bridges and structures, the multimodal network, transit network, and traffic operations and safety for major streets within one mile of Noonday Creek.
- **Utilities and Right-of-Way:** This section discusses underground and overhead utilities, and property ownership in the study area.
- **Land Use and Development Patterns:** This section discusses local and regional destinations, land cover, zoning, existing and future land use, and potential trail access points, as well as neighborhoods and subdivisions in the vicinity of Noonday Creek.

- **Environmental Screening:** This section provides highlights of an environmental screening completed for Noonday Creek within the study area. The full environmental screening technical memorandum is included in **Appendix B**.
- **Hydrological & Geotechnical Considerations:** This section discusses flood zones, propensity for flooding along Noonday Creek and its tributaries, and a topographical review of the Noonday Creek study corridor. Detailed flood maps and a summary of discharges along the creek is included in **Appendix C**.
- **Field Observations:** This section of the report summarizes observations, challenges, and major findings from an examination of the study area conducting in June 2022, including potential trail crossings.

The report concludes with a summary of key findings and observations that will help inform the feasibility of the trail and development of potential alternatives.



Noonday Creek As Shown From the Sewer Easement East of Bells Ferry Road



Prior Plan and Project Review

Local Plans

Cobb County Comprehensive Plan (2017)

The Cobb County Comprehensive Plan serves as a long-range planning document to direct and guide land use and growth for a period of 20 years. The current Comprehensive Plan forecasts land use trends through 2035. It develops a growth strategy and articulates a future vision with regard to residential and commercial development in the context of the natural environment.

The Comprehensive Plan addresses the current deficiencies in the local trail network and identifies opportunities for improvement. The existing gaps in trail connectivity are of particular concern, as is the overall need for greater equity and safety for pedestrians and bicyclists. Identified needs and corresponding opportunities/solutions are listed in **Table 1**.

Table 1: Relevant Needs & Opportunities from the Cobb County Comprehensive Plan

Need	Opportunity/Solution
Deficiencies in the sidewalk system	<ul style="list-style-type: none"> Particularly in Central Cobb, increased sidewalk coverage on secondary roadways is needed to ensure connectivity. In general, work towards system connectivity and cohesive circulation pattern.
Bike facilities	<ul style="list-style-type: none"> Prioritize bike facilities to enable connectivity to existing and programmed multi-use trails.
Increased park connectivity	<ul style="list-style-type: none"> Ensure safe, well-lit ped/bike connectivity between existing and future parks and neighborhoods.
Pedestrian-friendly environment	<ul style="list-style-type: none"> Enhance and promote a quality and safe streetscape.

The expansion in retail and residential services around the Bells Ferry Trailhead, and the ensuing rise in vehicular traffic, may make it more difficult for pedestrians and bicyclists within the area to access the trail, particularly among those who don't have access to a vehicle to travel to trailheads. An update to the Cobb County Comprehensive Plan is currently underway.

Town Center Community Master Plan Update (2017)

The Town Center Community Improvement District (TCCID) is prioritizing the development of an enhanced multimodal transportation network that provides local connections to various locations. The TCCID funds a variety of multimodal projects, such as trail enhancements and improvements, connectivity to parks and open space, wayfinding and signage, and enhanced lighting. The Town Center Community Master Plan proposes the creation of a seven-mile Town Center Loop Trail. This loop would connect to Noonday Creek Trail at George Busbee Parkway and Barrett Lakes Boulevard, enabling multimodal travel within Town Center and to surrounding areas. Another proposed short-term project, designated as "Open Space/Parks," incorporates the Noonday Creek Trail at Town Center Park. The 42-acre nature venue would include three smaller parks, a woodland area, and the trail. Additionally, there are three long-term bicycle/ pedestrian projects incorporating Noonday Creek:

- KSU Noonday Creek Trail Extension:** Extend Noonday Creek Trail from Barrett Lakes Boulevard west to Chastain Road and north adjacent to Campus Loop Road to Shiloh Road to connect the trail to Kennesaw State University (KSU).
- Cobb Parkway Pedestrian Bridge:** Proposed pedestrian bridge over Cobb Parkway, 500 feet north of Vaughn Road, to connect Noonday Creek Trail directly across Cobb Parkway where the alignment changes course. This project would improve pedestrian connectivity.
- Barrett Lakes Boulevard Complete Street:** Complete Streets improvements, including lighting, landscaping, extension of Noonday Creek Trail and roadway operational improvements.



Cobb County Comprehensive P.A.R.K.S. Master Plan (2018)

The PARKS Master Plan analyzes current conditions in County parks and summarizes findings from a survey of park users to develop recommendations to improve the County park network.

For trails, survey respondents indicated that paved trails/sidewalks and natural surface trails for biking are among the two most desired facilities.

Additionally, recommendations, both general, and for specific parks and recreation facilities, were suggested, including adoption of uniform signage and building design policies, the development of additional facilities throughout the County (particularly in underserved communities), and mitigating gaps and deficiencies in level of service.

Cobb County Greenways and Trails Master Plan (2018)

The Cobb County Greenways and Trails Master Plan identifies the proposed Noonday Creek Trail as a priority project (among eight priority trails across the County). The Noonday Creek Trail is part of the larger Mountain to River Trail (which spans from Kennesaw Mountain National Battlefield Park to the Chattahoochee River) and is part of the Regional Trail Vision established by ARC.

Already recognized as a trail of regional significance, the Greenways and Trails Master Plan notes that the proposed Noonday Creek Trail could facilitate greater multimodal transportation and recreation by connecting to the ongoing trail project at Shallowford Road, creating a continuous trail corridor from the Town Center area to downtown Woodstock. The proposed trail project would also provide additional recreational and active transportation opportunities to several neighborhoods in northern Cobb County, and to KSU and area schools. The project would also expand access to parks, activity centers, and a bikeshare station at the Bells Ferry Trailhead operated by the TCCID. The Noonday Creek Trail is a complex alignment and will require crossing beneath three existing roadways and the installation of boardwalk, depending on the extent of hydric soils along Noonday Creek.

Sewer easements allow for the construction, use, maintenance, repair, inspection, and reconstruction of sanitary sewer lines and facilities. While sewer easement is present along much of the Noonday Creek study corridor, much of the corridor is in floodplain or floodway. Both of these factors will impact permits required to construct the trail.

See **Appendix A** for the project cut-sheet which outlines a proposed route, as well as key opportunities and constraints identified in this planning process.

The Master Plan includes three additional prospective trails that could connect to the Noonday Creek Trail project, further expanding Cobb County's trail network.

- **Canton Road North Trail:** A 1.7-mile sidepath trail which would connect the south end of Noonday Creek Park to Lake Drive, where there is a proposed connection to Kell High School. The proposed trail would parallel soccer fields along Hawkins Store Road, and travel along the northern portion of Canton Road, increasing access to parks, schools, and sports fields.
- **Cobb International Boulevard Trail:** A 2.25-mile trail which would connect the Noonday Creek Trail along Barrett Parkway, with Old Highway 41, via a power line easement and Cobb International Boulevard. This trail connection would increase biking and walking options for employees of businesses along Cobb International Boulevard, as well as provide trail access for nearby residents.
- **Noonday Creek Park – Kell High School Trail:** A 1.4-mile paved trail which would connect Noonday Creek Park, Kell High School, and area baseball fields. The proposed trail alignment would follow Shallowford Road, and make use of existing right-of-way that leads to Lake Drive and connects to the high school. This trail would improve connectivity between regional recreational facilities and increase walking and biking opportunities.

Bells Ferry Road LCI Operational Study (2021)

Bells Ferry Road forms the eastern border of the Town Center Community Improvement District (TCCID) and provides access to the Bells Ferry Trailhead, which serves as the eastern terminus of Noonday Creek Trail in Cobb County. The Bells Ferry Road LCI Operational Study identifies solutions to help improve safety, operations, and multimodal mobility along Bells Ferry Road between Barrett Parkway/Piedmont Road and

Chastain Road/New Chastain Road. The study cites numerous issues along Bells Ferry Road, including disconnected sidewalks; a gap near the trailhead; a lack of bike facilities; and traffic congestion at some intersections.

Recommendations include a range of safety and operational improvements, presented as a series of short, mid-, and long-term projects and strategies. Specific recommended projects are listed in **Table 2**.

Table 2: Bells Ferry Road LCI Operational Study Recommendations

Recommendation Categorization	Specific Project
Bridge Replacement	<ul style="list-style-type: none"> Replacement of the Bells Ferry Road bridge over Noonday Creek Providing one lane in each direction with a dedicated northbound left-turn lane at side streets Design should also accommodate a potential future extension of the Noonday Creek Trail beneath the bridge (lengthening the bridge)
Intersection Improvements	<ul style="list-style-type: none"> Bells Ferry Trailhead to Big Shanty Road Big Shanty Road to Chastain Road/New Chastain Road
Segment Improvements	<ul style="list-style-type: none"> Span the entire study corridor Adding a 2-way center left-turn lane that would become dedicated left-turn lanes at side streets, and include short raised medians at select locations Adding a 5-foot sidewalk to fill gaps on both sides of corridor, as well as widening some segments of sidewalk to 10 feet
Streetscaping & Placemaking Recommendations	<ul style="list-style-type: none"> Enhancing the Bells Ferry Trailhead with educational signage, public art, etc. Widening existing walkway along the west side of Bells Ferry Road between the trailhead and Big Shanty Road from 8 to 10 feet
Other	<ul style="list-style-type: none"> Identify additional parking opportunities for trail users Conducting speed study along Bells Ferry Road.

Cobb Forward Comprehensive Transportation Plan (2021)

Cobb Forward serves as Cobb County’s Comprehensive Transportation Plan (CTP) and includes extensive discussion regarding multimodal transportation opportunities, expansion of trail networks, and project programming targeted at improving pedestrian and cyclist experiences. Noonday Creek Trail is included within the plan’s list of priority trails due to its high levels of pedestrian and cyclist activity on the existing portion of the trail west of the Bells Ferry Trailhead.

The CTP includes a Sidewalk Index (construction and improvement) that takes into account demand and supply, feasibility and project programming, among other variables. Additionally, an operations maintenance sidewalk framework was developed to ensure a uniform evaluation and funding procedure is in place. A technical analysis, divided into two broader categories – Roadway Project Types and Active Transportation Project Types – provides insights for how to increase connectivity and fill gaps in the network which is currently lacking along major streets near Noonday Creek such as New Chastain Road and Bells Ferry Road.



Project recommendations are categorized, based on urgency and funding allocations, on a five-, ten-, and 30-year basis. There are several projects that fall along or around Noonday Creek.

- **Noonday Creek Trail:** Proposed trail extension from Bells Ferry Road to Noonday Creek Park.
- **Noonday Creek Park to Kell High School:** A proposed multimodal connection from Noonday Creek Park to Kell High School along Shallowford Road and Jamerson Road.
- **KSU Noonday Creek Trail Extension (Shiloh Road):** A proposed trail extension to connect KSU to Noonday Creek Trail
- **Bells Ferry Road Improvements:** Widening from four to six lanes from Hawkins Store Road northwest to Ridgewood Creek Drive
- **South Barrett Reliever Phase 5:** New roadway south of Barrett Parkway extending from the eastern terminus of Phase IV (at the southern portion of Chastain Meadows Parkway) to Bells Ferry Road
- **Big Shanty Road Widening Phase IV:** Widening from two to four lanes from Chastain Meadows Parkway to Bells Ferry Road

Regional Plans

Walk. Bike. Thrive! (2017)

Walk. Bike. Thrive! is the regional active transportation strategy completed by the Atlanta Regional Commission, and serves as a guide that local governments can use to develop policies and standards for active and sustainable transportation options. The plan establishes a policy framework focused on three topics:

- World class infrastructure
- Healthy livable communities
- A competitive economy

Establishing these recommendations will allow for the creation of a high-quality walking and biking system, based on a range of criteria, including:

- Universal access
- Walking network
- Biking network
- Local trail network

Regional Trail Vision

The Regional Trail Vision within Walk. Bike. Thrive! identifies issues with the regional trail network and provides policy suggestions to help implement improvements. The overall policy goals are focused on improving safety for trail users, increasing mobility and accessibility, and considering how trails can increase economic competitiveness by providing access to destinations and serving as an amenity for residents and visitors.

The plan recognizes the need for multimodal connectivity, and its critical role in creating a robust and convenient pedestrian and cycling network. Subsequently, most of the policy goals and recommendations within this supplement integrate connectivity, or include it as the main goal. These include:

- Closing gaps between existing trail segments
- Providing access to urban neighborhoods, small towns, regional job centers, and transit
- Connecting between high-demand centers through suburban or lower-demand areas
- Providing access to parks, natural areas, or scenic destinations

Additionally, the Regional Trail Vision notes that local trail plans should remain current and that planned trails are shepherded into completion, particularly those that allow for greater access to under-served communities.

Safe Streets Supplemental Report

The Safe Streets Report serves as a regional action plan for Walk. Bike. Thrive!, focused specifically on pedestrian and cyclist safety, and eliminating fatal and serious injury crashes. This report identifies safety as critical to regional transportation, and that the lack of safe facilities, or the perception of unsafe facilities, inhibits many residents from walking or cycling to work. The report also notes that inadequate roadway design and community form are contributing to increased death and injuries of cyclists and pedestrians, particularly among vulnerable populations and underserved communities.



In order to mitigate these safety issues, Safe Streets establishes a regional, Vision Zero approach to work towards eliminating fatal and serious injury crashes, and relies on evidence-based countermeasures within a Complete Streets framework. Recommendations that could be applied to trail networks include the installation of pedestrian crossing islands, pedestrian hybrid beacons (PHBs) and rectangular rapid flashing beacons (RRFBs), crosswalk visibility enhancements, and the expansion of greenways, bicycle boulevards, and sidewalks.

Programmed Projects

Cobb County DOT

Bells Ferry Bridge Over Noonday Creek (2022 SPLOST)

Cobb County's Special Purpose Local Option Sales Tax (SPLOST) was renewed in 2020 via voter approval. SPLOST provides funding for a variety of public capital projects, such as transportation, public safety projects, and libraries, via a one-percent sales tax. Included in the roster of projects for funding is the replacement of the Bells Ferry Road bridge over Noonday Creek, located north of the Noonday Creek trailhead. The current bridge is two lanes wide and lacks both shoulders and sidewalks. Both sides of the bridge feature short concrete barriers partially open in the center.

Approximately \$2.8 million has been allocated for the bridge replacement. The proposed design will include pedestrian facilities, and take into account a potential alignment for the Noonday Creek Trail extension beneath the bridge. The Bells Ferry Road LCI Operational Study made recommendations for the bridge replacement to include two lanes, with a northbound left-turn lane to access the trailhead driveway, with a ten-foot multiuse path on either side of the bridge.

Bells Ferry Road Water Main Replacement (W2360)

Cobb County Water System will replace a water main along Bells Ferry Road. Transit pipe, 18,500 linear feet in length, will be replaced with a 12-inch ductile iron pipe (DIP) water main. Construction is slated to start in the first quarter of 2023 with an anticipated duration of 16 months.

Canton Road at Shallowford Road (X2304) and Canton Road Corridor (X2602)

This project will improve safety and operations at the intersection of Canton Road and Shallowford Road/Highland Terrace, which is located northwest of the Bells Ferry Trailhead and west of Noonday Creek Park. The project will install and expand turn lanes at the intersection as well as a raised median and sidewalks to improve pedestrian safety and multimodal connectivity which will eventually facilitate a safer connection to Noonday Creek Park and the future Noonday Creek Trail.

Noonday Creek Trail Pedestrian Bridge (TR525/PI# 0017989)

This project includes a proposed pedestrian crossing bridge to carry Noonday Creek Trail over Cobb Parkway approximately 500 feet north of Vaughn Road to provide a safer crossing and enhance trail connectivity. Design activities are ongoing with right-of-way and construction programmed for 2024 and 2025, respectively.

GDOT

Big Shanty Road Widening (PI# 0019616)

The 0.5-mile, two-lane portion of Big Shanty Road between Chastain Meadows Parkway and Bells Ferry Road is slated to be widened to four lanes. This project will incorporate a roundabout at Bells Ferry Road. The project was awarded a \$500,000 grant from the Georgia Transportation Infrastructure Bank (GTIB). Design activities are ongoing and construction is programmed for 2026.

Noonday Creek Trail Extension from SR 92 to Noonday Creek - Enhancement Multi-Use Trail (PI# 0016015)

The Noonday Creek Trail project within the City of Woodstock which extends southward into unincorporated Cherokee County and Cobb County will create a 1.8-mile trail from SR 92 to north of Shallowford Road, closing a portion of the current gap between the Bells Ferry Trailhead in northern Cobb County and the SR 92 trailhead in the City of Woodstock. The project is being completed by the City of Woodstock in coordination with Cherokee County. It is scheduled to be let in August 2022, with construction beginning in late 2022 and extending into 2023.



Applicable Policy, Regulations, and Guides

This section reviews key policy documents that apply to the study area. Each document is introduced and relevant topics for the Noonday Creek Trail Extension scoping study are outlined. Specific sections of guidance documents have also been included as appendices.

AASHTO (American Association of State Highway and Transportation Officials) Guide for the Development of Bicycle Facilities (2012)

The American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities (2012) is a federal resource that provides guidance on dimensions, use, and layout of multi-use paths and on-street bicycle facilities.

The guide includes recommendations for the design of trail geometry, trail crossings, markings and signage. The AASHTO Guide for the Development of Bicycle Facilities establishes most general parameters of trail design features like minimum curve sizes, general roadway crossing arrangements, shoulder widths, and safety rail requirements which will be necessary components for an extension of Noonday Creek Trail.

Americans with Disabilities Act (ADA) Standards and Public Rights-of-Way Accessibility Guidelines (PROWAG)

A multi-use path in the public right-of-way is considered to serve a transportation purpose, and is required to be accessible in accordance with the United States Access Board Americans with Disabilities Act (ADA) Accessibility Guidelines. Trails are multi-use paths, and therefore must meet ADA requirements to ensure that all paths, street crossings, signals, and other facilities for pedestrian utilization are accessible for all users.

The Public Rights-of-Way Accessibility Guidelines (PROWAG) is a draft document published by the U.S. Access Board that helps professionals design

ADA-compliant public facilities, including sidewalks, curb ramps, and multi-use trails.

Some basic PROWAG design parameters which apply to the Noonday Creek Trail include:

- General 5% maximum longitudinal trail slope
- Maximum 2% trail cross-slope

USDA Forest Service Wetland Trail Design and Construction Guide

The Wetland Trail Design and Construction Guide was developed by the U.S. Department of Agriculture (USDA) Forest Service in 2007. This practical guide describes techniques and tools for assessing soil and wetland conditions, types of trail structures and materials, and specific tools and skills for trail construction. It is primarily intended to inform the design of walking trails rather than shared-use paths, but the description of fieldwork and final layout options as well as boardwalk construction are useful for the proposed Noonday Creek Trail project in floodplain or floodway areas.

During field work conducted as part of this Scoping Study, evidence of beavers was observed near Noonday Creek adjacent to the Canterbury neighborhood (**Figure 3**). If the trail were to traverse this area, the USDA Guide recommends wrapping boardwalk piles with hardware cloth and stapling it into place to discourage beavers from chewing through the wood.



Figure 3: Evidence of Beavers near Noonday Creek



USDA Sustainable Trail Bridge Design

Published jointly in 2020 by the USDA Forest Service and the United States Department of Transportation (USDOT), the Sustainable Trail Bridge Design report “focuses on designing new, short, single-span, wooden trail bridges.” The report provides basic guidance on bridge siting, bridge types, material selection, loading and constructability. The report also includes a summary of standard trail bridge plans and specifications available for public reference. This guide could inform the location and design of simple bridge crossings over Noonday Creek based on the selection of an alternative for concept and design.

GDOT Design Policy Manual

The Georgia Department of Transportation (GDOT) Design Policy Manual (DPM) (2018) is the primary state level resource for transportation facility design guidelines in Georgia. The manual draws from AASHTO and Federal Highway Administration (FHWA) guidelines and encourages designers to consider a context-sensitive balance between different roadway users.

Chapter 9 of the GDOT DPM, Complete Streets Design Policy, outlines the multimodal philosophy adopted by the DOT and provides guidance to designers in Georgia on shared-use path development. Chapter 9 primarily draws from the AASHTO Guide for the Development of Bicycle Facilities and from PROWAG, but also provides Georgia-specific context on facility selection and design that will inform the Noonday Creek Trail project.

GDOT Pedestrian and Streetscape Guide

Developed in 2019, the GDOT Pedestrian and Streetscape Guide summarizes a variety of treatments and conditions focused on the experience of pedestrians and bicyclists. It serves as multimodal design guidance for the department, often referring to specific national standards for additional details on warrants and usage of certain design elements.

The guide specifies that shared-use paths:

- Should be designed for bicyclists and pedestrians
- Can be placed along public road right-of-way, bodies of water, parks or open spaces
- Are best placed along roadways with fewer curb cuts
- Should carefully consider visibility of trail users and on-coming traffic at places where the path may cross roadways.

GDOT also provides guidance for appropriate improvements for at-grade, uncontrolled pedestrian crossings. There are roadways in the study area which may need at-grade treatments. For example, Shallowford Road is currently posted at 45 miles per hour with two lanes in each direction, and the ongoing trail project will include an at-grade crossing on Shallowford Road near the bridge over Noonday Creek. The Guide recommends considering the use of a Pedestrian Hybrid Beacon (PHB) for crossing a roadway with this posted speed limit.

Cobb County Greenways and Trails Master Plan Design Guidelines

The existing Noonday Creek Trail is described as an example of successful greenway trail implementation in the Cobb County Greenways and Trails Master Plan Section 4: Design Guidelines. These guidelines provide specifics on trail dimensions and surroundings, as well as key conditions for great trails.

- 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 needed
- Prioritized amenities include restrooms, water fountains, waste receptacles, seating, art, and lighting
- Surface tread material: concrete or asphalt
- Maintain vegetative buffers



Town Center Community Improvement District (TCCID) Design Guidelines

The TCCID Design Guidelines provide a framework and sense of place for the public realm within the district. These guidelines aid designers of public roadways and parks, as well as private developments, to create more specific construction plans that will continue the CID's cohesive identity.

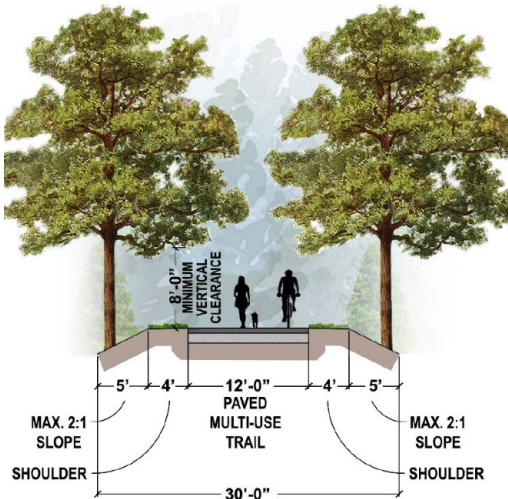


Figure 4: Town Center CID Design Guideline for Trails

The Design Guidelines, as seen in **Figure 4** include the following parameters:

- Paths should be a minimum of 8 feet wide; 12 feet is desirable for those with heavy pedestrian and bicyclist use.
- Paths should have shoulders 2 feet wide; 4 feet is desirable for those with heavy pedestrian and bicyclist use.
- Minimum vertical clearance of 8 feet for sidepaths, 10 feet for paved trails. Greater clearance for maintenance and emergency vehicles may be required.
- Concrete is a preferred material for sidepaths, and multi-purpose trails in flood-prone areas.
- The recommended surface for paved facilities is concrete or asphalt and should be designed to withstand the loading requirements of emergency and maintenance vehicles. Slopes greater than 5% are considered undesirable. When slopes exceed 5% on a heavy use multi-purpose trail, increase the width to 14 feet. Provide signage that alerts bicyclist of maximum percent grade.

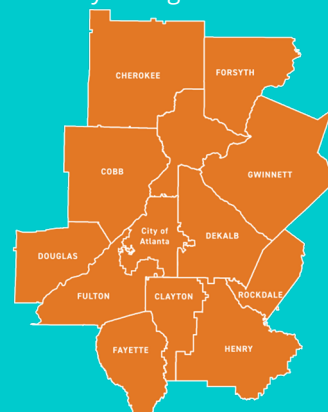


Atlanta Regional Commission's Role in Multimodal Planning

ARC develops policies and guidance for member local governments in the Atlanta region, including Cobb County. ARC also allocates federal funds for the construction of the highest priority projects in the Regional Transportation Plan through the short-range transportation improvement program (TIP). With respect to bicycle, pedestrian, and trails planning, ARC uses a focused approach to regional walking and bicycling which was adopted through "Walk. Bike. Thrive!." The five key strategies ARC uses to increase the number of pedestrian and bicycle trips include:

- Focusing investments in communities and activity centers
- Addressing safety and equity issues
- Working closely with transit providers
- Pursuing a strategy of relentless incrementalism by identifying barriers to walking and bicycling and addressing them through different opportunities
- Leading the development of the regional trail system

Design decisions are under the purview of local jurisdictions, and ARC's Complete Streets Workbook provides design guidance for consideration by local governments.



Source: Atlanta Regional Commission



Demographic Analysis

While there is no specific route proposed for the Noonday Creek Trail extension, the study area generally falls within a one-mile buffer of Noonday Creek between the Bells Ferry Trailhead and Shallowford Road. The demographics analysis examines population characteristics within the study area and in areas adjacent to the existing trail, within the one mile buffer. The analysis has been conducted at the Census tract level, for tracts that correspond to these areas. These include tracts 302.48, 303.46, 303.47, 303.48, and 303.49. A map of these Census tracts is shown in **Figure 5**.

The extension of the trail would serve not only those who utilize the trail for recreation, but also those who may not own a vehicle or lack consistent access to reliable transportation as well as area residents and visitors who would like non-vehicular options when traveling to local destinations . By expanding the reach of the trail, more residents will be able to reach job opportunities, school (such as KSU), retail and dining, and recreational and green spaces. Likewise, those who travel to shops or restaurants along the trail boost nearby businesses and the local economy.



Looking North From Hawkins Store Road Bridge



Pedestrian Jogging Along Bells Ferry Road on the Bridge Over Noonday Creek

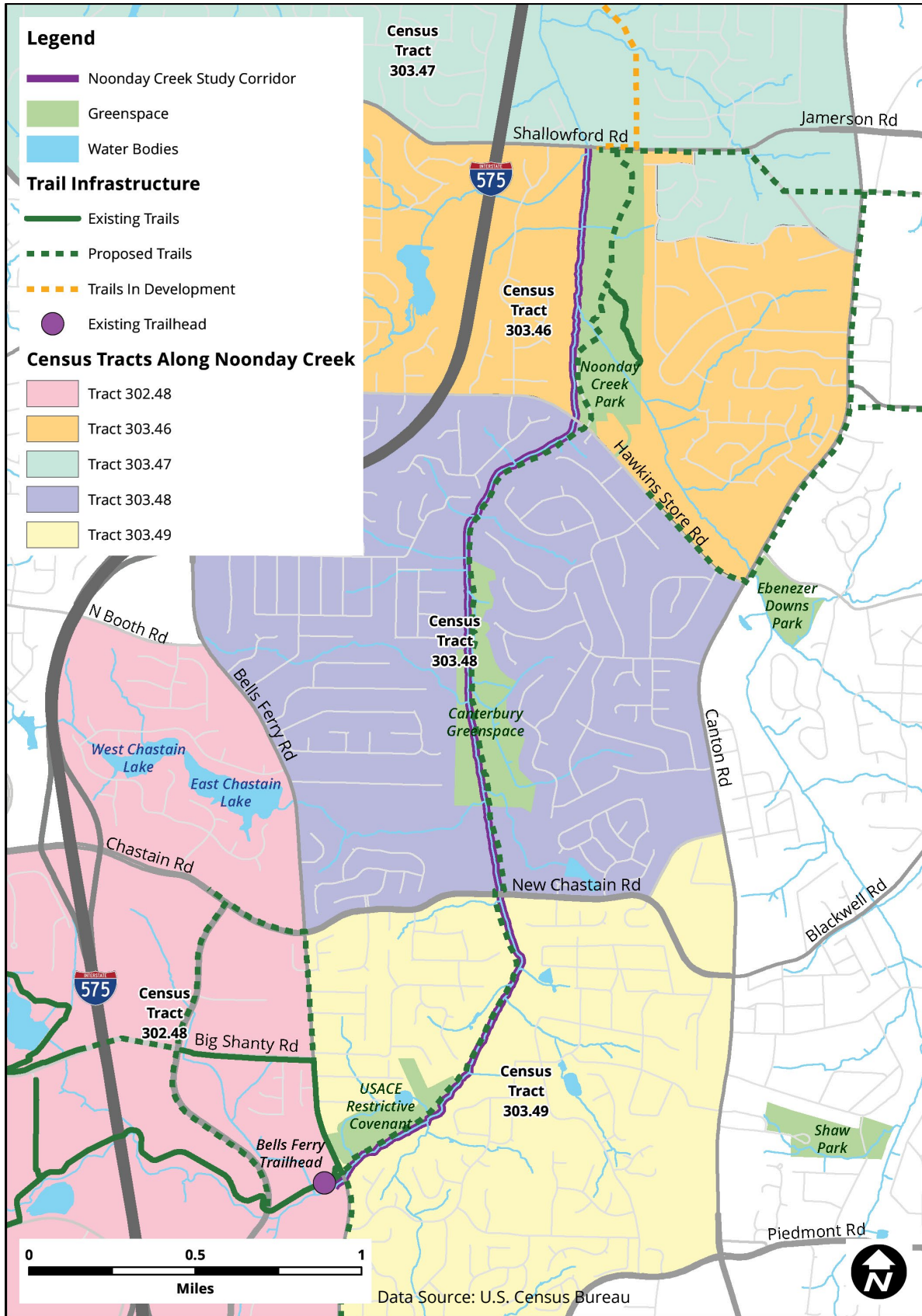


Figure 5: Census Tracts Within Noonday Creek Study Area



Population

As of the 2020 Decennial Census, Cobb County has approximately 766,149 residents, which is a 9% increase from 2010.¹ **Table 3** shows the population for Cobb County and by Census tract along the Noonday Creek study corridor. **Figure 7** shows population density along the study corridor.

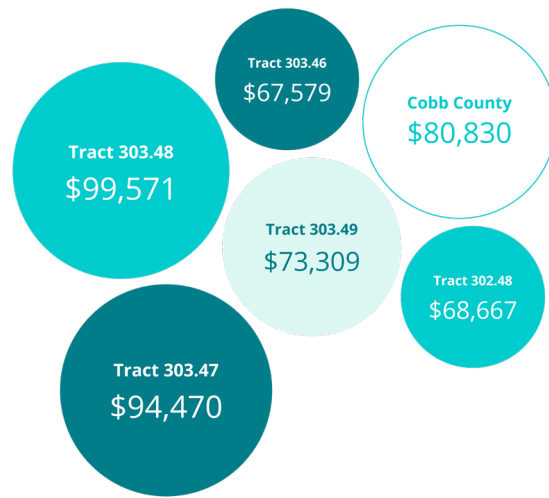
Within one mile of the Noonday Creek study corridor, the total population for the Census tracts equals approximately 23,926 people. Within tracts 302.48, 303.47, and 303.48, the population density exceeds that of Cobb County as a whole. These areas fall within the Town Center activity center and adjacent established neighborhoods.

Cobb County has a population of 56,121 students enrolled in college or graduate school, equaling 7% of the population. Among Census tracts along Noonday Creek, tract 302.48 had the highest percentage for post-secondary enrollment, with 1,983 residents, or approximately 29%, enrolled in college or graduate school. As discussed under the Commute Characteristics section, Tract 302.48 also has the largest share of residents who walk to work as well as the largest share of population who do not have access to a vehicle.

Median Household Income

Figures 6 and **8** show median household income in Cobb County and by Census tract within the Noonday Creek study area. Three of five Census tracts have median household income lower than that of Cobb County (\$80,830). Tracts 303.47 and 303.48, which consist primarily of single-family neighborhoods have higher household incomes than that of Cobb County. Figure 7 shows the population density by census tract within the study area.

Figure 6: Median Household Income Near Noonday Creek



Source: 2016-2020 American Community Survey 5-Year Estimates

Table 3: Population Statistics by Census Tract

Location	Population	Land Area (Square Miles)	Population Density (People per Square Mile)	Student Population
Cobb County	766,149	339.78	2,254.80	56,121
Tract 302.48	6,922	2.60	2,634.10	1,983
Tract 303.46	3,587	1.60	2,247.00	354
Tract 303.47	4,885	1.80	2,774.11	350
Tract 303.48	5,013	2.10	2,444.90	409
Tract 303.49	3,519	1.60	2,163.09	333

Source: 2020 United States Decennial Census

¹ 2022 United States Decennial Census. www.census.gov

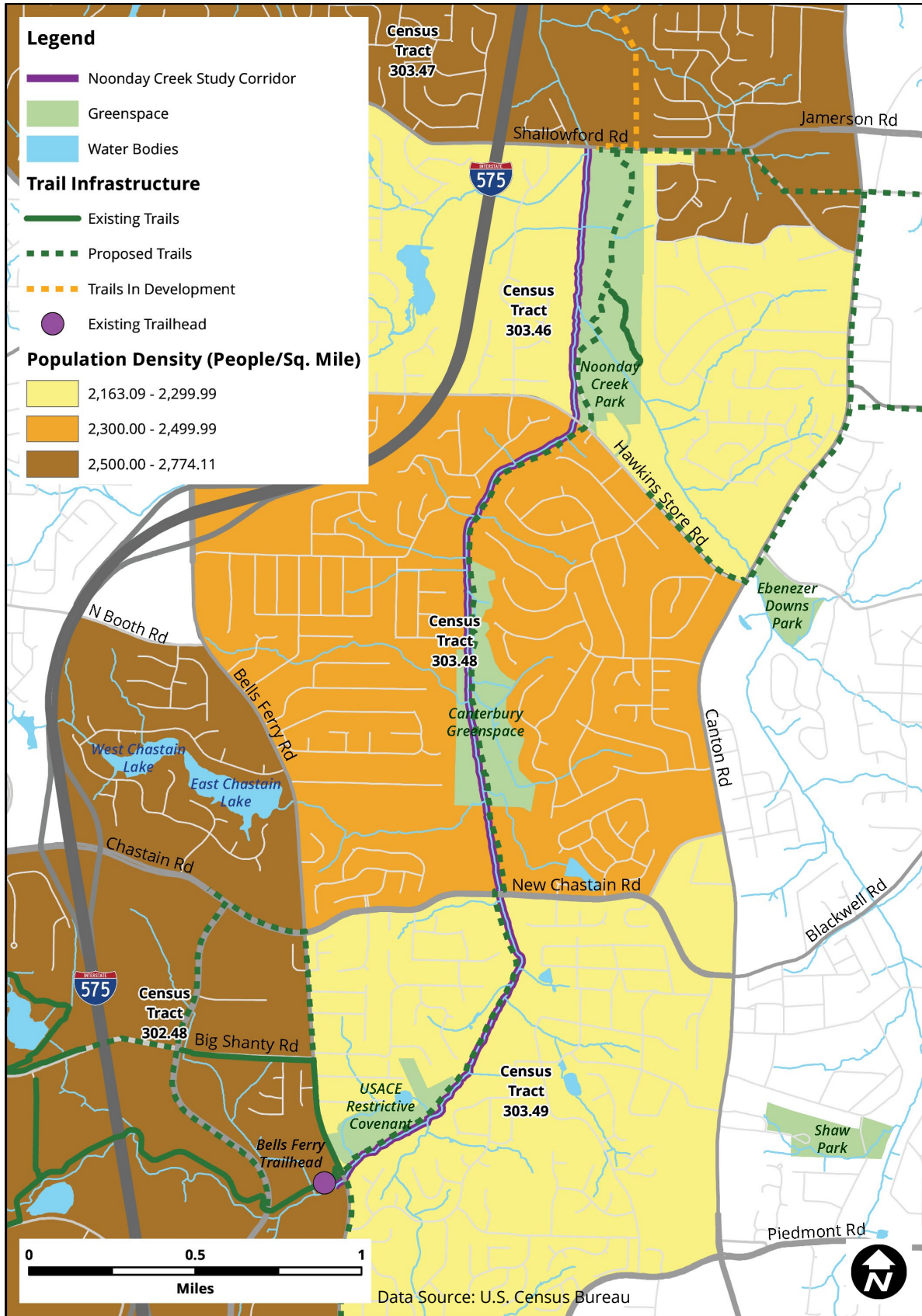


Figure 7: Population Density by Census Tract Within Noonday Creek Study Area

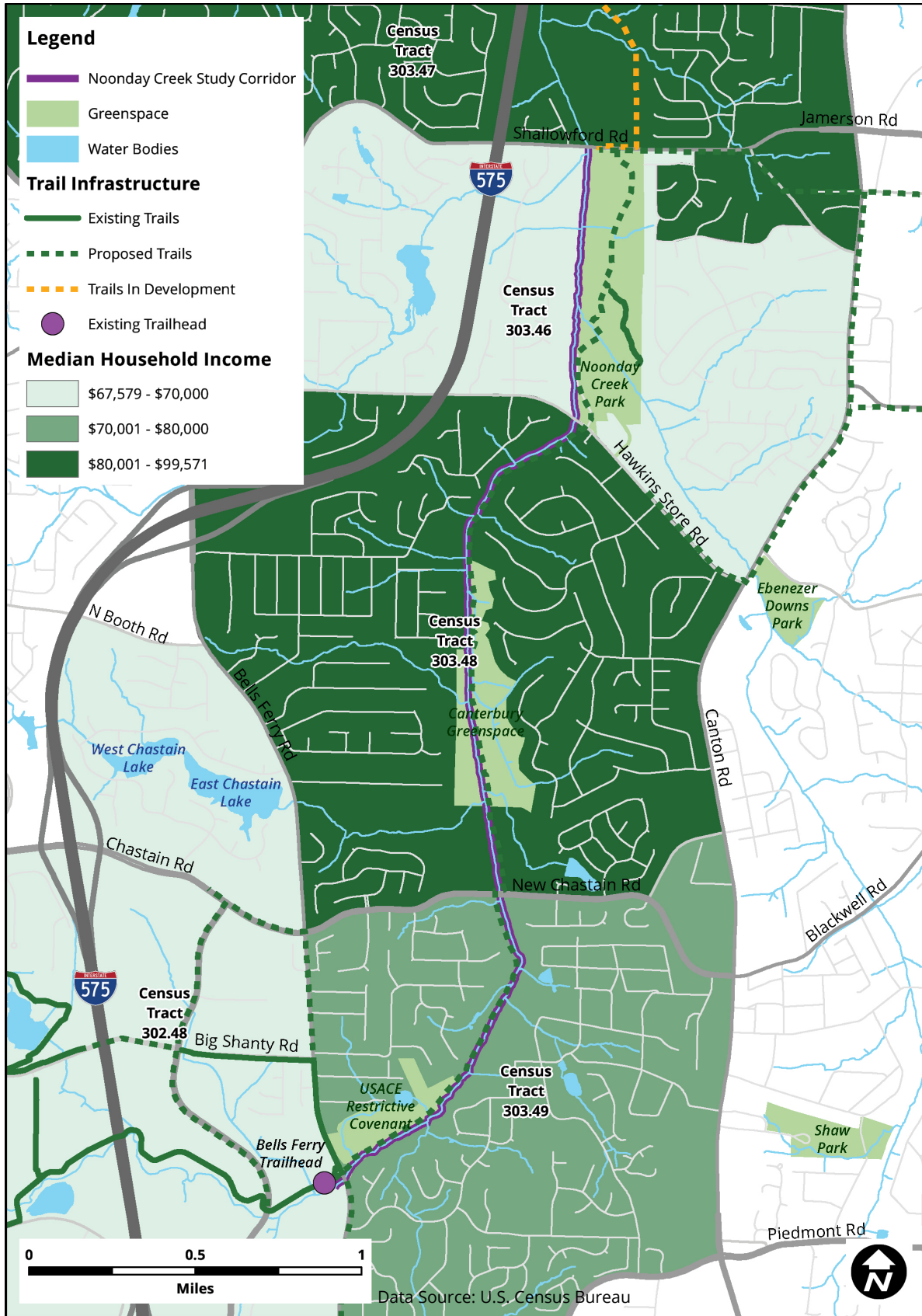


Figure 8: Median Household Income by Census Tract Within Noonday Creek Study Area



Environmental Justice Analysis

The US Environmental Protection Agency (EPA) defines environmental justice (EJ) as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.” Following this definition, disproportionately high and adverse effects are not determined solely by the size of the population or number of people affected, but rather the comparative effects on certain groups that have been historically disadvantaged or burdened (examples include people earning low incomes and non-white populations) in relation to communities that have not been disadvantaged, such as non-minority or higher-income earners. In this assessment, U.S. Census data were used to identify the demographics of the area in order to recognize potential “communities of concern.” The project team reviewed demographics for EJ groups, including people earning income below the poverty line, minority populations, and Hispanic populations to understand how an extension of Noonday Creek Trail can benefit these residents and facilitate non-vehicular transportation and recreational opportunities in the vicinity of Noonday Creek.

Poverty

Approximately 9.1% of Cobb County households live below the poverty level (**Figure 9**). Within the study area, three tracts have household poverty

rates exceeding the county average. Tracts 302.48 and 302.47 have the highest rates of households in poverty (19.2% and 17.5%, respectively). The proximity of these Census tracts to KSU and the concentration of student housing may contribute to these high rates.

Minority Population

Of Cobb County's total population of 766,149 residents, 369,182 (approximately 48%) are white alone. The largest minority population is Black or African American, which comprises approximately 26% of the population (200,072 residents). **Figure 10** displays the overall minority population by Census tract within the study area, and **Table 4** shows the percent share of minority, non-white and Hispanic residents for Census tracts in the study area in comparison to Cobb County. Tract 302.48 has the largest minority population (51.3%), exceeding the county average. Tract 303.49 has the lowest minority population (36.9%), falling below the county average. The percentage of the minority population ranges from 36.94% (tract 303.49) of the population, to 51.27% of the population (tract 302.48).

Hispanic Population

Approximately 14.52% of Cobb County's population, or 111,240 residents, identify as Hispanic or Latino. As shown in **Figure 11**, two of the five Census tracts along Noonday Creek (303.46 and 303.47) have a higher share of Hispanic population than Cobb County.

Table 4: Minority and Hispanic Population by Census Tract Along Noonday Creek

Location	Total Population	Percent Minority	Percent Hispanic
Cobb County	766,149	51.81%	14.52%
Tract 302.48	6,922	51.27%	9.10%
Tract 303.46	3,587	39.25%	17.12%
Tract 303.47	4,885	40.18%	17.28%
Tract 303.48	5,013	47.30%	10.41%
Tract 303.49	3,519	36.94%	9.97%

Source: 2016-2020 American Community Survey 5-Year Estimates

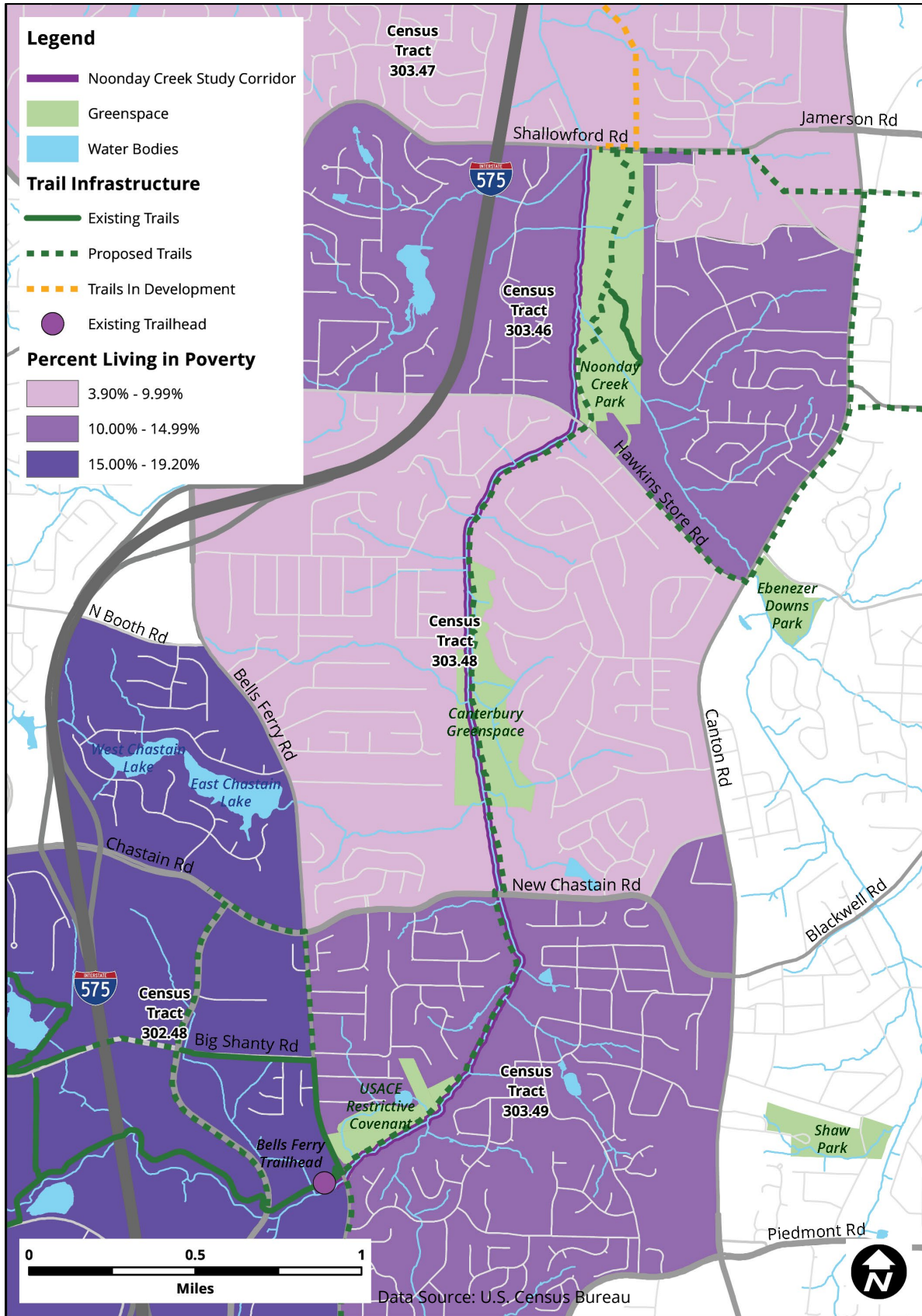


Figure 9: Percent Living in Poverty By Census Tract Within Noonday Creek Study Area

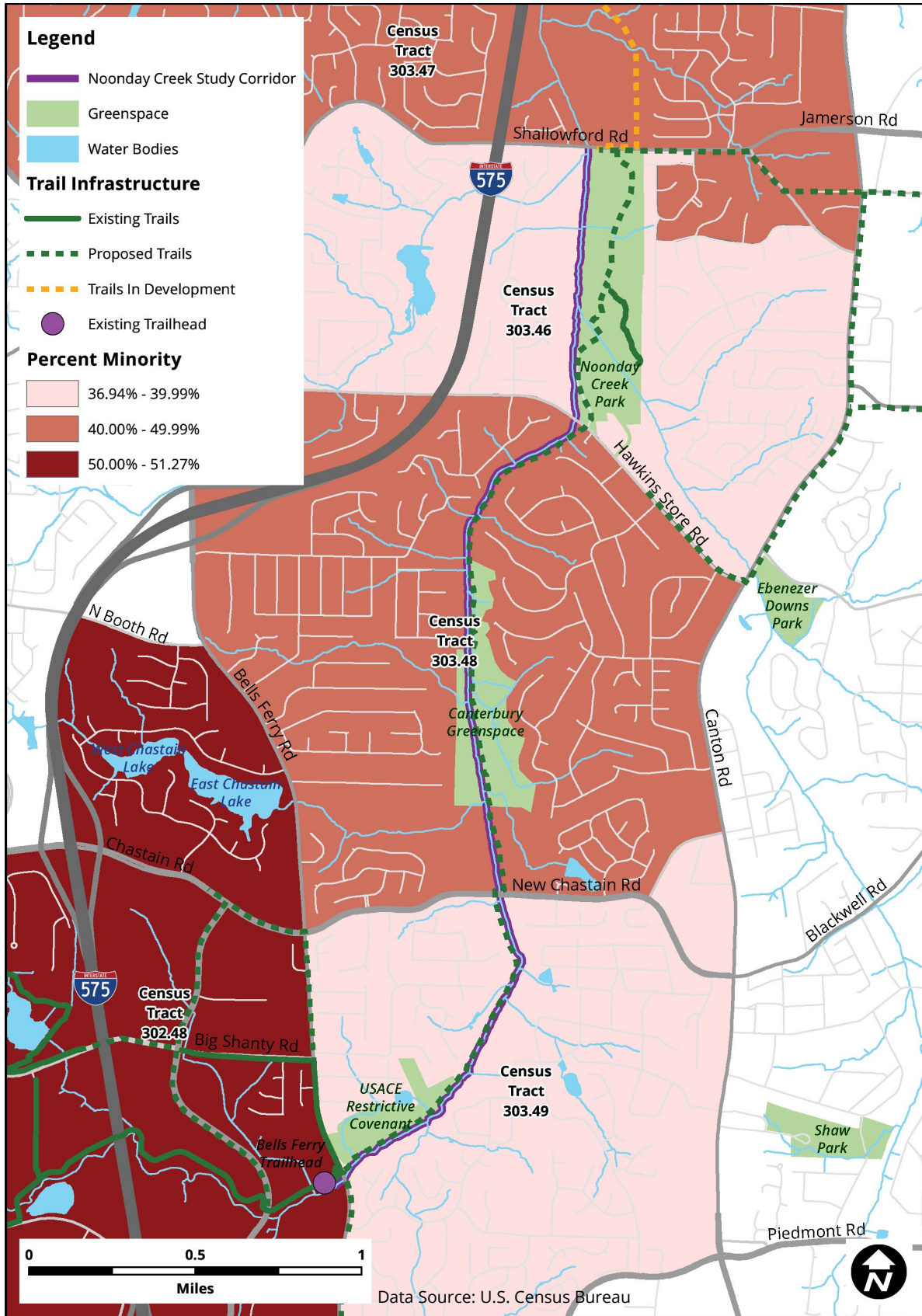


Figure 10: Minority Populations By Census Tract Within Noonday Creek Study Area

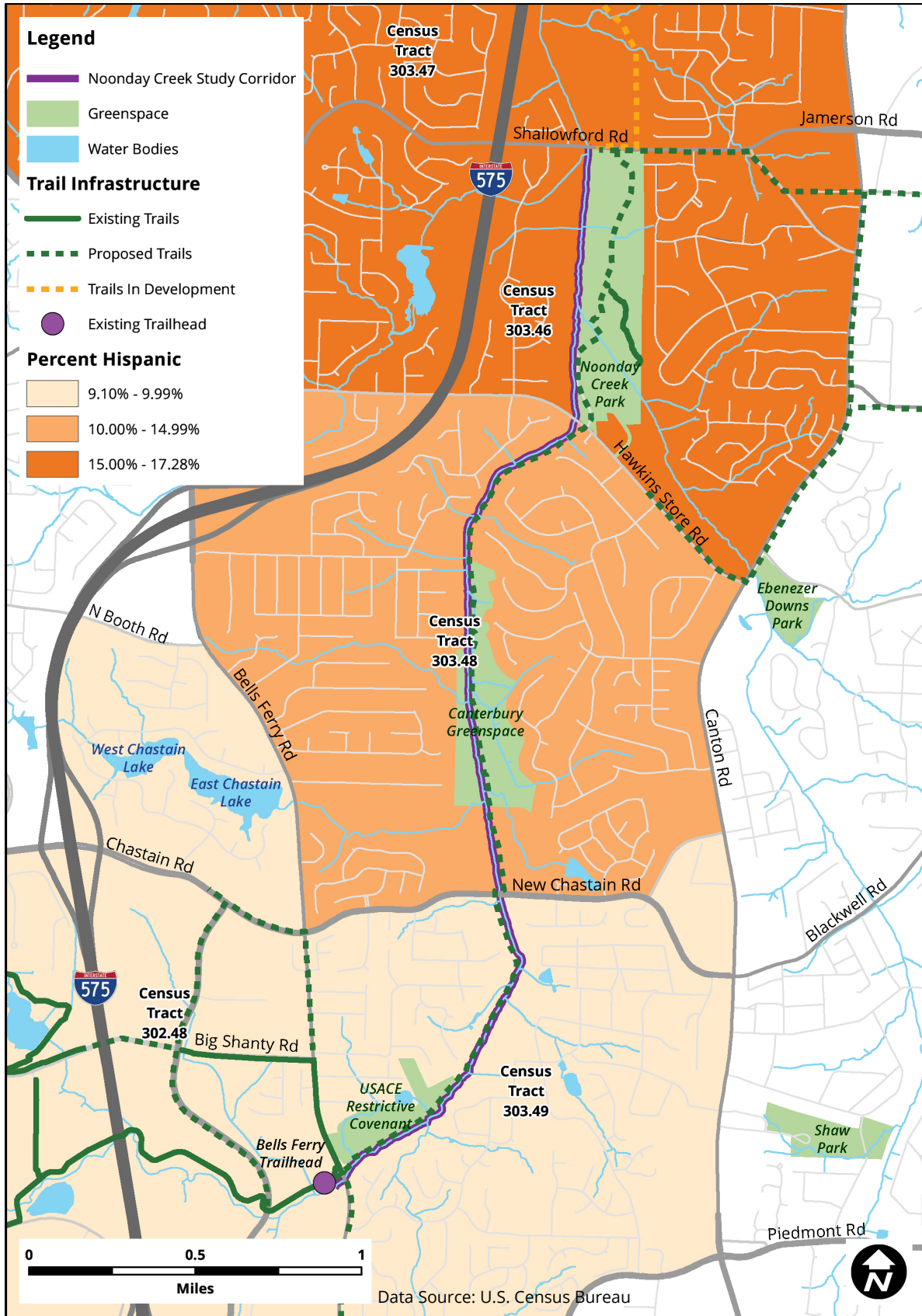


Figure 11: Hispanic Populations By Census Tract Within Noonday Creek Study Area



Commute Characteristics and Transportation Access

Commute Characteristics

Across Cobb County and within the study area, the majority of workers age 16 or over commute by driving alone in a vehicle. Across the county, the next most common commute was working from home, representing nearly 12% of workers countywide. This figure likely reflects the rise in telecommuting due to the ongoing COVID-19 pandemic. This pattern is mirrored in tracts 303.46 and 303.49, where 13% and 11% of workers, respectively, work from home (**Table 5**). Carpooling is also a popular mode of transportation, particularly among workers in tracts 303.47, 303.48, and 303.49, where the share of those carpooling exceeds the countywide average.

The two census tracts near Kennesaw State University (KSU) have a 300% higher rate of residents who commute on foot, compared to the rest of Cobb County. Residents of these two census tracts are primarily students; they may choose to walk because they don't own cars or to avoid the hassle of purchasing parking passes and finding a parking space.

Only a small portion of workers walk or bike to work across Cobb County and within the study area. Countywide, about one percent of workers walk to work, and 0.1% of workers bike to work. Within the study area, the percentage of those who commute by foot or bike is similarly minimal. In two tracts, however, the share of workers commuting by foot is three times that of the county share; 3.3% in tract 302.48 and 3.8% in tract 303.48. These areas lie within and adjacent to the TCCID and near KSU, where there is a larger student population and residential areas in close proximity to offices and commercial businesses.

Cycling as a commuting mode is even less popular than walking; only 0.1% of workers within Cobb County bike to work. No workers bike to work within the Census tracts along Noonday Creek.

Vehicle Access

All of the Census tracts along Noonday Creek have 100% of households within the referenced census tracts have access to at least one vehicle, with the exception of Tract 302.48 west of Bells Ferry Road, in which 2.14% of the population is without vehicle access. This is reflective of the income characteristics and the student population within Tract 302.48 as well as its proximity to KSU in comparison to the other tracts along Noonday Creek. The percent of households with no vehicle access is shown by Census tract in **Figure 12**.

Table 5: Commuter Mode Share Along Noonday Creek

Mode Share	Cobb County	Tract 302.48	Tract 303.46	Tract 303.47	Tract 303.48	Tract 303.49
Drove Alone	77.0%	84.2%	83.7%	78.1%	78.3%	78.8%
Carpooled	7.4%	2.7%	3.4%	14.5%	7.1%	10.1%
Public Transportation	0.9%	0.3%	0.0%	0.0%	0.1%	0.0%
Walk	1.1%	3.3%	0.0%	0.0%	3.8%	0.0%
Bicycle	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Taxicab, Motorcycle, or Other Means	1.9%	4.2%	0.0%	2.2%	3.6%	0.0%
Worked From Home	11.5%	5.3%	12.9%	5.2%	7.2%	11.0%

Source: 2016-2020 American Community Survey 5-Year Estimates

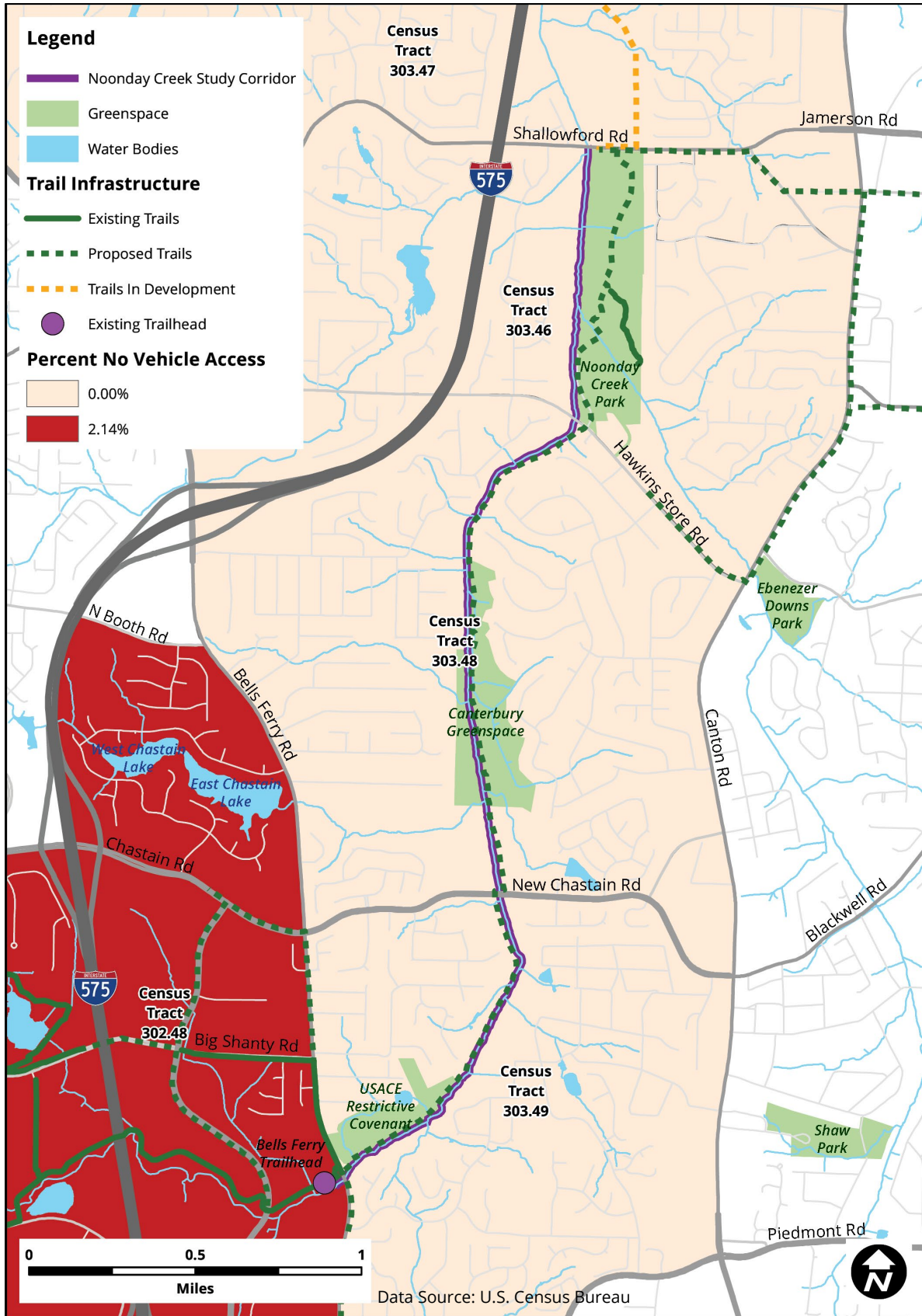


Figure 12: Vehicle Access By Census Tract Within Noonday Creek Study Area



Existing Transportation Infrastructure

This section of the Existing Conditions Analysis examines existing transportation infrastructure, including the roadway, multimodal, and transit networks, which can support access to an expansion of the trail to Noonday Creek Park. A three-year crash history as well as Safety risk and propensity are also analyzed as part of this review.

Roadway Network

Functional Classification

Figure 13 shows roadway functional class in the study area. The roadway network around Noonday Creek consists of minor arterials that provide connections between residential neighborhoods, the TCCID, and the I-75 and I-575 interchanges; and local roads, primarily located within neighborhoods in the area. Bells Ferry Road is a two-lane roadway that travels north-south to the west of Noonday Creek. North of the Bells Ferry Trailhead, Bells Ferry Road intersects with New Chastain Road, a two-lane, east-west roadway also classified as a minor arterial. Further north, Noonday Creek crosses beneath Shallowford Road, a two-lane minor arterial that also serves as the southern terminus of the planned Noonday Creek Trail extension from the City of Woodstock. The east-west local road consists of two lanes and provides access to Noonday Creek Park.

Four major roadways cross Noonday Creek:

- ***Bells Ferry Road***
- ***New Chastain Road***
- ***Hawkins Store Road***
- ***Shallowford Road***

Each of these roads has a posted speed limit of 45 MPH.

Speed Limit

The major roadways which pass within one mile of Noonday Creek include Bells Ferry Road, New Chastain Road, Hawkins Store Road, and Shallowford Road. Each of these roads has a posted speed limit of 45 miles per hour (MPH).



New Chastain Road West of Noonday Creek Trail

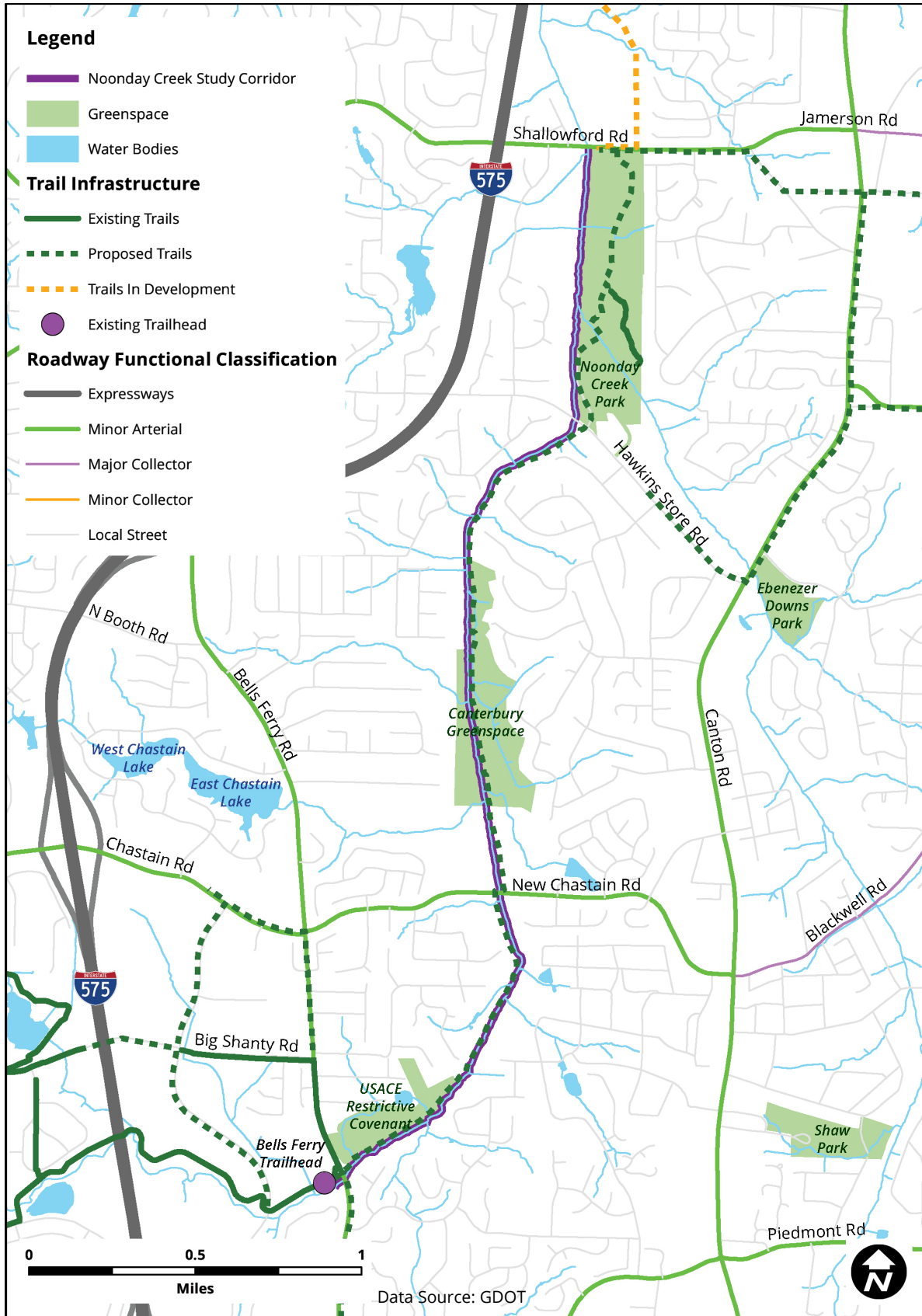


Figure 13: Roadway Functional Classification



Bridge Facilities

This section of the report provides an inventory of bridge facilities within the study area along Noonday Creek to describe existing conditions which we be utilized to evaluate the feasibility of a trail extension along with crossing opportunities based on existing structures. The portion of Noonday Creek between Bells Ferry Road and Shallowford Road crosses beneath five bridges, located at Bells Ferry Road, New Chastain Road (two bridge structures), Hawkins Store Road, and Shallowford Road. These are shown in **Table 6** and **Figure 14**.



Looking West Along Hawkins Store Road Towards Bridge Over Noonday Creek

Bridge Condition

The FHWA National Bridge Inventory (NBI) was reviewed to understand the condition of bridges within the study area.

Based upon bridge inspections, bridges are classified as Good, Fair, or Poor. According to the National Bridge Inventory (NBI), based on the Pavement and Bridge Condition Performance Measures final rule (January 2017), bridge condition is determined by the NBI lowest rating of condition ratings for Item 58 (Deck), Item 59 (Superstructure), Item 60 (Substructure), or Item 62 (Culvert).

Good Condition - All items score from 7 to 9

Fair Condition - If any items have a score of 5 or 6

Poor Condition - If any items have a score of 4 or less

Based on guidance from AASHTO, trail underpasses are commonly recommended solutions to avoid at-grade crossings of collector and arterial streets. An 8-foot vertical clearance is generally recommended; however, a 10-foot vertical clearance is more desirable. All bridges provide a 10-foot vertical clearance.

Source: AASHTO Guide for the Development of Bicycle Facilities , Fourth Edition, p. 5-6

Table 6: Bridges Along Noonday Creek

Bridge ID	Location	Year Built	Condition	Vertical Clearance (ft)*
067-0150-0	Bells Ferry Rd @ Noonday Creek	1959	Fair	31.2
067-5160-0	New Chastain Rd (EB) @ Noonday Creek	1993	Fair	14.2
067-5303-0	New Chastain Rd (WB) @ Noonday Creek	2013	Good	14.8
067-5033-0	Hawkins Store Rd @ Noonday Creek	1993	Good	29.0
067-0132-0	Shallowford Rd @ Noonday Creek	1990	Good	30.4

**Vertical clearances shown in this table are from the bottom of the beam to the waterline
Source: 2021 National Bridge Inventory & GDOT Inspection Reports*

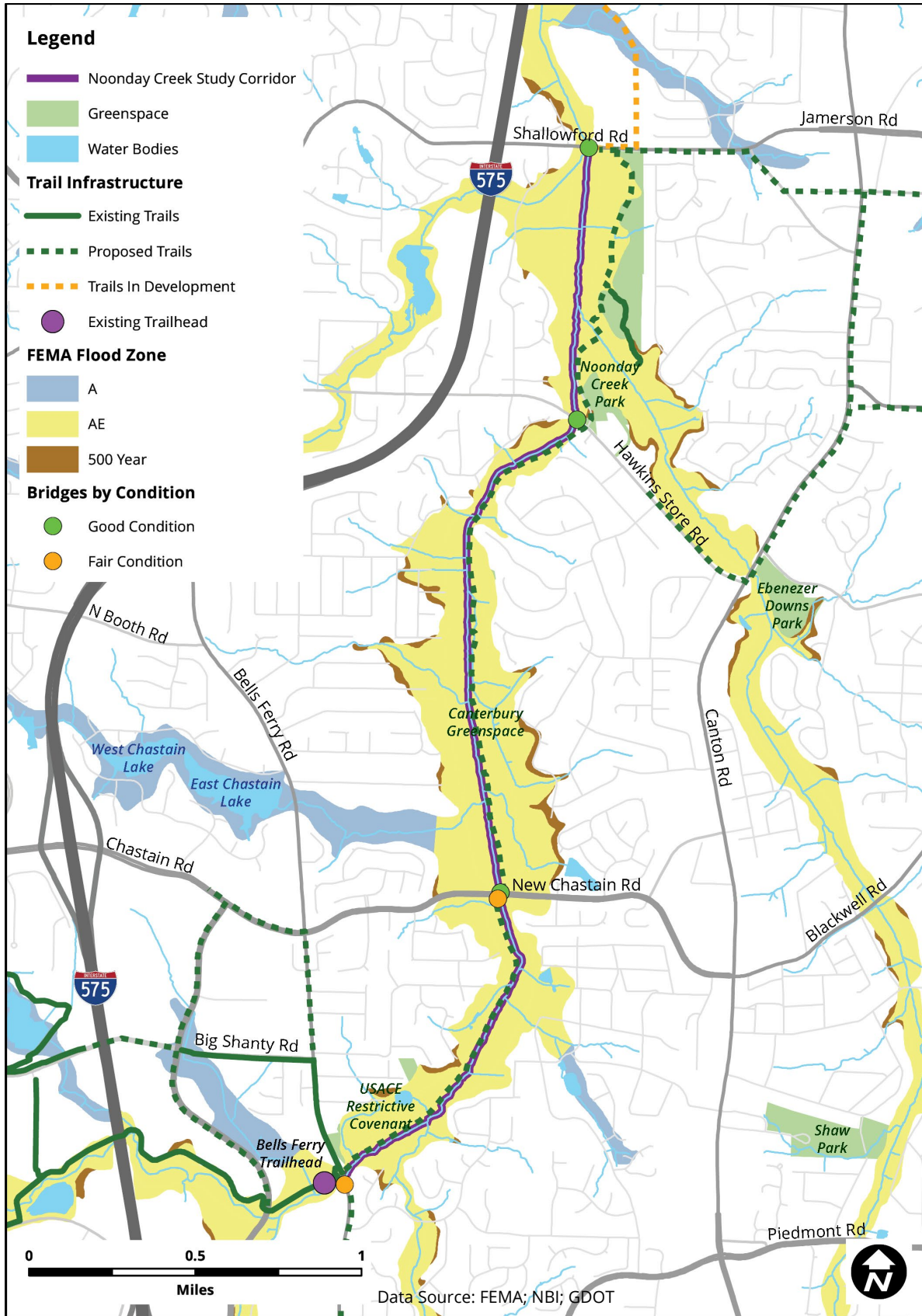


Figure 14: Bridge Condition Along Noonday Creek



Bells Ferry Road

The Bells Ferry Road bridge over Noonday Creek (Structure No. 067-0150-0) was built in 1959. The bridge carries two 12-foot vehicular travel lanes over Noonday Creek and lacks both shoulders and sidewalk. The bridge was last inspected by GDOT on April 26, 2021 and determined to be in fair condition.

The main bridge unit has four spans, and the deck is concrete with an asphalt overlay. The bridge has an approximately 30-degree skew. There is a water line on the east side of the bridge and a gas line and telephone conduit attached to the bottom of the left overhang. Underneath the deck, there is a steep slope and evidence of erosion, particularly on the north side of Noonday Creek. The most recent bridge inspection notes collision damage on the bridge railing and corrosion on the bridge substructure.

The bridge over Bells Ferry Road is programmed for replacement, with design scheduled to begin in late 2022. The Bells Ferry Road LCI Operational Study found that replacing the existing bridge could be an opportunity to add a wide sidewalk or trail for people wishing to access the trailhead on foot or on bike from the south. It could also potentially facilitate a future extension of the trail beneath the bridge, providing a safe and comfortable crossing, separated from roadway traffic, helping the County continue to grow its trail network and improve connectivity. As the design gets underway and based on County preferences, there may be an opportunity to design the bridge to accommodate a potential trail crossing beneath the structure following completion of this scoping study.



Bells Ferry Road Bridge Over Noonday Creek Programmed for Replacement

New Chastain Road Eastbound

The bridge along New Chastain Road in the eastbound direction (Structure No. 067-5160-0) was built in 1993 and carries two 12-foot vehicular lanes. The bridge was last inspected by GDOT on April 26, 2021 and determined to be in fair condition. The bridge has a narrow shoulder but lacks sidewalk and does not connect to sidewalk facilities on the south side of New Chastain Road. The main bridge unit does not have skew and consist of four spans with a concrete deck and asphalt overlay. There is a jersey barrier as the bridge rail on either side of the deck. A water line lies adjacent to the south side of the bridge, and there is a gravity sewer line slightly further south. The latest bridge inspection report indicates there is has minor cracking on the asphalt overlay and spall at all joints. There is also corrosion on the bridge substructure.

Among the five bridges along Noonday Creek, this structure has the lowest vertical clearance at 14.2 feet. Beneath the bridge, along the banks of Noonday Creek, there is rip rap, or rocky material designed to mitigate against scour and erosion.

New Chastain Road Westbound

The bridge along New Chastain Road in the westbound direction (Structure No. 067-5303-0) was built in 2013 and carries two 12-foot vehicular lanes. The bridge was last inspected by GDOT on August 24, 2021 and determined to be in good condition. The bridge has a narrow shoulder but lack sidewalks. The main bridge unit has no skew and consists of four spans with a concrete deck. There is a Jersey barrier as the bridge rail on either side of the deck. A water line is attached to the north side of the bridge. The latest inspection report notes minor cracking on the deck surface and that all deck joints are leaking.

Among the five bridges along Noonday Creek, this structure has the second lowest vertical clearance at 14.8 feet. There is rip rap along the banks of Noonday Creek beneath the bridge. While the vertical clearance for both the eastbound and westbound bridges is above the ten-foot preferred minimum, a trail crossing beneath the bridges is feasible provided that proper permitting requirements are fulfilled.



Low Vertical Clearance Beneath the New Chastain Road Bridges

Hawkins Store Road

The bridge on Hawkins Store Road over Noonday Creek (Structure No. 067-5033-0) was built in 1993 and carries two 12-foot travel lanes and an 11-foot eastbound left-turn lane. The bridge has four-foot shoulders containing sidewalk on each side. These sidewalks connect to sidewalks on both sides of the road east of the bridge; however, there is sidewalk only on the south side of Hawkins Store Road west of the bridge. The bridge was last inspected by GDOT on August 24, 2021 and determined to be in good condition.

The main bridge unit has a 15-degree skew and consists of three spans with a concrete deck. The bridge deck includes concrete and aluminum bridge rail. The latest inspection report noted minor cracking on the deck surface.

There is an 8-inch water line and a 4.5-inch gas line underneath the bridge deck. The structure has a vertical clearance of 29 feet, which could accommodate a potential below-grade trail crossing along Noonday Creek. Both banks of Noonday Creek have rip rap underneath the bridge.



Sidewalks Along Hawkins Store Road Bridge

Shallowford Road

The bridge on Shallowford Road over Noonday Creek (Structure No. 067-0132-0) was built in 1990 and carries two 12-foot vehicular lanes. There are four-foot shoulders on both sides of the bridge but these shoulders only connect to sidewalks on the south side of Shallowford Road. The bridge was last inspected by GDOT on April 12, 2021 and determined to be in good condition.

The main bridge unit has no skew and consists of three spans with a concrete deck. The bridge deck has a concrete bridge rail. There is a 3.5-inch gas line underneath the bridge deck, and a 12-inch water line on the south side of the bridge. In addition to this water line owned and operated by Cobb County Water System, there is a 36-inch water line south of the bridge owned and operated by Cobb County-Marietta Water Authority.

This structure has a vertical clearance of 30.4 feet, which could accommodate a potential below-grade trail crossing along Noonday Creek. Both banks of Noonday Creek have rip rap underneath the bridge.



Looking West on Shallowford Road From Bridge Over Noonday Creek

If it is determined that any below-grade trail crossings are needed beneath these bridges, the trail crossings will be designed in context with the vertical clearance and cross-section of the bridge to provide sufficient clearance for safe passage by trail users. If a bridge is scheduled to be replaced, such as the Bells Ferry Road bridge, any below-grade trail crossing should be designed in concert with the new bridge, incorporating best practices and standards for below-grade trail crossings.



Multimodal Network

Currently, there are limited walking and bicycling facilities in the study area for people accessing Noonday Creek Park. A potential extension of the Noonday Creek Trail would expand multimodal access to the park and destinations in the Town Center area.

Sidewalks and Bicycle Facilities

See **Figure 15** for the existing and proposed walking and bicycling facility map. The existing Noonday Creek Trail extends from Kennesaw Mountain National Park to Bells Ferry Road. A multi-use path along Big Shanty Road connects to the Noonday Creek Trail via the existing Mall Connector Trail. There are no existing on-street bicycling facilities within a mile of the project corridor. There are sidewalks on the following streets that intersect the project corridor which can promote connectivity to nearby neighborhoods and destinations if and when a trail extension is constructed:

- West side of Bells Ferry Road from the existing Noonday Creek Trail to Big Shanty Road
- Both sides of Bells Ferry Road from Chastain Road/New Chastain Road to just south of Chastain Landings Court to Chastain Manor Way
- North side of Big Shanty Road from Bells Ferry Road to Chastain Meadows Parkway, and further west
- Both sides of Chastain Road from Bells Ferry Road to Chastain Meadows Parkway, and further west
- South side of New Chastain Road from Bells Ferry Road to Canton Road, and further east
- North side of Hawkins Store Road from Bells Ferry Road to Canton Road
- South side of Shallowford Road from I-575 to Canton Road, and further east

While sidewalk facilities exist along minor arterials and thoroughfares in the area, there are numerous neighborhoods which do not have sidewalk facilities which connect to these major roadways. An example is the Brookhaven neighborhood east of Bells Ferry Road and north of the creek. Other

neighborhoods along Shallowford Road west of I-575 and along Hawkins Store Road do not have

sidewalk facilities within them. Connectivity to the Town Center is provided through Chastain Road and Big Shanty Road.

Proposed Facilities

The Cobb County Greenways & Trails Master Plan identified a number of desired or proposed new facilities pulling from area plans, studies, and new analysis and that each of these would need further study before they are advanced. These facilities include:

- **Bells Ferry Road Trail Sidepath:** From Rockridge Preserve Trail to Noonday Creek Trail
- **Bells Ferry Road Trail Sidepath:** From Big Shanty Road to Chastain Road
- **Big Shanty Road Extension Trail Sidepath:** From Chastain Meadows Parkway to Big Shanty Trail. A sidepath between Chastain Meadows Parkway and Bells Ferry Road on the south side of Big Shanty Road was completed in 2020.
- **Chastain/Chastain Meadows/Big Shanty On- and Off-Street Bicycle Facilities:** From Noonday Creek Trail to Chastain Road
- **Canton Road North Trail Sidepath:** From Noonday Creek Park to Lake Drive
- **Noonday Creek Park to Kell H.S. Trail Sidepath:** From Shallowford Road at Noonday Creek Park to Kell High School

Currently, no funding has been allocated for implementation.



Project Team Members Walking Down Narrow Sidewalk on the South Side of New Chastain Road

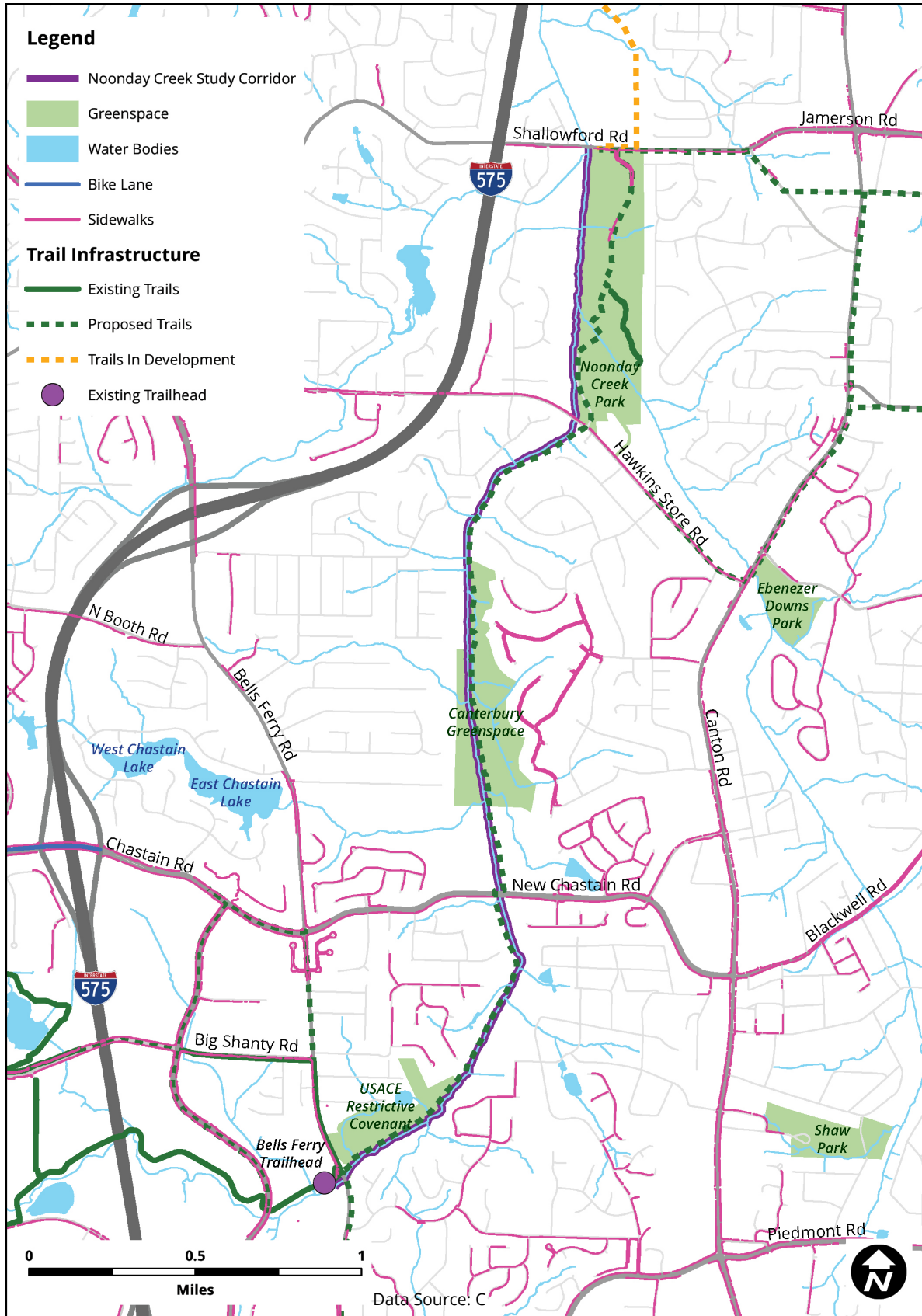


Figure 15: Existing and Proposed Walking and Bicycling Facilities

Trail Usage

Trail usage is measured in terms of average daily traffic (ADT), representing individuals traveling along the trail. Trail usage data was collected at the following trailheads along the existing Noonday Creek Trail:

- Vaughn Road
- US 41 East
- Town Center Park
- I-75
- I-575
- Bells Ferry

The Town Center Community Improvement District (TCCID) collects trail users to measure hourly, daily, weekly, monthly, and yearly trail usage. Data summarized below reflects trail use for the period from approximately July 2019 to July 2022 (although it should be noted that data collection began at slightly different points in time for each count station, depending on when the counters were installed). Data collection continue is ongoing. Trail counts by trailhead are shown in **Figure 16**. The trailheads east of I-75 including Town Center Park, I-575, and Bells Ferry have the highest trail usage counts with 358, 537, and 517 users, respectively.

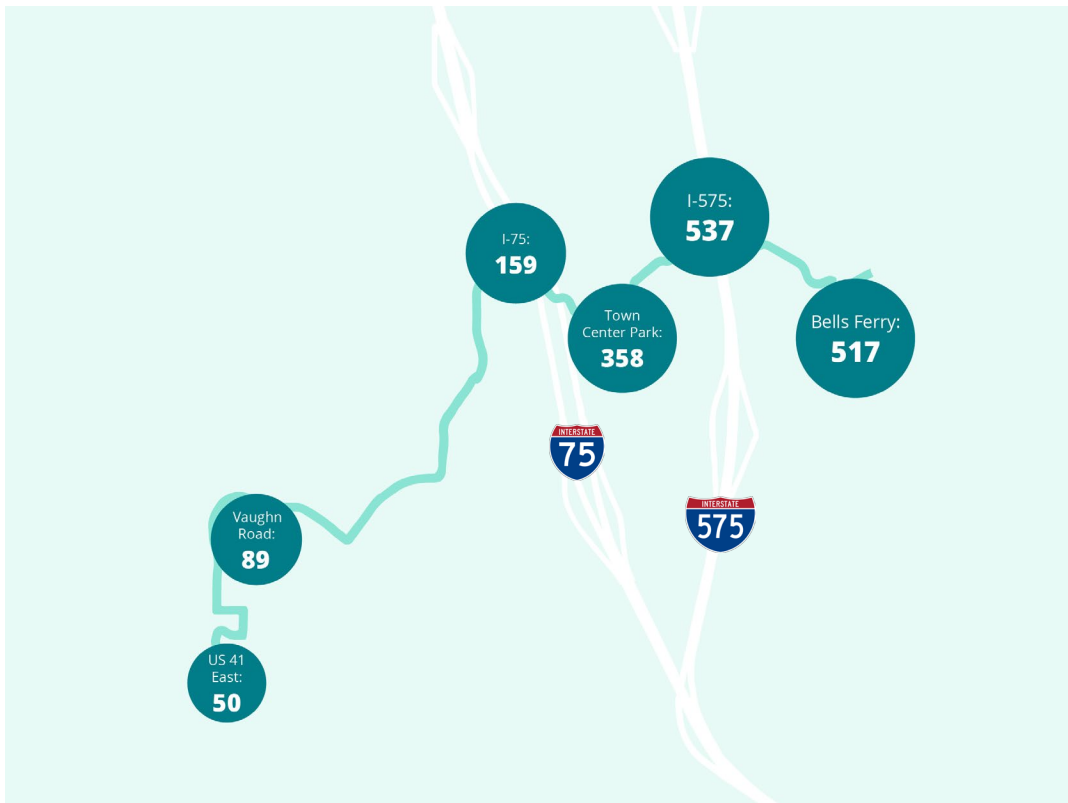


Figure 16: Noonday Creek Trail Usage Counts (Average Daily Counts)



Safety Risk

The Walk, Bike, Thrive! Regional Bike-Pedestrian Plan includes a safety risk analysis for the entire ARC region based on reported crashes involving vulnerable users relative to the estimated miles walked and biked by Census tract in the Atlanta region. The study area has a low to medium relative risk of bicyclist-involved and pedestrian-involved crashes. As trails are expanded in the area, the facilities provide a path for pedestrians and cyclists that is separated from the roadway, decreasing the relative risk of conflicts with vehicles. Additionally, minimizing at-grade crossings decreases safety risk. Where at-grade crossings are necessary, proven safety countermeasures, such as rectangular rapid flashing beacons (RRFBs), pedestrian hybrid beacons (PHBs), and median and pedestrian refuge islands, and crosswalk visibility enhancements should be considered as the trail is designed.²

See **Figures 17** and **18** for walk and bike crash risk maps.

Propensity

The Walking and Biking Propensity analysis from the Walk, Bike, Thrive! Regional Bike-Pedestrian Plan is a composite analysis of location-based characteristics that identifies areas with high propensity, or relative demand, for walking and bicycling. Factors include population and employment density, proximity to trails, transit, schools, and retail locations.

The analysis shows areas of medium-to-high walking and biking propensity adjacent to the study area. The higher-propensity areas are primarily correlated with where people live, shop and work along Canton Road and Bells Ferry Road. This suggests that there is demand for multimodal facilities in the area, including the potential trail extension.

This also suggests that the higher-propensity nodes could benefit from the inter-connectivity provided by the proposed trail extension, and that the presence of expanded trail facilities may increase the propensity for walking and biking in the area.

See **Figure 19** for the walking and bicycling demand/propensity map.



Entrance to Noonday Water Reclamation Facility Along Shallowford Road

² FHWA (2022). Proven Safety Countermeasures. <https://safety.fhwa.dot.gov/provencountermeasures/>

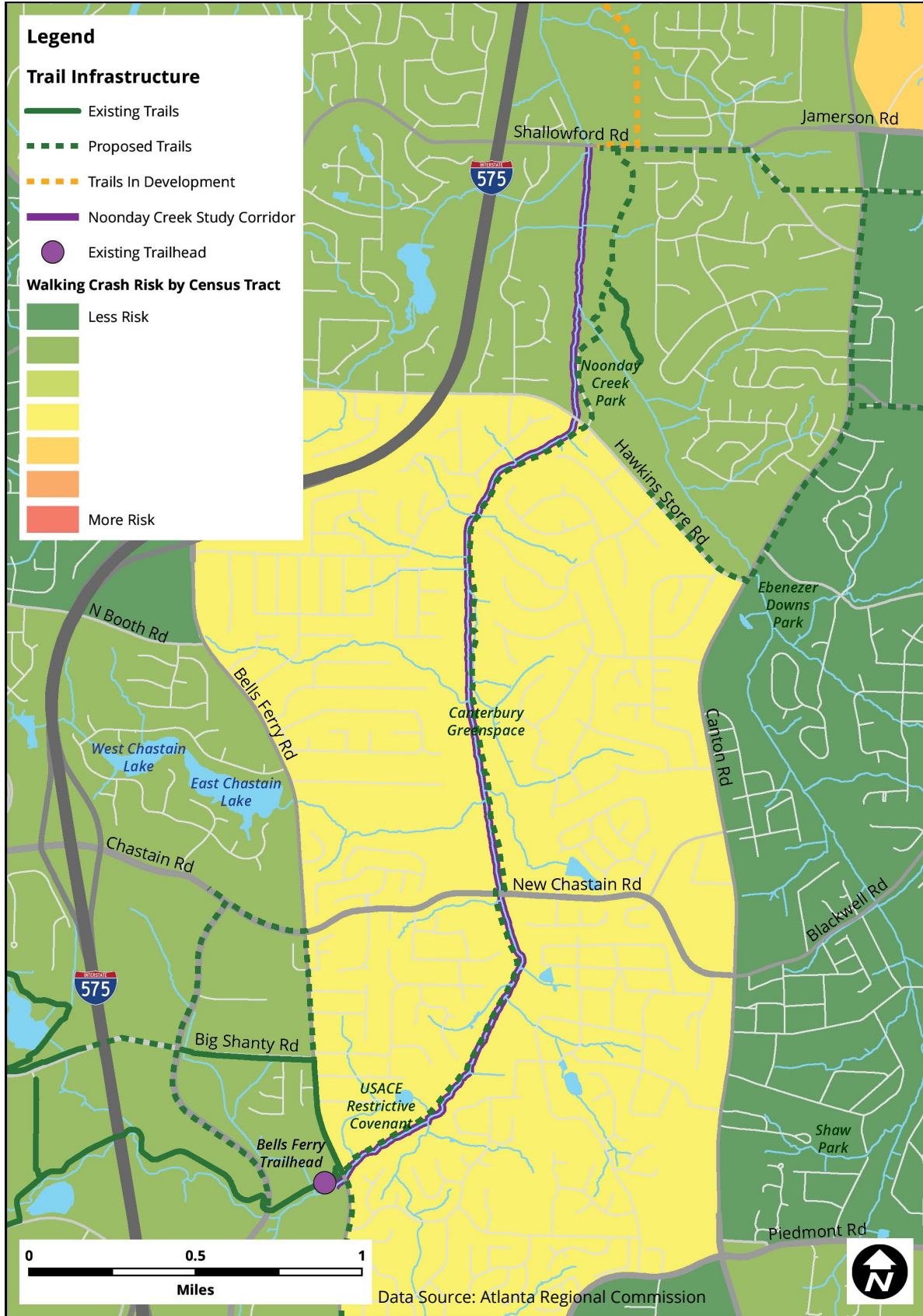


Figure 17: Walking Crash Risk by Census Tract

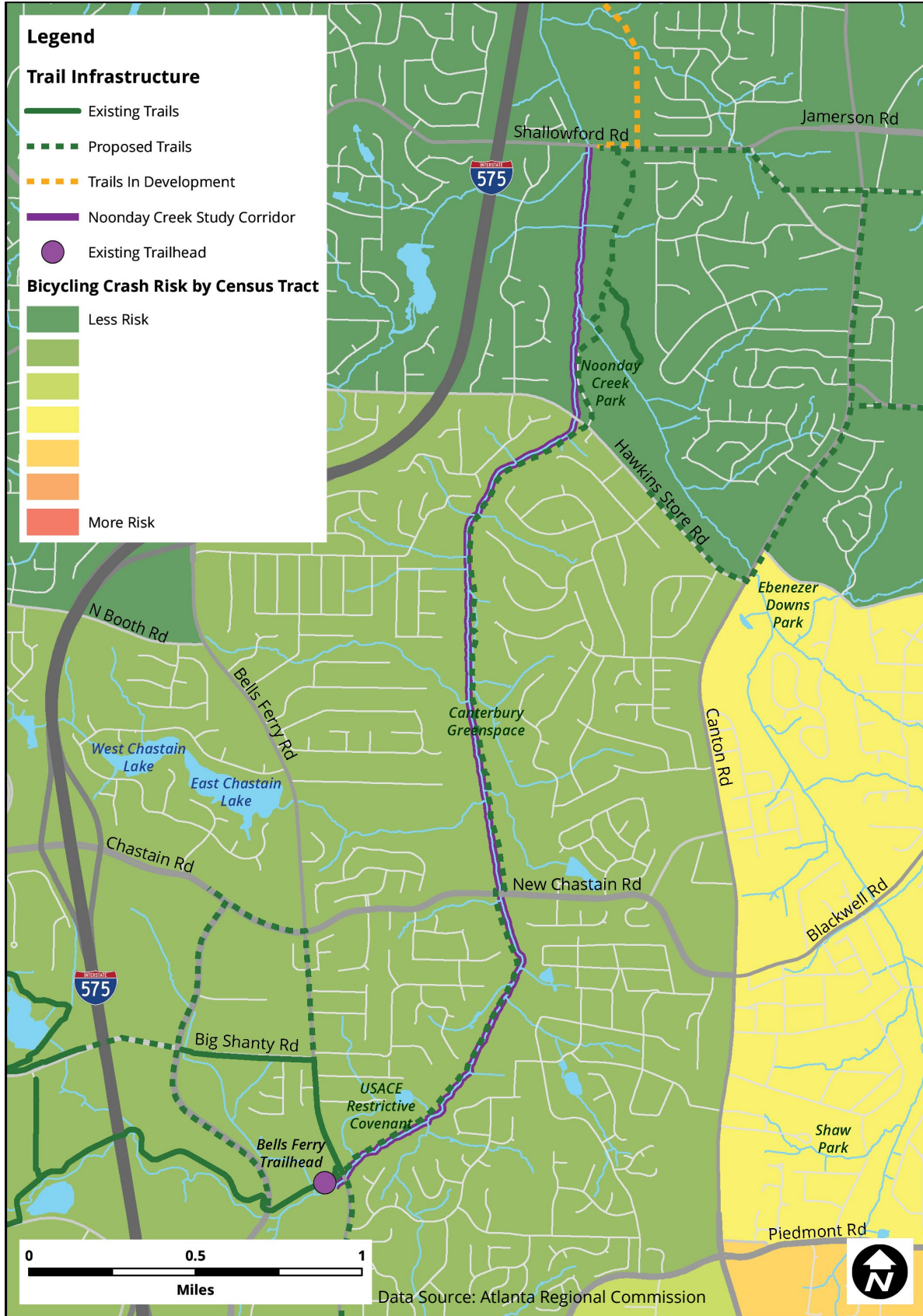


Figure 18: Bicycling Crash Risk by Census Tract

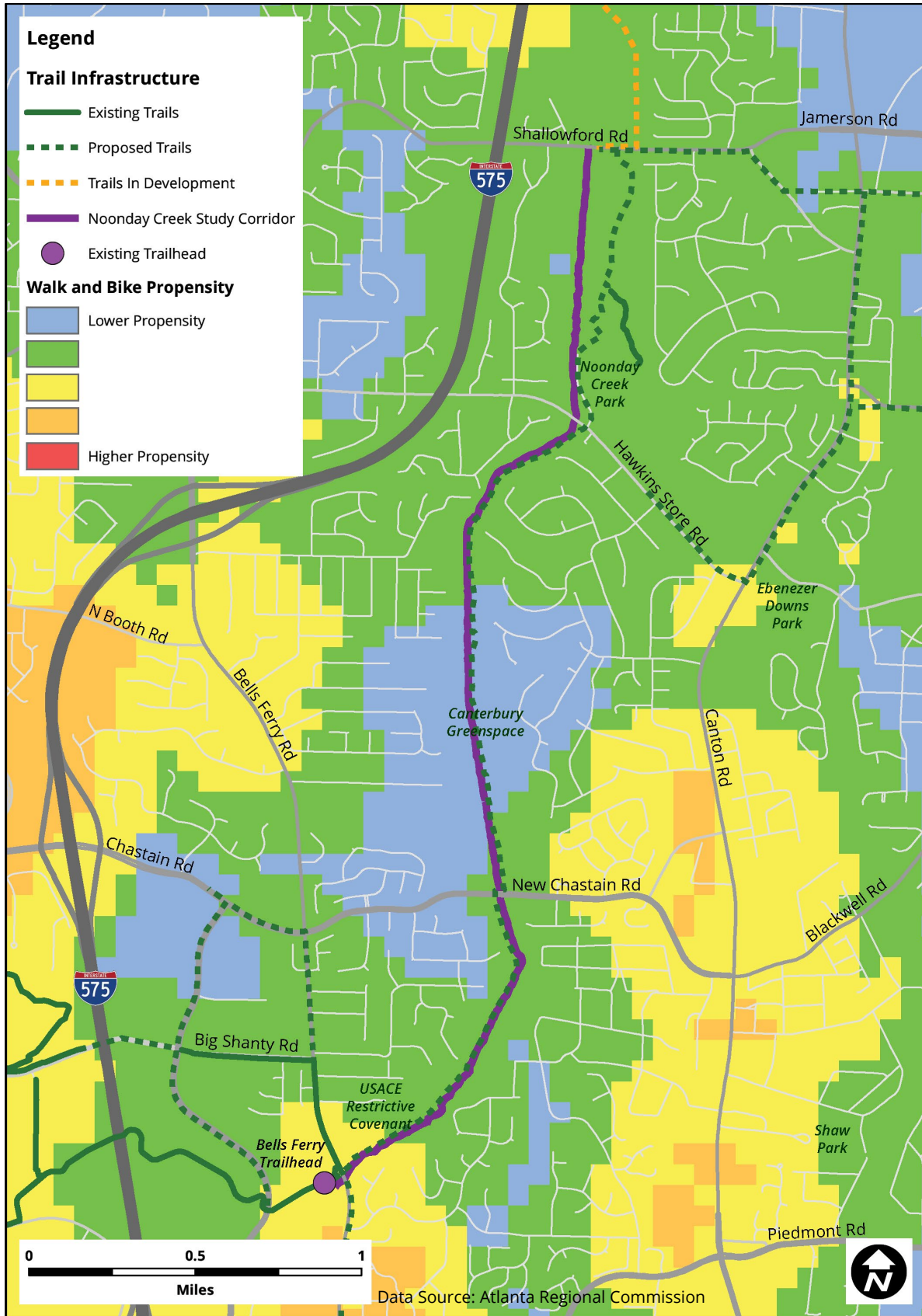


Figure 19: Walking and Bicycling Demand/Propensity



Transit Network

Cobb County is served by the CobbLinc Transit system, which provides fixed-route, express, and circulator bus services, paratransit, and a limited number of FLEX buses (which offers on-demand and flexible service for all passengers). Additional commuter services are provided by Xpress, which is operated by the Atlanta-Region Transit Link Authority (ATL). Fixed routes generally operate on north-south corridors, particularly within the general area of the Noonday Creek Trail. North of the Bells Ferry Trailhead, two routes (40 and 45) run in the east-west direction but they do not cross the trail study corridor nor do they provide direct access to existing trailheads.

Two park-and-ride lots are located west of Noonday Creek Trail, at the northern edge of Town Center Mall and along Busbee Drive. The Town Center Park-and-Ride lot is served by CobbLinc route 100, which extends south parallel to Interstate 75, as well as Rapid 10, which provides limited-stop service along route 10. The Busbee Park-and-Ride is served by routes 40 and 45, which extend to the southeast and southwest, respectively. Additional park-and-ride facilities are located to the north of the study corridor in the City of Woodstock along SR 92 at I-575. Each of these facilities carries Xpress bus service to and from Downtown Atlanta.

Traffic Operations and Safety

Traffic Operations

To reflect the scope of this study as well as the impacts of the ongoing COVID-19 pandemic, historic traffic count data was used in lieu of collecting new data to understand traffic operations along roadways which cross Noonday Creek between Bells Ferry Road and New Shallowford Road. The project team collected existing traffic volumes from historical data from count stations as part of GDOT’s Traffic Analysis & Data Application (TADA).

Table 7 summarizes average annual daily traffic (AADT), truck percentages, and the most recent year of data available for each traffic count station along roadways that cross Noonday Creek.

Among these corridors, New Chastain Road has the highest traffic volume. If an at-grade trail crossing were to be proposed at this location, a pedestrian hybrid beacon (PHB) or similar treatment may be needed to facilitate a safe crossing. The decision on whether to install a PHB would have to meet warrants and requirements for installation established by Cobb County DOT as well as the GDOT Pedestrian and Streetscape Guide. PHBs are reserved for streets which have four lanes or less and speed limits of 45 MPH or less.³ The proposed trail crossing at Shallowford Road, for the portion of the trail under design in Cherokee County, is currently designed as a PHB. As potential alternatives are developed for this extension scoping study, the exact location of the at-grade crossing and most appropriate type of treatment will be considered in consultation with CCDOT, Cherokee County, and the City of Woodstock.

Table 7: Traffic Count Data in Study Area

Roadway Crossing Noonday Creek	GDOT Traffic Counter ID	Functional Classification	Speed Limit (MPH)	AADT	Truck Percent	Year of Data
Bells Ferry Rd	067-2901	Minor Arterial	45	11,150	2.7%	2019
New Chastain Rd	067-2886	Minor Arterial	45	21,575	N/A	2017
Hawkins Store Rd	067-8751	Local	45	8,050	2.5%	2018
Shallowford Rd	067-0848	Minor Arterial	45	14,625	3.7%	2017

³ GDOT (2019). Pedestrian and Streetscape Guide, p. 5-9 & 5-10.



Safety Analysis

To identify safety deficiencies at potential roadway crossings along the Noonday Creek study corridor, three years of crash data (from January 1, 2019 to December 31, 2021) was obtained from the Cobb DOT’s crash database for the following corridor segments:

- Bells Ferry Road from Bridge Over Noonday Creek to Chastain Road/New Chastain Road
- New Chastain Road from Bells Ferry Road to Claybrooke Drive
- Hawkins Store Road from Kings Crossing Drive to Wellington Drive
- Shallowford Road from Kings Crossing Drive to Lincoln Drive

The crashes discussed in this section are based on reported data. Along each of these street segments, no crashes resulted in fatalities, nor did any crashes involve pedestrians. However, one crash did involve a bicyclist.

Bells Ferry Road

Between the bridge over Noonday Creek and New Chastain Road along Bells Ferry Road, 56 total crashes were reported between 2019 and 2021 (see **Figure 20**). Crashes by intersection include the following:

- Bellestone Way – 2 crashes
- Big Shanty Road – 8 crashes
- Brookhaven Drive - 1 crash
- Chastain Landings Court/Chastain Manor Way – 4 crashes
- Chastain Road/New Chastain Road – 33 crashes
- Kathryn Drive – 3 crashes
- Lloyd Drive – 3 crashes
- Willard Drive – 2 crashes

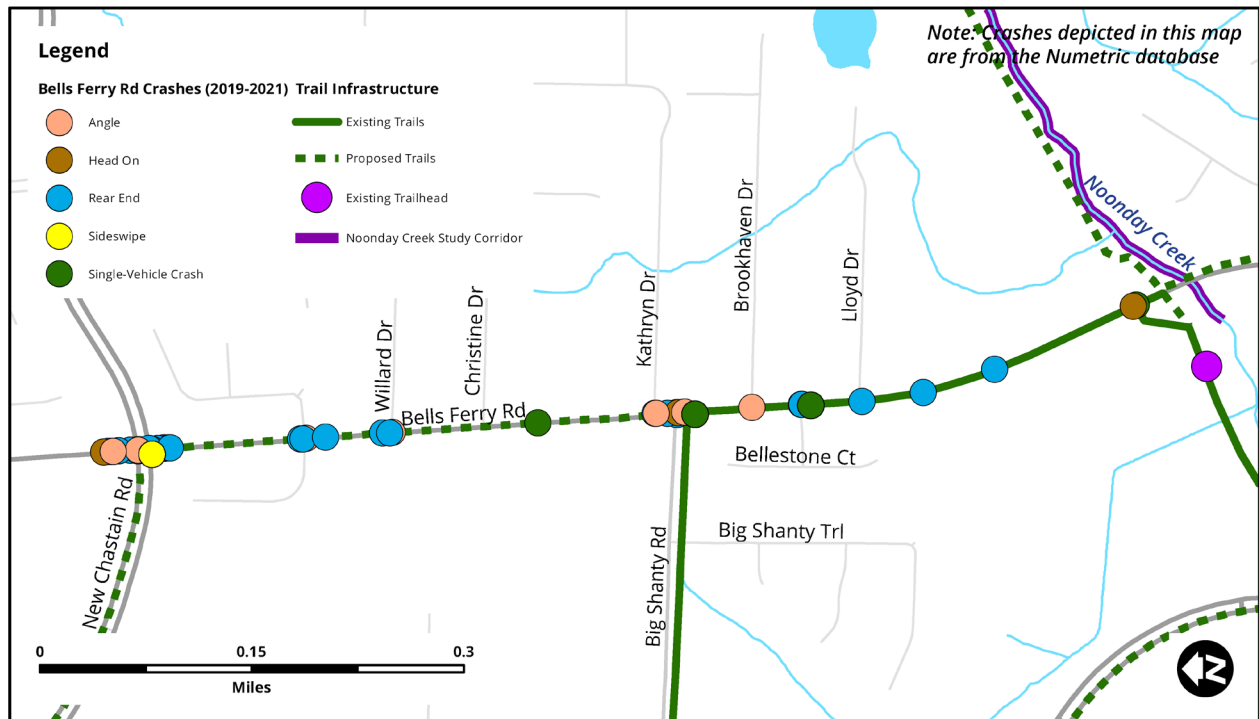


Figure 20: 2019-2021 Bells Ferry Road Crashes



Among these 56 crashes, crash types include the following:

- Rear-End – 33 crashes
- Right Angle – 5 crashes
- Sideswipe – 10 crashes
- Fixed Object – 3 crashes
- Left-Turn With Through Movement (LTWT) – 3 crashes
- Head-On – 1 crash
- Other - 1 crash

Reported contributing factors to crashes include the following:

- Distracted driving – 3 crashes
- Driver lost control – 2 crashes
- Failure to yield – 9 crashes
- Following too close – 27 crashes
- Improper lane change – 5 crashes
- Improper passing – 1 crash
- Improper turn – 3 crashes
- Misjudged clearance – 1 crash
- Reaction to an object/animal – 1 crash
- Under the influence – 4 crashes



Bells Ferry Road Looking North Towards Chastain Road/New Chastain Road

Ten of the 56 crashes resulted in 15 injuries including the following:

- Sideswipe crash at Bells Ferry Road and Big Shanty Road on July 15, 2019 at 8:06 AM involving an eastbound vehicle and westbound vehicle
- Rear-end crash in the south leg of the intersection at Chastain Road/New Chastain Road on December 21, 2019 at 3:18 AM involving two northbound vehicles
- Rear-end crash along Bells Ferry Road south of Lloyd Drive on September 9, 2020 at 6:10 PM involving two northbound vehicles
- Rear-end crash along Bells Ferry Road immediately north of Willard Drive on September 22, 2020 at 5:58 PM involving three southbound vehicles
- Rear-end crash in the south leg of the intersection at Bells Ferry Road and Chastain Road/New Chastain Road on December 7, 2020 at 6:19 PM involving two northbound vehicles
- Angle crash in the center of the intersection at Bells Ferry Road and Chastain Road/New Chastain Road on March 24, 2021 at 9:40 AM involving a turning northbound vehicle and a westbound through vehicle
- Rear-end crash along Bells Ferry Road south of Big Shanty Road on April 1, 2021 at 2:25 PM involving three northbound vehicles
- Rear-end crash in the north leg of the intersection at Bells Ferry Road and Chastain Road/New Chastain Road on June 13, 2021 at 10:38 PM involving two southbound vehicles
- Rear-end crash in the center of the intersection at Bells Ferry Road and Chastain Road/New Chastain Road on August 17, 2021 at 3:51 PM involving two westbound vehicles turning left to travel southbound on Bells Ferry Road
- Rear-end crash along Bells Ferry Road south of Lloyd Drive on November 19, 2021 at 4:20 PM involving two southbound vehicles

This analysis shows that traffic congestion is among the major safety challenges for constructing a multi-use path either across or along Bells Ferry Road, especially at the intersection with Chastain Road/New Chastain Road.

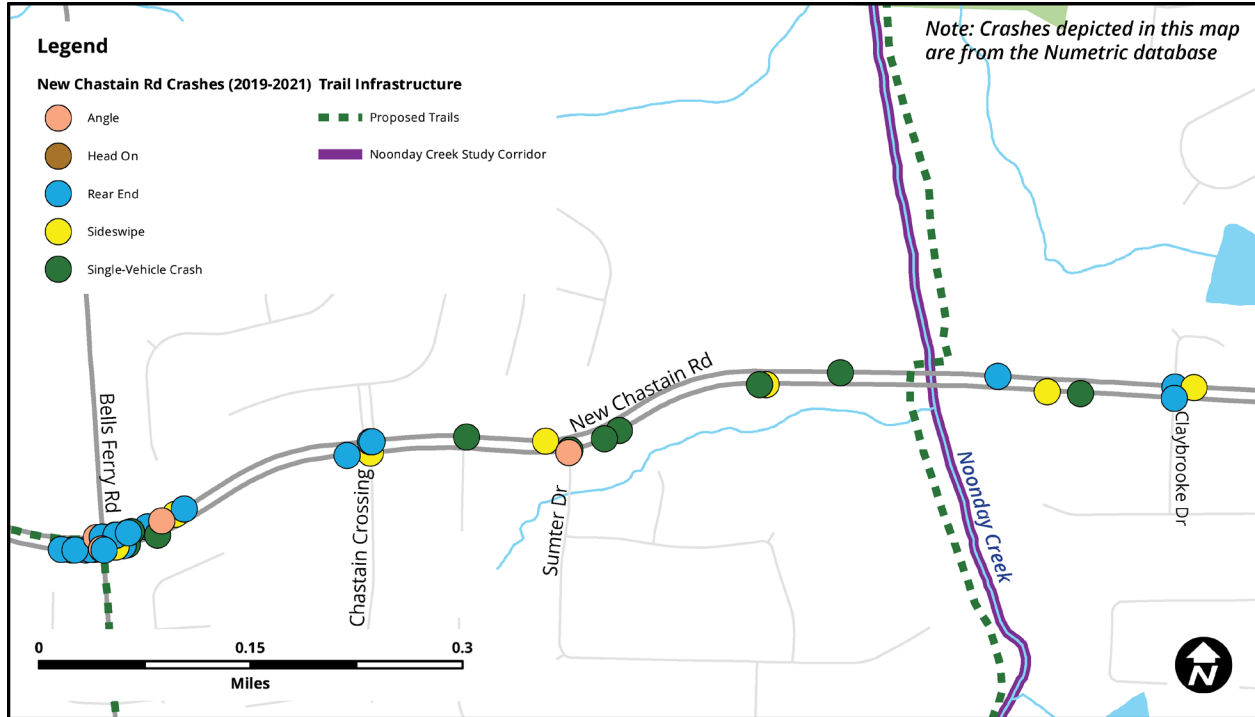


Figure 21: 2019-2021 New Chastain Road Crashes

New Chastain Road

Between Bells Ferry Road and Claybrooke Drive along New Chastain Road, there were 72 total crashes which were reported between 2019 to 2021 (see **Figure 21**). Crashes by intersection include the following:

- Bells Ferry Road – 47 crashes
- Sumter Drive – 9 crashes
- Claybrooke Drive/Grasmere Court – 9 crashes
- Chastain Crossing – 5 crashes
- Chastain Trace – 2 crashes

Among these 72 crashes, crash types include the following:

- Rear-End – 31 crashes
- Right-Angle – 4 crashes
- Sideswipe – 13 crashes
- Left-Turn With Through Movement (LTWT) – 8 crashes
- Fixed Object – 10 crashes
- Other - 6 crashes

Reported contributing factors to crashes include the following:

- Distracted driving – 3 crashes
- Disregard stop sign/signal – 4 crashes
- Driver lost control – 5 crashes
- Driving too fast for conditions – 3 crashes
- Failure to yield – 9 crashes
- Fire/explosion – 1 crash
- Following too close – 27 crashes
- Improper backing – 1 crash
- Improper lane change – 11 crashes
- Misjudged clearance – 1 crash
- Reaction to an object/animal – 4 crashes
- Other – 3 crashes



Seventeen of the 72 crashes resulted in 25 injuries:

- Rear-end on New Chastain Road east of Grasmere Court on January 22, 2019 at 6:55 AM involving two vehicles traveling westbound
- Rear-end at the intersection with Bells Ferry Road on February 11, 2019 at 4:35 PM involving two eastbound vehicles attempting to turn right to travel southbound
- Angle crash at the intersection with Bells Ferry Road on March 21, 2019 at 12:25 PM involving one vehicle traveling southbound on Bells Ferry Road, one vehicle traveling eastbound on Chastain Road, and a third vehicle traveling northbound on Bells Ferry Road
- Angle crash at the intersection with Bells Ferry Road on July 25, 2019 at 5:35 PM involving a westbound vehicle attempting to turn left to travel southbound on Bells Ferry Road and an eastbound vehicle on Chastain Road
- Rear-end crash along New Chastain Road in the east leg of the intersection at Bells Ferry Road on September 14, 2019 at 3:20 PM involving three westbound vehicles
- Angle crash in the intersection with Bells Ferry Road on September 22, 2019 at 7:00 PM involving an eastbound vehicle on Chastain Road failing to observe a traffic signal and striking a northbound left-turning vehicle attempting to travel westbound on Chastain Road
- Angle crash in the intersection with Bells Ferry Road on October 27, 2019 at 10:15 AM involving a vehicle turning left to travel northbound on Bells Ferry Road and a westbound vehicle on New Chastain Road
- Angle crash in the intersection with Bells Ferry Road on March 14, 2020 at 7:12 PM involving a northbound vehicle and an eastbound vehicle
- Angle crash in the intersection with Bells Ferry Road on June 22, 2020 at 4:10 PM involving three vehicles – one vehicle turning left to travel northbound on Bells Ferry Road, one vehicle traveling westbound on New Chastain Road, and one vehicle traveling southbound on Bells Ferry Road
- Angle crash at the intersection with Bells Ferry Road on December 15, 2020 at 6:37 PM involving three vehicles – one vehicle turning left to travel northbound onto Bells Ferry Road, a westbound vehicle on New Chastain Road, and an eastbound vehicle on Chastain Road
- Vehicle traveling eastbound struck a fixed object due to the driver losing control on New Chastain Road at Sumter Drive on January 5, 2021 at 2:46 PM
- A westbound motorcyclist under the influence struck a fixed object at the intersection with Bells Ferry Road on January 17, 2021 at 11:07 PM
- Vehicle traveling westbound on Chastain Road near Chastain Trace struck a fixed object on March 17, 2021 at 5:12 PM
- Rear-end crash in the east leg of the intersection with Bells Ferry Road on April 15, 2021 at 4:16 PM involving two westbound vehicles
- Rear-end crash along New Chastain Road west of Grasmere Court on May 17, 2021 at 9:44 PM involving two vehicles traveling westbound
- Rear-end crash along Chastain Road at the intersection with Chastain Crossing on September 7, 2021 at 7:40 AM involving three vehicles traveling westbound
- Vehicle traveling eastbound struck an object on New Chastain Road west of Claybrooke Drive on October 25, 2021 at 10:28 PM

Similar to Bells Ferry Road, New Chastain Road has safety concerns at the signalized intersection with Bells Ferry Road relating to sight distance, speed, and traffic congestion. Speed and vertical sight distance are concerns further east towards the bridge over Noonday Creek.



Figure 22: 2019-2021 Hawkins Store Road Crashes

Hawkins Store Road

Between Kings Crossing Drive and Wellington Drive along Hawkins Store Road, there were nine total crashes which were reported between 2019 to 2021 (see **Figure 22**). Crashes by intersection include the following:

- Ansley Drive – 2 crashes
- Farmbrook Lane – 4 crashes
- Kings Crossing Drive – 3 crashes

Among these nine crashes, crash types include the following:

- Right-Angle – one crash
- Rear-End – three crashes
- Sideswipe – three crashes
- Left-Turn With Through Movement (LTWT) – one crash
- Other - one crash

Reported contributing factors to crashes include the following:

- Disregard stop sign/signal – 1 crash
- Failure to yield – 1 crash
- Following too close – 3 crashes
- Improper turn – 1 crash

- Improper lane change – 2 crashes
- Other – 1 crash

Four of the nine crashes resulted in injury including the following:

- A LTWT crash on Hawkins Store Road east of Ansley Drive on October 17, 2019 at 6:03 PM
- A right-angle crash on Hawkins Store Road at Farmbrook Lane on December 10, 2019 at 9:29 PM
- A sideswipe crash on Hawkins Store Road east of Farmbrook Lane on August 28, 2020 at 10:19 PM
- A crash which involved a bicyclist traveling southbound on Kings Crossing Drive at Hawkins Store Road on September 9, 2020 at 2:30 PM

Speed, lighting, and visibility are among the safety concerns along this portion of Hawkins Store Road if there was either a side-use path or an at-grade crossing installed at this location along a future extension of Noonday Creek Trail.

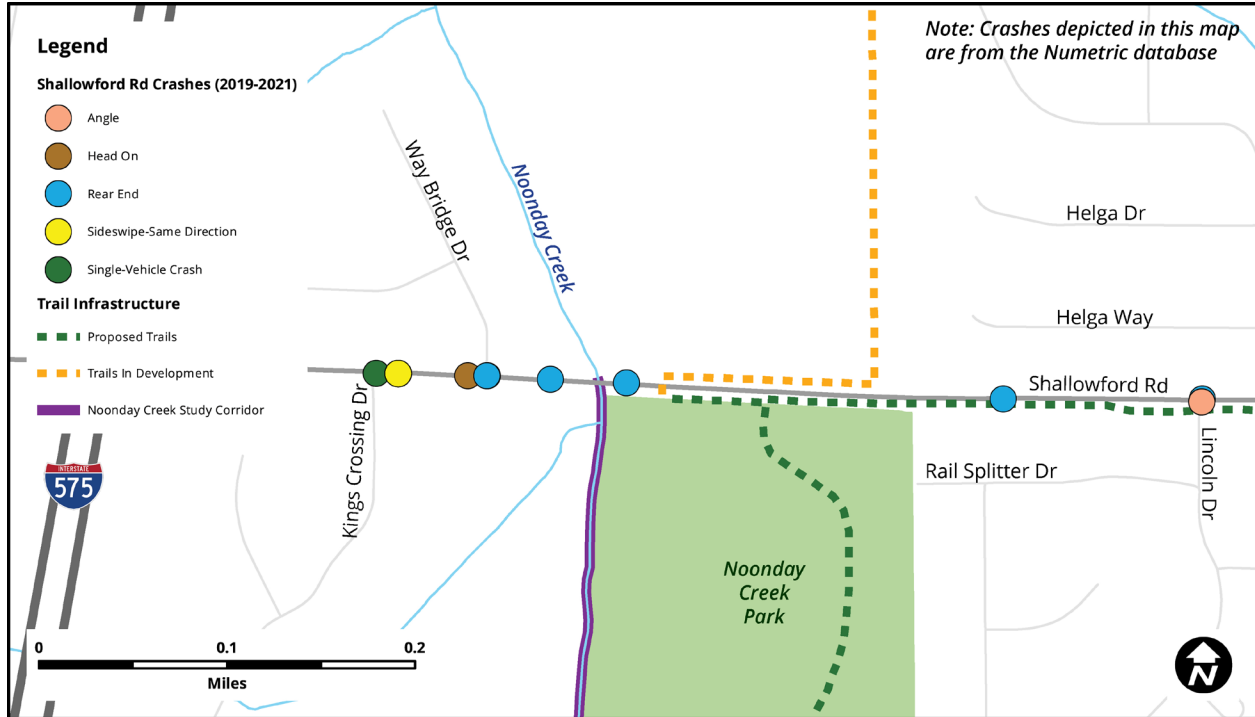


Figure 23: 2019-2021 Shallowford Road Crashes

Shallowford Road

Between Kings Crossing Drive and Lincoln Drive along Shallowford Road, there were ten total crashes which were reported between 2019 to 2021 (see **Figure 23**). Crashes by intersection include the following:

- Kings Crossing Drive – 3 crashes
- Lincoln Drive – 3 crashes
- Way Bridge Drive – 4 crashes

Among these ten crashes, crash types include the following:

- Head-On – 1 crash
- Rear-End – 5 crashes
- Sideswipe – 2 crashes
- Fixed Object - 2 crashes

Reported contributing factors to crashes include the following:

- Driving under the influence – 1 crash
- Driver condition – 2 crashes
- Following too close – 3 crashes
- Improper turn – 1 crash
- Wrong side of road – 1 crash

Five of the ten crashes resulted in injury including the following:

- A head-on crash along Shallowford Road east of Kings Crossing Drive on January 17, 2019 at 10:35 PM
- A rear-end crash involving two vehicles traveling westbound along Shallowford Road west of Lincoln Drive on September 29, 2020 at 10:17 PM
- A vehicle striking a fixed object on Shallowford Road just west of Kings Crossing Drive on February 1, 2021 at 12:14 AM
- A rear-end crash involving two vehicles traveling eastbound on Shallowford Drive east of Way Bridge Drive on September 21, 2021 at 9:02 AM
- A rear-end crash involving three vehicles traveling eastbound along Shallowford east of Way Bridge Drive on October 6, 2021 at 2:19 PM

Speed, lighting, and visibility are among the safety concerns along this portion of Shallowford Road if there was either a side-use path or an at-grade crossing installed at this location along a future extension of Noonday Creek Trail.



Right-of-Way and Utilities

There are large swathes of land along Noonday Creek between Bells Ferry Road and Shallowford Road that are publicly owned by Cobb County. This makes the creek an ideal trail connection and would lower right-of-way costs for trail construction.

In addition to property ownership, the project team is considering overhead and underground utility lines in proximity to the creek to understand where coordination with utility companies may be necessary to construct the preferred alignment of the trail. This section details where water, sewer, and gas lines exist to inform potential alignment options which will be evaluated throughout the course of this study. Most of the creek contains utilities along either one of the banks, or both, depending on the location along the creek.

As this section of the Existing Conditions Analysis describes, many private parcels along the creek contains an easement with Cobb County Water System that allows access to underground utilities, including water and sewer lines.



Signage Within the Canterbury Greenspace Noting Cobb County Ownership

Property Ownership

The Cobb Greenways and Trails Master Plan notes that approximately 69% of the priority trail corridor along Noonday Creek passes through parcels owned by Cobb County. As part of the GTMP a potential alignment was identified for further study and analysis. At the time, it was estimated that approximately 69% of that alignment passed through publicly owned property.

Public property along Noonday Creek is shown in **Figure 24**.

Approximately 69% of the priority trail corridor along Noonday Creek passes through parcels owned by Cobb County.

If the preferred alternative were to parallel Noonday Creek, approximately 30% of the trail corridor would traverse privately owned land that abuts single-family homes and subdivisions. Cobb County would need to coordinate closely with property owners and homeowners associations (HOAs) as appropriate to gain permission to construct the trail. Several potential approaches would be either the County acquires right-of-way or property owners grant an easement to the County.

An alternative option would be to utilize and widen existing pedestrian facilities along Bells Ferry Road and New Chastain Road to extend Noonday Creek Trail. This option has right-of-way constraints on both corridors due to parcel boundaries abutting existing pavement and sidewalks. Additionally, it would provide a less direct route between existing and future segments of the trail.



Private Property South of Noonday Creek

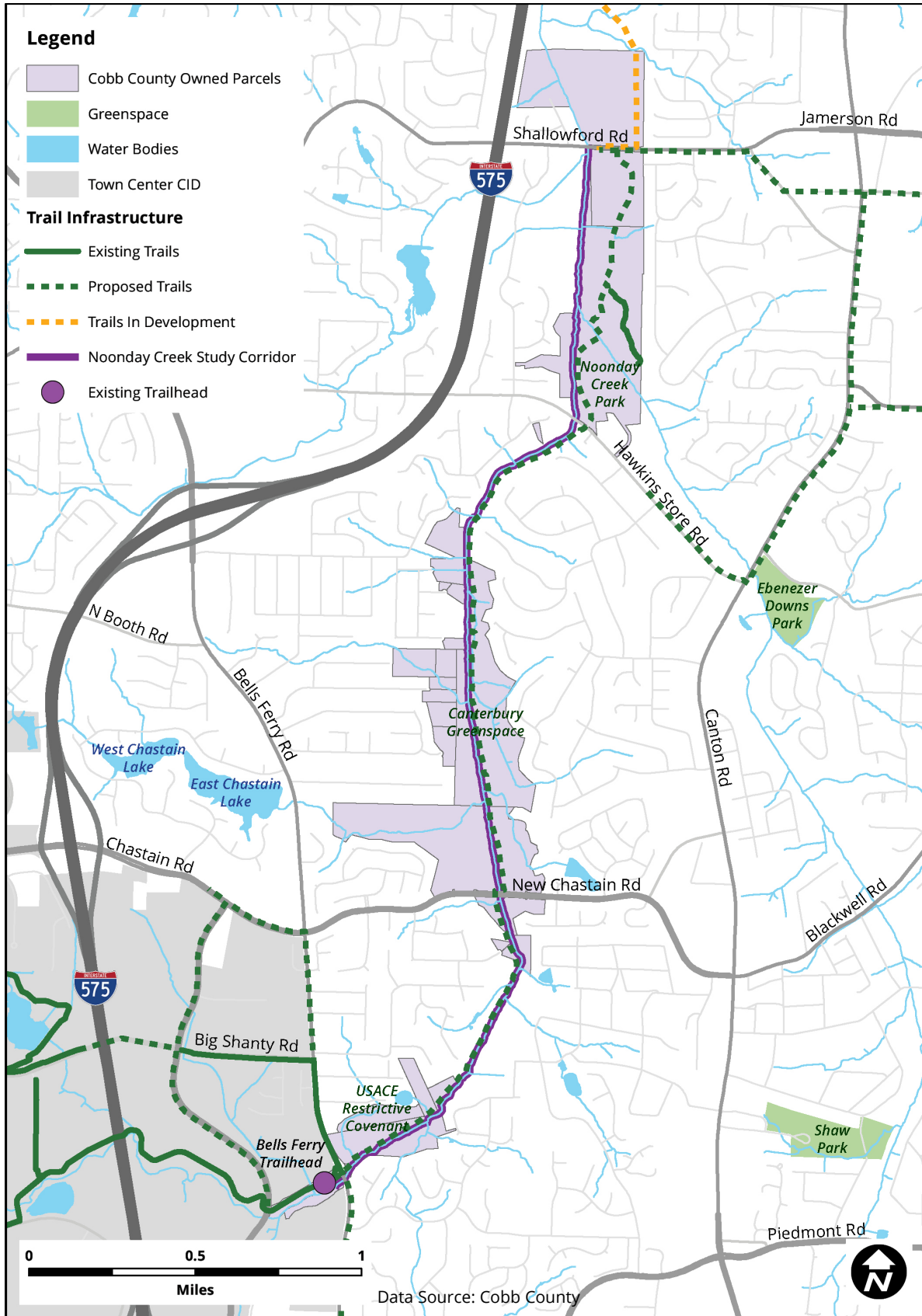


Figure 24: Public Property Along Noonday Creek



Underground and Overhead Utilities

Utility corridor trails are bicycle or pedestrian facilities that utilize the same space occupied by utilities, such as power lines or pipelines. Utilities are constructed within a designated right-of-way, and design and construction guidelines cited earlier in this Existing Conditions Analysis detail that trail construction is an allowed use within utility rights-of-way provided that proper coordination takes place and consent is obtained from underlying property owners over the course of concept and design phases.

Multiple utilities run along Noonday Creek in the study area such as water, sewer, power, and gas. If the preferred alignment were to follow the creek, Cobb County DOT would need to coordinate with utility companies to plan, design, and construct the trail in accordance with the guidelines of each utility company.

Georgia Power provides guidance that general consideration should be given to maintain a minimum of 25 feet of undisturbed area around a structure or attachment location. Additionally, Georgia Power will consider accommodating recreational facilities within easements provided that the facility does not interfere, obstruct, or endanger existing utilities.⁴

The project team coordinated with Cobb County Water System to identify existing water and sewer infrastructure within one mile of Noonday Creek and understand where utility challenges may exist. In addition to municipal utilities, the project team put in an 811 request to obtain data on overhead and underground utilities including gas, power, and telecommunications. This section is broken down into three segments delineated by potential roadway crossings.

Bells Ferry Road to Canterbury Greenspace

Figure 25 shows underground utilities operated by Cobb Water System along Noonday Creek between Bells Ferry Road and the Canterbury Greenspace.

There is a water main line on the east side of Bells Ferry Road from the bridge to Chastain Road/New Chastain Road. Just north of the Bells Ferry Road bridge over Noonday Creek, there is a gravity sewer line which crosses underneath the roadway as well as a water valve and fire hydrant. On New Chastain Road, there is a water main line on each side of the road. There is a fire hydrant just west of the bridge over Noonday Creek on the north side of New Chastain Road.

Along the easement east of Bells Ferry Road, there is a continuous gravity sewer line on the north side of the creek all the way to New Chastain Road. Between Bells Ferry Road and New Chastain, there are five gravity sewer lines which cross Noonday Creek and connect to the sewer easement. The easement continues north of New Chastain Road with regularly spaced manholes. With respect to overhead utilities, there are power lines along the east side of Bells Ferry Road which cross over to the west side of the road near Brookhaven Drive. The easement along Noonday Creek on this portion of the study corridor does not contain overhead utilities.



Water Line Crossing Noonday Creek South of New Chastain Road

⁴ Georgia Power Company (2022). Right-of-Way Use. <https://www.georgiapower.com/community/environment/trees-and-right-of-way/right-of-way-use.html>



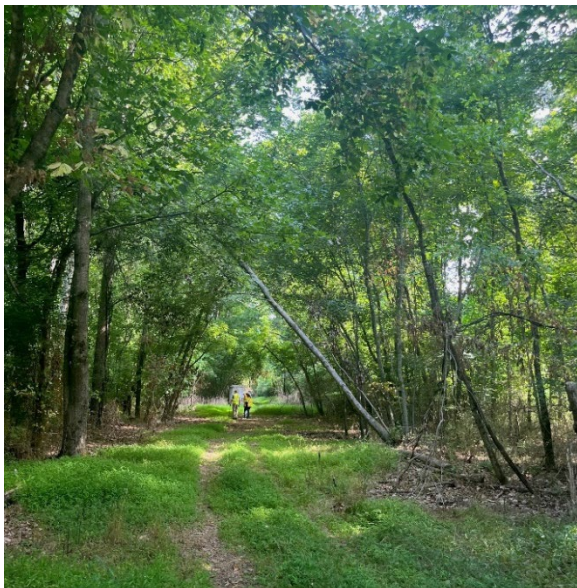
Canterbury Greenspace to Hawkins Store Road

Figure 26 shows underground utilities operated by Cobb Water System along Noonday Creek between the Canterbury Greenspace and Hawkins Store Road.

There is a water main line and a gas line which runs on the south side of Hawkins Store Road and goes underneath the bridge over Noonday Creek.

The easement west of Noonday Creek contains gravity sewer lines and regularly spaced manholes extending all the way to Hawkins Store Road. Between New Chastain Road and Hawkins Store Road, there are five gravity sewer lines which cross Noonday Creek and connect to the sewer easement. The easement continues north of New Chastain Road with regularly spaced manholes.

With respect to overhead utilities, there are power lines along the north side of Hawkins Store Road in the vicinity of the bridge over Noonday Creek. The easement along Noonday Creek on this portion of the study corridor does not contain overhead utilities.



Sewer Easement West of Noonday Creek and North of New Chastain Road

Hawkins Store Road to Shallowford Road

Figure 27 shows underground utilities operated by Cobb Water System along Noonday Creek between the Hawkins Store Road and Shallowford Road in an area that corresponds to Noonday Creek Park east of the creek. There are two water main lines as well as a gas line along Shallowford Road. As discussed under the Bridge Facilities section, one water line is owned and operated by Cobb County Water System while the other is owned and operated by Cobb County-Marietta Water Authority.

The easement west of Noonday Creek contains gravity sewer lines and regularly spaced manholes extending all the way to Shallowford Road where it connects to a sewer force main line and the Noonday Water Reclamation Facility. Between Hawkins Store Road and Shallowford Road, there is one gravity sewer line which crosses Noonday Creek at the confluence with Little Noonday Creek and connects to the gravity sewer line under the easement.

With respect to overhead utilities, there are power lines along the north side of Hawkins Store Road in the vicinity of the bridge over Noonday Creek as well as within the sewer easement west of Noonday Creek.



Overhead Power Lines North of Hawkins Store Road Which Extend Onto Utility Easement West of Noonday Creek Park

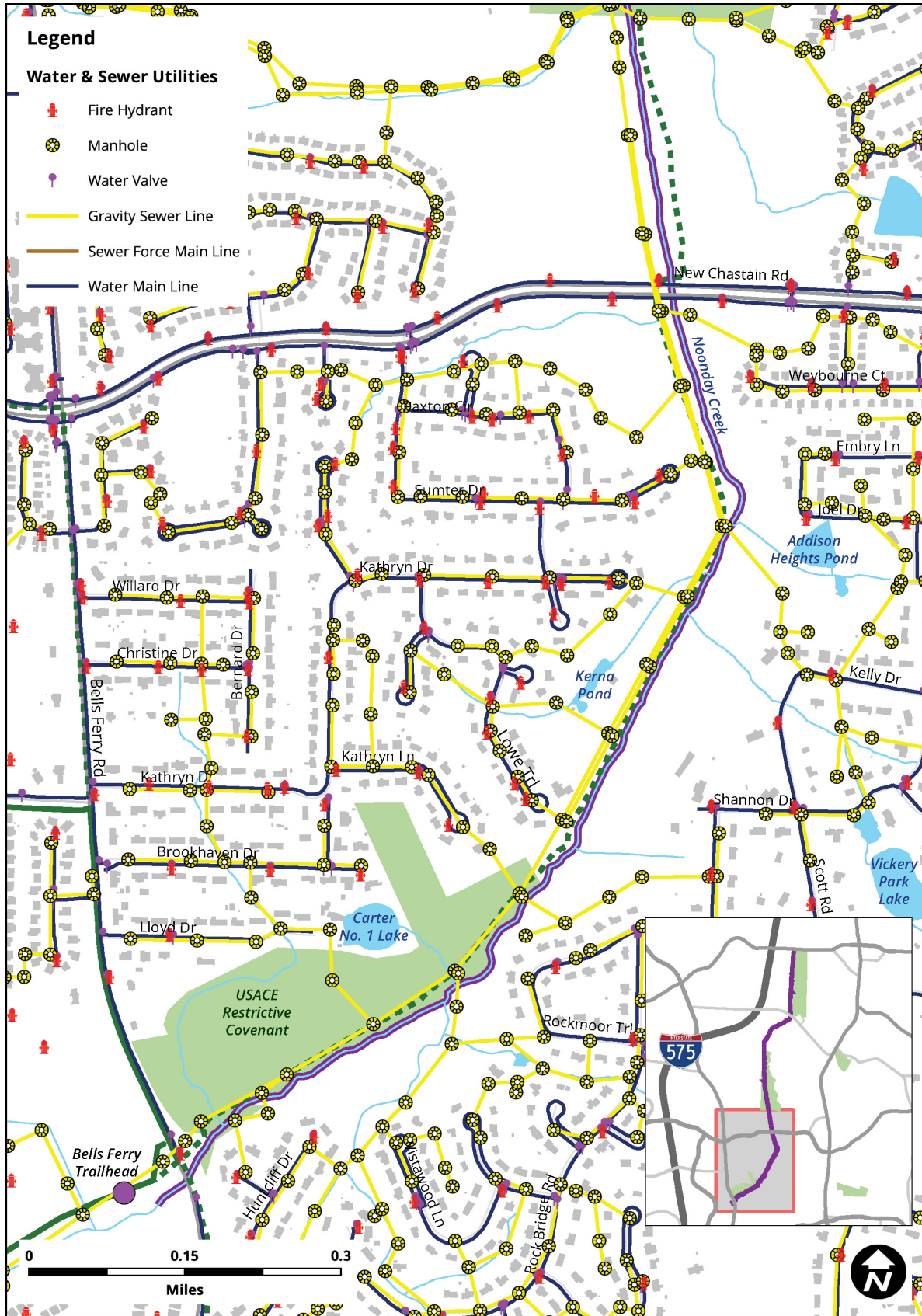


Figure 25: Water & Sewer Utilities Between Bells Ferry Road and Canterbury Greenspace



Figure 26: Water & Sewer Utilities Between Canterbury Greenspace and Hawkins Store Road



Figure 27: Water & Sewer Utilities Between Hawkins Store Road and Shallowford Road



Land Use and Development Patterns

Existing land use in the study area is primarily residential. It is important to understand future land use patterns within the study area and in adjacent areas, as noted in the Cobb County Comprehensive Plan, to inform the development of a potential trail extension in the area. This section includes analysis on neighborhoods and subdivisions, local and regional destinations, land cover, zoning, existing and future land use, and potential trail access points.

Neighborhoods and Subdivisions

Much of the development to the east, south, and southeast of the study area consists of single-family homes and subdivisions. There are 60 subdivisions within a half-mile of the Bells Ferry trailhead. These neighborhoods and subdivisions are depicted in **Figure 28**.

The largest of the subdivisions is Piedmont Hills, which extends from the northeast of the trailhead, to the southeast. Its westernmost boundary abuts Noonday Creek and Bells Ferry Road, while its southernmost border is adjacent to Piedmont Road. A smaller, but substantially sized subdivisions which lies to the east of Piedmont Hills is Woodgate. To the north of the existing trailhead, and both Piedmont Hills and Woodgate is Addison Heights, whose western border approaches Noonday Creek's eastern banks.

The residential development to the southwest of the trailhead is contained within two subdivisions, the Gardens at Laura Creek, and the Vintage Club. Northern subdivisions include Big Shanty Plantation, Grayson Place (the smallest in size of the area subdivisions), and Brookhaven, which extends from Bells Ferry Road to Noonday Creek. The majority of the development to the west of Big Shanty Plantation and the Vintage Club consists of commercial development.

The pattern of single-family residential continues to the north of the current trailhead, and adjacent to the study area, which runs parallel to Noonday Creek. There are a number of smaller subdivisions and neighborhoods, including Dover Downs,

Country Plantation, and Lincoln. The most substantially sized subdivision in this area is Canterbury Park, whose northwest border abuts Noonday Creek's eastern shore. To the west of Noonday Creek lies Durham Estates and Maggie Valley.

Several of these subdivisions are designated historic (developed in or prior to 1974), including Addison Heights, Brookhaven, Canterbury, Durham Estates, Piedmont Hills, and Woodgate.

Implications of historic structures are discussed in the environmental screening section as well as **Appendix B**.



Boardwalk Within the Canterbury Greenspace

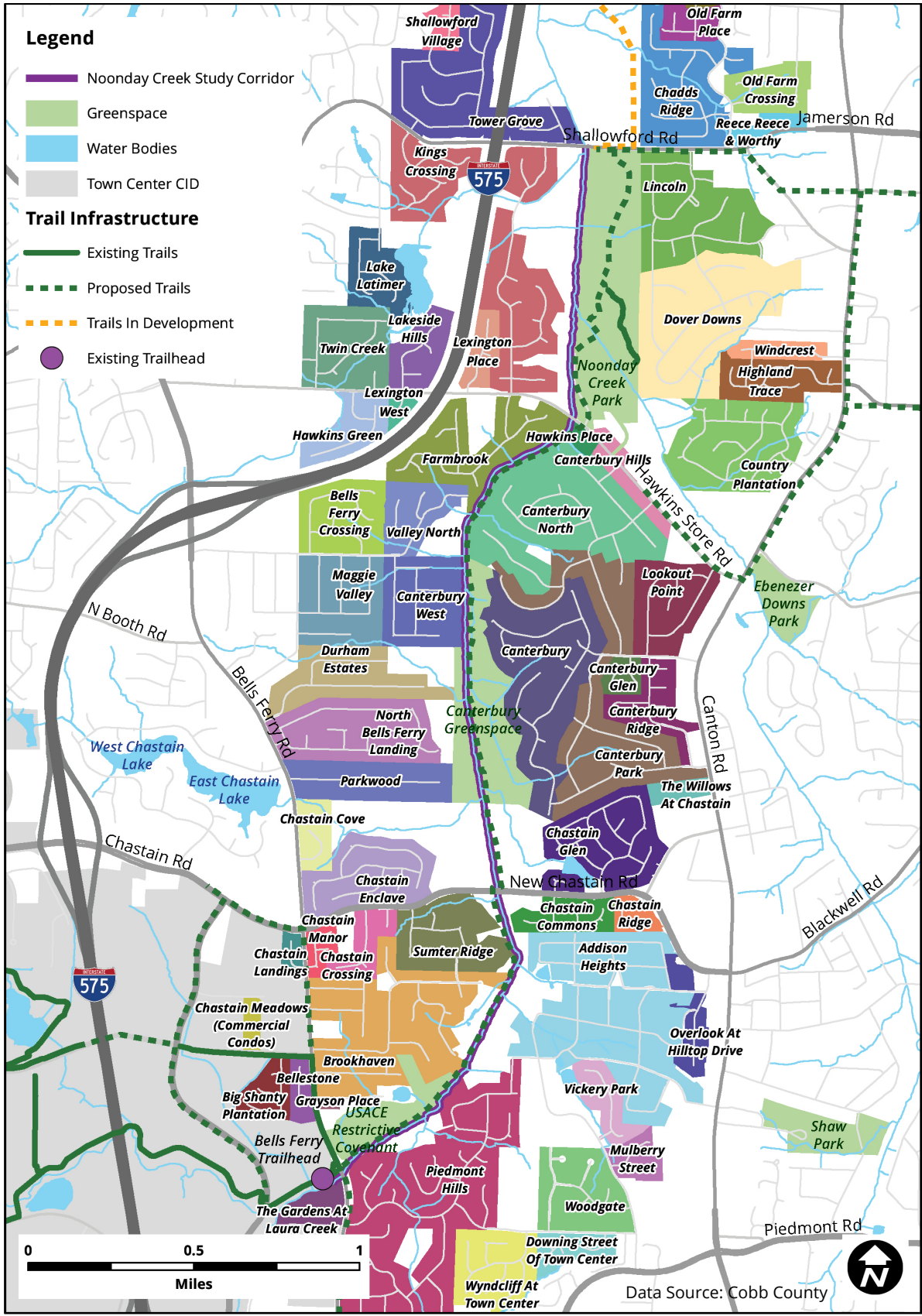


Figure 28: Neighborhoods and Subdivisions



Local and Regional Destinations

The study area includes numerous local and regional destinations including schools, libraries, commercial districts, and government and public safety facilities. These are depicted in **Figure 29**.

Community Facilities

There are two public schools within one mile of Noonday Creek, both located east of Bells Ferry Road. Bells Ferry Elementary School is located at the northeast corner of Bells Ferry Road and Piedmont Road. Daniell Middle School is located further east, closer to the western border of Canton Road.

While KSU is located outside of the immediate study area, its proximity to the study area (approximately two miles from Noonday Creek) and connection to the existing Noonday Creek Trail affords an opportunity for increased access to the campus. The majority of the campus is bound by I-75, with several facilities, including the stadium, located to the south of Big Shanty Road within TCCID.

The closest library to Noonday Creek Trail is Gritters Library, which is a location within the Cobb County Public Library system. It is located almost directly east of the trail, to the east of Canton Road. In addition to schools and libraries, the area contains one government office (the North Cobb Tag Office along Canton Road) and two fire stations. These fire stations are Cobb County Fire Station #12 and Fire Station #16.

Commercial and Office Development

Located to the west of the Noonday Creek Trailhead at Bells Ferry Road, the Town Center CID (TCCID) is a self-taxing district generally bounded by Chastain Road to the north, Bells Ferry Road to the east, Shiloh Valley Drive to the south, and Barrett Lakes Boulevard to the west. The TCCID has a high concentration of commercial development, including smaller commercial spaces, national chain anchors, and office space.

There is a significant amount of commercial development along the Canton Road corridor. This commercial development is lower-density compared to TCCID, generally consisting of fast food restaurants, and individual retail stores, including drugstores and other shops that serve consumer needs. Much of this development is classified as General Commercial or Neighborhood Shopping, and services the surrounding single-family residential neighborhoods.

Reflecting the diversity of the commercial districts and development within this area (including within the TCCID itself), there are a number of commercial zoning classifications assigned. The zoning classifications include those which are compatible with smaller, neighborhood-oriented commercial, commercial centers which serve multiple communities, and regional commercial centers which serve communities within and outside of Cobb County.

Several popular destinations are in close proximity to the study area, including:

- ***4 schools***
- ***4 parks / greenspaces***
- ***1 library***
- ***1 community center***
- ***Numerous workplaces and commercial spaces***

Proposed Developments

As the area within and surrounding the study corridor is largely built-out and consists of residential development, there are no residential developments planned within the study area, as indicated by Cobb County planning and zoning records.

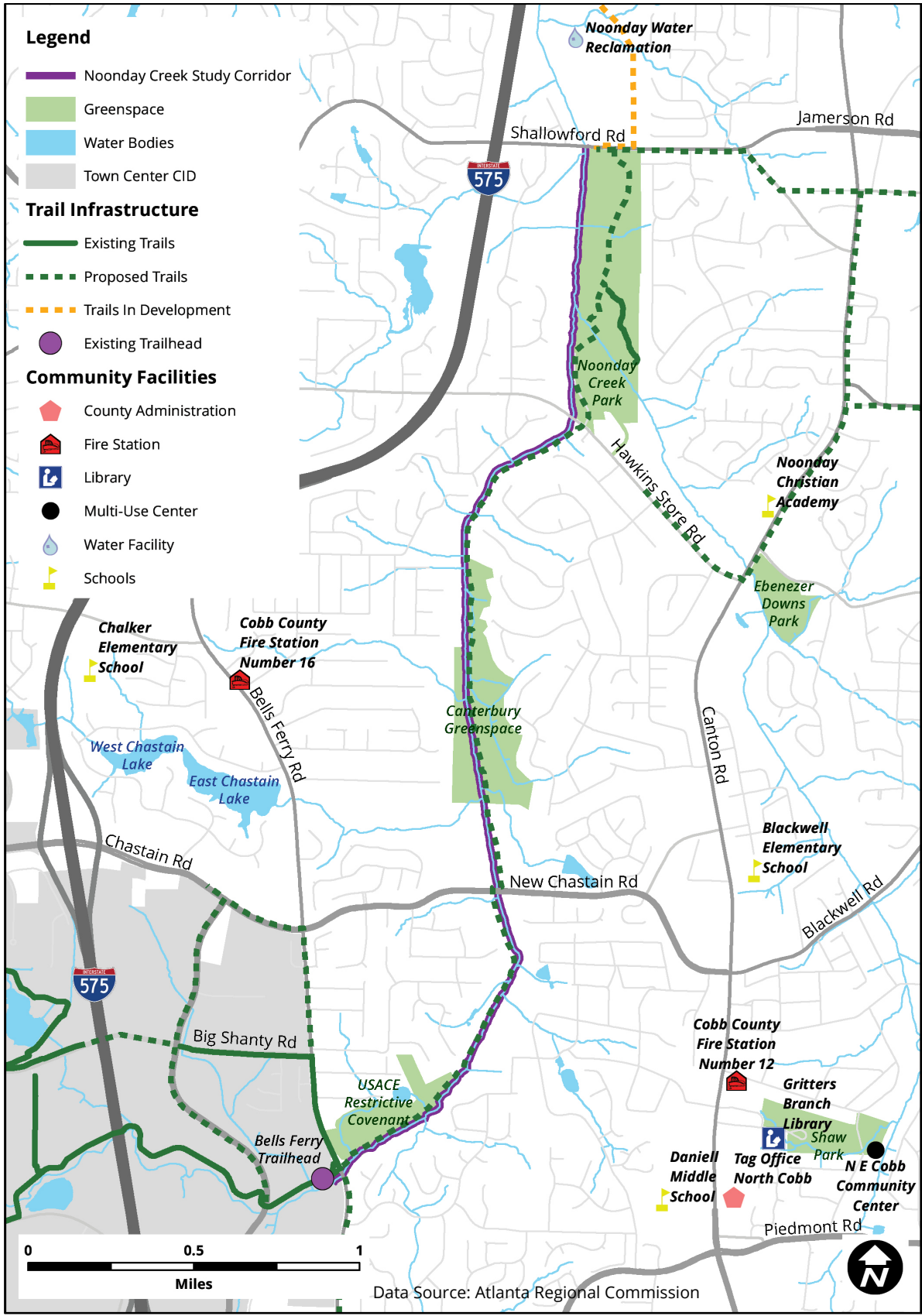


Figure 29: Community Facilities



Parks and Greenspace

A potential extension of Noonday Creek Trail would provide additional recreation and active transportation opportunities to several neighborhoods in northern Cobb County, connecting them to Bells Ferry Trailhead and Noonday Creek Park and facilitating access to parks and recreation in the City of Woodstock. **Figure 30** depicts parks which are within one mile of Noonday Creek along with multimodal facilities in close proximity to them.

Bells Ferry Trailhead

The Bells Ferry Trailhead is the eastern terminus of the existing Noonday Creek Trail at Bells Ferry Road. The trailhead was completed in 2017 and includes 50 parking spaces, restrooms, a drinking fountain, and a bikeshare station. It also includes trash receptacles, seating, and lighting.

Canterbury Greenspace

Between New Chastain Road and Hawkins Store Road east of Noonday Creek, the Canterbury neighborhood contains a network of trails within a wetland area. While these trails are primarily for use by Canterbury residents, they are located on property owned by Cobb County.

Noonday Creek Park

Noonday Creek Park is a 99-acre park located at in the northern portion of the study area, with access from Hawkins Store Road and Shallowford Road. The park has 482 parking spaces, three restroom buildings, a concession area, picnic area, and a playground. The park features 12 soccer fields, two football fields, a BMX track, and a meeting room.

Other Nearby Park Facilities

Within one mile of Noonday Creek are four additional parks: Noonday Creek Park, Ebenezer Downs Park, Canterbury Greenspace, and Shaw Park. Existing and potential future sidewalks in the vicinity of these parks could provide multimodal access to a future extension of Noonday Creek Trail.



Map of Canterbury Greenspace Trails



Entrance to Noonday Creek Park Along Hawkins Store Road

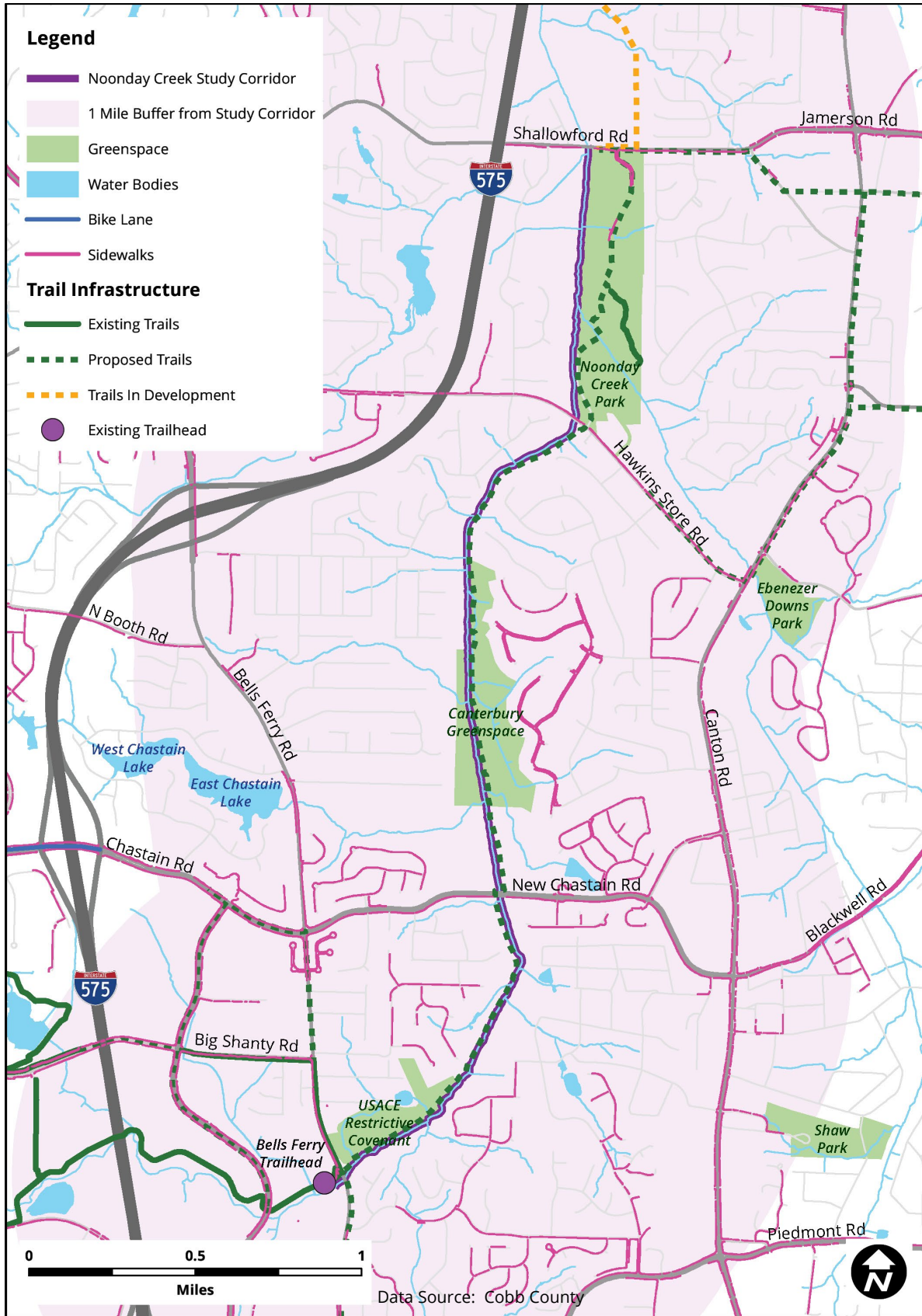


Figure 30: Access to Parks Along Noonday Creek



Land Cover

National Land Cover Database

The National Land Cover Database (NLCD) describes the surface of the earth, with 20 classifications that consider vegetation type, development density, and agricultural use. The data is captured at a 30-meter resolution. The most recent data is from 2019 and is shown in **Figure 31**. The data is provided by the [Multi-Resolution Land Characteristics Consortium](#). The land cover data indicates that much of the study area has been developed in recent decades. However, Noonday Creek is clearly visible as a corridor of mature deciduous forest, shown in lighter green in **Figure 31**. The potential extension of Noonday Creek Trail would provide enhanced access to this natural resource.

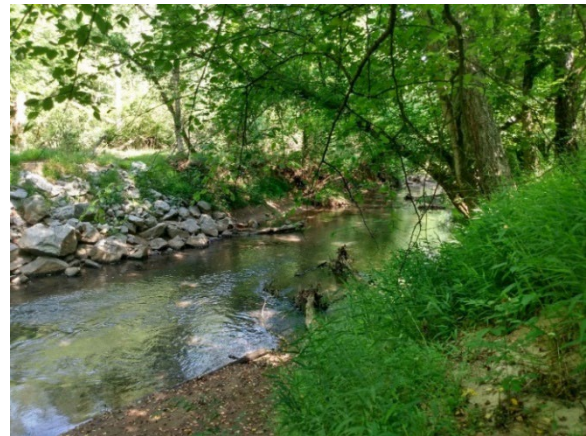
Along Noonday Creek, between Bells Ferry Road and Chastain Road, there is a mix of deciduous and mixed forest, pasture-hay, and low-intensity developed land representing single-family neighborhoods in the area. The variety of environments in this section could provide opportunities for outdoor educational signage focused on wild forest and historical agriculture.

From New Chastain Road to Hawkins Store Road along Noonday Creek, in addition to low-intensity developed land, there is woody wetland and deciduous and evergreen forest. The wetland areas in particular may require specific design solutions, which are considered in the Hydrology section of this report. There is a relatively large deciduous forest area in this portion of the study area, which presents an important opportunity for shade, wildlife-viewing, and potential educational opportunities.

Between Hawkins Store Road and Shallowford Road, in addition to low- and medium-intensity developed land, there is pasture/hay fields, and deciduous forest and evergreen forest. Both sides of the creek have been mostly cleared of tree cover in this area, with an access road on the western side of the creek and Noonday Creek Park on the eastern side of the creek. Stands of pines and deciduous trees separate residential homes from the creek itself on the western side.



Flat Topography and Vegetation Overgrowth Near Shallowford Road



Noonday Creek North of New Chastain Road Near the Canterbury Greenspace



Blind Horizontal Curve Along Hawkins Store Road West of Noonday Creek

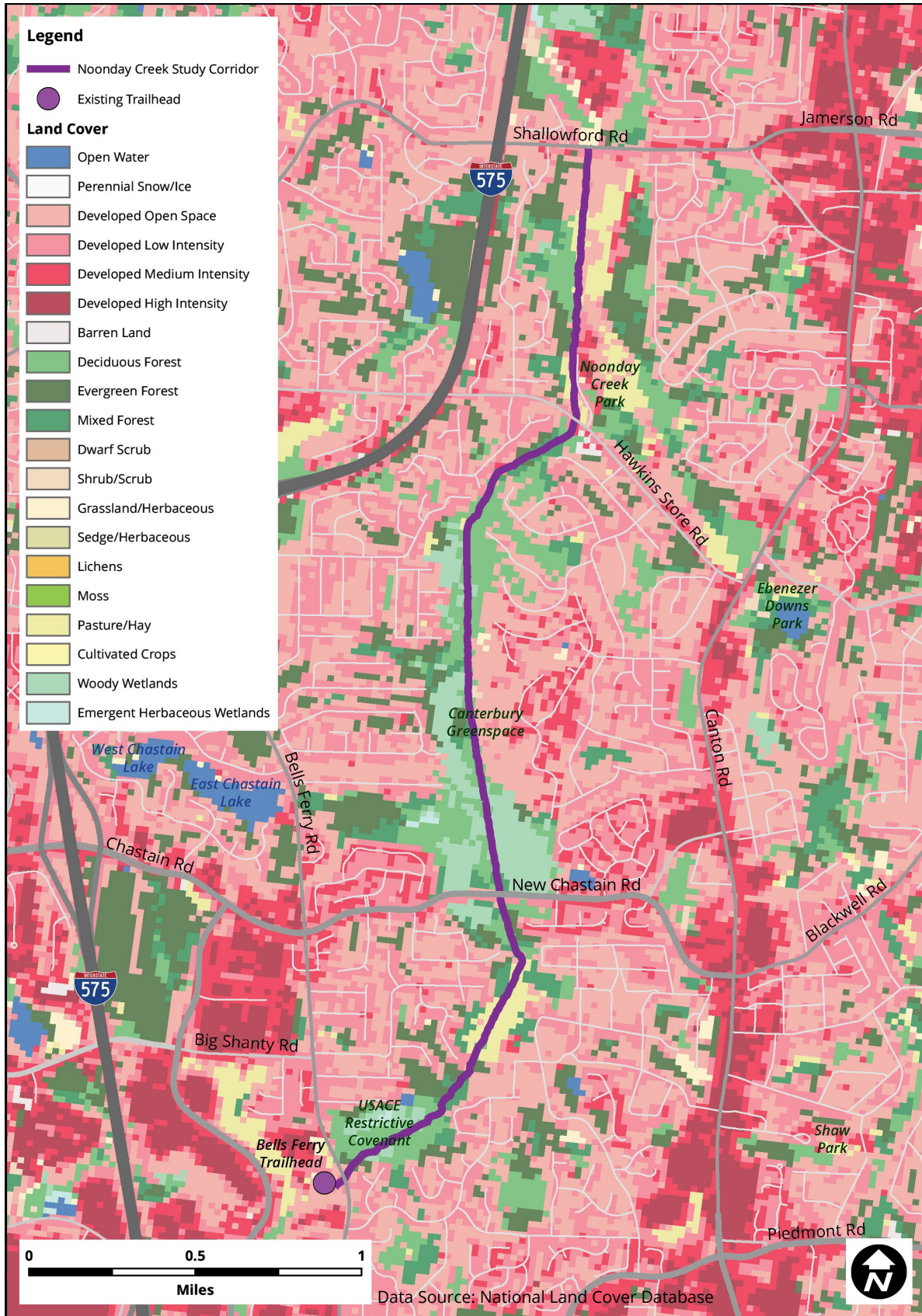


Figure 31: Land Cover Around Noonday Creek Corridor



Existing Zoning

There are numerous zoning districts in the study area that are primarily categorized as residential (both single-family and multi-family) or commercial. Specifically, the commercial zoning districts include, but are not limited to, smaller neighborhood and community retail, general commercial, and larger planned commercial development.

The eastern side of Bells Ferry Road consists mainly of single-family residential use. The majority of this residential is zoned R-15 (single-family residential for 15,000 SF lots). An elementary school is located at the eastern corner of Bells Ferry Road NE and Piedmont Road, and is within the R-20 district (single-family residential for 20,000 SF lots). There is commercial development located along Canton Road, to the east of Bells Ferry Road zoned as Neighborhood Shopping (NS). There is also commercial development lining Canton Road.

Much of the commercial development to the west of Bells Ferry Road is zoned PSC (Planned Shopping Center) and consists of Town Center Mall and surrounding commercial development within TCCID. There is also Neighborhood Shopping (NS) and Community Retail Commercial (CRC) zoning, which allows for the location of retail commercial and service uses designed and oriented to serve several neighborhoods making up a community. Among office developments in the area, zoning is designated as OS (Office/Service) and O&I (Office and Industrial). Residential development west of Bells Ferry Road is primarily multi-family, reflected by the various multi-family zoning districts. Several multi-family complexes border the northern portion of the Town Center, and are zoned PVC (Planned Village Community), which offers more flexible site plans, with compact retail centers unified within the center of the community. This promotes walkability and opportunities for multimodal access in close proximity to Noonday Creek Trail.

The development to the north of the Bells Ferry Trailhead is largely residential, with some large parcels zoned OS. A parcel bordering the northern side of Chastain Road is zoned as RSL (residential Senior Living Facilities) and is currently the site of a condominium community. A more complete listing of zoning districts is in the sidebar below.

Zoning Districts & Descriptions

- CRC** – Community Retail Commercial
- FST 10** – Fee Simple Townhouse (10 units/acre)
- GC** – General Commercial
- NS** – Neighborhood Shopping
- O&I** – Office & Industrial
- OS** – Office/service
- PRD** – Planned Residential Development
- PSC** – Planned Shopping Center
- PVC** – Planned Village Community
- R-15** – Single-family Residential (15,000 SF lot size)
- R-20** – Single-family Residential (20,000 SF lot size)
- RA-4** – Single-Family Attached/Detached
- RA-6** – Single-Family Attached/Detached
- RM-8** – Residential Multi-family
- RM-12** – Residential Multi-family
- RR** – Rural Residential
- RRC** – Regional Retail Commercial
- RSL** – Residential Senior Living Facilities
- SC** – Suburban Condominium Residential District



Existing Land Use

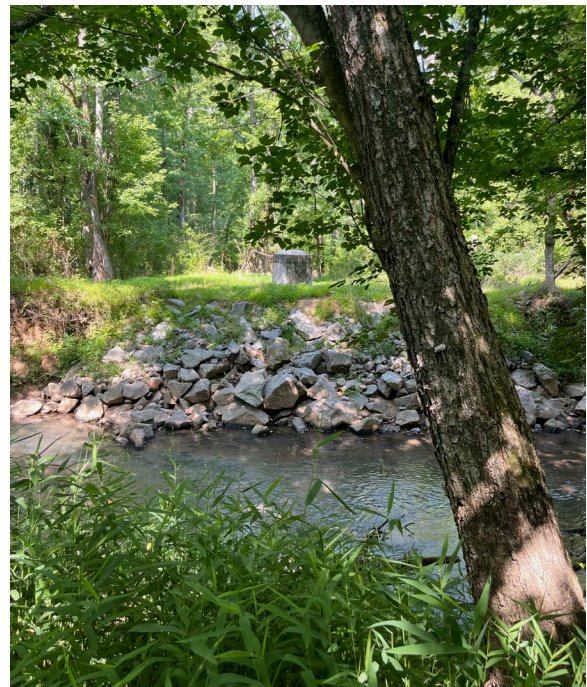
Existing land use classifications in the vicinity of Noonday Creek are shown in **Figure 32**.

The predominant land uses in the surrounding area, particularly in the study corridor east of Bells Ferry Trailhead, are residential and park/recreation/conservation, which is generally concentrated north-south along the Noonday Creek segment which is located to the east of I-575, as well as east-west along Hawkins Store Road. Smaller segments of green space exist to the west of I-575, generally within single family residential neighborhoods.

Residential development within this portion of Cobb County has traditionally consisted of single-family dwellings within subdivisions. Although this development pattern is continuing, multi-family residential land use has, in recent years, increased in availability, and continues to do so. While the increase in multi-family has generally occurred west of the existing Noonday Creek Trail, several multi-family communities are located to the south east of the Bells Ferry Trailhead. These communities include both apartment and duplex-style dwellings. Additionally, several newer single-family residential communities in proximity to the study corridor, have been developed with higher density, as opposed to the traditional half acre and acre developments.

Commercial land use within the area is generally concentrated along the Canton Road corridor, and west of the trailhead, within the TCCID, and adjacent businesses. The increased density of the commercial development, particularly along the Noonday Creek Trailhead, in conjunction with increased multi-family residential development, reflects the expanded mixed-use development. Greater walkability within the area allows access to a diverse range of commercial options, including several grocery and other specialty food and drinks stores, restaurants, smaller neighborhood merchants, sports facilities, and clothing stores. Currently, there are few mixed-use parcels in this portion of Cobb County.

On the east side of Bells Ferry Road adjacent to Noonday Creek is a Cobb County wetlands mitigation area which was created in conjunction with “piping” a portion of Noonday Creek to balance negative environmental impacts stemming from a runway extension project at Cobb County International Airport-McCollum Field in 2000. To accommodate the runway extension a portion of Noonday Creek had to be filled and culvert had to be constructed to maintain the creek in the vicinity of the airport. To secure the necessary permits and approval for construction, several compensatory mitigation measures were required to offset these impacts. These included restoration of an off-airport wetland area downstream of the airport - at Bells Ferry Road, creation of a segment of new stream bed, and creation of restrictive covenants along the creek both above and below the runway. Together, these resulted in ecological improvements to the Noonday Crossing area near Bells Ferry Road which were intended to offset the negative impacts to the creek near the airport that enabled the runway extension. Currently, the area along Noonday Creek contains a conservation easement that could facilitate an eventual extension of the trail northward.



Parks and Conservation Space is Abundant Along Noonday Creek

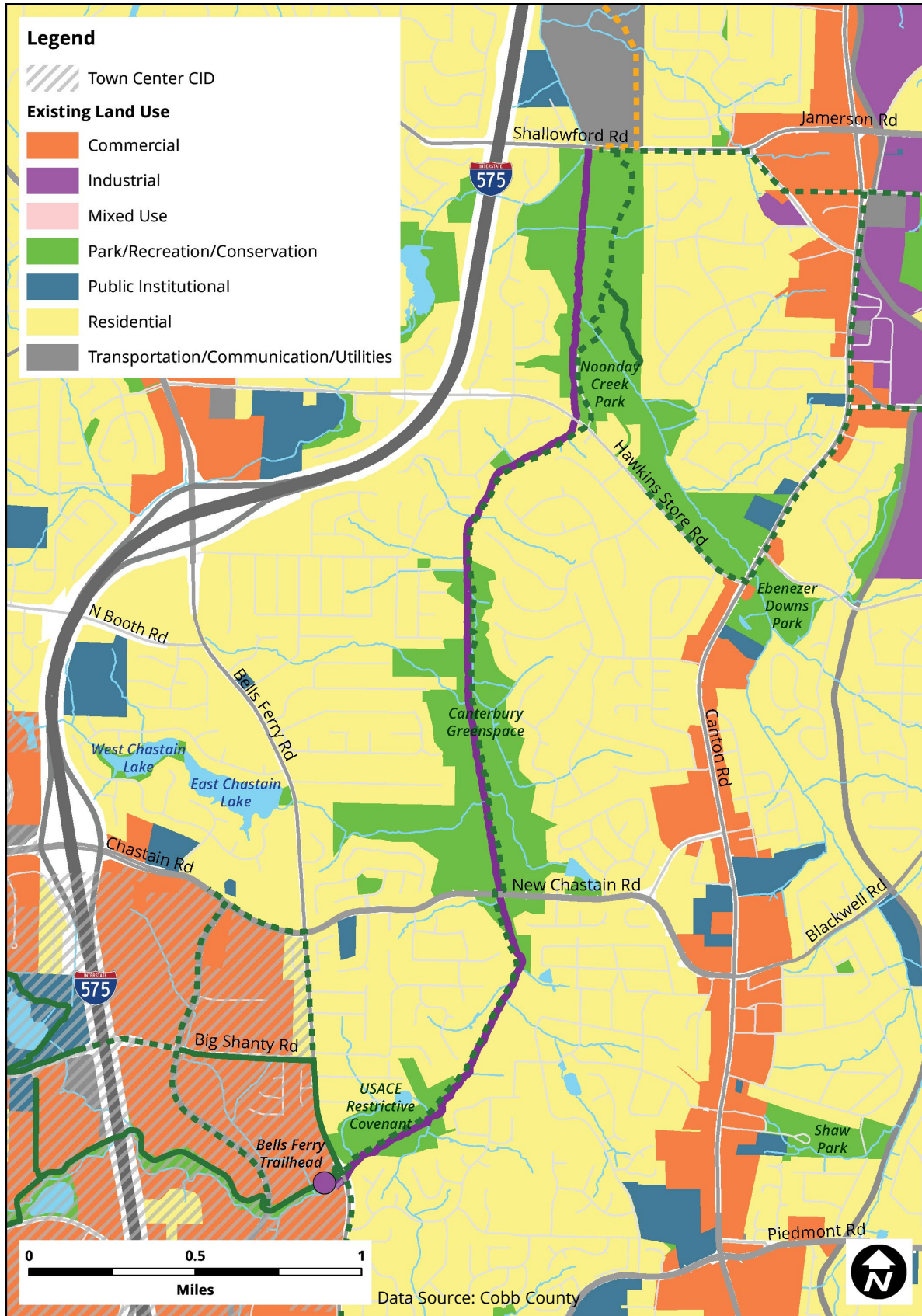


Figure 32: Existing Land Use



Future Land Use and Character Areas

The Cobb County Comprehensive Plan guides future land use with a horizon of 20 years into the future. The current Comprehensive Plan forecasts designates future land use by the year 2040.

Figure 33 shows future land use within the study area. The majority of the land adjacent to Noonday Creek is expected to remain as Low Density Residential (LDR) in the future. However, there are some medium and high density residential (MDR and HDR, respectively), closer to I-575 along Chastain Road. There are also swaths of land dedicated as parks/greenspace.

The Bells Ferry Trailhead is within the Park/ Recreation/Conservation (PRC) land use category, which extends along the trail to the north of the Town Center development, ending just west of I-75. The PRC category provides land for active or passive recreational uses for public and privately owned property, including playgrounds, nature preserves, and public parks. Environmentally sensitive areas such as flood plains and wetlands are also included within this category.

The majority of the surrounding development to the north, east, and south, consists of LDR-designated land. LDR is suitable for the development of single-family residential with a density of one to two and a half dwelling units per acre, as well as non-supportive senior living facilities, which is eligible for density of up to five units an acre.

Medium Density Residential (MDR) is located to the north, west, and south of the trailhead and study corridor. Provided for areas that are appropriate for moderate residential development, density can range from two and a half to five dwelling units an acre. There is a limited amount of High Density Residential (HDR) to the northeast of the trailhead, abutting New Chastain Road. HDR allows for a residential density of five to twelve units per acre, and should be sensitive to surrounding areas and development.

The land to the west of the Bells Ferry Trailhead is classified as Community Activity Center (CAC). These areas are meant to serve the needs of several neighborhoods or communities, and uses

can include low- and mid-rise office buildings and department stores.

Constituting a smaller amount of land, Public/ Institutional (PI) and Neighborhood Activity Center (NAC) are also within the study area. PI parcels are located along New Chastain Road as well as Piedmont and Canton Roads, for government and institutional land uses such as municipal complexes, police and fire stations, and colleges. To the south of the trailhead, located along the southern border of Barrett Parkway/Piedmont Road, is land classified as NAC. The NAC future land use category is for small offices retail for use by the local community.

The broader Regional Activity Center (RAC) category comprises much of the land located to the west of the Bells Ferry Trailhead and project corridor, generally to the west of 575 in areas corresponding to Town Center Mall and adjacent commercial and mixed-use developments. This future land use category consists of several sub-future land use categories, and is intended for areas that can support high-intensity development serving a regional market. Typical uses include high-rise office buildings, regional malls, and residential development of varying densities. The sub-categories within this area are listed below:

- **Office (OFF):** Generally appropriate for office space, although can also include a more diversified use of land, including mixed-use developments or mid- or high-rise residential development.
- **Open Space/Recreation (OSR):** Intended to facilitate additional open space and community gathering spaces through urban design, such as the installation of pocket parks.
- **Public institution (PI):** Provide for certain state, federal, or local government uses
- **Retail/Service (RS):** Areas appropriate for retail stores and service operations, as well as mixed use development that include office space. Residential development is not permitted in this category.
- **Transportation/Communication/Facilities (TCU):** Areas which provide services such as power generation plants, railroad facilities, and communications towers.

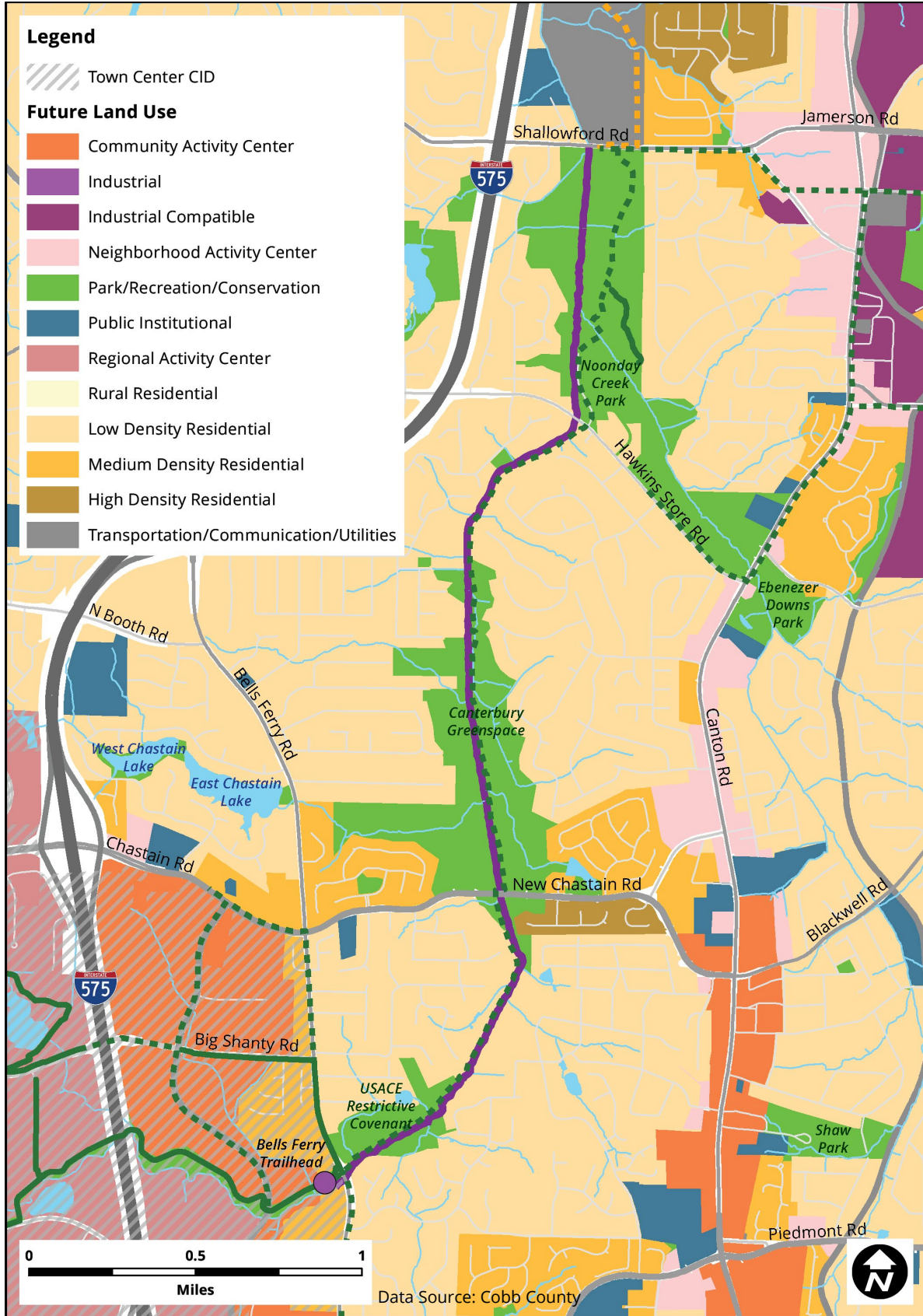


Figure 33: Future Land Use



Potential Trail Access

There are four roadways that cross Noonday Creek in the study area:

- Bells Ferry Road
- New Chastain Road
- Hawkins Store Road
- Shallowford Road

As part of the Existing Conditions Analysis, it will be important to consider how the trail would cross each of these locations – over, under, or at-grade. Furthermore, understanding the multimodal facilities along each of these roadways will inform how an extension of Noonday Creek Trail can promote or enhance connectivity as well as where additional bicycle, pedestrian, or transit facilities may be needed to allow trail users to access the trail without a vehicle.

The Cobb County Greenways and Trails Master Plan proposes two trailheads along the Noonday Creek priority trail corridor (see **Figure 34**):

- A walk-up access point at New Chastain Road
- A major trailhead at Hawkins Store Road, at the south end of Noonday Creek Park

Additional walk-up access points or trail spurs should be considered adjacent to the preferred alignment, to provide greater access from neighborhoods in the area. Potential access points would be evaluated based on technical feasibility (natural environment, slope, property ownership, etc.) as well as community support. As the Scoping Study proceeds, potential trail access points will be closely examined in coordination with the local community.



The Current Eastern Terminus of Noonday Creek Trail at Bells Ferry Trailhead



Noonday Creek Trail Mileage and Informational Signage

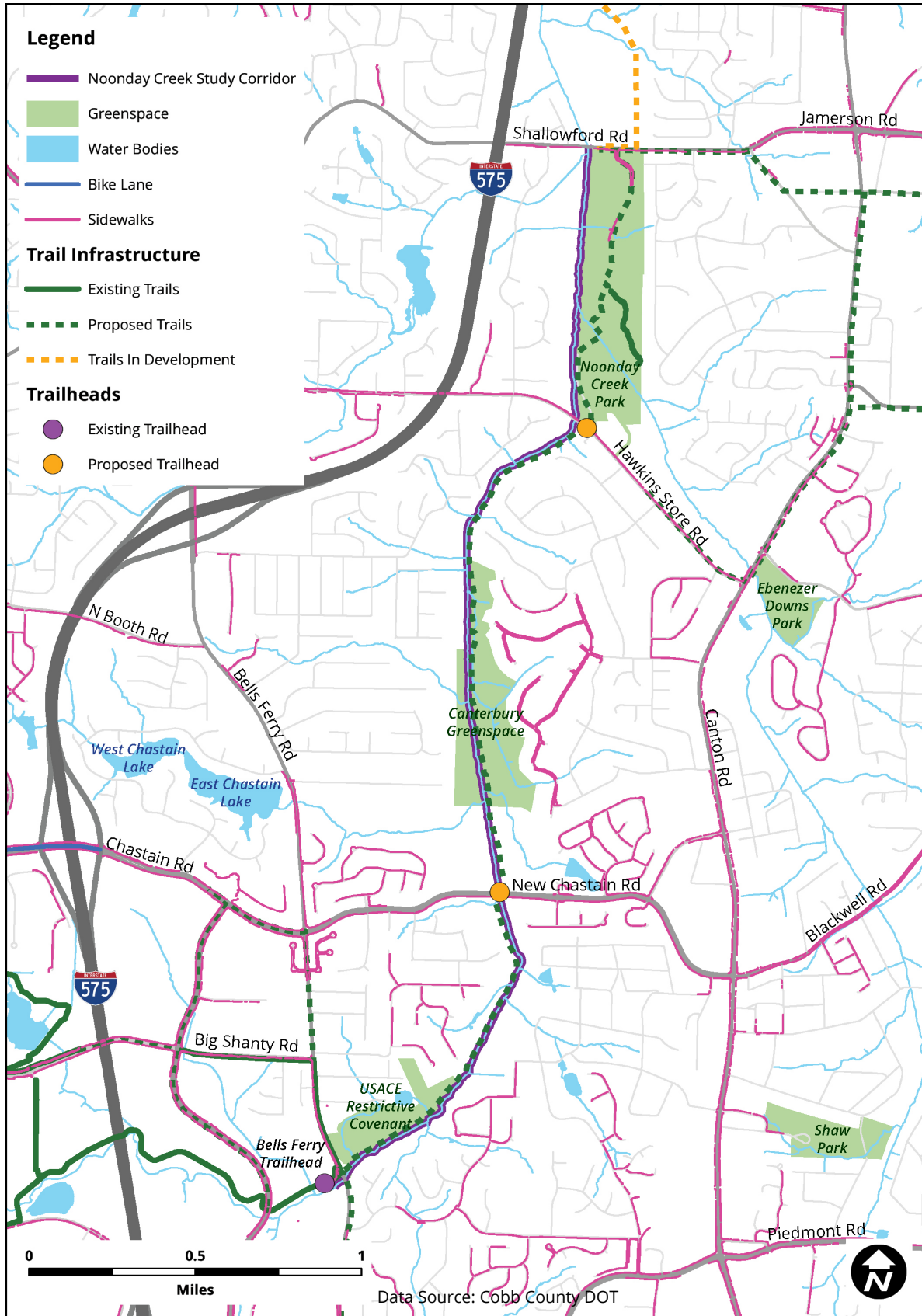


Figure 34: Existing and Proposed Trailheads from Cobb County Greenways & Trails Master Plan



Environmental Screening

An environmental screening was conducted in June and July 2022 to understand potential ecological, historical, and archaeological resources along Noonday Creek and within ½-mile of either side of the creek. A variety of sources were consulted, including Cobb County Tax Assessor data; National Wetland Inventory; U.S. Fish & Wildlife Service (USFWS) Information for Planning and Consultation; Environmental Protection Agency's Environmental Justice and Mapping Tool; Historic Aerials; Georgia's Natural, Archaeological, and Historic Resources GIS (GNHARGIS); and Google Earth. This section provides an overview of the environmental screening and potential permits that may be needed if a trail were to be constructed along Noonday Creek.

The full Environmental Screening Technical Memorandum is included in **Appendix B**.

Ecology

Two wetland areas and 24 streams were identified within 150 feet of the Noonday Creek Study Corridor. Aerial imagery and soils data depicts a high potential for larger wetland systems than depicted along the western side of the study corridor, and the presence of wetland systems along the eastern side of the study corridor. These areas and resources are depicted in **Figure 35**.

State and Federally Protected Species

USFWS Information for Planning and Consultation lists the federally endangered Michaux's sumac (*Rhus michauxii*), federally threatened Cherokee darter (*Etheostoma scotti*), white fringeless orchid (*Platanthera integrilabia*), and federal candidate monarch butterfly (*Danaus plexippus*) as species of concern within the project area. Potential habitat was found for the following species:

- **Monarch butterfly (*Danaus plexippus*):** Potentially suitable habitat occurs statewide but is not likely to affect the survey area.
- **Cherokee darter (*Etheostoma scotti*):** Habitat is present in Noonday Creek but is considered extirpated within the Noonday Creek watershed.

- **Dwarf sumac:** Habitat is not present within the survey area evaluated due to invasive species infestation (kudzu) within the woodlands. Neighboring woodlands may provide suitable habitat.
- **White fringeless orchid (*Platanthera integrilabia*):** Suitable habitat is present within the wet prairies observed within the sewer easement.

A preliminary review for state-listed species of concern identified Georgia aster (*Symphotrichum georgianum*) and lined chub (*Hybopsis lineapunctata*) as species of concern within the project area.

- **Georgia aster (*Symphotrichum georgianum*):** Suitable habitat was observed along the west side of Noonday Creek in areas of the sewer easement.
- **Lined chub (*Hybopsis lineapunctata*):** Suitable habitat is present within Noonday Creek.



Vegetation Overgrowth Common Along Noonday Creek

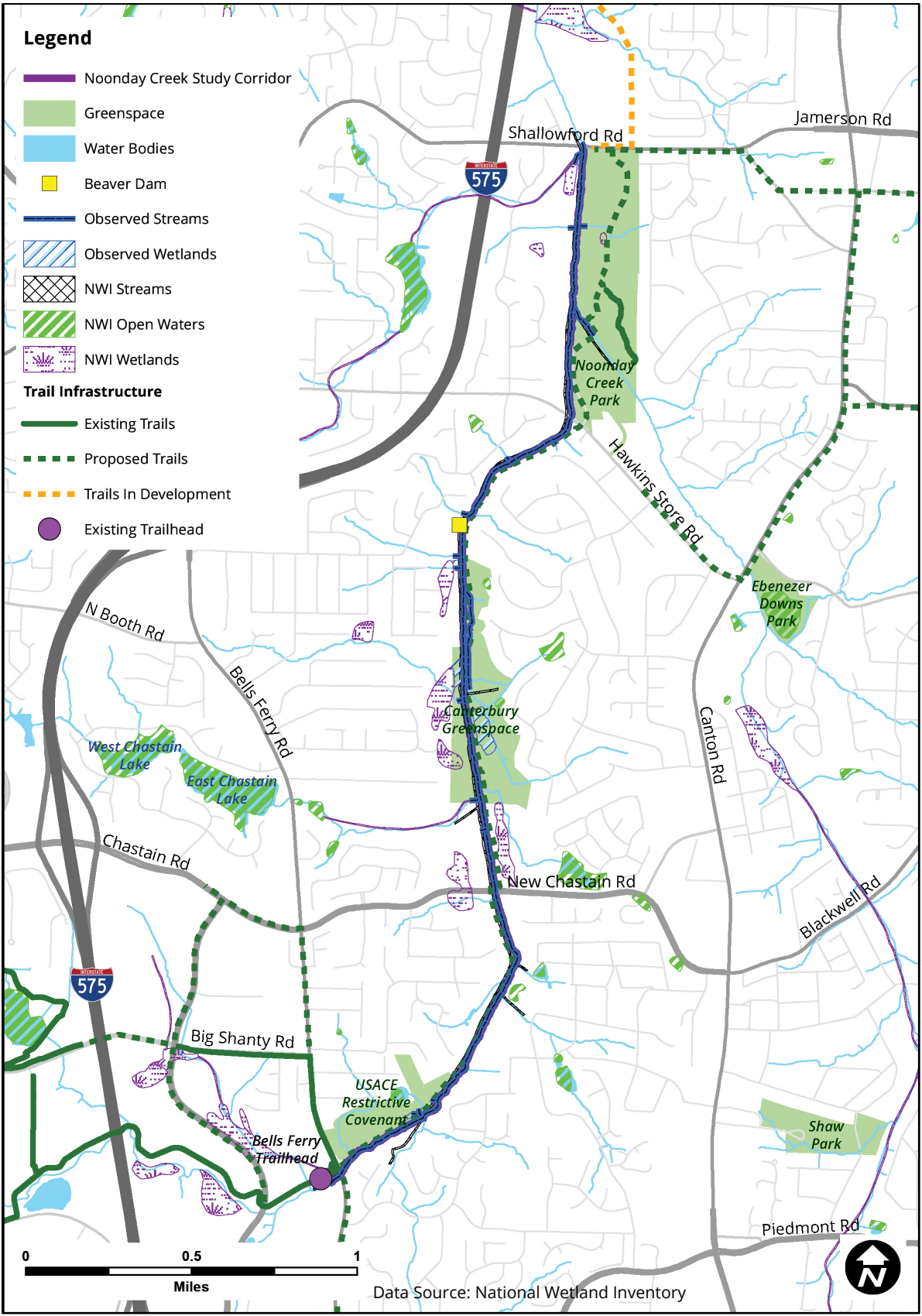


Figure 35: Water Resources Along Noonday Creek



History

The history assessment was evaluated for areas within a ½-mile of each side of Noonday Creek, excluding properties located west of I-575 were not included or evaluated. Once the potential trail alignment is identified and refined, many of the historic-aged properties identified may be determined to be outside the area of potential effect.

For the purpose of this scoping study, historians used the year 1974 and earlier to define “historic age.” An evaluation of eligibility was not completed at this stage. A more thorough evaluation would be conducted under Section 106 of the Historic Preservation Act if Federal funding were to be utilized for the trail project. Readily available data from the Cobb County Tax Assessor, historicaerials.com, GNAHRGIS, Google Earth, and a windshield survey was used to identify potential historic-aged properties. This evaluation identified:

- 1 historic-age bridge
- 9 historic-age districts,
- 2 historic-age parks
- 21 historic-age houses

These are shown in **Figure 36**.

Archaeology

The archaeology evaluation was conducted at a total of 13 sites, located within one kilometer of Noonday Creek. One site is within the immediate vicinity of the creek, and three additional sites have the potential to extend into the project corridor. These sites are further discussed in **Appendix B**.



Team Members Surveying Near Canterbury Greenspace

Overview of Permitting and Documentation Requirements

If the trail were to be constructed along Noonday Creek, both sides of the stream have potential for wetland and stream impacts, depending on trail alignment and structure types. Construction methods and structure types will have a large bearing on how impacts are calculated and mitigated. Both sides of Noonday Creek have potential for impacts to archaeological resources. The level of impacts will depend on trail alignment and structure types. If federal funding is utilized, a full archaeological resources analysis would be conducted to better understand impacts. If state funds are utilized, a USACE permit would also trigger a Section 106 – archaeology field analysis.

There is a 27-acre Army Corps of Engineers (USACE) Restrictive Covenant (RC) site located northeast of the Bells Ferry Road bridge over Noonday Creek, and six of these acres are a wetland restoration area. This RC was being established in 2003 as an off-site wetland restoration and preservation site. It is associated with USACE Permit Number 960010730. If any portion of the RC were to be acquired for the proposed trail, a request to modify an existing USACE permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344) would likely be required through coordination with the USACE.



Bank Erosion Near Noonday Creek Park

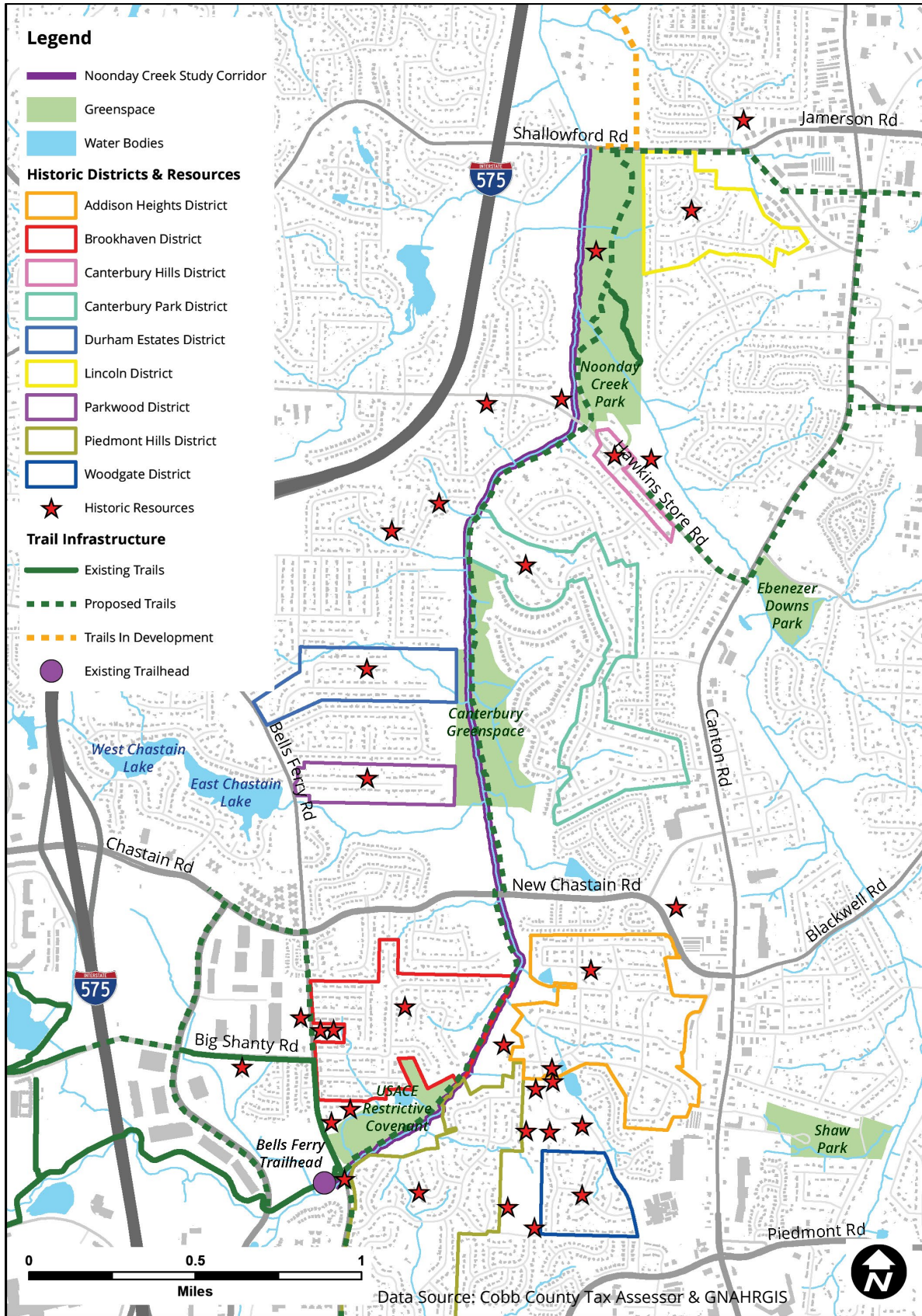


Figure 36: Historic Districts & Resources Within the Noonday Creek Study Area



Hydrological & Geotechnical Considerations

Hydrology

Noonday Creek is one to three feet deep on average, with a steady and clear flow with established vegetation along the banks. The channel width is approximately 25 to 50 feet under normal/low flow conditions, with an established floodplain width between 300 to 500 feet for the 100-year base flood event, and areas as wide as 1,000 feet in some locations. High water marks noted during the site visit indicated regular rise in water surface elevations of approximately five feet, with extreme rises of ten to 15 feet for larger storm events. (10 year events or more).

There are multiple tributaries that enter Noonday Creek, including regulated streams:

- Noonday Creek Tributary No. 1
- Little Noonday Creek
- Noonday Creek Tributary No. 3
- Noonday Creek Tributary No. 4

Noonday Creek Tributary No. 1 enters in from the west just upstream of Shallowford Road, and Little Noonday Creek enters from the east 2,500 feet upstream of Shallowford Road. Noonday Creek Tributary No. 3 combines with Noonday Creek 1,500 feet downstream of Bells Ferry Road, and Noonday Creek Tributary No. 4 combines with Noonday Creek 1,200 feet upstream of the crossing at Bells Ferry Road. Additionally, there are unnamed tributaries approximately 1,500 feet both upstream and downstream of New Chastain Road

and several smaller intermittent streams, ponds and wetland areas along the length of the trail. Detailed discharge information and floodplain maps are included in **Appendix C**.

Noonday Creek is a FEMA-regulated Zone AE stream that drains an area of 34.39 square miles from downstream from Shallowford Rd, and 17.50 square miles upstream from Bells Ferry Road. The FEMA-established peak discharges for the 100-year storm event are 15,888 cubic feet per second (cfs) downstream and 8,533 cfs at the upstream limits. FEMA has established cross sections beginning with cross sections A and B, respectively downstream and upstream of Shallowford Road, and includes all cross sections up to cross section H located upstream of Bells Ferry Road. The majority of Noonday Creek is located within the regulated floodplain, and a proposed trail along the creek would fall within the floodway. (See **Figure 37** and **Table 8**.)

The drainage area consists primarily of urbanized, developed land consisting mostly of residential areas, with some additional commercial developments. There are residential structures in the vicinity of the proposed trail, with some structures within the FEMA designated floodplain. There are existing water and sewer utilities within the floodplain along the west side of the creek.

Due to the fact that much of the sewer easement along Noonday Creek falls within a floodplain or floodway, a trail constructed along the creek would likely require specific permits and impact costs as well as the implementation timeline.

Table 8: Stream Discharges Along Noonday Creek

Flooding Source and Location	Drainage Area	Peak Discharges (cubic feet per second)	
		1% Annual Chance (100-Year Flood Event)	0.2% Annual Chance (500-Year Flood Event)
At Bells Ferry Rd	17.50	8,533	11,583
At New Chastain Rd	22.31	14,452	15,614
At Hawkins Store Rd	25.10	12,399	15,889
At Shallowford Rd	34.39	15,888	20,217

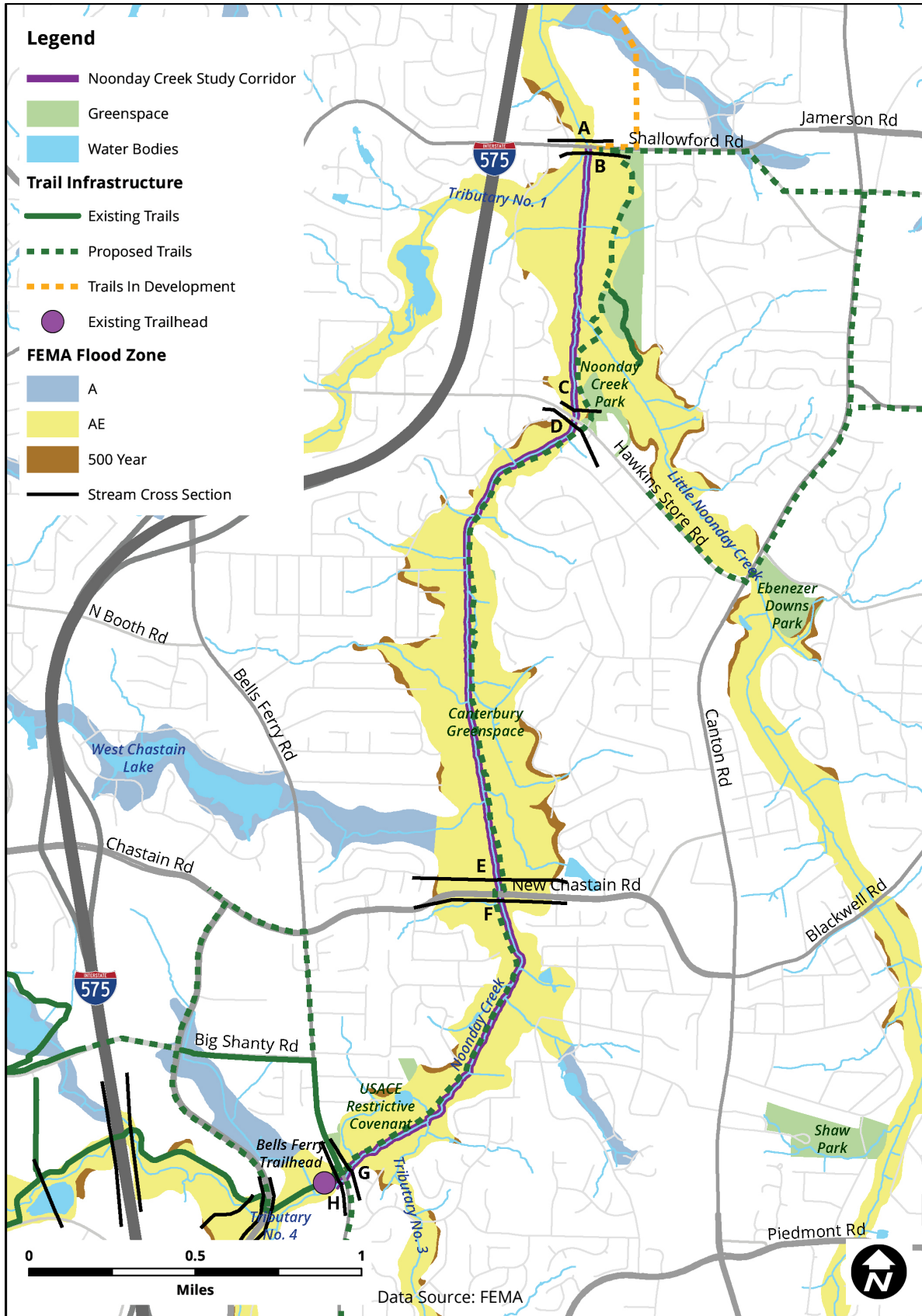


Figure 37: FEMA Flood Zones and Stream Cross Sections



Observations on Hydraulic Crossings

A trail crossing of Noonday Creek would be possible at various points along the trail. Overbank areas are largely the same on both the east and west sides of Noonday Creek. Additional study would be required at specific locations where the crossing would best be desired in order to determine the hydraulic feasibility of such a crossing. There is some instability along the banks at some locations, and wetlands and small tributaries are regular features along this corridor and should be avoided if possible. Additional concerns include the high level of debris in the creek and any erosion or meandering of the creek which could worsen scour potential at any crossings of Noonday Creek. This section provides further context and observations at potential roadway crossings.

Bells Ferry Road

Bells Ferry Road runs between FEMA cross section G and H. The 100-year base flood elevation at cross section G (downstream) is 923.8 feet and at cross section H (upstream) is 925.7 feet. The low chord of the bridge is approximately 937 feet which leaves approximately ten feet of clearance over the 100-year storm, 14 feet of clearance over the 10-year storm and over 25 feet of clearance under low flow conditions. Flow is largely contained between bents 2 and 3 and there appears to be room for a trail under the bridge without constricting flow. The existing embankment has a slope greater than 2:1 and is rip rapped and would likely require a retaining wall to stabilize the slope and hold the fill required for a trail at this location.

New Chastain Road

New Chastain Road runs between FEMA cross sections E and F. The 100-year base flood elevation at cross section E (downstream) is 914.3 feet and at cross section F (upstream) is 917.5 feet. The low chord of the bridge is approximately 914 feet which suggests overtopping, or flooding of the roadway, during the 100-year storm event as well as the 10-year event and ten feet of clearance under low flow conditions. Any trail under the existing bridge would have to be near grade and would be expected to flood multiple times per year.

The floodway is over 1,000 feet just downstream of this crossing due to wetland areas and a tributary that enters from the west, which limits the options for adding fill required to build a ramp and pedestrian bridge over New Chastain Road.

Hawkins Store Road

Hawkins Store Road runs between FEMA cross section C and D. The 100-year base flood elevation at cross section C (downstream) is 907.1 feet and at cross section D (upstream) is 909.5 feet. The low chord of the bridge is approximately 919 feet which leaves over ten feet of clearance over the 100-year storm, 15 feet of clearance over the 10-year storm and over 25 feet of clearance under low flow conditions. Flow is largely contained between bents 2 and 3 and there appears to be room for a trail under the bridge without constricting flow. The existing embankment has a slope greater than 2:1 and is rip rapped and would likely require a retaining wall to stabilize the slope and hold the fill required for a trail at this location.

Shallowford Road

Shallowford Road runs between FEMA cross section A and B. The 100-year base flood elevation at cross section A (downstream) is 901.2 feet and at cross section B (upstream) is 903.4 feet. The low chord of the bridge is approximately 908 feet which leaves over five feet of clearance over the 100-year storm, nine feet of clearance over the 10-year storm and over 20 feet of clearance under low flow conditions. A preliminary assessment shows that a crossing beneath the bridge at this location is feasible and should be substantiated with additional analysis as well as coordination with the programmed trail project north of Shallowford Road into Cherokee County and the City of Woodstock.



Geology

The study area lies within the Piedmont Physiographic Province of Georgia. The soil profile for the Piedmont Physiographic Province consists of surficial soils that are the residual products of the in-place weathering of the parent rock. Along the creek, there are subgrade soils that may consist of soft and wet soils. If the trail were to be constructed along the creek, these types of soils may require stabilizing prior to fill placement and/or pavement construction. Stabilization may consist of removing and either drying out and replace, or replacing with drier soils.

The terrain along Noonday Creek is relatively flat and therefore may not drain well. During construction occurring in wet weather periods, placement of low-strength filter fabric per GDOT Special Provision 881 may be placed on top of the existing ground prior to placing the fills in accordance with GDOT Standard Specifications 455. If it is not feasible to drain this area during construction, a mat or rock embankment should be placed to a height of 18 inches above the water level prior to placing normal fills. The rock embankment should be separated from normal fills with a layer of woven plastic filter fabric per Standard Specifications 881.

For bridge crossings, the underlying rocks are by Amphibolite/ Mica Schist/ Biotitic Gneiss. Typically, in this geology, the bridges would be supported on steel H-Piles. The new bridge planned at Bells Ferry Road would likely be supported on driven steel H-piles. The H-piles would extend below estimated scour depths at the intermediate bents and into weathered rock and/or the parent bedrock. It is anticipated that the parent bedrock would be encountered within the upper 40 to 70 feet below existing ground surface.



Project Team Member Surveys Noonday Creek Banks Near Canterbury Greenspace

Field Observations

On June 14, 2022, the project team, consisting of planners, engineers, and scientists conducted a field visit along the Noonday Creek to make observations and identify opportunities and challenges at potential trail crossings and along the creek. The following pages provide observations, challenges, and opportunities for each of the locations project team members observed during the field visit.



Crossing at Bells Ferry Road

The Bells Ferry Road bridge is located within a single-family residential area. The bridge over Noonday Creek is scheduled to be replaced by Cobb County. The new bridge is currently in design; if the trail were to be constructed beneath this bridge, the design would accommodate a trail crossing.

Bells Ferry Road has an eight-foot sidewalk on the west side of the road between the Bells Ferry Trailhead and Big Shanty Road. North of this point, there is a gap in sidewalk until just north of the intersection with Willard Drive. Between Willard Drive and Chastain/New Chastain Road, there is sidewalk on both the east and west sides of Bells Ferry Road.

Observations

- The Bells Ferry Trailhead provides trail access and connectivity west towards Town Center Mall and KSU
- There is a bicycle share station at the Bells Ferry Trailhead
- Vertical clearance under the bridge is sufficient for trail users and a trail facility at this location can withstand significant flood events.

Challenges

- Thick vegetation approaching the Bells Ferry Road bridge
- An at-grade path would be difficult to implement, due to the steep slope present on the southern side of the Bells Ferry Road bridge over Noonday Creek
- Lack of pedestrian facilities along Bells Ferry Road south of the Bells Ferry Trailhead to accommodate access from Piedmont Hills subdivision as well as other developments closer to Bells Ferry Elementary School
- Coordination with utilities along Bells Ferry Road could be challenging if the trail has an at-grade crossing at Bells Ferry Road to connect to existing sewer easement east of Bells Ferry Road

Opportunities

- Convenient access for neighborhoods in the study area
- Existing wide sidewalk along Bells Ferry Road connects to Bells Ferry Trailhead and future expanded trail facility
- The right-of-way in the vicinity of the bridge as well as locations on either side of the bridge are owned by Cobb County



Bells Ferry Road Bridge Over Noonday Creek Looking East from Bells Ferry Trailhead



Steep Slopes Underneath the Bells Ferry Road Bridge and Evidence of Erosion



Parking Facilities and the Eastern Terminus of Noonday Creek at Bells Ferry Trailhead



Bridge Piers Show Water Lines From Previous Flooding Events Along Noonday Creek



Bells Ferry Road to New Chastain Road

Immediately east of Bells Ferry Road, parcels on both sides of the creek are owned by Cobb County with the north side of the creek containing sewer easement. This extends to approximately Lowe Trail where there are private homeowners on either side of the creek until the vicinity of Joel Drive just south of New Chastain Road.

Observations

- Entrance to sewer easement on Bells Ferry Road just north of the bridge over Noonday Creek
- No sidewalk on the east side of Bells Ferry Road north of the bridge over Noonday Creek
- More convenient access and routing along the north side of the creek due to pre-existing access road
- Generally cleared path, gentler slopes down to Noonday Creek
- While there are gaps in sidewalk infrastructure, infrastructure does exist along much of the corridor

Challenges

- Thick vegetation along creek bed
- Private property ownership in the middle of this section of the creek could prevent a trail facility from being constructed
- There is limited space, generally due to the existing residential development east of Bells Ferry Road

Opportunities

- An at-grade path would be able to be more easily implemented
- A viable alternative to the creek would be utilizing Bells Ferry Road and New Chastain Road



Project Team Members Inspect A Cobb County Easement To The North Of Noonday Creek Trailhead At Bells Ferry



Vegetation Along Cobb County Easement East of Bells Ferry Road



Manhole and Cistern Along Cobb County Sewer Easement Show Potential Water Levels During Flooding Events



Noonday Creek As Seen From The Cobb County Easement Located East Of Bells Ferry Road



Crossing at New Chastain Road

The crossing at New Chastain Road consists of two bridge structures, one for each direction of New Chastain Road. This bridge crossing has the lowest vertical clearance among any bridges along the Noonday Creek study corridor.

Observations

- Near Chastain Commons and Chastain Ridge subdivisions
- South side of bridge does not appear to provide enough clearance; additionally, there is very little ROW, and a large quantity of private property abuts Noonday Creek
- Lack of safe conditions for pedestrians due to curved road and high speed of vehicles

Challenges

- An at-grade crossing would expose pedestrians to heavy and high-speed traffic and would necessitate crossing four to five lanes of traffic
- Questions regarding grade for pedestrian access to get across bridge to northern side of New Chastain Road
- There is limited space due to existing residential development in each direction of the intersection
- Thick vegetation and wetlands on either side of the creek

Opportunities

- Pedestrian infrastructure, including sidewalks at all corners of the Bells Ferry and New Chastain Road intersection, and a pedestrian refuge island, are currently in place
- Property on either side of the bridge is owned by Cobb County and contains sewer easement on the west side of the creek
- An at-grade crossing would be possible due to the existing conditions of the corridor
- A new trailhead was recommended for this location as part of the Cobb Greenways & Trails Master Plan. This facility could be built on either side of New Chastain Road, as both sides of the road at the creek are owned by the County



New Chastain Road Eastbound Bridge From Easement Property South of the Roadway



Lower Vertical Clearance And Slope Are Potential Challenges for a Below-Grade Trail Crossing



Sidewalk Gaps Present on the North Side of New Chastain Road Approaching the Noonday Creek Bridge



An At-Grade Crossing is Possible Given Current Easement Access West of Noonday Creek Along New Chastain Road

New Chastain Road to Hawkins Store Road

This portion of Noonday Creek is largely public property which is occupied by the Canterbury Greenspace on the east side of the creek along with water and sewer lines on the west side of the creek; however, there are some homeowners within subdivisions closer to Hawkins Store Road with properties which abut the creek.

Observations

- Canton Road provides access between Hawkins Store Road and New Chastain Road, and runs parallel to Noonday Creek, located to the west.
- Some utility lines are exposed on the west side of the creek along the sewer easement

Challenges

- There are some private property owners north of the Canterbury greenspace on both sides of the creek.
- Right-of-way needs between the Canterbury neighborhood and Hawkins Store Road
- Thick vegetation north of Canterbury Greenspace

Opportunities

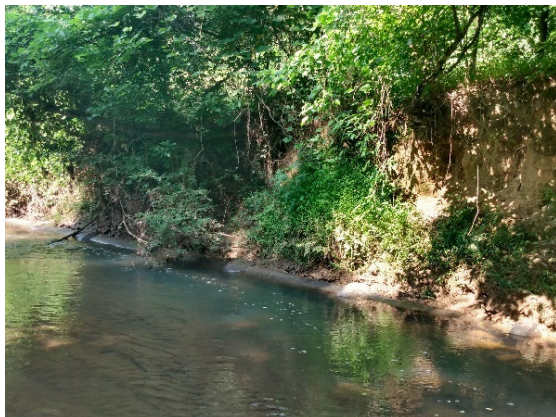
- Existing trails, boardwalks, and facilities in the Canterbury Greenspace owned by Cobb County can be incorporated into the proposed trail
- Existing overlooks and scenic views can be incorporated into the design



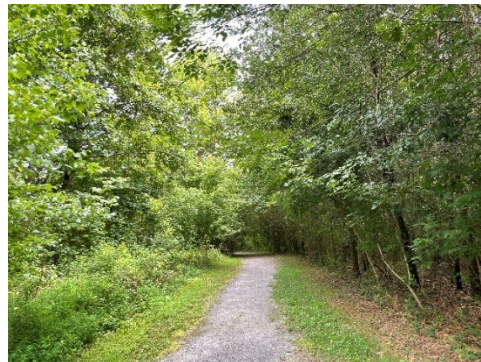
Gravel and Underground Pipes Exposed Within Easement West of the Creek



Vegetation and Overgrowth Mark Northern Extent of Paths and Trails Maintained by Cobb County Within Canterbury Greenspace



Exposed Utility Line Along Noonday Creek's West Bank



Gravel Paths within Canterbury Greenspace East of Noonday Creek

Crossing at Hawkins Store Road

The Hawkins Store Road bridge over Noonday Creek provides the highest vertical clearance of any bridge facility along the Noonday Creek study corridor. This makes it a tremendous opportunity for a below-grade trail crossing to allow the trail to connect to Noonday Creek Park and Shallowford Road. However, there are topographical and ecological challenges at this crossing.

Observations

- Thick vegetation on either side of the bridge on both sides of the creek

Challenges

- Steep slope and topography at the bridge
- Private property south of Hawkins Store Road

Opportunities

- High vertical clearance along the bridge
- Noonday Creek Park is a recommended trailhead within the Cobb Greenways & Trails Master Plan, and there is an accessible entrance off Hawkins Store Road



Thick Vegetation Along Utility Easement Looking South Towards Hawkins Store Road Bridge



Bridge Over Noonday Creek, West Of The Noonday Creek Park Entrance



Entrance To Cobb County Easement, Located To The West Of Noonday Creek Park, Off Of Hawkins Store Road

Entrance To Noonday Creek Park Off Of Hawkins Store Road



Hawkins Store Road to Shallowford Road

This portion of Noonday Creek has a utility easement on the west side of the creek and Noonday Creek Park is located on the east side of the creek. This makes trail alternatives on either side of the creek attractive; however, there is a lack of shade and connectivity to other facilities due to the park's layout and topography in the area.

Observations

- All land on either side of this portion of the creek is publicly owned

Challenges

- Overhead power lines will require coordination with power companies such as Cobb EMC and Georgia Power
- Lack of shade and amenities for nearly one mile between Hawkins Store Road and Shallowford Road west of the creek
- Coordination with Cobb PARKS on facilities planning and trail alternatives development

Opportunities

- Existing bridge over Little Noonday Creek could facilitate a trail connection
- There is an opportunity to capitalize on Noonday Creek Park as a trailhead in alignment with recommendations from the Cobb Greenways & Trails Master Plan due to the presence of amenities and vehicle parking
- Utility easement west of Noonday Creek opposite from the park



Overhead Utility Lines and Thick Vegetation North of Hawkins Store Road



Sewer and Utility Easement West of Noonday Creek Opposite Noonday Creek Park



Existing Pedestrian Bridge Over Little Noonday Creek in Noonday Creek Park



Erosion Along Noonday Creek Against a Soccer Field at Noonday Creek Park

Crossing at Shallowford Road

The northern terminus of the Noonday Creek study corridor is located at Shallowford Road immediately north of Noonday Creek Park. This section ties into the programmed trail project north into Cherokee County (PI 0016015).

Observations

- Vehicles were observed traveling faster than the 45 MPH posted speed limit
- Sidewalk is present only on the south side of Shallowford Road
- The Noonday Water Reclamation facility is located to the north of Shallowford Road

Challenges

- There are both overhead and underground utility challenges in the vicinity of this bridge
- Topographical challenges and thick vegetation along utility easement just south of Shallowford Road
- Programmed trail north into Cherokee County includes an at-grade crossing at Shallowford Road

Opportunities

- At this potential crossing, Cobb county owns parcels east of Noonday Creek only
- Coordination with programmed trail project
- Potential to move proposed crossing along Shallowford Road or develop a below-grade crossing under the bridge on Shallowford Road at the creek if and when the bridge is replaced



Bridge Contains Both Utilities and Wide Shoulders



Thick Vegetation Along Utility Easement South of Shallowford Road



Shallowford Road Near Noonday Creek Includes Sidewalk on the South Side of the Roadway



Summary and Key Findings

The “scoping” phase of a project or study is intended to lay out background information and data, identify opportunities and constraints, to explore potential alternatives, and to identify potential barriers or challenges in a conceptual project before beginning design. To that end, the Existing Conditions Analysis for the Noonday Creek Trail Extension Scoping Study considers the existing transportation network, current and future land use, property ownership, the presence of utilities, and environmental factors in the vicinity of Noonday Creek between Bells Ferry Road and Shallowford Road. Collectively, this information serves as a foundation – an inventory of technical factors that Cobb County and its partners must consider when evaluating the feasibility of a trail extension and potential alignment options. Such factors include, but are not limited to existing transportation infrastructure and community facilities, bridge crossings, environmental regulations, location of utilities, and topography.

Evaluating these factors and layering data will help Cobb County understand the opportunities and challenges of potentially building a trail in this area. For example, while the bridges that cross Noonday Creek have high enough clearance to cross beneath them, it is important to also consider safety, flooding, maintenance access, and cost, among other factors. Similarly, while more than two-thirds of land along the creek within the study area is publicly owned, private property in close proximity to the creek combined with required stream buffers, topographical, and hydrological challenges may preclude the possibility of a trail along the creek itself in some areas or greatly increase the cost of such an alignment. In such cases, opportunities along parallel roadways should be considered, alongside traffic volumes, safety data, and available right-of-way. A trail in this area would expand options for multimodal travel and increase regional connectivity, linking Kennesaw Mountain with downtown Woodstock and beyond.

Going forward, the project team in coordination with Cobb County, will explore and analyze potentially viable options based on these findings. Feasibility and potential alternatives will be evaluated based upon a number of factors, including but not limited to: complexity and feasibility; environmental, utility, and property impacts; estimated cost; connectivity with the broader trail network; and alignment with established goals and community input.

Next Steps

- Share findings of the Existing Conditions Analysis with the Stakeholder Steering Committee and gather feedback
- Identify criteria to used towards evaluating potential alignment options
- Develop up to three potential alternative alignments
- Seek stakeholder and community feedback on potential trail alternatives
- Identify a preferred trail alternative alignment, in consultation with Cobb County, based on options evaluated
- Prepare a Cobb County DOT concept report based on the preferred alternative
- Compile a final report and present findings to community members and key stakeholders



Noonday Creek Looking East From Bells Ferry Road