BRASELTON, GEORGIA

Trail Feasibility Study

Final Report - January 2022

Acknowledgments

The Braselton Trail Feasibility Study was prepared for the Town of Braselton by Alta Planning + Design. Funding for this study was provided by Gainesville-Hall Metropolitan Planning Organization (GHMPO) and the Town of Braselton.

GHMPO acknowledges the Town staff who provided valuable input throughout the study:

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PREPARED FOR:

The opinions, findings, and conclusions of this publication are those of the author(s) and not necessarily those of the Department of Transportation, State of Georgia, or the Federal Highway Administration. Prepared in Cooperation with the Department of Transportation and the Federal Highway Administration.

PREPARED BY:

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A Resolution by the Gainesville-Hall Metropolitan Planning Organization Policy Committee Adopting the Braselton Trail Study

WHEREAS, the Gainesville-Hall Metropolitan Planning Organization is the designated Metropolitan Planning Organization for transportation planning within the Gainesville Metropolitan Area Boundary which includes all of Hall County and a portion of Jackson County following the 2010 Census; and

WHEREAS, the Infrastructure Investment and Jobs Act (IIJA) Act requires the Metropolitan Planning Organization to increase accessibility and mobility options available;

WHEREAS, the IIJA Act furthermore directs GHMPO to enhance the integration and connectivity of the transportation system, across and between modes;

WHEREAS, the Braselton Trail Study makes recommendations to improve the area's accessibility and mobility;

NOW, THERE, BE IT RESOLVED that the Gainesville-Hall Metropolitan Planning Organization adopts the Braselton Trail Study.

A motion was made by PC member Richard Higgins and seconded by PC member Jeff Stowe and approved this the 8th Day of March, 2022.

Mayor Sam Couvillon, Chair
GHMPO Policy Committee

Subscribed and sworn to me this the 8th Day of March, 2022

Notary Public

My Commission expires 1-22-2024

ANAEL DOMINGUEZ NOTARY PUBLIC HALL COUNTY GEORGIA MY COMMISSION EXPIRES JANUARY 22, 2024

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BRASELTON, GEORGIA
TRAIL FEASIBILITY STUDY

1 BACKGROUND

1. BACKGROUND

INTRODUCTION

The purpose of this study is to conduct a small-scale, focused trail feasibility study to explore all possible connections for a multi-use path between the Life Path, which currently ends near the intersection of State Route 211 / Thompson Mill Road, and Downtown Braselton. The Braselton Trail provides the opportunity to connect residents and visitors with the Highlands to Islands Multi-Use Trail system, downtown Braselton, Lake Lanier Islands, and downtown Gainesville. These connections offer a safe transportation alternative for the region. This study will help Braselton leverage their existing community, cultural, and tourism resources by connecting the two major destinations in town—the Chateau Elan Golf Club, Winery, & Resort and downtown Braselton—to achieve the 2019 Braselton Tourism Report's recommendations of solidifying the Braselton brand across the geographic area, offering outdoor experiences, and activating a walkable bustling downtown.

PROJECT GOALS

Guiding principles for the study include:

Feasibility and Constructability:
developing a facility design and alignment that is realistic

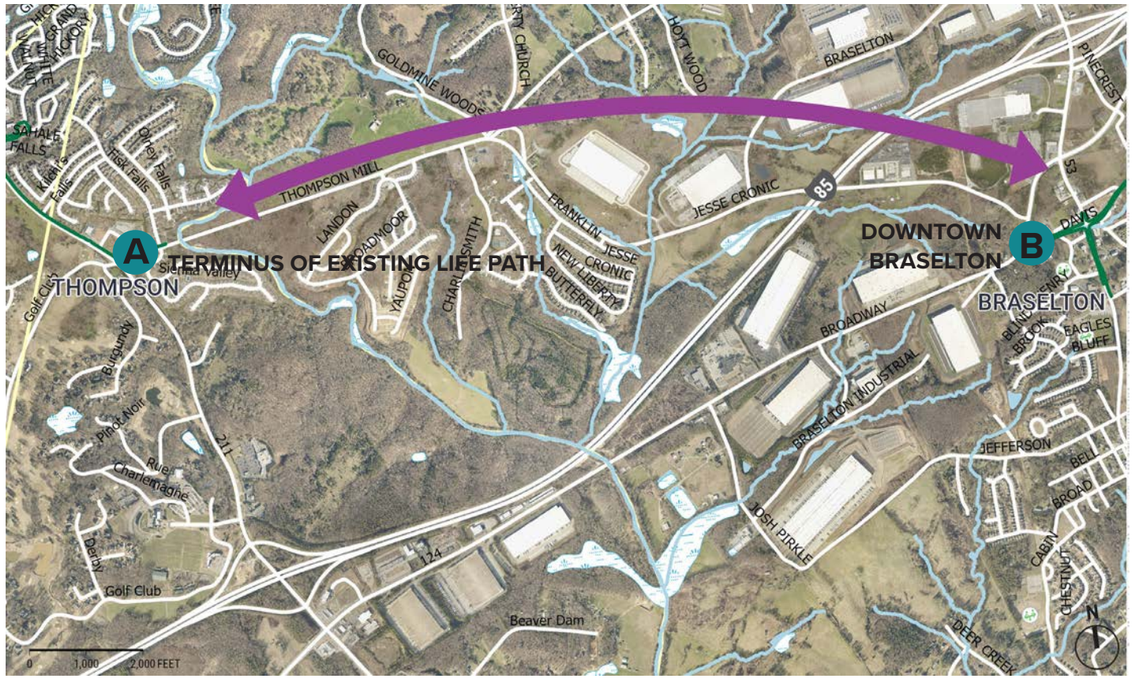
Cost consideration:
determining what investment would be needed from the Town, Counties, and public agencies to construct the trail

Impact mitigation:
minimizing impacts to adjacent properties and the environment

Safety:
providing a safe and comfortable experience for trail users within the context of Braselton's existing development patterns

Connectivity:
creating a continuous facility and determining the most reasonable terminus location for the trail in each of the areas involved in the study

PROJECT AREA MAP



TOWN OF BRASELTON

Located 53 miles northeast from downtown Atlanta, Braselton, Georgia is a growing town with rich history and a revitalizing downtown. Covering around 34 square miles, Braselton is unique in that it is located in four counties: Barrow, Gwinnett, Hall, and Jackson Counties. The town is served by Interstate 85, and two major state routes, Highway 53 and Highway 211, which provide residents, employees, and visitors easy access to and from the town. (*2020 Braselton Comprehensive Plan*)

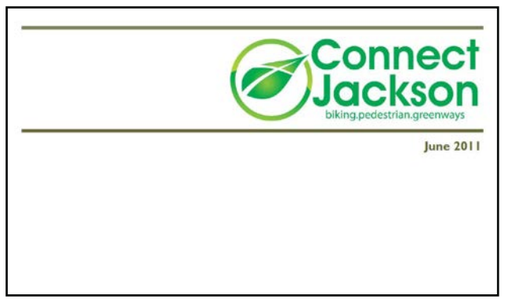
PREVIOUS PLANNING EFFORTS

Braselton Comprehensive Plan (2020)

This comprehensive plan envisions the long-term future of the Town of Braselton and outlines its implementation. Over time, this plan will serve as a guide for cooperation and coordination between the Town, its service providers, partners, and current and future property owners. The plan should be used to support decisions regarding growth management, transportation, housing, economic development, and quality of life over the next few decades.

Jackson County Comprehensive Plan (2050)

This plan represents the latest version of a nearly continuous effort to understand and plan for growth in unincorporated Jackson County. Since 1974 when the County first adopted a zoning ordinance to ensure the orderly and logical development of land, the county has developed a continuum of plans, which this plan builds on.



Connect Jackson (2011)

This document presents a concise guide to facilitate decision-making for investments in conservation and non-automobile transportation. The planning process that informed this document was designed to include on- and off-road facilities for walking and/or bicycling, as well as to identify critical corridors for habitat and water quality conservation.

Life Path (2016)

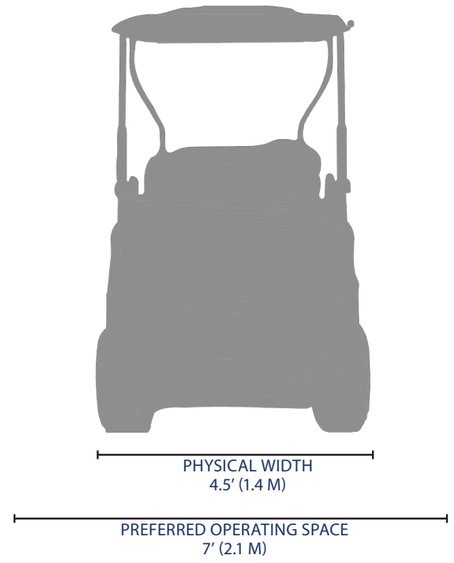
The Braselton LifePath provides urban connectivity in a suburban setting by linking residential, retail and offices via alternative modes of transportation along a 10-foot-wide concrete pathway. The LifePath connects The Village at Deaton Creek and the Northeast Georgia Medical Center to Chateau Elan, Mulberry Walk and the Town of Braselton Mulberry River Walk and was funded by the Braselton Community Improvement District (CID) in partnership with the Town of Braselton, Gwinnett County and the Georgia Department of Transportation.

USER TYPES

The identification of specific user types is important for determining the best facilities for the Braselton Trail. Understanding that golf carts are a preferred alternative transportation vehicle in the area informs the recommended trail width. The trail is intended to be used by families with children, shaping which destinations are prioritized, and how corridors are evaluated. This section describes expected user groups for the Braselton Trail, as well as the needed operating space and design solutions for each.

GOLF CART USERS

Golf Carts are the largest of the devices used on multi-use paths. They are typically 4-wheeled, and powered by an electric motor. The typical length of golf carts varies from 7.5 - 10', and standard wheelbase models can carry up to 4 people. Path design should consider the volume and mix of golf carts with respect to other non-motorized users and provide a comfortable experience for all. Golf carts differ other users in several ways - they move at a faster speed, have greater mass, and require more space for passing other users and making turns. The typical turning radius of a golf cart ranges between 9.5 - 12'. Because golf carts require clear space to operate within a facility, the operating width is greater than the physical dimensions of the cart.

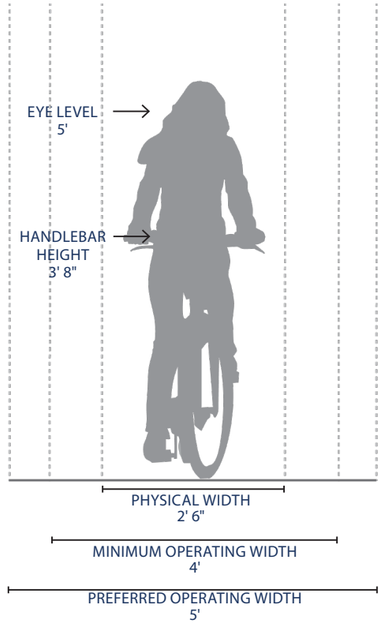


PEDESTRIANS

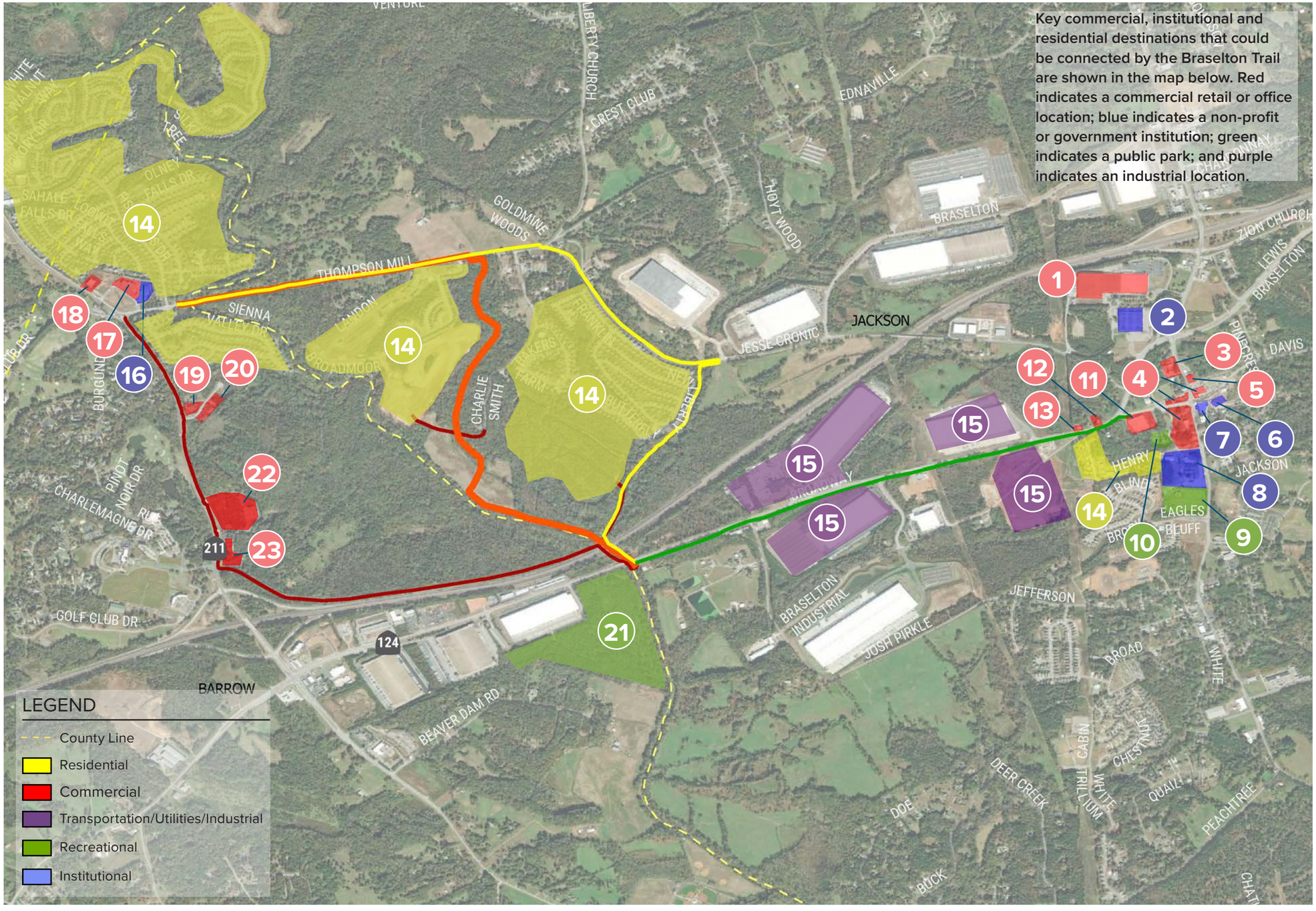
Pedestrians have a variety of characteristics and the transportation network should accommodate a variety of needs, abilities, and possible impairments. Age is one major factor that affects pedestrians' physical characteristics, walking speed, and environmental perception. Children have low eye height and walk at slower speeds than adults. They also perceive the environment differently at various stages of their cognitive development. Older adults walk more slowly and may require assistive devices for walking stability, sight, and hearing.

BICYCLISTS

Bicyclists and their bicycles exist in a variety of capabilities, sizes and configurations. These variations occur in the types of bicycle (such as a conventional upright bicycle, a recumbent bicycle or a tricycle), and behavioral characteristics (such as the comfort level and experience of the cyclist). Multi-use path design should consider reasonably expected bicyclist types and utilize the appropriate design dimensions and standards. Bicyclists differ from pedestrians in several ways such as moving at a faster pace and generally having a higher center of gravity. Design of path curves is important for cyclists, as are the design of ramps, grade changes, and path surface transitions.



DESTINATIONS & CONNECTIONS



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2 INVENTORY & ANALYSIS

2. INVENTORY & ANALYSIS

EXISTING CONDITIONS

Connecting the existing LifePath to downtown Braselton also connects two major residential nodes together. The area surrounding the intersection of SR 211 and Liberty Church Road has recently been transitioning from vacant or agricultural zones to residential and commercial areas. Braselton Village and nearby developments such as the Enclave at Bakers Farm are transforming large vacant parcels between SR 211, the Mulberry River and I-85 into a thriving center with shops, entertainment and residences.

The Town has developed an industrial and logistics hub between these major residential nodes. Industry continues to locate along SR 124, Jesse Cronic Road, and Braselton Parkway. Some of the major employers include Amazon, Petco, Mizuno, Kichler Lighting, Haverty's Furniture, Dayton Superior, Carter's Incorporated and others.

There are some publicly-owned parcels throughout the study area, as indicated in the map below. These parcels are primarily located near the Mulberry River, but one in particular will house a new 71-acre park and is located south of SR 124 also along the river.

SR-124 at Barrow County Line

Chateau Elan Entrance

LEGEND

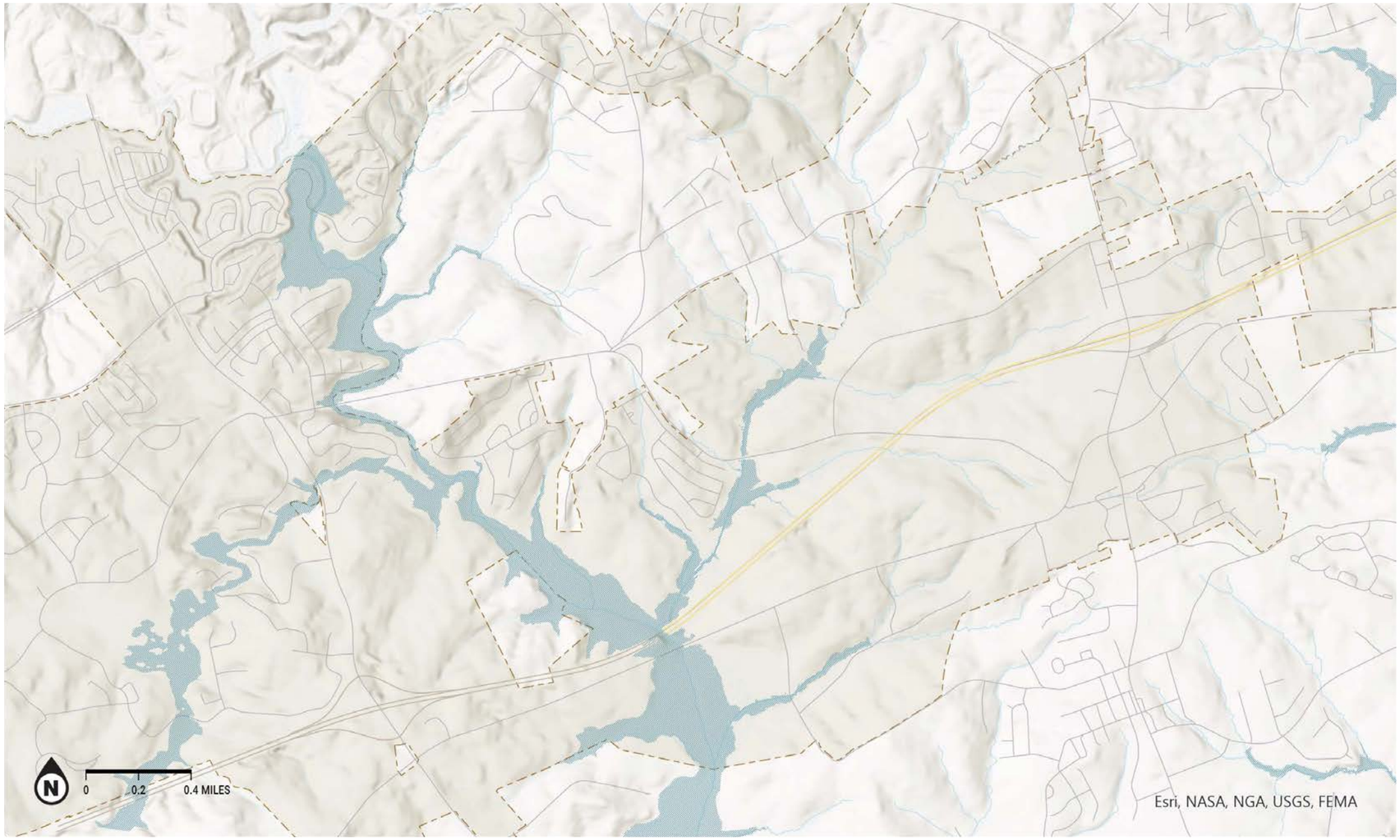
- Residential
- Commercial
- Office/Institutional
- Transportation/Utilities/Industrial
- Public
- Agricultural / Open Space
- Vacant

BRASELTON LAND USE

LEGEND

- 100-Year Floodplain
- Hillshade Topography
- Water Bodies
- Town Limits
- Roads
- Interstate

NATURAL FEATURES MAP



NATURAL FEATURES

Mulberry River

Forming the boundary between Barrow and Jackson counties, the Mulberry River is a key asset for the Town of Braselton. Mulberry Riverwalk natural surface trails are currently planned for expansion, and the river is designated for fishing. Throughout the study area, streambanks are often steep and erosion is prevalent, especially in developed areas. In 2017, Braselton conducted a streambank restoration project to address this issue north of Liberty Church Road.

In 2018, the Georgia Environmental Protection Division developed a watershed management plan to address river impairment from urban/ stormwater run-off, agricultural livestock, leaking septic, illicit connections, streambank erosion, destruction of vegetative stream buffers and inadequate compliance and enforcement of related ordinances.

To address these water quality issues, both Jackson and Barrow counties are enforcing 100-foot vegetative stream buffers on each side of the Mulberry River. The Town of Braselton has established a 150-foot vegetative stream buffer for the Mulberry River, plus an additional 25-foot buffer for any impervious surfaces.

Flooding & Wetlands

The headwaters of the Mulberry River start in Hall County and flow southwards. The river splits westward as Duncan Creek just south of Liberty Church Road. These major water bodies can cause flooding, and the FEMA flood hazard zones for the 100-year, or 1% chance flood within Barrow and Jackson counties is shown in blue hatching in the map.

Topography

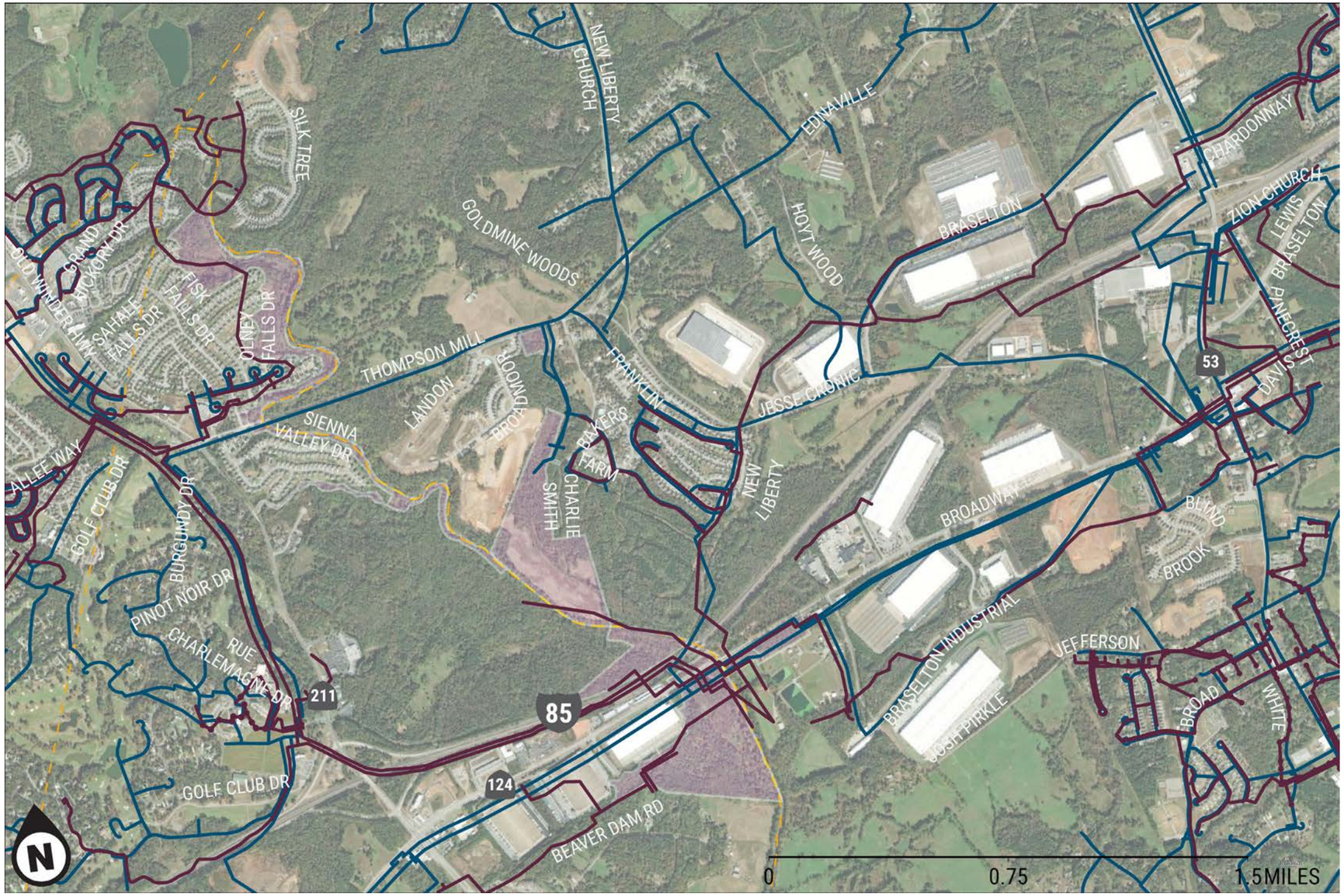
The Town of Braselton is located within the upper fringes of the Piedmont Plateau: a series of prominent hills near the base of the mountains with large streams. Elevations in the study area are moderately sloping and range from 660 to 1300 feet.

RIGHT-OF-WAY & UTILITIES

Easements for utilities can sometimes be modified or already allow for additional uses such as trails. The water and sewer lines in the study area are shown in the map below. One potential pathway for the Braselton Trail could follow the water line along Thompson Mill. In addition, there may be some right-of-way along SR 124 following water and occasionally sewer along this corridor.

Key parcels identified as publicly-owned are shaded in light purple on the map. These parcels generally follow the Mulberry River, and also include the large parcel south of SR 124 where a new park is planned.

PROPERTIES & UTILITIES ANALYSIS MAP



OPPORTUNITIES & CONSTRAINTS

A desktop review was conducted of possible trail alignments using GIS data provided by the Town, Jackson County, and Barrow County as well as Google Earth satellite imagery. Opportunities and constraints were identified for confirmation in the field.

Field teams visited the Town of Braselton in August 2021 to visit seven possible trail alignments. Previously identified opportunities, such as an easement along the north side of I-85 were confirmed. The feasibility of crossing I-85 underneath the bridges at the Mulberry River was assessed by visiting the site. Major constraints were also reviewed. Some of the most important constraints identified included the width of the Jesse Cronic Road bridge over I-85 and traffic volumes and speeds at both the Jesse Chronic bridge and the SR 53 bridge over I-85. A synopsis of the opportunities and constraints were summarized and presented to Town Staff in September.

Opportunity to use existing construction access roads and large bank width underneath I-85 and SR 124.

SR 124 appears to have available right-of-way for path to be buffered from the roadway.

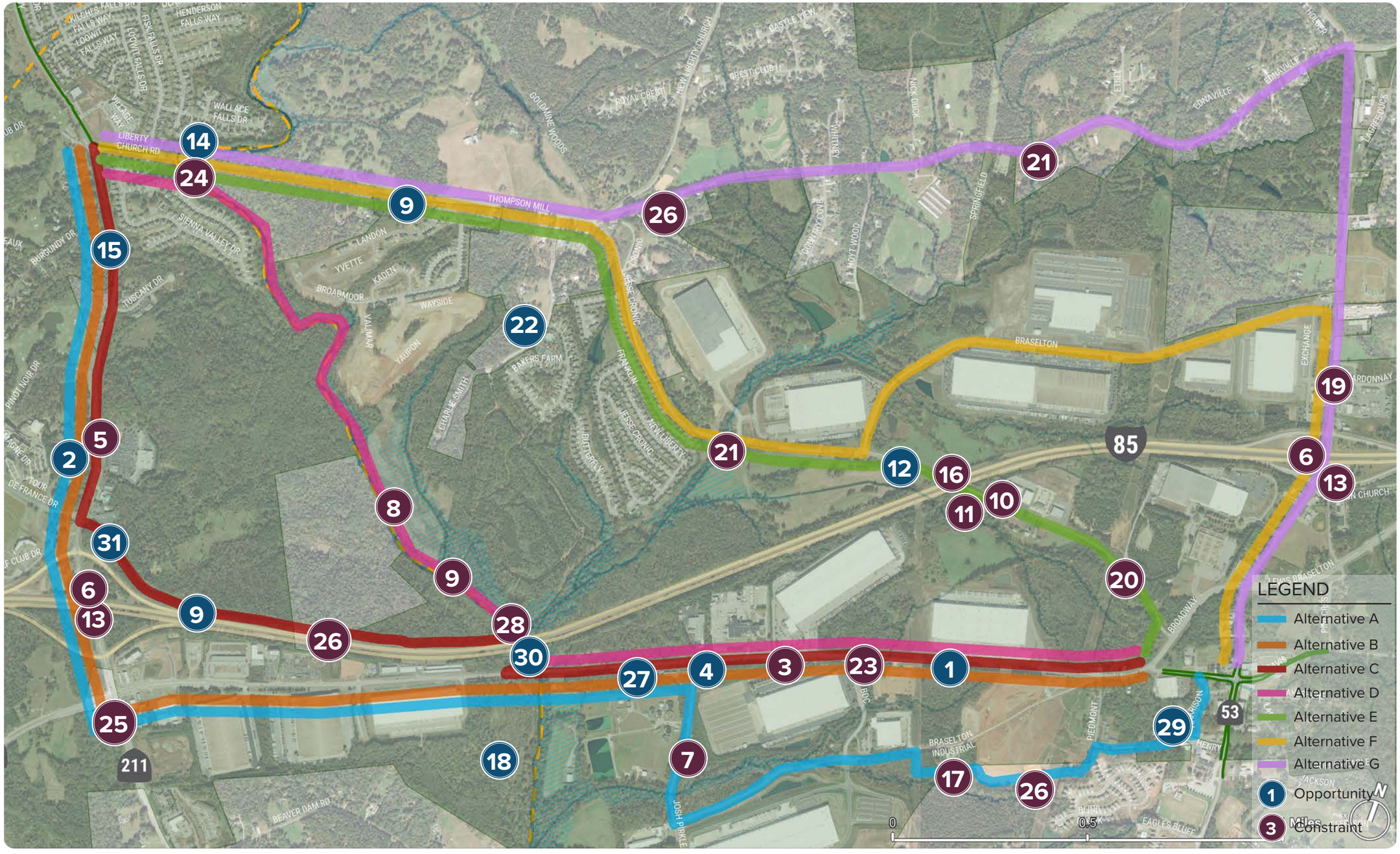
Heavily trafficked commercial corridor and truck stop creates safety and comfort concerns for cyclists and pedestrians.

Multi-use path is already planned for Braselton Parkway Extension.

Heavily trafficked commercial corridor and truck stop creates safety and comfort concerns for cyclists and pedestrians.

There is limited opportunity for reallocation of shoulder width: measured between 10-14 feet on each side.

OPPORTUNITIES AND CONSTRAINTS



LIST OF OPPORTUNITIES AND CONSTRAINTS

1. Potential to involve commercial and industrial stakeholders located along SR 124 as partners.
2. SR 211 connects destinations: Chateau Elan; shopping centers; restaurants; and future residential developments.
3. SR 124 observed with relatively high volume of trucks and higher traffic speeds.
4. SR 124 appears to have available right-of-way for path to be buffered from the roadway.
5. Numerous potential conflict points at large commercial driveway for Publix shopping center.
6. The pedestrian crossings at I-85 ramps are uncomfortable with large amounts of fast-moving traffic.
7. Potentially difficult topography and possible right-of-way acquisition required once alternative leaves SR 124.
8. Complex right-of-way acquisition, limited construction access, clearing, and permitting alongside the river.
9. Alternative includes a large amount of rural/pastoral/natural experience.
10. Right-of-way constraints in this area indicate that the trail would need to switch sides of the roadway.
11. Will likely need to install storm water infrastructure at this location.
12. Most straightforward to construct due to fewer developments and driveways, as well as no cross-travel at the bridge.
13. There is limited opportunity for reallocation of shoulder width: measured between 10-14 feet on each side.
14. Potential connection to existing and extended Mulberry Riverwalk natural surface trail at this location.
15. Widening of SR 211 includes extension of Life Path south to Chateau Elan area along the eastern side of SR 211.
16. There are significant bridge width limitations at Jesse Cronic Bridge, which will challenge path alignment.
17. Existing roadways do not connect at this location, potential challenges with right-of-way acquisition.
18. Potential connection to future 70-acre Town Park.
19. Heavily trafficked commercial corridor and truck stop creates safety and comfort concerns for cyclists and pedestrians.
20. Future land uses indicate corridor is planned to transition from open space to commercial / industrial.
21. Steep slopes constrain usable right-of-way: could require significant disturbance and possible modification to existing culvert.
22. Strong demand for connectivity to trail from existing / future residents.
23. If route follows power easement, the power lines switch sides of the roadway at BDC Pkwy, so trail would also switch sides.
24. Need to cross Mulberry River near Fisk Falls / Sienna Valley.
25. Large intersection with multiple conflict points.
26. Portions of the alternative are outside the Town of Braselton city limits.
27. Alternative joins with existing Trolley Route along SR 124.
28. Mulberry River water quality is impaired, which could increase permitting challenges during trail development.
29. Opportunity to connect to existing Braselton Park.
30. Opportunity to use existing construction access roads and large bank width underneath I-85 and SR 124.

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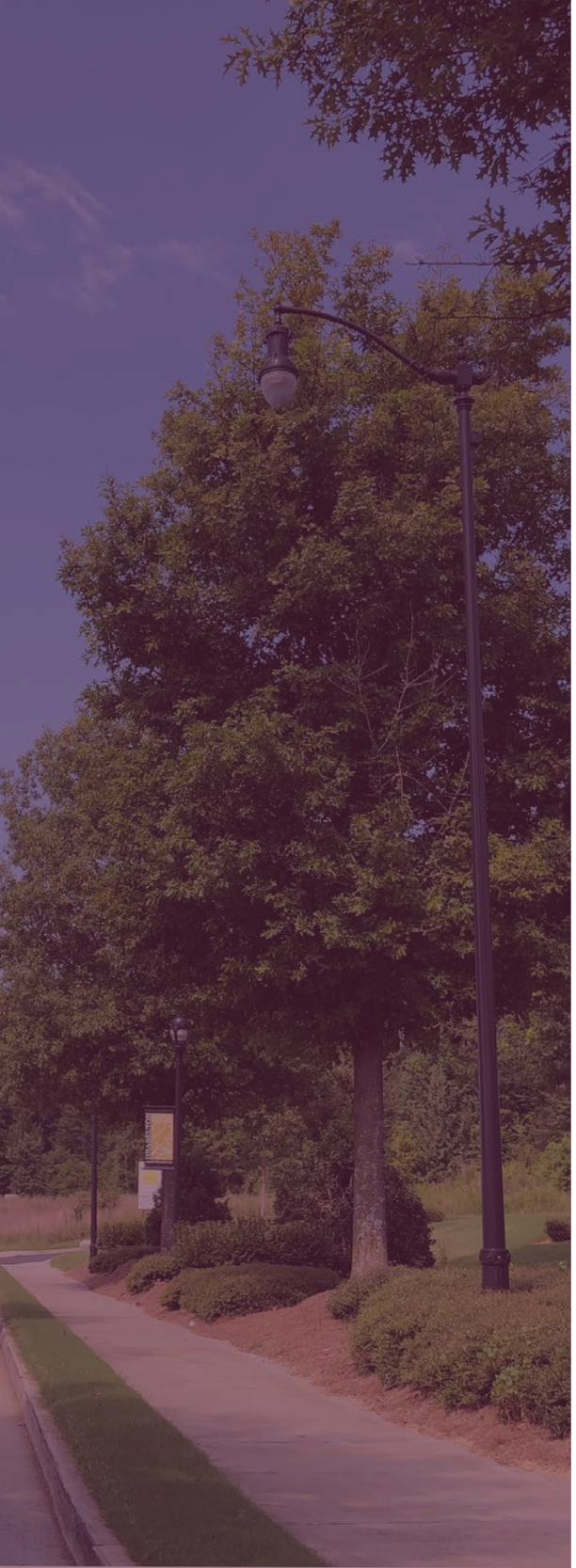


3 ALTERNATIVES EVALUATION

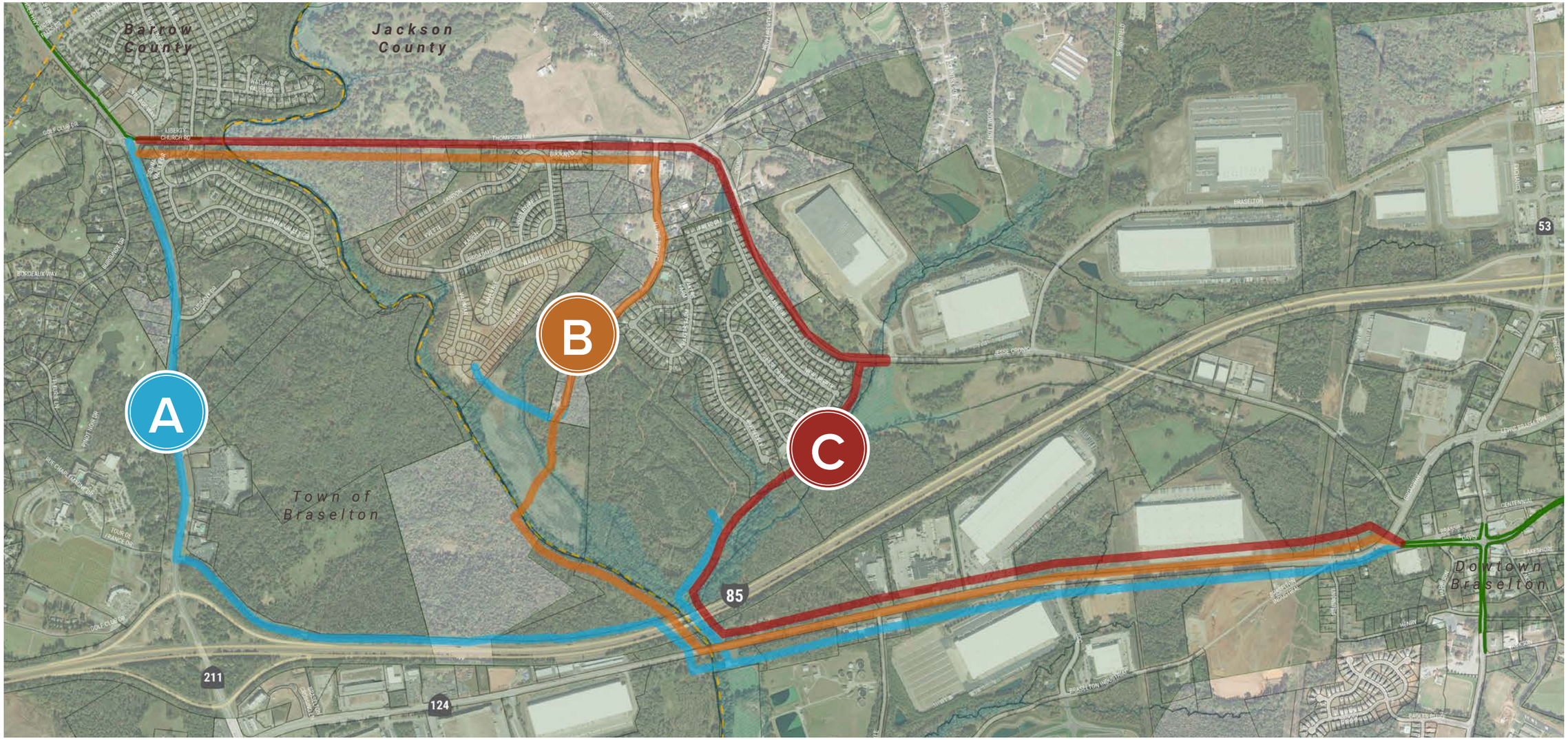
3. Alternatives Evaluation

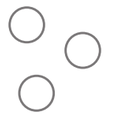
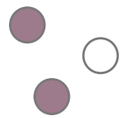
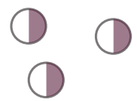
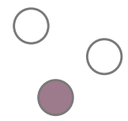
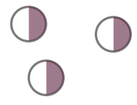
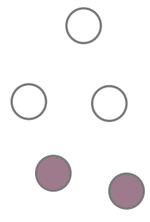
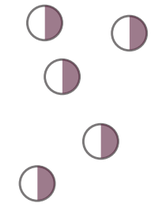
The initial seven alignment ideas were narrowed down to three alternatives for the Braselton Trail based on the decision criteria identified on this page. These criteria were based on the major goals for the Braselton Trail including: feasibility, high levels of neighborhood connectivity, low environmental impact, opportunity for economic development, excellent user experience, and enhanced safety. Once the three alternates where chosen, the screening criteria were used to further identify the preferred trail alternative.

TRAIL ALTERNATIVES COMPOSITE

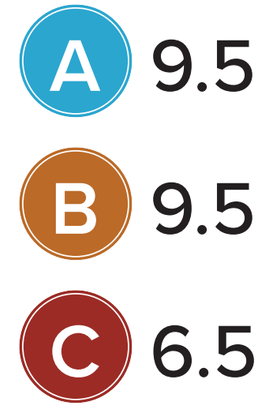
LEGEND

- Town Limit
- County Boundary
- Existing Multi-Use Path
- Alternative A + Spurs
- Alternative B
- Alternative C



GOAL	EVALUATION MEASURE	A. BLUE	B. ORANGE	C. RED
FEASIBILITY	– Relative cost based on length + typical cost per mile – ROW availability: number of privately-owned parcels – Topographic challenges			
ACCESS / CONNECTIVITY	– Community access: residential population within 1/4 mile via the road network – Access to parks / natural resources – Access to other modes of transportation			
ENVIRONMENTAL IMPACT	– Passes through designated wetlands – Passes through 100-year floodplain			
ECONOMIC IMPACT	– Employees within 1/2 mile – Low-stress connectivity to commercial districts			
USER EXPERIENCE	– Level of user comfort – Opportunities for + activation – Amenities + destinations along the trail			
SAFETY	– Traffic volumes along nearby roadways – Speeds along nearby roadways & at potential conflict points – Number of driveway crossings – Number of at-grade crossings of roadways (arterial or higher vs. collector or lower) – Opportunities for eyes on the trail			
	FINAL SCORE	**9.5**	**9.5**	**6.5**

ALTERNATIVE SCORING



OVERVIEW

The three screened alternatives were evaluated for coherence with the goals of the Braselton Trail: feasibility, connectivity, environmental impact, economic impact, and safety. Each alternative was scored as best, neutral or worst for each goal, and assigned a point value of 0, 0.5 or 1 respectively.

Although very different in overall character, Alternatives A and B scored exactly the same. Further consideration of more qualitative factors for feasibility, such as avoiding disturbance to the vegetative buffer along the Mulberry River, made Alternative A more favorable resulting in Alternative A as the preferred alignment for the Braselton Trail.

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4 PREFERRED TRAIL CONCEPT

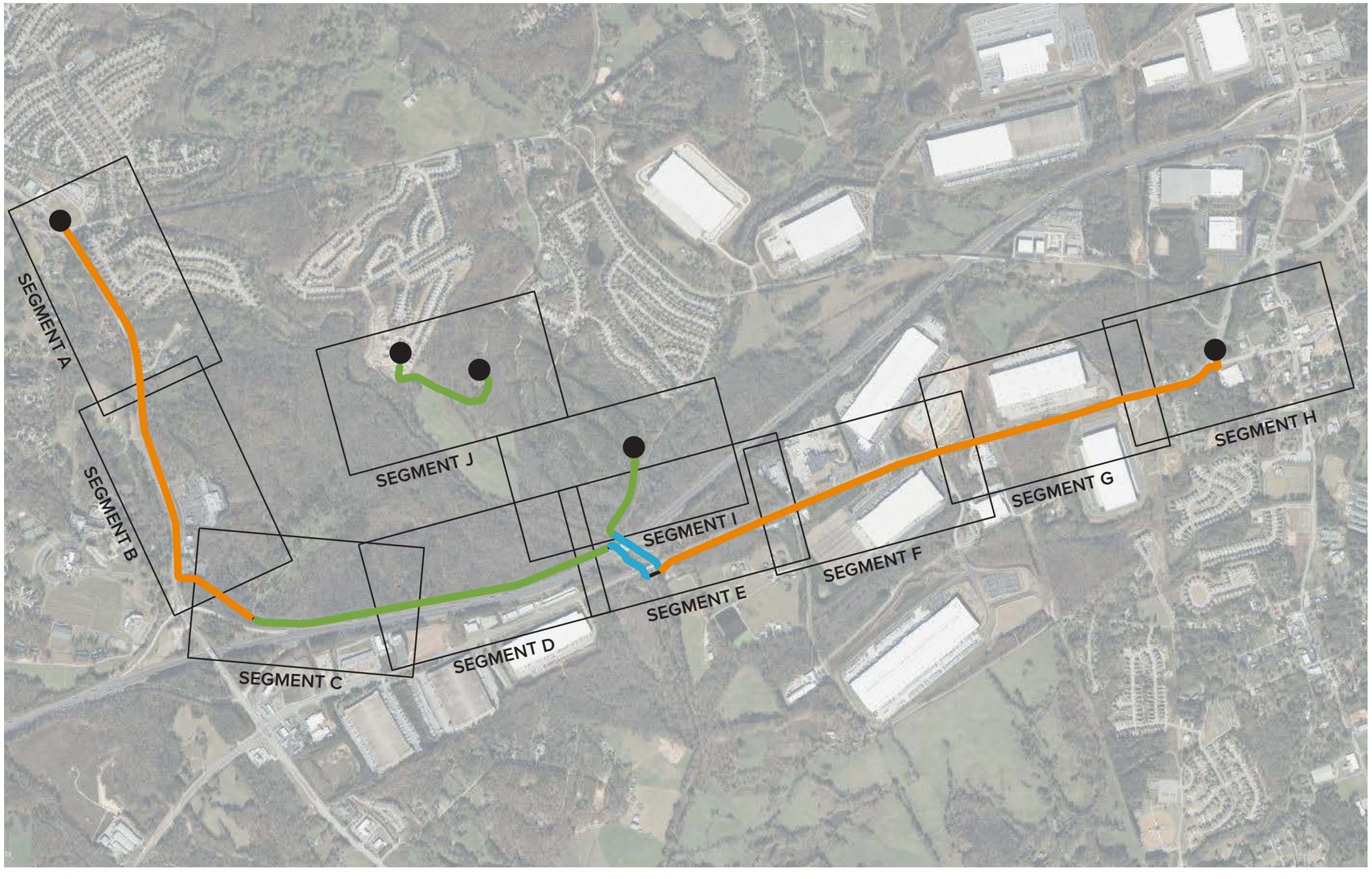
4. PREFERRED TRAIL CONCEPT

Alternative A was selected as the preferred alternative because it utilizes in-progress plans for a shared-use path along SR 211, concept plans for the extension of Braselton Parkway, and limits disturbance to the vegetative buffer while connecting neighborhoods on both sides of the Mulberry River. Alternative A connects retail destinations like Braselton Village or the Vineyards at Chateau Elan with natural resources such as the Mulberry River and a future Town Park, as well as a the restaurants, shops and businesses of downtown. Alternative A does not require any mid-block crossings of roadways, and requires the least amount of property easement acquisition.

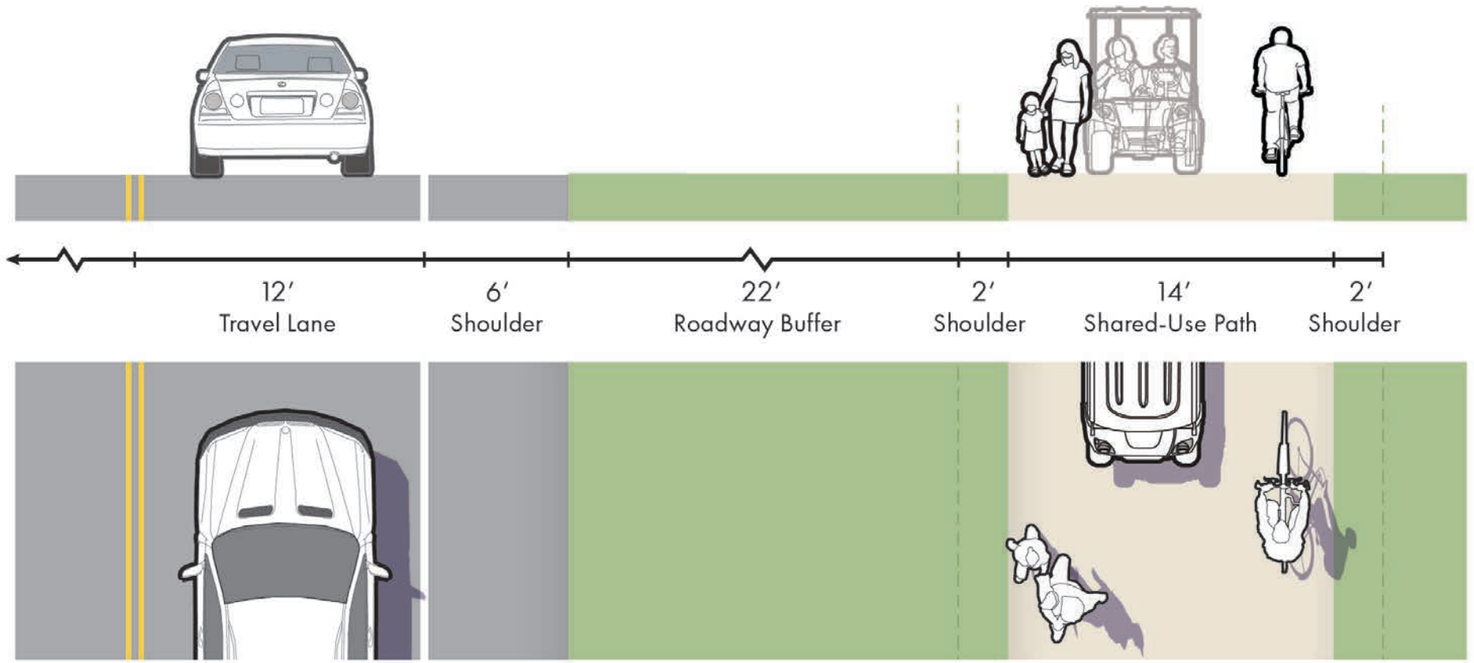
The map to the right illustrates the selected preferred trail alignment broken into segments that are explored further later in this section. The trail has been color-coded to reflect the changing typology along the selected alignment to include trail along roadway, trail through woods, and trail along river.

LEGEND

- Trail Along Roadway
- Trail Through Woods
- Trail Along River
- Segment Sheets
- Termini



TRAIL TYPOLOGIES

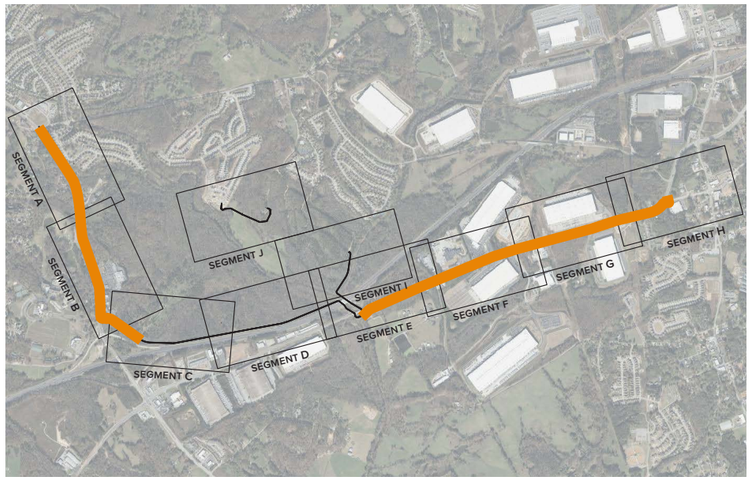


TRAIL ALONG ROADWAY (55 mph)
TYPICAL CONDITIONS

0 2′ 4′ 8′ 16′

Trail Along Roadway

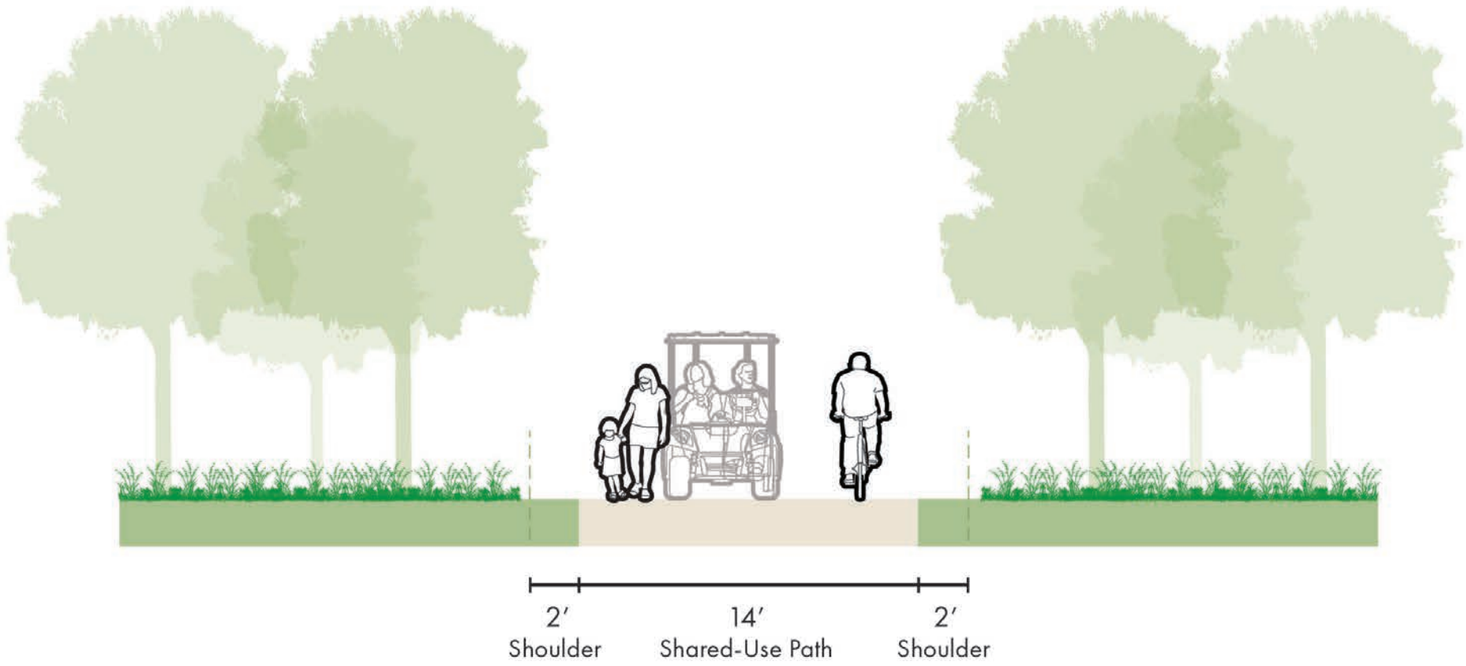
The typology cross section to the left illustrates the Trail Along Roadway typology that will make up the majority of the proposed trail facility. This typology provides a 22’ roadway buffer to satisfy AASHTO standards for clear zone between vehicular traffic and alternative transportation traffic. The trail will include a 2’ clear shoulder zone to provide room for steering correction to reduce the potential for trail collisions. In areas with constrained right-of-way that do not allow for the full 22’ buffer, guardrails should be installed to provide necessary protection from vehicles traveling along the parallel roadway. This buffer zone can also be reduced in areas with vertical separation between the roadway and the trail, such as curb and gutter.

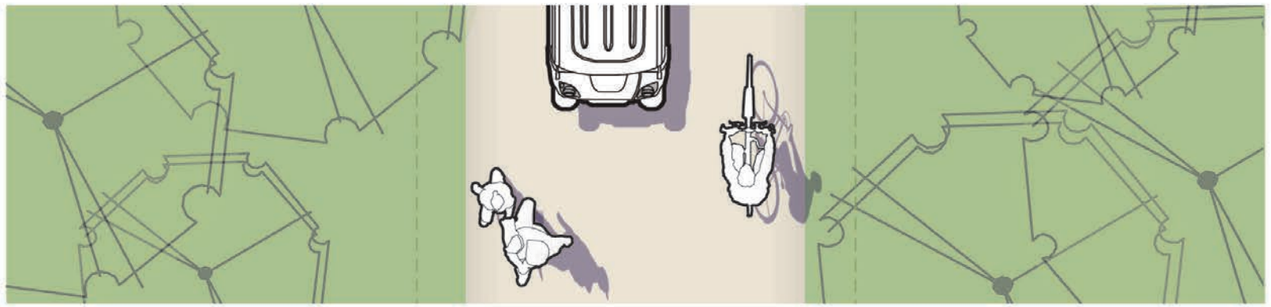


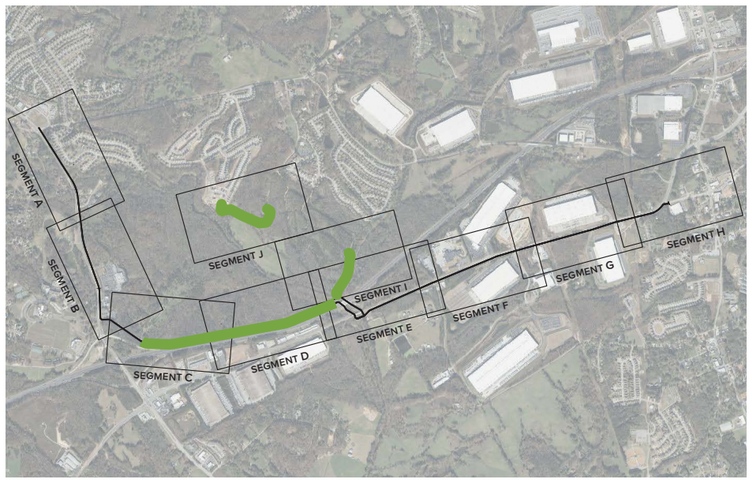
TRAIL TYPOLOGIES

Trail In Woods

The typology cross section to the right illustrates the Trail In Woods typology that will make up a sizable segment of the proposed trail facility. This typology provides a 2' clear shoulder zone to provide room for steering correction to reduce the potential for trail collisions. This typology should ensure 12' of vertical clearance from the trail surface to any overhead elements, including tree branches. Other than the 2' shoulders on each side of the trail, vegetation should be preserved in the areas adjacent to the trail to provide for an enjoyable experience for trail users.



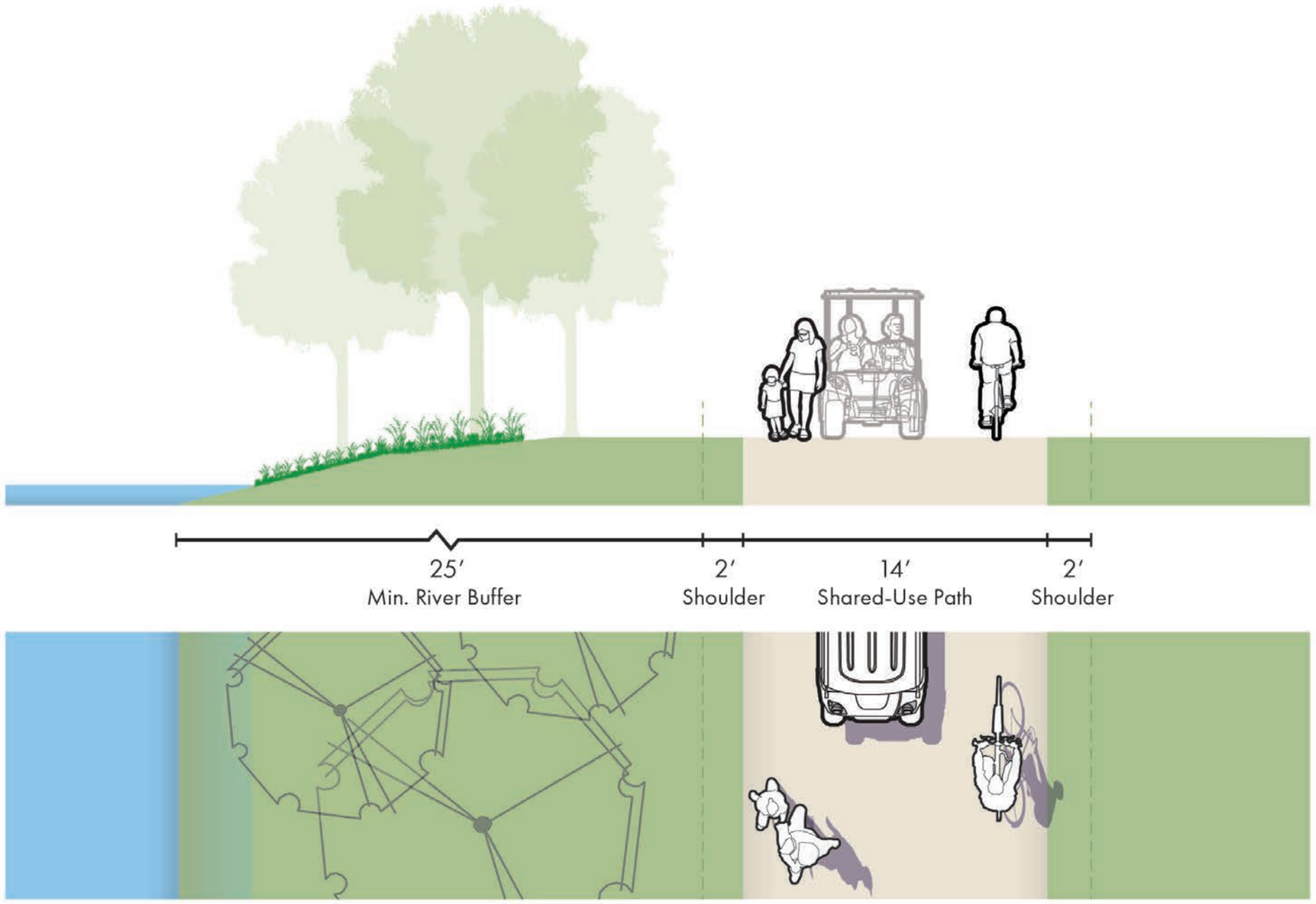




TRAIL IN WOODS
TYPICAL CONDITIONS

0 2' 4' 8' 16'

TRAIL TYPOLOGIES

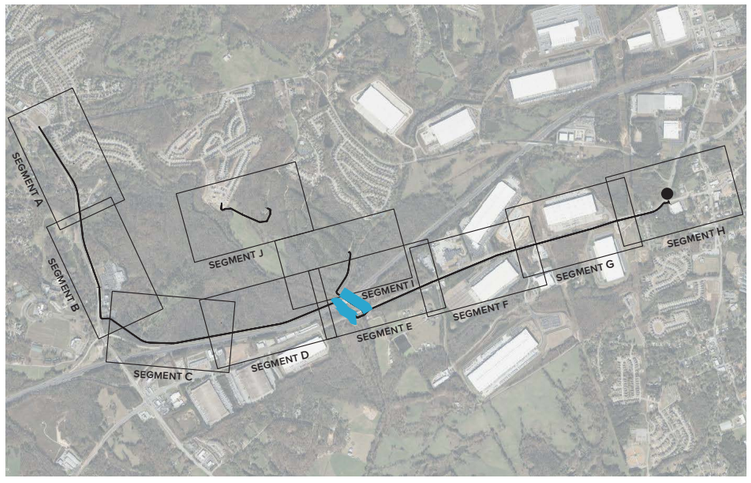


TRAIL ALONG RIVER
TYPICAL CONDITIONS

0 2′ 4′ 8′ 16′

Trail Along River

The typology cross section to the left illustrates the Trail Along River typology that will make up a small portion of the proposed trail facility. This typology provides a 25’ minimum river buffer to satisfy Town of Braselton standards for riparian zones. The trail will include a 2’ clear shoulder zone to provide room for steering correction to reduce the potential for trail collisions. In areas with constrained right-of-way that do not allow for the full 25’ riparian buffer, a variance will be required to be approved by the Town of Braselton. Trail portions utilizing this typology may require additional permitting and approvals through local, state, and federal environmental agencies. Specific permitting requirements will be determined during the design phase of each phase of project implementation.



SEGMENT A

Segment A of the Braselton Trail follows the facility already planned to extend the LifePath southwards in conjunction with a widening of SR 211. This project is the proposed widening and improvements of SR 211 from Pinot Noir Drive to SR 347, P.I. No. 0016089.

This study recommends a 14-foot trail width for the full length of the trail, however, the December 2020 plans for P.I. No. 0016089 have been designed with a 10' sidepath with a four (4) to six (6) foot buffer between the sidepath and the curb. If the Town of Braselton desires a 14-foot trail width, city staff should coordinate with GDOT and the engineering team for P.I. No. 0016089 to discuss revising the plans to reflect the desired width, compliant with this plan's design guidance. The portion of this segment between Liberty Church Road and the east side of the new Duncan Creek bridge will have to remain at the 10' width, due to topographical constraints and proposed retaining walls.

Segment A contains two street crossings: one at Liberty Church Road, a signalized four-way intersection; and one at Tuscany Drive, which is a stop-controlled local residential street which dead-ends in a cul-de-sac. The project team recommends that the Town of Braselton re-consider the December 2020 plans for the intersection with Liberty Church Road, as they could be improved for trail users. Some of these improvements would include: a smaller turning radius for the channelized right turn from NB SR 211 onto eastbound Liberty Church Road; better alignment of crosswalks with sidewalk ramps; and the consideration of refuge medians instead of striped traffic medians.

Segment A also includes a new, widened bridge over Duncan Creek, a perennial stream leading to the Mulberry River. Careful attention to bridge aesthetics such as fencing will be important. According to the December 2020 plans for P.I. No. 0016089, there is 15-foot portion of the bridge reserved for the trail, which may constrain the trail in this area to 10-feet. In addition to the bridge aesthetic, other portions of the trail segment are expected to be directly adjacent to 15 to 20-foot retaining walls, which could offer an opportunity for public art and placemaking.

KEY MAP

Extent:

SR 211 from the existing LifePath at Liberty Church Road to approximately 400 ft south of Tuscany Drive

Length:

2646 Linear Feet (LF) or approximately 0.5 miles

Corridor:

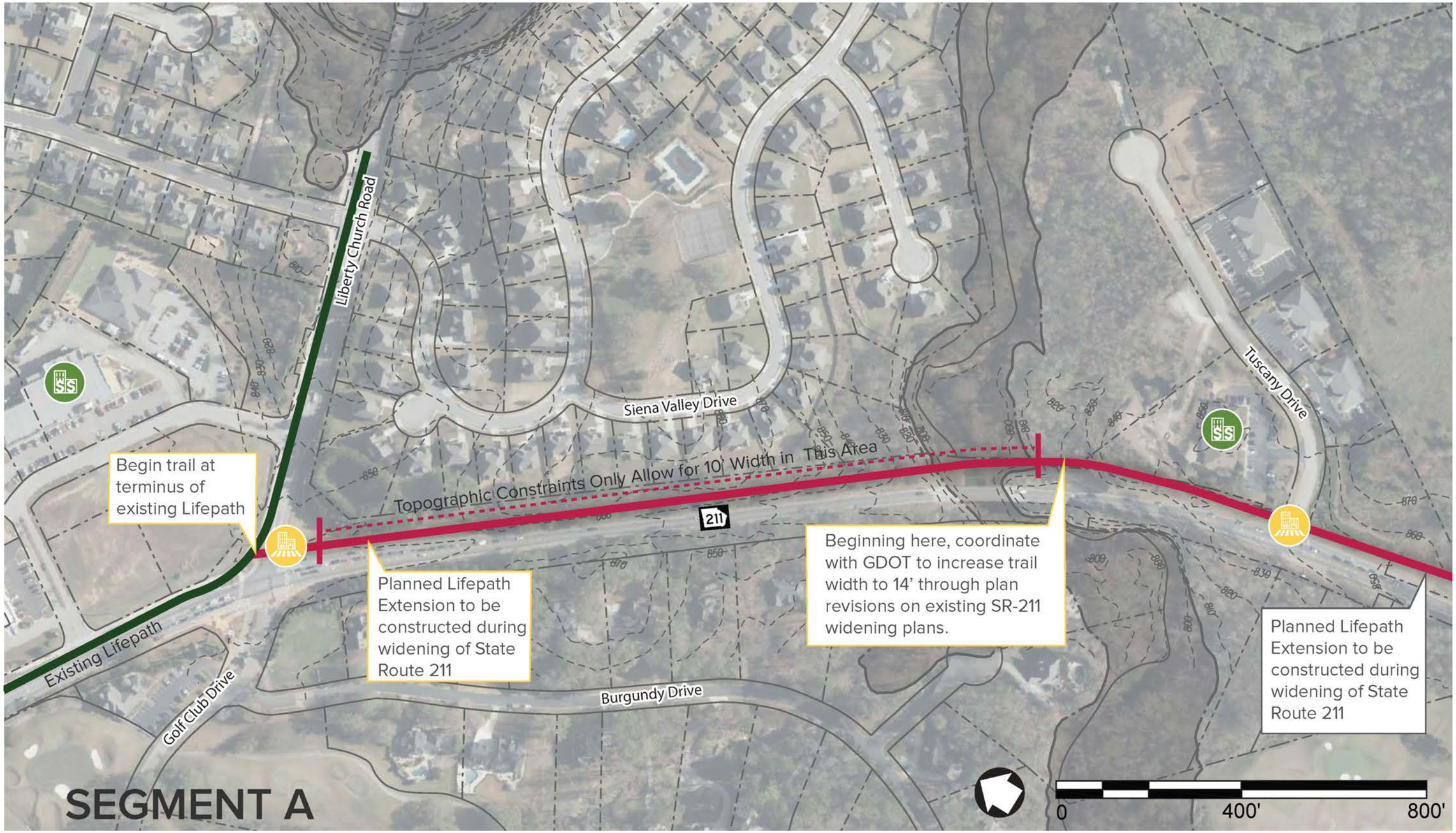
Eastern side of SR 211 primarily within existing right-of-way in conjunction with widening of SR 211

Crossings:

- Liberty Church Road: signalized four-way intersection
- Tuscany Drive: at-grade crosswalk at stop-controlled T-intersection
- Duncan Creek Crossing: new bridge incorporating 10-foot sidepath on eastern side

Legend

- Shared Use Path
- Existing Lifepath
- At-Grade Commercial Crossing
- Commercial Area


Liberty Church Road
Siena Valley Drive
Tuscany Drive
Begin trail at terminus of existing Lifepath
Topographic Constraints Only Allow for 10' Width in This Area
211
Planned Lifepath Extension to be constructed during widening of State Route 211
Beginning here, coordinate with GDOT to increase trail width to 14' through plan revisions on existing SR-211 widening plans.
Planned Lifepath Extension to be constructed during widening of State Route 211
Existing Lifepath
Golf Club Drive
Burgundy Drive
SEGMENT A
0
400'
800'

SEGMENT B

Segment B continues along another planned section for widening SR 211: P.I. No. 0013988 widening and improvements of SR 211 from SR 124 to Pinot Noir Drive. The March 2021 plans for P.I. No. 0013988 have been designed with a 10' sidepath with a four (4) to six (6) foot buffer between the sidepath and the curb. If the Town of Braselton desires a 14-foot trail width, as recommended by this study, city staff should coordinate with GDOT and the engineering team for P.I. No. 0013988 to discuss revising the plans to reflect the desired width.

Segment B begins approximately 400 feet south of Tuscany Drive and crosses future Pinot Noir Drive accessing the new development Braselton Village; as well as three driveways associated with the existing Vineyards at Chateau Elan shopping center. This segment then turns east and follows the planned Braselton Parkway Extension, also a part of P.I. No. 0013988. Segment B will cross at least two planned driveways along the Braselton Parkway Extension.

According to March 2021 plans for P.I. No. 0013988, Pinot Noir Drive will be signalized with pedestrian signals, crosswalks and ramps planned for all corners. The width of the crossing at Pinot Noir Drive is however, approximately 100 feet. The town could ask for additional attention to the placement of median refuges and the radii for right turns across the sidepath, to hopefully shorten crossing lengths and slow turning vehicular traffic at this intersection. Careful attention to the radii of turn lanes for all driveway crossings along Segment B could significantly enhance safety for trail users.

KEY MAP

Extent:

SR 211 from approximately 400 ft south of Tuscany Drive to approximately 600 feet along proposed Braselton Parkway Extension

Length:

3175 Linear Feet (LF) or approximately 0.6 miles

Corridor:

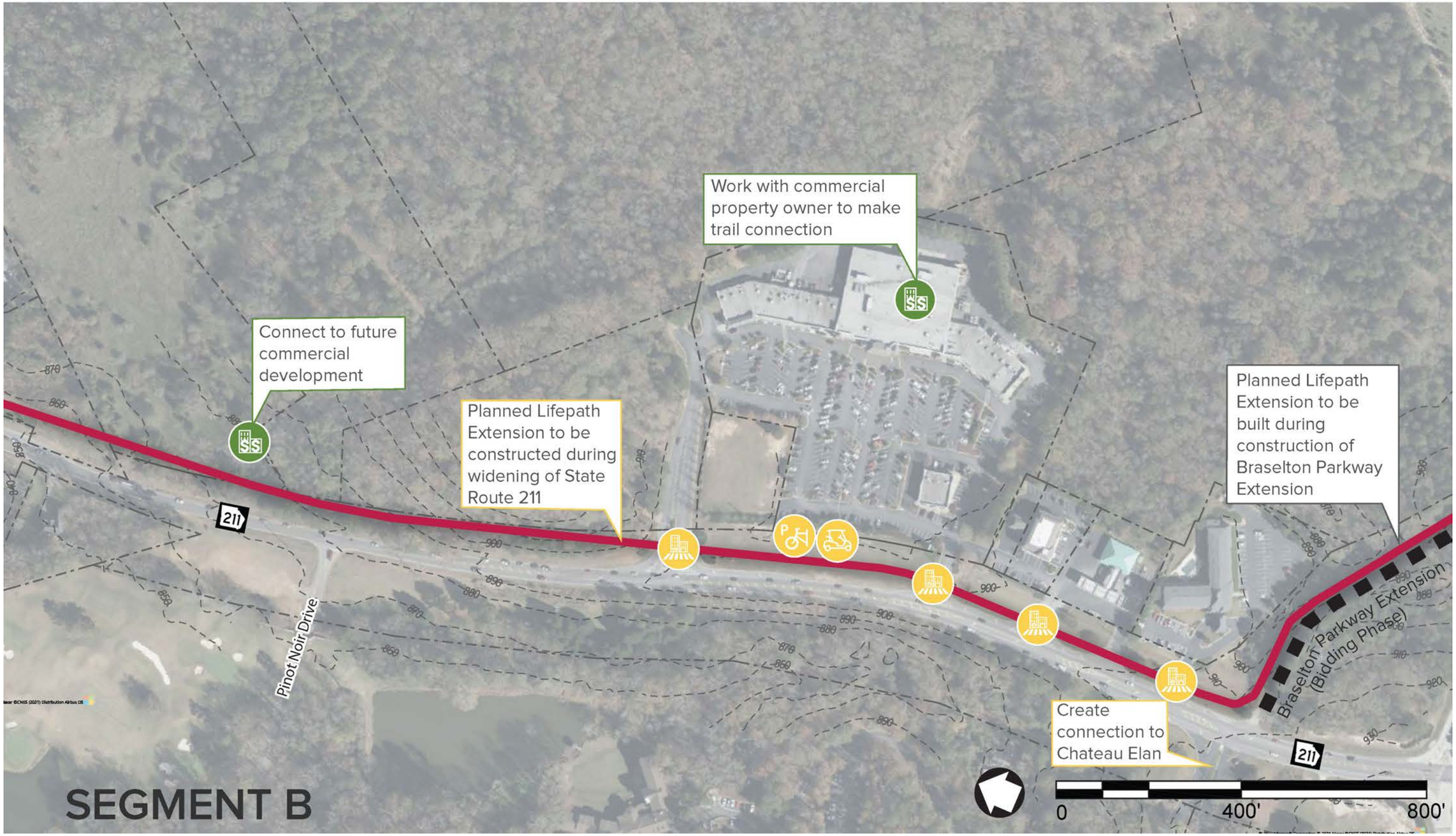
Eastern side of SR 211 and northern side of proposed Braselton Parkway Extension primarily within existing right-of-way in conjunction with widening of SR 211

Crossings:

- Proposed Pinot Noir Drive at Braselton Village development: signalized four-way intersection
- Three (3) driveways at the Vineyards at Chateau Elan development: three (3) stop-controlled T-intersections
- Two (2) driveways along proposed Braselton Parkway Extension: two (2) stop-controlled T-intersections

Legend

- Shared Use Path
- Planned Braselton Parkway
- At-Grade Commercial Crossing
- Bike Parking
- Golf Cart Charging
- Commercial Area


Work with commercial property owner to make trail connection
Connect to future commercial development
Planned Lifepath Extension to be constructed during widening of State Route 211
Planned Lifepath Extension to be built during construction of Braselton Parkway Extension
Create connection to Chateau Elan
Braselton Parkway Extension (Bidding Phase)
Pinot Noir Drive
211
SEGMENT B
0
400'
800'

SEGMENT C

Segment C would continue the Braselton Trail east along the north side of the future Braselton Parkway Extension further than currently planned in P.I. No. 0013988 widening and improvements of SR 211 from SR 124 to Pinot Noir Drive. This segment is placed along an existing utility and former construction access road. Field observations indicate utilities located along a low-lying area between this corridor and the northbound I-85 access ramp.

KEY MAP

Legend

- Shared Use Path
- Planned Braselton Parkway
- Future Braselton Parkway

Extent:

Braselton Parkway Extension approximately 600 feet east of SR 211 for approximately half a mile, generally following utility easement and old construction road

Length:

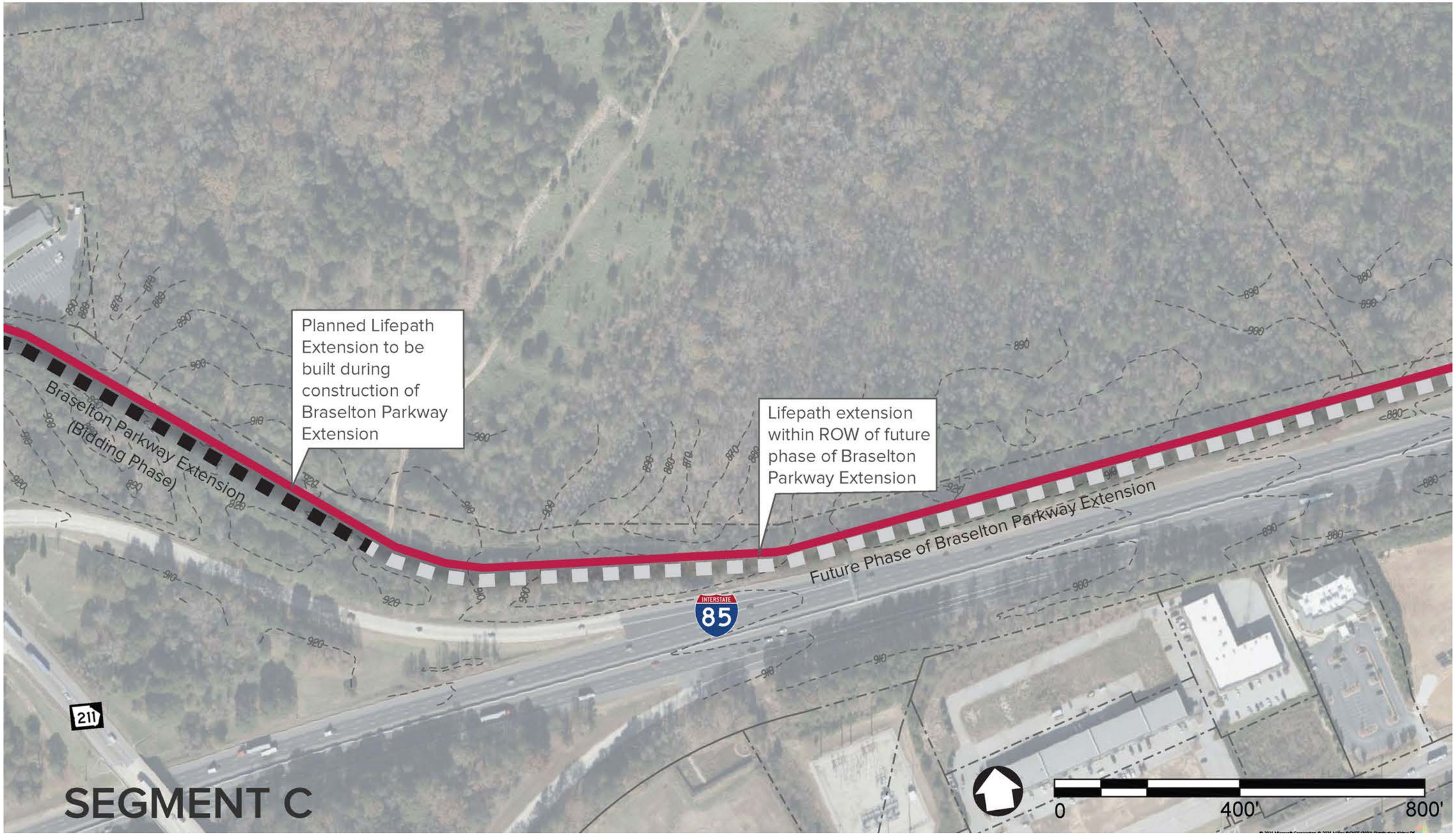
2907 Linear Feet (LF) or approximately 0.55 miles

Corridor:

Future Braselton Parkway Extension

Crossings:

- None


Planned Lifepath Extension to be built during construction of Braselton Parkway Extension
Lifepath extension within ROW of future phase of Braselton Parkway Extension
Braselton Parkway Extension (Bidding Phase)
Future Phase of Braselton Parkway Extension
INTERSTATE 85
211
SEGMENT C
0
400'
800'

SEGMENT D

Segment D would continue the Braselton Trail east along the north side of the possible future Braselton Parkway Extension. This segment continues along an existing utility and former construction access road. Field observations indicate there may be some topographic challenges and drainage considerations for low-lying areas. Segment D travels outside of the Town of Braselton limits for a brief section.

KEY MAP

Legend

- Shared Use Path
- Future Braselton Parkway

Extent:

Possible future Braselton Parkway Extension, generally following utility easement and old construction road towards the Mulberry River

Length:

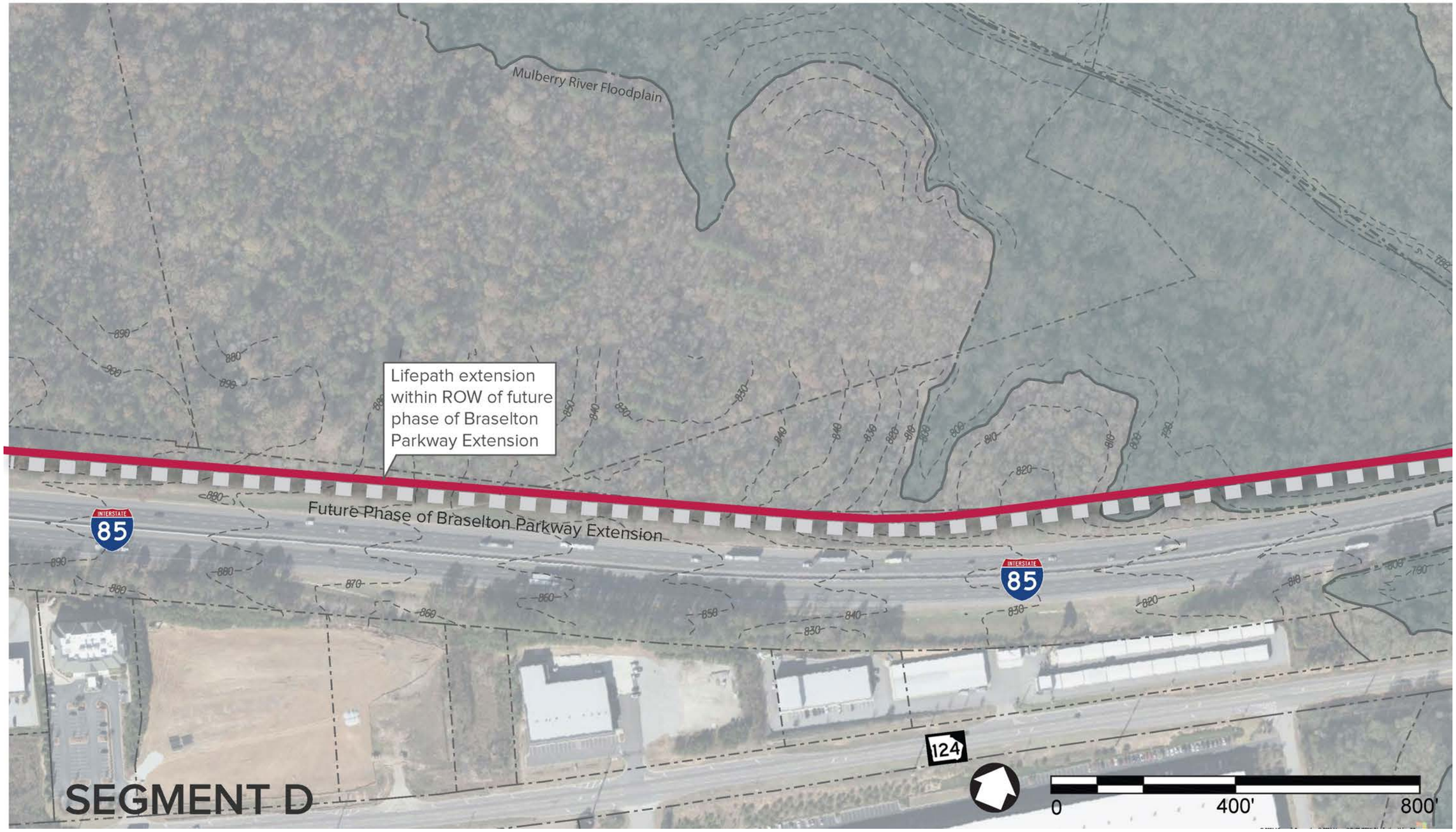
2538 Linear Feet (LF) or approximately 0.48 miles

Corridor:

Future Braselton Parkway Extension

Crossings:

- None


Mulberry River Floodplain
Lifepath extension within ROW of future phase of Braselton Parkway Extension
Future Phase of Braselton Parkway Extension
INTERSTATE 85
INTERSTATE 85
124
SEGMENT D
0
400'
800'

SEGMENT E

One of the key challenges in connecting the existing LifePath with downtown Braselton is the crossing of I-85. Segment E shows how the trail will follow plans for the Braselton Parkway Extension east from SR 211 until it reaches the Mulberry River. The trail will then turn south, crossing the proposed roadway and following the river underneath I-85. Field observations indicated that there is opportunity to utilize the large bank width and existing construction access roads for Segment E.

Segment E would then continue underneath SR-124 to provide a connection to the proposed 71-acre Town of Braselton park. The length of the trail from the existing LifePath to this point is approximately 2.3 miles, which makes the new park an ideal location for a golf-cart charging station. In addition, Segment E turns east and crosses the Mulberry River at this location. Town staff should collaborate with current designers of the park to modify park plans to accommodate and enhance a future trail through the northeast corner of the parcel. The need for a bridge across the Mulberry River could also be considered.

Once the Braselton trail Segment E crosses the river, it joins with Neighborhood Spur #2. Neighborhood Spur #2 connects residential areas to the east of the Mulberry River to the overall trail system. This spur also crosses underneath I-85 and SR-124, joining the system on the east bank of the Mulberry River on the south side of SR 124.

The Braselton Trail then continues along the south side of SR 124 towards downtown. The trail will primarily utilize existing right-of-way, but will be set back from the roadway by 22 feet. Guardrail will be required in some areas along this section due to the speeds along SR 124. Careful attention to intersection design at the at-grade crossing of Josh Pirkle Road will enhance safety for trail users in this area frequented by truck traffic.

KEY MAP

Extent:

Possible future Braselton Parkway Extension, generally following utility easement and old construction access roads approximately 200 feet west of the Mulberry river; residential areas east of the Mulberry River; crossing underneath roadways on both sides of the Mulberry River; to approximately 2000 feet west of the Mulberry River on the south side of SR 124

Length:

Mainline: 3208 Linear Feet (LF) or approximately 0.61 miles

Neighborhood Spur #2: 754 Linear Feet (LF) or approximately 0.14 miles

Corridor:

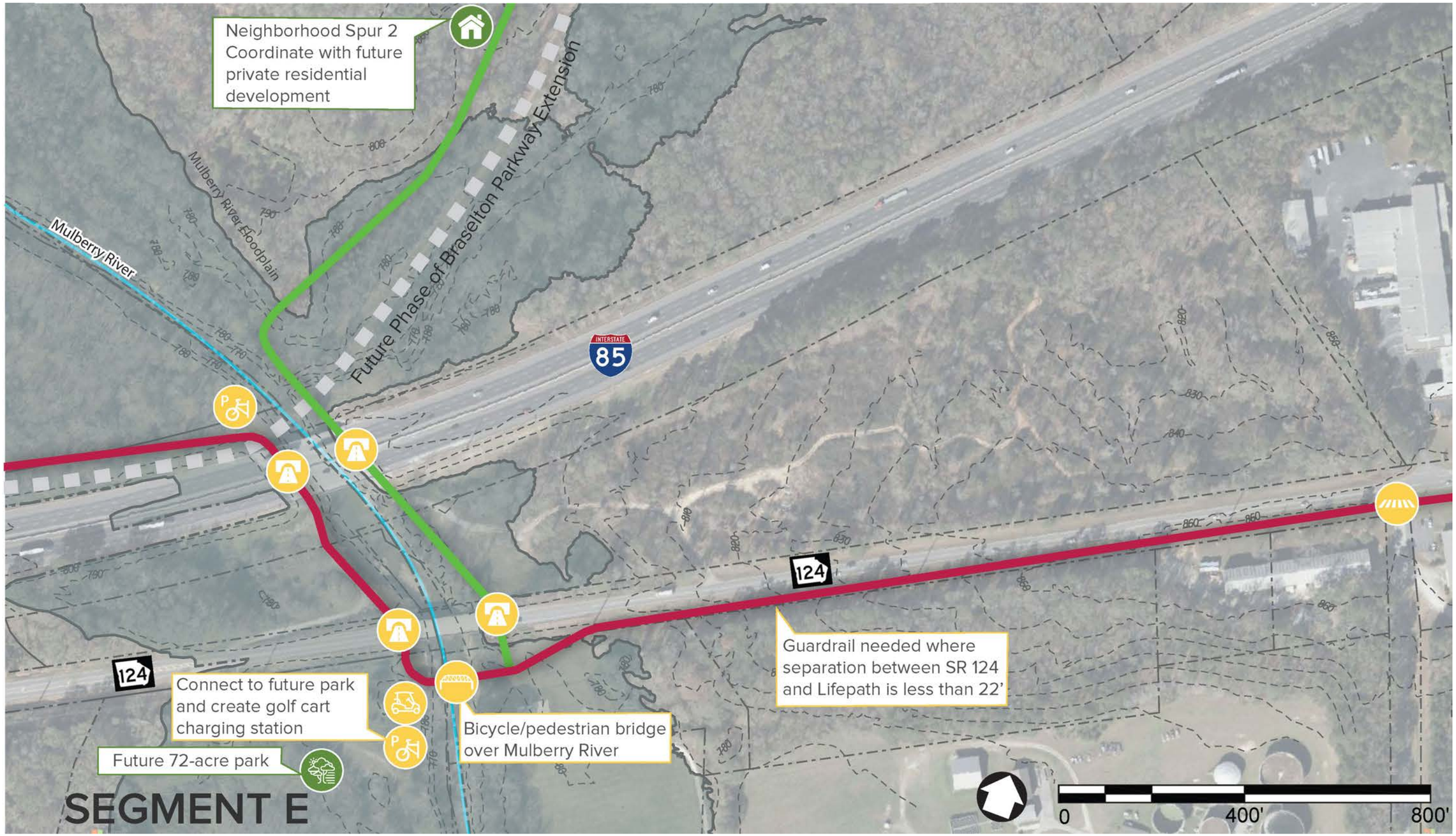
Possible future Braselton Parkway Extension east of the Mulberry River, crossing at the Mulberry River and the south side of SR 124

Crossings:

- Possible future Braselton Parkway Extension: trail crossing should be incorporated into future concepts
- Underpass at Mulberry River at I-85 on both sides
- Underpass at Mulberry River at SR -124 on both sides
- Trail Bridge over Mulberry River on south side of SR 124
- Gravel driveway into industrial private property
- Josh Pirkle Road: stop-controlled T-intersection

Legend

- Shared Use Path
- Spur Trail
- At-Grade Road Crossing
- Bike Parking
- Golf Cart Charging
- Bridge Underpass
- Bicycle / Pedestrian Bridge
- Residential Area
- Park


Neighborhood Spur 2
Coordinate with future private residential development
Mulberry River Floodplain
Mulberry River
Future Phase of Braselton Parkway Extension
INTERSTATE
85
124
124
Connect to future park and create golf cart charging station
Future 72-acre park
Bicycle/pedestrian bridge over Mulberry River
Guardrail needed where separation between SR 124 and Lifepath is less than 22'
SEGMENT E
0
400'
800'

SEGMENT F

Segment F continues the Braselton Trail along SR 124 primarily utilizing existing right-of-way. The path will be ideally setback from the roadway by 22 feet. The corridor should include a guardrail between the roadway and the trail in areas where a 22-foot setback is not possible. There is the opportunity for several employers along this section of the trail to be engaged in placemaking activities and wayfinding development, including Elan Power Products, Mayfield Dairy, Haverty's Furniture, Hitachi Koki USA, and Whole Foods.

Segment F contains several at-grade stop-controlled crossings at two industrial driveways as well as BDC Parkway. Collaboration with local property owners will be important for establishing crosswalks at these driveways and ensuring trail user visibility to turning truck traffic.

KEY MAP

Extent:
SR 124 from Josh Pirkle Road to approximately 600 feet east of BDC Parkway.

Length:
2637 Linear Feet (LF) or approximately 0.5 miles

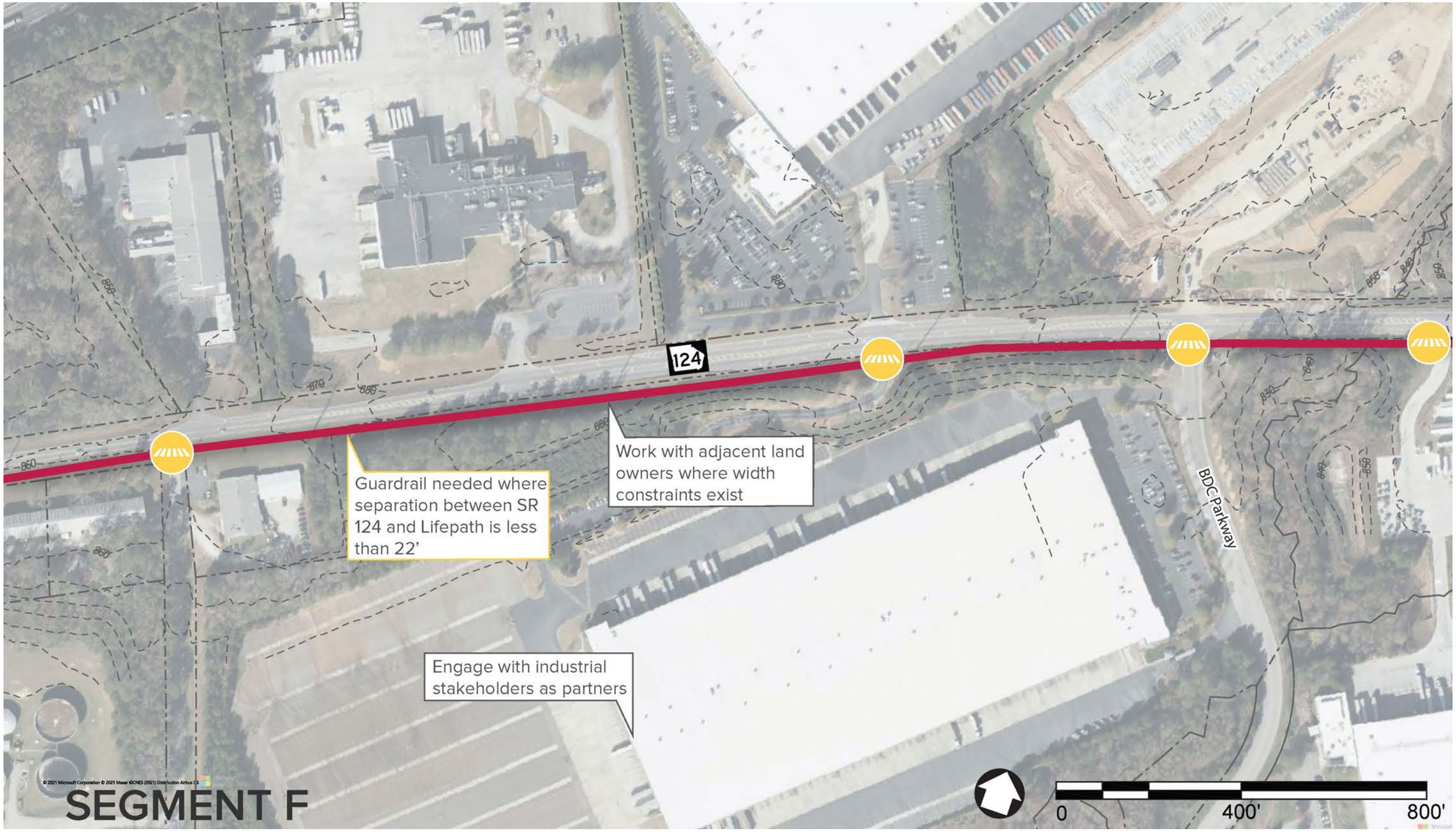
Corridor:
South side of SR 124

Crossings:
- Industrial driveways: two (2) stop-controlled T-intersections
- BDC Parkway: stop-controlled T-intersection

Legend

Shared Use Path

At-Grade Road Crossing


124
Guardrail needed where separation between SR 124 and Lifepath is less than 22'
Work with adjacent land owners where width constraints exist
Engage with industrial stakeholders as partners
BDC Parkway
0
400'
800'
SEGMENT F

SEGMENT G

Segment G continues the Braselton Trail along SR 124 primarily utilizing existing right-of-way. The path will be ideally setback from the roadway by 22 feet. The corridor should include a guardrail between the roadway and the trail in areas where a 22-foot setback is not possible. There is the opportunity for several employers along this section of the trail to be engaged in placemaking activities and wayfinding development. Segment G includes one at-grade stop-controlled crossings at Braselton Industrial Boulevard. This section of the trail also may be constrained by the power substation located just west of Piedmont Avenue.

KEY MAP

Legend

- Shared Use Path
- At-Grade Road Crossing

Extent:

SR 124 from approximately 600 feet east of BDC Parkway to just west of Piedmont Avenue

Length:

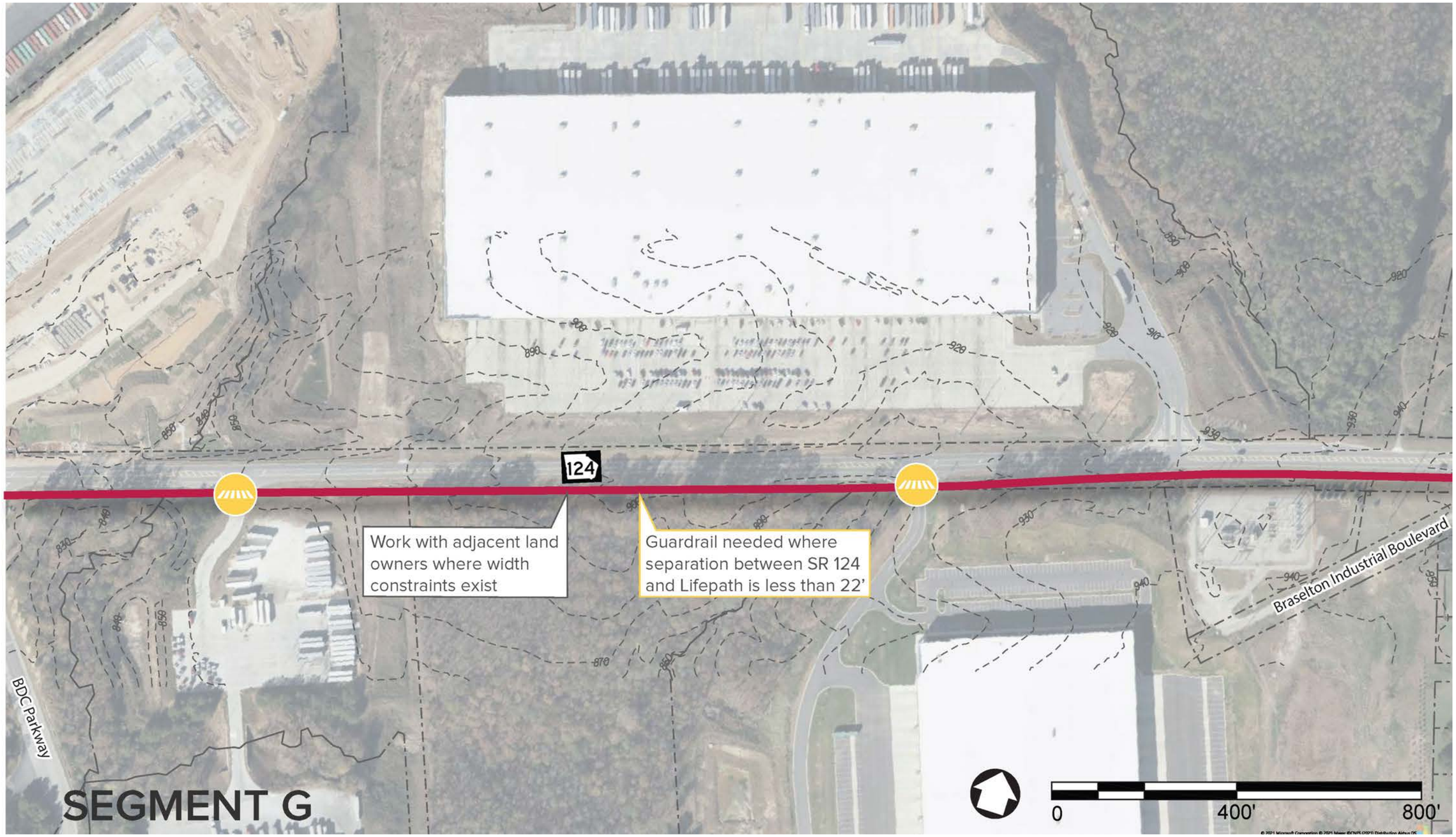
2599 Linear Feet (LF) or approximately 0.49 miles

Corridor:

South side of SR 124

Crossings:

- Braselton Industrial Boulevard: at-grade stop-controlled T-intersection


124
Work with adjacent land owners where width constraints exist
Guardrail needed where separation between SR 124 and Lifepath is less than 22'
Braselton Industrial Boulevard
BDC Parkway
SEGMENT G
0
400'
800'

SEGMENT H

Segment H continues along SR 124 towards an existing shared-use path along Davis Street in downtown Braselton. This section travels along the south side of SR 124 primarily utilizing existing right-of-way. The path will be ideally setback from the roadway by 22 feet. The corridor should include a guardrail between the roadway and the trail in areas where a 22-foot setback is not possible. Segment H includes one at-grade stop-controlled crossing at Piedmont Avenue, and one crossing over a driveway along Davis Street.

KEY MAP

Extent:

SR 124 from Piedmont Avenue to the existing shared-use path on the south side of Davis Street.

Length:

1009 Linear Feet (LF) or approximately 0.19 miles

Corridor:

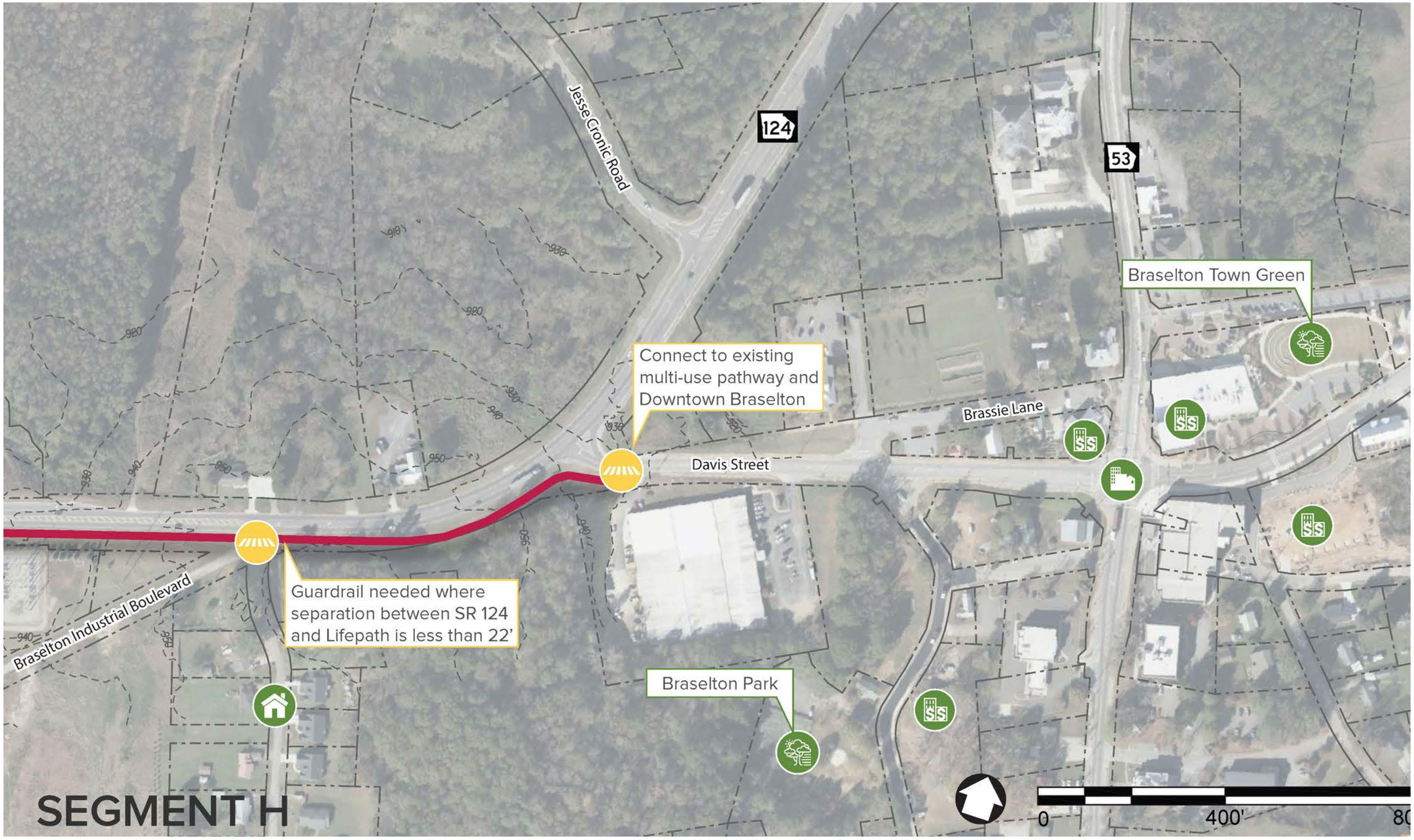
SR 124 from Piedmont Avenue to Davis Street

Crossings:

- Piedmont Avenue: stop-controlled, T-intersection
- Driveway along Davis Street: stop-controlled, T-intersection

Legend

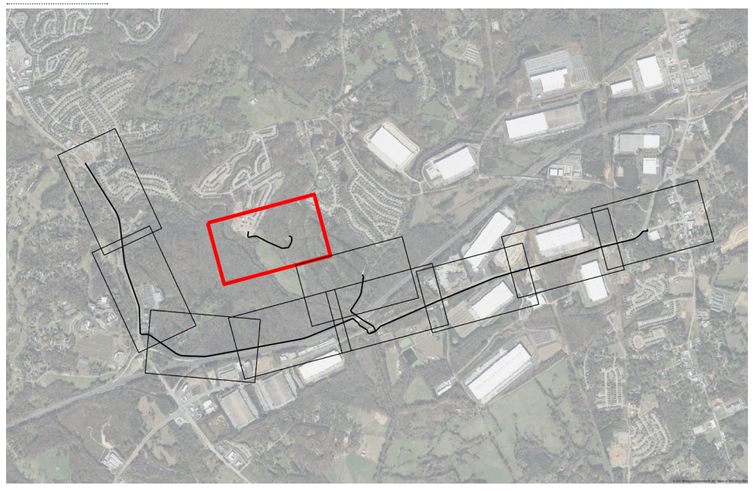
- Shared Use Path
- Spur Trail
- At-Grade Road Crossing
- Residential Area
- Park
- Downtown Area
- Commercial Area


Jesse Cronic Road
124
53
Braselton Town Green
Connect to existing multi-use pathway and Downtown Braselton
Brassie Lane
Davis Street
Guardrail needed where separation between SR 124 and Lifepath is less than 22'
Braselton Industrial Boulevard
Braselton Park
SEGMENT H
0
400'

SEGMENT I

Segment I envisions a new trail connection between Yaupon Trail and Charlie Smith Road. Neighborhood Spur #1 will allow residents to utilize lower speed, lower volume residential roads to travel southward and connect with the larger Braselton Trail system. This spur utilizes a parcel already owned by the Town of Braselton, and connects two residential neighborhoods currently under construction. There is one low-lying area of the spur that will require careful consideration of drainage.

KEY MAP



Extent:

Off-road shared-use path between Yaupon Trail and Charlie Smith Road.

Length:

1772 Linear Feet (LF) or approximately 0.34 miles

Corridor:

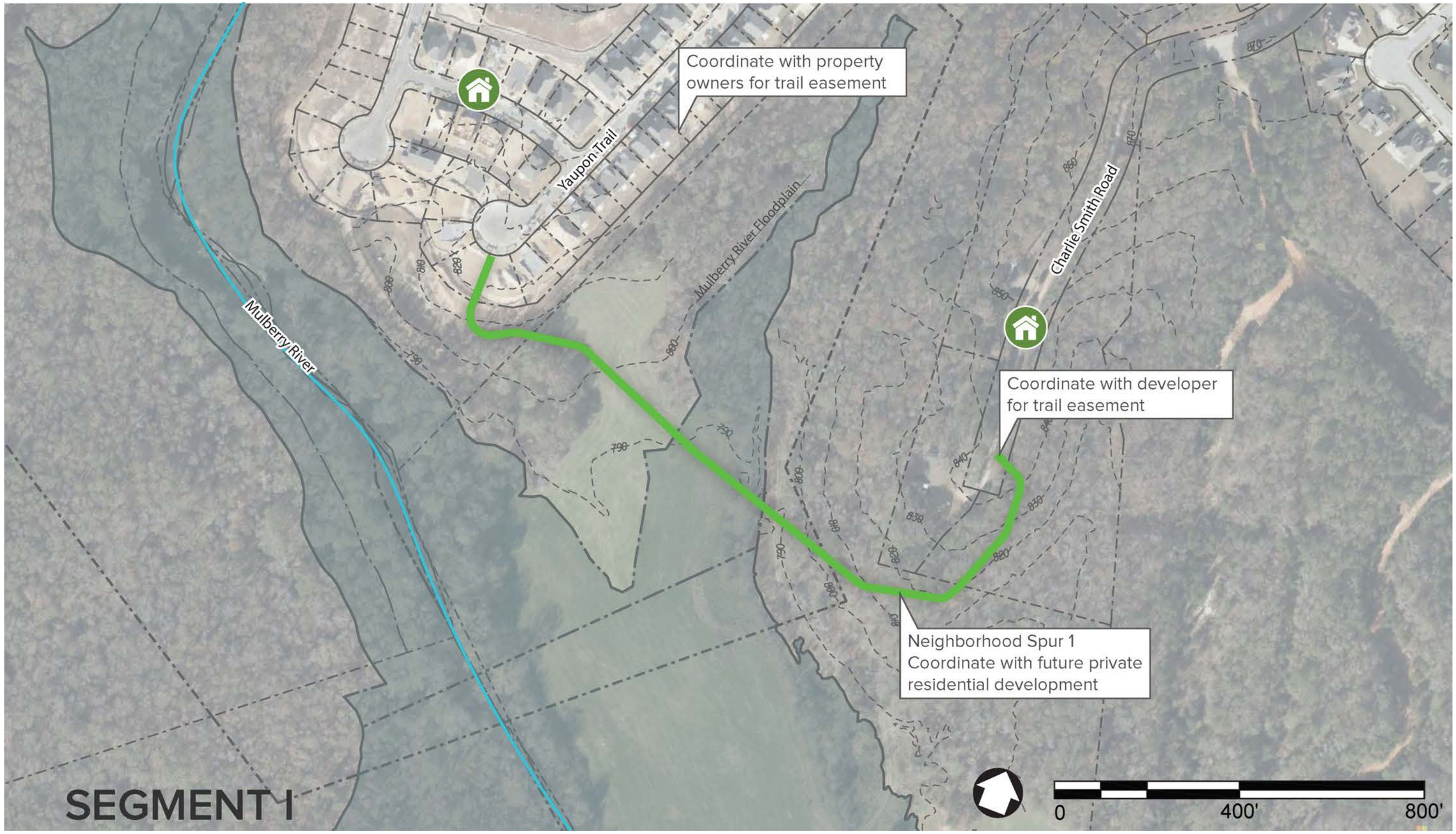
Wooded corridor between Broadmoor and The Enclave at Baker's Farm neighborhoods

Crossings:

- None

Legend

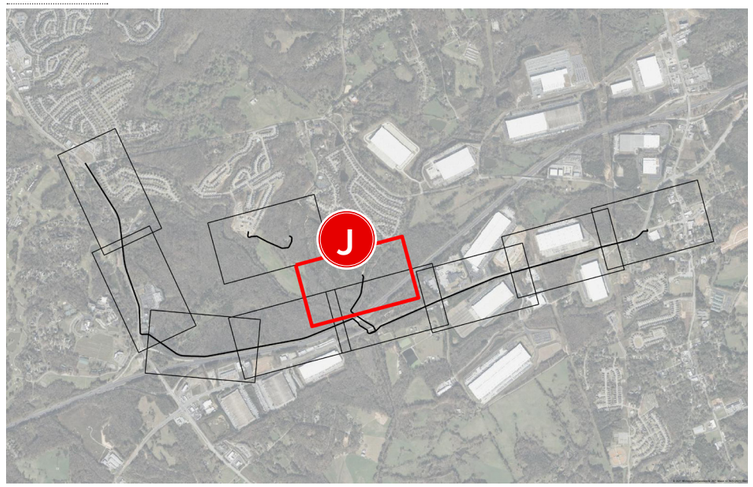
- Spur Trail
- At-Grade Road Crossing
- Residential Area


Coordinate with property owners for trail easement
Yaupon Trail
Mulberry River Floodplain
Charlie Smith Road
Mulberry River
Coordinate with developer for trail easement
Neighborhood Spur 1
Coordinate with future private residential development
SEGMENT 1
0
400'
800'

SEGMENT J

Segment J envisions a new trail connection between Charlie Smith Road and the rest of the Braselton Trail system near the Mulberry River. Neighborhood Spur #2 will allow residents to utilize lower speed, lower volume residential roads to travel southward and connect with the larger Braselton Trail system. This spur is a crucial connection from residential neighborhoods currently under construction. There is one low-lying area of the spur that will require careful consideration of drainage.

KEY MAP



Extent:

Off-road shared-use path Charlie Smith Road and the Mulberry River at I-85

Length:

1288 Linear Feet (LF) or approximately 0.24 miles

Corridor:

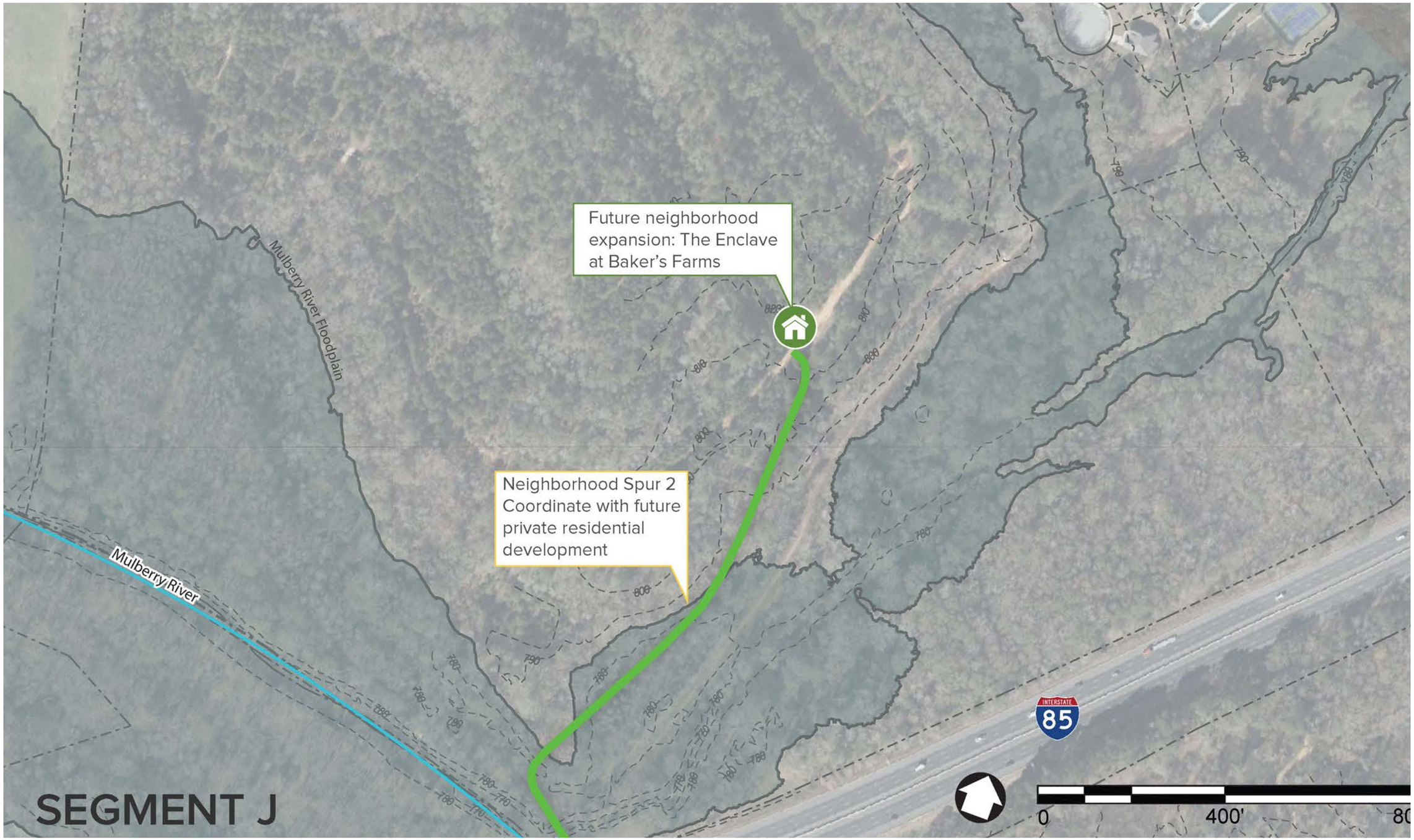
Wooded corridor between The Enclave at Baker's Farm neighborhood and the Mulberry River

Crossings:

- None

Legend

- Spur Trail
- At-Grade Road Crossing
- Residential Area


Future neighborhood expansion: The Enclave at Baker's Farms
Neighborhood Spur 2 Coordinate with future private residential development
Mulberry River Floodplain
Mulberry River
INTERSTATE 85
SEGMENT J
0
400'

LEFT BLANK

5 IMPLEMENTATION

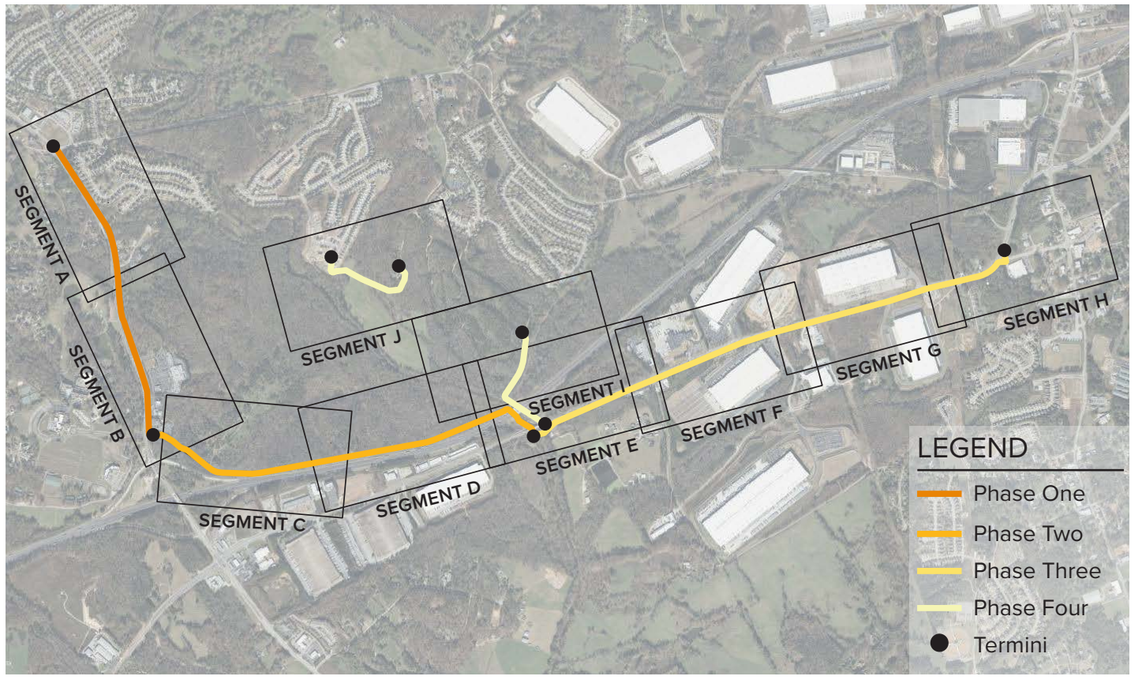
5. IMPLEMENTATION

A. PHASING PLAN

While the desired outcomes and anticipated benefits of trail development will not be fully realized until segments are fully connected, social and economic impacts can begin to be felt by the community as soon as construction commences. Significant cost savings can be gained by designing, permitting, and constructing trail segments as larger multi-mile projects. However, it is likely that financial constraints will require Town of Braselton trails to be completed in several sections as funding becomes available.

The Braselton trails extend a total of 4.65 miles as recommended, including spurs. The phasing strategy proposed represents realistic goals for project implementation, assuming there is local support and cooperation. Regardless of available funds or willing parties, it is necessary to prioritize construction of the trail into functional segments for development.

Point-to-point connections were considered for all phases as is the criteria developed in the prioritization process in the previous section, as well as ongoing community development projects, feedback from staff, and public input. The prioritization criteria and phasing plan should be revisited and refreshed when closer to implementation for each phase, as development patterns, funding sources and population growth change over time.



The recommended breakdown of phasing is as follows: Phase 1: Increase Planned 10' trail to 14' where feasible along the SR-111 corridor from Liberty Church Road to the planned Braselton Parkway Extension; Phase 2: Sidepath along the Braselton Parkway Extension from SR-111 to Mulberry River; Phase 3: Crossing Mulberry River and Continuing the Sidepath along SR-124 to Downtown Braselton; and Phase 4: Residential Spurs to Connect Yaupon Trail to Charlie Smith Road and Charlie Smith Road to Mulberry River.

B. ORDER OF MAGNITUDE COST ESTIMATES FOR PREFERRED CONCEPT PHASING

Phase 1: SR-111, Liberty Church Rd. to Future Braselton Parkway (Increase width from 10' to 14')	
Trail Construction	$315,000
Misc. Construction Costs	$141,900
Contingency	$138,000
Engineering / Survey / Admin / Inspection	$92,000
Phase 1 Project Total	**$779,000**

Phase 2: Future Braselton Parkway, SR-211 to Mulberry River	
Trail Construction	$1,235,200
Misc. Construction Costs	$308,800
Contingency	$464,000
Engineering / Survey / Admin / Inspection	$541,000
Phase 2 Project Total	**$2,549,000**

Phase 3: SR-124, West side of Mulberry River to Davis Street in Downtown Braselton	
Trail Construction	$2,964,300
Misc. Construction Costs	$770,700
Contingency	$1,121,000
Engineering / Survey / Admin / Inspection	$1,122,000
Phase 3 Project Total	**$5,978,000**

Phase 4: Residential Spurs - Yaupon Trail to Charlie Smith Road & Charlie Smith Road to Mulberry River	
Trail Construction	$1,956,400
Misc. Construction Costs	$508,900
Contingency	$740,000
Engineering / Survey / Admin / Inspection	$740,000
Phase 4 Project Total	**$3,946,000**

C. PROGRAMMING AND POLICY IMPLEMENTATION

LEVERAGE FUTURE DEVELOPMENT

As Braselton continues to grow and expand its borders, the Town and counties involved can leverage this plan to build synergy with future development by requiring the dedication of right-of-way for a separated multi-use trail. However, the Town cannot request more than established minimum standards. This plan suggests that Town and Counties' land development codes include minimum standards for pathway and other active transportation connectivity, including the requirement to build or accommodate previously planned facilities that fall within the area of interest. In instances where development applications are requesting variances, zone changes, or other requests that modify the currently entitled land use, it may be possible to require land dedicated for a future trail. This recommendation is particularly relevant to the spurs between existing and proposed neighborhoods, where residential growth along the Mulberry River corridor is currently happening. Future plans for extending the Braselton Industrial Parkway corridor should also include enough right-of-way for a separated trail.

D. IDENTIFYING FUNDING

Having sufficient design and construction funds is necessary for implementation of the Braselton Trail Feasibility Study. Communities that are consistently successful in implementing these types of projects leverage funds from a variety of sources and are consistent, year after year, with making investments in capital and maintenance projects. This study recognizes the challenge of funding this project, but this section outlines suitable opportunities if funding be pursued.

The Gainesville-Hall MPO (GHMPO) are responsible for transportation policy, planning, and investment decision making in the Braselton portion of Jackson County and distribute transportation funds from multiple funding programs throughout this region. GDOT and Georgia Bikes! also serve as potential sources for guidance in funding for the implementation of these types of projects. Projects of this size may apply for multiple funding sources at the local, state, and federal level. Capital funding for town infrastructure improvements and state or federal grants could also be leveraged.

The Town should work with these entities to apply for appropriate funding opportunities. Grant opportunities that may be appropriate are listed below.

FEDERAL FUNDING OPPORTUNITIES:

- Transportation Alternatives (TA) Set-Aside
- Recreational Trails Program (RTP) (Reimbursement grants only)

STATE FUNDING OPPORTUNITIES:

- Georgia Outdoor Stewardship Program from Georgia Department of Natural Resources:

  This grant program provides a dedicated funding mechanism to support parks and trails and protect and acquire lands critical to wildlife, clean water and outdoor recreation across the state of Georgia. Eligible proposals include projects that support state parks and trails; support local parks and trails of state and regional significance; provide stewardship of conservation land; or acquire critical areas for the provision or protection or clean water, wildlife, hunting, fishing, military installation buffering, or for natural resource-based outdoor recreation.

  Per Georgia Bikes!, "In Georgia, the state constitution limits the expenditure of state motor fuel taxes on the construction and maintenance of "roads and bridges." Luckily, bicycle lanes and bikable shoulders occur on roads and bridges, so state transportation funds are eligible for most bicycle accommodations. Often, state funds are bundled with federal funding, and many federal transportation programs are eligible for bicycle improvements."

LOCAL FUNDING OPPORTUNITIES:

- Local capital budget for roadway construction and maintenance
- Special Purpose Local Option Sales Tax (SPLOST)
- Bonds
- Community Improvement Districts (CIDs)
- Tax Allocation Districts (TADs)

E. TRAIL PARTNERSHIPS

Trail implementation and management can be effective and efficient with support from partnerships with a variety of public, private, non-profit, and community organizations at the local, regional, and national levels. Through the combined resources of existing staff, new funding sources, and new community partners and volunteers, the following are strategies for advancing best practices in implementation and management for the Braselton Trail system.

GAINESVILLE-HALL METROPOLITAN PLANNING ORGANIZATION (GHMPO)

MPOs are responsible for leading regional transportation initiatives and coordinating transportation grant funding. In the event additional coordination is needed for other roles, the GHMPO could serve as a facilitator of meetings, especially if it involves the Mayor or City Manager of partner cities.

Other roles may include:

- Provide updates to City staff on opportunities for facility development that coincide with other capital or maintenance projects
- Work actively to ensure bicycle and pedestrian projects are funded through the State prioritization process (STIP).

TOWN OF BRASELTON ADMINISTRATION

Town Administration provides leadership and funding obligations and budget items for capital improvements. Town management should adopt a budget for expenditures of funding that support local trail development. Town staff should be prepared to provide supporting materials to the administration for the budget process, including any bicycling, walking, golf cart, and trail-related reports, user estimates, and benchmarking statistics.

Braselton officials ensure that the public's health and safety are protected during the normal use of any city-owned property, including parks and trails. The Town of Braselton Administration would have the overall responsibility for trail construction, operations, and maintenance.

Other roles may include:

- Coordinate across jurisdictional boundaries to provide trail network connectivity to Braselton.
- Enforce trail design standards and uniformity for all future trail construction projects.
- Lead greenway programmatic activities to encourage trail use and community pride.
- Conduct evaluation activities along trails such as user preference surveys and counts.

POLICE/SHERIFF'S DEPARTMENTS

The Jackson County Sheriff's Department patrols all public property including parks and recreation facilities in areas outside Braselton Town Limits. For areas within the Braselton Town Limits, the Braselton PD will patrol trail portions in their jurisdiction. When segments of Braselton trail are constructed, police patrol should increase in the first six months to monitor use and hours of operation along the trail.

HIGHLANDS TO ISLANDS

Highlands to Islands has helped promote the advancement of trails in the Braselton region. The organization, a 501 (c)3, seeks to raise active living, health, and quality of life through various efforts including advocacy, education, facilitation, and campaigning. Highlands to Islands should continue to play a role during the development of the Braselton network by helping to organize promotional events, assisting with fundraising, and raising awareness for increased trail use and programming.

ROLE OF THE PRIVATE SECTOR AND NON-PROFITS

Private organizations can play a significant role in the development and management of trail systems; local, regional, and national organizations provide various types of help. Local organizations can make in-kind donations, volunteer labor, and construct and maintain sections of a trail. Regional and national organizations can provide similar types of support including the provisioning of grants and other funding schemes. When new businesses or subdivisions are constructed near or adjacent to a trail facility, they may agree to share responsibility in supporting operations and maintenance, as well as providing access and dedicating open space.

After a trail is constructed, other developments, adjacent to or nearby, may take place and affect trail usage. Agreements can be established for new neighborhood, subdivision, and business development in such areas to help support trail maintenance, operations, and access. This type of support may include annual fees, in-kind donations, and day-to-day operations and maintenance responsibilities.

To various degrees, partnerships between other private, public, and non-profit agencies can also be formed in creating a diversified, stable support system for the trail network. For Braselton the following partners have been identified:

- Château Élan Winery & Resort
- Northeast Georgia Medical Center
- Michelin Raceway Road Atlanta
- Thompson Mills Forest – Georgia State Arboretum
- Whole Foods
- Amazon
- City of Hoschton

F. NEXT STEPS

Present Findings to Town Council

Before proceeding further, Braselton staff should present the Braselton Trail study to Town Council for review and adoption.

Engage a Professional Engineering Firm

Identify a consultant or consultant team to develop a complete design package for the first phase of trail.

Engage Property Owners

Town staff, project partners, and the consultant team should together determine the best strategy to reach out to adjacent property owners along the corridor to obtain approval of final design.

Finalize the Route

Following public input, Town staff should organize a team meeting to review this document in detail, along with the results of the previous two steps, and confirm the details of the final routing and recommended improvements.

Complete Design

Once the route is finalized, the consultant team should complete a full design of the trail and produce a comprehensive set of construction documents that follow the standards required for the appropriate funding source.

Construct the Trail

Once construction documents are produced, the trail can then be constructed with any federal funds that have been set aside for this project and any local funds required to supplement those funds.

Perform Ongoing Maintenance and Patrolling

Once the trail is on the ground, Town staff should continue to maintain and patrol the trail in accordance with the trail management and maintenance best practices.

APPENDIX

APPENDIX A: DESIGN GUIDELINES

A. GUIDANCE BASIS

International Guidance

The International Light Transportation Vehicle Association, Inc., is accredited through the American National Standards Institute (ANSI). Through its Golf Course Safety Guidelines, the association provides design and operations guidance for golf cart paths so that they are "compatible with the designed capabilities of the golf cart." Topics covered include golf cart traffic, street crossings, and golf cart paths.

The guidance provided by the International Light Transportation Vehicle Association is primarily intended for golf course owners, but much of the guidance provided is applicable to a public path system. Where appropriate, guidance related to the capabilities of golf carts has been incorporated into this document.

National Guidance

The following standards and guidelines were consulted during development of this guide:

» The Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic.

» American Association of State Highway and transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities (2012) provides guidance on dimensions, use, and layout of multi-use paths and on-street bicycle facilities.

State Guidance

» The Georgia Code Title 40 permits local governments to allow golf cart operation on roads under their jurisdiction, but doesn't give any further guidance.

Statewide guidance is provided by the Georgia Department of Transportation (GDOT).

» The Design Policy Manual (2018) is the primary resource for roadway and active transportation facility design guidelines and standards of GDOT.

» The Pedestrian and Streetscape Guide (2018) provides guidance on design of walkways and pedestrian support facilities. It does not provide standards or specifications.

Local Guidance

The Braselton Code of Ordinances *Section 11-105 Golf Cart Ordinance* permits the following:

Who can drive?

1. Those persons who are 16 years of age and older may drive a motorized cart (ie, electric or gas powered golf carts) on the recreation paths and/or streets and those areas accessible by the public of the town unless such person has had his or her license to operate a motor vehicle suspended or revoked by the state which issued said license in which case such person shall not be permitted to operate a motorized cart on the recreation paths and/or streets and those areas accessible by the public of the town during the time of suspension or revocation.

2. Those persons who are 15 years of age but not yet 16 years of age may drive a motorized cart on the recreation paths and/or streets and those areas accessible by the public of the town:

a. If he or she does not have in his or her possession a valid instructional permit issued by the state pursuant to O.C.G.A. § 40-5-24, as may be amended, and has not had his or her instructional permit suspended or revoked, then he or she shall be accompanied in the front seat by a person at least 18 years of age who holds a valid motor vehicle driver's license or he or she shall be accompanied in the front seat by a parent, grandparent or legal guardian; or

b. If he or she has in his or her possession a valid instructional permit issued by the state pursuant to O.C.G.A. § 40-5-24, as may be amended, and is unaccompanied by a licensed driver as provided in subsection (b)(1), or is unaccompanied by a parent, grandparent or legal guardian as provided in subsection (b)(1), then he or she may be accompanied in the vehicle by up to one other person who must be at least 15 years of age, or he or she may be accompanied by up to three immediate family members.

3. Those persons who are 12 years of age but not yet 15 years of age may drive a motorized cart on the recreation paths and/or streets and those areas accessible by the public of the town if they are accompanied in the front seat by a parent, grandparent or legal guardian.

4. No person under the age of 12 shall be permitted to drive a motorized cart on the recreation paths and/or streets and those areas accessible by the public of the town under any circumstances.

Can I drive on the street?

» No LSMV (low speed motor vehicle, ie, gem carts) shall be permitted to operate on any street of which the posted speed limit exceeds 35 miles per hour. Except as prohibited above, LSMVs shall be permitted to cross over streets of which the posted speed limit exceeds 35 miles per hour.

What are the rules of the path?

» Normal rules of the road shall apply to the recreation paths. For instance, when approaching oncoming path users, each user shall move to his right side of the path. Passing shall be on the left side of the path.

» Pedestrians should be given due consideration and reasonable right-of-way by other users of the recreation paths to ensure them safe passage.

How fast can I go?

» No person shall operate an EPAMD at a speed greater than seven miles per hour when traveling on any path or sidewalk or 15 miles per hour or any other town right-of-way. (This again is limited by state law, see O.C.G.A. § 40-6-322).

What can go on the path?

Authorized users of recreation paths are as follows:

(1) Pedestrians;

(2) Nonmotorized vehicles;

(3) Roller skates, roller blades and skateboarders (daylight only);

(4) Electric-powered golf carts;

(5) Gasoline-powered golf carts;

(6) Emergency and authorized maintenance vehicles;

(7) Bicycles, traditional and electric (as defined in section 78-91);

(8) Electric and conventional wheelchairs; and

(9) Electric vehicles designed to carry one person at a speed not to exceed 20 miles per hour except as prohibited in section 78-95

(10) LSMV provided that the vehicle is operated only in a mode or other restriction which does not allow the vehicle to exceed 20 miles per hour.

(11) EPAMDs (electric personal assistive mobility device, ie, Segways®).

Prohibited uses of recreation paths are as follows:

(1) Automobiles and trucks (except authorized maintenance vehicles);

(2) Motorcycles;

(3) Street and trail motorized bikes or vehicles (not to include electric bicycles);

(4) Minibikes and mopeds;

(5) Horses;

(6) Go-carts;

(7) Motorized skateboards or motorized scooters;

(8) Motorized play vehicles; and

(9) Except as permitted in section 78-94, any vehicle designed by the manufacturer to be able to travel at speeds in excess of 20 miles per hour under its own power on a flat surface.

Do I need lights?

» Motorized carts may be operated over those authorized streets, recreational paths and those areas accessible by the public only during daylight hours unless such motorized carts are equipped with functional headlights and taillights.

» EPAMDs shall be equipped with the following: front, rear, and side reflectors which shall be visible from a distance of 300 feet when directly in front of lawful upper beams of headlights on a motor vehicle; a system that when employed will enable the operator to bring the device to a controlled stop; and, if the device is operated between one-half hour after sunset and one-half hour before sunrise, a lamp emitting a white light which, while the device is in motion, illuminates the area in front of the operator for a distance of 300 feet.

Do I need a horn or bell?

» A warning or announcement shall be given by operators of golf carts and other users of the recreation paths, such as bicyclists and skaters, when approaching pedestrians from the rear. This warning or announcement may be verbal, but it is recommended that bicyclists and golf cart operators equip their vehicles with a warning device such as a horn or bell. Each user of the recreation paths shall be considerate of the safety and welfare of other users, and dangerous conduct will not be tolerated.

For the full Ordinance, including definitions,please visit our website at http://braselton.net/braselton-code-of-ordinances.html

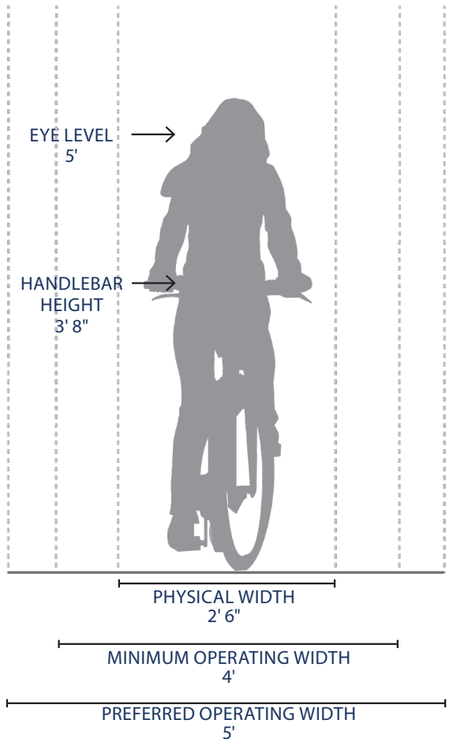
Design Needs of Bicyclists

Bicyclists and their bicycles exist in a variety of capabilities, sizes and configurations. These variations occur in the types of bicycle (such as a conventional upright bicycle, a recumbent bicycle or a tricycle), and behavioral characteristics (such as the comfort level and experience of the cyclist). Multi-use path design should consider reasonably expected bicyclist types and utilize the appropriate design dimensions and standards. Bicyclists differ from pedestrians in several ways such as moving at a faster pace and generally having a higher center of gravity. Design of path curves is important for cyclists, as are the design of ramps, grade changes, and path surface transitions.

Pedestrian Characteristics by Age

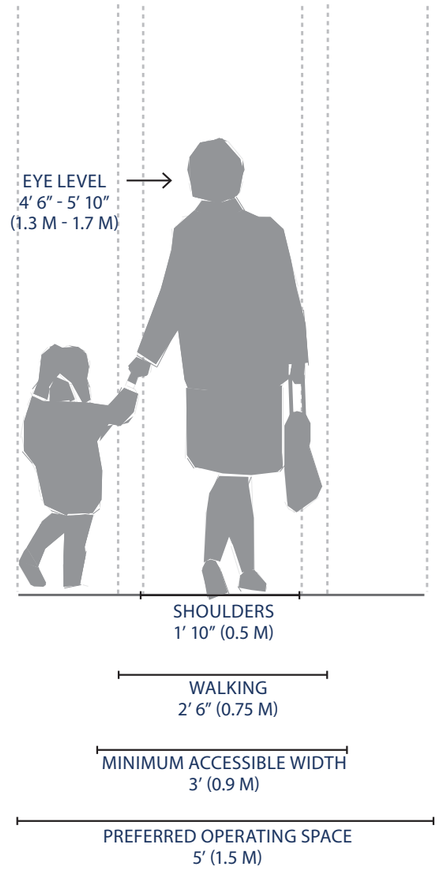
AGE	CHARACTERISTICS
0-4	» Learning to walk
	» Requires constant adult supervision
	» Developing peripheral vision and depth perception
5-8	» Increasing independence, but still requires supervision
	» Poor depth perception
9-13	» Susceptible to “darting out” in roadways
	» Insufficient judgment
	» Sense of invulnerability
14-18	» Improved awareness of traffic environment
	» Insufficient judgment
19-40	» Active, aware of traffic environment
41-65	» Slowing of reflexes
65+	» Difficulty crossing street
	» Vision loss
	» Difficulty hearing vehicles approaching from behind

Source: AASHTO. Guide for the Planning, Design, and Operation of Pedestrian Facilities, Exhibit 2-1. 2004.



Design Needs of Pedestrians

Pedestrians have a variety of characteristics and the transportation network should accommodate a variety of needs, abilities, and possible impairments. Age is one major factor that affects pedestrians’ physical characteristics, walking speed, and environmental perception. Children have low eye height and walk at slower speeds than adults. They also perceive the environment differently at various stages of their cognitive development. Older adults walk more slowly and may require assistive devices for walking stability, sight, and hearing.



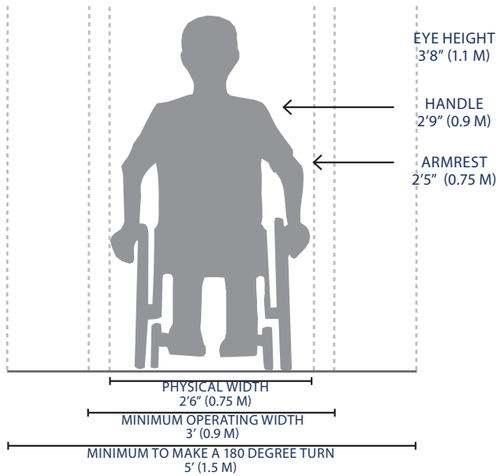
Design Needs of Users with Disabilities

The table below summarizes common physical and cognitive impairments, how they affect personal mobility, and recommendations for improved pedestrian-friendly design. Note that this table is not inclusive of all ADA guidelines.

IMPAIRMENT	EFFECT ON MOBILITY	DESIGN SOLUTION
Physical Impairment Necessitating Wheelchair and Scooter Use	» Difficulty propelling over uneven or soft surfaces. » Cross-slopes cause wheelchairs to veer downhill or tip sideways. » Require wider path of travel.	» Firm, stable surfaces and structures, including ramps or beveled edges. » Cross-slopes of less than two percent. » Sufficient width and maneuvering space.
Physical Impairment Necessitating Walking Aid Use	» Difficulty negotiating steep grades and cross slopes; decreased stability and tripping hazard. » Slower walking speed and reduced endurance; reduced ability to react.	» Cross-slopes of less than two percent. Smooth, non-slippery travel surface. » Longer pedestrian signal cycles, shorter crossing distances, median refuges, and street furniture.
Hearing Impairment	» Less able to detect oncoming hazards at locations with limited sight lines (e.g. driveways, angled intersections, channelized right turn lanes) and complex intersections.	» Longer pedestrian signal cycles, clear sight distances, highly visible pedestrian signals and markings.
Vision Impairment	» Limited perception of path ahead and obstacles; reliance on memory; reliance on non-visual indicators (e.g. sound and texture).	» Accessible text (larger print and raised text), accessible pedestrian signals (APS), guide strips and detectable warning surfaces, safety barriers, and lighting.
Cognitive Impairment	» Varies greatly. Can affect ability to perceive, recognize, understand, interpret, and respond to information.	» Signs with pictures, universal symbols, and colors, rather than text.

Design Needs of Wheelchair Users

People traveling in wheelchairs have specific needs. For example, maneuvering around a turn requires additional space for wheelchair devices. Providing adequate space for 180 degree turns at appropriate locations is an important element of accessible design. See "Physical Impairment Necessitating Wheelchair and Scooter Use" in the table above for more information on mobility impacts and design solutions for wheelchair users.

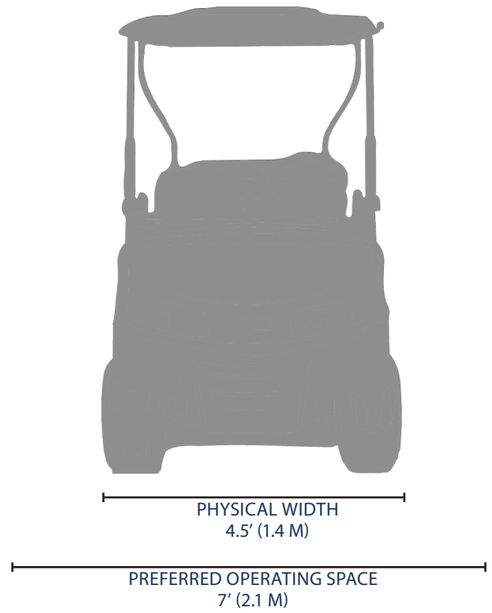


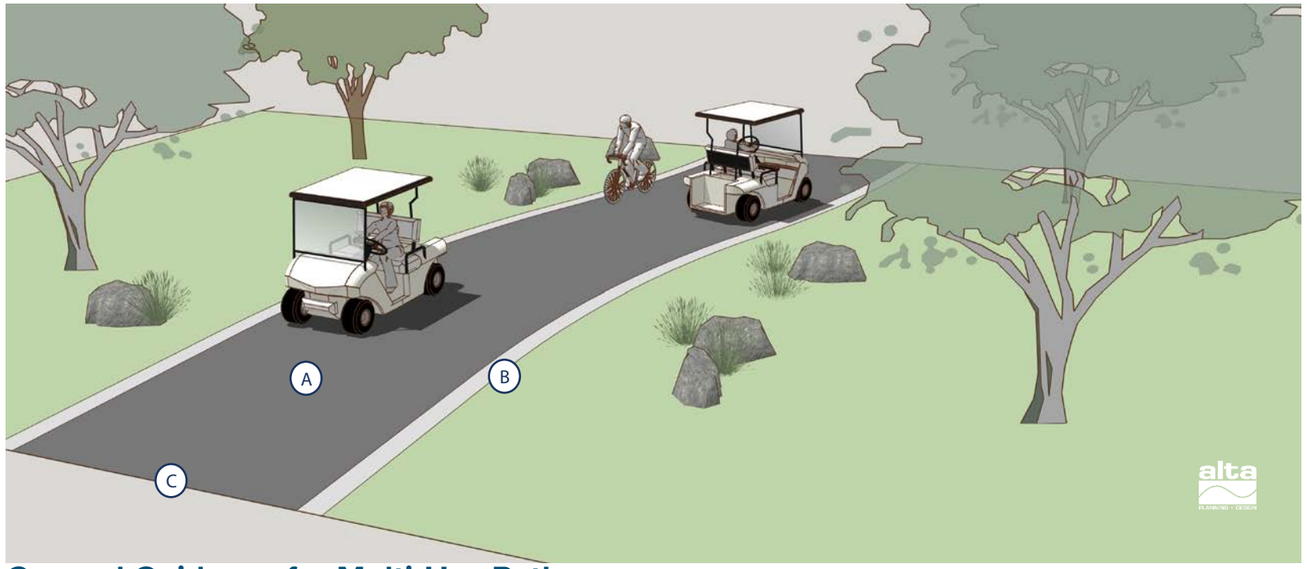
Design Needs of Golf Cart Users

Golf Carts are the largest of the devices used on multi-use paths. They are typically 4-wheeled, and powered by an electric motor. The typical length of golf carts varies from 7.5 - 10', and standard wheelbase models can carry up to 4 people. Path design should consider the volume and mix of golf carts with respect to other non-motorized users and provide a comfortable experience for all. Golf carts differ other users in several ways - they move at a faster speed, have greater mass, and require more space for passing other users and making turns. The typical turning radius of a golf cart ranges between 9.5 - 12'. Because golf carts require clear space to operate within a facility, the operating width is greater than the physical dimensions of the cart.

Golf cart specific guidance:

- 7' preferred operating space
- Preferred Surfaces: Concrete (Asphalt acceptable where feasible)
- Preferred paved width: 14'
- Minimum paved width: 12'
- Additional minimum 2' shoulders on each side, free from obstructions
- Maximum cross slopes: 1.5%
- Maximum running slopes: 4.5% (unless following existing road grade per PROWAG)
- Vertical clearance: 10'
- "Where conditions are highly constrained, a minimum path width of 8 feet may be used, per the AASHTO Guide for the Development of Bicycle Facilities (2012 Edition). However, this guideline was not created with golf carts in mind and a path that is narrower than 12 feet may require users to pull off onto the shoulder for comfort and safety when passing"
- Per client: golf cart maximum range = 3 miles
  - Recommend golf cart charging stations at major nodes and <3 miles on center between nodes
- Street Crossings
  - Provide ADA-compliant curb ramps with detectable warning surface and MUTCD signage
  - Add other street crossing rec's from previous plans
- Driveway Crossings
  - Refer to GDOT standard details if applicable. Consider separating into residential vs. commercial – I think crossing large driveways needs crosswalks, etc. , whereas crossing residential driveways would be less intense.
- Integration with Other Bikeways
- Pull from previous plans





General Guidance for Multi-Use Paths

Conventional multi-use paths allow for two-way, off-street bicycle use and also may be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users. In Braselton, golf cart operators are common users of the path system. Therefore, conventional multi-use path standards should be tailored specifically to the needs of golf carts while still comfortably accommodating other users. Multi-use paths are frequently found in parks, along rivers, streams, and in greenbelts or utility corridors where there are few conflicts with motorized vehicles. Multi-use paths are also found alongside roadways; in this context, they are often referred to as sidepaths.

Typical Application

The Atlanta Regional Commission (ARC) has developed design standards for "Trails of Regional Significance." The intent of these standards is to establish expectations for design quality for regional multi-use paths receiving funding from ARC. Because the path system in Braselton also accommodates relatively high volumes of golf carts in addition to people walking or bicycling, many of ARC's "Trails of Regional Significance" standards are appropriate even for local multi-use paths in the County. An added benefit of using ARC's design standards as a starting point is that they may be more likely to be funded through ARC's competitive grant processes if they facilitate regional bicycle travel.

ARC's standards are as follows:

- Be at least 12 feet wide to allow for comfortable passing even when users in the opposite direction are walking or biking two-abreast, and wider in dense areas where demand is likely to be high
- Meet or exceed guidance put forth in AASHTO's Guide for the Development of Bicycle Facilities for physical separation from the roadway if built as a "sidepath"
- Include wayfinding signage that provides information about popular destinations
- Provide safe, convenient crossings that minimize delay and out-of-direction travel for path users
- Include support facilities at trailheads and along the route including seating, trash cans, water fountains, bathrooms, bike parking, and/or public art
- Accommodate the full range of bicycle types, including cargo bikes, tandems, incumbents, tag-along/trailer bikes, and bicycle trailers

Design Features

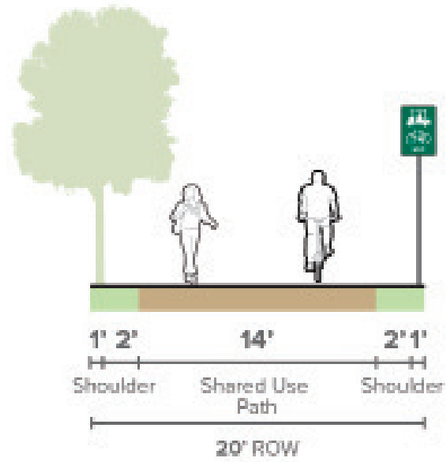
(A) Preferred path width is 14 ft (4.3 m), and minimum width is 12 ft (3.7 m). Twelve feet is the minimum width needed to allow two golf carts to pass each other, and also enables a bicyclist to pass another path user going the same direction, while another path user is approaching from the opposite direction. Fourteen feet is the preferred width for multi-use paths designed to facilitate golf carts, pedestrians, and bicyclists. Where pedestrian volumes are extremely high, a separate track 5 ft (1.5 m) sidewalk can be provided for separate use. Where conditions are highly constrained, a minimum path of 8 ft may be used, per the AASHTO Guide for the Development of Bicycle Facilities (2012 Edition). However, this guideline was not created with golf carts in mind and a path that is narrower than 12 ft may require users to pull off onto the shoulder for comfort and safety when passing.

(B) A 2 ft (0.6 m) or greater shoulder on both sides of the path should be provided free of obstacles. An additional foot of lateral clearance, for a total of 3 ft (1.0 m), is required by the MUTCD for the installation of signage or other furnishings.

- Materials: Asphalt and concrete are both common paving materials for multi-use paths. Aggregates such as GAB, granite, etc. may be specified, but must follow ADA compliance. Shoulders are typically unpaved.

(C) Stable, slip-resistant path surface and ADA-accessible curb ramps with tactile warning strips for ADA-accessibility

- Running slopes not to exceed 5%, unless following road grade per PROWAG
- Cross-slopes not to exceed 2%
- Standard clearance to overhead obstructions should be 10 ft (3.0 m), where feasible
- Frequent access points from the local road network



Multi-Use Path
Preferred Conditions*

*Minimum dimensions for use in constrained conditions are described in the text to the left

Multi-Use Path Along Streams and Rivers

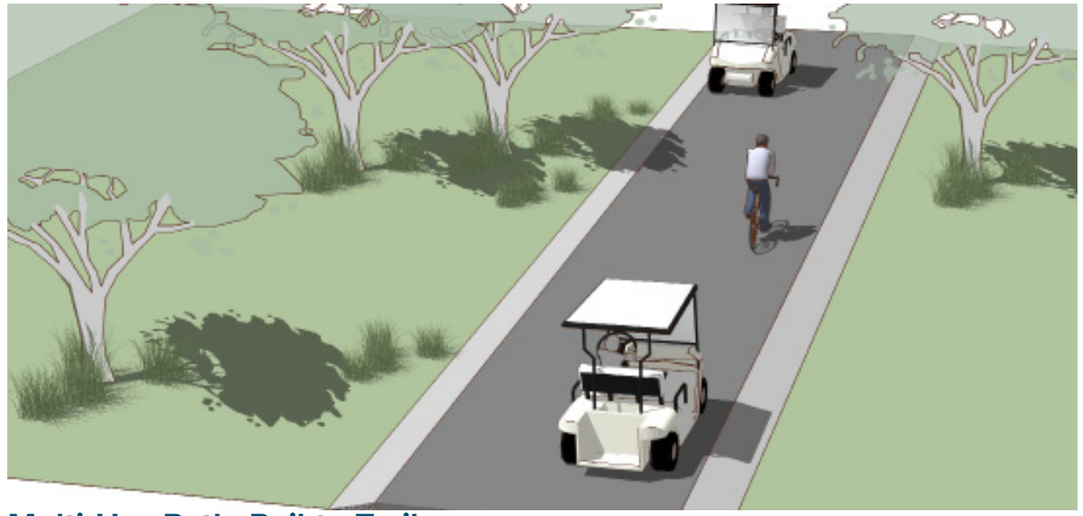
Riparian and waterway corridors often offer excellent shared use path development and gap closure opportunities. These corridors include canals, drainage ditches, rivers, and streams and offer excellent transportation and recreation opportunities for multi-use path users of all ages and skills.

Typical Application

- Along riparian and waterway corridors
- Within 100-year floodplain
- Outside of Riparian Buffers - The Georgia Erosion and Sedimentation Act of 1975 (O.C.G.A. 12-7) and its subsequent amendments require that primary and secondary trout streams maintain an undisturbed riparian buffer of 50', and all other streams maintain a minimum buffer of 25' (measured from where vegetation is wrested by normal stream flow).
- Outside of watershed protection boundaries. Refer to Chapter 104, Article VII Section 104-182 for the full list of buffer and setback requirements of each water system. Also refer to the ordinances of local jurisdictions.

Design Features

- Provide durable, low maintenance materials that can withstand flooding such as concrete instead of asphalt
- Public access to the shared use path may be prohibited during the following events:
  - Canal/flood control channel or other utility maintenance activities
  - Inclement weather or the prediction of storm conditions



Multi-Use Path: Rail-to-Trail

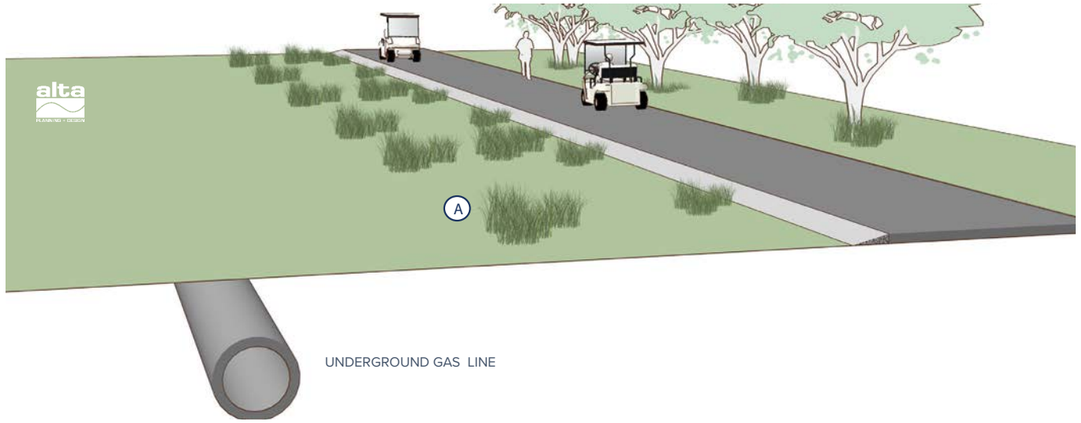
Commonly referred to as Rails-to-Trails, these facilities are vacated rail corridors that have been converted into off-street paths. Rail corridors offer several advantages, including relatively direct routes between major destinations and generally flat terrain. The railroad may form an agreement with any person, public or private, who would like to use the rail corridor as a multi-use path or linear park until it is again needed for rail use. Where feasible, local municipalities should acquire inactive rail rights-of-way whenever possible to preserve the opportunity for Rail-to-Trails development.

Typical Application

- Along inactive rail corridors
- In full conversions of inactive rail corridors, the sub-base, superstructure, drainage, bridges, and crossings are already established and only require upgrades for bicycle and pedestrian use.
- Corridors formerly used as rail lines typically require hazardous material remediation.

Design Features

- Where possible, leave as much of the ballast in place as possible to disperse the weight of the Rail-to-Trail surface and to promote drainage. Ballast is often contaminated and may need to be removed for public use.
- Railroad grades are very gradual. This makes Rails-to-Trails attractive to many users, and easier to adapt to ADA guidelines.



Multi-Use Path Utility Corridor

Corridors for utility lines may be able to also accommodate multi-use paths. Easements over underground utilities such as water, sewer, natural gas, or buried electric or optic lines are well suited for trail use. Above-ground utilities such as telephone, cable or overhead electric may also present opportunities for multi-use path development. Utility companies benefit from this arrangement by having uninterrupted, easily accessible routes to their facilities.

Typical Application

» Along underground utility easements for water, sewer, natural gas, or buried electric or fiber-optic lines.

» Along above-ground utility corridors such as telephone, cable, or overhead electric

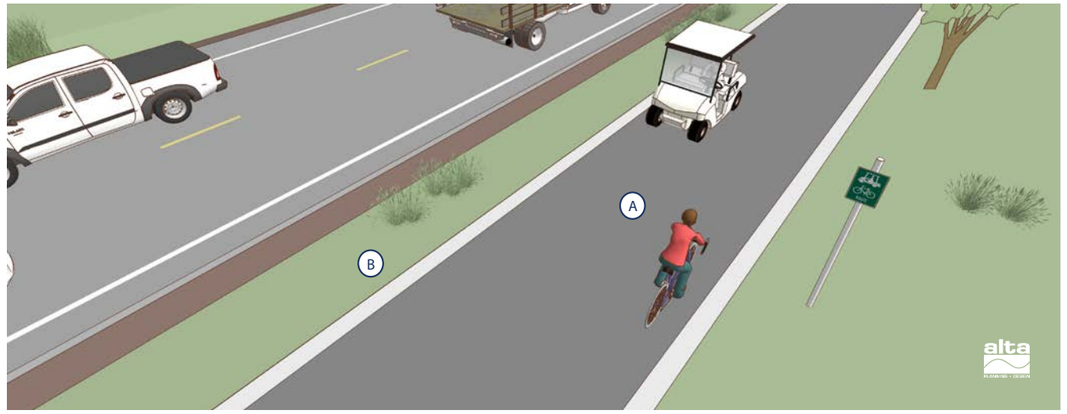
Design Features

(A) Utility companies may require specific landscaping limitations, such as regular trimming or vegetative height restrictions that may compromise the aesthetics of the multi-use path.

» Individual utility companies may have their own policies and guidelines about buffer requirements.

» Given the context, there may be structural requirements for multi-use paths to support maintenance activities of utility companies.

» Where excavation may be limited, consider the use of aggregate trail surfaces, so long as they comply with ADA guidelines.



Basic Sidepath

A sidepath is a bi-directional multi-use path located immediately adjacent and parallel to a roadway. Sidepaths can offer a high-quality experience for golf cart users and bicyclists where traffic speeds and/or volumes are too high to share the roadway. See page 22 for an additional figure of the basic sidepath preferred conditions.

Typical Application

Although paths in independent rights-of-way are preferred, sidepaths may be considered where one or more of the following conditions exist:

» Along collector roadways with a posted speed less than 45 mph

» To provide continuity between existing segments of multi-use paths in independent rights-of-ways

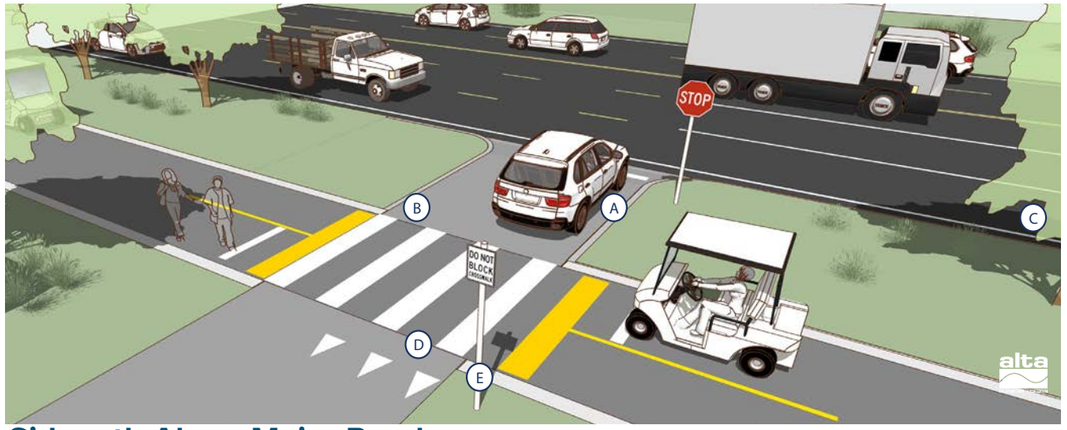
» For use near schools and neighborhoods, where increased separation from motor vehicles is desired

Design Features

(A) » Standard Tread Width: The preferred width is 14' so that golf cart users can pass each other, bicyclists, and pedestrians comfortably during 2-way operation.

(B) » Roadway Separation: The preferred separation width is 6.5'. Minimum separation width is 5'.

» Sight Lines: It is important to keep approaches to intersections and major driveways clear of obstructions such as parked vehicles, shrubs, and signs on public or private property.



Sidepath Along Major Roadway

Where there is a need to accommodate pedestrians, bicyclists, and golf cart users along high-speed and/or multi-lane arterial roadways, sidepaths should be designed to a higher standard to support safe and comfortable operation. Sidepaths along major roadways should be set back further from the street than the minimum AASHTO guidance of 5 feet, should feature design cues that encourage people driving to yield to path users at driveways, and should provide shade trees where possible to increase user comfort and define the path edge. See page 22 for an additional figure of the sidepath along major roadway preferred conditions.

Typical Application

Along roadways with a posted speed of 45 mph or above

Along multi-lane arterials, particularly those with strip commercial land uses

Along State routes

Design Features

(A) Set the path back at a preferred distance of 20’ from the roadway or in clear zone (whichever is greater) to provide increased separation from high speed/volume roadways. A path setback of at least 20’ provides sufficient space for 1 vehicle to pull completely out of the travel lane when making right turns into driveways or at cross streets without crossing the path.

» Where a 20’ or greater setback is not possible, use steep driveway ramps to encourage appropriate vehicle speeds. Where conditions are constrained, a minimum 5’ buffer is required, per AASHTO guidance.

» Sidepaths accommodating golf carts along GDOT roadways must be located outside of GDOT’s specified clear zone.

(B) » Maintain a level path surface at roadway intersections.

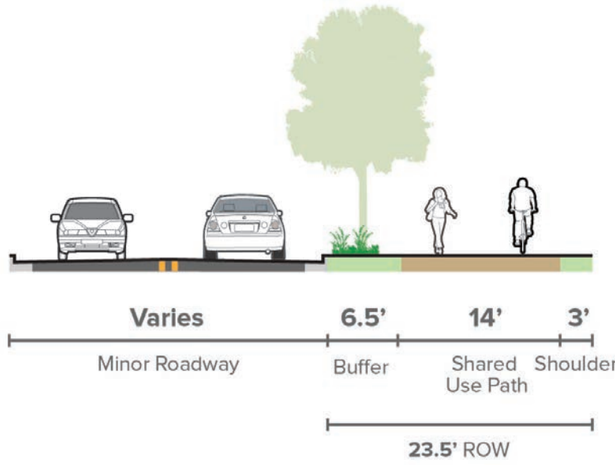
(C) » Provide shade trees in the 20’ landscaped buffer between the roadway and sidepath where feasible, taking care to maintain clear sight triangles at driveways and cross streets.

(D) » Mark crosswalk and yield lines at high-volume driveway.

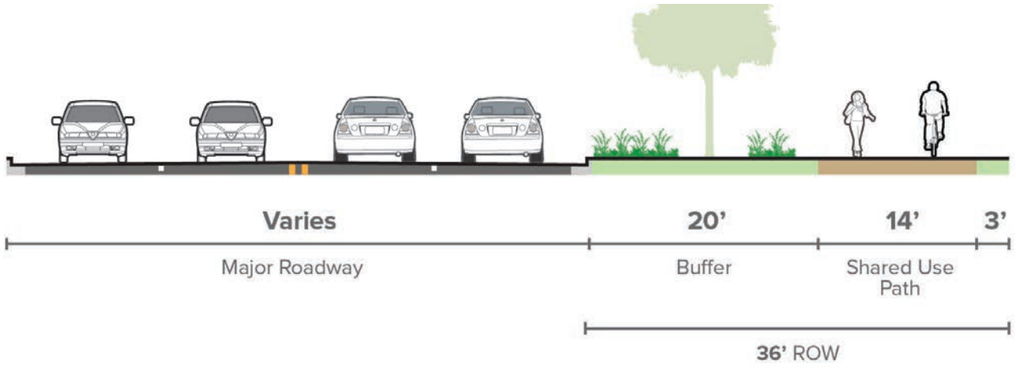
(E) » Install “Do Not Block Crosswalk” signage.

Sidepath Preferred Conditions

Below is a comparison between two different sidepath configurations based on roadway conditions. These figures represent the preferred conditions for both minor and major roadway adjacencies.



Basic Sidepath
Preferred Conditions*



Sidepath Along Major Roadway
Preferred Conditions*

*Minimum dimensions for use in constrained conditions are described on page 57

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APPENDIX B:
TRAIL FUNDING SOURCES OVERVIEW

Due to the cost of most construction and trail development activities, it may be necessary to consider several sources of funding, that when combined, would support these costs. This appendix outlines sources of funding at the federal, state, and local government levels and from the private sector. These sources cover a variety of costs related to trail and community development in northwest Georgia along proposed trail connections and surrounding areas. The following descriptions are intended to provide an overview of available options and do not represent a comprehensive list. Funding sources can be used for a variety of activities, including: planning, design, implementation and maintenance. It should be noted that this section reflects the funding available at the time of writing. The funding amounts, fund cycles, and even the programs themselves are susceptible to change without notice.

FEDERAL FUNDING SOURCES

Federal funding is typically directed through state agencies to local governments either in the form of grants or direct appropriations, independent from state budgets, where shortfalls may make it difficult to accurately forecast available funding for future project development. Federal funding typically requires a local match of approximately 20%, but there are sometimes exceptions; the American Recovery and Reinvestment Act stimulus funds did not require a match. The following is a list of possible Federal funding sources that could be used to support construction of many trail improvements. Most of these are competitive, and involve the completion of extensive applications with clear documentation of the project needs, costs, and benefits.

MOVING AHEAD FOR PROGRESS IN THE TWENTY-FIRST CENTURY (MAP-21)

The largest source of federal funding for bicycle and pedestrian is the US DOT's Federal-Aid Highway Program, which Congress has reauthorized roughly every six years since the passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty- First Century (MAP-21) was enacted in July 2012 as Public Law 112-141, and has been extended through May 31, 2015. The Act replaces the Safe, Accountable, Flexible, Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), which was valid from August 2005 - June 2012.

MAP-21 authorizes funding for federal surface transportation programs including highways and transit for the 27 month period between July 2012 and September 2014 (with an extension to May 31, 2015). It is not possible to guarantee the continued availability of any listed MAP-21 programs, or to predict their future funding levels or policy guidance. Nevertheless, many of these programs have been included in some form since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, and thus may continue to provide capital for active transportation projects and programs.

In Georgia, federal funds are administered through the Georgia Department of Transportation (GDOT) and Regional Planning Commissions, such as the Georgia Mountains Regional Commission (GMRC). Most, but not all, of these programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. Federal funding is intended for capital improvements and safety and education programs, and projects must relate to the surface transportation system. Georgia has been flexing 50% of TAP.

There are a number of programs identified within MAP-21 that are applicable to bicycle and pedestrian projects, such as the Recreational Trails Program and Safe Routes to Schools.

More information: *http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm*

TRANSPORTATION ALTERNATIVES

Transportation Alternatives (TA) is a new funding source under MAP-21 that consolidates three formerly separate programs under SAFETEALU: Transportation Enhancements (TE), Safe Routes to School (SR2S), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian, bicycle, and streetscape projects including sidewalks, bikeways, multi-use paths, and rail-trails. TA funds may also be used for selected education and encouragement programming such as Safe Routes to School, despite the fact that TA does not provide a guaranteed set-aside for this activity as SAFETEA-LU did.

Average annual funds available through TA over the life of MAP-21 equal $81.4 million nationally, which is based on a two percent set-aside of total MAP-21 allocations. Note that state DOT's may elect to transfer up to 50 percent of TA funds to other highway programs, so the amount listed on the website represents the maximum potential funding. Remaining TA funds (those monies not re-directed to other highway programs) are disbursed through a separate competitive grant program administered by GDOT. Local governments, school districts, tribal governments, and public lands agencies are permitted to compete for these funds.

Each state governor is given the opportunity to "opt out" of the Recreational Trails Program. However, as of the writing of this plan, only Florida and Kansas have "opted out" of the RTP. For all other states, dedicated funds for recreational trails continue to be provided as a subset of TA. MAP-21 provides $85 million nationally for the RTP.

For the complete list of eligible activities, visit:

http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm

For funding levels, *http://www.fhwa.dot.gov/MAP21/funding.cfm*

HIGHWAY SAFETY IMPROVEMENT PROGRAM

MAP-21 doubles the amount of funding available through the Highway Safety Improvement Program (HSIP) relative to SAFETEA-LU. HSIP provides $2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. MAP-21 preserves the Railway-Highway Crossings Program within HSIP but discontinues the High-Risk Rural roads set-aside unless safety statistics demonstrate that fatalities are increasing on these roads. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for non-motorized users in school zones are eligible for these funds.

More information: *http://safety.fhwa.dot.gov/hsip/*

SURFACE TRANSPORTATION PROGRAM (STP)

The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of pedestrian improvements are eligible, including trails, sidewalks, crosswalks, pedestrian signals, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STP-funded pedestrian facilities may be located on local and collector roads which are not part of the Federal-aid Highway System. 50 percent of each state's STP funds are allocated by population to the MPOs; the remaining 50 percent may be spent in any area of the state.

More information: *http://www.fhwa.dot.gov/map21/guidance/guidestprev.cfm*

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM (CMAQ)

The Congestion Mitigation/Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality non-attainment and maintenance areas for ozone, carbon monoxide, and particulate matter which reduce transportation related emissions. States with no non-attainment areas may use their CMAQ funds for any CMAQ or STP eligible project. These federal dollars can be used to build bicycle and pedestrian facilities that reduce travel by automobile. Purely recreational facilities generally are not eligible. Communities located in attainment areas who do not receive CMAQ funding apportionments may apply for CMAQ funding to implement projects that will reduce travel by automobile.

More information: *http://www.fhwa.dot.gov/environment/air_quality/cmaq/*

FEDERAL TRANSIT ADMINISTRATION ENHANCED MOBILITY OF SENIORS AND INDIVIDUALS WITH DISABILITIES

*T*his program can be used for capital expenses that support transportation to meet the special needs of older adults and persons with disabilities, including providing access to an eligible public transportation facility when the transportation service provided is unavailable, insufficient, or *inappropriate to meeting these needs.*

For more information: *http://www.fta.dot.gov/documents/MAP-21_Fact_Sheet_-_Enhanced_Mobility_of_Seniors_and_Individuals_with_Disabilities.pdf*

PARTNERSHIP FOR SUSTAINABLE COMMUNITIES

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to "improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide." The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure ("Provide more transportation choices, develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health").

The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including both TIGER I and TIGER II grants). Georgia jurisdictions should track partnership communications and be prepared to respond proactively to announcements of new grant programs. Initiatives that speak to multiple livability goals are more likely to score well than initiatives that are narrowly limited in scope to pedestrian improvement efforts.

More information: *http://www.sustainablecommunities.gov/NATIONAL SCENIC BYWAYS*

DISCRETIONARY GRANT PROGRAM

The National Scenic Byways Discretionary Grants program provides merit-based funding for byway-related projects each year, utilizing one or more of eight specific activities for roads designated as National Scenic Byways, All-American Roads, State scenic byways, or Indian tribe scenic byways. The activities are described in 23 USC 162(c). This is a discretionary program; all projects are selected by the US Secretary of Transportation.

Eligible projects include construction along a scenic byway of a facility for pedestrians and bicyclists and improvements to a scenic byway that will enhance access to an area for the purpose of recreation. Construction includes the development of the environmental documents, design, engineering, purchase of right-of-way, land, or property, as well as supervising, inspecting, and actual construction.

For more information: *http://www.bywaysonline.org/grants/*

FEDERAL COMMUNITY DEVELOPMENT BLOCK GRANT

Community Development Block Grant (CDBG) funds are allocated through the States to local municipal or county governments for projects that enhance the viability of communities by providing decent housing and suitable living environments and by expanding economic opportunities, principally for persons of low and moderate income. The program provides communities with resources to address a wide range of unique community development needs.

Beginning in 1974, the CDBG program is one of the longest continuously run programs at HUD. The CDBG program provides annual grants on a formula basis to 1209 general units of local government and States. Federal CDBG grantees may use Community Development Block Grants funds for activities that include (but are not limited to): acquiring real property; reconstructing or rehabilitating housing and other property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities; paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grants funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs.

More information: *http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs*

ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANTS

The Department of Energy's Energy Efficiency and Conservation Block Grants (EECBG) may be used to reduce energy consumptions and fossil fuel emissions and for improvements in energy efficiency. Section 7 of the funding announcement states that these grants provide opportunities for the development and implementation of transportation programs to conserve energy used in transportation including development of infrastructure such as bike lanes and pathways and pedestrian walkways. Although the current grant period has passed, more opportunities may arise in the future.

For more information: *http://www1.eere.energy.gov/wip/eecbg.html*

RIVERS, TRAILS, AND CONSERVATION ASSISTANCE PROGRAM

The Rivers, Trails and Conservation Assistance Program (RTCA) is a National Parks Service (NPS) program providing technical assistance via direct NPS staff involvement to establish and restore greenways, rivers, trails, watersheds and open space. The RTCA program provides only for planning assistance—there are no implementation funds available. Projects are prioritized for assistance based on criteria including conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation, and focusing on lasting accomplishments. This program may benefit trail development in Georgia locales indirectly through technical assistance, particularly for community organizations, but is not a capital funding source.

More information: *http://www.nps.gov/ncrc/programs/rtca/*

STATE FUNDING SOURCES

Unlike many states, Georgia has no consistent funding source that supports acquisition, development and rehabilitation of outdoor recreation areas. While the State of Georgia operated a Recreation Assistance Fund from 1978-1999, the state is currently one of fourteen states with no consistent source of funds for parks and recreational agencies. Lacking state assistance for recreation, many of the programs operated in Georgia are derived from federal funding sources administered at the state level.

TRANSPORTATION IMPROVEMENT PROGRAMS (TIP)

Transportation Improvement Programs (TIPs) in Georgia are administered by Metropolitan Planning Organizations (MPOs) within metro areas. These TIPs can contain a variety of transportation projects, including bicycle and pedestrian facilities. Outside of metro areas, Georgia maintains a Statewide Transportation Improvement Program (STIP). However, bicycle and pedestrian planning in non-MPO areas are typically funded through Regional Commissions (RCs). The distinctions between MPOs and RCs are discussed below.

Metropolitan Planning Organizations (MPOs) are federally designated agencies created in urban areas containing more than 50,000 people. Fifteen MPOs operate within Georgia. They are charged with conducting comprehensive, coordinated planning processes to determine the transportation needs of their respective constituencies, and prioritizing and programming projects (including bicycle and pedestrian projects) for federal funding. The MPOs conduct open public meetings annually for input into the development of the Long Range Plans and Transportation Improvement Programs.

The Georgia State Planning Act of 1989 included key provisions for the creation of Regional Development Commissions throughout the state intended to assist local governments in planning and coordinate regional planning. These entities were later consolidated into twelve Regional Commissions (RCs). GDOT contracts with Regional Commissions (Except the Atlanta Regional Commission) to provide bicycle and pedestrian transportation services. Sample projects include:

- Regional bicycle and pedestrian plans
- Safe Routes to School Plans
- Purchasing bike route signage and coordinating their installation
- Bike route and trail mapping
- Walkable community design workshops

Georgia Statewide Transportation Improvement Program: *http://www.dot.ga.gov/InvestSmart/Pages/STIP.aspx*

GOVERNOR'S OFFICE OF HIGHWAY SAFETY

The Governor's Office of Highway Safety (GOHS) is Georgia's advocate for highway safety. This office works with law enforcement, judicial personnel and community advocates to coordinate activities and initiatives relating to the human behavioral aspects of highway safety. The GOHS's mission is to develop, execute and evaluate programs to reduce the number of fatalities, injuries and related economic losses resulting from traffic crashes on Georgia's roadways. The office works in tandem with the National Highway Safety Administration to implement programs focusing on occupant protection, impaired driving, speed enforcement, truck and school bus safety, pedestrian and bicycle safety and crash data collection and analysis. Programs administered by the Governor's Highway Safety Office are 100% federally funded.

More information: *http://www.gahighwaysafety.org/*

GEORGIA RECREATIONAL TRAIL PROGRAM

In Georgia, the administration of the Recreational Trail Program is handled by the Department of Natural Resources (DNR), Division of Parks, Recreation, and Historic Sites. Under this program, the Grants Administration and Planning Unit of Georgia DNR provides 80/20 grant assistance for eligible applicants for land acquisition, development of public recreational trails, non-routine maintenance, and assessment of existing public trails.

The Georgia Recreational Trail Program has several criteria for applicants of trail funding. Lands and facilities that receive funding must be for public trails or the direct support of trail usage. In order to satisfy the public requirement, trail facilities must be open to the general public without discrimination during reasonable times and hours, and must be maintained and operated for public recreational usage. Eligible applicants must be legally constituted entities such as state and federal agencies, cities, counties, recreational commissions, or recreational authorities with legislative sanction. Applicants must also demonstrate that proposed trail projects are identified or further a specific planning goal of Georgia's Statewide Comprehensive Outdoor Recreation Plan (SCORP). Likewise, the proposed trail project should be consistent with needs identified in the sponsor jurisdiction's local comprehensive plan.

Annual grant cycles begin with applications in the fall and grant awards announced in early March of the following year.

More information: *http://gastateparks.org/grants/rtp#application*

GEORGIA SAFE ROUTES TO SCHOOL

Funded by the Federal Safe Routes to School (SRTS) program, Georgia's SRTS program is designed to encourage more kids to walk and bike to school safely. Program activities and funding are for projects within a 2-mile radius of primary and middle schools (grades K-8). SRTS funding for infrastructure is no longer available in Georgia; the state only continues to fund the SRTS Resource Center.

The Safe Routes to School Program is organized around 5 ideas – also called the 5 Es:

- Engineering: Making the environment safer for walking and bicycling
- Encouragement: Encouraging kids to walk and bike
- Education: Teaching kids and parents safe ways to walk and bike
- Evaluation: Checking to see how many kids are walking and biking as a result of the program
- Enforcement: Changing driver, walker and bicyclist behavior as they travel together along the road

More information: *http://www.saferoutesga.org/content/georgia-srts-basics*

LAND AND WATER CONSERVATION FUND

The Land, Water & Conservation Fund (LWCF) program is a federally funded, state administered grant program and provides matching grants to local governments and state agencies that provide recreation and parks, for the acquisition and development of public outdoor recreation areas and facilities. All grant projects must be on publicly owned land. In Georgia, the LWCF has helped finance land acquisition for linear parks, such as the Chattahoochee River National Recreation Area.

The Georgia Department of Natural Resources (DNR) Division of Parks, Recreation, and Historic Sites conducts a Statewide Comprehensive Outdoor Recreation Plan (SCORP) every five years to articulate state recreational policy and maintain eligibility for federal funds from the Land and Water Conservation Fund (LWCF). LWCF grants support state, county, and managing agency outdoor recreation projects for land acquisition, development, and rehabilitation.

The most recent iteration of the SCORP covers the planning period of 2008-2013. Under this plan, three key priorities are identified as follows:

- Promote Health / Fitness and Livability of All Communities
- Enhance Economic Vitality
- Conserve and Properly Use Natural Resources
-

Of these three primary goals, the promotion of health, fitness, and livability appears to apply the most closely to trail development. For example, one key recommendation under this goal is to explore ways of connecting existing parks and recreational facilities for pedestrians and non-motorized vehicles, such as bikes and in-line skates.

Georgia Land & Water Conservation Fund Grants: *http://gastateparks.org/grants/lwcf*

Georgia Statewide Comprehensive Outdoor Recreation Plan: *http://www.gastateparks.org/item/152835*

LOCAL GOVERNMENT FUNDING SOURCES

Municipalities often plan for the funding of pedestrian and bicycle facilities/improvements through development of Capital Improvement Programs (CIPs). For example, the Managing agency of Powder Springs has financed local extensions connecting to the Silver Comet Trail through municipal general funds. CIPs should include all types of capital improvements (water, sewer, buildings, streets, etc.) versus programs for single purposes. This allows municipal decision-makers to balance all capital needs. A variety of possible funding options available to Georgia jurisdictions for implementing bicycle and pedestrian projects are described below. However, many will require specific local action as a means of establishing a program, if not already in place.

CAPITAL RESERVE FUND

Other states have created statutory authority for municipalities to create capital reserve funds for any capital purpose, including bicycle and pedestrian facilities. The reserve fund must be created through ordinance or resolution that states the purpose of the fund, the duration of the fund, the approximate amount of the fund, and the source of revenue for the fund. Sources of revenue can include general fund allocations, fund balance allocations, grants and donations for the specified use.

More information: *http://www.osc.state.ny.us/localgov/pubs/lgmg/reservefunds.pdf*

COMMUNITY IMPROVEMENT DISTRICTS (CIDS)

Community Improvement Districts (CIDs) are a voluntary self-taxing mechanism for funding governmental services, such as parks and recreation, road construction, storm water and waste water systems, water systems, public transportation, and other services. CIDs can levy taxes, fees and assessments on non-residential properties and apply the funds to governmental services and facilities within the CID boundary. CIDs can also fund improvements through issuing bonds. However, CID-issued bonds may not be considered an obligation of the state or local government other than the CID itself. The Georgia General Assembly may create a CID by local legislation, with conditional approval of the managing agency or county government where the CID is located. In addition, the creation of a CID is contingent on receiving the written consent of a majority of the property owners within the CID that would be subject to CID taxes, fees and assessments. The governing body of each CID as designated by the Legislature must include representatives from each managing agency or county within the CID.

More information: Georgia Constitution Article IX, Section VII *http://www.lexisnexis.com/hottopics/gacode/*

TAX ALLOCATION DISTRICTS (TADS)

Tax Allocation Districts (TADs), often called Tax Increment Financing (TIF) in other states, are a mechanism for funding improvements in blighted or underutilized areas based on future property value increases. TADs operate by establishing a current tax base floor for a given TAD district area and applying future taxes over and above the tax floor for a given period of time to pay the costs of infrastructure. Most often, but not always, TADs issue bonds to fund infrastructure improvements that are aimed at spurring redevelopment and property value increases. TAD funds may be used for a wide range of development activities. Cities, counties and school systems may decide independently whether to participate in a TAD. Managing agency or county TADs require a jurisdiction-wide referendum for approval and the creation of a local redevelopment agency to administer the TAD. The local redevelopment agency is tasked with identifying a specific redevelopment area and public improvements needed to help the area attract new private development. Since a determination of blight is required, TADs generally apply to urbanized “brownfield” or “grayfield” sites rather than undeveloped rural property. One prominent example of TAD financing for bicycle/pedestrian infrastructure is the Atlanta BeltLine TAD.

More information: *https://www.investatlanta.com/development/commercial-incentives/tax-allocation-districts/tax-allocation-districts-frequently-asked-questions/*

INSTALLMENT PURCHASE FINANCING

As an alternative to debt financing of capital improvements, communities can execute installment or lease purchase contracts for improvements. This type of financing is typically used for relatively small projects that the seller or a financial institution is willing to finance or when up-front funds are unavailable. In a lease purchase contract the community leases the property or improvement from the seller or financial institution. The lease is paid in installments that include principal, interest, and associated costs. Upon completion of the lease period, the community owns the property or improvement. While lease purchase contracts are similar to a bond, this arrangement allows the community to acquire the property or improvement without issuing debt. These instruments, however, are more costly than issuing debt.

TAXES

Many communities have raised money for general transportation programs or specific project needs through self-imposed increases in taxes and bonds. For example, Pinellas County residents in Florida voted to adopt a one cent sales tax increase, which provided an additional $5 million for the development of the overwhelmingly popular Pinellas Trail. Sales taxes have also been used in Allegheny County, Pennsylvania, and in Boulder, Colorado to fund open space projects. A gas tax is another method used by some municipalities to fund public improvements. A number of taxes provide direct or indirect funding for the operations of local governments and public improvement projects that can be used for bicycle and pedestrian facilities. Some of them are:

Special Purpose Local Option Sales Taxes (SPLOST)

In Georgia, sales tax is imposed on all retail sales, leases and rentals of most goods, as well as taxable services (occupancy taxes fall under this category as well). Georgia cities and counties have the option of imposing an additional Special Purpose Local Option Sales Tax (SPLOST). State law requires approval of a resolution to establish a SPLOST by a countywide referendum with a defined end date. SPLOST funds can only be applied to specified capital improvement projects. At this time, Hall County, Georgia voters have approved seven SPLOST referendums to generate revenues for a variety of projects including transportation infrastructure improvements, community amenities, public works projects, and other local infrastructure improvements.

More information about Hall County SPLOST referendums: *https://www.hallcounty.org/398/SPLOST-Law*

Property Tax

Property taxes generally support a significant portion of a municipality's activities. However, the revenues from property taxes can also be used to pay debt service on general obligation bonds issued to finance trail system acquisitions. Because of limits imposed on tax rates, use of property taxes to fund trails could limit the municipality's ability to raise funds for other activities. Property taxes can provide a steady stream of financing while broadly distributing the tax burden. In other parts of the country, this mechanism has been popular with voters as long as the increase is restricted to parks and open space. Note, other public agencies compete vigorously for these funds, and taxpayers are generally concerned about high property tax rates.

Excise Taxes

Excise taxes are taxes on specific goods and services. These taxes require special legislation and funds generated through the tax are limited to specific uses. Examples include lodging, food, and beverage taxes that generate funds for promotion of tourism, and the gas tax that generates revenues for transportation related activities.

FEES

A variety of fee options have been used by local jurisdictions to assist in funding pedestrian and bicycle improvements. Enabling actions may be required for a locality to take advantage of these tools.

In-Lieu-Of Fees

As an alternative to requiring developers to dedicate on-site greenway or pedestrian facility that would serve their development, some communities provide a choice of paying a front-end charge for off-site protection of pieces of the larger system. Payment is generally a condition of development approval and recovers the cost of the off- site land acquisition or the development's proportionate share of the cost of a regional facility serving a larger area. Some communities prefer in-lieu-of fees. This alternative allows community staff to purchase land worthy of protection rather than accept marginal land that meets the quantitative requirements of a developer dedication but falls short of qualitative interests.

Excise Taxes

Excise taxes are taxes on specific goods and services. These taxes require special legislation and funds generated through the tax are limited to specific uses. Examples include lodging, food, and beverage taxes that generate funds for promotion of tourism, and the gas tax that generates revenues for transportation related activities.

BONDS AND LOANS

Bonds have been a very popular way for communities across the country to finance trail projects. A number of bond options are listed below. Contracting with a private consultant to assist with this program may be advisable. Since bonds rely on the support of the voting population, an education and awareness program should be implemented prior to any vote. Billings, Montana used the issuance of a bond in the amount of $599,000 to provide the matching funds for several of their TEA-21 enhancement dollars. Austin, Texas has also used bond issues to fund a portion of its bicycle and trail system.

Revenue Bonds

Revenue bonds are bonds that are secured by a pledge of the revenues from a specific local government activity. The entity issuing bonds pledges to generate sufficient revenue annually to cover the program's operating costs, plus meet the annual debt service requirements (principal and interest payment). Revenue bonds are not constrained by the debt ceilings of general obligation bonds, but they are generally more expensive than general obligation bonds.

General Obligation Bonds

Cities, counties, and service districts generally are able to issue general obligation (G.O.) bonds that are secured by the full faith and credit of the entity. A general obligation pledge is stronger than a revenue pledge, and thus may carry a lower interest rate than a revenue bond. The local government issuing the bonds pledges to raise its property taxes, or use any other sources of revenue, to generate sufficient revenues to make the debt service payments on the bonds. Frequently, when local governments issue G.O. bonds for public enterprise improvements, the public enterprise will make the debt service payments on the G.O. bonds with revenues generated through the public entity's rates and charges. However, if those rate revenues are insufficient to make the debt payment, the local government is obligated to raise taxes or use other sources of revenue to make the payments. Bond measures are typically limited by time, based on the debt load of the local government or the project under focus. Funding from bond measures can be used for right-of-way acquisition, engineering, design, and construction of pedestrian and bicycle facilities. Voter approval is required.

Special Assessment Bonds

Special assessment bonds are secured by a lien on the property that benefits from the improvements funded with the special assessment bond proceeds. Debt service payments on these bonds are funded through annual assessments to the property owners in the assessment area.

State Revolving Fund Loans

Initially funded with federal and state money, and continued by funds generated by repayment of earlier loans, State Revolving Funds (SRFs) provide low interest loans for local governments to fund water pollution control and water supply related projects including many watershed management activities. These loans typically require a revenue pledge, like a revenue bond, but carry a below market interest rate and limited term for debt repayment (20 years).

Funds From Private Foundations & Organizations

Many communities have solicited trail infrastructure funding assistance from private foundations and other conservation-minded benefactors.

PATH FOUNDATION

The PATH Foundation is a non-profit organization that partners with state and local governments to fund the construction and maintenance of trails in Georgia. Since its inception, the PATH foundation has constructed more than 160 miles of hiking, biking, and walking trails, including the Silver Comet Trail. PATH foundation staff provides assistance to local governments in planning, designing, building and maintaining trail projects. The foundation has created a “PATH Standard” for trail facilities to provide regular specifications for trails. The PATH Foundation has conducted several successful capital campaigns to solicit donations from charitable foundations and individual donors. In some cases, PATH provides matching funds to finance the development of trails. The PATH foundation also sponsors an “Adopt a Trail” program to coordinate volunteers for supplemental maintenance programs. Numerous local charitable organizations and business interests have provided support for the PATH foundation, including the James M. Cox Foundation, Arthur M. Blank Family Foundation, Georgia-Pacific Foundation, Georgia Power Foundation, Northside Hospital Foundation, SunTrust Bank Atlanta Foundation, Turner Broadcasting System, The Wachovia Foundation, and the Robert W. Woodruff Foundation.

More information: *http://pathfoundation.org/*

THE ROBERT WOOD JOHNSON FOUNDATION

The Robert Wood Johnson Foundation was established in 1972 and today it is the largest U.S. foundation devoted to improving the health and health care of all Americans. Grant making is concentrated in four areas: To assure that all Americans have access to basic health care at a reasonable cost; To improve care and support for people with chronic health conditions; To promote healthy communities and lifestyles; To reduce the personal, social and economic harm caused by substance abuse (tobacco, alcohol, and illicit drugs).

More information: *http://www.rwjf.org/grants/*

REI GRANTS

REI is dedicated to inspiring people to love the outdoors and take care of the places they love. REI focuses philanthropic efforts on supporting and promoting participation in active volunteerism to care for public lands, natural areas, trails and waterways. This focus engages a full spectrum of REI resources to mobilize communities around outdoor stewardship. The store teams cultivate strong partnerships with local non-profit organizations that engage individuals, families and entire communities in outdoor volunteer stewardship. REI stores use their public visibility, staff support and online communication tools to connect people to the stewardship opportunities hosted by their partners. These store resources thereby drive customers’ attention, awareness and involvement in support of partner programs and needs. REI also supports local partners financially with grant funding. The grants program begins with nominations from store teams who select the local non-profits with whom they’ve developed enduring and meaningful partnerships. Nominated partners are then invited to submit applications for grant funding. REI grants provide partner organizations with the resources and managing agency to organize stewardship activities and get volunteers involved.

More information: *http://www.rei.com/stewardship/community.html*

WALMART STATE GIVING PROGRAM

The Walmart Foundation financially supports projects that create opportunities for better living. Grants are awarded for projects that support and promote education, workforce development/ economic opportunity, health and wellness, and environmental sustainability. Both programmatic and infrastructural projects are eligible for funding. State Giving Program grants start at $25,000, and there is no maximum award amount. The program accepts grant applications on an annual, state by state basis.

More information: *http://foundation.walmart.com/?p=8979*

THE RITE AID FOUNDATION GRANTS

The Rite Aid Foundation is a foundation that supports projects that promote health and wellness in the communities that Rite Aid serves. Award amounts vary and grants are awarded on a one year basis to communities in which Rite Aid operates. A wide array of activities are eligible for funding, including infrastructural and programmatic projects.

For more information: *https://www.riteaid.com/about-us/rite-aid-foundation*

BANK OF AMERICA CHARITABLE FOUNDATION, INC

The Bank of America Charitable Foundation is one of the largest in the nation. The primary grants program is called Neighborhood Excellence, which seeks to identify critical issues in local communities. Another program that applies to greenways is the Community Development Programs, and specifically the Program Related Investments. This program targets low and moderate income communities and serves to encourage entrepreneurial business development.

More information: *http://www.bankofamerica.com/foundation*

THE TRUST FOR PUBLIC LAND

Land conservation is central to the mission of the Trust for Public Land (TPL). Founded in 1972, the Trust for Public Land is the only national nonprofit working exclusively to protect land for human enjoyment and well being. TPL helps conserve land for recreation and spiritual nourishment and to improve the health and quality of life of American communities.

More information: *http://www.tpl.org*

NATIONAL TRAILS FUND

American Hiking society created the National Trails Fund in 1998 as the only privately supported national grants program providing funding to grassroots organizations working toward establishing, protecting, and maintaining foot trails in America. The society provides funds to help address the $200 million backlog of trail maintenance. National Trails Fund grants help give local organizations the resources they need to secure access, volunteers, tools and materials to protect America's cherished public trails. To date, American Hiking has granted more than $240,000 to 56 different trail projects across the U.S. for land acquisition, constituency building campaigns, and traditional trail work projects. Awards range from $500 to $10,000 per project.

- Projects the American Hiking Society will consider include: Securing trail lands, including acquisition of trails and trail corridors, and the costs associated with acquiring conservation easements.
- Building and maintaining trails that will result in visible and substantial ease of access, improved hiker safety, and/or avoidance of environmental damage.
- Constituency building surrounding specific trail projects, including volunteer recruitment and support.

More information: http://www.americanhiking.org/national-trails-fund/

THE CONSERVATION ALLIANCE

The Conservation Alliance is a non-profit organization of outdoor businesses whose collective annual membership dues support grassroots citizen-action groups and their efforts to protect wild and natural areas. Grants are typically about $35,000 each. Since its inception in 1989, The Conservation Alliance has contributed $4,775,059 to environmental groups across the nation, saving over 34 million acres of wild lands. The Conservation Alliance Funding Criteria:

- The Project should be focused primarily on direct citizen action to protect and enhance our natural resources for recreation.
- The Alliance does not look for mainstream education or scientific research projects, but rather for active campaigns.
- All projects should be quantifiable, with specific goals, objectives, and action plans and should include a measure for evaluating success.
- The project should have a good chance for closure or significant measurable results over a fairly short term (one to two years).
- Funding emphasis may not be on general operating expenses or staff payroll.

For more information: *http://www.conservationalliance.com/grants*

PEOPLE FOR BIKES

The PeopleForBikes Community Grant Program provides funding for important and influential projects that leverage federal funding and build momentum for bicycling in communities across the U.S. These projects include bike paths and rail trails, as well as mountain bike trails, bike parks, BMX facilities, and large-scale bicycle advocacy initiatives.

Since 1999, they have awarded 272 grants to non-profit organizations and local governments in 49 states and the District of Columbia. The investments total nearly $2.5 million and have leveraged $650 million in public and private funding.

More information: *http://www.peopleforbikes.org/pages/community-grants*

LOCAL TRAIL SPONSORS

A sponsorship program for trail amenities allows smaller donations to be received from both individuals and businesses. Cash donations could be placed into a trust fund to be accessed for certain construction or acquisition projects associated with the greenways and open space system. Some recognition of the donors is appropriate and can be accomplished through the placement of a plaque, the naming of a trail segment, and/or special recognition at an opening ceremony. Valuable in-kind gifts include donations of services, equipment, labor, or reduced costs for supplies.

CORPORATE DONATIONS

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Municipalities typically create funds to facilitate and simplify a transaction from a corporation's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

PRIVATE INDIVIDUAL DONATIONS

Private individual donations can come in the form of liquid investments (i.e. cash, stock, bonds) or land. Municipalities typically create funds to facilitate and simplify a transaction from an individual's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

FUNDRAISING / CAMPAIGN DRIVES

Organizations and individuals can participate in a fundraiser or a campaign drive. It is essential to market the purpose of a fundraiser to rally support and financial backing. Often times fundraising satisfies the need for public awareness, public education, and financial support.

LAND TRUST ACQUISITION AND DONATION

Land trusts are held by a third party other than the primary holder and the beneficiaries. This land is oftentimes held in a corporation for facilitating the transfer between two parties. For conservation purposes, land is often held in a land trust and received through a land trust. A land trust typically has a specific purpose such as conservation and is used so land will be preserved as the primary holder had originally intended.

VOLUNTEER WORK

Residents and other community members are excellent resources for garnering support and enthusiasm for a greenway corridor or pedestrian facility. Furthermore, volunteers can substantially reduce implementation and maintenance costs. Individual volunteers from the community can be brought together with groups of volunteers from church groups, civic groups, scout troops and environmental groups to work on greenway development on special community workdays. Volunteers can also be used for fund-raising, maintenance, and programming needs.

APPENDIX C: ORDER-OF-MAGNITUDE DETAILED COST ESTIMATES

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Alta Planning + Design	PROJECT	2021-080	Braselton, GA Trail Study			
Opinion of Probable Cost	Section 1 - Rt 211, Liberty Church Rd to Access Road					
12/20/2021						
Item	Quantity	Unit		Unit Cost		Item Total
Trail construction						
Conrete Path - 4 ft widening	3,500	LF	$	90.00	$	315,000.00
Item 1 Total:					**$**	**315,000.00**
Total - Construction Items					**$**	**315,000.00**
Misc. construction costs						
Minor items				10%	$	31,500.00
Work zone traffic control				15%	$	47,300.00
Field change order				5%	$	15,800.00
Mobilization				15%	$	47,300.00
Item 1 Total:					**$**	**141,900.00**
Construction Total					**$**	**457,000.00**
General contingency				30%	$	138,000.00
Construction Total					**$**	**595,000.00**
Engineering and survey				20%	$	92,000.00
Construction Admin/Inspection				20%	$	92,000.00
Project Total					**$**	**779,000.00**

Assumptions

* Right of Way acquisitons are not included in cost estimate
* Utility relocations are not included in cost estimate
* Design and Construction effort is lower than typical due to it being an add-on to an existing project
* Crossing improvements are already included in the existing project

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Alta Planning + Design	PROJECT	2021-080	Braselton, GA Trail Study			
Opinion of Probable Cost	Section 2 - Access Rd, Rt 211 to Creek					
12/20/2021						
Item	Quantity	Unit		Unit Cost		Item Total
Trail construction						
Concrete Path - 14 ft	6,425	LF	$	190.00	$	1,220,750.00
Item 1 Total:					**$**	**1,220,750.00**
Fencing, Furnishings and Signage						
Slope protection fencing - 48" wood 3 rail		LF	$	150.00	$	-
Signage allowance	5	LM	$	1,600	$	8,000.00
Site furniture allowance	2	LM	$	5,000	$	10,000.00
Item 2 Total:					**$**	**18,000.00**
Total - Construction Items					**$**	**1,238,750.00**
Misc. construction costs						
Minor items				10%	$	123,900.00
Work zone traffic control				2%	$	24,800.00
Field change order				5%	$	62,000.00
Mobilization				8%	$	99,100.00
Item 1 Total:					**$**	**309,800.00**
Construction Total					**$**	**1,549,000.00**
General contingency				30%	$	465,000.00
Construction Total					**$**	**2,014,000.00**
Engineering and survey				15%	$	233,000.00
Construction Admin/Inspection				20%	$	310,000.00
Project Total					**$**	**2,557,000.00**

Assumptions

* Right of Way acquisitons are not included in cost estimate
* Utility relocations are not included in cost estimate
* Assumes no roadway crossings are required for this segment

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Alta Planning + Design	PROJECT	2021-080	Braselton, GA Trail Study			
Opinion of Probable Cost	Section 3 - Rt 124, West side of creek to Davis St					
12/20/2021						
Item	Quantity	Unit		Unit Cost		Item Total
Trail construction						
Concrete Path - 14 ft	9,145	LF	$	190.00	$	1,737,550.00
Item 1 Total:					**$**	**1,737,550.00**
Bridges						
Bridge 1 -	200	LF	$	5,000	$	1,000,000.00
Item 2 Total:					**$**	**1,000,000.00**
Fencing, Furnishings and Signage						
Slope protection fencing - 48" wood 3 rail	200	LF	$	150.00	$	30,000.00
Landscaping	750	LF	$	200	$	150,000.00
Signage allowance	7	LM	$	1,600	$	11,200.00
Site furniture allowance	2	LM	$	5,000	$	10,000.00
Item 3 Total:					**$**	**201,200.00**
Roadway Crossings						
Marked Crosswalk	7	EA	$	3,800.00	$	26,600.00
Item 4 Total:					**$**	**26,600.00**
Total - Construction Items					**$**	**2,965,350.00**
Misc. construction costs						
Minor items				10%	$	296,600.00
Work zone traffic control				5%	$	148,300.00
Field change order				5%	$	148,300.00
Mobilization				6%	$	178,000.00
Item 1 Total:					**$**	**771,200.00**
Construction Total					**$**	**3,737,000.00**
General contingency				30%	$	1,122,000.00
Construction Total					**$**	**4,859,000.00**
Engineering and survey				15%	$	561,000.00
Construction Admin/Inspection				15%	$	561,000.00
Project Total					**$**	**5,981,000.00**

Assumptions

* Right of Way acquisitons are not included in cost estimate
* Utility relocations are not included in cost estimate
* Crossings are assumed to be marked crosswalks and do not include signal upgrades or other enhancements

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Alta Planning + Design	PROJECT	2021-080	Braselton, GA Trail Study			
Opinion of Probable Cost	Section 4 -Trail Spurs					
12/22/2021						
Item	Quantity	Unit		Unit Cost		Item Total
Trail construction						
Concrete Path - 14 ft	3,820	LF	$	190.00	$	725,800.00
Misc Cut / Fill	1,400	CY	$	50.00	$	70,000.00
Item 1 Total:					**$**	**795,800.00**
Drainage						
Planted swales along trail	1,040	LF	$	40.00	$	41,600.00
Structures and culverts	1	EA	$	5,000.00	$	5,000.00
Item 3 Total:					**$**	**46,600.00**
Fencing, Furnishings and Signage						
Slope protection fencing - 48" wood 3 rail	500	LF	$	150.00	$	75,000.00
Landscaping	120	LF	$	200	$	24,000.00
Item 4 Total:					**$**	**99,000.00**
Trailheads						
Access Points	1	EA	$	15,000	$	15,000.00
Item 7 Total:					**$**	**15,000.00**
Total - Construction Items					**$**	**1,956,400.00**
Misc. construction costs						
Minor items				10%	$	195,700.00
Work zone traffic control				5%	$	97,900.00
Field change order				5%	$	97,900.00
Mobilization				6%	$	117,400.00
Item 1 Total:					**$**	**508,900.00**
Construction Total					**$**	**2,466,000.00**
General contingency				30%	$	740,000.00
Construction Total					**$**	**3,206,000.00**
Engineering and survey				15%	$	370,000.00
Construction Admin/Inspection				15%	$	370,000.00
Project Total					**$**	**3,946,000.00**

Assumptions

* Right of Way acquisitons are not included in cost estimate
* Utility relocations are not included in cost estimate

APPENDIX D:
ALTERNATIVES EVALUATION SPREADSHEET

GOAL	EVALUATION MEASURE	A: Blue	B: Orange	C: Red	SCORES		
FEASIBILITY	– Relative cost based on length + typical cost per mile				100	50	0
	– ROW availability: number of privately-owned parcels				100	50	0
	– Topographic challenges				50	0	0
ACCESS / CONNECTIVITY	– Community access: residential population within 1/4 mile via the road network				100	100	50
	– Access to parks / natural resources				0	50	50
	– Access to other modes of transportation				100	50	50
ENVIRONMENTAL IMPACT	– Passes through designated wetlands – Passes through 100-year floodplain				100	50	0
ECONOMIC IMPACT	– Employers within 1/2 mile – Low-stress connectivity to commercial districts				100	0	50
USER EXPERIENCE	– Level of user comfort				0	100	50
	– Separation from traffic				0	100	50
	– Amenities + destinations along the trail				100	50	50
SAFETY	– Traffic volumes along nearby roadways				0	100	50
	– Speeds along nearby roadways + at potential conflict points				0	100	50
	– Number of driveway crossings				0	100	50
	– Number of at-grade crossings of roadways (arterial or higher vs. collector or lower)				100	50	50
	– Opportunities for eyes on the trail				100	0	50

LEGEND:

	Best
	Average
	Worst

AVERAGE: 55.882 | 55.882 | 35.294

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it's better in Braselton

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