



SUGAR HILL GREENWAY

LIVABLE CENTERS INITIATIVE CONCEPT PLAN

NOVEMBER 2020



TOOLE
DESIGN

Acknowledgements

Thank you to the community members, staff, and officials who helped develop this plan. It was prepared by the City of Sugar Hill in cooperation with the Department of Transportation, Federal Highway Administration, and the Atlanta Regional Commission. Special thanks to:

Mayor and Council

Steve Edwards, Mayor
Susie Walker, Mayor Pro Tem (Post 3)
Brandon Hembree, Council Member (Post 1)*
Marc Cohen, Council Member (Post 2)
Taylor Anderson, Council Member (Post 5)

Core Team Committee

Julie Adams, Vice Chair of the City of Sugar Hill Planning Commission
Bobby McGraw, Executive Pastor of Sugar Hill Church
Jeff Coleman, Senior Pastor of Church on the Hill
Trey Ragsdale, Gov. and Community Relations Manager at Kaiser Permanente
Angela Jenkins, Sugar Hill Running Club
Kristen Petillo, Neighbor
Jay Petillo, Neighbor
Megan Mendez, Neighbor

City of Sugar Hill

Kaipo Awana, AICP, Director of Planning*
Troy Besseche, Assistant City Manager*
Mercy Montgomery, Director of Economic Development
Kami Clements, Marketing and Communications Coordinator*
Joel Hoffman, Creative Content Coordinator*

**Core Team member*

Disclaimers:

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

Geographic and mapping information presented in this document is for informational purposes only, and is not suitable for legal, engineering, or surveying purposes. Mapping products presented herein are based on information collected at the time of preparation. Toole Design Group, LLC makes no warranties, expressed or implied, concerning the accuracy, completeness, or suitability of the underlying source data used in this analysis, or recommendations and conclusions derived therefrom.

Ned Jasarevic, Information Technology
Kim Landers, Planning Technician
Nicole Klein, Planning Admin
Kellie Littlefield, Senior Planner

Toole Design Group

Addie Weber, AICP, Project Manager*
Meghan McMullen, Deputy Project Manager*
Jeff Ciabotti, Principal-in-Charge
Blake Loudermilk, PE, Engineering Lead*
Ashley Gunderson, Engineer
Artie Cashwell, Planner
Eric Childs, PLA, ASLA, LEED AP, Landscape Architect
Bonnie Moser, Urban Designer

Gwinnett County

Vincent Edwards, AICP, Section Manager, Infrastructure Analysis*
Edgardo Aponte, PE, Preconstruction Division Director
Tshaya Jackson, Project Manager
Andrew Thompson, PE, Deputy Director, Program Delivery

Atlanta Regional Commission

Jared Lombard, AICP, Senior Principal Planner*



Sugar Hill Greenway Livable Centers Initiative Concept Plan

October 2020

Introduction

Defining “Greenway”	3
Transforming How We Move and Play	4
Greenways and Safety	6
Designing for Everyone	8

Concept Direction

Influencing Conditions & Plans	12
Community Engagement	24
Route Selection Considerations	32
Design Strategies	33

Conceptual Design

Overview	37
State Route 20 West	40
Hillcrest	46
SR 20 East	52
Downtown	58

1

Design Considerations

Site Furnishings	66
Trail Amenities	68
Wayfinding	71
Landscape Planting Palettes	72
Engineering Considerations	77

65

9

Implementation

Right-of-way Aquisition Strategies	82
Regulatory Strategies	85
Gwinnett County and GDOT Partnerships	88
Community Partnerships	90
Phasing	94
Cost Estimates	96
Funding	98
Action Plan	99

81

Figures

Figure 1.	LCI Study Area and Citywide Greenway Loop	1
Figure 2.	Study Area	2
Figure 3.	Bicyclist Design User Profiles	8
Figure 4.	Influencing Conditions Map	13
Figure 5.	Community Input Map - Desired Destinations	27
Figure 6.	Community Input Map - Areas of Concern	28
Figure 7.	Community Input Map - Feature Ideas	29
Figure 8.	Community Input Map - Walking and Biking Routes	30
Figure 9.	Alternative Routes	31
Figure 10.	Preferred Alignment Map	34
Figure 11.	Proposed Greenway Map - State Route 20 West	39
Figure 12.	Section A - SR 20 (Cumming Hwy) from W Broad St to Sugar Ridge Dr	40
Figure 13.	SR 20 and W Broad St/Sycamore Rd Intersection Concept	41
Figure 14.	New Community Park Concept - Program Diagram	43
Figure 15.	Proposed Greenway Concept Map - Hillcrest	45
Figure 16.	Section B - Hillcrest Dr (Shared Use Path with Minimum Separation)	46
Figure 17.	Section C - Hillcrest Dr (Shared Use Path with Greater Separation)	46

Figure 18.	Section D - Off-street Trail	46
Figure 19.	SR 20 and Hillcrest Dr Intersection Concept	47
Figure 20.	Richland Creek Natural Retreat Concept - Program Diagram	49
Figure 21.	Proposed Greenway Map - SR 20 East	51
Figure 22.	Section E - SR 20 (Nelson Brogdon Blvd) from Wages Way to Buford Hwy	53
Figure 23.	SR 20 and Peachtree Industrial Blvd Intersection Concept	54
Figure 24.	SR 20 and Wages Way Intersection Concept	54
Figure 25.	SR 20 and Broadmoor Rd Intersection Concept	55
Figure 26.	Proposed Greenway Map - Downtown	57
Figure 27.	Section G - W Broad St Bike Boulevard	58
Figure 28.	SR 20 Widening Project Location	87
Figure 29.	Phasing Map	93

Tables

Table 1.	Planning Level Cost Estimate Summary	95
Table 2.	Potential Funding Sources	96

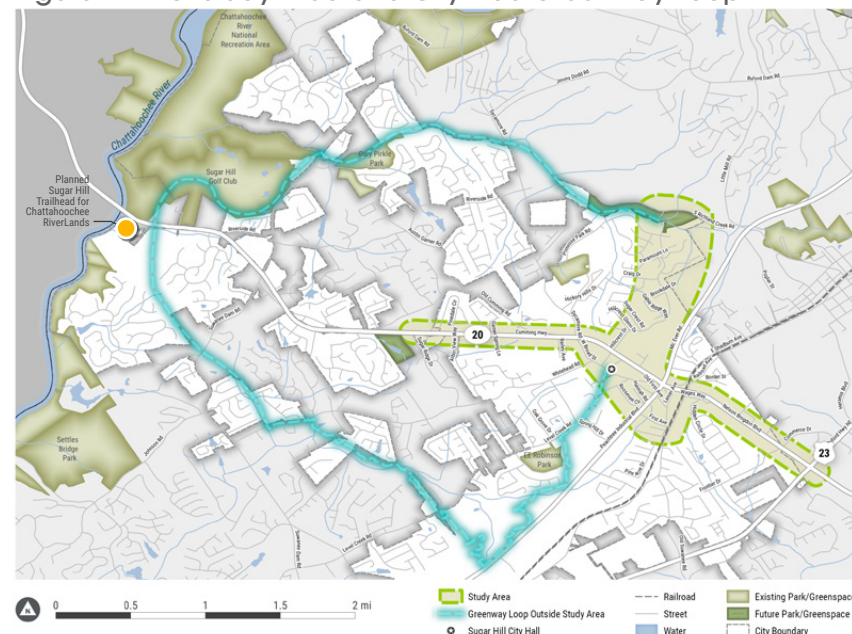


Introduction

The City of Sugar Hill is a family-friendly community near the Chattahoochee River and Lake Lanier working to deliver the Sweet Life to residents through excellent destinations, recreation, and mobility choices. One of its signature initiatives is the *Sugar Loop Greenway Master Plan (2016)*,

which identified 16.5 miles of trails and linear open space. Implementation of this network is underway, with Phase 1 construction expected to begin in Fall 2020. The *Sugar Hill Greenway Concept Livable Centers Initiative (LCI)* will build on that plan by connecting Downtown Sugar Hill, residential neighborhoods, and commercial areas to the broader greenway loop with a central east-west pedestrian and bicycle route through the city and a safe crossing of State Route (SR) 20 (Cumming Highway/Nelson Brogdon Boulevard) from Downtown to Richland Creek. In addition to improving equitable access to the greenway for residents of Sugar Hill, it will also increase multimodal transportation choices within the city by connecting residences to shops and employment centers.

Figure 1. LCI Study Area and Citywide Greenway Loop



Study Area

Figure 2 illustrates the study area for this project. It includes the SR 20 corridor from Sugar Ridge Drive to Buford Highway, Downtown Sugar Hill, and the Hillcrest Drive corridor from SR 20 to Richland Creek. Several alternative routes were considered within the study area (see page 32) before selecting a preferred alignment (see page 36).

Livable Centers Initiative

To support this vision, the Atlanta Regional Commission funded this study through its Livable Centers Initiative (LCI) program. The LCI program helps Metro Atlanta communities reimagine themselves as vibrant, walkable places that offer increased mobility options, encourage healthy lifestyles, and provide improved access to jobs and services.

Figure 2. Study Area

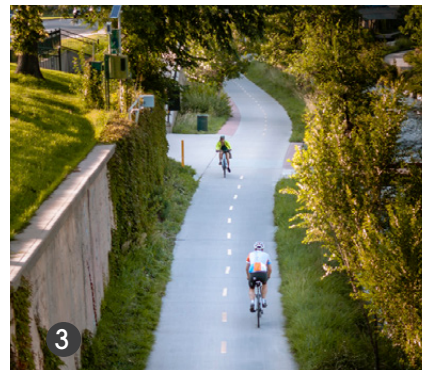


DEFINING “GREENWAY”

“A linear open space that connects multiple destinations along a corridor that is predominately natural in character.”

-Sugar Loop Greenway Master Plan (2016)

What is a greenway, exactly? The Sugar Loop Master Plan (2016), which outlines a plan for a 16.5-mile greenway loop around the city, defines it as “a linear open space that connects multiple destinations along a corridor that is predominately natural in character.” Because this project expands the greenway’s mission by connecting Sugar Hill’s neighborhoods and Downtown to each other and the broader greenway, it also must expand the definition. **Here, we include in the term “greenway” the combination of pedestrian and bicycle facilities that link to this system of active transportation and natural areas in Sugar Hill’s more urban settings.** In some locations, context and physical constraints will call for the use of pedestrian and bicycle facilities other than the traditional shared use path for portions of the route, including those defined at right.



1) Shared use path as a boardwalk; 2) Separate sidewalk and cycle track; 3) Paved off-street trail

Facility Types

SHARED USE PATHS: A path for pedestrians and cyclists that is physically separated from vehicular traffic by an open space or a barrier. Depending on their context, shared use paths may be:

SIDE PATHS: Shared use path within an existing street right-of-way (next to a road)

OFF-STREET TRAILS: Shared use path in an independent right-of-way (separate from a road)

SIDEWALKS: Paved path for pedestrians on the side of a road.

BICYCLE LANES: A lane in the roadway designated for use by cyclists through striping, signage, and pavement markings.

BUFFERED BICYCLE LANES: A bicycle lane with a designated buffer space separating cyclists from adjacent vehicular traffic or parking.

TWO-WAY CYCLE TRACKS: Bike paths that are physically separated from vehicular traffic by a barrier or vertical separation (i.e. at sidewalk level) and allow bicycle movement in both directions.

BICYCLE BOULEVARDS: Streets with low existing vehicular speeds and volumes that are enhanced to improve comfort and safety for cyclists riding in shared lanes with cars, such as traffic calming, pavement parkings, and signage.

TRANSFORMING HOW WE MOVE AND PLAY

A greenway trail and connecting corridors present several important benefits: improved transportation options, opportunities for new forms of economic development, improvements in public health, reduced harm to the environment and increased equity. To ensure these potential benefits are realized they should be incorporated into the greenway planning process as goals for trail planners, developers and advocates. What follows is an overview of the benefits of these multi-use facilities to help inform evaluation of the project moving forward.

Creating value and generating economic activity

- Residential properties will realize a greater gain in value the closer they are located to trails and greenspace
- Tourism and recreation-related revenues from trails come in several forms
 - Create opportunities in construction and maintenance
 - Recreation rentals
 - Recreation services
 - Historic preservation
 - Restaurants and lodging

Improving bicycle and pedestrian transportation

- A complete trail network, as part of a local transportation system, will offer effective transportation alternatives by connecting homes, workplaces, schools, parks, downtown, and cultural attractions

Improving health through active living

- A region's trail network will contribute to the overall health of residents by offering people attractive, safe, accessible places to bike, walk, hike, jog, or skate

Improving environmental conditions – clear skies, clean rivers, protected wildlife

- Greenways protect and link fragmented habitat and provide opportunities for protecting plant and animal species.
- They reduce air pollution by:
 - Providing enjoyable and safe alternatives to the automobile
 - Protecting large areas of plants that create oxygen and filter air pollutants
- They improve water quality by:
 - Creating a natural buffer zone that protects streams, rivers and lakes, preventing soil erosion and filtering pollution caused by agricultural and road runoff

Protecting people and property from flood damage

- The protection of open spaces associated with trail and greenway development also often protects natural floodplains along rivers and streams

Enhancing cultural awareness and community identity

- Trails and greenways can serve as connections to local heritage by preserving historic places and by providing access to them. They provide a sense of place and an understanding of past events by drawing greater public attention to historic cultural locations and events.

Safe and Livable Communities

- Trails and greenways can reduce crime and illegal activity through regular use and high visibility of users.
- Trails and greenways provide informal opportunities to meet and interact with neighbors.
- Integrating unique features such as trails and greenways into communities provides a sense of place and community pride.
- Neighborhoods where children can safely walk or bike to a park, school, or to a neighbor's home are generally also good places to live.



GREENWAYS AND SAFETY

During greenway planning efforts, landowners along the proposed path often voice concerns about an increase in crime due to the expectation that a greenway provides criminals with refuge and sheltered access to targets. With thousands of miles of open trails and greenways throughout the US, there have been many studies that have examined this issue. Most studies have found that while some residents were apprehensive about trail projects, most did not experience problems after the trail's opening. In fact, many became users of the trail and the majority recognized the trail's economic and health benefits to the community. Links to several studies are available in the appendix.

In an article for the National Parks and Recreation Association¹, consultant Mark Allen Young offers a variety of managing agency tools to aid in keeping communities safe, the tools are summarized as follows.

¹ Young, Mark Alan. "Trail Safety: The Perception and Reality." National Parks and Recreation Association. July 1, 2014.

DESIGN FOR SAFETY: Trail safety begins with thoughtful engineering and design, from trail concept to construction, personal safety must be the city's highest priority. Crime Prevention through Environmental Design (CPTED) is a concept that takes a multidisciplinary approach to deterring criminal behavior in the design process. CPTED designs the built environment to mitigate the occurrence of crime and the perception of danger.

POLICIES AND RULES: As Sugar Hill's greenway network grows, the city will continue to set policies and post rules to ensure a safe and enjoyable experience for bicyclists, joggers and walkers. Posted rules related to trail etiquette and accident prevention are common, many managing agencies also include trail safety tips alongside other trail information on signage, in brochures and online, such tips like carrying a cell phone with GPS location capability are particularly helpful.

TECHNOLOGY: To improve emergency response to trail incidents, many park and recreation agencies are installing emergency call boxes and emergency locator systems. The Alpharetta Parks and Recreation Department in suburban Atlanta has placed 13 call boxes along its eight-mile Big Creek Greenway Trail.

Sophisticated emergency locator systems use signage markers with unique location identifiers placed at intervals along the trail. In

Dallas, Texas, the city is expanding an emergency locator system initially used on the Katy Trail to trails throughout the city. This system gives law enforcement and emergency medical services an accurate location and access to the trail without delay.


TRAIL PATROLS: Trails, like neighborhood streets, are linear public spaces used for transportation and recreation. A dedicated trail patrol benefits public safety. The recreational trail system in Columbus, Ohio, is patrolled by Franklin County Metropolitan Park District park rangers on bicycles day and night because the trails are never closed. The Metro Park rangers are certified law enforcement officers, and their presence is a deterrent to criminal activity. As reported by Mark Allen Young, the Big Creek Greenway Trail in Alpharetta is monitored by a dedicated bicycle patrol unit in the Department of Public Safety. George Gordon, Alpharetta's public information officer, asserts, "While crime on our trails is negligible, we do not take trail safety for granted. Our dedicated bike patrol officers play an important role in preventing crimes of opportunity." Volunteer groups with names such as Trail Ambassadors, Trail Watchers, and Trail Sentinel monitor trail systems across the country.

How do Greenways Impact Adjacent Residents?

Multiple studies have examined the impact of greenways on adjacent residents and found they do not have negative effects on neighborhood safety, a common concern in areas considering greenways for the first time. Excerpts from such research is highlighted below and references to additional research and articles are available in the appendix.

"Linear Parks and Urban Neighborhoods: A Study of the Crime Impact of the Boston South-West Corridor" (2001) examined crime along a five-mile greenway in Boston. It found no significant increase in crime for those living next to the corridor. In fact, there was less crime, as compared to houses bordering quiet commercial streets, and significantly less crime than for those abutting a busy arterial street.

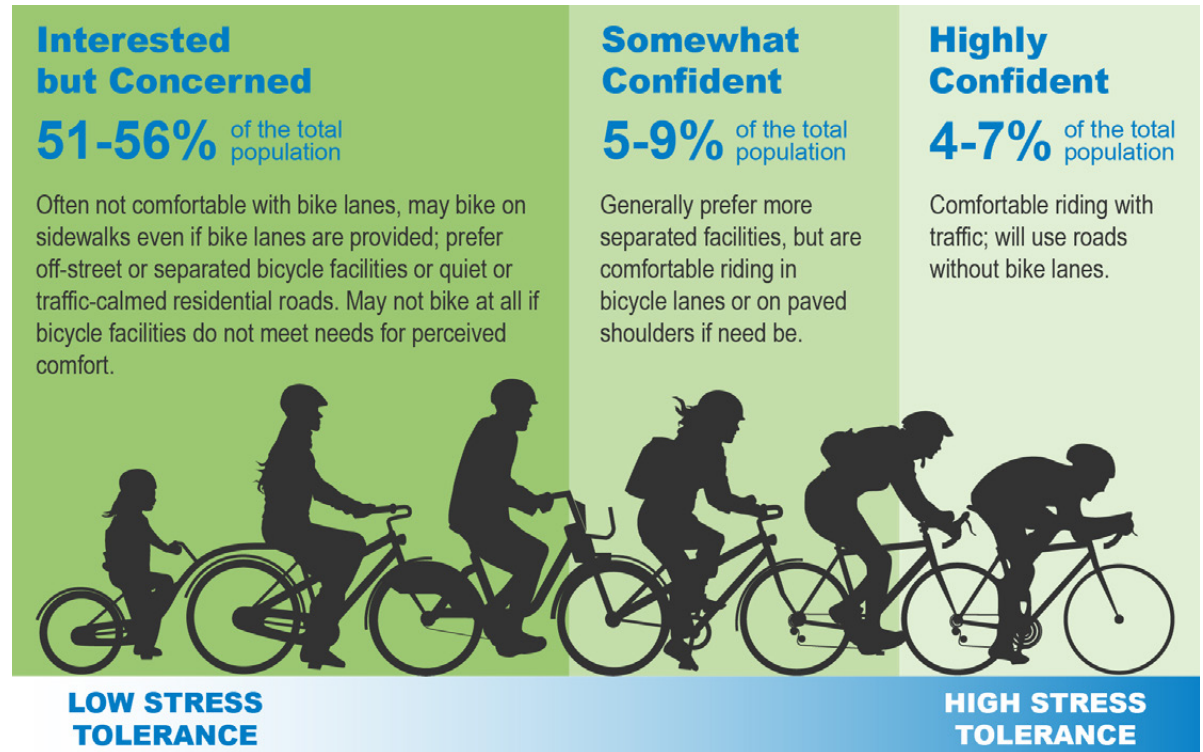
"Preliminary Assessment of Crime Risk Along Greenways in Charlotte" (2005) was a systematic analysis of property crime on or adjacent to a greenway during a four-year period within Mecklenburg County, NC. Data suggest that greenway-adjacent properties do not incur greater risk of crime than other properties within the same neighborhood statistical area. On the contrary, greenway-adjacent properties had lower crime rates 75 percent of the time and in one year (2001), greenways actually appeared safer than the broader community.



DESIGNING FOR EVERYONE

A great greenway serves the entire community. The Sugar Hill Greenway will be designed to maximize access and use of the facility for everyone. This not only means ensuring ease of physical access for people using wheelchairs or strollers by meeting the Americans with Disabilities Act (ADA) design standards. It also means considering potential user behavior and perceptions to choose routes and facility types that will appeal to a wide range of users. Most people (51 to 56 percent of the total population, based on a national survey of the 50 largest metros) are interested in cycling, but are concerned about specific facility types and conditions. They prefer to use separated facilities that make them feel protected. For this reason, separated facilities with comfortable buffers will be used wherever possible. Intersections will be designed to maximize visibility, offer safe places to wait, and slow vehicle traffic. By

Figure 3. Bicyclist Design User Profiles



Data Source: Dill, Jennifer and McNeil, Nathan, "Revisiting the Four Types of Cyclists: Findings from a National Survey," Transportation Research Record: Journal of the Transportation Research Board, 2587: 90-99, 2016.

designing for the most vulnerable or concerned users, we can create an experience that is safe and attractive for as many people as possible.

Concept Direction

For the Sugar Hill Greenway to become a unique destination, it must be responsive to the existing context and reflective of community aspirations. Highlights from the planning process, existing conditions, ongoing planning efforts, and community input that influenced the preferred route and design elements are outlined in this section.

The vision for this project was considered in the context of the City of Sugar Hill's broader efforts to continue to develop a vibrant Downtown, implement a 16-mile greenway loop throughout the city, offer multimodal transportation choices for the community, and foster a high quality of life for residents, employees, and visitors. This project has the opportunity to tie together existing and growing amenities through the heart of the city, helping to maximize the returns on those investments and provide equitable access to them for more community members.



1) The first section of the Sugar Hill Greenway is now open on Peachtree Industrial Boulevard 2) The Bowl, The E Center, upgraded streetscapes, and a new City Hall in Downtown Sugar Hill

GOAL

The goal of this plan is to identify a feasible, desirable route and conceptual design for a new section of the Sugar Hill Greenway that will connect SR 20 neighborhoods to Downtown Sugar Hill, new community parks, shopping plazas, and the broader 16-mile greenway loop. Long-term, this project will form part of the connections to key regional destinations: the Chattahoochee River, Lake Lanier, and park-and-ride transit center near I-985.

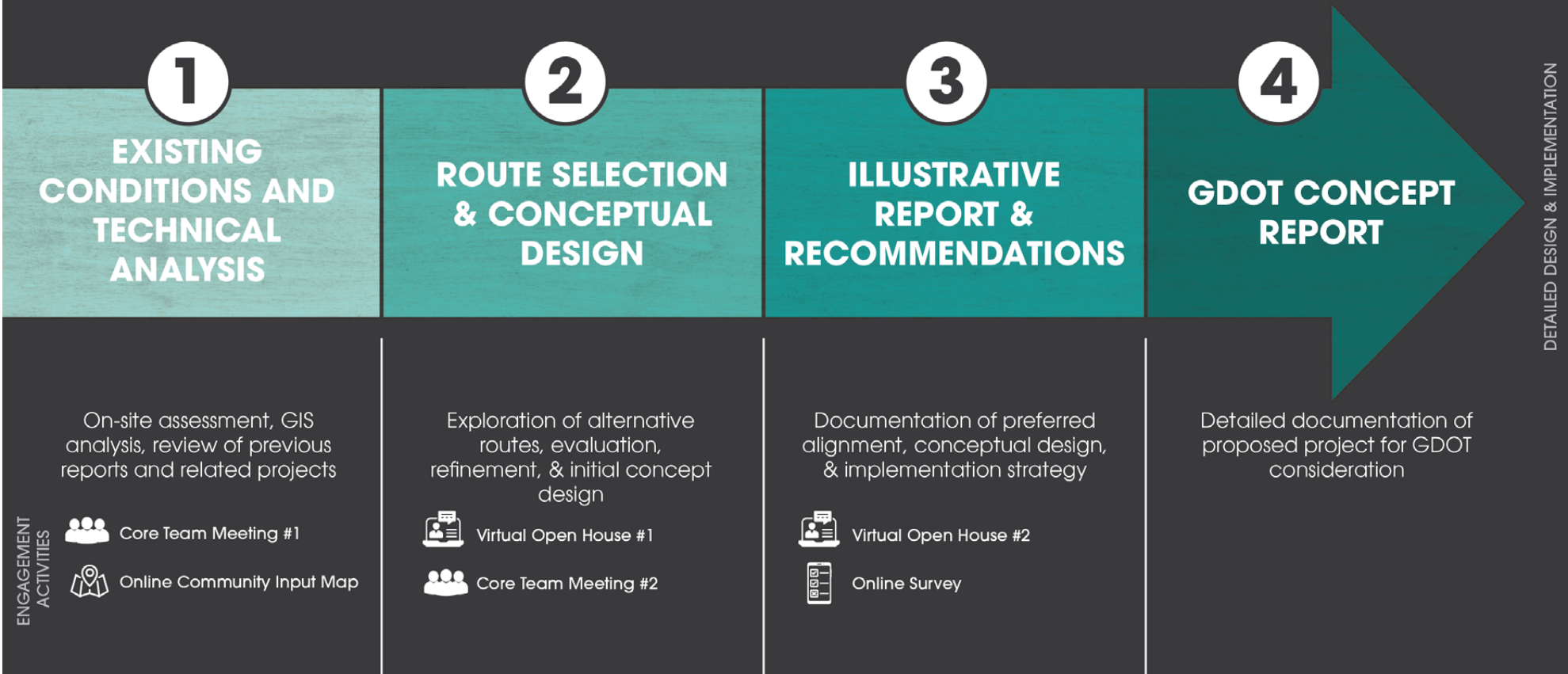
GUIDING PRINCIPLES

The City of Sugar Hill will:

- 1** Design a **safe and comfortable** facility for users of all ages and abilities
- 2** **Connect** community facilities and other useful destinations
- 3** Maximize access to **nature**
- 4** Use existing public land and right-of-way as much as possible

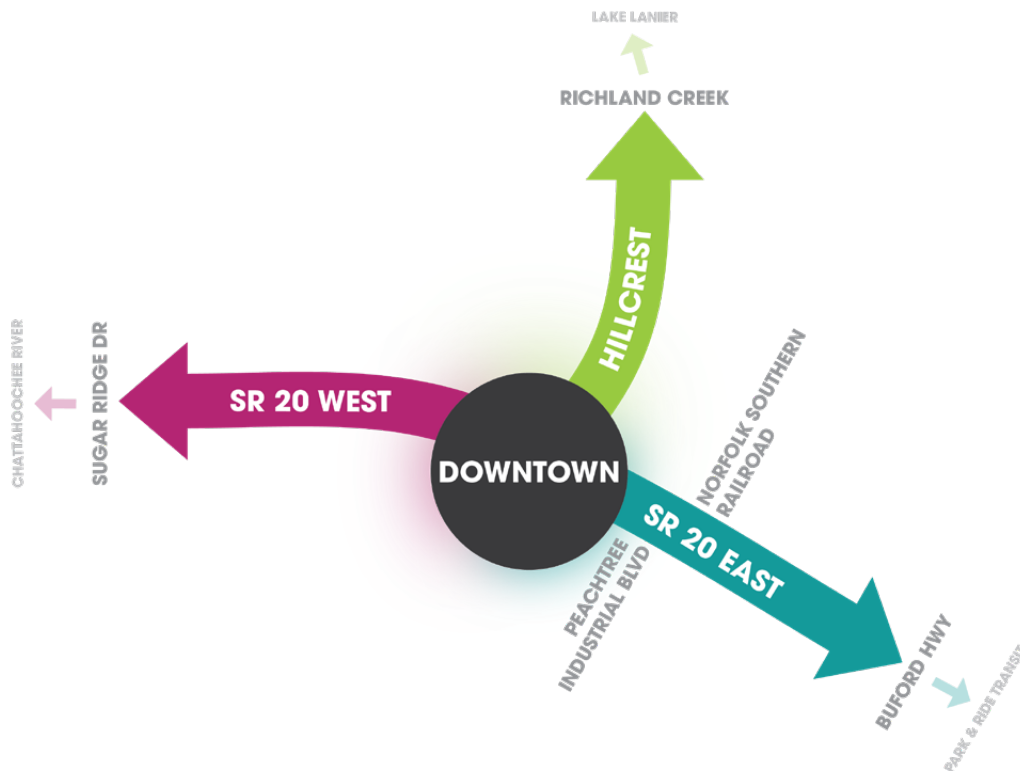
PLANNING & DESIGN PROCESS

This LCI project kicked off in May 2020, with existing conditions analysis and community engagement taking place throughout the summer. This draft concept plan was released in early September and will be revised based on community feedback. A revised plan and an accompanying Georgia Department of Transportation (GDOT) Concept Report will be completed by the end of October 2020. Detailed design and implementation will follow.



INFLUENCING CONDITIONS & PLANS

A great and implementable greenway concept is context-sensitive, addressing key physical challenges, maximizing connections to desired destinations, respecting environmentally sensitive areas, and anticipating future development patterns.

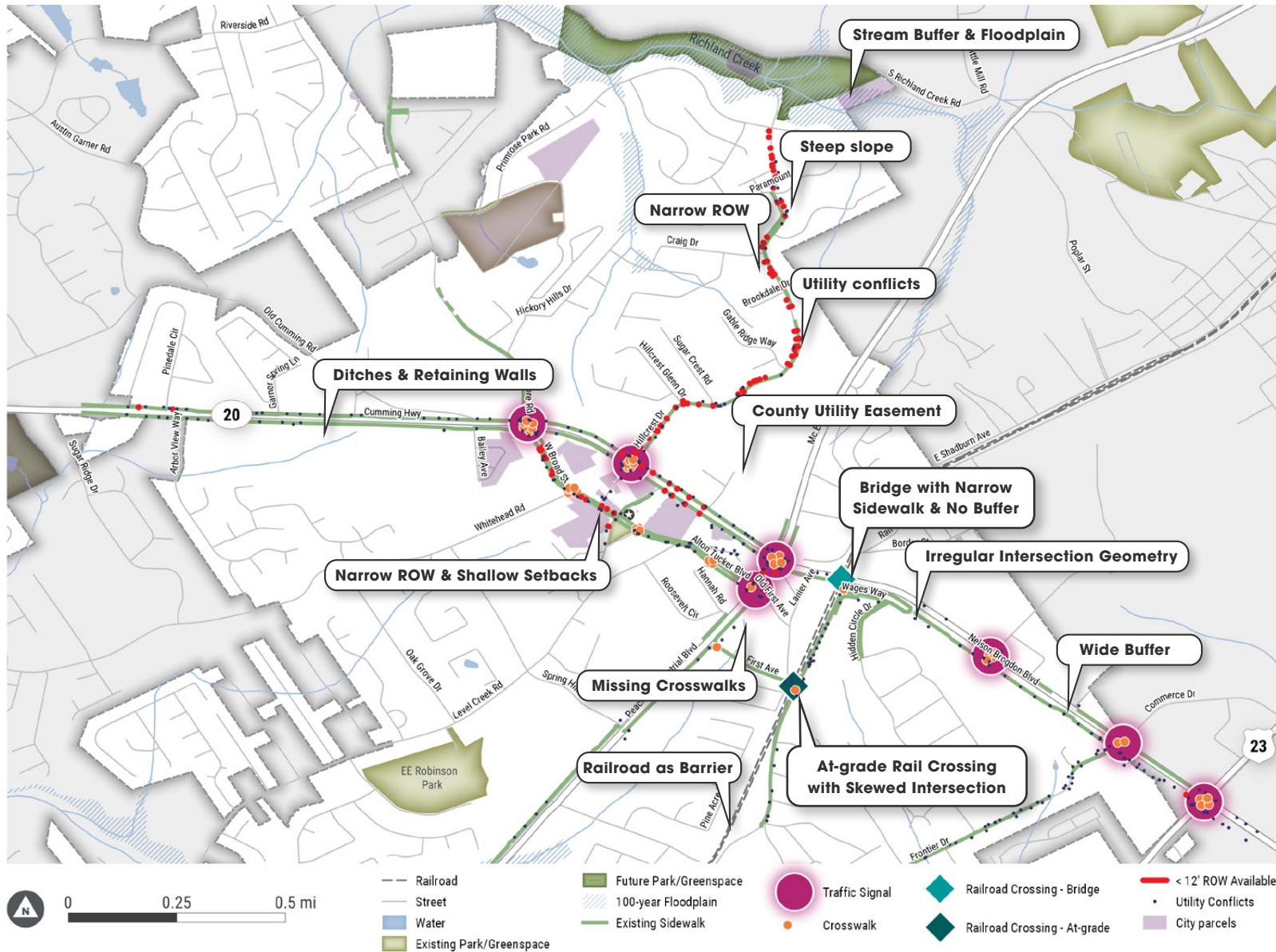


This section outlines key influencing conditions for the study area overall and each of the project corridors—SR 20 West, Hillcrest, SR 20 East, and Downtown— beginning on page 14. Relevant aspects of related planning efforts in and around the study area are highlighted beginning on page 19. The analysis is based on site visits and a geospatial data analysis. A site survey was not conducted as part of this project. Additional information about existing conditions will be available in the Appendix.

Multimodal Connections

Gwinnett County Transit (GCT), the local transit provider, does not offer fixed route local bus service within the study area. The nearest service is Route 101, which picks up at a park and ride lot near SR 20 and Interstate 985 (I-985) with express commuter bus service to Atlanta. The study area is also outside of the GCT paratransit service area. *Connect Gwinnett*, GCT's master plan, shows limited service improvements for Sugar Hill. A new local bus route (Route 50) is planned to pick up at the I-985 park and ride and connect to the Gwinnett Place Transit Center near Duluth. Route 401 will also pick up at the I-985 park and ride lot and offer all-day express bus service to the Chamblee MARTA station. The eastern part of Sugar Hill, including Downtown, will be added to the service area for an on-demand flex route (Flex 500) that will take people to the I-985 park and ride lot to access fixed route service. The I-985 park and ride will be upgraded.

Figure 4. Influencing Conditions Map

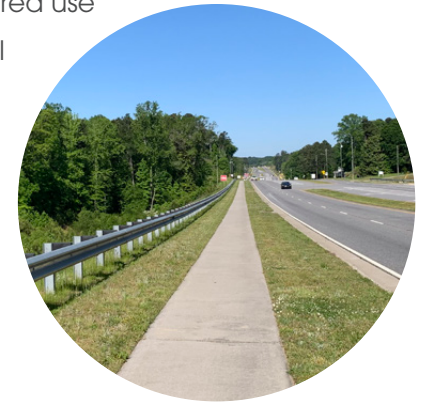




- 1) Much of the land on the south side of this corridor is undeveloped.
- 2) There are multiple locations with steep dropoffs and retaining walls.
- 3) This office building is one of few existing businesses in this section.
- 4) The intersection of SR 20 and Sycamore Rd/W Broad St is the only north-south crossing in this section.

State Route 20 West

The State Route 20 (SR 20) West Corridor runs from the intersection of SR 20 and Sycamore Road/W Broad Street in the east to the new community park on SR 20 just west of Sugar Ridge Drive. SR 20 is a four-lane road with a grass median here. As a regional route, it has a high volume of traffic: 25,500 Annual Average Daily Trips (AADT). There are existing five-foot sidewalks on both sides of the road, but no bicycle facilities. There are few opportunities for pedestrians or cyclists to cross SR 20 in this area. After the W Broad Street/Sycamore Road intersection, the next crosswalk is more than two miles away at Suwanee Dam Road. Many of the properties fronting SR 20 in this area are undeveloped, with a few local businesses along the route. On the south side of the street, most of the frontage is wooded, in some cases with steep topography and creeks. As a result, long sections of the road have guard rails and portions have retaining walls on the south side of the sidewalk. This means that although there is sufficient publicly-owned right-of-way (ROW) in most places, space for a shared use path will be constrained or require civil works.



Hillcrest

The Hillcrest corridor is primarily residential, with Sugar Hill Church on the south end and several warehousing or industrial properties backing up to the east side of Hillcrest Drive behind a wooded buffer. The intersection of SR 20 and Hillcrest Drive may be intimidating for some greenway users. Pedestrians have to walk more than 160 feet to cross SR 20 across five lanes of traffic and right turn slip lanes on every corner. There is an existing sidewalk along most of the east side of the street, with several facility gaps toward the north end. There are only a few short sidewalk segments on the west side and there are no sidewalks on either side from W Broad Street to SR 20. There are no existing bicycle facilities. Although there are several all way stops, there are no crosswalks along Hillcrest Drive at side streets. The available publicly-owned ROW is narrow in many parts of Hillcrest Drive, with most locations having 14 feet or less available from the back of the existing curb to the ROW line. Fire hydrants, utility poles, and stormwater infrastructure frequently occur where a shared use path would go, meaning some utilities may have to be relocated. On the north end of Hillcrest Drive, there is a very steep slope between Shire Village Drive and Primrose Park Drive heading toward Richland Creek and the undeveloped land north of the subdivision has uneven terrain. The land directly north of a planned pedestrian bridge over SR 20 at the E Center Downtown has been considered for a potential shared use path. There are existing County pipeline and utility easements that may be used to form most of a potential connection there.



- 1) The intersection of Hillcrest Dr and SR 20 has right turn slip lanes at all corners, encouraging higher speed turns and creating a hazard for pedestrians and cyclists.
- 2) A new development at the corner of Hillcrest Dr and SR 20 will have 300+ residential units.
- 3) There is a steep slope at the north end of Hillcrest Dr approaching Richland Creek.
- 4) There is an undeveloped area around Richland Creek at the north end of the corridor. Part of this will become a passive city park.



- 1) The Norfolk Southern rail tracks create a barrier between the east and west parts of the city.
- 2) The existing sidewalk on the SR 20 bridge over the railroad is narrow and has no barrier.
- 3) Portions of this corridor have deep setbacks from SR 20, but in some cases there are stormwater drains that will need to be addressed.
- 4) The Dollar Tree is one of many shops and businesses on SR 20 near Buford

State Route 20 East

The State Route 20 (SR 20) East corridor runs from Peachtree Industrial Boulevard to the Sugar Hill city limit just west of Buford Highway. There are large shopping plazas at SR 20 and Buford Highway, and shops, offices, restaurants, places of worship, and warehousing are located continuously along SR 20. Traffic volumes on SR 20 in this area are very high at 47,700 AADT. There is a generous amount of ROW in most locations along this corridor, more than 30 feet is available from the back of the existing curb, a depth that will allow for a comfortable buffer. There are open drainage channels within the buffer throughout, which means drainage modifications will likely be necessary. The most significant challenge in this area is the Norfolk Southern Railroad, which bisects the city. There are two existing rail crossings in this area: a bridge over SR 20 and an at-grade crossing at First Avenue. The existing bridge has narrow sidewalks and no buffer or vertical separation. The crossing at First Avenue has a skewed geometry and grade changes, making it unsafe for pedestrians and cyclists to cross. Peachtree

Industrial Boulevard (PIB) is another intimidating barrier. The intersection of SR 20 and PIB is nine lanes wide at the intersection with no median refuge and a right turn slip lane in the southeast corner that encourages fast right turn movements. There are no existing crosswalks or thru signal phases at the intersections of Alton Tucker Boulevard or First Avenue and PIB.



Downtown

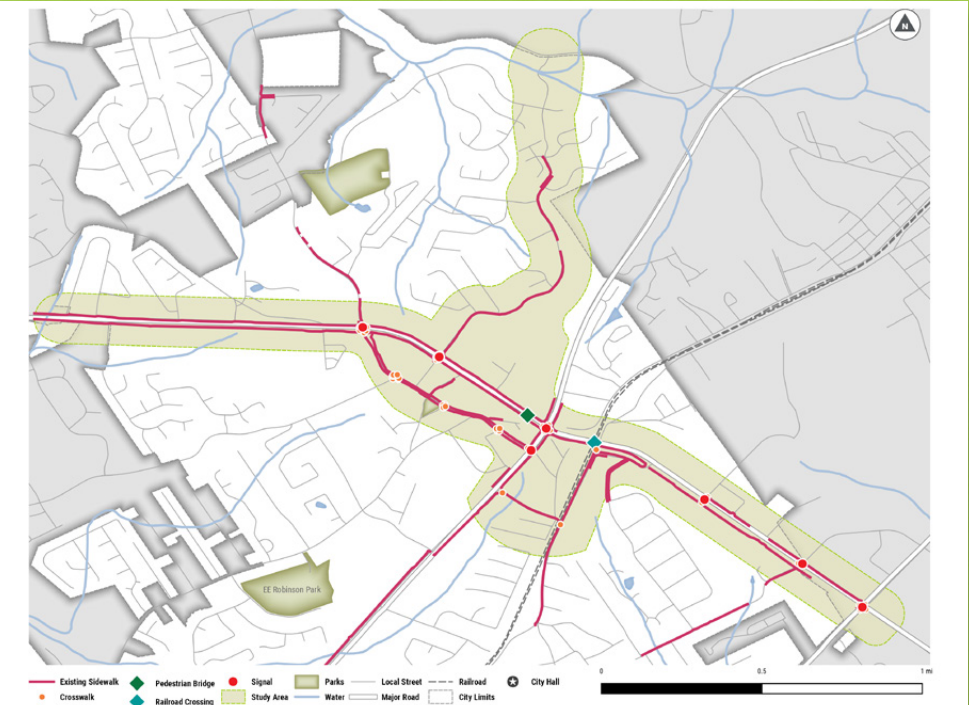
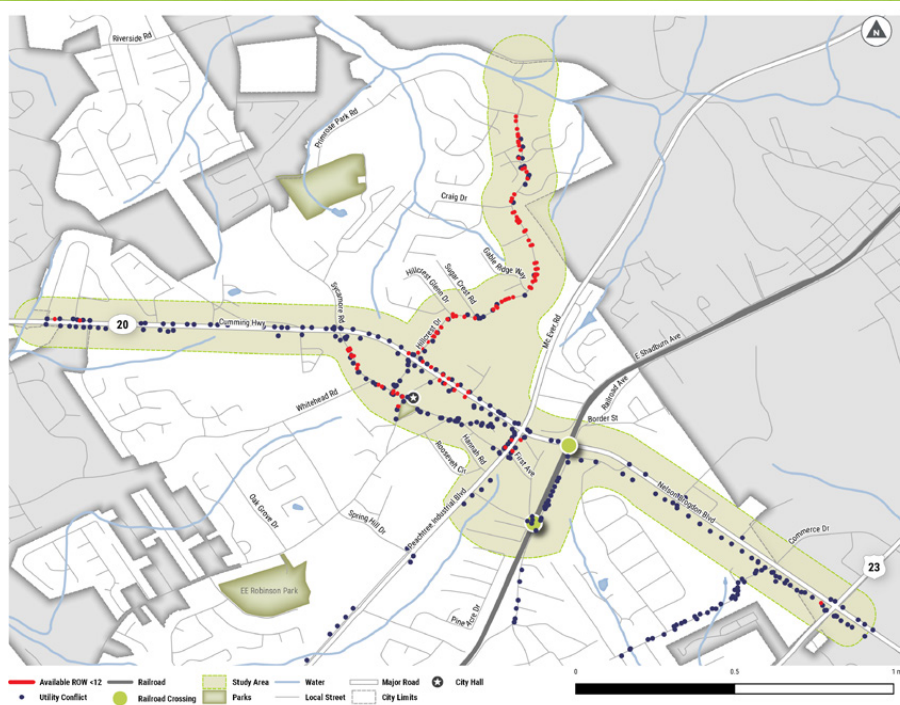
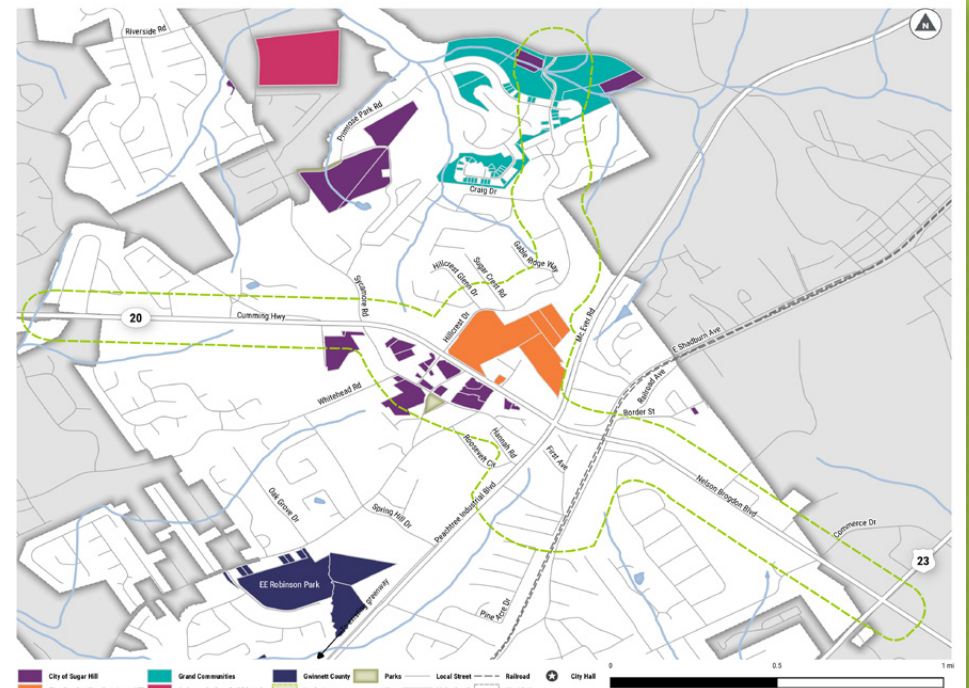
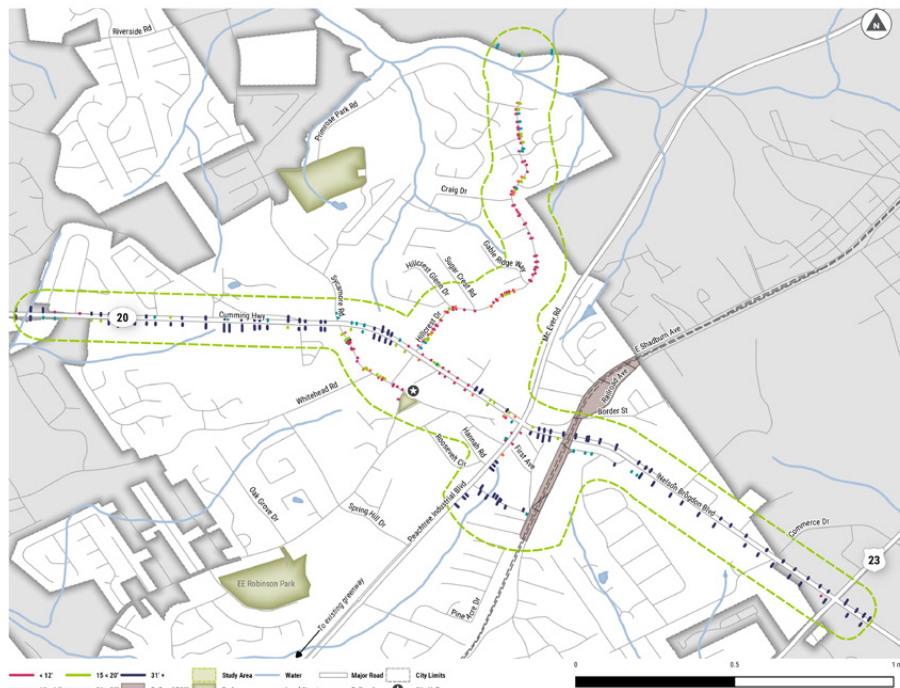
Downtown Sugar Hill is a growing hub of mixed-use development anchored by civic facilities and events venues like City Hall, the E Center, the Eagle Theatre, and The Bowl. Sidewalks have been installed on most streets except for Hillcrest Drive. There are no existing bicycle facilities. There are several locations Downtown with not only constrained ROW, but also constrained physical space available for a potential facility due to relatively shallow setbacks for the urban buildings and a recently installed upgraded streetscape. The City owns several parcels along the alternative routes being considered Downtown, which could reduce the need for acquisition in some cases. Frequent side streets and on-street parking along much of W Broad Street and Alton Tucker Boulevard will cause conflict points for cyclists. Some traffic calming measures have been installed, shown below, but their finishes have become worn and they do not seem to effectively slow traffic.



Existing traffic calming measures are fading and limited in their effectiveness



- 1) Upgraded streetscape with brick inlay, landscaping, and human-scale lighting in front of the E-Center.
- 2) Alton Tucker Blvd terminates at Peachtree Industrial Blvd on the east end of Downtown.
- 3) The E-Center driveway on the east side of the building, where a pedestrian bridge is planned across SR 20.
- 4) Undeveloped property on W Broad St near City Hall.



Influencing Plans

Several recent plans informed the anticipated infrastructure investments and desired development patterns in and around the project study area, including:

Sugar Loop Greenway Master Plan (2016)

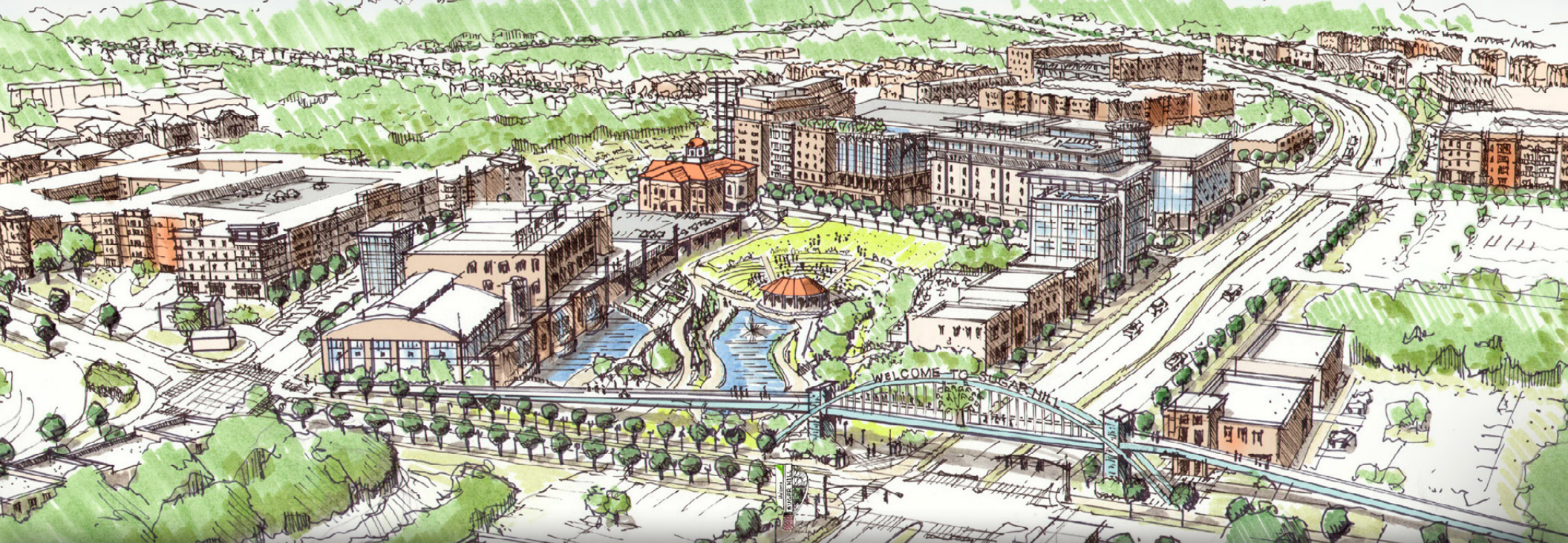
The Sugar Loop Greenway Plan (2016) established a vision for a system of linear greenspaces and trails throughout Sugar Hill. The entire plan features 16.5 miles of paved, shared use trails for pedestrians and cyclists with 11.5 miles of greenways, defined as linear open spaces that connect multiple destinations along a corridor that is predominately natural in character. The proposed route connects to multiple natural, commercial, and civic destinations, including the Chattahoochee River, National Park Service land, Downtown Sugar Hill, Gary Pirkle Park, the Sugar Hill Golf Course, E.E. Robinson Park, and planned city and county parks in the area.

The plan features several proposed trailheads. Within or near the study area for this project, previously proposed trailheads include:

- Sugar Hill Town Green
- E.E. Robinson Park
- Sugar Hill Street Department Facility on Hillcrest Drive
- New pocket park where the trail meets Richland Creek

The plan makes several specific design recommendations relevant to this study area, including:

- Cross SR 20 with a bridge or tunnel to avoid crossing the busy road at grade;
- Enhance safety by adding emergency call boxes, lighting the trail, and designing the trail to enable emergency and maintenance vehicle access;
- Add amenities like benches, shaded rest areas, trash receptacles, dog waste bag dispensers, and drinking fountains to maximize user comfort;
- Integrate wayfinding, branding, and public art; and
- Build for low maintenance, with a preference for concrete surface trails.



Rendering of Downtown Sugar Hill from the *Downtown Sugar Hill LCI Master Plan (2018)* showing the future greenway crossing SR 20 via a pedestrian and bicycle bridge

Downtown Sugar Hill LCI Major Update (2018)

The 2018 update to the Downtown Sugar Hill LCI details the desired evolution of Sugar Hill's growing downtown into an even more vibrant and walkable place with higher density redevelopment, a connected street network with walkable blocks (< 500 feet), enhanced open space, and pedestrian-oriented architecture and site design. Proposed new roads from this plan will provide a framework as large, mostly undeveloped blocks within the LCI study area begin to develop. Several multi-use paths and

new bicycle facilities were recommended in the plan. New crossings of Peachtree Industrial Boulevard at either Alton Tucker Boulevard or First Avenue were recommended, with a focus on getting pedestrians and cyclists safely across this major road. Traffic calming and pedestrian crossing improvements were recommended at the intersection of SR 20 and Hillcrest Drive. A pedestrian bridge over SR 20 was recommended as an extension of Level Creek Road at the E Center to offer a grade-separated crossing option for greenway users.

Sugar Hill SR 20 Corridor Study (2018)

This plan establishes an overall vision for the future of SR 20, an influential travel and development corridor for Sugar Hill, between the Chattahoochee River and Peachtree Industrial Boulevard. The plan recommended the addition of this greenway segment to improve pedestrian and bicycle access within the city to neighborhoods, parks, Downtown, and the future greenway loop, as well as to enhance the character of the corridor with a 100-foot landscape buffer where possible. The intersections of SR 20 with W Broad Street/Sycamore Road and Hillcrest Drive were recommended for upgraded pedestrian crossings and the E Center was identified as a location for a new pedestrian bridge over SR 20.

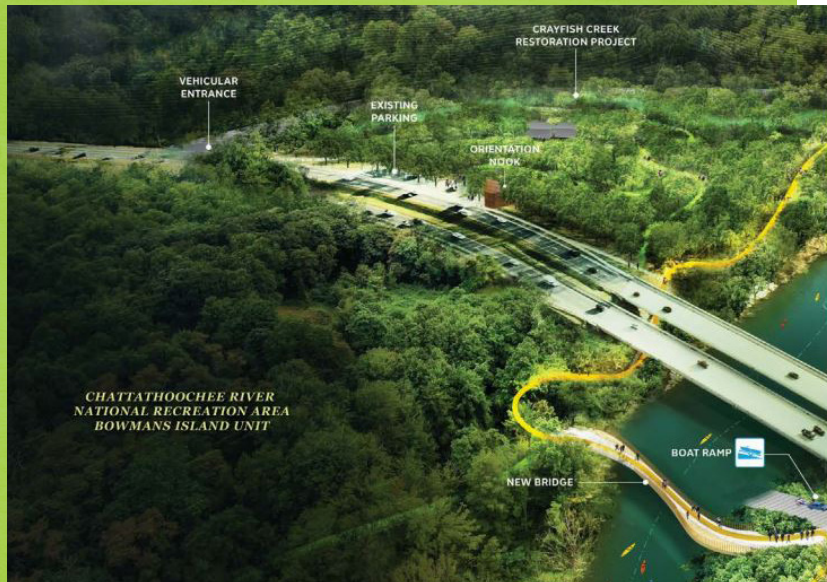
A new community park is recommended at a city-owned parcel on the south side of SR 20 on the west side of Sugar Ridge Drive. It also recommended locations and levels of intensity for future development nodes. Within this study area, two concentrated areas of redevelopment were identified:

- **SR 20 West** (*Node 3 in the plan*): A combination of medium density mixed-use development and medium-density residential development are recommended on the south side of SR 20 from Sugar Ridge Drive to W Broad Street/Sycamore Road. Residential development of varying densities is recommended on the north side.
- **Downtown** (*Node 4 in the plan*): The highest density of mixed-use development is recommended for Downtown Sugar Hill between West Broad Street/Sycamore Road and Peachtree Industrial Boulevard on both the north and south sides of SR 20. Public and institutional uses like City Hall and places of worship will continue to anchor this area.

Gwinnett Countywide Trails Master Plan (2018)

The Sugar Hill Greenway loop was included in the countywide trail master plan as one of the signature trails for the countywide system. The plan also recommended the Western Gwinnett Bikeway nearby, which will pick up at the southeast corner of the Sugar Hill Greenway loop and head southwest toward Duluth, Berkeley Lake, and Peachtree Corners, with an east-west spur to reach Downtown Suwanee.

Regional Impact



A Northern Gateway to the RiverLands

The rendering above from the *Chattahoochee RiverLands Greenway Study (2020)* shows a concept for the new trailhead of the RiverLands trail located at SR 20 and the Chattahoochee River in Sugar Hill proposed in that project. It will continue to draw visitors from across the region to Sugar Hill to enjoy its natural beauty and is an opportunity to attract people to local businesses through a greenway connection. By extending the Sugar Hill Greenway from Downtown, through neighborhoods, to this destination, Sugar Hill can become an early adopter of the plan's vision for a region with strong ties to the Chattahoochee River.

Chattahoochee RiverLands Greenway Study (2020)

This ambitious regional plan outlines a vision for enhanced access to the Chattahoochee River from Buford Dam on Lake Lanier to Chattahoochee Bend State Park. It identifies Sugar Hill as the northern gateway to the RiverLands and recommends an iconic trailhead near the Chattahoochee River at SR 20. Features will include:

- Trailhead amenities like restrooms and water fountains
- Boat ramp and kayak storage
- Separate pedestrian and bicycle bridge across the river at SR 20
- River overlook at Bowmans Island historic fish weir
- Expanded parking
- Interpretive pavilion
- Crayfish Creek Restoration Project

Connecting the Sugar Hill Greenway to this unique destination will greatly expand access to nature for Sugar Hill residents and invite RiverLands visitors to shop and dine in Sugar Hill. As one of the closest downtowns to a RiverLands trailhead, it will also be an opportunity to help showcase what trail-oriented and river-oriented communities in the Atlanta region can look like, a core vision of the Chattahoochee RiverLands project.

Chattahoochee River District Real Estate Supply and Demand Market Update (2020)

A recent market study analyzed approximately 155 acres of publicly- and privately-owned land on the north side of SR 20 near the Chattahoochee River, referred to as the Chattahoochee River District, and real estate trends in the surrounding area. It showed a continued demand for housing in the area, a need to diversify housing types for a growing older population, and an opportunity to develop new products like small lot single-family homes within an easy walk of amenities.

SR 20 Widening Project (2020)

GDOT and the Gwinnett County Department of Transportation (GCDOT) are working on a project to widen SR 20 between Peachtree Industrial Boulevard and Buford Highway. The project goal is to enhance safety and reduce vehicular congestion within the project area. It will widen this section of SR 20 from two lanes to three lanes in each direction, including widening the existing bridge over the Norfolk Southern Railroad. The proposed design

includes 5-foot sidewalks along the bridge, which is the only grade-separated railroad crossing in the area but does not have adequate space to accommodate a wider shared use path (10 feet or wider) and comfortable buffer. The City of Sugar Hill is currently working with GDOT and GCDOT to determine if the design can be modified to accommodate a shared use path.

SR 20 Pedestrian and Bicycle Bridge Project (2020)

The City of Sugar Hill has been actively pursuing the implementation of the pedestrian and bicycle bridge over SR 20 recommended in the Downtown Sugar Hill LCI plan. It submitted an application for federal funding through the BUILD Grant process and sees the project as a cornerstone for improving safe and comfortable access to Downtown for residents of nearby neighborhoods.

COMMUNITY ENGAGEMENT

This project builds on an established community vision to develop a connected greenway system throughout Sugar Hill and to enhance pedestrian and bicycle access to parks, natural areas, the Chattahoochee River, shopping areas, and Downtown, as outlined in the Sugar Loop Greenway Master Plan (2016), Sugar Hill SR 20 Corridor Study (2018), and Sugar Hill Downtown Master Plan LCI Study (2018). Several engagement activities were held to get community input specific to this section of the greenway, including Core Team meetings, virtual open houses, an online community input map, and an online survey. All activities were held virtually due to social distancing requirements in response to COVID-19.

More detailed summaries of each engagement activity are available in the Appendix.



Core Team

A Core Team met twice to have focused discussions about the route selection and desired features for this segment of the greenway. Members included representatives from multiple city departments, the planning commission, neighbors, local businesses and organizations, and representatives from partner agencies like Gwinnett County and the Atlanta Regional Commission. Key direction from Core Team members included:

- Use public right-of-way or land as much as possible to reduce the need for acquisition
- Connect to local businesses
- Support multimodal transportation by connecting to transit routes and adding features like mobility hubs
- Promote healthy living and an “opt outside” mindset with features like water fountains, restrooms, and outdoor exercise equipment
- Ensure adequate lighting and visibility and minimize conflict points to make users feel safe
- Encourage revitalization with trail-oriented development for areas around the railroad tracks and for aging shopping plazas
- Facilitate future connections to recreation areas near Buford Dam and Lake Lanier
- Use landscaping to make the trail an impressive front door to the city and to create more of a buffer from the roadway
- Make the experience comfortable with shade and canopies
- Incorporate opportunities to feature public art; celebrate local history; engage local arts and history groups to develop content; and promote community awareness of the economic, health, and environmental benefits
- Create a cohesive branding and wayfinding system for the entire greenway network that includes artistic elements
- Create an awareness campaign to help residents adopt trail etiquette



Virtual Open House #1

The first virtual open house focused on introducing the project, discussing greenway benefits and features, reviewing alternative routes and their critical challenges, and asking participants about what they think makes a great greenway and which route segments they prefer. Feedback from participants included:

- Select natural settings whenever possible, even if it takes longer
- Make it wide enough to allow for social walking and biking, and for safely passing
- Connect to Downtown, natural areas, parks, and the Chattahoochee River
- Bike and vehicle parking should be available to access the greenway
- Make it pet-friendly
- Add amenities like shade, water fountains with bottle refill features, art, educational signage, and maps



Online Community Input Map

An interactive Community Input Map was developed to get location-specific feedback from the community about the greenway concept. It was open for two weeks in July and got responses from 94 participants. They were asked to share five types of input:

- Places I'd like to walk or bike to
- Ideas for greenway features
- Issue spots for walking or biking
- Routes I currently walk or bike
- Routes I would like to walk or bike, if it was more comfortable or safe

Participants responses are illustrated in Figure 5 through Figure 8 on the following pages, including any open-ended comments they provided.

Community Input Map Results



Destinations

Participants identified Downtown Sugar Hill and the Sugar Hill Station shopping plaza at the intersection of SR 20 and Buford Highway as the places they would most like to walk or bike to within the study area, with Downtown Sugar Hill being the most popular choice. Just outside of the study area, they also identified EE Robinson Park Baseball Complex and the planned new city park on SR 20 near Sugar Ridge Dr as desired destinations for walking or biking.



Issue Spots

Within the study area, locations identified as issue spots for walking or biking included:

- The Shell gas station at the intersection of SR 20 and Peachtree Industrial Blvd
- Shopping plazas at the intersection of SR 20 and Buford Hwy



Feature Ideas

Several participants added locations where they had ideas for greenway features within the study area, including pedestrian and bicycle bridges over SR 20, bike parking Downtown, and amenities like restrooms and water fountains.

Current & Desired Routes

Several routes within or directly connecting to the study area were identified as routes people would like to walk or bike if they were more comfortable or safe, including:

- W Broad St/Alton Tucker Blvd
- SR 20 (Sycamore Rd/W Broad St west to the Chattahoochee River)
- Off-street route through the planned new city park on SR 20 near Sugar Ridge Dr
- Church St
- Level Creek Rd (Alton Tucker Blvd to EE Robinson Park)
- Sycamore Rd (SR 20 to Primrose Park Rd)
- Whitehead Rd (W Broad St to Suwanee Dam Rd)
- Off-street route through wooded parcels east of Hillcrest Dr from SR 20 to Richland

Figure 6. Community Input Map - Areas of Concern

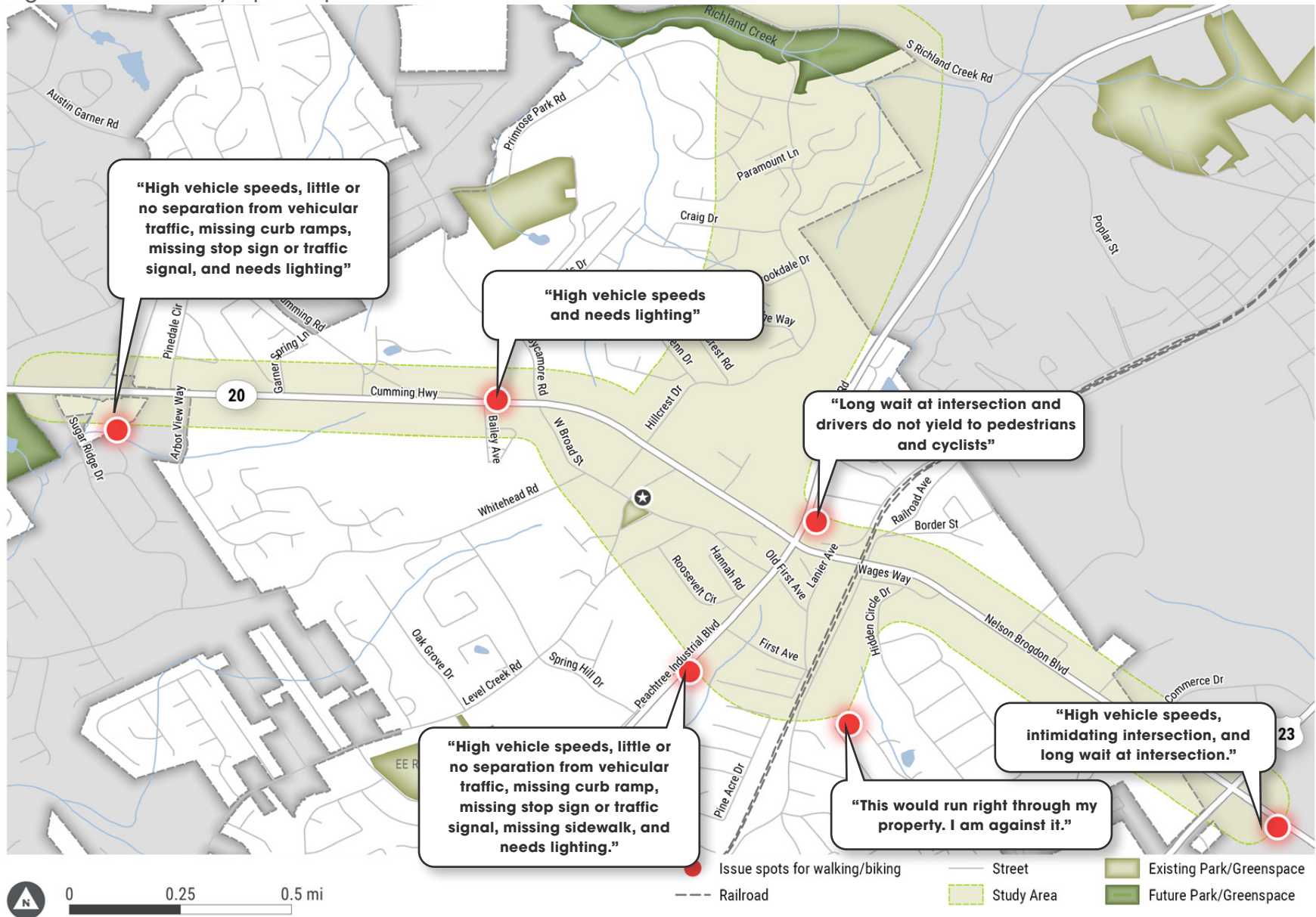


Figure 7. Community Input Map - Feature Ideas

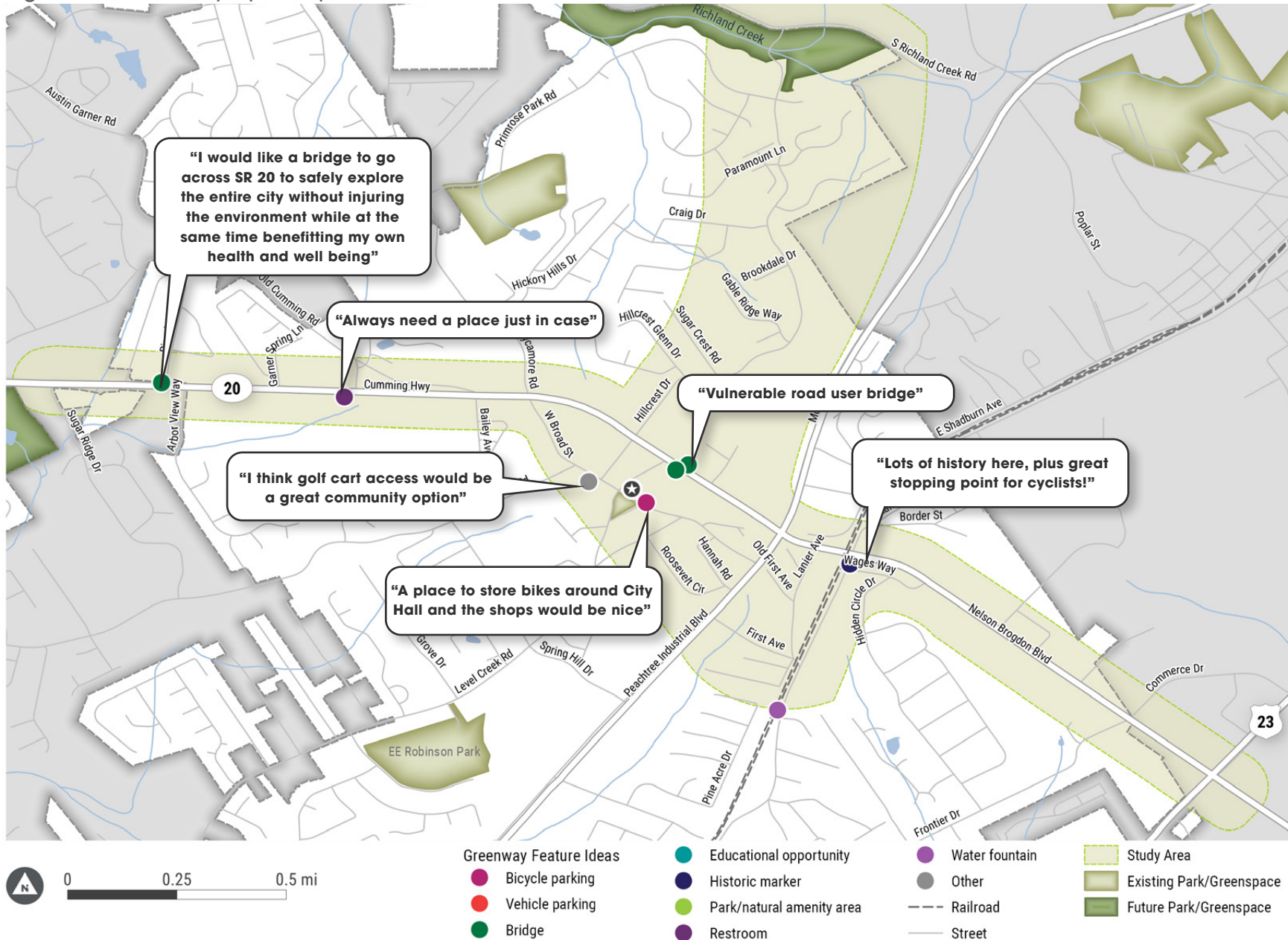
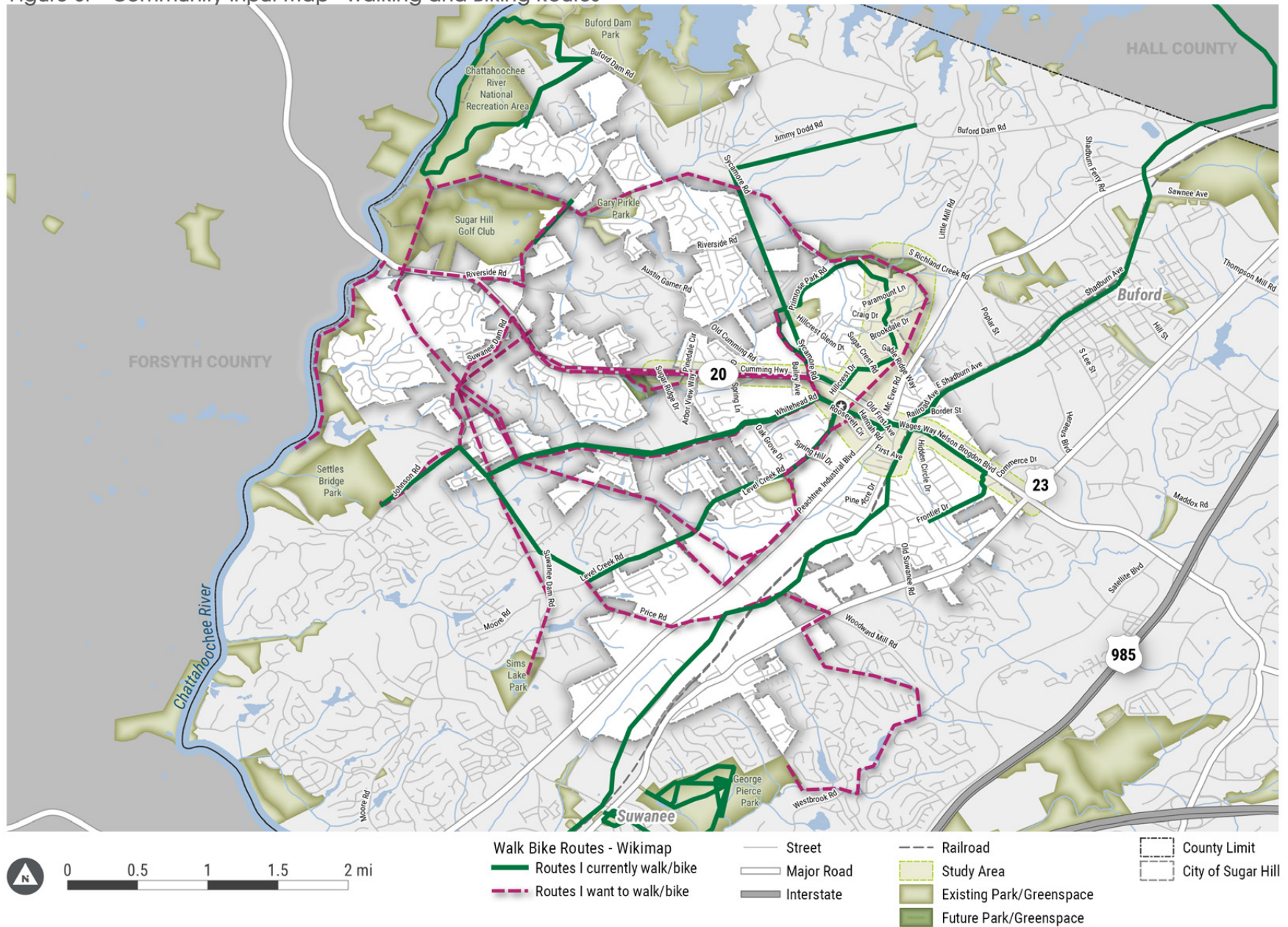


Figure 8. Community Input Map - Walking and Biking Routes





Virtual Open House #2

A second virtual open house was held on September 9, 2020 to share the proposed route and conceptual design for the proposed greenway segments. Participant comments included:

- Most participants said they would probably feel comfortable on each of the proposed segments.
- A wider landscaped buffer or barrier such as trees or a fence was requested on the SR 20 West section.
 - *The buffer design in this area is constrained by available space and GDOT landscaping requirements, which limit what can be placed directly next to SR 20*
- Participants wanted more information about the distance between the proposed Hillcrest segment and their homes.
 - *Exact placement of the trail within the proposed corridor will be determined in the design phase*
 - *A fence was recommended to buffer these properties from the trail*
- Neighbors want to maintain mature trees.
- Proposed access points looked about right.
- The preferred order for construction was:
 1. Hillcrest
 2. Downtown
 3. SR 20 East
 4. SR 20 West



Online Survey

Community members gave feedback on the draft report through an online survey, which was open from September 23 to October 4. 188 people participated. Key themes included:

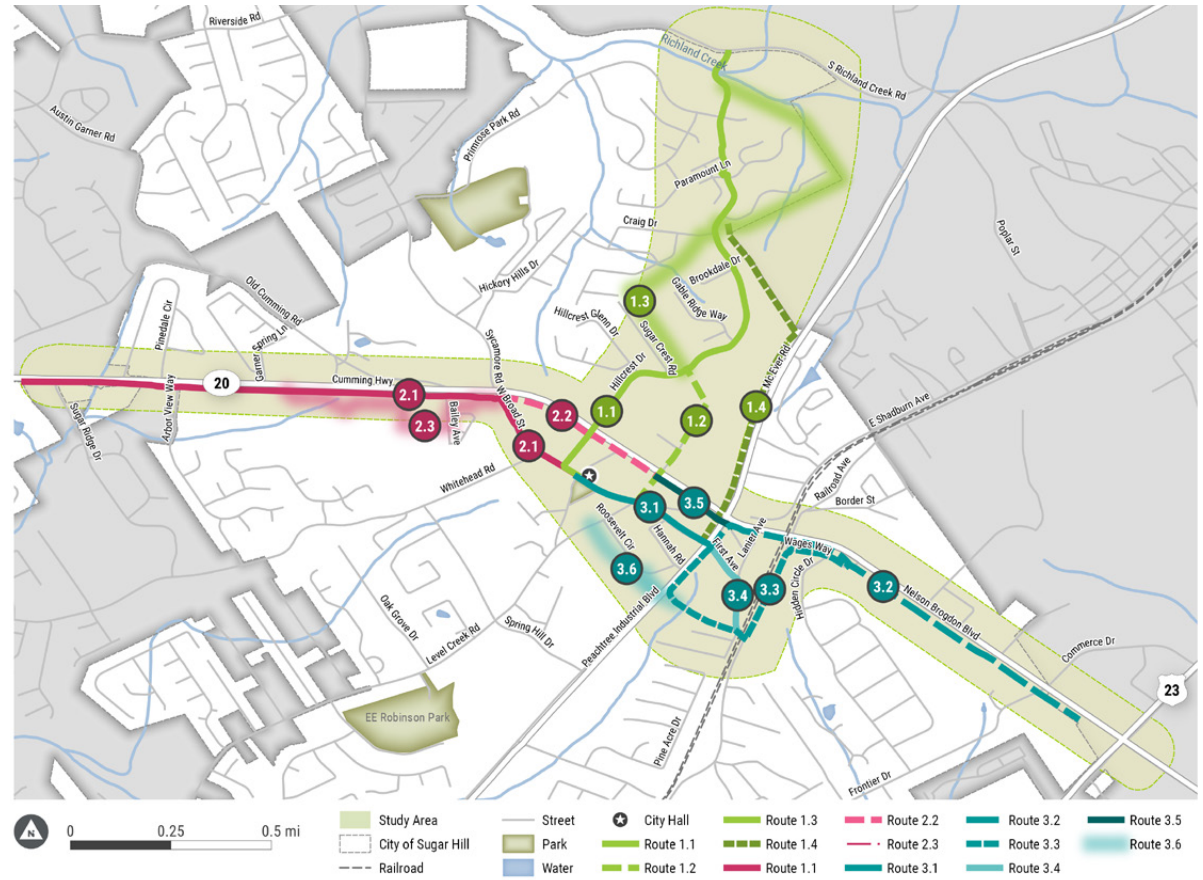
- Most people thought the route looked good, with only 5 percent saying they did not like the proposed route.
- Strong support for the wider landscaped buffers possible in some locations, natural settings, new parks, and connections to Downtown, including intersection improvements.
- Most people said they would feel comfortable using each of the proposed segments. Only 2 to 10 percent of respondents said they probably wouldn't be comfortable for all segments except SR 20 West, where 21 percent thought they may be uncomfortable, citing a desire for the path to have more separation from the road there.
- Desire to ensure visibility and lighting for the off-street path along Hillcrest and reduce odors from the dump.
- Desire for better access for neighborhoods north of SR 20.
- Confusion over whether parking would be lost Downtown.
- Concerns over cost from a small number of respondents.
- The preferred order for construction was:
 1. Downtown
 2. Hillcrest
 3. SR 20 West
 4. SR 20 East

ROUTE SELECTION CONSIDERATIONS

Choosing the right route for a greenway is a balancing act between practical considerations and community aspirations to make sure it can not only be afforded and implemented in a reasonable time, but also that it will be well used and loved by many community members. The decision involves tradeoffs between access to destinations; user safety and comfort; available right-of-way; topography and physical challenges; and constructability and likely expense.

Access to destinations and natural settings were identified as important factors for community members through engagement activities. Available right-of-way, constructability, and likely expenses ultimately had the greatest influence on route selection, as they have the largest impact on the potential for near-term implementation. Routes that provide excellent community benefits but require acquisition or expensive construction are recommended as future routes to be added as properties redevelop.

Figure 9. Alternative Routes



DESIGN STRATEGIES

Several strategies were developed to describe the overall approach to the greenway concept design in a way that maximizes the realization of community aspirations while recognizing physical and fiscal constraints. These include:

1 Avoid Intimidating Intersections.

Minimize crossing distances

Strategies may include providing curb extensions, refuge islands, tighter curb radii, mountable truck aprons, and narrowing or removing travel lanes.

Maximize separation between motorists and greenway users

The volume and speed of vehicular traffic at certain intersections can act as a barrier to some greenway users and detract from the desired greenway experience.

2 Find and Create Natural Experiences.

Preserve and protect ecologically sensitive areas along the greenway.

Avoid or minimize impacts to wetlands, rivers, streams, steep slopes, and habitats for rare or endangered species. Use vegetative buffers and natural stormwater infiltration wherever possible.

Design native and pollinator-friendly landscape plantings.

These context-sensitive plantings will help forge a unique identity for the greenway.

Transform open spaces along the greenway into parks and pocket parks that support multiple user types and functions.

Connect the greenway to parks that have off-street trail experiences in natural settings.

3 Maximize user comfort and safety.

Make the greenway accessible to and usable by individuals with disabilities.

The surface should be firm, stable, slip-resistant, and compliant with ADA Accessibility Guidelines.

Support the social function of the greenway.

The width should allow people to travel side-by-side with friends and be passed by users approaching from the opposite direction without increasing the potential for conflicts.

Enhance visibility to give peace of mind.

The presence of other people and good visibility can increase the sense of personal safety, help deter crime, and encourage use at all times of day.

4 Create a visually coherent experience.

Install frequent wayfinding.

Users will clearly recognize they are on the Sugar Hill Greenway no matter where along the route they are located.

Create an aesthetic identity.

Design elements like site furnishings, trail amenities, and wayfinding should be used consistently to reinforce a unique identity.

Make trailheads identifiable gateways.

Ensure transitions between segments are seamless with no perceived gaps.

5 Connect to places people want to go.

Make connections to destinations convenient and continuous.

Include direct access to Downtown, parks, open space, neighborhoods, and shopping.

Connect to existing and planned sidewalks, bike facilities, and transit service.

Integrate the east and west sides of Sugar Hill.

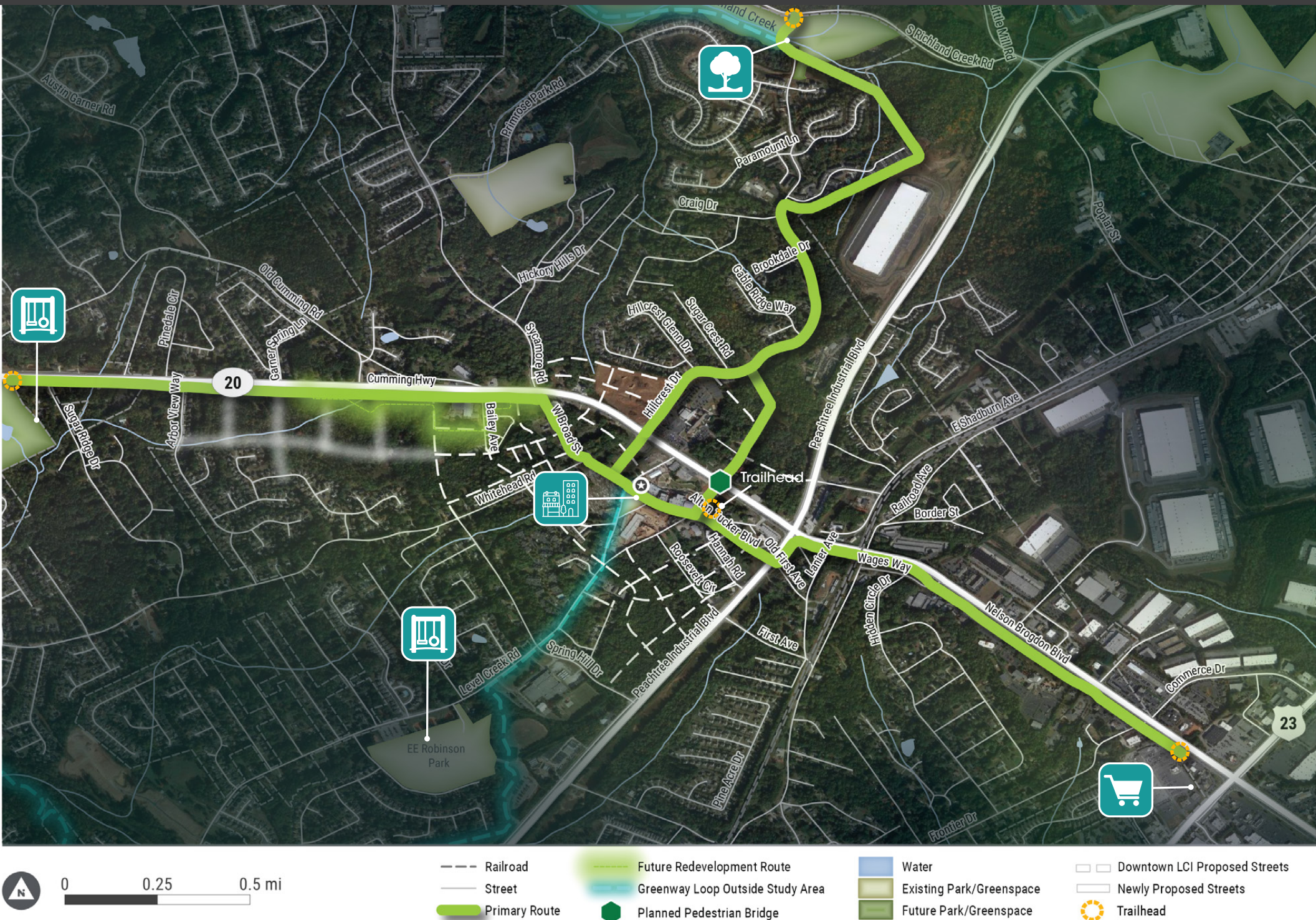
Conceptual Design

The conceptual design for the preferred alignment, outlined in this section, was based on the existing conditions analysis, planning influences, community priorities, and tradeoffs described in the previous section.

Figure 10 illustrates the preferred route for this section of the greenway, which runs along SR 20 from the new park at Sugar Ridge Drive to W Broad Street/Sycamore Drive; along W Broad Street and Alton Tucker Boulevard Downtown; a short distance up Peachtree Industrial Boulevard back up to SR 20; and east on SR 20 to Buford Highway. It will have twin critical paths, one along Hillcrest Drive and a parallel off-street route, giving users the option to use an at-grade street crossing or the planned pedestrian and bicycle bridge, then converges along Hillcrest Drive and later veers to the east through a wooded area before reaching Richland Creek.

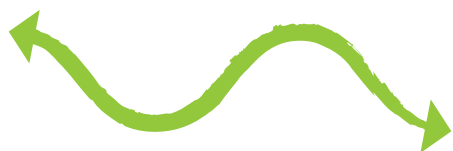
The conceptual design will be refined and detailed as the project enters the design and implementation phases. It ensures the community is aligned in its vision for the project, highlights key design considerations, proposes design approaches, and sufficiently develops the design to determine an estimated cost and implementation strategy. This section gives an overview of the greenway route and typical features, as well as a detailed description of each corridor, including the route, typical sections, key crossings, and signature destinations.

Figure 10. Preferred Alignment Map



OVERVIEW

The greenway features illustrated in Figure 10 are described below and on the following pages.



Paths

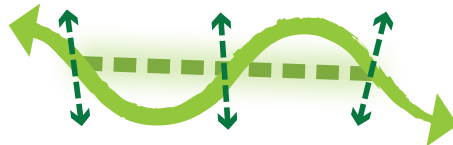
Primary Alignment

The preferred alignment is the priority route to be pursued by the City of Sugar Hill and its partners to connect Downtown to nearby neighborhoods and destinations, and to ultimately become the central feature of a larger citywide greenway network. It uses primarily publicly-owned ROW, easements, or minor acquisition.



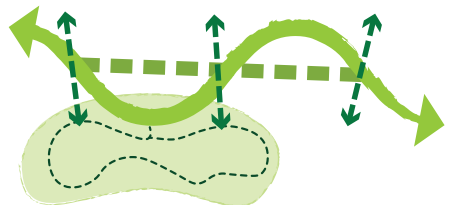
Future Development Routes

Routes that are recommended, but occur on private property and will require cooperation from property owners are indicated as “future development routes.” The exact alignment of these routes may vary to account for building placement, setbacks, and environmental conditions as properties develop.



Access Points

Regular points of access along the trail will be critically important to improve mobility and access to community amenities and neighborhoods. Ideally, access points should occur about every 500 feet, the same distance as a walkable city block. In locations where there is no existing adjacent development, these access path designations may take the form of future road locations to be constructed as properties redevelop.



Park Trails

Paved or unpaved trails at local parks can extend the greenway experience by connecting users to loops in natural settings.



Destinations

Community Park

A new community park is being designed on a City-owned parcel on the south side of SR 20 near Sugar Ridge Dr. This will be the western terminus of this section of the greenway and will provide a fun end point for users. It will include a shared-use path on site, trailhead amenities, and limited vehicular parking. (See page 45 for more information.)



Natural Retreat

A natural park will be developed at a City-owned parcel on the north end of the Hillcrest corridor between Richland Creek and S Richland Creek Road. It will retain its wooded character and have limited, ecologically sensitive programming. The focus will be on informal, passive activities that allow community members to engage with nature. (See page 51 for more information.)



Downtown

The east-west and north-south segments of the project will meet in Downtown Sugar Hill, connecting users to civic destinations like City Hall, entertainment venues like the Eagle Theatre and the Bowl, housing, and local shops and restaurants.



Neighborhood Shopping

The preferred alignment provides access to many shops, restaurants, and other businesses along SR 20. Convenient and safe access to these everyday essentials will encourage neighbors to run some of their errands by foot or bike.



Regional Destinations

This project will be a critical first step toward building out shared use paths to reach popularly requested walking and biking destinations in the area: the Chattahoochee River, Lake Lanier, and the park and ride transit center near I-985. Future projects should aim to fill the remaining gaps beyond this study area to reach these focal points.



Amenities & Features

Comfort Stations

Comfort stations make it convenient to opt outside for the day by providing a place to rest and regroup. These typically feature seating, a trash and recycling bin, a water fountain, bicycle parking, and a small shelter. Where possible, they could include a public restroom. They can be co-located along transit routes, with bike share docking stations, or near public parking to support a multimodal transportation network.



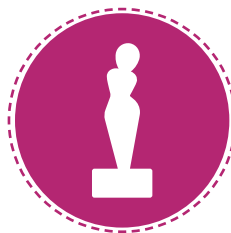
Waysides

Waysides are rest areas placed periodically along the route to give people a spot to pull off and pause without stopping in the middle of the path. These are simpler than comfort stations and typically feature seating, shade, and a trash and recycling bin.



Parking

Parking for bicycles and vehicles will be provided at select locations throughout the project area. Bicycle parking is recommended at all parks and activity centers. For vehicle



parking, existing public parking and joint use parking agreements with private lots are recommended wherever possible to avoid dedicating additional land to parking. Limited new parking is recommended.

Art

Art will be used to invigorate spaces throughout the greenway. Recommended locations are identified in this section. Exact themes and pieces will be determined in the implementation phase in collaboration with local artists, with a narrative surrounding local history being the intent of some installations.



Wayfinding

Getting around the Sugar Hill Greenway will be easy. Signs and maps will be installed periodically along the route to help users locate themselves, decide which way to go, and easily navigate to their destinations. Distinctive art installations and connections to memorable local landmarks like City Hall will further help users naturally orient themselves along the route. Recommended locations for major wayfinding signs are identified in this section and will be detailed in the design phase.

STATE ROUTE 20 WEST

The SR 20 West segment runs from W Broad Street/Sycamore Road to just past Sugar Ridge Drive, where a new community park is being designed on a city-owned parcel. It will feature a shared use path along SR 20, with a proposed alternative route off the main road as properties redevelop.

Preferred Alignment

This facility will require grading and/or retaining walls for most of its length to add sufficient width for a shared use path. For an extended low-lying area near an existing bridge, a pedestrian structure can be used alongside the existing bridge to minimize grading and other impacts. This structure will likely require additional wetlands permitting and some property acquisition. Acquisition is expected to be minimal, focused around intersections to transition to the trail where turn lanes push the facility back.

Future Development Route

A parallel route is recommended along a portion of this segment to give users the option to travel further back from SR 20 in an environment with lower traffic volumes. Most of the land in this area is currently undeveloped and the implementation of this

route will depend on the development of these properties. Depending on the site plan for the eventual development, this may either take the form of an off-street path in a natural setting or a side path along a new street.

Access Points

Because there are few existing destinations adjacent to this route, most of the recommended access paths will take the form of future streets as undeveloped properties are built out. Figure 11 shows the new streets recommended in the *Downtown Master Plan LCI*, as well as newly proposed streets west of that study area. As these properties develop, the exact locations of the streets may vary. They should connect to the greenway at a rhythm of approximately every 500 feet and should form a connected network to provide access to neighborhoods to the south.

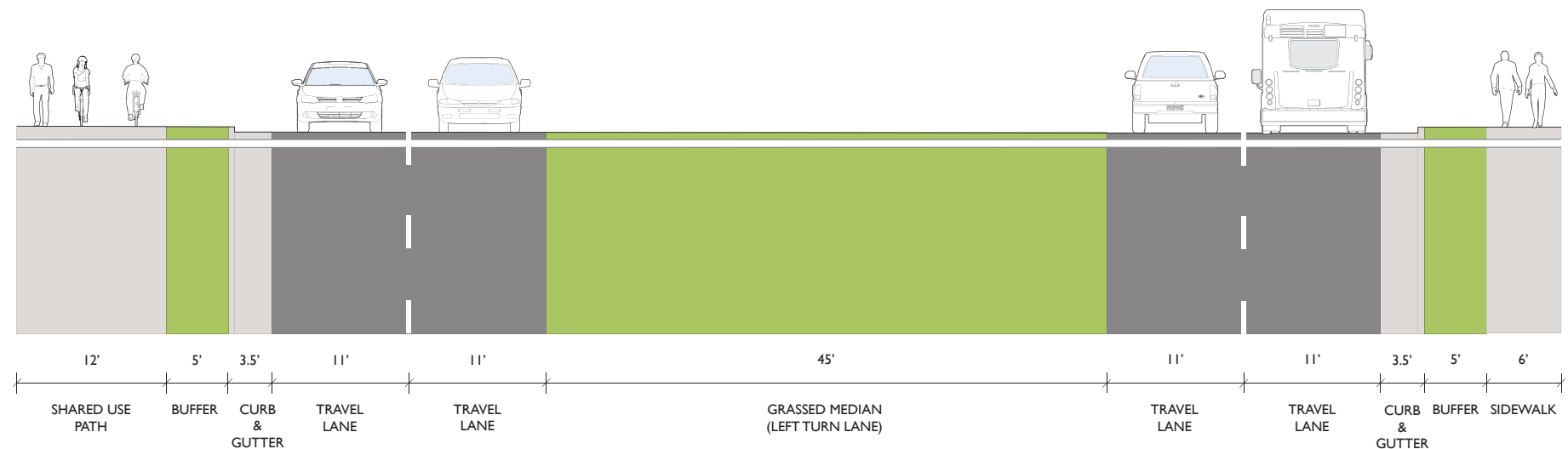
Figure 11. Proposed Greenway Map - State Route 20 West



Typical Sections

Most of this corridor has a constrained right-of-way, and in some cases retaining walls, guard rails, or other features limit the space physically available for a shared use path. The typical section in this area will be a 12-foot shared use path for pedestrians and cyclists on the south side of SR 20, with a 5-foot buffer separating the path from the roadway. Some acquisition will be needed to accommodate a path in select locations.

Figure 12. Section A - SR 20 (Cumming Hwy) from W Broad St to Sugar Ridge Dr



Key Crossing

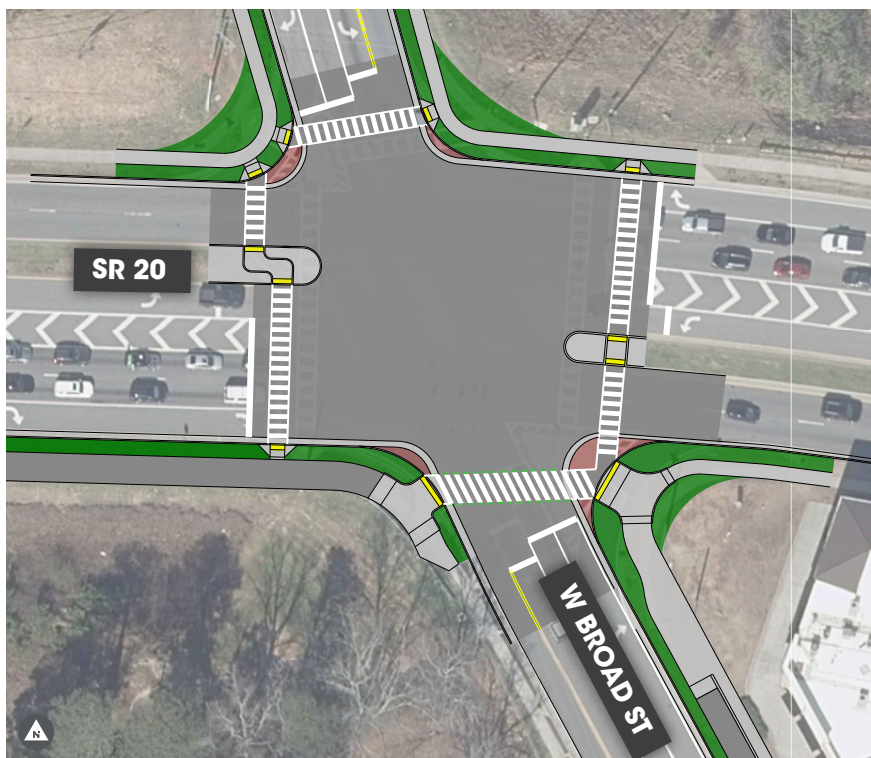


Figure 13. SR 20 and W Broad St/Sycamore Rd Intersection Concept

SR 20 and W Broad St/Sycamore Rd

- Tighten turning radii on all four corners and add a truck apron to accommodate turning movements of larger vehicles
- High visibility crossing with refuge islands on SR 20 for pedestrian safety and comfort
- Reconfigure the ramps that cross W Broad St to allow a variety of user types to access the shared use facility that travels west along SR 20
- Shared crosswalk for pedestrians and cyclists across W Broad St on the south side of the intersection
- Signage to make turning vehicles more aware of pedestrian crossings

THIS ILLUSTRATION IS CONCEPTUAL. FINAL DESIGN MAY VARY.

Rendering of a new 12-foot
concrete shared use path on the
south side of SR 20 between W
Broad St and Sugar Ridge Dr



Destination: New Community Park

The City of Sugar Hill is currently developing a master plan for a City-owned parcel on the south side of SR 20 just west of Sugar Ridge Drive. Figure 14 shows several park elements that would support its role as a greenway anchor and should be considered for inclusion in the park master plan. A trail loop in a natural setting in this location will help meet a community desire to have more off-street greenway experiences by taking advantage of a property already owned by the City. The northeast corner will have trailhead amenities like an information kiosk, bike repair station, seating, and bike parking. From there, a gateway corridor with sculptures and artistic elements will lead into the park. A flat learning loop will offer a safe space for kids to learn how to ride their bikes. A limited amount of parking on site will serve both park and greenway visitors, making the greenway more accessible for users who do not live nearby.

Figure 14. New Community Park Concept - Program Diagram



HILLCREST

The Hillcrest corridor will connect Downtown and residential neighborhoods to a new park on the north side of Richland Creek through a combination of side paths along Hillcrest Drive and off-street paths in natural settings. It will have a relaxing, wooded character.

Preferred Alignment

There will be two ways to access the Hillcrest corridor from Downtown. The first is a shared use path on the east side of Hillcrest Drive that begins at W Broad Street Downtown and continues north before transitioning to an off-street path south of Marakanda Trail. The corridor will require grading and in some places small retaining walls may be necessary to build up additional width for the trail. Right-of-way acquisition will be minimal. Space is limited between Sugar Crest Drive and the utility easement, where the buffer has been minimized or eliminated.

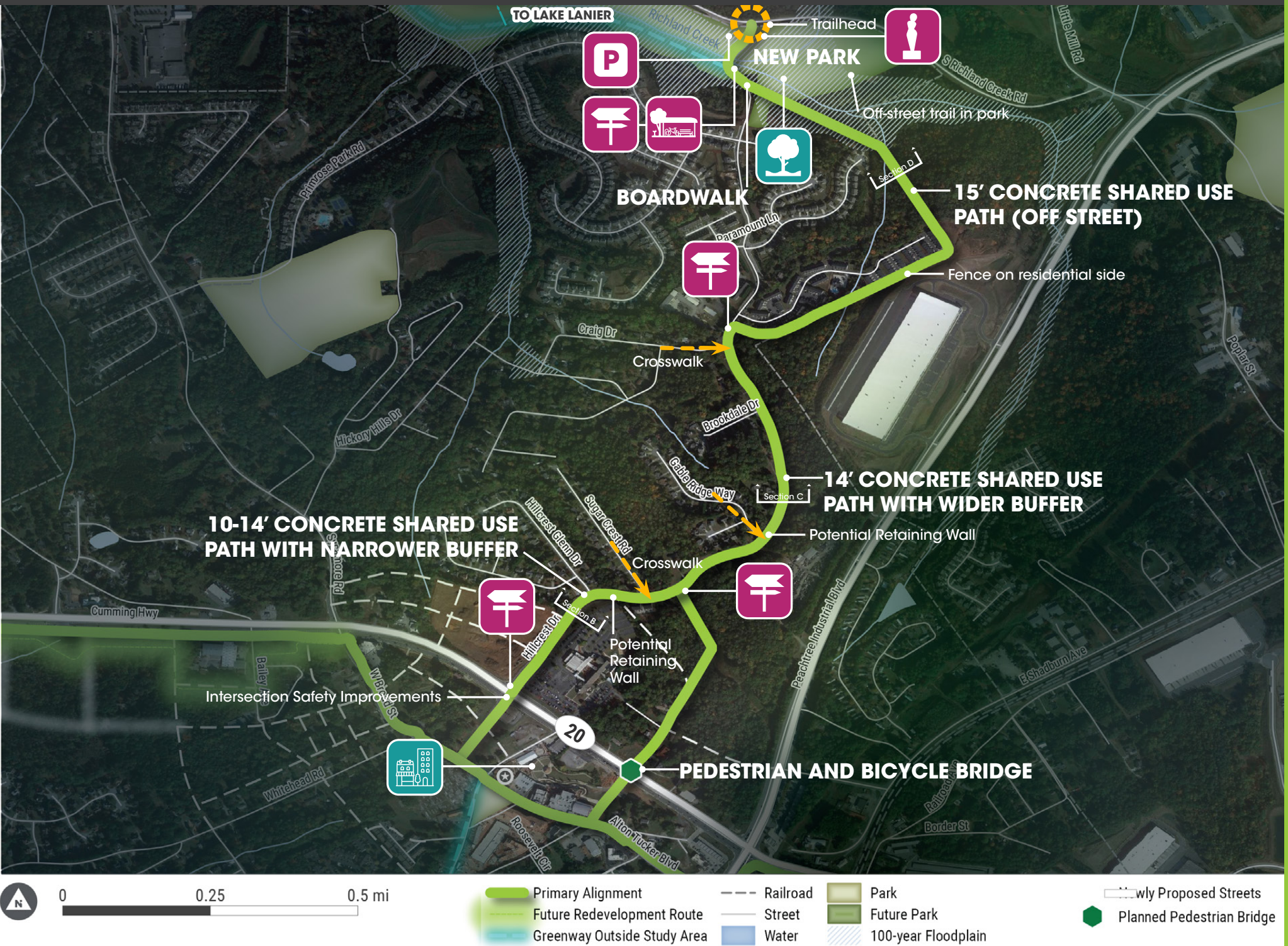
There will also be an option to cross SR 20 using a planned pedestrian and bicycle bridge near the E Center. Another path will head north from the bridge through what is currently mostly undeveloped property and reconnect with Hillcrest Drive east of Sugar Crest Drive. Most of the off-street route shown in Figure 15 follows County pipeline easements. Coordination with property owners and limited acquisition may be required.

Where the path transitions to an off-street condition near the Sugar Hill Overlook community, right-of-way acquisition will be needed until the trail reaches the City-owned parcels near Richland Creek. A fence should be designed and installed on the residential side of the off-street path for added privacy. Portions of the path approaching Richland Creek will be a boardwalk due to topography. The precise location of the path will be determined in the design phase after survey is completed, but effort will be taken to avoid and preserve mature trees.

Access Points

There are few existing crosswalks connecting residential streets on the west side of Hillcrest Drive to the current sidewalk on the east side of the street. Crosswalks and curb ramp upgrades should be added at existing three-way stops on Hillcrest Drive at Craig Drive, Gable Ridge Way, and Sugar Crest Drive. On the north end, the greenway can be accessed via S Richland Creek Road at the new park.

Figure 15. Proposed Greenway Concept Map - Hillcrest



Typical Sections

There are three types of typical sections for the Hillcrest corridor, depending on the context in different locations. Most of the segments along Hillcrest Drive will have a 10- to 14-foot shared use path on the east side of the corridor with a landscaped buffer of up to 5 feet (Section B). Where there is more space and right-of-way available, a wider buffer of up to 10 feet will be used (Section C). The off-street portions of the route will have a shared use path of up to 15 feet in a natural setting (Section D) with a fence where it passes by residences. The segment from the proposed pedestrian bridge to Hillcrest Drive through a mostly wooded area is shown as an off-street path. If adjacent properties redevelop, it is possible this route would become a new street and a side path would be used instead, such as Section B or C. Figure 15 illustrates the locations of each of these typical sections.

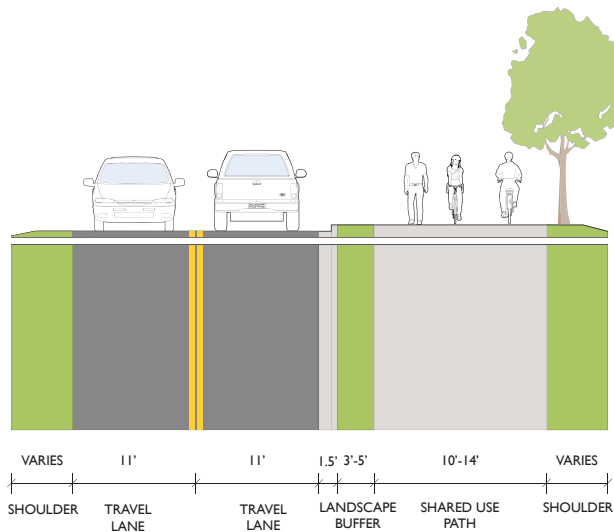


Figure 16. Section B - Hillcrest Dr (Shared Use Path with Minimum Separation)

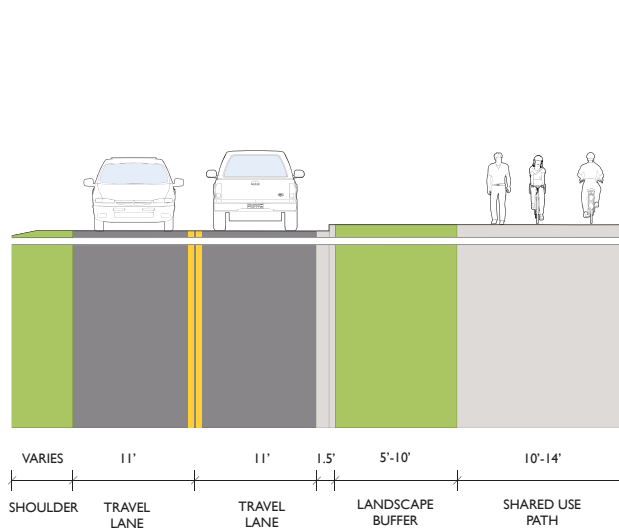


Figure 17. Section C - Hillcrest Dr (Shared Use Path with Greater Separation)

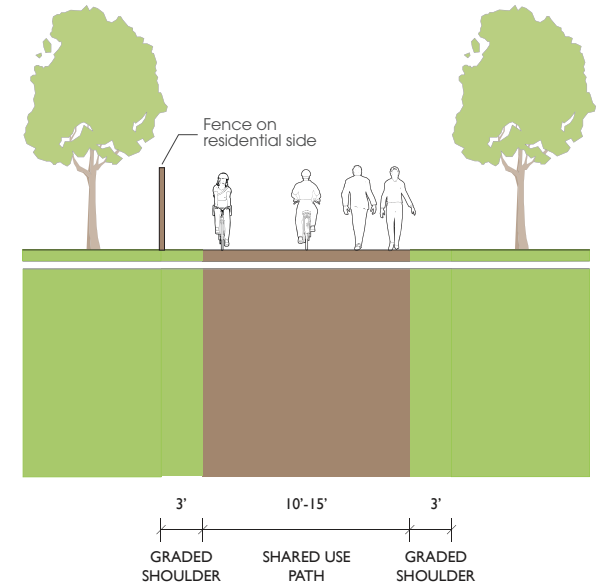


Figure 18. Section D - Off-street Trail

Key Crossing

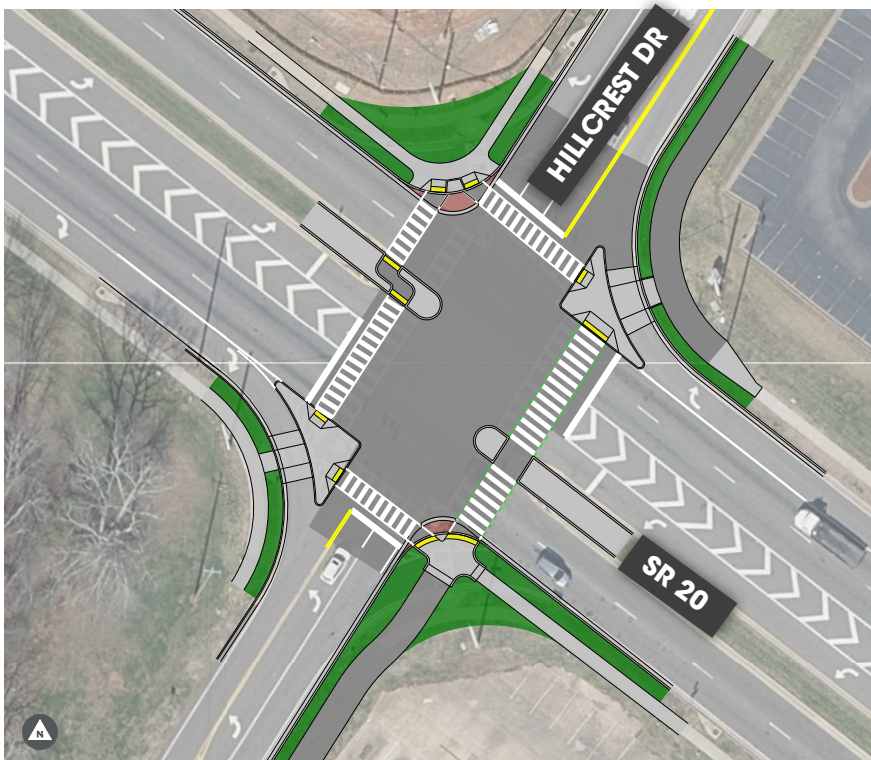


Figure 19. SR 20 and Hillcrest Dr Intersection Concept

SR 20 and Hillcrest Dr

- Tighten the radius of the northwest and southeast corners, removing slip lanes, to shorten the crossing distance and slow turning movements to improve safety for crossing pedestrians
- Raise crosswalk over slip lanes at the northeast and southwest corners to slow vehicle movements and improve visibility for pedestrians in the crosswalk
- Rebuild the islands on the slip lanes to meet the raised crossing and provide ADA accessible ramps
- Add a shared crossing for pedestrians and cyclists to cross SR 20 on the east side of the intersection
- Add a refuge island for users crossing SR 20
- Reconfigure islands to allow queueing

THIS ILLUSTRATION IS CONCEPTUAL. FINAL DESIGN MAY VARY.



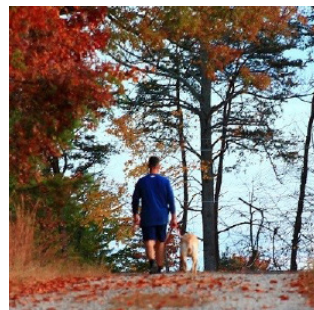
Rendering of a boardwalk over Richland Creek leading into a new, natural park on the north side

Destination: Richland Creek Natural Retreat

Richland Creek offers a natural getaway just over a mile from Downtown Sugar Hill. Recently acquired City property on the north side of the creek will become a public park, increasing access to nature for the community. Figure 20 illustrates a conceptual design for the park, which will be further developed in its own master plan with input from the community. Proposed features include:

- Boardwalk across Richland Creek
- Unpaved trails in forested setting
- Natural play area and playground
- Shade garden and pavilion
- Dog park
- Creek access
- Outdoor fitness station
- Bike share station
- Limited parking near S Richland Creek Road

Figure 20. Richland Creek Natural Retreat Concept - Program Diagram



SR 20 EAST

The SR 20 East corridor begins at the western end of Downtown Sugar Hill, the intersection of Alton Tucker Boulevard and Peachtree Industrial Boulevard, heads north toward SR 20, and then east along SR 20 toward the city limits near Buford Highway.

Preferred Alignment

From Peachtree Industrial Boulevard to Wages Way, available space for a buffer is minimal. Vertical separation will be included in the design to create a barrier between greenway users and vehicular traffic to maximize comfort and safety. The intersection of SR 20 and Wages Way will be reconfigured to standardize geometry, slow vehicle turn movements, and make greenway users visible to drivers.

Between Wages Way and the Sugar Hill Station shopping plaza, The path will be set back from SR 20 with a buffer of 15 to 30 feet. Available right-of-way is relatively wide and no acquisition is anticipated at this time. There is existing drainage within the buffer area that will need to be addressed through grading and improving channelization of flows to bring them beyond the facility and prevent ponding on the path.

Practical Alternative

The feasibility of the preferred alignment depends on support from GDOT and the Gwinnett County Department of Transportation, which are currently designing a road widening project for SR 20 in this area. If the request to incorporate a shared use path as part of the bridge reconstruction is not approved, an alternative route will be necessary. Either improvements to the existing at-grade crossing at First Avenue or a pedestrian and bicycle bridge over the railroad may be considered. Cooperation from Norfolk Southern and available funding will be determining factors.

Access Points

There is continuous development fronting most of this route, creating direct access to the greenway for many local businesses. Intersection improvements at SR 20 and Peachtree Industrial Boulevard and at SR 20 and Broadmoor Road will improve safety and comfort for users crossing SR 20 from the north and improve access to the path from side streets to the south.

Figure 21. Proposed Greenway Map - SR 20 East



THIS ILLUSTRATION IS CONCEPTUAL. FINAL DESIGN MAY VARY.

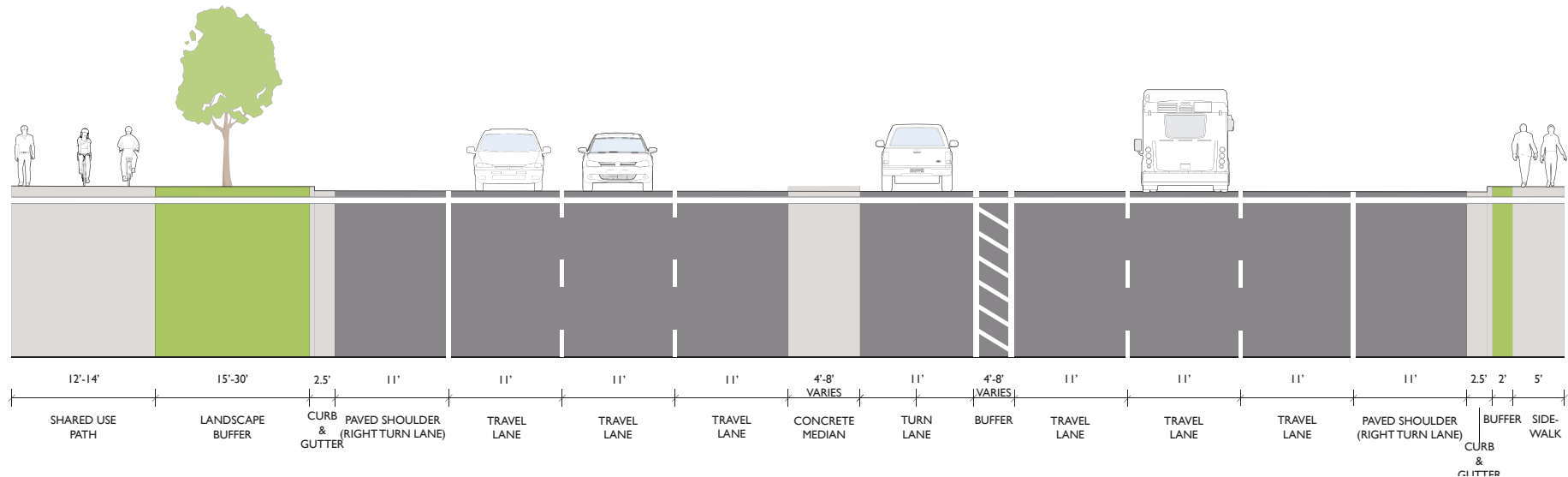


Rendering of a new 14-foot concrete shared use path with a landscaped buffer on the south side of SR 20 between Wages Way and the city limits at Sugar Hill Station shopping plaza

Typical Section

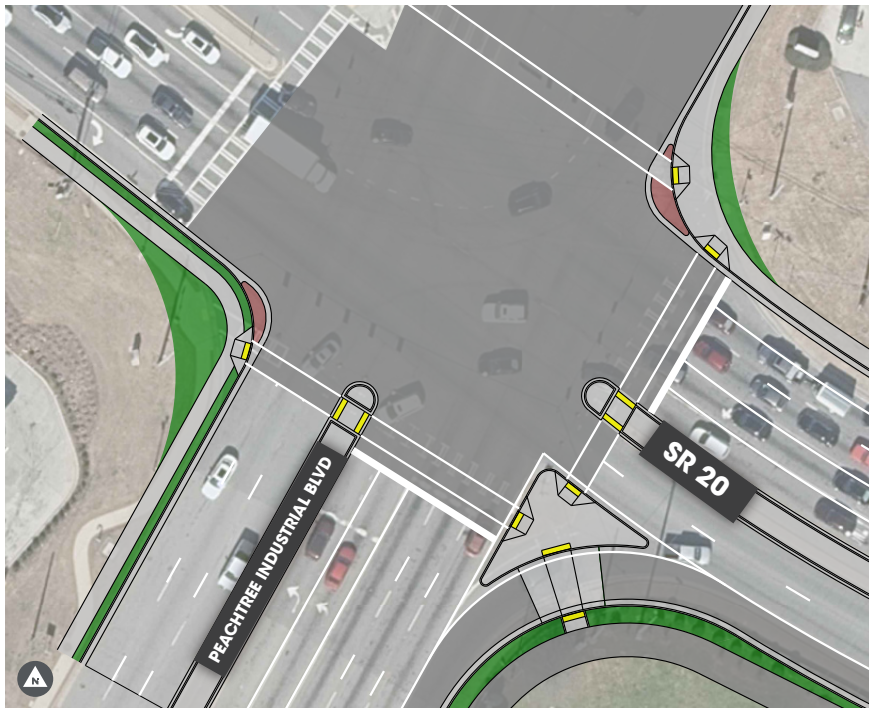
The eastern portion of SR 20 is characterized by deep building setbacks along most of the route. In this area, a 12- to 14-foot wide shared use path with a more generous landscape buffer (Section E) can be used in most locations east of Wages Way. Where available space is more constrained, a narrower buffer will be used (Section A).

Figure 22. Section E - SR 20 (Nelson Brogdon Blvd) from Wages Way to Buford Hwy



Key Crossings

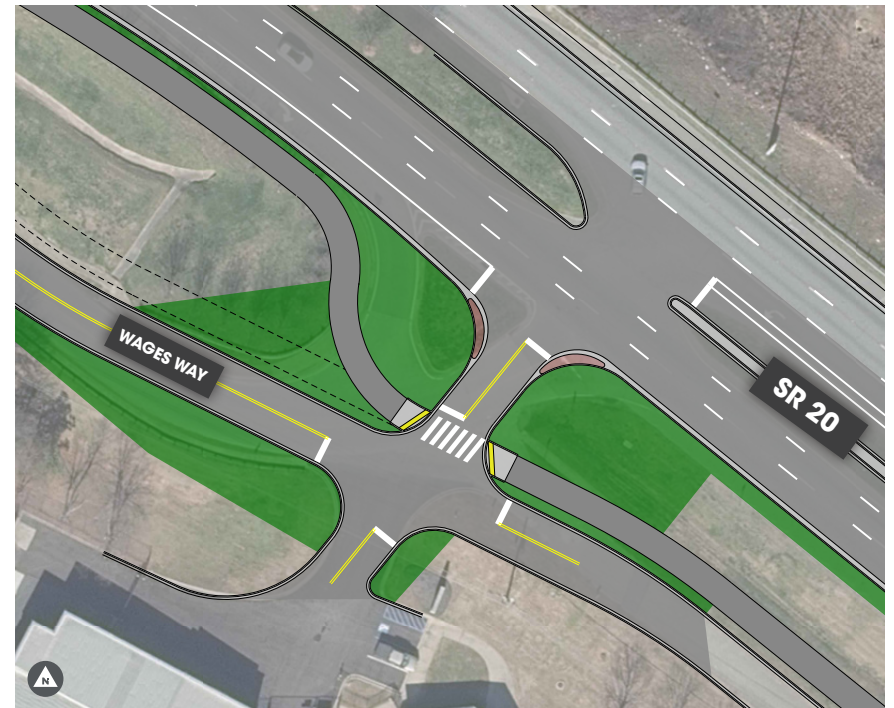
Figure 23. SR 20 and Peachtree Industrial Blvd Intersection Concept



SR 20 and Peachtree Industrial Blvd

- Raised pedestrian crossings to island
- Build out islands to allow for queueing and protection for pedestrians and cyclists
- Tighten right turn slip lanes
- Truck aprons on right turns to accommodate larger vehicles

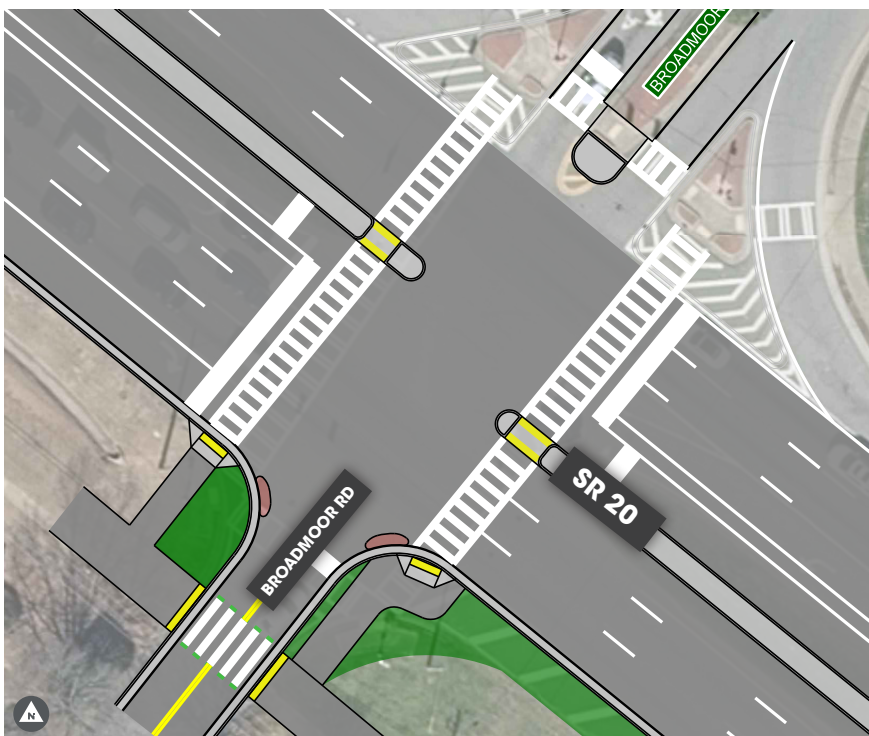
Figure 24. SR 20 and Wages Way Intersection Concept



SR 20 and Wages Way

- Remove right turn slip lane
- Truck aprons at right turns
- High visibility pedestrian and bicycle crossing
- Landscape and curb extensions to improve intersection geometry, tighten turn radii, and reduce conflicts
- Create a four-way stop

Figure 25. SR 20 and Broadmoor Rd Intersection Concept



SR 20 and Broadmoor Rd

- Raised crossing at driveway
- Add truck aprons on right turning movement and tighten radii on the south side of SR 20
- Add refuge islands and enhanced crosswalks on SR 20
- Add sidewalk connections from the set back trail to the intersection

DOWNTOWN

Greenway corridors from all directions converge in Downtown Sugar Hill, where civic facilities, events venues, and local businesses will attract users from around the community. The greenway takes on a more urban character in this environment and adapts to constrained right-of-ways where necessary.

Preferred Alignment

The path shifts away from SR 20 Downtown toward parallel local streets with lower traffic volumes and speeds: W Broad Street and Alton Tucker Boulevard. Where there is enough space, a two-way cycle track will be installed. Some right-of-way acquisition will be needed to accommodate the full width of the facility on Alton Tucker Boulevard. No impacts are expected to the existing curb line, except where tightening intersection radii and building ramps to transition across intersections and driveways. The cycle track will transition to a bike boulevard— a shared on-street condition with sharrows, signage, and traffic calming— in the center section, where space is highly constrained. The cycle track will pick back up west of Hillcrest Drive, where physical space is available but right-of-way acquisitions will be needed. There will be continuous sidewalks throughout. Users will have the option of heading toward Richland Creek via a shared use path on Hillcrest Drive or the planned pedestrian and bicycle bridge over SR 20. The Alton Tucker Boulevard and Peachtree Industrial Boulevard intersection

will be modified with a new crosswalk and signal phase, offering safe access between Downtown and eastern Sugar Hill.

Access Points

Downtown's existing and planned street network provides multiple opportunities for users to access the greenway. The first phase of the greenway, which will begin construction in late 2020, will meet this project at the intersection of Church Street and W Broad Street. If the City is able to overcome previous acquisition challenges on the north end of Level Creek Road, the Phase 1 path should be extended from the intersection of Level Creek Road and Church Street up to W Broad Street via Level Creek Road as well. This will create a more direct connection to the planned pedestrian and bicycle bridge over SR 20. A trailhead near the E Center will be a central gathering spot and rest area for greenway users, leveraging the nearby outdoor restrooms, public parking garage, and its high visibility location. A transit shelter and bike share station should be provided here to support multimodal transportation options.

Typical Sections

Where possible, separated pedestrian and bicycle facilities will be provided Downtown. There is adequate space to install a two-way cycle track to complement existing sidewalks on Alton Tucker Boulevard from Peachtree Industrial Boulevard to the E Center and on W Broad Street from Hillcrest Drive to SR 20. The center portion of W Broad Street has highly constrained available right-of-way, and comfortable accommodations for pedestrians have already been made through recent streetscape projects. For these blocks, pedestrians will use the sidewalk and cyclists will share the road with vehicles. Sharrow markings will be painted on the road, signs will be added to increase awareness that cyclists will be present, and traffic calming measures will be installed to slow down drivers. Figure 26 illustrates the locations of these typical sections.

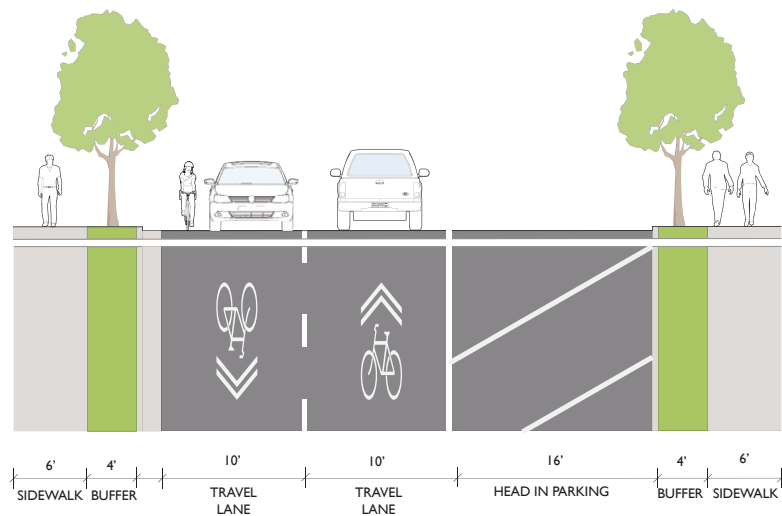


Figure 27. Section G - W Broad St Bike Boulevard

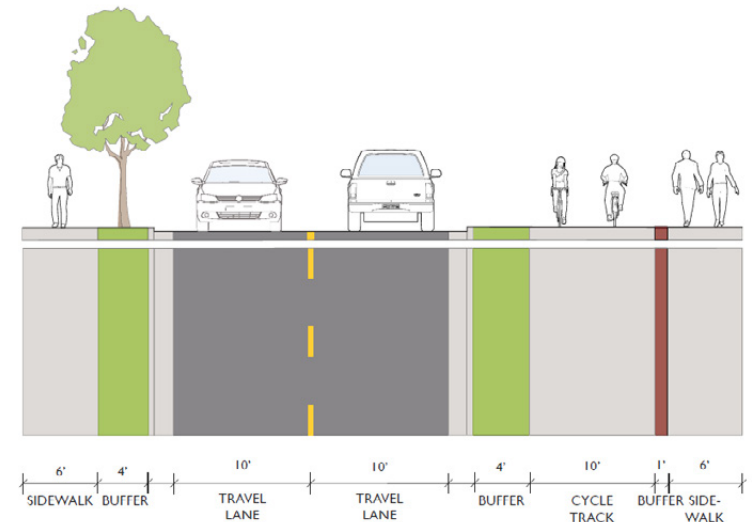


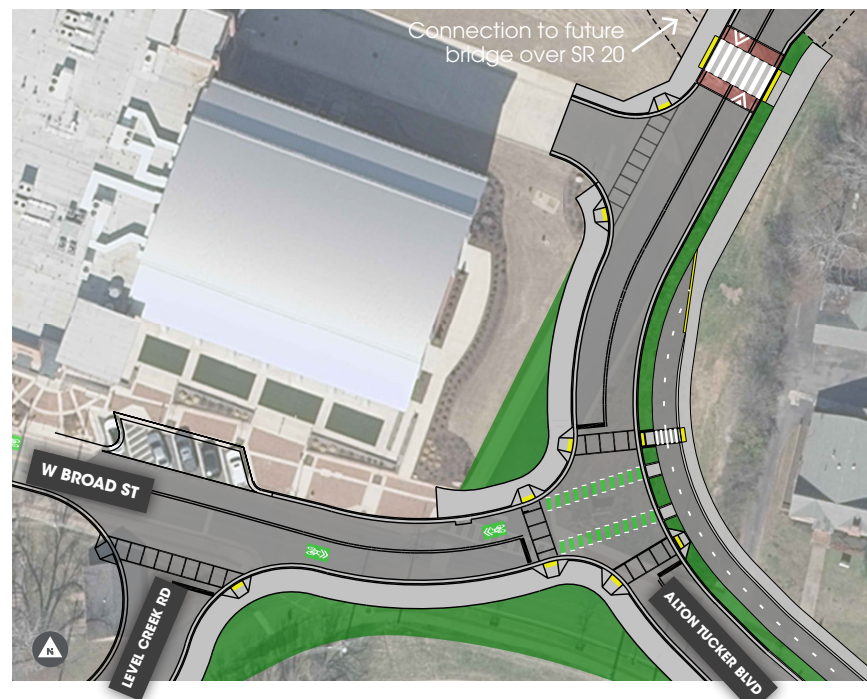
Figure 28. Section H - Downtown Cycle Track & Sidewalk

Crossings



W Broad St and Hillcrest Dr

- Transition to shared facilities along W Broad St in advance of the crossing over Hillcrest Dr
- Three-way stop to enhance comfort of users transitioning from the bike boulevard to the cycle track
- Bike box on Hillcrest Dr to ease eastbound cyclist transition to street level
- Bike ramp on the east side of the intersection to transition bikes from street level to sidewalk level facilities
- Raised intersection (optional)



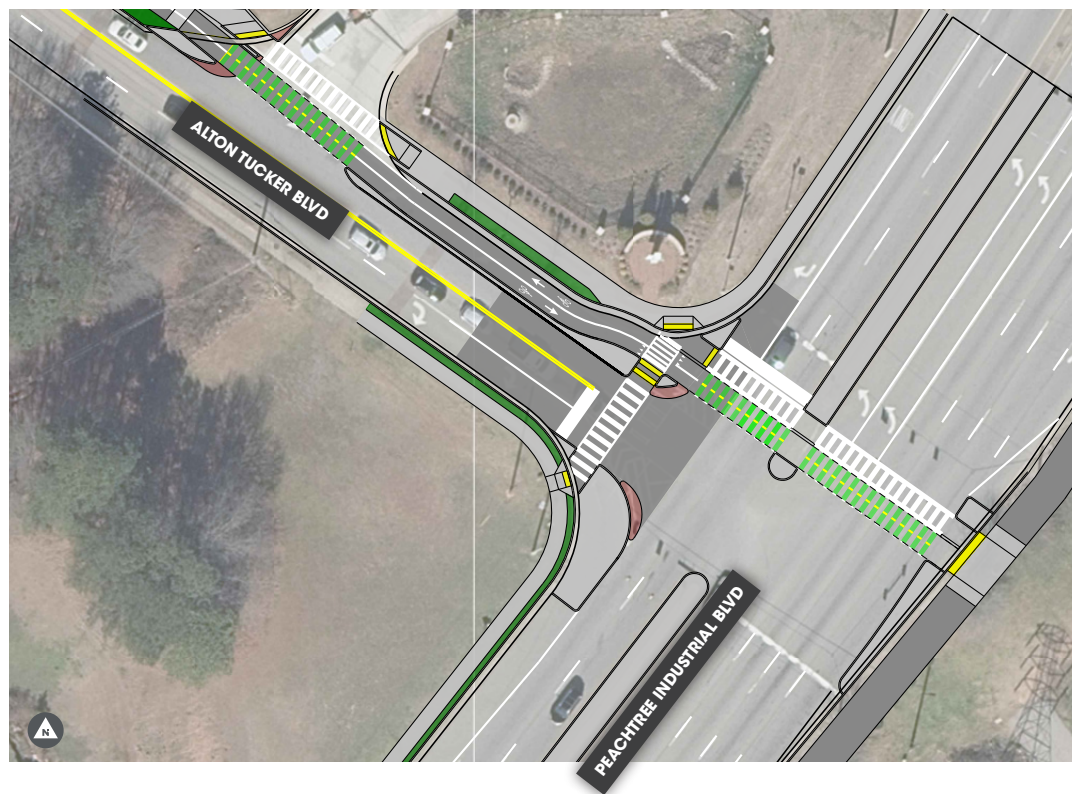
W Broad St, Level Creek Rd, and Alton Tucker Blvd

- New three-way stop at W Broad St and Alton Tucker Blvd
- Landscaped curb extension and realignment
- High visibility crosswalks
- Green conflict paint to facilitate transition to cycle track
- Sharrows west of Alton Tucker Blvd
- Raised intersection (optional)



Top to Bottom: 1) Custom branding and signs for the Capital City Bikeway in Saint Paul, MN; 2) Westlake cycle track and sidewalk in Seattle, WA

Crossings (Continued)



Alton Tucker Blvd and Peachtree Industrial Blvd

- Dedicated signal phase and high visibility crossing for pedestrians and cyclists
- Remove right turn slip lanes and build out curb extensions to shorten crossings
- Add pedestrian and cyclist refuge islands on Peachtree Industrial Blvd to shorten crossings
- Add truck aprons to accommodate larger vehicles



THIS ILLUSTRATION IS CONCEPTUAL. FINAL DESIGN MAY VARY.

Rendering of the intersection of the greenway crossing at Peachtree Industrial Boulevard and Alton Tucker Boulevard and future trail-oriented development on the east side of Peachtree Industrial Boulevard.

Design Considerations

To fulfill the vision of creating a signature greenway facility for Sugar Hill, the design process requires a comprehensive and concurrent approach to the selection of site furniture and the design of trail amenities, wayfinding and landscape planting. Each design component should contribute aesthetically to the greenway's unique identity and sense of place.

Each component should also contribute to the accessibility and intuitive use of the greenway. The design strategies outlined in this section represent the basic parameters for designing and constructing a cohesive, consistent greenway. Additional direction and detail will be developed as the project moves beyond this scope of work and into the conceptual and schematic design phases.

SUGAR HILL STYLE

Low-maintenance and low-impact

Accessible and intuitive

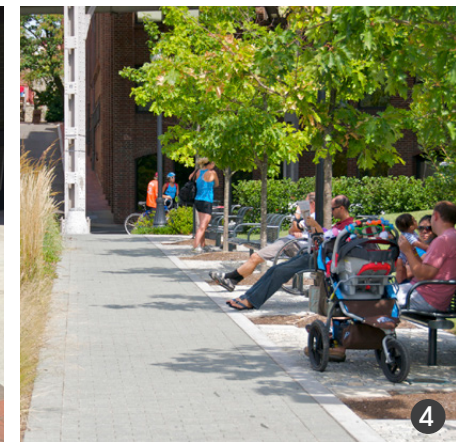
Ecologically-friendly

Beautiful, durable, classic materials
in a contemporary style

SITE FURNISHINGS

Seating: Benches and Picnic Tables

- Benches allow visitors to rest while waiting for other path users. Greenway users may also wish to rest after a walk or bicycle ride.
- Benches should be accessible and should generally be placed to maximize the view of people passing by, or near a significant natural or artistic feature. It is generally not preferable to place a bench so that the back of a person sitting on it has their back to the greenway.
- Picnic tables should be accessible and placed away from the flow of greenway traffic.
- Seating should be anchored and made of durable materials that resist vandalism efforts.



Trash and Recycling Receptacles

- Litter receptacles should be provided at the greenway's entrances and regularly maintained by the City of Sugar Hill or a partner agency.
- Receptacles may also be placed at waysides and other amenities if the receptacles are regularly serviced and collected. Receptacles should be easily accessible to maintenance staff.

- 1) Durable concrete and wood bench in a natural setting
- 2) Decorative metal bench in a park setting
- 3) Standard site furnishings in Downtown Sugar Hill
- 4) Seating oriented to view activity and enjoy shade

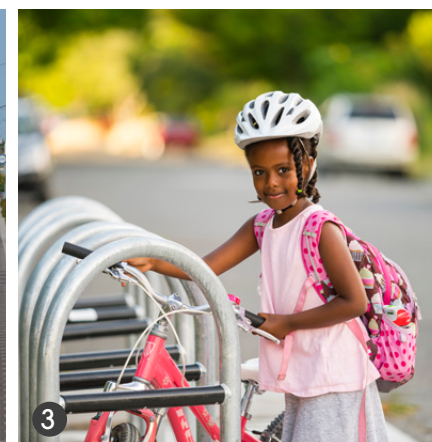
Water Fountains (for people and pets!)

- Water fountains are a welcome amenity for some users and can also be designed to provide water for pets.
- Water fountains should be located near other trail amenities such as restrooms, trailheads, waysides, and parks.
- Water fountains should be ADA Accessibility Guidelines compliant.
- Fountains that are designed to allow users to refill water bottles make it easy for people to stay hydrated throughout the greenway.



Bicycle Parking

- Bicycle parking is important at rest areas with bathrooms and at locations that connect to parks, playgrounds, schools, shops, restaurants and other similar locations where greenway users are likely to need to leave their bicycles for a period of time. Bicycle racks are also important at spur hiking trails that may be accessed by people arriving by bicycle.
- Bike racks should be located near bus stops Downtown and on SR 20 to facilitate multimodal travel options.



- 1) Bicycle parking, water fountain, and an informational kiosk at trailhead
- 2) Bicycle parking next to transit shelter and a shared use path
- 3) Convenient bike parking at key neighborhood destinations

TRAIL AMENITIES

Waysides

Waysides are locations adjacent to the greenway that provide a place for path users to rest, meet other path users, enjoy a view, or to orient themselves. They serve both practical and aesthetic purposes and can greatly enhance the user experience.

Waysides come in many shapes and sizes, from a bench along a shared use path, to pocket parks with restrooms, maps, and other amenities described above. Consider including cane-detectable signage that includes braille information to alert individuals with vision disabilities to the presence of the wayside. Include a description of the wayside amenities to assist the person in navigating and understanding the layout of the wayside.

Trailheads

- Trailheads serve as gateways, or access points to the greenway and may also include other facilities, such as restrooms, kiosks, bicycle repair stations, seating, etc.
- Trailheads should feature wayfinding signage that clearly identify routes and destinations for greenway users.
- Informational kiosks, signs, and bulletin boards
 - These can include helpful information such as the name of the shared use path, operating hours, “you are

here” maps, contact information to report problems, emergency response information such as contact information, and shared use path rules and regulations. These should meet accessibility requirements for position, height and legibility of signs.

- Bicycle repair stations
 - Repair stations provide greenway users with a set of tools that allow for routine bicycle maintenance.
 - Bicycle repair tools are secured to the repair station by high strength cables.
 - Repair stations should be located at trailheads and at some waysides.
- Restrooms
 - If placing restrooms as part of the greenway design, prioritize their location at trailheads. Identify where gaps may exist along the greenway for accessing restrooms.
 - Consider ease of vehicular access to restrooms for maintenance and security reasons.
 - Locate restrooms outside of areas prone to flooding.
 - Consult all relevant local, state and federal codes and standards prior to design.
 - Locate bicycle parking adjacent to restroom structures without obstructing greenway access.



- 1) Trailhead restroom and wayfinding at the Razorback Greenway in Bentonville, AR.
- 2) Whimsical gateway and plaza designs at the botanical gardens in Athens, GA.
- 3) Bike share station at Piedmont Park in Atlanta.
- 4) Outdoor fitness station.
- 5) Bike repair station at the Razorback Greenway in Bentonville, AR.



Public Art

- Public art, sculpture, and interactive installations can contribute to the greenway's identity and provide a more meaningful experience for users.
- Public art can be aesthetic and abstract, functional and concrete, or a combination of those categories.
- Greenway art installations can reflect local history in cultural and/or ecological terms, which helps greenway users develop a stronger emotional connection to the landscape.
- Sculptures and installations can also provide a natural wayfinding function by serving as memorable landmarks for greenway users, particularly when placed at key focal points. Original artistic elements should be incorporated into each trailhead to create distinct identities.
- The planned pedestrian and bicycle bridge across SR 20 is an opportunity to integrate art, both for bridge users at a smaller scale and to make an impression on drivers passing through Sugar Hill.
- Selecting a location for temporary installations can add a sense of novelty, giving users a reason to return and explore the rotating selection of local art.

WAYFINDING

The wayfinding system for the Sugar Hill Greenway should be easy to use, intuitive, and concise. The wayfinding system should also reinforce the aesthetic identity of the greenway through the consistent use of colors, fonts, materials, and logos. The City of Sugar Hill communications staff is currently developing a brand identity for the greenway system, which should be integrated into the design of wayfinding signs. Once the greenway brand has been finalized, a standard wayfinding package should be created. Wayfinding signs types may include informational, directional, regulatory, and mile marker posts.

Informational Signs

Informational signs and map kiosks give shared use path users a chance to stop and orient themselves to the path or the larger transportation network. These signs should be set back far enough off the greenway to give space for users to view the sign without impeding forward motion of other greenway users.

General information signage may include the following:

- Greenway maps
- Hours of operation
- Areas of interest
- Greenway etiquette
- Rules and regulations

Directional Signs

Directional signs should increase the comfort and confidence of greenway users by clearly and regularly indicating the direction of travel, the location of greenway destinations and amenities, and the location of trailheads and other access points.

Regulatory Signs

Regulatory signs, such as stop or yield signs, provide warnings or directions that must be followed by greenway users to protect their health, safety, and welfare.

Mile Markers

Mile markers help shared use path users measure distance traveled and provide important reference points in case of emergency. Mile markers should be placed every quarter to half mile along a shared use path. There are a variety of styles of mile markers. Pavement markings or embedded monuments flush with the surface of the trail have been used as mile markers for ease of maintenance in areas where heavy equipment is used to maintain the path and adjacent landscape.

The Manual on Uniform Traffic Control Devices (MUTCD) also provides guidance for mile marker signs. These signs may be placed back-to-back along one side of the trail, or on either side of the trail. Mile 0 should typically begin either from the west or the south of the shared use path corridor.

LANDSCAPE PLANTING PALETTES

Each corridor of the Sugar Hill Greenway will have a unique planting palette that reflects the corridor's natural and cultural themes. Planting palettes based on natural themes may draw inspiration from the corridor's topography, watershed characteristics, existing plantings, and other characteristics. Cultural themes are identified from characteristics such as land use, the type of adjacent development, the amount of open space, traffic volume and noise, and so forth. The planting palette for each corridor identifies a primary/signature tree and several species of secondary trees. Shrubs, perennials, ornamental grasses, and groundcovers complete the planting palette.

SR 20 West

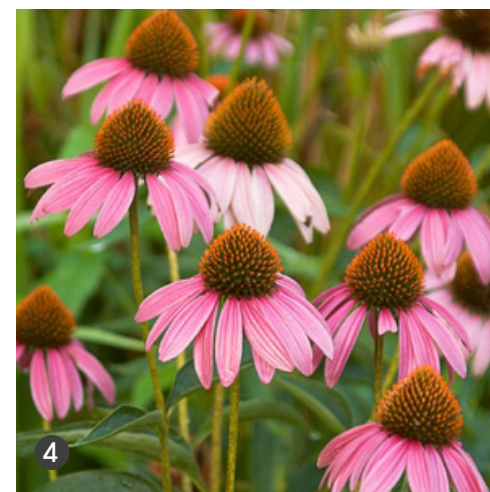
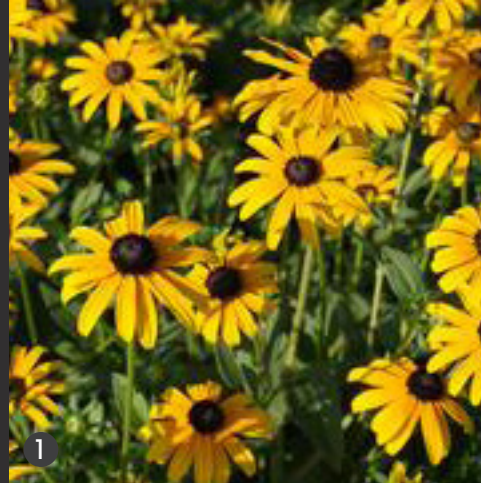
This corridor of the Sugar Hill Greenway is located within the Level Creek Watershed Basin (LE-1). Compared to the greenway's other corridors, the SR 20 West corridor is less developed and contains more open space. As previously mentioned, a new community park is planned just beyond the greenway's western terminus. The defining quality of this corridor is movement. Greenway users will be traveling between the new park and trailhead at the western end of the greenway toward Downtown Sugar Hill and the other greenway corridors. Plantings for this corridor are chosen for their distinctive qualities, such as unusual foliage types or irregular forms that will be more noticeable when in motion.

Plantings

- Primary trees:
 - *Metasequoia glyptostroboides* / Dawn Redwood
 - *Taxodium distichum* / Bald Cypress
- Secondary trees: Ginkgo, Smoketree
 - *Cotinus coggygria* / Smoketree
 - *Juniperus virginiana* / Eastern Red Cedar
- Shrubs:
 - *Aesculus parviflora* / Bottlebrush buckeye
 - *Rhus glabra* / Smooth sumac
 - *Yucca filamentosa* / Adam's needle

- Perennials:
 - *Echinacea purpurea* / Purple coneflower
 - *Eryngium yuccifolium* / Button snake-root
 - *Liatris spicata* / Gayfeather
 - *Rudbeckia fulgida* var. *fulgida* / Black-eyed Susan
 - *Solidago odora* / Sweet Goldenrod
 - *Verbena bonariensis* / Vervain
- Ornamental Grasses:
 - *Andropogon virginicus* / Broomsedge
 - *Eragrostis spectabilis* / Lovegrass
 - *Panicum virgatum* / Switchgrass
- Groundcovers:
 - *Liriope muscari* 'Big Blue' / Big Blue Lilyturf
 - *Juniperus procumbens* 'Nana' / Dwarf Japanese Juniper

SAMPLE PLANTINGS



1) Black-eyed Susan 2) Switchgrass 3) Ginkgo tree 4) Purple coneflower
5) Gayfeather 6) Button snake-root 7) Smoketree

Hillcrest

The Hillcrest corridor is located within the Richland Creek Watershed Basin (RI-1). This corridor is quieter, as it lacks the constant clamor of vehicular traffic on SR 20. Single family homes and a few multifamily developments are the overwhelming type of development. The topography of the Hillcrest Corridor is one of its defining qualities. At several crests along the corridor, greenway users will enjoy good vantage points for taking in the scene below. In contrast, a significant portion of the greenway runs along Richland Creek in a forested riparian setting. Plantings for the Hillcrest Corridor were chosen for their relationship with topography and water. Native riparian plantings will be used in lower areas, especially along Richland Creek, while ridge plantings will be used for higher elevations.

Plantings: Riparian

- Primary tree:
 - *Fagus grandifolia* / American Beech
- Secondary trees:
 - *Liriodendron tulipifera* / Tulip Poplar
 - *Platanus occidentalis* / Sycamore
- Shrubs:
 - *Clethra alnifolia* / Summersweet
 - *Itea virginica* / Virginia Sweetspire
 - *Rhododendron canescens* / Piedmont Azalea
 - *Viburnum dentatum* / Southern arrowwood
- Perennials:
 - *Aquilegia canadensis* / Eastern Columbine
 - *Carex appalachica* / Appalachian sedge
 - *Carex pensylvatica* / Pennsylvania sedge
 - *Chasmanthium latifolium* / Inland sea oats
 - *Eutrochium dubium* 'Little Joe' / Joe Pye Weed
 - *Lobelia cardinalis* / Cardinal Flower
 - *Rudbeckia fulgida* 'Goldsturm' / Black-eyed Susan
- Ornamental Grasses:
 - *Andropogon virginicus* / Broomsedge
 - *Panicum virgatum* / Switchgrass
 - *Sorghastrum nutans* / Indiangrass

- Groundcovers:
 - *Asarum canadense* / Canadian wild ginger
 - *Dryopteris erythrosora* 'Brilliance' / Autumn Fern
 - *Dryopteris marginalis* / Marginal Wood Fern

Plantings: Ridge

- Primary tree:
 - *Carya glabra* / Pignut Hickory
- Secondary trees: Oaks, Pines, Dogwoods
 - *Quercus alba* / White Oak
 - *Pinus strobus* / Eastern White Pine
 - *Cornus florida* / Dogwood
- Shrubs:
 - *Hamamelis virginiana* / Witchhazel
 - *Hypericum densiflorum* / St. John's Wort
 - *Ilex glabra* / Inkberry
 - *Lindera benzoin* / Spicebush
 - *Rhus aromatica* / Fragrant sumac
 - *Viburnum acerifolium* / Maple-leaf Viburnum
- Perennials:
 - *Aquilegia canadensis* / Eastern Columbine
 - *Aruncus dioicus* / Goat's beard

SAMPLE PLANTINGS



1) Sycamore tree 2) Summersweet shrubs
3) Little bluestem ornamental grasses

- Ornamental Grasses:
 - *Andropogon gerardii* / Big bluestem
 - *Panicum virgatum* / Switchgrass
 - *Schizachyrium scoparium* / Little bluestem
- Groundcovers:
 - *Asarum canadense* / Canadian wild ginger
 - *Mitchella repens* / Partridgeberry
 - *Polystichum acrostichoides* / Christmas fern

SR 20 East

This corridor is dominated by commercial, auto-centric development, especially closer to the intersection of Peachtree Industrial Boulevard and SR 20. Although the SR 20 East corridor is within the Richland Creek Watershed Basin (RI-1), the corridor is situated near the ridgeline that separates the RI-1 watershed with the Level Creek Watershed Basin (LE-1) and does not contain any lower-lying elevations. The planting palette for the SR 20 East corridor should reflect a sense of arrival adjacent to Downtown Sugar Hill and the commercial areas near Peachtree Industrial Boulevard.

Plantings:

- Primary tree:
 - *Acer saccharum* / Sugar Maple
- Secondary trees: Oaks, Honey Locust, Crape Myrtle
 - *Gleditsia triacanthos* form *inermis* / Thornless Honeylocust
 - *Lagerstroemia indica* x *fauriei* 'Sarah's Favorite' / Sarah's Favorite Crape Myrtle
 - *Nyssa sylvatica* / Blackgum
 - *Quercus lyrata* / Overcup Oak
 - *Quercus shumardii* / Shumard Oak

- Shrubs:
 - *Cornus sericea* 'Kelsey' / Low Red Osier Dogwood
 - *Rosa radrazz* / Knock Out Rose
 - *Itea virginica* 'Sprich' / Little Henry Sweetspire
 - *Rhus aromatica* 'Gro-Low' / Fragrant Sumac
- Perennials:
 - *Amsonia hubrichtii* / Arkansas Amsonia
 - *Asclepias tuberosa* / Butterfly Weed
 - *Bergenia cordifolia* / Heartleaf Bergenia
 - *Liatris spicata* / Gayfeather
 - *Nepeta x faassenii* 'Walkers Low' / Walkers Low Catmint
 - *Rudbeckia fulgida* var. *deamii* / Black-eyed Susan
 - *Salvia x sylvestris* 'May Night' / May Night Sage
- Ornamental Grasses:
 - *Panicum virgatum* 'Shenandoah' / Shenandoah Switch Grass
 - *Sporobolus heterolepis* / Prairie Dropseed
- Groundcovers:
 - *Liriope muscari* 'Big Blue' / Big Blue Lilyturf

1) Arkansas Amsonia
2) Fragrant Sumac



ENGINEERING CONSIDERATIONS

Roadway Design

The lack of accessible facilities and gaps in connectivity discourage the most vulnerable members, such as people with limited mobility, of the population from safely accessing and enjoying Downtown and the future greenway. Along SR-20 and Hillcrest there are missing curb ramps, and sidewalk sections to fully connect driveway crossings and intersections. Some crosswalks along the SR 20 corridor are skewed, which require pedestrians to travel longer distances than if the crosswalks were aligned perpendicular to the street. Uncontrolled crossing distances should ideally be no more than 22 feet.

In some locations, the reallocation of right-of-way to realign or calm streets will create space for stormwater control measures, outdoor dining, landscaping, and placemaking elements that will continue to Downtown Sugar Hill an attractive destination.

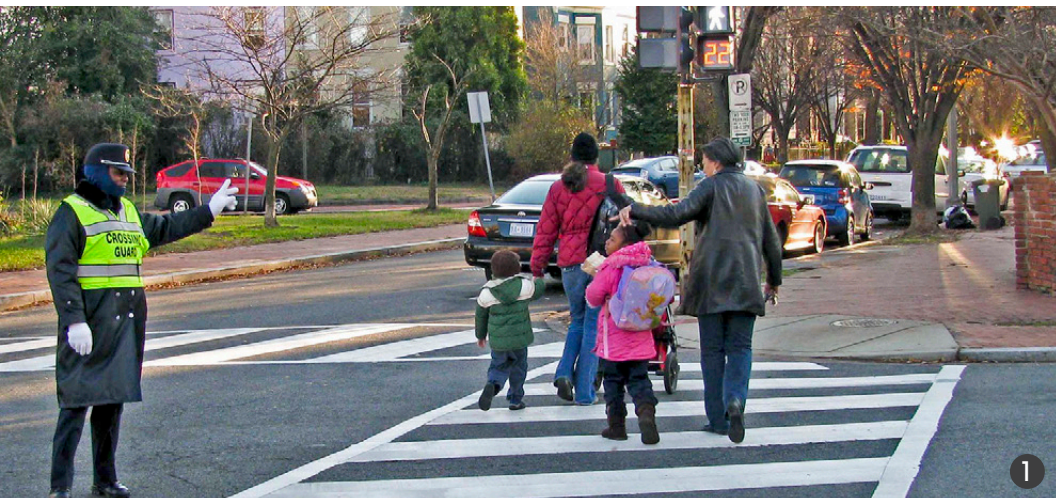
Crosswalks

High visibility crosswalks perpendicular to the street will replace the current at-grade, skewed crosswalks. Two types of crosswalks may be used, depending on context:



- 1) Landscaped curb extension to realign the street, slow traffic, and enhance aesthetics
- 2) Landscaped island alternative to maintain existing curb and gutter





- 1) Standard continental crosswalk
 2) Standard crosswalk with separate bicycle crossing and green conflict point
 3) Enhanced crosswalk with brick pavers

- **STANDARD CROSSWALK:** Standard crosswalks should use continental or high visibility crosswalks. These typically have 24-inch wide white bars spaced 4-feet on center perpendicular to the path of travel. They should be at least 8 feet wide or the width of the approaching sidewalk, whichever is greater.
- **ENHANCED CROSSWALK:** These crosswalks may be used Downtown on W Broad Street and Alton Tucker Boulevard to fit with the upgraded streetscape aesthetic, including high contrast brick accents. They should be at least 10 feet wide or the width of the approaching sidewalk, whichever is greater. In areas with high pedestrian volumes like Downtown, they may be as wide as 18 feet.

Crossing Islands

Providing pedestrian refuge space on major roads will reduce the total crossing distance and give pedestrians and cyclists a safe place to pause, if needed. They should be considered wherever crossing distances are greater than 50 feet to allow multi-stage crossings, which may allow shorter signal phases. Cut through widths should equal the width of the crosswalk. The minimum width is 6 feet, with 8 feet preferred to accommodate cyclists and wheelchair users.

Shared Use Path Centerlines

Centerlines are not required for shared use paths in most cases. Markings are only recommended in areas where passing is inadvisable due to one of the following conditions:

- Sight line issues from curves
- Excessive grade that would result in variance of speed between users
- Approaching intersections or obstructions
- Unlit locations where nighttime riding is permitted
- High user volumes

Stormwater Management and Water Quality

Water quality and detention facilities shall meet Georgia Environmental Protection Division (GA EPD) standards for post-construction as well as the City of Sugar Hill, Gwinnett County, and GDOT's stormwater ordinance and permit requirements.

Much of the existing infrastructure along SR 20 is open concrete channels or grass channels. While the grass channels offer some treatment, they may not be sufficient to carry the increasing runoff from the growing impervious surface from the widening of the corridors. Additional methods to carry water to tributaries or to expand detention

areas, would be beneficial for stormwater management and should be addressed in the detailed design phase, including:

- Carefully consider impacts to existing drainage and how to preserve and improve runoff, especially near outlet pipes along SR 20 and Hillcrest Drive
- Integrate bioretention cells and rain gardens into the Downtown streetscape to manage stormwater at low points and enhance aesthetics, especially where landscaped curb extensions will be added
- Create spaces for runoff filtration along Hillcrest Drive



Bioretention cells and rain garden



Lighting

Lighting creates ambiance and sets the tone for safety and comfort on streets and trails. For Downtown streets, pedestrian and vehicular lighting should be consolidated on a single pole to reduce conflicts and clutter. Lights should be spaced 60 to 75 feet apart. Lights at intersections should be set back 15 feet from cross street, and the remaining fixtures should be spaced equidistant, where possible. Light fixtures should be placed in the furniture zone of the streetscape and should be coordinated with existing and proposed tree locations. Trees should be set back a minimum of 15 feet from light fixtures to avoid creating areas of low visibility.



For off-street segments, pedestrian-scale lighting is preferred to tall, highway-style lamps. Pedestrian-scale lighting is characterized by shorter light poles (standards around 15 feet high), lower levels of illumination (except at crossings), closer spacing to avoid dark zones between luminaires, and high-pressure sodium vapor, metal halide, or LED lamps. This approach to lighting design can improve lighting uniformity along the greenway and at conflict points, helping to address issues of social safety and bicycle and pedestrian visibility. Depending on the location, average maintained horizontal illumination levels of 0.5 to 2 footcandles should be considered, and lighting levels should provide a uniform illumination of the bicycle facility surface. Higher lighting levels may be needed in some locations to increase the perception of personal safety. Accent lighting may be added in high pedestrian activity areas like Downtown to highlight buildings and art or create a soft glow.

Light fixtures along SR 20 should be located and spaced based on existing vehicular scale light fixtures. The location of light standards relative to the roadway should follow GDOT setback requirements. Care should be taken to reduce loss of light to comply with “dark sky” best practices.

- 1) Example of pedestrian-scale lighting for an off-street trail
- 2) Signature accent lights in Downtown Sugar Hill

Implementation

The Sugar Hill Greenway concept outlined in this plan will have a positive impact on the quality of life for the residents and visitors of Sugar Hill. However, it will take considerable effort, collaboration, and funding to plan, design, and implement. The City must use its resources sensibly, while being mindful of its long-term goals.

In addition, the incremental development of the trail will require coordination between the City's Planning, Parks and Recreation and Public Works Departments and other stakeholders, including Gwinnett County, GDOT, and private developers or property owners.

How should the City make the Sugar Hill Greenway a reality? This chapter discusses how to continue implementing the community's vision by examining the strategies, policies and partnerships that will provide the framework for a successful project. Detailed implementation components like cost estimates, project phasing, funding, and near/mid-term action items are outlined to realistically move the project towards construction.



RIGHT-OF-WAY ACQUISITION STRATEGIES

The majority of the proposed alignment for this portion of the greenway uses public property. In some locations, right-of-way will need to be acquired on private property in order to fully execute the vision. This occurs where the right-of-way along a public street is constrained or where the preferred route goes through private property. Locations where acquisitions are needed will be validated with a site survey as this project moves into the design phase.

There are many ways to secure and develop right-of-way for greenway systems. It will be necessary to work with some landowners to secure trail right-of-way when it does not exist. This section details a list of specific strategies and policies drawn from programs in the Portland, OR; Aberdeen, NC; Prince Georges County, MD; and non-profit sources including Rails-to-Trails Conservancy (RTC). The information provided includes partnerships and acquisition options to consider in developing the Sugar Hill Greenway and its connecting corridors.

Acquisition Partners

The City of Sugar Hill should pursue partnerships with land trusts and land managers to make more effective use of their land acquisition funds and strategies.

- **LAND TRUSTS.** Land trust organizations are valuable partners when it comes to acquiring land and rights-of-way for greenways. These groups can work directly with landowners and conduct their business in private so that sensitive land transactions are handled in an appropriate manner and will often transfer land to the public agency once encumbered.
- **PRIVATE LAND MANAGERS.** For example, utility companies that manage land throughout the region. Trails and greenways can be built on rights-of-ways that are either owned or leased by electric and natural gas companies. Electric utility companies have long recognized the value of partnering with local communities, non-profit trail organizations, and private landowners to permit their rights-of-ways to be used for trail development.

The City of Sugar Hill should actively maintain relationships with private utility and land managers to ensure that the community wide greenway system can be accommodated within these rights-of-way. The City will need to demonstrate to these companies that maintenance will be addressed, liability will be reduced and minimized, and access to utility needs will be provided.

Acquisition Tools

As indicated in RTC's, *Successful Strategies for Trail Development*, acquiring a right-of-way for a greenway is rarely a simple, straightforward task. The process often requires multiple stages of groundwork, including conducting corridor research to determine who owns the right-of-way, undertaking environmental assessments, negotiating with the landowner, figuring the cost, or value, of the corridor and securing financing or funding. The following list of tools describe various methods of acquisition that the City can use to acquire greenway lands, either with partners or in its own right.

PURCHASE. Land can be purchased outright by either a nonprofit or a public entity. This option may be the simplest, but it can prove costly, especially if it requires reaching agreements with multiple landowners.

OPTION TO BUY. An option is a legal document giving a person the right to buy. The document outlines the required price and applicable period, with a fee (often 10 percent of land value). If the property is bought, the fee is deducted from the purchase price; if the purchase does not proceed, the fee is nonrefundable.

EASEMENTS. An easement is a right to use another person's real estate for a specific purpose; in this case, a trail. Easements can be negotiated with railroads, private landowners and public entities, such as a utility company. Because you are not purchasing the land, the cost is typically less than if you were to purchase it. The owner retains ownership of their land.

LAND DONATIONS. A landowner can donate property to an agency or organization. Tax credits may be available for land donated for conservation purposes.

LAND LEASE. In these cases, the land is rented from the landowner for a set amount of time. Leases can come from a variety of sources, including utility companies, railroads and public entities.

PURCHASE AND LEASE BACK. An agency can purchase property and lease it to the previous owner for a specified period of time. This arrangement may include use restrictions and may be useful if the landowner wants to sell the land but wishes to continue using it, such as for grazing animals.

BARGAIN SALE. This refers to the sale of a property at less than the fair market value. The difference between a bargain sale price and fair market value often qualifies as a tax-deductible charitable contribution. You can use this method to avoid high capital gains taxes.

PURCHASE OF DEVELOPMENT RIGHTS. This involves purchasing the development rights from a private property owner at a fair market value. The landowner retains all ownership rights under current use but exchanges the rights to develop the property for cash payment.

LAND BANKING. This involves land acquisition in advance of expanding urbanization. The price of an open space parcel prior to development pressures is more affordable to a jurisdiction seeking to preserve open space. A municipality or county might use this technique to develop a greenbelt or preserve key open space.

EMINENT DOMAIN. Property, or parts of property, can be forcibly taken from a landowner for use by the general public. This method is the least preferred because it can create resentment toward the trail by the former landowners, and the acquirer is still required to pay fair market value for the property.

REGULATORY STRATEGIES

The City can control the use and development of land through legislative powers. Regulatory methods help shape the use of land without transferring or selling the land. The following types of development ordinances are regulatory tools that can meet the challenges of suburban growth, as well as conserve and protect greenway resources.

- Growth Management Measures
- Performance Zoning
- Incentive Zoning
- Conservation Zoning
- Overlay Zoning
- Negotiated Dedications
- Reservation of Land
- Planned Unit Development
- Cluster Development

Trail-Oriented Development

Similar to Transit-Oriented Development (TOD), Trail-Oriented Development takes advantage of and leverages infrastructure that supports active ways of getting around in urban or suburban areas. In much the same way that TODs aim to build places where

people can live, shop, and travel from a string of centralized community centers, trail-oriented development aims to provide a network of local business and housing choices within a web of safe and enticing trails. The amenity of the trail provides a pull for home buyers and a new market for local businesses.

Best practices for this strategy include:

- Link land-use planning with non-motorized transportation
- Capitalize on amenity value of the trail to lure development
 - utilize remnant corridors
- Foster desired development density through TOD like zoning and ordinances
- Promote public and private investment

According to Billy Fields, Ph.D. at Texas State University, “the potential synergy associated with well-designed trail corridors and revitalization planning has attracted several communities around North America to implement trail-oriented type redevelopment projects.” One such example which started its evolution more than 15-years ago, is in Minneapolis with its Midtown Greenway project.



Trail Oriented
Development

Midtown Greenway

Minneapolis, MN

The first phase of the Greenway was opened in 2000, converting a rail line trench into a new neighborhood amenity. The depressed former rail line, however, was not well-connected to communities around the trail. During the next several years, members of the Midtown Greenway Coalition worked to create **zoning and land use plans designed to provide enhanced access to the trail**. While there are many factors spurring redevelopment along the corridor, the new trail amenity and building design that fronted and activated the trail were key factors in helping create new nodes of positive development along the corridor.

In a report published by the Urban Land Institute in 2016, *Active Transportation and Real Estate: The Next Frontier*, the authors identify this trend as the latest phase in the evolution of urban development from car-centric to people-friendly design. The report highlights the Midtown Greenway and other excellent examples of cities using urban trails or greenways as tools for revitalization including:

- The Circuit Trails, Greater Philadelphia, PA
- Atlanta BeltLine, Atlanta, GA
- Katy Trail, Dallas, TX

The report suggests that developers looking to maximize the amenity value of the trail should consider including items such as **bicycle storage, extra-wide hallways and elevators, bike cleaning stations, bike “valets,” access to bike-share systems, bike repair room and shower or locker facilities**.

The projects mentioned in the report all experienced success in encouraging redevelopment through the mix of new public space. The common thread among the case studies and research focused on trailside zoning as a key ingredient in enhancing commercial and economic development. As such, consideration of a **trailside development zoning overlay** to guide redevelopment of the Sugar Hill Greenway and connecting projects may lead to greater economic returns for the project.

Resources: Active Transportation and Real Estate: The Next Frontier, Urban Land Institute, 2016
Presentation: New Partners for Smart Growth Conference, Billy Fields, Ph.D., 2012

Development Process

Many local governments use ordinances to require new developments to build or pay for active transportation infrastructure including greenways as part of the approval process. It is common for municipal officials to place conditions on the approval of subdivision and land development applications. Through negotiation, a municipality can request the installation of bicycle and pedestrian facilities. The City of Sugar Hill should integrate such policy requirements, and other planning elements into its Comprehensive Plan and/or other adopted plans such as a pedestrian and bicycle master plan that will identify the need for these facilities so that developers are aware that the city will require or would like to implement these facilities when land development applications are made.

Communities vary greatly on how these types of requirements are written and implemented. One such example can be found in Prince George's County, Maryland, where developers are required to dedicate land and build pedestrian and bicycle facilities that are on their property or on public right-of-way fronting their property (i.e. streets). While not all development applications are subject to this requirement this subdivision ordinance gives the Planning Board the authority for requiring development to build trail facilities. See language at right.



Trail under construction in Prince George's County, MD

Sample Ordinance

PRINCE GEORGE'S COUNTY, MD

CODE OF ORDINANCES SECTION 24-123(A)(6):

"Land for bike trails and pedestrian circulation systems shall be shown on the preliminary plan and, where dedicated or reserved, shown on the final plat when the trails are indicated on a master plan, the County Trails Plan, or where the property abuts an existing or dedicated trail, unless the Board finds that previously proposed trails are no longer warranted."

GWINNETT COUNTY AND GDOT PARTNERSHIPS

Much of the proposed greenway runs along and/or intersects County or State controlled roads, including SR 20 and Peachtree Industrial Boulevard, making collaboration with Gwinnett County and GDOT essential to its success.

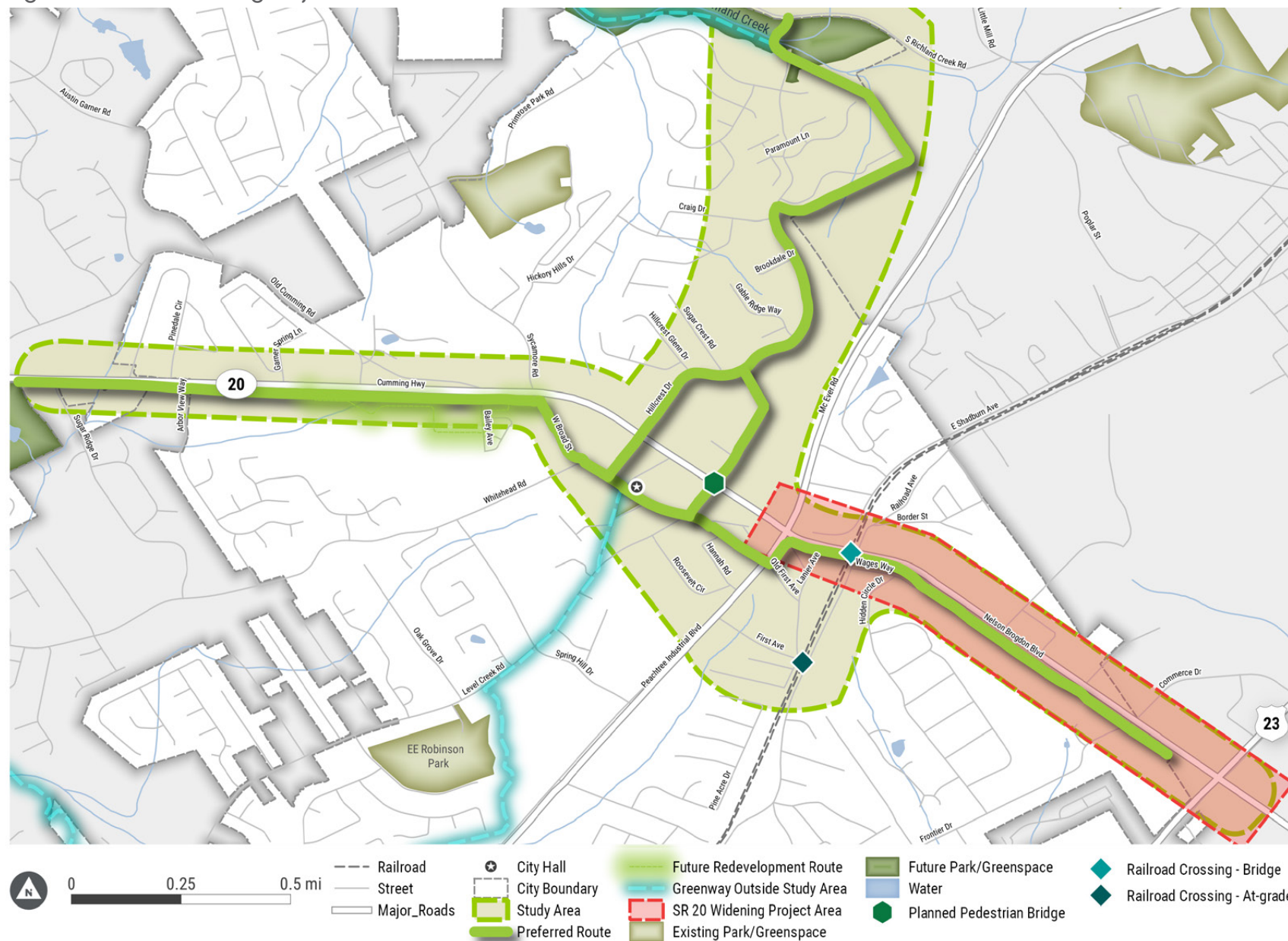
GWINNETT COUNTY: Gwinnett County has already established its commitment to supporting the development of a countywide network of trails and greenways in its recent master plan, which included the previously adopted sections of the Sugar Hill Greenway. The City of Sugar Hill will work with Gwinnett County to integrate this and other segments into the countywide system.

Gwinnett County will also play a key role in developing safe and effective greenway crossings. The County manages all of the traffic signals within the City of Sugar Hill and nearby unincorporated areas, and it controls certain streets within the study area, like Peachtree Industrial Boulevard. The City of Sugar Hill will work with Gwinnett County staff to determine potential modifications to intersection design and signal timing that will balance the needs of all travel modes and promote safe crossings for vulnerable users.

GDOT: SR 20 is a significant road in Sugar Hill, serving as the front door to the city and a direct connection to Downtown and much of the local commercial activity. As a state route, it also provides regional connectivity for long-distance trips all the way from Cartersville in the west to Loganville in the east. The City of Sugar Hill will work with GDOT to balance these competing local and regional functions in a way that best serves all users.

The most critical partnership with GDOT will be the potential integration of a shared use path into its ongoing SR 20 widening project, which is currently in design in partnership with the Gwinnett County Department of Transportation (DOT). The project spans from Peachtree Industrial Boulevard to Buford Highway. Because SR 20 is the only grade separated crossing of the Norfolk Southern railroad in the area, it is the preferred route for the shared use path. GDOT's decision to include the path as, at minimum, part of the bridge reconstruction and potentially throughout the corridor will determine the feasibility of the preferred alternative. A decision is expected in Fall 2020. If the design modification request is not approved, an alternative route using the at-grade crossing at First Avenue or a new pedestrian and bicycle bridge will become necessary.

Figure 29. SR 20 Widening Project Location



COMMUNITY PARTNERSHIPS

Trails, greenways, linear parks, and similar corridor enhancement projects are most successful when there is strong public agency leadership, a comprehensive framework plan, and overwhelming community support, usually embodied in a citizen support organization. These organizations typically assist with a variety of tasks including advocacy, public outreach, funding and management, among others.

The Sugar Hill Greenway is well on its way to success as evidenced by the commitment of staff and elected officials who have already begun implementing the project. What follows is a brief summary of the various types of support groups, with some examples of how different organizational structures bolster these facilities in their region. Sugar Hill has started this process by forming a citizen support committee called the Friends of the Greenway; however as more miles open and interest grows, consideration of a more formalized entity may be warranted.

Support Group Types

Community support groups can take on many different forms and functions based on the size and complexity of the community and project(s) being supported. The most common are:



Public Agency Supported Advisory Boards/Committees

Public agencies typically form Advisory Boards to obtain ongoing citizen input at various stages in planning and/or implementing project(s). Hosting an advisory board is an excellent way to get a better product while building support for agency policies, programs, projects, and funding. Most public agencies are familiar with this support structure and often make this a requirement in their planning processes. Creating and running an effective advisory board requires a thoughtful, purposeful and informed strategy.

Alternatively, there are a variety of governmental frameworks that exist to fund, implement, and manage greenway programs. In these cases, the responsibilities of these entities far surpass what is expected of an advisory board. These efforts can be partially or fully funded and supported by the public agency or supported in other ways. This structure works best for implementing and maintaining a pathway or system of pathways, but it may not be the best option for building public support for a project before it is done. The organization examples at right are models for this type of structure.

Peer Profiles

Public Supported Advisory Boards and Committees

Great Rivers Greenway

St. Louis, MO

Great Rivers Greenway is the public agency connecting the St. Louis region with greenways. It was created in 2000, through a public vote to use a new sales tax to improve rivers and parks. The Great Rivers Greenway District is a publicly funded entity that oversees the planning and execution of a network of trails throughout the St. Louis region. A twelve-member Board of Directors representing the three areas governs the distribution of funds for developing the River Ring, the system of interconnected greenways, parks and trails. An Executive Director and staff carry out the development of the River Ring, working with local, county and state agencies as well as private and non-profit agencies throughout the St. Louis region.

Midtown Improvement District

Atlanta, GA

Established in 2000, the Midtown Improvement District is a self-taxing district created by Midtown commercial property owners to augment public resources and catalyze economic growth in Midtown. The MID is funded by property owners through a special assessment paid on commercial property. The MID is governed by a nine-person board of directors elected by property owners, with three members appointed by the Mayor and President of the Atlanta City Council.

Public Agency Supported Non-profit Organizations and Corporations

Several successful community support groups are independent non-profits that are partly funded by a public agency. This structure is an excellent way to ensure long-term sustainability of a project but requires significant upfront effort, funding and political support. These groups often have sophisticated organizational structures, significant corporate support, and are politically savvy. These can include community improvement districts with dedicated staff.

Coalitions

Coalition groups bring together the public, private, and nonprofit sector to support a project. Often, these projects span several jurisdictions or will impact several different interest groups. This type of group can be useful to build support for more politically contentious projects.

Peer Profiles

Public Agency Supported Non-profits and Corporations

Buffalo Bayou Partnership

Houston, TX

The Buffalo Bayou Partnership is a nonprofit that aims to revitalize the Buffalo Bayou, a 10-mile stretch of bayou that flows through the center of Houston. Established in 1986, the Partnership's geographic focus is the 10-square mile stretch of the bayou that flow through the heart of downtown to the Port of Houston Turning Basin. The Partnership is funded by through the support of foundations, corporations, individuals and government agencies. The group is partly funded by a Downtown Tax Increment Reinvestment Zone.

Coalitions

The Circuit Trails Coalition

Greater Philadelphia, PA

The Circuit is Greater Philadelphia's multi-use trail network connecting people to jobs, communities, parks, and waterways. Since its May 2012 launch, the Circuit Trails Coalition has brought together nonprofit organizations, foundations and agencies to advocate for its completion, with an eye toward raising the profile of trails and their many public benefits. To date over 300 miles of the envisioned 750-mile regional network are completed.

“Friends of” Non-profit Groups

“Friends of” groups are typically the most common and locally focused type of support group. These groups often obtain nonprofit status and are usually started by a group of neighbors or concerned citizens who coalesce around the common goal of supporting the trail or greenway. “Friends of” groups can vary in size, but tend to start small and grow bigger as the project progresses. They can support by fundraising, spearheading

educational campaigns, hosting fun community events, creating social walking or biking groups, or organizing clean up days. Growing and leveraging Sugar Hill’s existing Friends of the Greenway group can help build neighborhood support and community spirit around this new amenity. Strengthening its membership will also help facilitate ongoing community engagement as this project enters the design phase.

“Friends of” Non-profit Groups

Friends of the Katy Trail

Dallas, TX

The City of Dallas owns the land, but works hand in hand with the nonprofit group Friends of the Katy Trail to keep the Trail well maintained and programmed. The group maintains and landscapes the paths, provides lighting, signage, benches and fountains, hires Dallas Bike Officers for safety patrols, and pays all utilities. The group is primarily funded through capital contributions, corporate sponsorships, and personal memberships, and raises approximately \$1 million annually.



Photos and social media posts from Sugar Hill’s existing Friends of the Greenway group, who will continue to be important partners for implementation and activation



PHASING

Project phasing recommendations were determined by balancing community priorities, as expressed by virtual open house and survey participants, with opportunities to build a connected network and coordinate with the timing of other local initiatives and private development, such as other roadway or park construction. This phasing plan is a game plan for city staff to gradually execute the community's vision in manageable pieces that can be achieved with attainable resources. It is a flexible approach that can and should be modified if community preferences change over time, obstacles limit the near-term viability of certain project elements, or new opportunities arise.

Phase 1: SR 20 East

An ongoing GDOT and GCDOT widening project on SR 20 from Peachtree Industrial Boulevard to Buford Highway coincides with the SR 20 East project area and is scheduled to complete design and begin acquisition and construction soon. This segment and associated intersection improvements are recommended as the first phase to tie into this planned project, minimize impacts to traffic operations, and create cost efficiencies by consolidating construction activities in this area into a joint project. Coordination with GDOT and GCDOT on this piece was still underway at the time of this report. If the greenway can not be included within the planned widening project, it may be shifted to a later phase.

Phase 2: Downtown

Downtown was identified as a community priority and connects the SR 20 East segment (Phase 1) to the greenway segment currently under construction on Level Creek Road and Church Street. This phase will include the cycle tracks and bicycle boulevard Downtown, as well as intersection safety improvements within Downtown and at major intersections used to access Downtown: SR 20 at Hillcrest Drive and Alton Tucker Boulevard at Peachtree Industrial Boulevard.

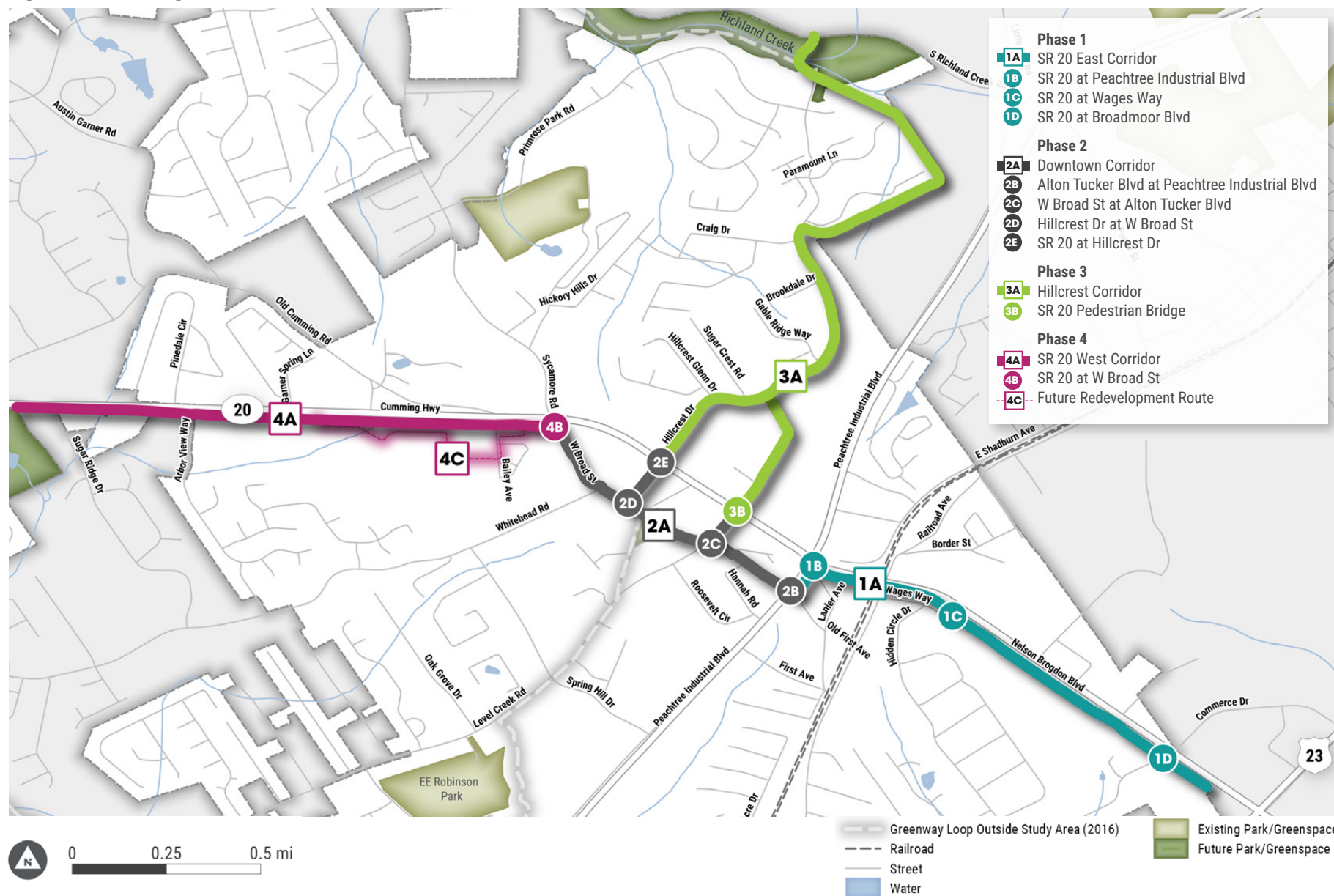
Phase 3: Hillcrest

The Hillcrest route offers the natural experience community members desire while also connecting nearby neighborhoods to Downtown and the planned park at Richland Creek. It will connect directly to both Phase 2 and the broader 16-mile planned greenway, making it the next priority for implementation.

Phase 4: SR 20 West

This segment of the greenway will be most useful once the new city park near Sugar Ridge Drive is open. It is recommended as the last phase due to lower community preference and to align with the timing of the new park. Additionally, the off-street route through currently undeveloped property is preferred to the on-street option along SR 20 and its development may coincide with a later phase. If these parcels are developed, the greenway should be included in the proposed design.

Figure 30. Phasing Map



COST ESTIMATES

Initial, planning level cost estimates for the proposed design have been developed to determine the approximate cost of improvements. These estimates are intended for planning purposes to help the City of Sugar Hill identify and pursue project funding. More detailed costs will be determined as projects move into the design phase.

Methodology

A companion document to this report, the *Sugar Hill Greenway LCI GDOT Concept Report*, includes a more detailed account of assumptions and methods used to estimate project costs. Assumptions and methods are summarized below:

- Unit costs are based on values from the ARC Planning Level Cost Estimation Tool, historical bid pricing from GDOT, and estimator's judgment.
- All costs are in 2020 dollars and should be inflated as necessary for use in future construction years.
- All construction costs include a 30 percent contingency and 12 percent engineering cost.
- Estimates do not include costs for easement or right-of-way acquisition, utility relocation, lighting, drainage, or ongoing maintenance.

Construction costs will vary based on the ultimate project scope, timing, and economic conditions. A desktop analysis and site visits were used to identify site conditions that are likely to impact project costs, such as locations where retaining walls or bridges will be necessary. A site survey, to be conducted in a future phase, will help better gauge the cost impacts of these conditions. Cost contingencies included in the estimate help account for costs that cannot be determined without detailed design and site survey, such as utility relocation.

Table 1 summarizes the estimated project cost by element. Improvements are broken down by corridor segments and intersection upgrades to allow flexibility in implementation phasing. Total cost per phase may vary depending on the refined selection of projects per phase. Features such as waysides, landscaping, and minor intersection improvements are included in segment costs. Segments where existing site conditions require more extensive civil works and structures, such as SR 20 West and Hillcrest, will be more expensive to construct than those that will require more minimal civil works, such as Downtown and SR 20 East.

Cost estimation for this project focused on the cost of the greenway facility itself. The estimated costs for the proposed parks, art installations, and wayfinding signs are not included within the scope of this project. Costs for these items will be determined as the city refines the concepts for these project components. The estimated cost for the pedestrian bridge over SR 20 will be developed separate from this process as part of a grant application.

Table 1. Planning Level Cost Estimate Summary

Project #	Item	Estimated Cost
Phase 1		
1A	SR 20 East Corridor	\$2,204,000
1B	Intersection Upgrade: SR 20 at Peachtree Industrial Blvd	\$590,000
1C	Intersection Upgrade: SR 20 at Wages Way	\$489,000
1D	Intersection Upgrade: SR 20 at Broadmoor Blvd NE	\$178,000
Phase 1 Subtotal		\$3,461,000
Phase 2		
2A	Downtown Corridor	\$951,000
2B	Intersection Upgrade: Alton Tucker Blvd at Peachtree Industrial Blvd	\$253,000
2C	Intersection Upgrade: W Broad St at Alton Tucker Blvd	\$68,000
2D	Intersection Upgrade: Hillcrest Dr and W Broad St	\$128,000
2E	Intersection Upgrade: SR 20 at Hillcrest Dr	\$398,000
Phase 2 Subtotal		\$1,798,000
Phase 3		
3A	Hillcrest Corridor	\$3,509,000
3B	SR 20 Pedestrian Bridge*	TBD*
Phase 3 Subtotal		\$3,509,000
Phase 4		
4A	SR 20 West Corridor	\$6,502,000
4B	Intersection Upgrade: SR 20 at W Broad St	\$420,000
Phase 4 Subtotal		\$6,922,000
Total		\$15,690,000*

*Cost of the pedestrian bridge over SR 20 will be estimated through a separate project and will affect the total estimated cost

FUNDING

Multiple sources of funding can be combined to finance different aspects of the greenway. Dedicated, recurring funding is the most reliable way to build out a robust network, including this project and other greenway segments recommended in the *Sugar Loop Greenway Master Plan (2016)*, within a reasonable timeframe. The City should review alternative financing structures— such as reallocating existing funding, taking out an infrastructure bonds, or establishing development impact fees— to determine the approach that best fits with its financial strategy and will result in a sustainable revenue source. Because this project has both transportation and recreation benefits, funding sources from both domains may be considered.

The Atlanta Regional Commission’s (ARC) *Walk. Bike. Thrive!* toolkit provides an outline of potential funding sources for municipalities in the Atlanta region looking to implement pedestrian and bicycle infrastructure, including local, private, regional, state, and federal sources. Table 2 summarizes the potential funding sources detailed in that report.

Table 2. Potential Funding Sources

	Short Term Project (< 2 Years)	Long Term Project (> 2 years)
Small Budget	Neighborhood associations Community improvement districts Crowdsourcing Non-profit grants Impact fees Infrastructure bonds Governor’s Office of Highway Safety Local taxes Foundation grants Individual donors	Federal transportation funds Capital improvement budget funds State programs: <ul style="list-style-type: none"> • GDOT • Recreational Trails Program (Dept. of Natural Resources) • Community Development Block Grant
Big Budget	Foundation grants Individual donors Community improvement districts Public-private partnerships Infrastructure bonds Local taxes	Federal transportation funds Congressional earmarks

Source: *Walk. Bike. Thrive!* Atlanta Regional Commission (2018)

ACTION PLAN

This action plan provides guidance on the key next steps needed to implement this portion of the Sugar Hill Greenway. Some of the recommended actions, such as revisions to the zoning ordinance, may also support the development of other greenway segments. It is a flexible strategy that should be regularly reviewed and updated by staff to reflect ongoing opportunities and challenges.

SHORT TERM (YEARS 1-2)		
	Action	Responsible Party
1	Adopt the Sugar Hill Greenway Concept LCI Plan	City Council
2	Educate staff and elected officials about the Greenway Concept LCI Plan and its recommendations and implications	Dept. of Planning
3	Communicate and coordinate the Greenway Concept LCI Plan components with respective stakeholders, prospective partners, regional jurisdictions, and local developers.	Dept. of Planning
4	Get new greenway segment adopted as part of Gwinnett County's Countywide Trail Master Plan and ARC's Regional Trail System Concept	Dept. of Planning; Gwinnett County; ARC
5	Establish a secure funding source for greenway construction through the City's budgeting process	Dept. of Planning; City Manager
6	Seek additional funding for greenway development through corporate partnerships, both local industries and tourism	Dept. of Planning; Dept. of Economic Development
7	Work with ARC to determine eligibility and competitiveness for Transportation Alternatives Program (TAP) and LCI program transportation project implementation funding	Dept. of Planning
8	Work with GDOT and GCDOT to modify the SR 20 widening project design (Peachtree Industrial Boulevard to Buford Hwy) to include a shared use path	Dept. of Planning; GDOT; GCDOT
9	Work with GDOT and GCDOT to determine traffic impacts and approvals for intersection design and signal modifications	Dept. of Planning; GDOT; GCDOT
10	Revise zoning ordinance to require implementation of adopted greenway plans as properties redevelop and encourage trail-oriented development building and site design elements	Dept. of Planning

SHORT TERM (YEARS 1-2)

	Action	Responsible Party
11	Develop and launch a signature brand for the Sugar Hill Greenway	Dept. of Planning; Dept. of Economic Development; Communications staff
16	Explore the potential for a bike share program by conducting a feasibility study and engaging the community about overall desire and preferred locations.	Dept. of Planning
17	Establish a greenway data collection program and collect baseline data, including periodic counts of pedestrians and cyclists and economic impact data	Dept. of Planning; Dept. of Economic Development
18	Compile emergency response, crime, and other incident data as a baseline for monitoring, including location-specific information for reporting and identification of opportunities to improve greenway safety, security, and overall management	Dept. of Planning; Police Department
19	Begin holding regular meetings (at least quarterly) of the Friends of the Greenway group	Friends of the Greenway
20	Partner with Friends of the Greenway to develop a neighborhood education campaign about greenway benefits and etiquette	Dept. of Planning; Friends of the Greenway
21	Partner with Friends of the Greenway to host a launch event for Phase 1 of the greenway to build momentum and support, including a potential sponsorship and fundraising component for future phases	City event coordinator; Friends of the Greenway
22	Engage community arts and history organizations to identify stories and artists to be featured in public art installations along the greenway	Dept. of Planning; Sugar Hill Arts Commission; Sugar Hill Historic Preservation Society
23	Coordinate with Gwinnett County Transit to determine the potential to enhance bus shelters and service along the greenway route	Dept. of Planning
24	Review greenway maintenance capacity and protocols and adopt best practices, as needed	Dept. of Planning; Dept. of Public Works

MID TERM (YEARS 3-5+)		
	Action	Responsible Party
12	Develop and adopt trail design guidelines and standards, including a wayfinding package	Dept. of Planning
13	Develop a 100 percent design package for the greenway design	Dept. of Planning
14	Begin right-of-way acquisition where needed	City Manager
15	Create a detailed master plan for the new park at Richland Creek	Dept. of Parks and Recreation
25	Continue to apply for grant funding and solicit corporate/community sponsorships	Dept. of Planning; Dept. of Economic Development
26	Continue to implement subsequent phases of the greenway as funding allows	Dept. of Planning; Dept. of Public Works
27	If determined to be feasible, install bike share stations at key trail access points and trailheads	Dept. of Planning; Bike share partner
28	Continue to monitor, report, and evaluate pedestrian and bicycle user counts, safety data, and economic impacts	Dept. of Planning; Dept. of Economic Development
29	Finalize designs and build the new community park on the south side of SR 20 near Sugar Ridge Dr	Dept. of Parks and Recreation
30	Finalize designs and build the new park at Richland Creek	Dept. of Parks and Recreation
31	Partner with Friends of the Greenway and local schools and youth organizations to host educational rides for beginners along the greenway and at the learning loop at the new park on SR 20	Dept. of Parks and Recreation; Dept. of Planning; Friends of the Greenway
32	Partner with a bicycle event parking vendor, if needed, to bring in short-term bike parking for special events Downtown to accommodate peak demand	Dept. of Planning
33	Work with property owners like shopping plazas and places of worship to create joint use parking agreements, as needed	Dept. of Planning; Property owners

As the Sugar Hill Greenway begins to be developed and visited, consider strategies for building momentum towards recognizing the Atlanta region, including Sugar Hill, as a world-class destination that prioritizes biking and walking. As indicated in the Urban Land Institute's report, *Active Transportation and Real Estate: The Next Frontier*, this status is often reflected in how a community markets itself, whether to tourists or developers or people relocating to the area and reflected visually in the public realm. Some of the most trail-friendly places in the U.S. and abroad have taken opportunities to create the following highly visible infrastructure for biking and walking:

- Collaboration with architects to develop trail-oriented buildings and architecture.
- Visible trail-related sculpture and support facilities, and iconic, architectural non-motorized bridges.
- Artful, whimsical wayfinding that makes it easy and memorable to bike and walk.

Converting the Sugar Hill Greenway corridor into a catalyst for revitalization is an exciting endeavor that requires vision and smart planning. The *Sugar Hill Greenway LCI Concept Plan* provides a framework for the process to begin and the implementation actions outlined here offer specific considerations that will aid in successfully building this essential community asset.





Sugar Hill Greenway Livable Centers Initiative Concept Plan
November 2020