Emory South Peachtree Creek Trail Extension Scoping Study

EXISTING CONDITIONS

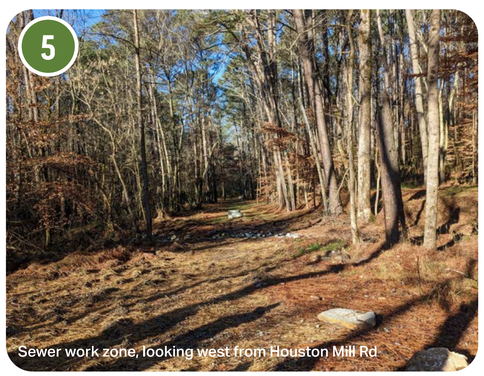
Prepared for DeKalb County by
The PATH Foundation
KAIZEN Collaborative

VA Medical Center, looking west

VA Medical Center, looking west toward Lullwater Preserve

Lullwater Preserve existing trails

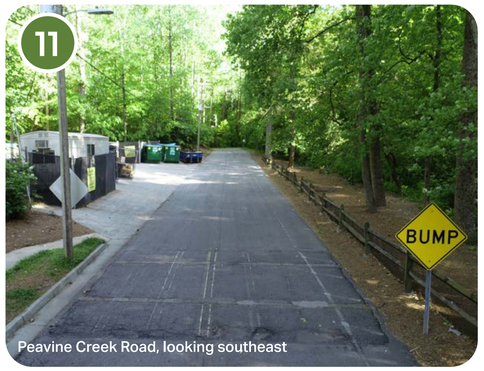
Sewer work zone, looking west toward Houston Mill Rd



Sewer work zone, looking west from Houston Mill Rd

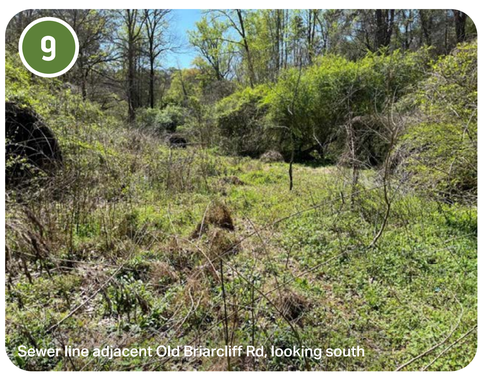
Sewer work zone near Victoria Estates, looking west

Wesley Woods parking lot, looking south

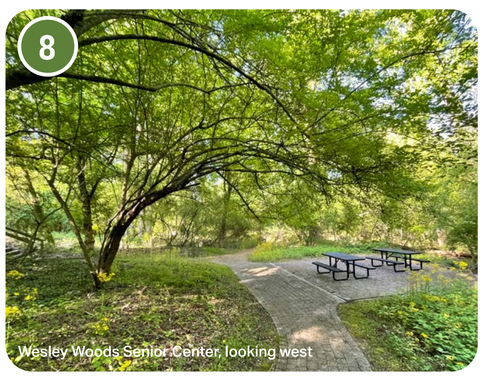


Peavine Creek Road, looking southeast

Clifton Road and CDC entrance



Sewer line adjacent Old Briarcliff Rd, looking south



Wesley Woods Senior Center, looking west

LAND HISTORY

Prepared for DeKalb County by
The PATH Foundation
KAIZEN Collaborative

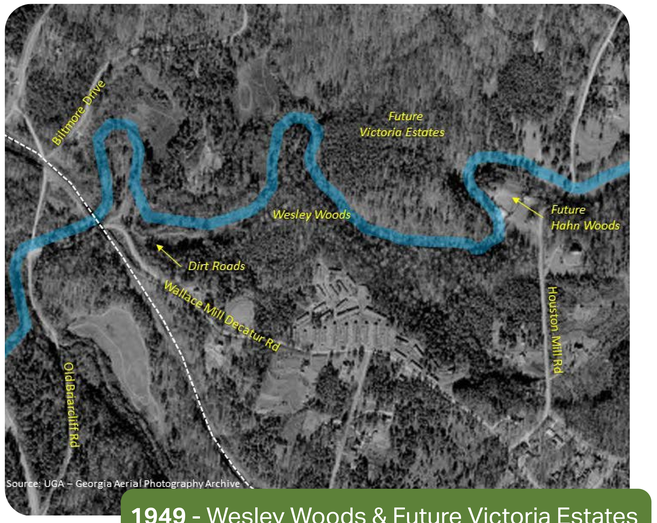
South Peachtree Creek

Emory University sits in the middle of the Atlanta Metropolitan Area – home to over 6 million people. South Peachtree Creek and its forested valley form the northern border of Emory University.

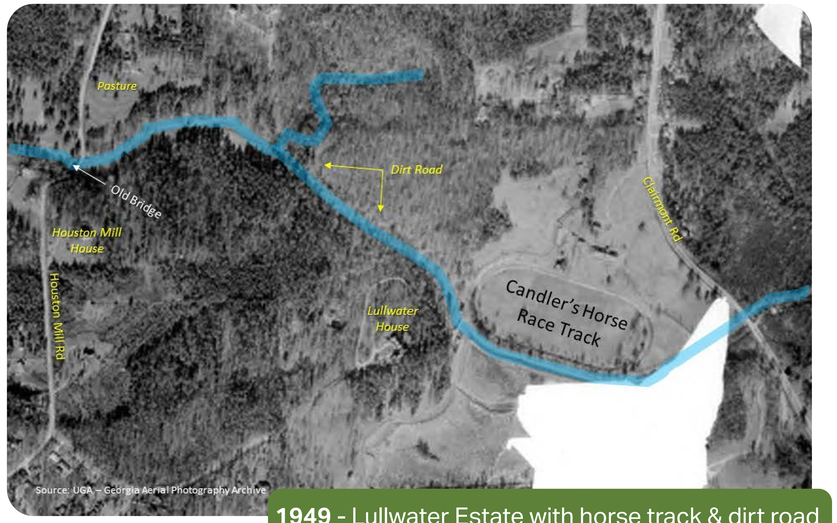
Beginning in the 1850s, the trees in the forest were harvested for lumber, the land was cleared for pasture, and the creek was dammed to mill grain and later to provide electricity. Starting in the 1920s, the development of the Lullwater Estate included the construction of a mansion and a regulation-size horse track with roads that cut through the forest, as well as the dredging of a marsh and damming of the Earnest Richardson Creek to create Candler Lake.

Beginning in the 1950s with Emory's acquisition of the Lullwater Estate, research and medical center development accelerated. This era brought the Emory National Primate Research Center, the Atlanta VA Medical Center (on the former horse track), Wesley Woods Medical Center, Emory University Hospital Wesley Woods, Southern Association of Colleges and Schools, and the neighborhoods of Victoria Estates, Thomson Park, and Druid Hills.

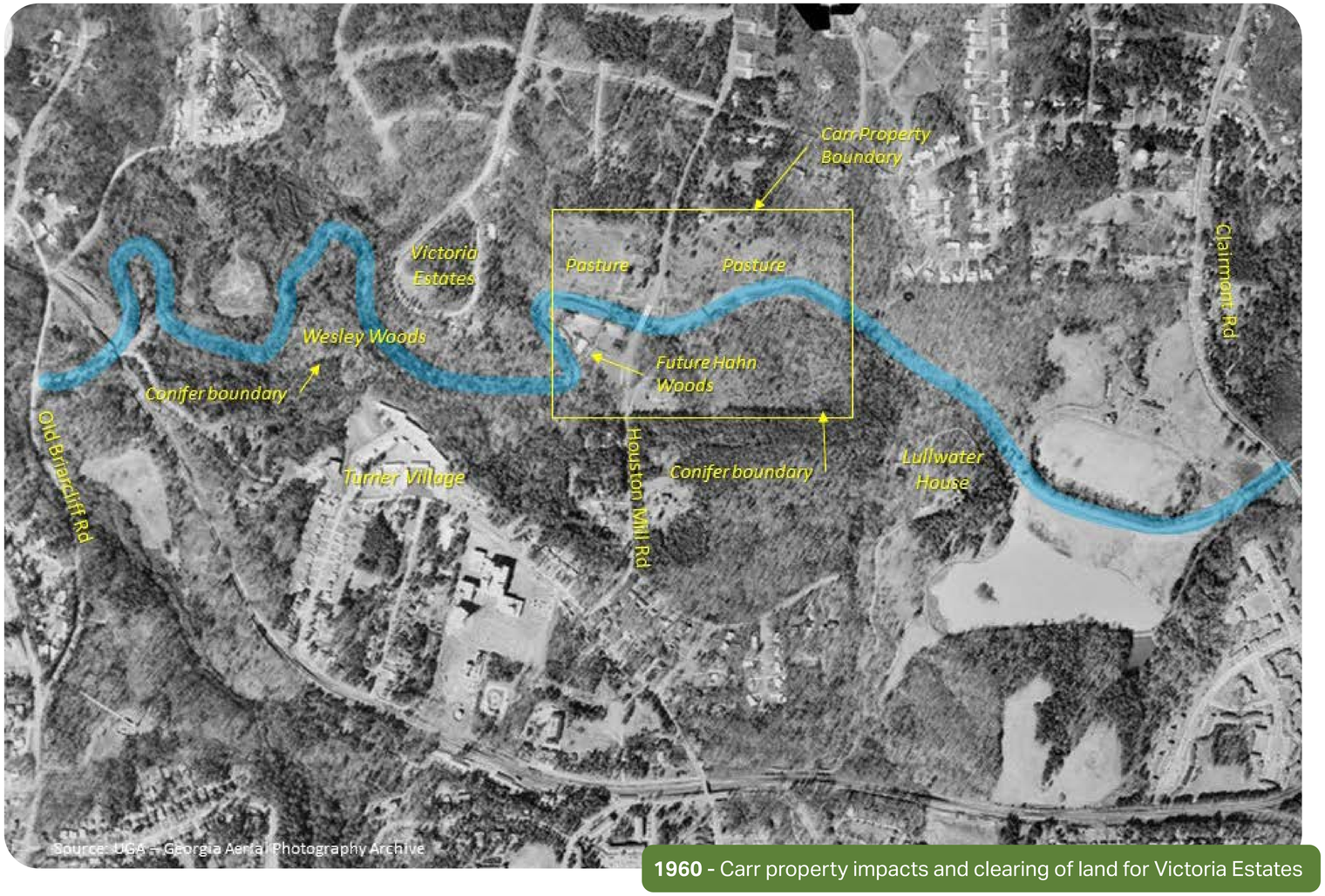
But some portions of forest remained with reasonably intact forest floor and stream bank ecology. Emory biologists and their students, began cataloging the flora and fauna, highlighting the specialness of the remaining forest. At their urging, Emory began limiting development along the creek valley in the 1990s.



1949 - Wesley Woods & Future Victoria Estates



1949 - Lullwater Estate with horse track & dirt road



1960 - Carr property impacts and clearing of land for Victoria Estates

Images

Above: *What remains of Lullwater Mill Tower and dam as it appears in 2023.*

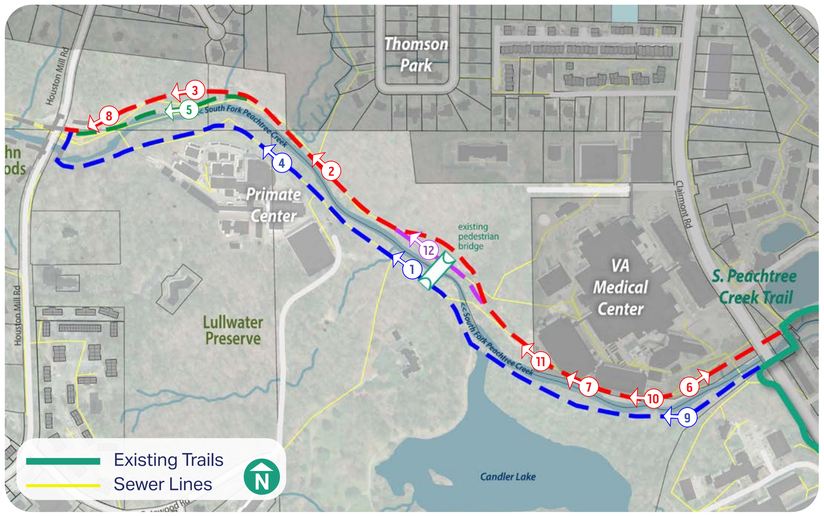
Left: *The Lullwater Estate's tower, dam, bridge and horse pasture as they appeared circa1930. Note that the horse pasture behind the tower is now a forested area.*

Emory South Peachtree Creek Trail Extension Scoping Study

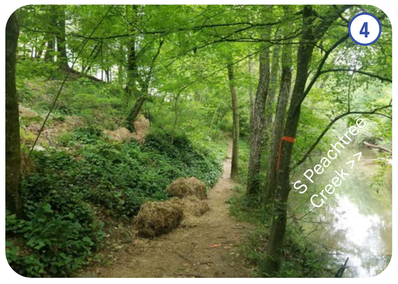
ALIGNMENT ALTERNATIVES

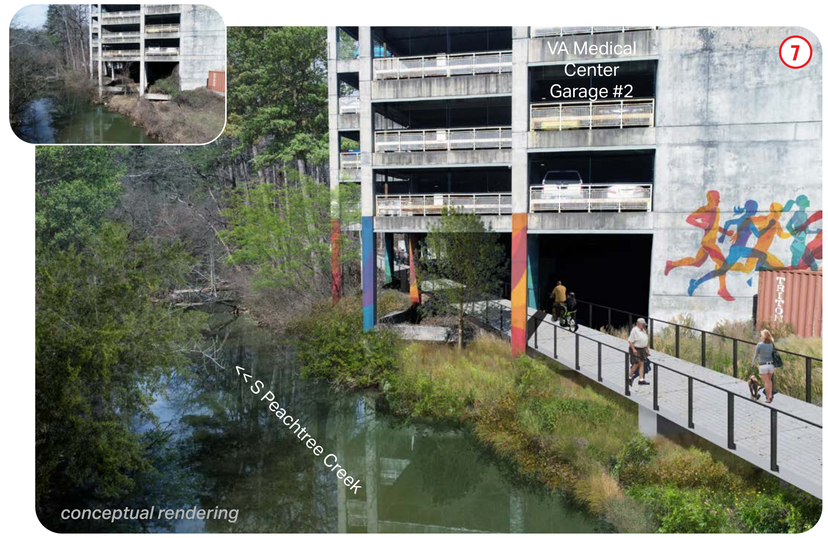
Prepared for DeKalb County by
The PATH Foundation
KAIZEN Collaborative

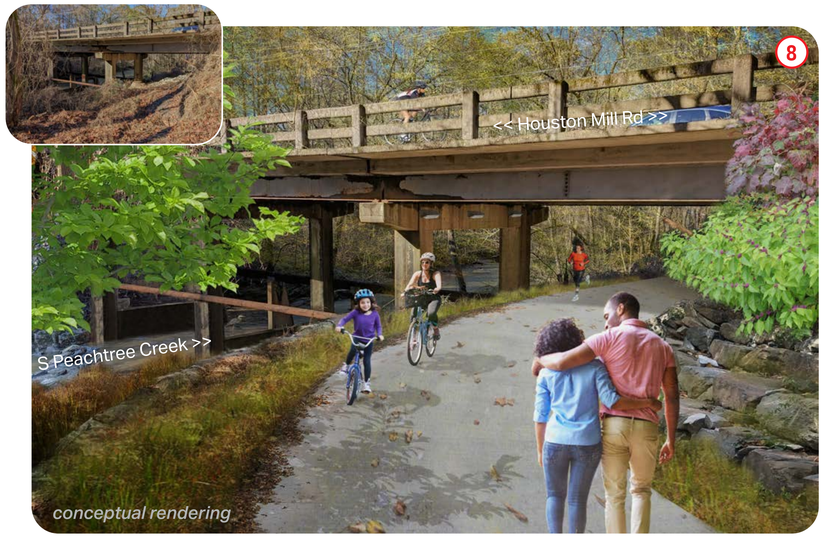
Segment 1: Clairmont Road to Houston Mill Road

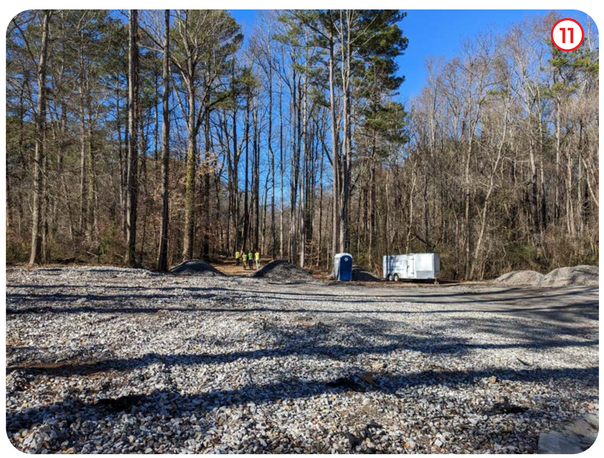


Alternatives: 1a 1b 1c 1d







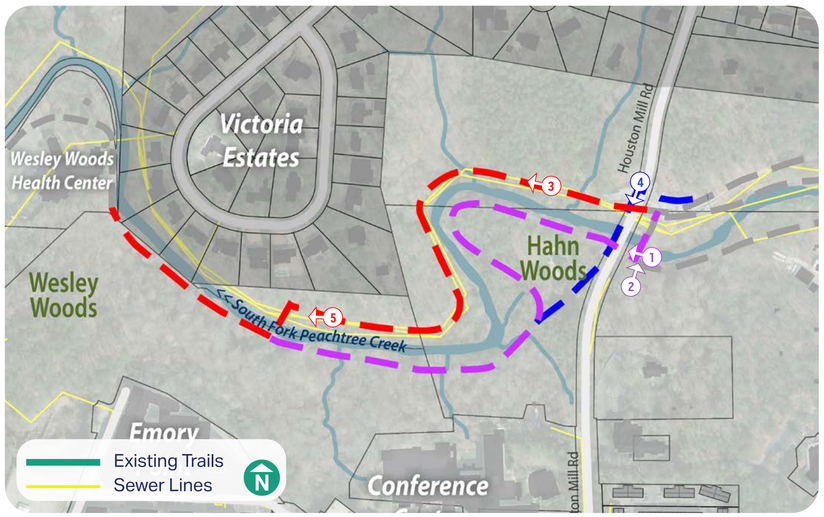


Emory South Peachtree Creek Trail Extension Scoping Study

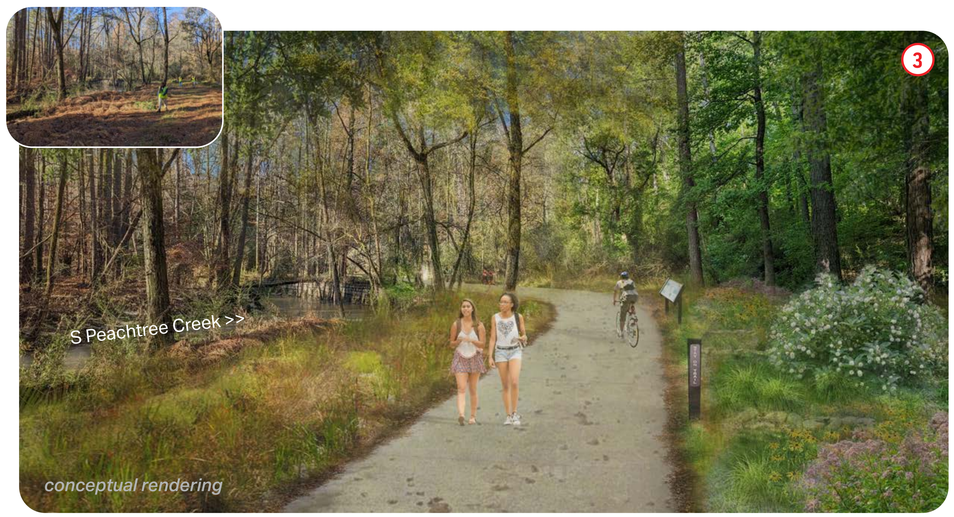
ALIGNMENT ALTERNATIVES

Prepared for DeKalb County by
The PATH Foundation
KAIZEN Collaborative

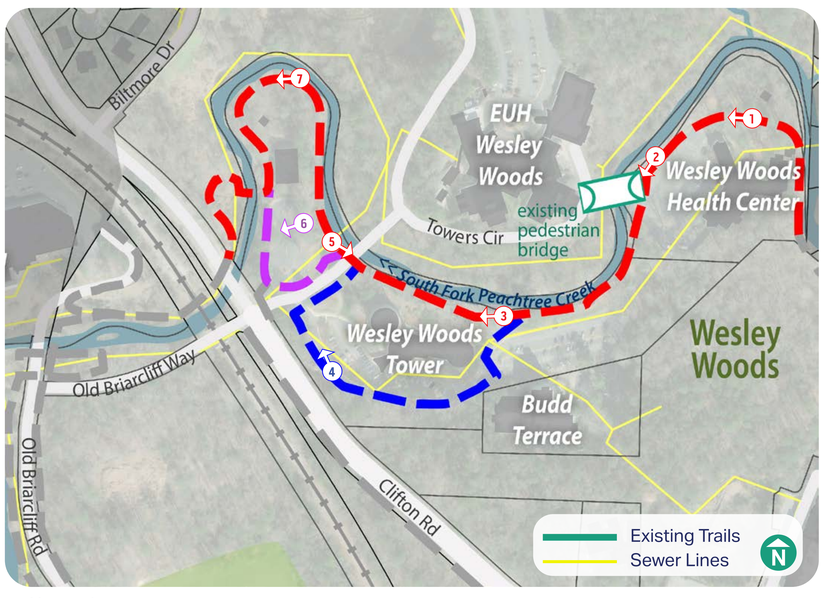
Segment 2: Houston Mill Road to Wesley Woods



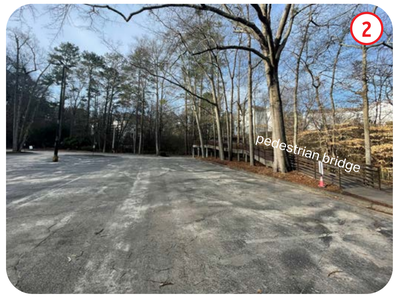
Alternatives: 2a 2b 2c

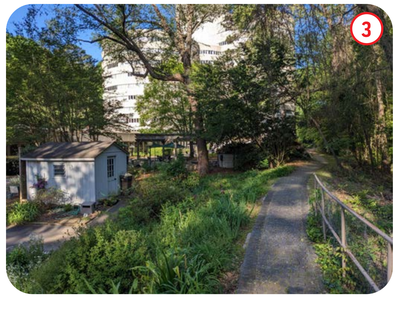


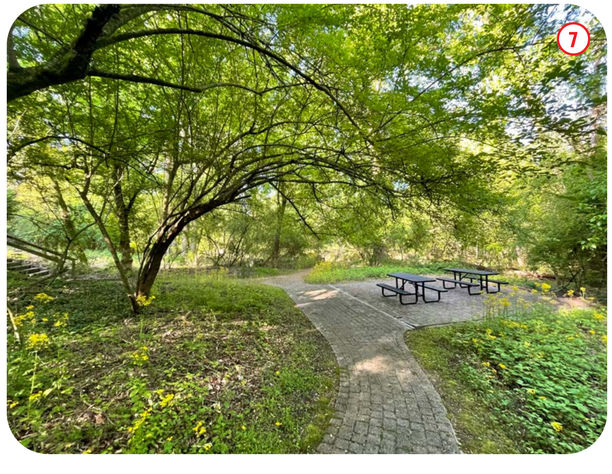
Segment 3: Wesley Woods to Clifton Road



Alternatives: 3a 3b 3c





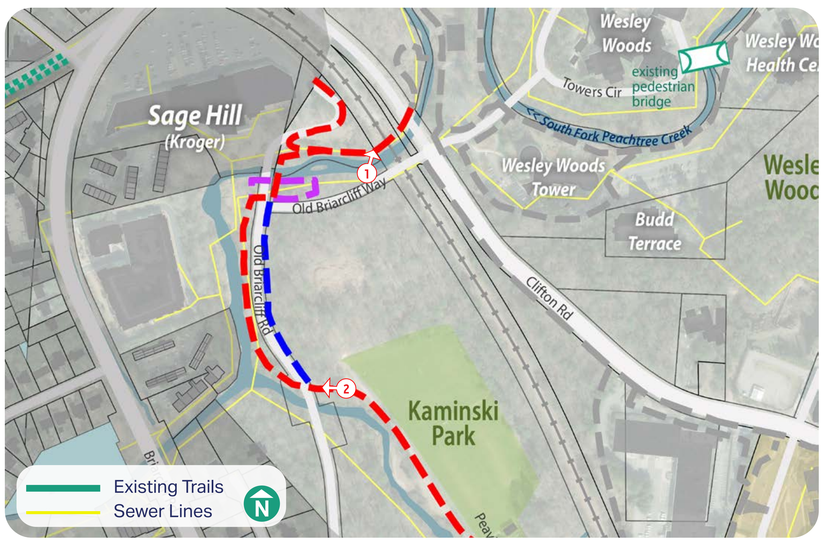


Emory South Peachtree Creek Trail Extension Scoping Study

ALIGNMENT ALTERNATIVES

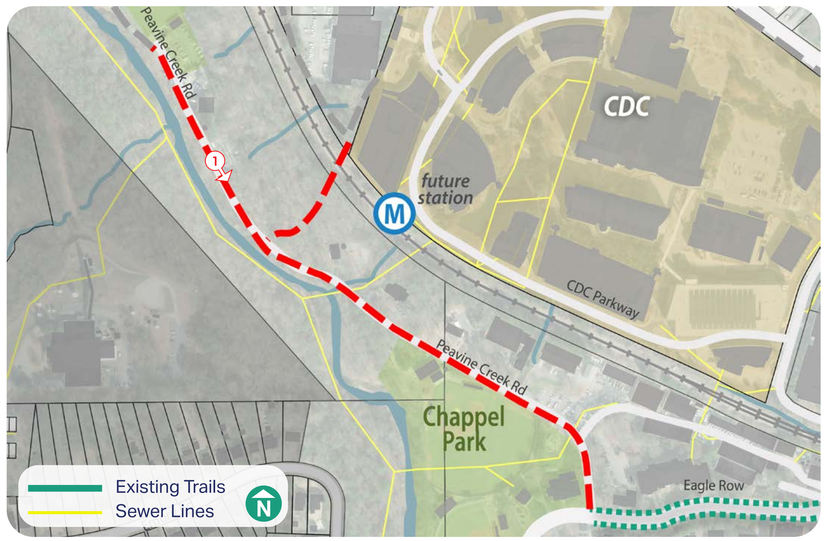
Prepared for DeKalb County by
The PATH Foundation
KAIZEN Collaborative

Segment 4: Sage Hill Area



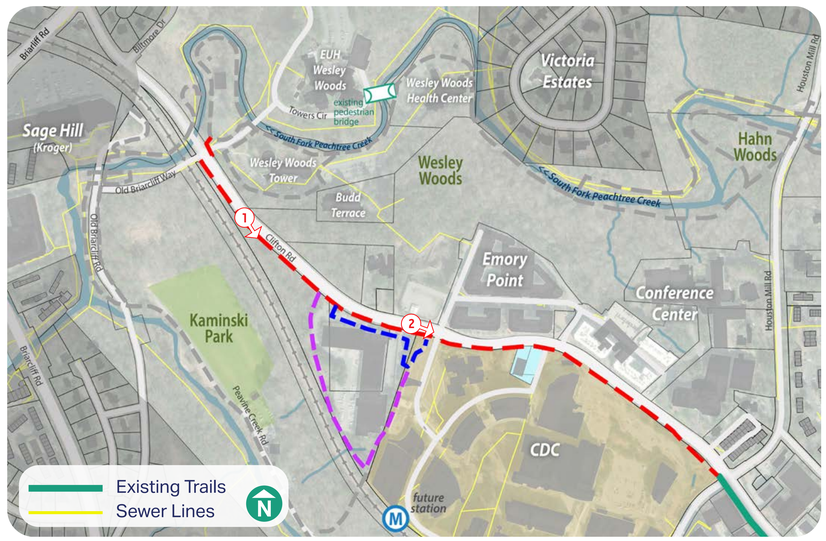
Alternatives: 4a 4b 4c

Segment 5: Peavine Creek Road

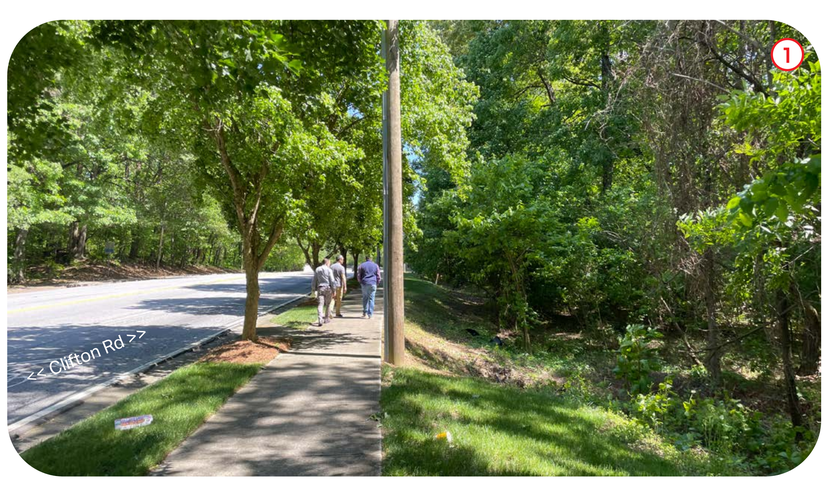


Alternatives: 5a

Segment 6: Clifton Road



Alternatives: 6a 6b 6c



ECOLOGY: NATIVE SPECIES NEEDING SUPPORT

Prepared for DeKalb County by
The PATH Foundation
KAIZEN Collaborative

NOTABLE SPECIES

BAY STARVINE
Schisandra glabra

Federally Protected: NO
State Threatened: YES

Observed in: Section 2, 3

- Trail project would remove nearby invasive species threatening the starvine.

CHATTAHOOCHEE CRAYFISH
Cambarus howardi

Federally Protected: NO
State Threatened: YES

- Habitat previously identified by Emory in S. Peachtree Creek west of Houston Mill Rd and a Wesley Woods feeder stream

BIGLEAF MAGNOLIA
Magnolia macrophylla

Federally Protected: NO
State Threatened: NO

Observed in: Section 2, 3

- This native magnolia will be prioritized for tree plantings along the trail in appropriate locations

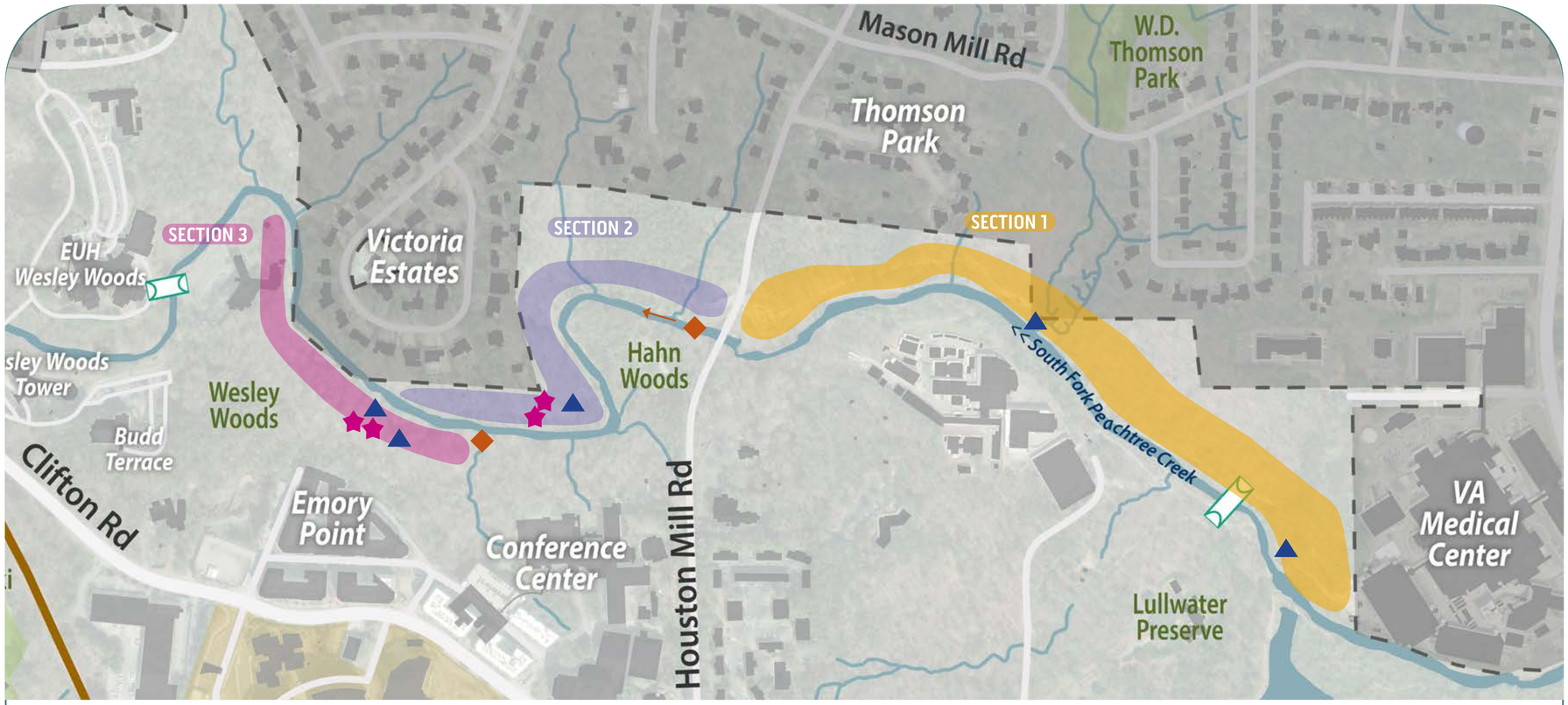
UMBRELLA TREE
Magnolia tripetala

Federally Protected: NO
State Threatened: NO

Observed in: Section 2, 3

- This native magnolia will be prioritized for tree plantings along the trail in appropriate locations

ECOLOGY SURVEY SECTIONS



Identified in ecological survey: ▲ Wet Areas ★ Bay Starvine

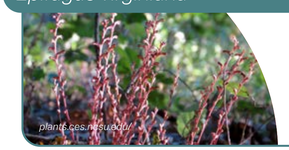
Previously Identified by Emory Students: ◆ Chattahoochee Crayfish

CAROLINA SILVERBELL
Halesia carolina

Federally Protected: NO
State Threatened: NO

Observed in: Section 1, 2

BEECH-DROPS
Epifagus virginiana



Federally Protected: NO
State Threatened: NO

Observed in: Section 3

BASHFUL WAKEROBIN
Trillium catesbaei

Federally Protected: NO
State Threatened: NO

Observed in: Section 2, 3

PAWPAW
Asimina triloba

Federally Protected: NO
State Threatened: NO

Observed in: Section 2, 3

FOAM FLOWER
Tiarella cordifolia

Federally Protected: NO
State Threatened: NO

Observed in: Section 3

LITTLE SWEET BETSY
Trillium cuneatum

Federally Protected: NO
State Threatened: NO

Observed in: Section 3

ECOLOGY: INVASIVE SPECIES THREATEN THE FOREST

Prepared for DeKalb County by
The PATH Foundation
KAIZEN Collaborative

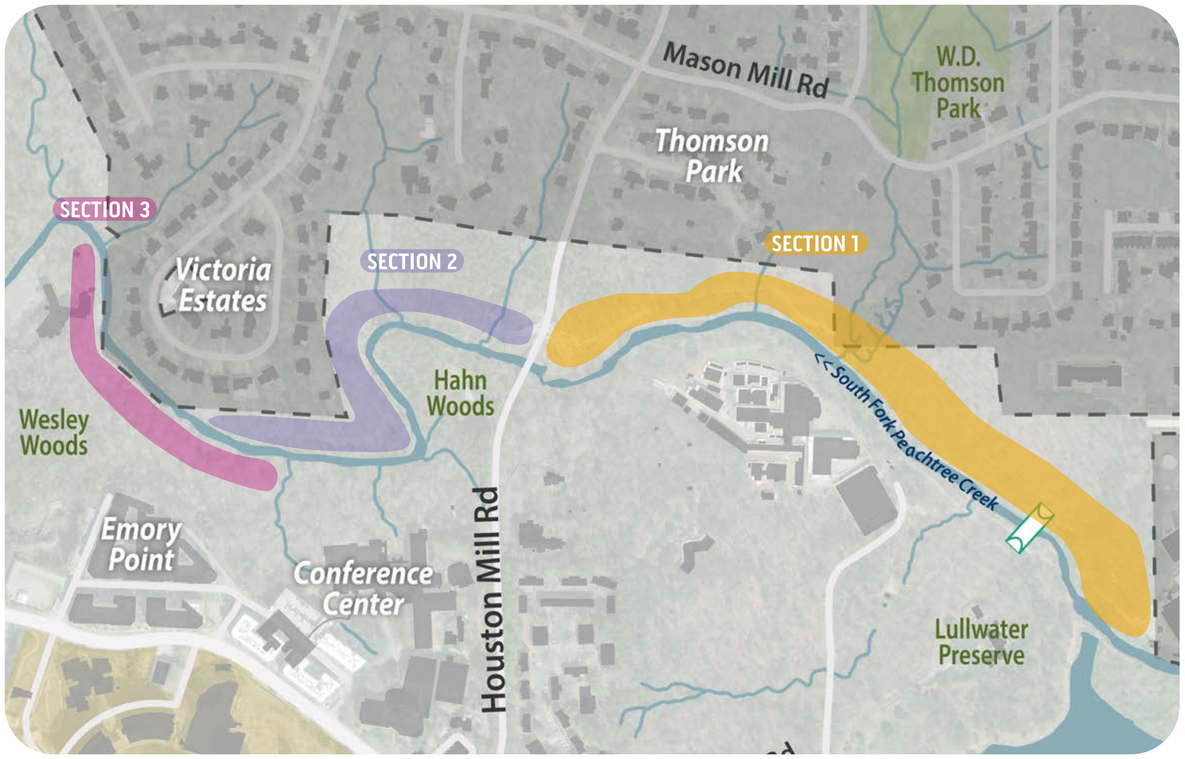
INVASIVE SPECIES

INVASIVE PLANT SPECIES

An ecological survey of the study area identified the invasive plant species shown here. They are categorized by rank using the Georgia Exotic Pest Plant Council Invasive Plant List (gaeppc.org/list/).

GA EPPC Invasive Plant List Ranking:
Category 1 – *Serious, extensive invasion & displacement of GA native plants*
Category 2 – *Moderate invasion & displacement of GA native plants*
Category 3 – *Exotic plants with minor invasion & displacement of GA native plants, or problematic in adjacent states*
Category 4 – *Potentially invasive, in need of more study*

FIELD SURVEY STUDY AREA



ENGLISH IVY
Hedera helix

GA EPPC rank: Category 1
Observed in: Section 1, 2, 3

- Extensive growth across the majority of the forest floor
- Prioritize keeping ivy off of trees to minimize seed dispersal

MARSH DAYFLOWER
Murdannia keisak

GA EPPC rank: Category 1
Observed in: Section 1, 2

- Identified as the dominant species in wetlands in the sewer corridor and Lullwater Reserve

CHINESE PRIVET
Ligustrum sinense

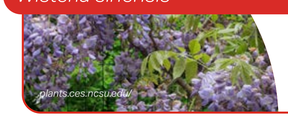
GA EPPC rank: Category 1
Observed in: Section 1, 2, 3

- Common throughout the entire trail corridor

AMUR HONEYSUCKLE
Lonicera maackii

GA EPPC rank: Category 1
Observed in: Section 1, 2, 3

CHINESE WISTERIA
Wisteria sinensis



GA EPPC rank: Category 1
Observed in: Section 1, 2

THORNY OLIVE
Elaeagnus pungens

GA EPPC rank: Category 2
Observed in: Section 1, 2, 3

JAPANESE HONEYSUCKLE
Lonicera japonica

GA EPPC rank: *Category 1*
Observed in: *Section 1, 2, 3*

KUDZU
Pueraria montana

GA EPPC rank: Category 1
Observed in: Section 1, 2, 3

NEPALESE BROWNTOP
Microstegium vimineum

GA EPPC rank: Category 1
Observed in: Section 1, 2, 3

OREGON GRAPE
Mahonia bealei

GA EPPC rank: Category 3
Observed in: Section 1, 2, 3

CHINESE HOLLY
Ilex cornuta

GA EPPC rank: Category 4
Observed in: Section 2, 3

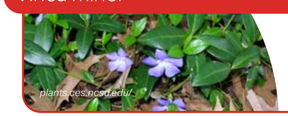
HEAVENLY BAMBOO
Nandina domestica

GA EPPC rank: Category 2
Observed in: Section 2, 3

MULTIFLORA ROSE
Rosa mutiflora

GA EPPC rank: Category 1
Observed in: Section 1, 3

COMMON PERIWINKLE
Vinca minor



GA EPPC rank: Category 2
Observed in: Section 1, 2

BEEFSTEAK PLANT
Perilla frutescens

GA EPPC rank: Category 3
Observed in: Section 1, 2

MIMOSA
Albizia julibrissin

GA EPPC rank: Category 1
Observed in: Section 2

ECOLOGY: STREAMBANKS & FOREST MANAGEMENT

Prepared for DeKalb County by
The PATH Foundation
KAIZEN Collaborative

Design in Sensitive Environments:

1. Study corridor and feasible trail opportunities defined
2. Environmental specialists identify priority species, specimen trees, and floodplains
3. Designers propose feasible and ecologically respectful trail alignment(s) and construction strategy
4. Environmental specialists conduct field evaluations and request changes
5. Designers revise and then finalize the alignment and construction method
6. Stakeholders review and comment, DeKalb County approves and funds
7. Further environmental review by Georgia EPD and city/county permitting agencies
8. Permitting finalized and building begins with environmental specialists present

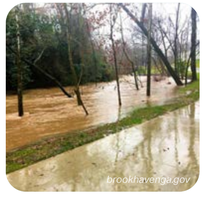
Wet Areas

Ephemeral Ponds

- Created by damming effect of sewer line or retaining walls
- Ephemeral ponds would be avoided completely.
- Other wet areas would be avoided and/or bridged with elevated structure.

Images
Top: Ephemeral pond in Lullwater
Bottom: Ephemeral pond near Victoria Estates

Floodplain



- Trails provide access for sewer overflow monitoring and to remove invasive species that increase flood damage.
- Trail projects are authorized in the floodplain when the design:
  - Withstands submersion
  - Is proven to match pre-project base flood conditions with an engineer-approved "No-Rise Cetertificate."

Images
Top: Peachtree Creek Greenway, Brookhaven, GA.
Bottom: Big Creek Greenway, Alpharetta, GA

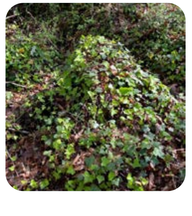
Humans, Trails & the Forest

Define Human Access

Trails define human access. Fencing and strategic planting discourage off-trail wandering and support privacy.

Images
Top: Proctor Creek Greenway, Atlanta, GA
Bottom: Carrollton GreenBelt, Carrollton, GA

Invasives Removal Program

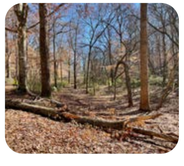


- Multi-year process, done in rounds during cold months
- Trained teams hand-pull invasives (spray not advised to conserve native evergreens).
- Conduct work in zones, focus on areas upslope of the trail alignment.

Images
Top: Invasive species in Wesley Woods
Bottom: Invasive species in Lullwater Preserve

Arborist Guidance

- Arborist assesses, prescribes and documents impact on each tree in the work zone.
- Arborist oversees contractors on site as a 3rd party inspector.



Images
Existing conditions along the sewer corridor

Funding & Education

- Endow a forest management fund
- Broad-based student and community education

Precedent: Clemson Experimental Forest (CEF)
The CEF is managed by Clemson University as a multi-use space that provides opportunities for scholarly research, recreation, community volunteering and education, and historic preservation (clemson.edu/public/experimental-forest/education.html).

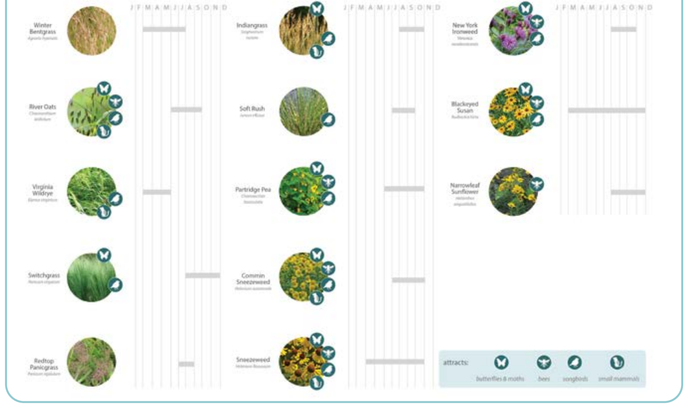
Streambank Stabilization & Revegetation

- Invasives along the trail buffer would be replaced with native mix at ecologically appropriate locations.
- Native magnolias (*macrophylla, tripetala*) would be prioritized in tree plantings along the trail
- Streambank stabilization and revegetation in select areas

Bank stabilization and revegetation using soil lifts, shown on install day (left) and 2 years later (right).

An existing Magnolia macrophylla along the sewer corridor.

Riparian Area Native Seed Mix



BUILDING METHODS

Prepared for DeKalb County by
The PATH Foundation
KAIZEN Collaborative

Trail Examples in Sensitive Environments:

Grand Canyon Greenway Trail ▪ Grand Canyon, AZ

Chattahoochee River Trail ▪ Roswell, GA

Quequechan River Rail Trail ▪ Fall River, MA

Pa'rus Trail ▪ Zion National Park, UT

Trail Construction in Ecologically Sensitive Locations

Top-Down Construction

- Build as you go with equipment on what was just built
- Provides construction flexibility to preserve trees and habitat
- Tight construction envelope limits tree removal.
- With minimal land disturbance, no silt fence is required.
- Enables people to experience sensitive environments with minimal disturbance.

Root Bridging

Root bridging protects tree roots if the trail encroaches the critical root zone. This technique allows the trail to blend into a wooded environment.

Bridges & Railings

- Bridges built on-site with stick-build techniques would minimize construction envelope.
- Bridge construction would utilize pre-disturbed areas along sewer lines for staging and access.
- Railings can be designed to support privacy and limit off-trail wandering

TRAIL BENEFITS

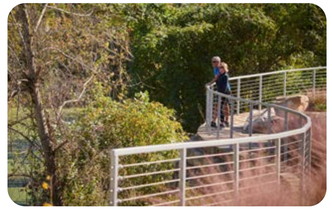
Prepared for DeKalb County by
The PATH Foundation
KAIZEN Collaborative

TRAILS ENHANCE WELLNESS

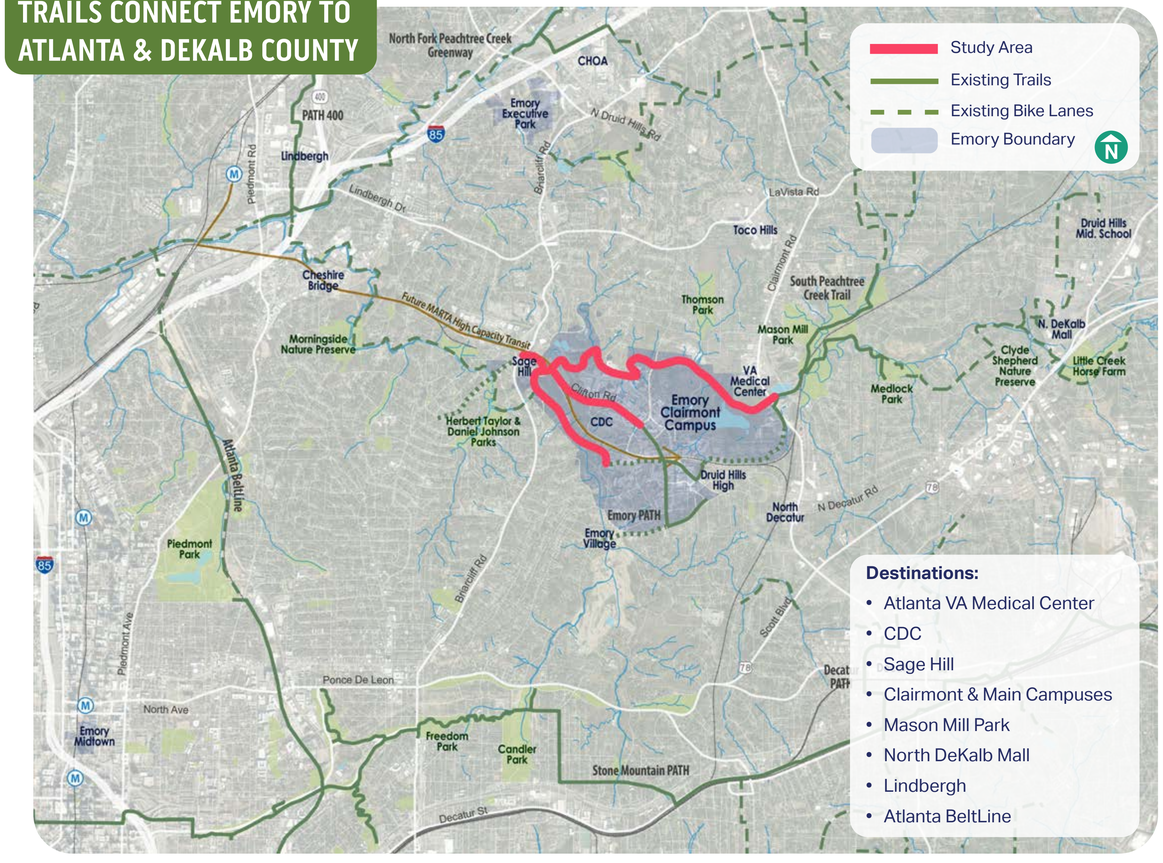
- Improve physical and mental health
- Provide access for all ages and abilities


TRAILS PRESERVE GREENSPACE

- Create linear parkspace
- Limit human access to fragile areas
- Protect Bay Starvine and clear invasives



TRAILS CONNECT EMORY TO ATLANTA & DEKALB COUNTY



Destinations:

- Atlanta VA Medical Center
- CDC
- Sage Hill
- Clairmont & Main Campuses
- Mason Mill Park
- North DeKalb Mall
- Lindbergh
- Atlanta BeltLine

TRAILS STRENGTHEN COMMUNITY

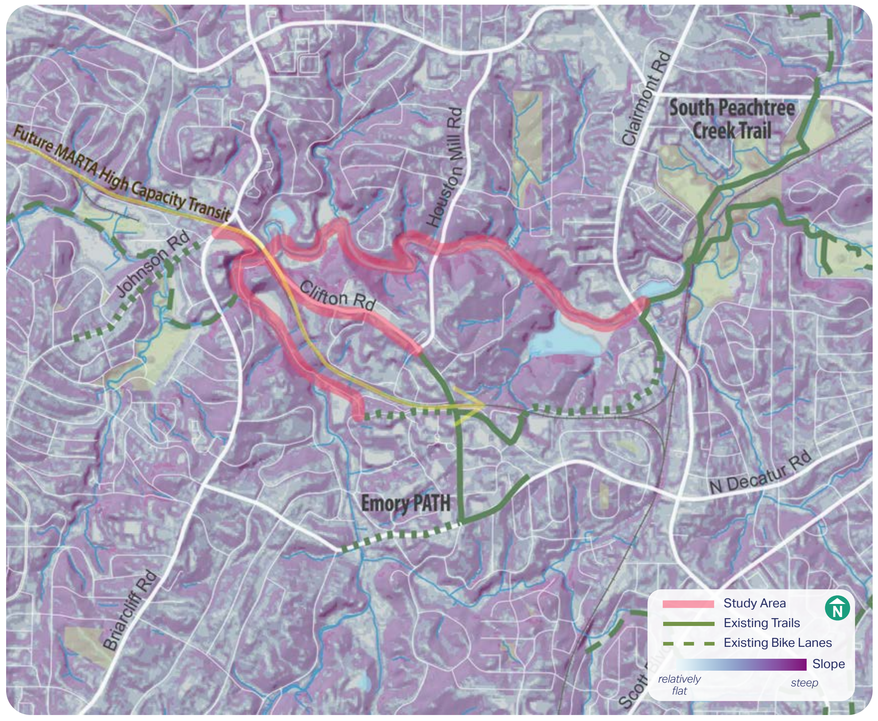
- Support Emory & Atlanta
- Provide a chance to share the story of the land with a broader population

Currently, the VA Center has no gym or accessible outdoor rehab space


Ruins along S. Peachtree Creek illustrate the history of early hydroelectric power generation in DeKalb County

TRAILS ENABLE ALTERNATIVE COMMUTING OPTIONS

Slope Analysis



Current biking and pedestrian infrastructure through the Emory campus encounter steep slopes and rely upon busy roads, such as Clifton Road and Houston Mill Road. Despite this, data collected by the League of American Bicyclists consistently demonstrates that the CDC and Emory University have the highest numbers of bicycle commuters in the Atlanta region. This trail study corridor connects across the northern Emory campus from Briarcliff Road to Clairmont Road, providing the opportunity to greatly improve multimodal connections across campus. Following relatively flat existing sewer lines and avoiding interaction with cars for the bulk of the trail study corridor, this potential trail alignment offers a multimodal travel option for those who may feel otherwise uncomfortable traveling outside of a car in existing conditions – further widening the pool of potential multi-modal commuters to the CDC and Emory University into the future.

The trail study corridor offers the opportunity to connect over 16,000 residents within one mile of the corridor.