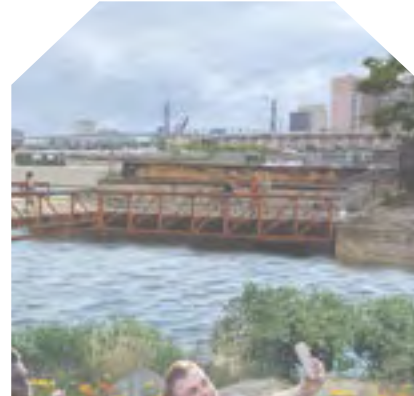


# EMERALD TRAIL

## Master Plan and Implementation Strategy



Prepared by:  
**PATH Foundation and  
KAIZEN Collaborative**

Prepared for:  
**Groundwork Jacksonville**





# Emerald Trail

## Master Plan and Implementation Strategy

Revised  
August 19, 2021

Prepared for:



Prepared by:



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# Forward

The Emerald Necklace, with miles of connected greenways, parks and trails, has been a dream since it was envisioned nearly a century ago by famed architect Henry Klutho. It seems fitting that as the City of Jacksonville commemorates 50 years since consolidation, that Groundwork Jacksonville, in partnership with The City of Jacksonville, presents this Emerald Trail Master Plan to the community.

The following pages represent months of research, planning and collaboration with the PATH Foundation - a non-profit responsible for building more than 275 miles of trails in Georgia, and Kaizen Collaborative - one of the leading trail planning and design firms in the southeast.

Just as significant, this comprehensive plan is the result of countless hours of community engagement, discussion and visioning with residents, business owners and community stakeholders who are most impacted by the inadequate spaces to safely walk, cycle, run, fish, swim and recreate in our historic urban neighborhoods.

During monthly Neighborhood Working Group and Steering Committee meetings, our neighborhood constituents provided honest, valuable feedback that was incorporated throughout this plan, from adding new trail connections that we hadn't thought of, to revising trail sections to better serve the needs of those living and working nearby. We are indebted to these community stewards for their insight and commitment to this process.

We are also grateful to the generous funders of this plan, for without them, the Emerald Trail would be no closer to reality. The entire master plan cost was privately underwritten by a \$50,000 donation from JTC Running (JTC), as well as through grants from Local Initiatives Support Corporation (LISC) and the Giving Forward Community Endowment Fund at The Community Foundation for Northeast Florida.

Atlanta has the BeltLine. New York City has the High Line, Chicago has the 606. World-class cities have signature parks and green spaces where residents can safely walk, bike, run and connect with their city and with each other. There is a part for everyone to play in bringing Klutho's dream to life as we create Jacksonville's signature outdoor destination. Join us. Let's work together to build the Emerald Trail within the next 10 years.

**Kay Ehas**  
CEO  
Groundwork Jacksonville

**Kristina Nelson**  
Board Chairman  
Groundwork Jacksonville

---

*Groundwork Jacksonville was founded in 2014 specifically to clean Hogans and McCoys Creeks and convert contaminated land into parks, playgrounds, trails, and other public greenspace. One of only 20 Trusts in the US, Groundwork Jacksonville, Inc. is a partnership between the City of Jacksonville, the US National Park Service, the US Environmental Protection Agency and Groundwork USA.*

# EX

## Executive Summary

This document is intended as a guide for implementing the development of a greenway and trail system in and near downtown Jacksonville. The authors, with the aid of an active Steering Committee, developed an overall plan to connect most in-town neighborhoods to existing trails, parks, schools, restaurants and shopping with safe, enjoyable bike and pedestrian facilities separated from traffic.

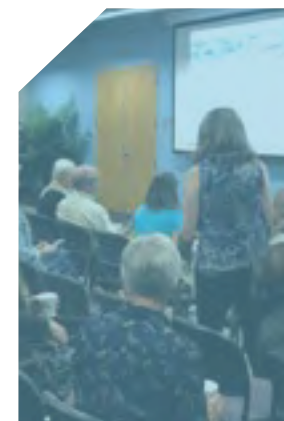
This report identifies two tiers of projects, based on their apparent need, ease of development, and prospects for success. There are 6.8 miles of Tier One projects identified, including the proposed 1.3 mile-long model project, the S-Line to Brooklyn segment.

Combined with Tier Two projects, the overall plan suggests alignments for 19.7 miles of new trails encircling the downtown area as loops. The fully developed system is estimated to cost \$184.3 million dollars using 2021 construction costs. With 6 miles of trail already in place, adding up the programmed trail segments, the overall built trail system will include a total of 33.8 miles of trails.

*The Emerald Trail Master Plan supports the goal to provide a safe, enjoyable, convenient, and attractive trail system for everyone in the City of Jacksonville.*

The design standards adopted by the Steering Committee closely match the standards used to build the existing S-Line trail segments. Retrofitting existing trails with new signs and amenities will help promote the Emerald Trail brand and build support for the project.

This document outlines the next steps that must be taken to insure this project is implemented. Downtown Jacksonville and the surrounding urban core neighborhoods need the Emerald Trail. Now is the time to make it happen.



# Table of Contents

## Executive Summary

<b>01</b>	Introduction	2
<b>02</b>	Planning Considerations	3-9
	Planning Process	4
	Steering Committee	4
	Data Collection and Field Work	5
	Establishing Planning Goals	5
	Trail Types	6-8
	Master Plan Development	9
	Public Meeting	9
<b>03</b>	Implementation Plan - Tier 1	10-52
	Overview	11
	Planning Prioritization	11
	Programmed Segments	12
	Trail Implementation Plan Tier 1	12
	Model Project	12
	Implementation Tier 1 Segment Map	13
	Programmed Segment   McCoys Creek Greenway	14-18
	Programmed Segment   Artist Walk to Fuller Warren Bridge	19-21
	Programmed   San Marco Connector	22-24
	Model Project   S-Line to Stonewall Street	25-30
	Segment #2   Hogan Street Connector	31-38
	Segment #3   Southwest Neighborhood Connector	39-41
	Segment #4   S-Line Connector	42-46
	Segment #5   Hogans Creek Greenway	47-52
<b>04</b>	Implementation Plan - Tier 2	53-76
	Overview	54
	Implementation Tier 2 Segment Map	55
	Segment #6   Westside Connector	56-59
	Segment #7   Northwest Connector	60-62
	Segment #8   Eastside Connector	63-70
	Segment #9   Hogans Creek to Riverwalk	71-74
	<i>Emerald Trail</i> Overall Trail Map	75
<b>05</b>	Implementation Strategy	76-81
	Leading role of the Implementation of <i>Emerald Trail</i>	77
	Cost Summary	78
	Implementation Timeline	79
	Formation of an Implementation Committee	80
	Next Steps	81
<b>06</b>	Branding and Design Standards	82-102
	Overview	83
	Trail System Naming and Logo	83-84
	Trail Signage	85-87
	Trail Amenities and Furnishings	88-90
	Construction Standards	91-107
	Appendix:	
	Steering Committee Members	108

# 1 Introduction

Downtown Jacksonville has the warm Florida sun, the St. Johns River, a thriving corporate community, and city leaders dedicated to improving the city. Yet the city center and nearby neighborhoods lack the vibrant feel of a city poised to compete for new employers and the young, educated employees they seek to hire.

Most metropolitan Jacksonville citizens never think about going downtown for an evening. Close-in neighborhoods don't appear to be benefiting from the nationwide boom in new development and revitalization projects. The area needs a shot of adrenaline to bring it to life.

A connected system of greenways and trails connecting people to parks, schools, and restaurants will quickly become the favored amenity of the area, encouraging citizens to exercise and socialize while traveling through the city without cars. New businesses will open, homes will be improved, and the neighborhoods around downtown will come alive.

Jacksonville leaders have envisioned an ***Emerald Necklace Trail*** project for decades. Now they have a definitive plan and an implementation strategy for building the project. Coupled with the commitment to revitalize and restore McCoys Creek and Hogans Creek with trails along with the FDOT's project connecting the Northbank Riverwalk to San Marco, the stars seem aligned to build a major portion of the trail system.

If Jacksonville is to compete with sister cities for new jobs and new citizens to fill those jobs, developing trails and linear parks must be a priority. The investment made in trails and linear parks will pay big dividends for decades to come. Without trails, downtown Jacksonville will fall behind other cities that recognize the importance of greenways and trails to build a great city.



*The COJ has invested building two sections of the S-Line Rail Trail along an abandoned rail road corridor. Photo shown was taken at 'Mile Zero'. The Emerald Trail envisions connections to the existing S-Line Rail Trail.*

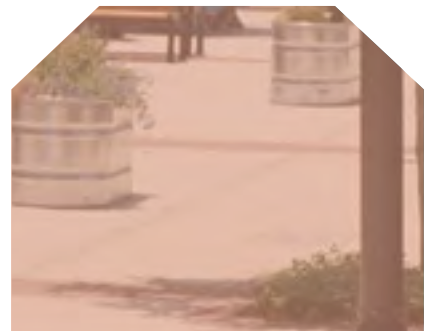
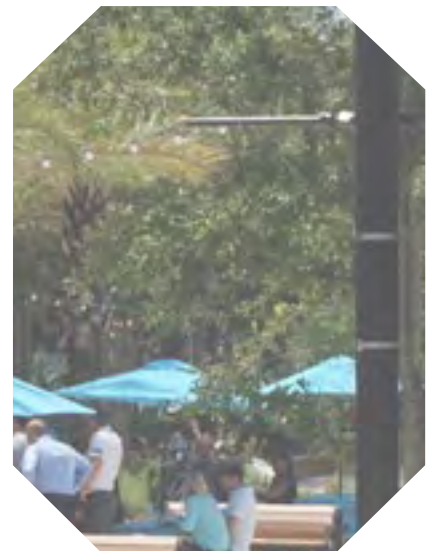
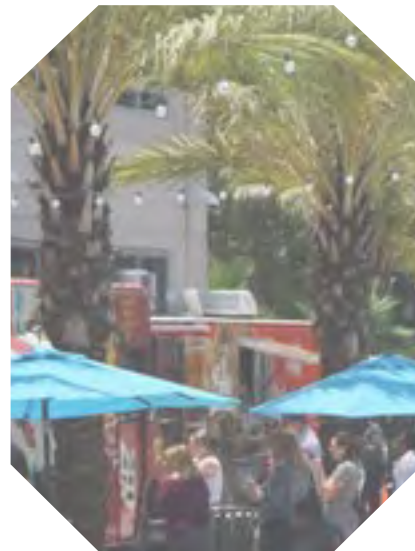


*Opportunities to activate the vacant buildings in Downtown Jacksonville by building the proposed trail segment through this area.*



# 02

## Planning Considerations



# 2 Planning Considerations

## 2.1 Planning Process

With the recommendation of the COJ's Parks Department, Groundwork Jacksonville retained the PATH/KAIZEN team to develop a Trail Master Plan that would kick-start Jacksonville's much needed urban trail development and help to finally realize the community's long-held vision of an Emerald Necklace of connected parks and greenways.

The PATH/KAIZEN team reviewed numerous research and planning documents developed over the years by the COJ and other organizations, performed extensive field research to determine potential routes that will connect key destinations and vetted their findings with Groundwork Jacksonville and key constituents.

Each month the design team met with the Steering Committee convened by Groundwork Jacksonville listed below. In addition, Groundwork met monthly with the Neighborhood Working Group comprised of community members who live and/or own businesses along the proposed trail. The six-month iterative planning process incorporated feedback from these groups at each stage of development.

Additionally, the design team assisted Groundwork in leading brainstorming sessions for the name and logo of the trail and in hosting a public meeting that attracted more than 300 attendees.

The *Emerald Trail Master Plan* will serve as the blueprint for the COJ's multi-use trail development with an implementation goal to build approximately 19.7 miles of new trails in the next 10 years that will connect to existing and already planned segments including the S-Line, McCoys Creek, Riverside, San Marco and the Northbank and Southbank Riverwalks.

## 2.2 Steering Committee

Groundwork Jacksonville convened the *Emerald Trail Master Plan* Steering Committee to establish overall goals for the trail system, approve branding and trail standards, and provide local input into trail destinations, connections and routes.



*Groundwork Jacksonville with KAIZEN presenting to the Steering Committee*

The Steering Committee met over four months and included representatives from the following:

- City Council Member
- COJ Director of Strategic Partnerships
- COJ Parks, Recreation and Community Services Department
- COJ Planning Department
- COJ Traffic Engineer
- Jacksonville Electric Authority (JEA)
- Jacksonville Sheriff's Office (JSO)
- Jacksonville Transportation Authority (JTA)
- Community Foundation of NE Florida
- Downtown Investment Authority Board Member
- JTC Running
- LISC Jacksonville
- CSX
- Rail Yard Business District
- UF Health Jacksonville
- Residents representing Springfield, Eastside, Durkeeville, Newtown, North Riverside, and Brooklyn

*(A list of individual Steering Committee Members is included as the Appendix)*

### 2.3 Data Collection and Field Work

Using the COJ's GIS data, assessment of current and future planning and development efforts, as well as feedback from the public, PATH/KAIZEN's analysis of existing and proposed trail connections within the City of Jacksonville focused on the following criteria:

- Is the trail route feasible for construction?
- Is the trail route appealing to all users?
- Is the trail route perceived as safe?
- Does the trail route connect desirable destinations?
- Does the trail fulfill the connections to the existing trails?

Over a six-month period, the planning team conducted field work and analyzed data to determine if the proposed trail routes were feasible, appealing, safe, and destination-driven. The planning team recorded and transferred all information onto field maps and into ArcGIS once validated by the Steering Committee.

### 2.4 Establishing Planning Goals

It is important to understand the behavior and use potential of existing and future trail users. Understanding the characteristics that facilitate the development of the multi-use infrastructure may increase the number of people using it. A Portland, OR study<sup>1</sup> outlined a city's population into four distinctive types of cyclists as listed below.

#### Four Types of Cyclist

<1%	Strong and Fearless
7%	Enthused and Confident
60%	Interested but Concerned
33%	No Way, No How

<sup>1</sup> Dill, Jenifer, and Nathan McNeil. "Four Types of Cyclists." *Transportation Research Record: Journal of the Transportation Research Board* 2387.1 (2013): 129-138

Understanding that 93% of the population in a bicycle-centric city such as Portland were not cycling on a roadway, the PATH/KAIZEN team discussed ideas about how to target the core 60% "Interested but Concerned" population of Jacksonville, which offers the highest potential for increasing the number of people riding bicycles. The *Emerald Trail Master Plan* will focus on encouraging this target group to use bicycles more by providing a higher quality bicycle infrastructure that is low stress and separated from vehicles.

This target led to the planning goal - *to provide a safe, enjoyable, convenient, and attractive trail system for everyone in the City of Jacksonville.*

Achieving this goal will result in a successful return on the public/private investment, yielding a high number of trail users from Jacksonville's population who all capture the benefits associated with multi-use trails.



## 2.5 Trail Types

Six types of trail facilities were identified from a multi-use trail perspective during the planning process to ensure the *Emerald Trail* met the goals of being safe, enjoyable, convenient, and attractive. The primary type of trail is a multi-use greenway trail facility and the secondary types include the shared-use street, the shared-use side path, the green alley, the raised cycle track, and the neighborhood greenway.

### *Greenway Trail:*

Greenway trails often refer to trails used by all non-motorized travelers that are constructed in green areas such as parks, stream corridors, undeveloped land, etc. Greenway trails should be a minimum of twelve feet wide, hard surfaced, with design and construction specifications following the American Association of State Highway Transportation Officials (AASHTO) regulations. The Steering Committee for *Emerald Trail* has agreed upon a set of standards for building greenway trails, consistent with AASHTO guidelines, that are identified in Chapter 6.



*Greenway Trail Typical Section*

### *Shared-use Street (Woonerf):*

Shared-use streets are streets or squares where cars, pedestrians, cyclists, and other local residents travel together without traditional safety infrastructure to guide them. They prioritize pedestrians, slow vehicular speed by creating uncertainty for drivers, retrofit a street to be curbsless/flush, and create a sense of space. The design typically includes minimal traffic control signals or markings, site furniture, and landscape medians/bulb-outs. However, the design mostly varies by specific site conditions.

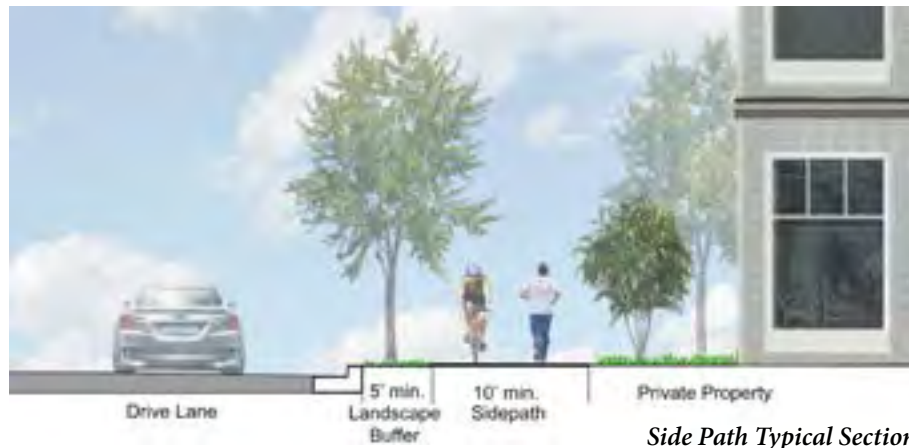


*Examples of a shared-use street, Bell Street, Seattle, WA*



### Side Path:

Many cities and counties, including Jacksonville, find themselves retrofitting their city with trails rather than having them included as part of the infrastructure with new development. As a result, shared-use trails alongside roads in existing public right-of-way, called side paths, are often the only option for making the desired connections. The preferred width of a shared-use side path is 12-foot with a minimum 10-foot wide. Side paths should have a 5-foot minimum landscaped buffer from the roadway and markings on the trail to heighten awareness that bicycles and other users are present.



*Side Path Typical Section*

### Raised Two-way Cycle Track:

Raised cycle tracks are bicycle facilities that are vertically separated from motor vehicle traffic and are at the level of the adjacent sidewalk. They typically are paired with a furnishing/landscape zone between the cycle track and motor vehicle travel lane and/or pedestrian area. Additional traffic engineering and operational studies should be considered when placing a raised two-way cycle track that crosses a signalized intersection.



*Raised Two-way Cycle Track Typical Section*

### Green Alley:

Green Alleys transform underutilized alleyway into a safe, green, community shared-use space. By repurposing the currently neglected alleyway, Green Alleys improve the neighborhoods' living space and promote community connectivity.



*Green Alley Typical Section*

### *Neighborhood Greenway:*

Neighborhood Greenways are streets with low motorized traffic volume and slower speeds, designed and designated to give bicycle travel priority. Neighborhood Greenways use signs, pavement markings, and speed/volume management measures to discourage through-traffic by motor vehicles, creating safe and convenient bicycle crossings of busy arterial streets.

Many local streets with low existing speeds and volumes offer the basic components of a safe bicycling environment. These streets can be enhanced using a range of design treatments and tailored to existing conditions and desired outcomes, creating bicycle boulevards. Design treatments are grouped into measures that provide the following benefits:

- **Route Planning:** Direct access to destinations
- **Signs and Pavement Markings:** Easy to find and to follow
- **Speed Management:** Slow motor vehicle speeds
- **Volume Management:** Low or reduced motor vehicle volumes
- **Minor Street Crossings:** Minimal bicyclist delay
- **Major Street Crossings:** Safe and convenient crossings
- **Offset Crossings:** Clear and safe navigation
- **Green Infrastructure:** Enhancing environments



*Neighborhood Greenway Typical Section*



*Neighborhood Greenway example showing traffic calming elements*



*Neighborhood Greenway example showing limited vehicle entry while utilizing signage and pavement markings for cyclists.*

## 2.6 Master Plan Development

The first Steering Committee and Neighborhood working Group meetings were structured as introductory kick-offs to present the objectives of the master plan, proposed trail types, and discuss the initial fieldwork and preliminary planning for the proposed trail connections.

Through six months of additional field work and collection of the Steering Committee and Neighborhood Working Group feedback, PATH/KAIZEN refined the proposed trail alignments within the Master Plan and created the trail design standards along with the trail signage and amenities. The Steering Committee and Neighborhood Working Group provided valuable input and suggestions that were incorporated into the trail design standards in order to create a branding for the Emerald Trail.

After three meetings with each the Steering Committee and the Neighborhood Working Group and one public meeting, Groundwork and PATH/KAIZEN presented the Steering Committee with the draft Master Plan document including an implementation strategy, timeline, trail branding and design standards. Feedback and comments were collected to further vet the draft report, resulting in final revisions to the Emerald Trail Master Plan.

Groundwork Jacksonville presented the document to the Mayor and City Council in March 2019 for adoption.

## 2.7 Public Meeting

Groundwork Jacksonville and the PATH/KAIZEN team presented the preliminary *Emerald Trail Master Plan* during a public meeting on July 24, 2018 at the Downtown Campus of Florida State College Jacksonville. During the meeting the planning team outlined the benefits of trails, introduced the proposed types of trails, shared the master planning process and presented the preliminary Trail Master Plan.

The second half of the meeting focused on gathering feedback from the community and discussing the details of the plan. Comment cards were distributed to the attendees during the meeting, collected and compiled into



*Over 300 residents attended to the public meeting held at Florida State College Jacksonville*

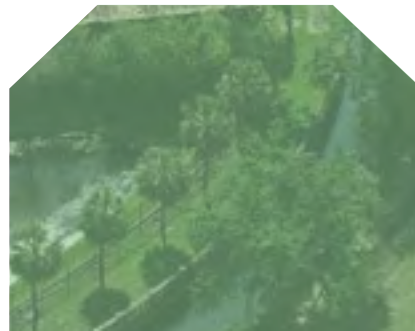
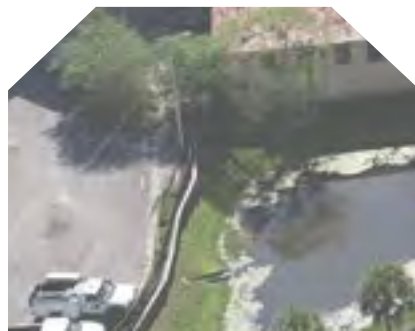
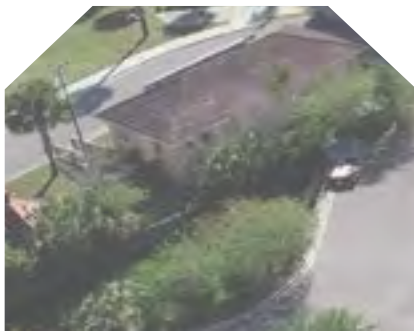
a summary, and then presented to the Steering Committee group. A majority of the attendees were supportive of the Master Plan.

The meeting was followed up by an online posting to gain additional feedback and to allow a chance for those that could not attend to provide their input.



03

# Implementation Plan - Tier 1



# 3 Trail Implementation Plan Tier 1

## Overview

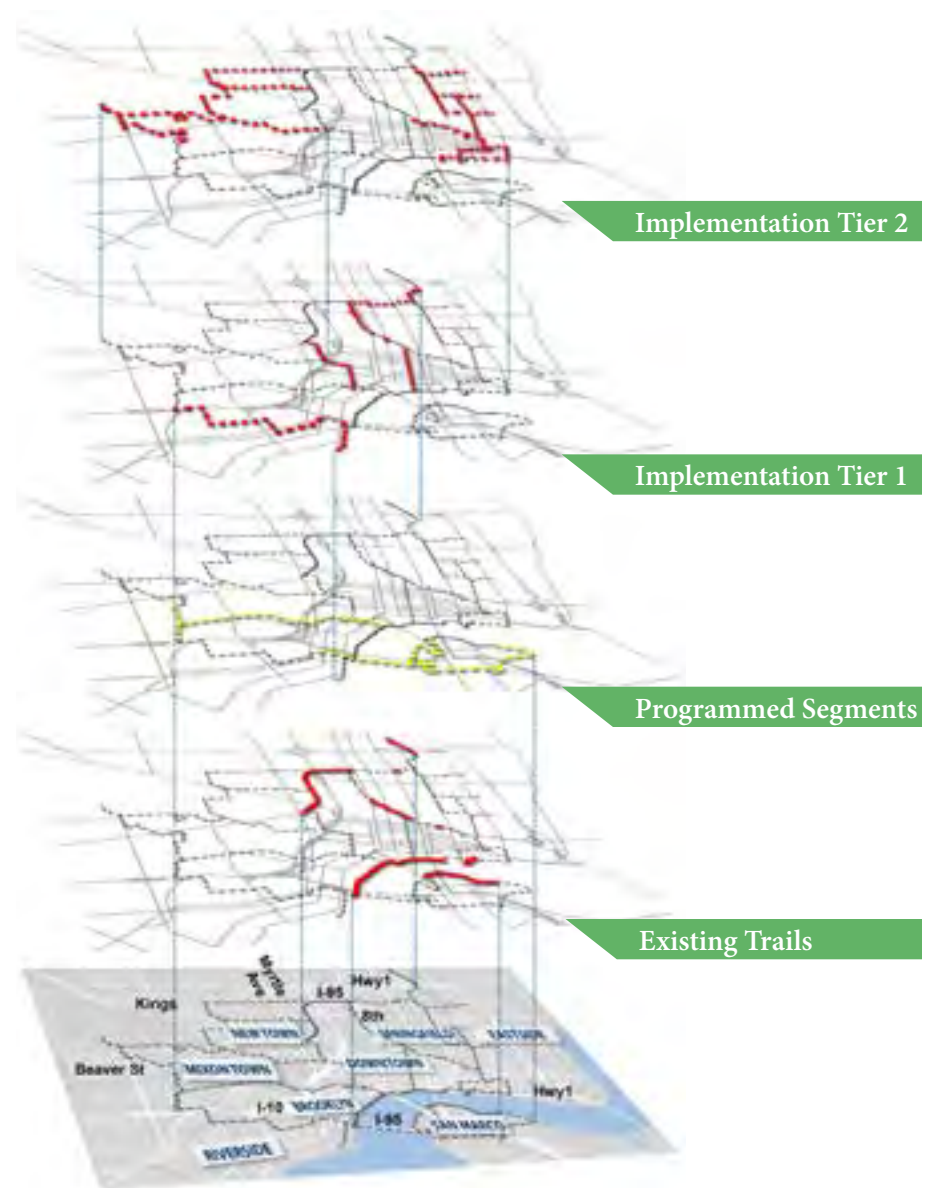
The Emerald Trail Master Plan identifies 27.8 miles of proposed multi-use trails within the Jacksonville's urban core, including 8.1 miles of funded trail segments. The presented plan achieves the goal of connecting neighborhoods to the existing S-Line Rail Trail and the Northbank and Southbank Riverwalks, schools, and parks. With the recommendation of the PATH/KAIZEN team, the *Emerald Trail Master Plan* includes implementation prioritization of the proposed trail segments as reviewed and approved by the Steering Committee. Within the overall Master Plan, the trail system is dissected into three implementation tiers: Programmed Segments, Implementation Tier 1, and Implementation Tier 2.

## 3.1 Planning Prioritization

To help prioritize trail segments for implementation, the following considerations were discussed:

- Extending existing trail segments to provide greater trail use and connectivity.
- Responding to public sentiment to determine the most desired trail connection within the geographical area.
- Locating desired destinations at each end of the trail segments.
- Determining the level of complexity and property acquisition.
- Requiring private developments located along a proposed trail segment to include construction of the trail segment within the developer's project.

The goal for implementation is for the Implementation Committee to have a trail segment within acquisition, design, permitting, and construction at all times until completion. During the planning process, the Steering Committee and PATH/KAIZEN proposed the *Emerald Trail Master Plan* to outline a successful approach to implement the *Emerald Trail* during the next 10 years (2019-2029). A summarized implementation map and timeline is presented in Chapter 5.



Implementation Prioritization Tiers

### 3.2 Programmed Trail Segments

Programmed trail segments are the proposed trail segments that have existing funding allocated for implementation. The following three programmed segments were included within the Master Plan:

#### Programmed Segments:

McCoys Creek Greenway .....	14-18
Artist Walk to Fuller Warren Bridge .....	19-21
San Marco Connector .....	22-24

### 3.3 Trail Implementation Plan Tier 1

Based on existing development projects, existing and projected funding (public and private), connectivity to key destinations, and opportunities to provide trails for each neighborhood, the following trail segments have been identified for immediate implementation upon adoption of *Emerald Trail Master Plan*. Completing the implementation of Tier 1 will provide Jacksonville's urban core with approximately 6.8 miles of new trails, including all six trail types that were proposed within the Master Plan.

#### Implementation Plan Tier 1:

Model Project   S-Line to Stonewall Street .....	25-30
Segment #2   Hogan Street Connector .....	31-38
Segment #3   Southwest Neighborhood Connector .....	39-41
Segment #4   S-Line Connector .....	42-46
Segment #5   Hogans Creek Greenway .....	47-52

### 3.4 Model Project

The first trail segment for implementation is the Model Project (pg. 23). In the meetings with the Steering Committee, the PATH/KAIZEN team recommended identifying one segment of *Emerald Trail* for early implementation as the 'model project.' The group brought forth the *S-Line to Stonewall Street* segment. Construction of this segment, using the branding and specifications presented in this plan, will be extraordinarily beneficial in kick-starting the development of the entire system.

The following pages present the programmed trail segments and implementation plan Tier 1 segments in more detail, including opportunities as well as potential obstacles that will likely affect decisions regarding the order of implementation. A very preliminary estimate to design and construct each segment is also presented, along with before and after graphics of selected locations along each trail segment proposed.

The estimated cost is based on material and labor pricing from Spring, 2018. An estimated cost for easement and property acquisition is not included but should be considered prior to beginning implementation. An estimated cost for trail lighting is not included but should entail \$1000 per fixture at a fifty-foot intervals (\$500,000/mile) where lighting is desired.



# Emerald Trail Implementation Tier 1



# Programmed Segment | McCoys Creek Greenway

## Description:

Groundwork Jacksonville and COJ are conducting a stream restoration plan for McCoys Creek to bring the creek back to a more pristine condition. The proposed restoration plan will look at realigning the creek, as well as the opportunity to remove the asphalt pavement on McCoys Creek Boulevard and convert the street to open space. The PATH/KAIZEN team sees this as an excellent opportunity to incorporate the proposed multi-use greenway to meander through the existing floodplain and greenspace along the restored creek corridor as part of the *Emerald Trail Master Plan*.

The proposed McCoys Creek Greenway, bounded by Edison Street to the south, by the railroad to the north, and by the Northbank Riverwalk to the east, will feature approximately 2.8 miles of greenway following the adjacent McCoys Creek, linking neighborhoods to major parks and community facilities, and ultimately connecting to the Riverwalk. Incorporating this segment within the Master Plan will ensure the proposed greenway is built along with the implementation of the stream restoration plan.

A trailhead at the future Forest Park is being proposed. The park will serve as a public gathering place for the residents as well as users from outside of McCoys Creek neighborhood. Additional trailhead locations are being considered within the McCoys Creek Stream Restoration Plan for providing greenway access points and parking.



*Existing green space between McCoys Creek Boulevard and McCoys Creek*

## Overview:

**Connecting Destinations:** Hollybrook Park, Forest Park, Brooklyn Park, Skyway Transit Center, Northbank Riverwalk

**Begins:** Northeast corner of Edison Avenue and Cherokee Street / South of the railroad

**Ends:** Northbank Riverwalk

**Distance:** 14,581 LF (2.8 miles)

**Programmed Funding:** \$105.4 million dollars

**Projected Completion of Planning and Engineering:** 2020

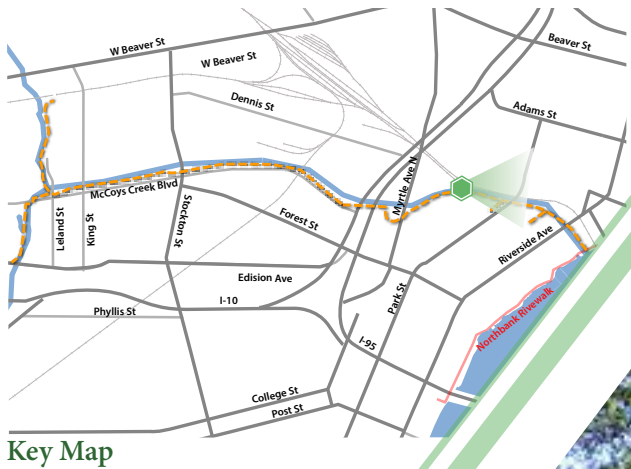
**Projected Timeline for Construction:** 2021-2024 (Brooklyn End)



# Programmed Segment | McCoys Creek Greenway







## Proposed Trail North of Chelsea Street

The illustration below shows the proposed greenway trail along the southern bank of McCoys Creek, featuring a scenic greenway that could be brought to reality along with the programmed creek restoration project.



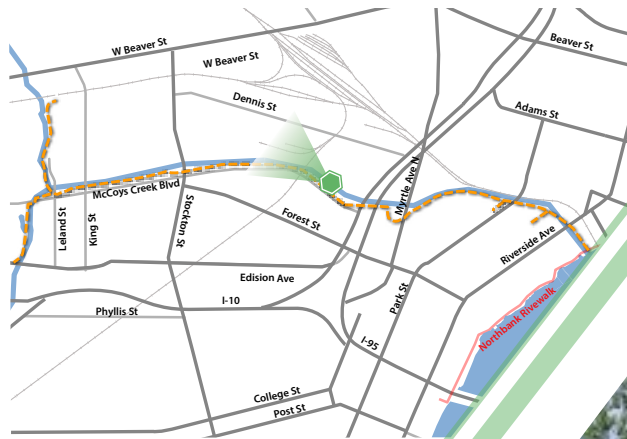
Existing conditions of McCoys Creek at northern end of Chelsea Street





## Proposed Trail under Railroad

McCoys Creek is located on the right-hand side of the image shown below. The planning team has discovered that along the south bank of the creek there is adequate space for the proposed trail to go under the railroad with a covered roof structure as illustrated in the graphic below. Structures and warning signs will be incorporated based on local code and railroad requirements.

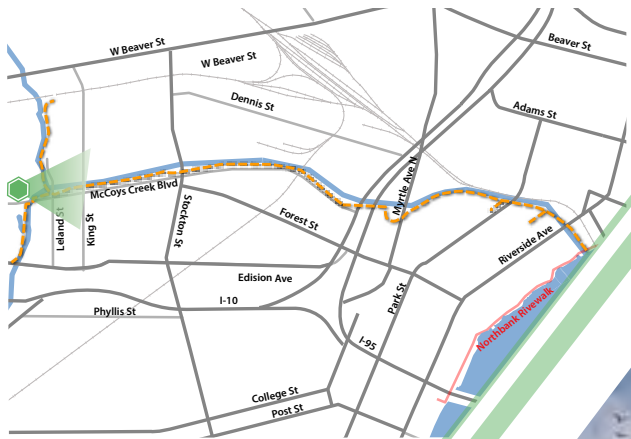


Key Map



Desired location along McCoys Creek for trail to go under the railroad





Key Map

## Proposed McCoys Creek Greenway near Sunshine Street

The illustration below shows the proposed greenway trail bridges over the restored creek at the west end of the corridor. The trail will then transition into the Hollybrook Park and connect north and south through the park. The shown location could become a gathering space where the three proposed trail segments meet. A plaza space with amenities, landscaping, and an overlook deck could be created.



Existing conditions on McCoys Creek Boulevard looking east





# Programmed Segment | Artist Walk to Fuller Warren Bridge

## Description:

The second programmed segment entails two projects, which provide a critical connection from the Northbank Riverwalk to the Southbank Riverwalk within FDOT right-of-way. The first project is the Artist Walk linear park space under the Fuller Warren Bridge from the St. Johns River across Riverside Avenue, Park Street, and College Street, ending at Riverside Park. The Artist Walk will include the multi-use trail connection, parking, pedestrian corridors, and landscaping. It will support the Riverside Arts Market, which has been open between the river and Riverside Avenue since 2009, and a much needed public space for the COJ.

## Overview - Artist Walk:

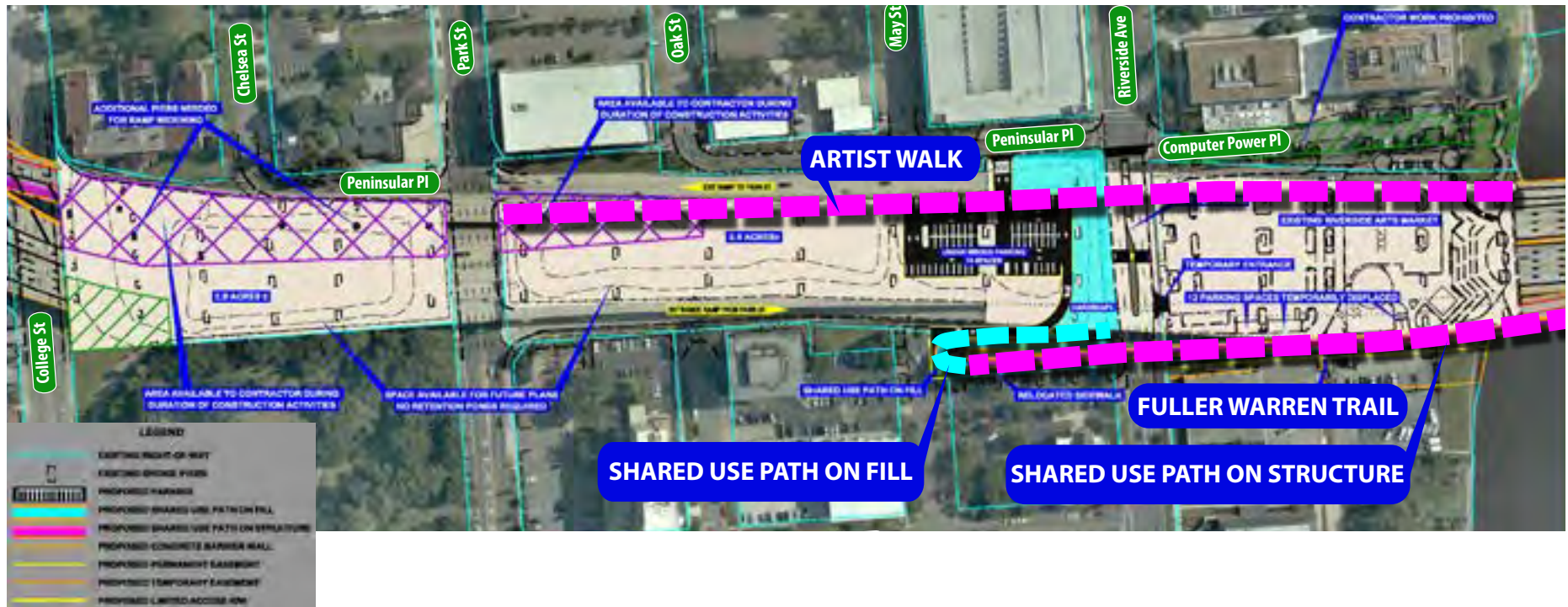
**Connecting Destinations:** Northbank Riverwalk, Riverside Park

**Begins:** Northbank Riverwalk

**Ends:** College Street under the Fuller Warren Bridge

**Distance:** 1,761 LF (0.3 miles)

**Projected Funding:** \$4.52 million dollars by the Northbank Riverfront Park  
\$2.65 million dollars by FDOT



The Artist Walk under Fuller Warren Bridge by FDOT

**Description(continued):**

The second project is a shared-use path along the south side of the Fuller Warren Bridge from the Artist Walk to the exit ramp at Palm Avenue in San Marco. A bridge ramp is proposed leading from the Artist Walk onto the shared-use path.

**Overview - Fuller Warren Bridge Sidepath**

**Connecting Destinations:** Northbank Riverwalk, Nemours Children's Specialty Care

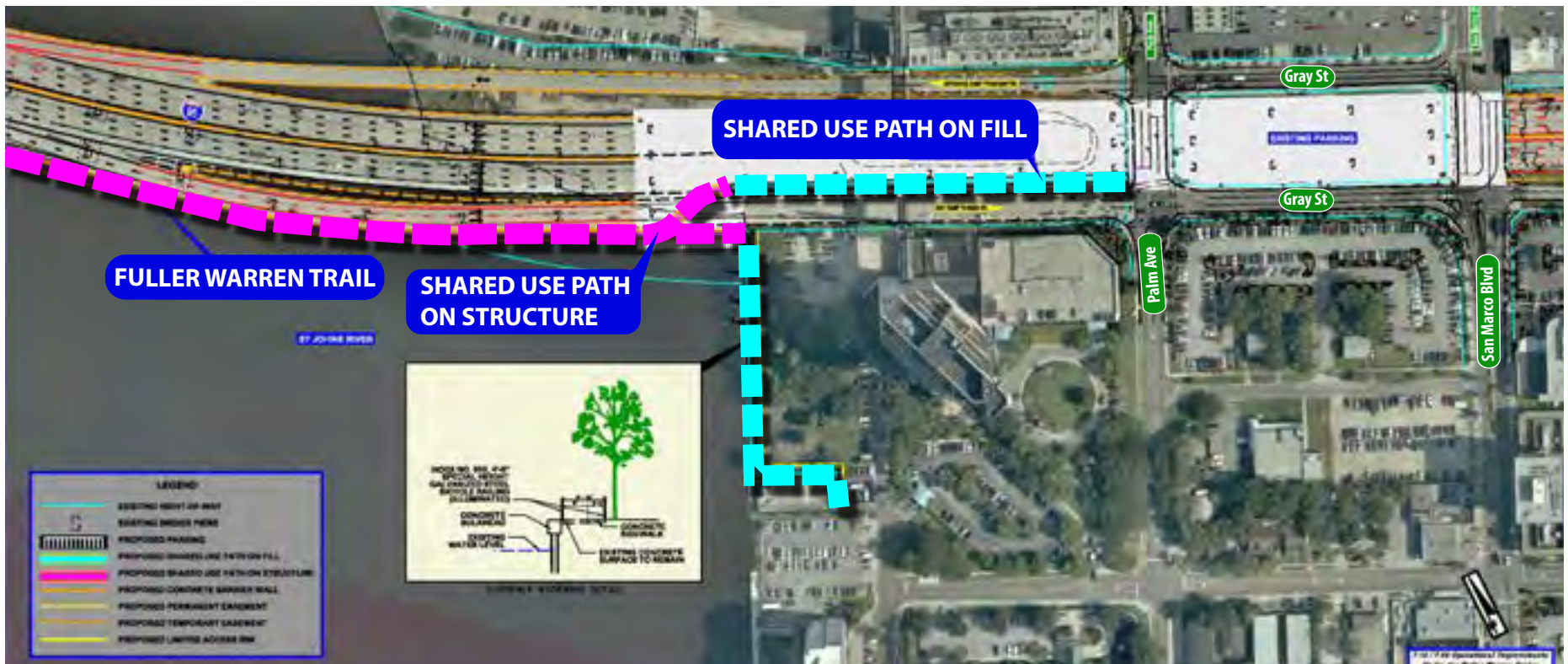
**Begins:** Northbank Riverwalk

**Ends:** West end of Childerns Way

**Distance:** 5,770 LF (1.1 miles)

**Estimated Cost for Construction:** \$15 million dollars

**Projected Timeline for Completion:** 2021



Future Sidepath along the Fuller Warren Bridge by FDOT



# Programmed Segment | Artist Walk to Fuller Warren Bridge



# Programmed Segment | San Marco Connector

## Description:

As with most urban areas, San Marco has been developed with limited opportunities for retrofitting greenway trail connections. The existing Southbank Riverwalk is an exceptional multi-use trail connection along the river and begs for expansion. PATH/KAIZEN agrees with the extension proposed by the COJ east along the Duval County Public School property and the future development to Broadcast Place. This trail connection will be a highly used extension of the Riverwalk for both bicyclists and pedestrians.

Trail connections from the Southbank Riverwalk west and Broadcast Place south will have to rely on side-paths and coordination of right-of-way from adjacent property owners. The interaction with the interstate, road intersections, and the railroad all provide costly/timely challenges for implementation. With these connections already planned and scheduled for implementation, PATH/KAIZEN has reviewed and outlined a loop connection within San Marco.

The planning team recommends all other connections to be planned as Complete Street projects due to the limited right-of-way of some of the streets, where a quality trail as a minimum 10' wide side-path with a minimum 5' landscape separation is not always feasible. Creating a strong trail loop is preferred. Providing ease of bicyclists and pedestrians to transition on/off the trail loop from the other streets is recommended.



## Overview:

**Connecting Destinations:** Southbank Riverwalk, Northbank Riverwalk, Duval County public Schools

**Begins:** Friendship Fountain

**Ends:** Southbank Riverwalk

**Distance:** 14,800 LF (2.8 miles)

Funded connectivity projects in San Marco by City of Jacksonville, FL

2. U.S. Department of Transportation. "Complete Streets are streets designed and operated to enable safe use and support mobility for all users."



# Programmed Segment | San Marco Connector





## Proposed Side Path along Kings Avenue

The proposed side path along Kings Avenue will be a 10' to 12' wide trail by expanding the existing sidewalk and utilizing the available green space along the detention pond.



Existing conditions on Kings Avenue looking northwest



# Model Project | S-Line to Stonewall Street

**Description:**

The first segment in the implementation Tier 1 was chosen by PATH/KAIZEN team and vetted through the Steering Committee as the model project to kick-off the implementation of the *Emerald Trail*. The model project will make the connection from the south end of the existing S-Line trail to the intersection of Park Street and Stonewall Street, providing multiple access points for the LaVilla and Brooklyn neighborhoods, as well as establishing the future opportunity to connect to the McCoys Creek Greenway. In addition, there is a funded COJ project for a road diet on Park Street between Stonewall and Forest Street with a two-way cycle track on the west side of Park Street. Constructing this segment will meet the project goal to provide connections between the S-line trail and its surrounding neighborhoods towards the Riverwalk and downtown area. This segment has the most logical start/endpoints that will ensure high use of the model project once it is built.

The proposed trail starts at the intersection of the existing S-Line on State Street by adding an at-grade crossing with a pedestrian activated signal. Then, it becomes a side path on the south side of State Street to the west side of Eaverson Street by utilizing the extra green space on the existing shoulder. As the side path reaches the signalized intersection at West Beaver Street, it will cross to the south side and transition into a greenway trail through the Florida Dwight Memorial Playground. Crossing Cleveland Street with the traffic signal, the proposed trail continues as a side path on the north side of Church Street. It will then make a mid-block crossing over to the south side of Church Street with Rectangular Rapid Flashing Beacon. Coordination with FDOT is needed to make the trail transitions off the street onto its property. The trail transitions off the street and becomes a greenway on the City-owned green space adjacent to the detention ponds until it reaches Lee Street. There are several vacant parcels along the west side of Lee Street, which could be utilized as space for a greenway trail. The Brooklyn Road Diet Study has proposed converting the western half of the Park Street viaduct to a bike/pedestrian space. The planning team has reviewed and incorporated the proposed facility on the viaduct as part of the model project.

**Overview:**

**Connecting Destinations:** S-Line, Riverwalk, Florida C. Dwight Memorial Playground, Lift Ev’ry Voice and Sing Park, JTA Transit Center

**Begins:** South end of S-Line on State Street

**Ends:** Intersection of Park Street and Stonewall Street

**Distance:** 6,873 LF (1.3 miles)

**Opportunities and Benefits:**

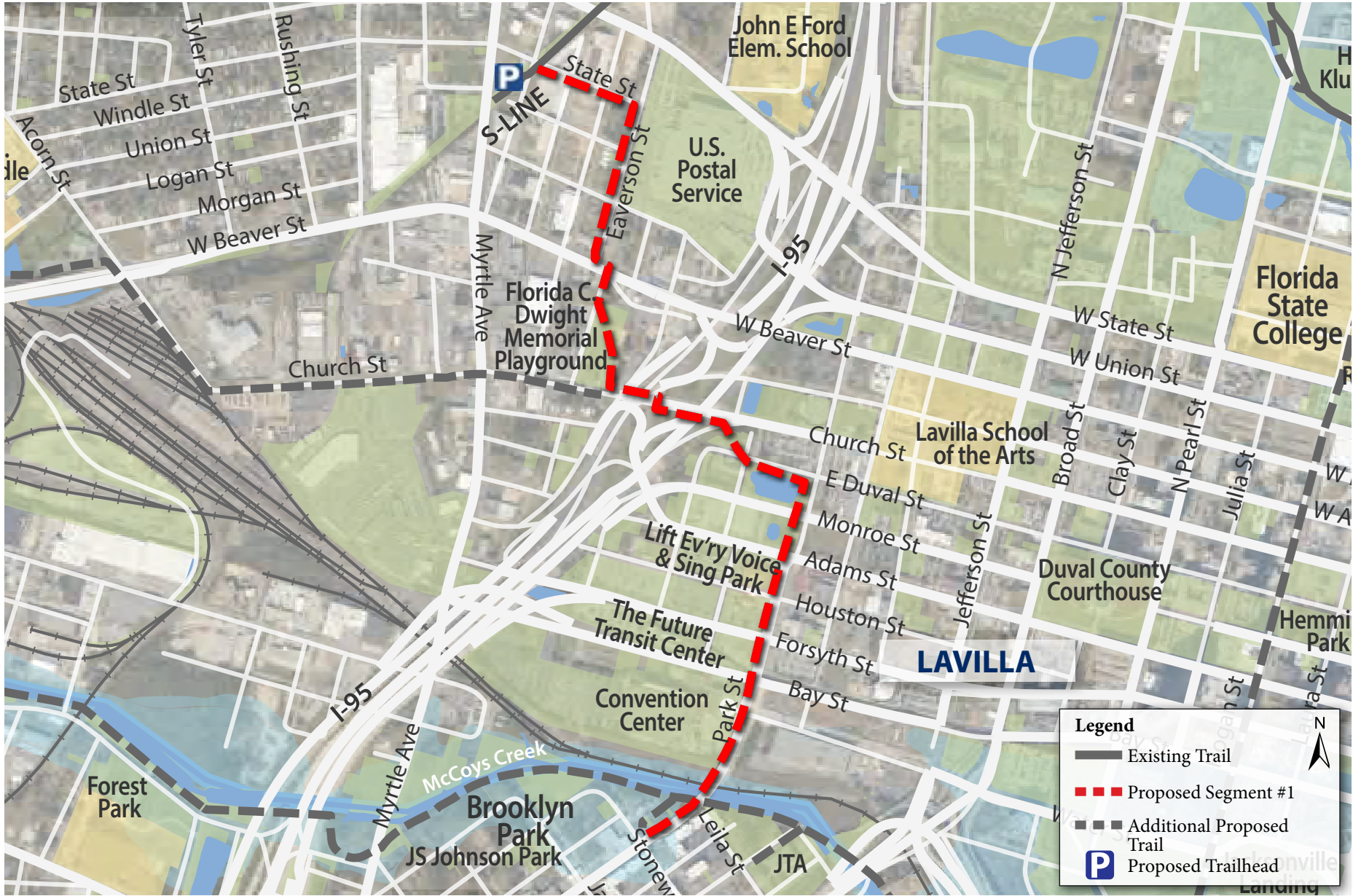
- No acquisition is needed
- Establishes the opportunity to connect to the programmed McCoys Creek Greenway
- Establishes the opportunity to transition to the COJ’s planned cycle track project along Park Street.

**Estimated Cost for Implementation:**

<b>S-Line to Stonewall Street - 6,873 LF</b>	
Planning & Engineering	\$682,779
Construction Cost	\$8,930,000
Total Cost to Implement	\$9,612,779

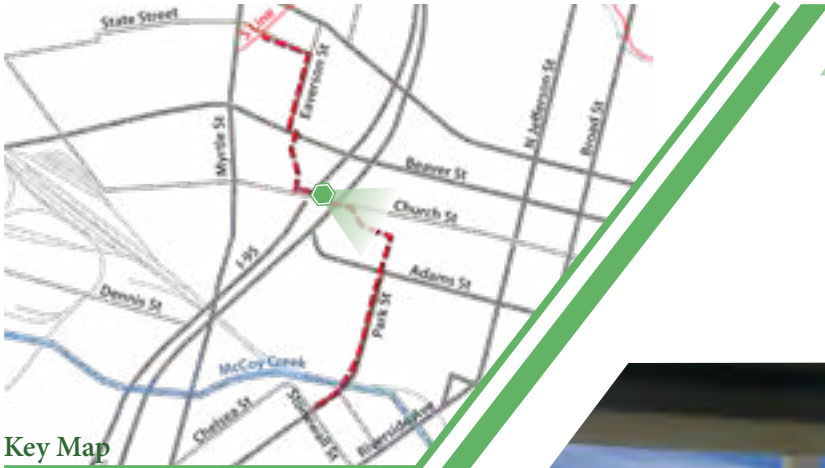


# Model Project | S-Line to Stonewall Street



# Proposed Trail under I-95

There are opportunities for the proposed side path on Church Street to utilize the FDOT property under I-95 and to transition into a greenway heading southeast through the city-owned green space.



Key Map



Existing conditions on Church Street under I-95







Key Map

## Proposed Greenway along Existing Detention Pond

The proposed greenway along Duval Street will be a 10' to 12' wide trail with a generous landscape area away from the street. An overlook area adjacent to the existing pond within the city-owned property will add some interests to this trail segment.



Existing conditions near Duval Street



## Proposed Renovations on Park Street Viaduct (Regular Day)

Proposed renovations on the viaduct will include a dedicated two-way cycle track and a pedestrian area with benches and art elements. The raised planters are utilized to provide vertical separations between the cycle track and the pedestrian area while providing a viable landscaping area on the bridge structure. The existing three-way intersection of Park Street and Water Street will be reconfigured to provide a safe crossing for the trail users.



Key Map



Existing conditions on the Park Street Viaduct







Key Map



Existing conditions on the Park Street Viaduct



## Proposed Renovations on Park Street Viaduct (Events Day)

The illustration below shows the potential uses of the renovated space on the Park Street viaduct for hosting events, such as a farmers market, local festivals, etc. It will become a landmark of the community and a popular destination of the entire trail system.



# Segment #2 | Hogan Street Connector

**Description:**

Previously envisioned by the COJ within the proposal for the 2019 Community Development Block Grant (CDBG), the Hogan Street Connector provides a missing connection between the Hogans Creek Greenway trail and the Northbank Riverwalk trail. The proposed trail begins on the northern end at Hogans Creek and interacts with the Florida State College at Jacksonville (FSCJ) campus as a shared-use street. The shared-use street will provide a main promenade for both pedestrians and cyclists while still accommodating the low volume, one-way vehicular circulation for drop-off and pick-up within the campus.

As the trail connection continues south, it will leave the FSCJ campus and connect through the Jacksonville Transportation Authority Transit Station property. PATH/KAIZEN suggests for Jacksonville Transportation Authority (JTA) to incorporate the trail connection with planned enhancement for the transit station in order to have the trail connect to and along the bus area within the site’s existing greenspace.

South of the Transit Station, the trail becomes an elevated cycle track along the west side of Hogan Street adjacent to the pedestrian sidewalk. The one-way roadway of Hogan Street will be modified to remove one of the two travel lanes. This proposed roadway modification and elevated cycle track design is proposed from W. State Street south to Bay Street. The suggested design standard of the elevated cycle track is to create a safe and inviting pedestrian and bicycle dominated corridor.

From Bay Street to Water Street, the elevated cycle track does not require modification of the roadway. The final block from Water Street to the Northbank Riverwalk will have the cycle track and pedestrian area transition into a shared-use side path. With any future redevelopment of the Riverfront Plaza, a bicycle and pedestrian promenade connection is recommended to provide a gateway from the Northbank Riverwalk to the Hogan Street Connector.

**Overview:**

**Connecting Destinations:** Downtown Jacksonville, Florida State College, James Weldon Johnson Park, Riverfront Plaza, Northbank Riverwalk

**Begins:** Hogans Creek at 1st Street

**Ends:** Northbank Riverwalk

**Distance:** 4,729 LF (0.9 miles)

**Opportunities and Benefits:**

- Provides direct connection through Downtown Jacksonville
- Connects two existing trail corridors - the Northbank Riverwalk and the Hogans Creek Greenway

**Potential Obstacles:**

- Requires acquisition from one property between Bay Street and Water Street

**Estimated Cost for Implementation:**

<b>Hogan Street Connector - 4,729 LF</b>	
Planning & Engineering	\$750,000
Construction Cost (2021)	\$6,210,000
Total Cost to Implement	\$6,960,000

# Segment #2 | Hogan Street Connector



## Proposed Shared-use Street

The proposed shared-use street at the FSCJ campus will become a one-way street with design elements that delineate the unique dedication of the shared condition with pedestrian/bikes. Paver, raised speed tables, customized crosswalks, signage, and planters are shown as the potential design of the space.

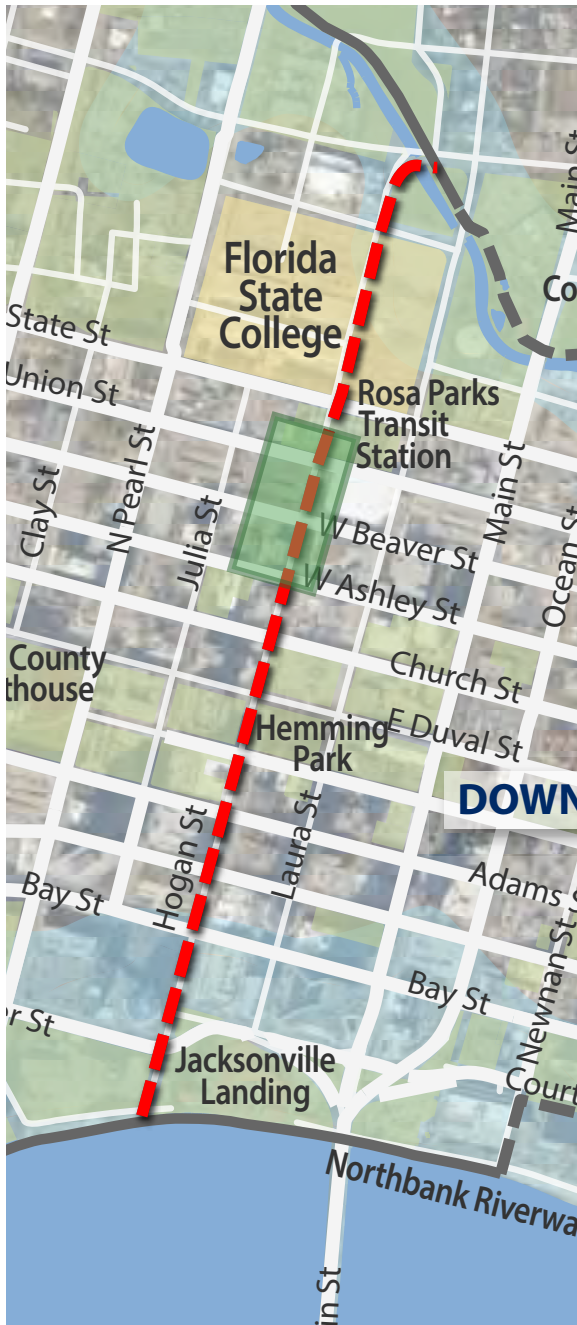


Existing conditions at Florida State College campus looking south

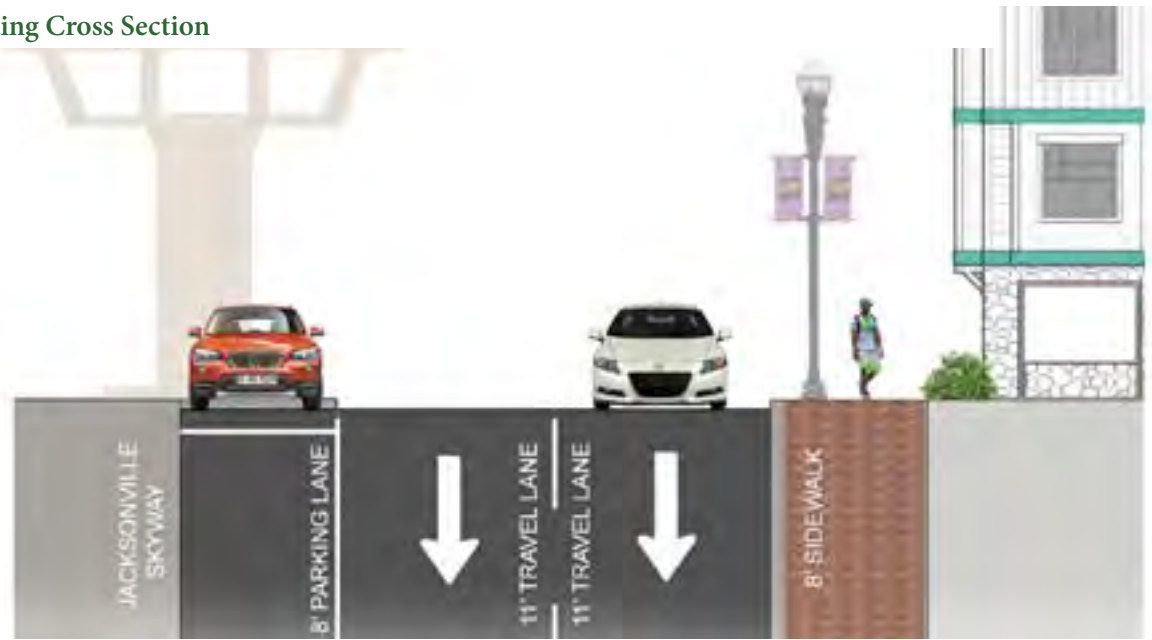




# Hogan Street Raised Cycle Track - Union Street to Bay Street



Existing Cross Section



Proposed Cross Section



## Hogan Street Raised Cycle Track - Union Street to Bay Street

With the proposed road diet, the raised two-way cycle track along Hogan Street will be 10' wide with a 3' min. landscape buffer. Design elements will include pedestrian lights, identification signs, and pavers that provide visual separation between the cycle track and the sidewalk, as well as bicycle signals at each intersection. The custom crosswalks will be utilized at the crossings.

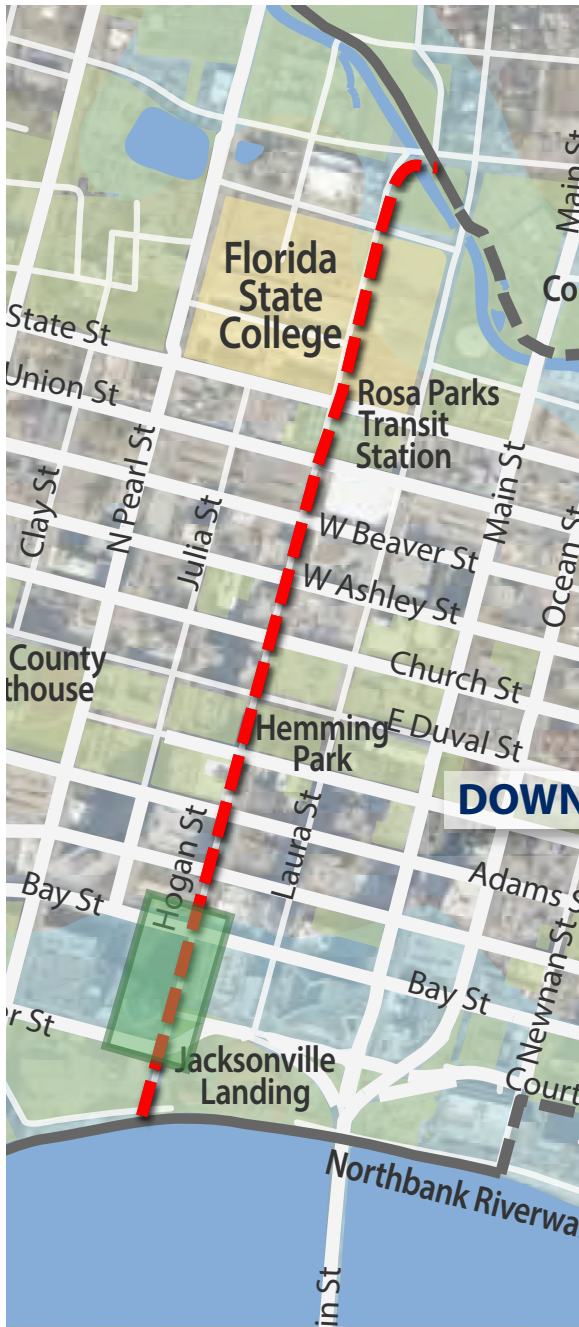


Existing condition at Union Street to Bay Street

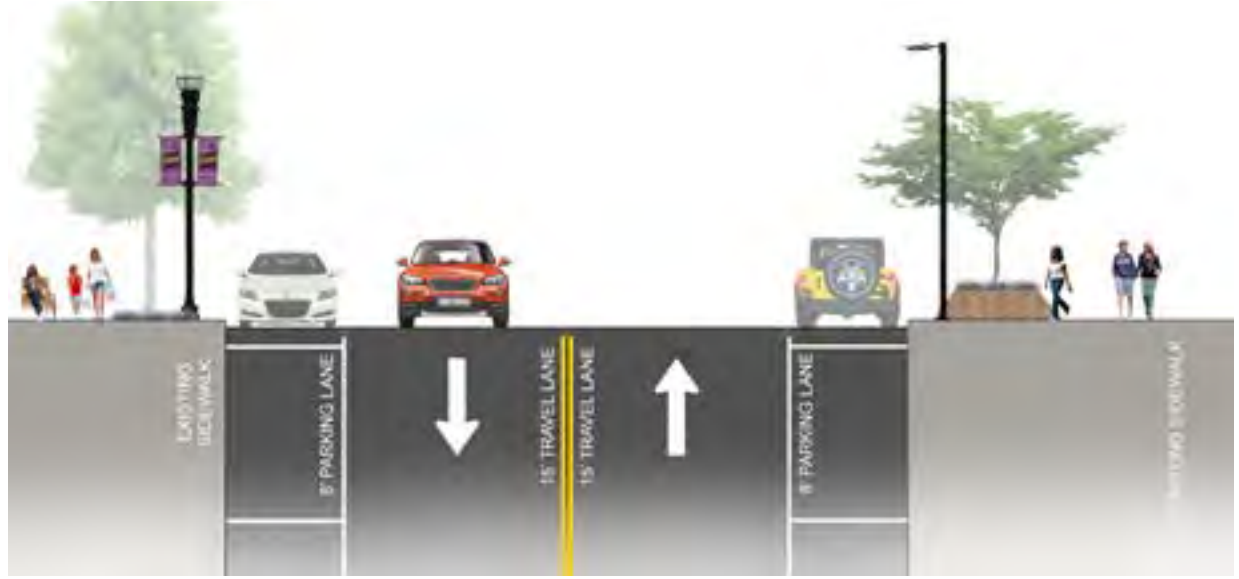




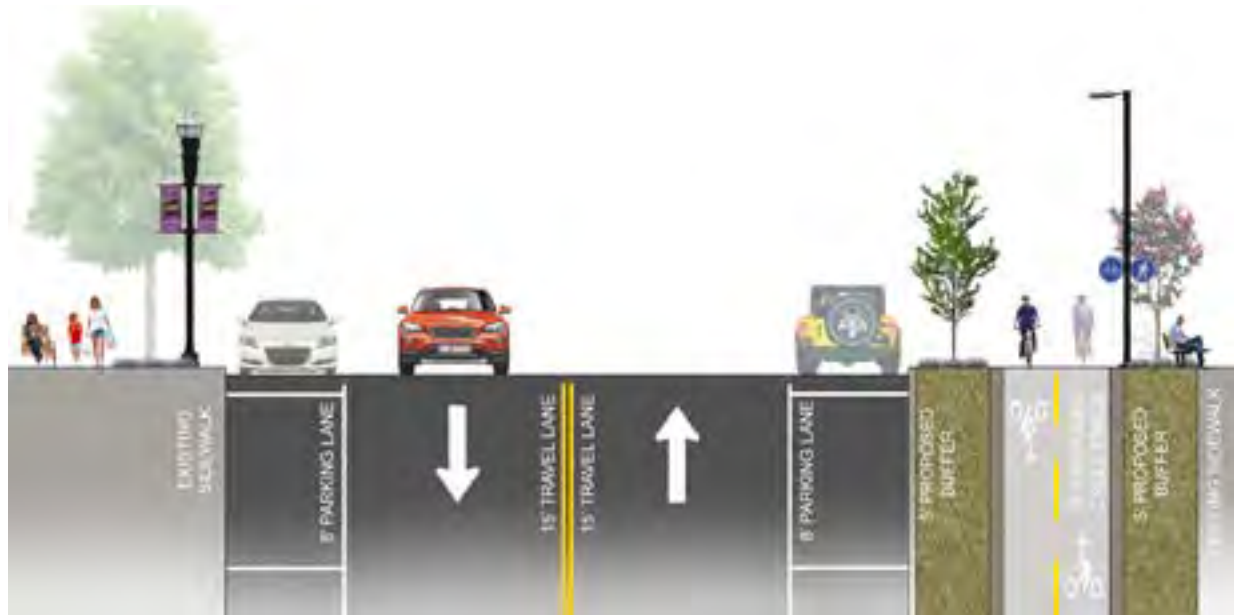
# Hogan Street Raised Cycle Track - Bay Street to Water Street



Existing Cross Section

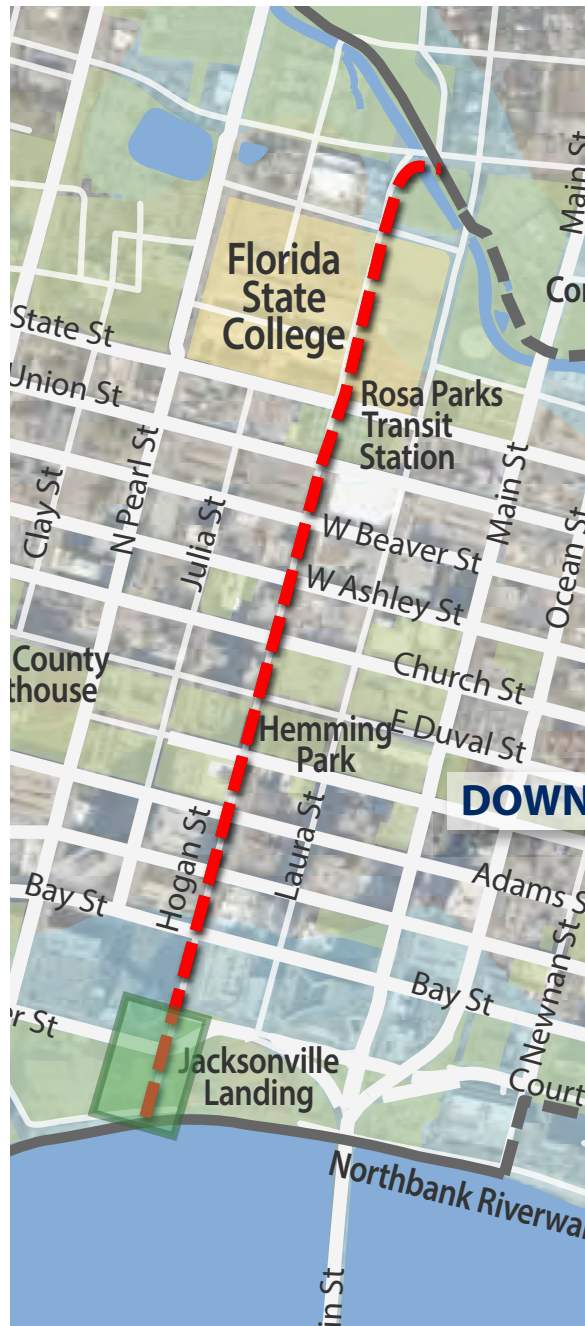


Proposed Cross Section





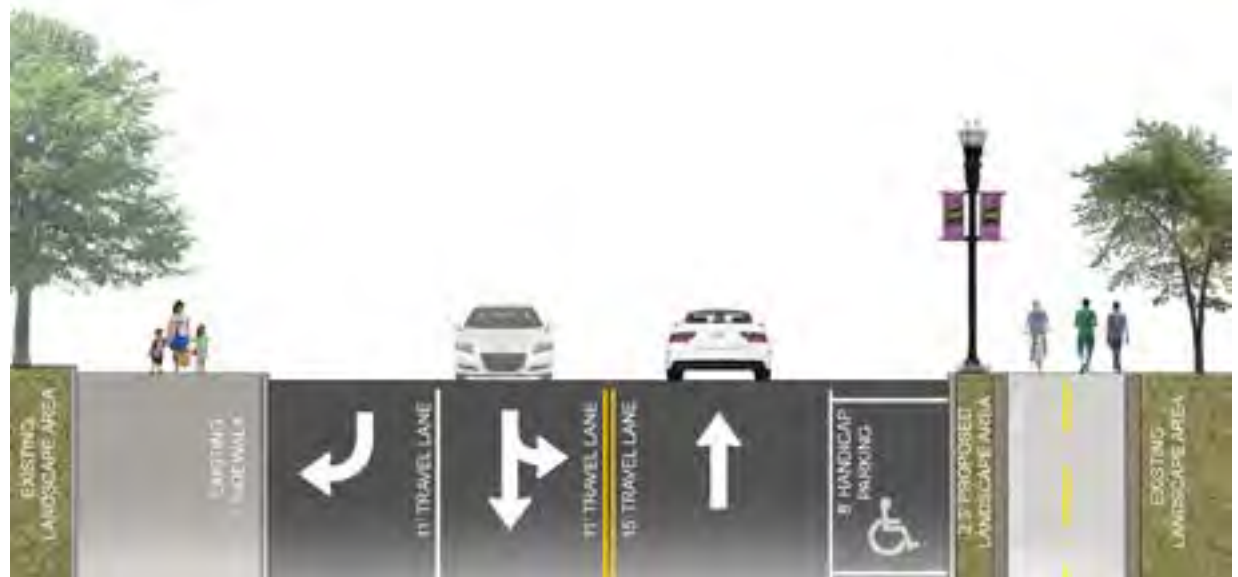
# Hogan Street Side Path - Water Street to Riverwalk



Existing Cross Section



Proposed Cross Section





## Hogan Street Connector - Bay Street to Riverwalk

A raised two-way cycle track with a 5' landscape buffer is proposed on the existing shoulder from Bay Street to Water Street. By removing the existing planters and adding landscape areas with flush curbs, the proposed condition will revitalize the public space while complimenting the downtown urban setting.



View of Hogan Street at Bay Street to Riverwalk





# Segment #3 | Southwest Connector

## Description:

With the programmed McCoys Creek Greenway and the Artist Walk, the Southwest Connector provides neighborhood connections to Brooklyn, Five Points, and Riverside. The trail segment begins at the Artist Walk under I-95 at College Street and is proposed as a greenway connection through Riverside Park. The trail connection within the park will mirror the park’s existing walkways with recommended improvements to accommodate a width of 10 feet.

The trail will cross Margaret Street as a mid-block crossing with a proposed rapid flashing beacon and then transition to a green alley between College Street and Myra Street. The green alley connection is three blocks long ending at Osceola Street. Each street crossing of the green alley is proposed to be a through condition for the trail user and a controlled stop for the vehicular traffic. To limit vehicular traffic from using the green alley as a cut-through while still accommodating the adjacent property owner’s vehicular access, the green alley design will incorporate bollards at select locations.

The Southwest Connector transitions to a neighborhood greenway along Osceola Street and becomes a sidepath along Gilmore Street with a crossing of Stockton Street at the existing signalized intersection. Connectivity to Central Riverside Elementary School is proposed as the trail continues as a side path along the north side of Gilmore Street to King Street. Using the right-of-way of King Street, the trail will cross over the active railroad track and under highway I-10 to connect to the McCoys Creek corridor and into Hollybrook Park ending at the McCoys Creek Greenway.

In addition, a side path connection along the east side of Riverside Avenue is planned from the Artist Walk at the Northbank Riverwalk to Memorial Park. Modification of Riverside Avenue adjacent to Memorial Park is proposed within the connection of the side path. The roadway modification will provide traffic calming while improving this highly desired trail connection to the park.

## Overview:

**Connecting Destinations:** Riverside Park, Memorial Park, Central Riverside Elementary School, Hollybrook Park, McCoys Creek Greenway

**Begins:** Artist Walk under I-95

**Ends:** South end of the McCoys Creek Greenway on Edison Avenue

**Distance:** 12,212 LF (2.3 miles)

## Opportunities and Benefits:

- Provides a connection through the alleyway that is separated from street traffic
- Provides connections to major parks and commercial hubs

## Potential Obstacles:

- Coordinations with property owners along the greenway alley will be crucial to make this segment viable.

## Estimated Cost for Implementation:

Southwest Connector - 12,212 LF	
Planning & Engineering	\$1,843,249
Construction Cost (2021)	\$18,432,488
<b>Total Cost to Implement</b>	<b>\$20,275,736</b>



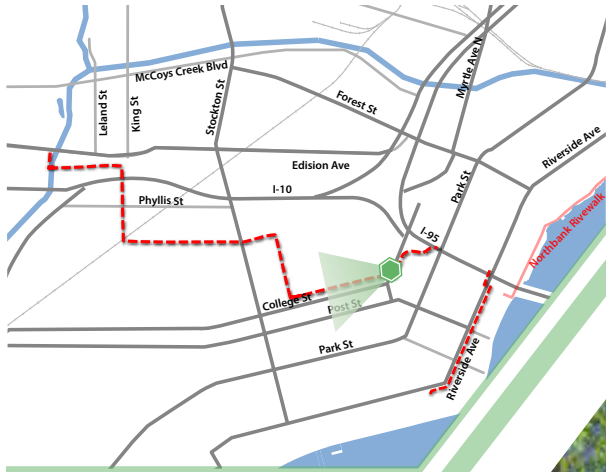
# Segment #3 | Southwest Connector





## Proposed Green Alley

The proposed green alley between Myra Street and College Street will provide an attractive connection through the back side of the residential properties to Riverside Park.



Existing alleyway east of Goodwin Street



# Segment #4 | S-Line Connector

## Description:

The S-Line Connector provides the missing trail segments along the existing S-Line Rail Trail. At Boulevard Street on the western end, the trail segment will follow the abandoned rail corridor owned by Jacksonville Electric Authority (JEA) to N. Pearl Street. The crossing of N. Pearl Street is proposed as a mid-block crossing with a bicycle/pedestrian activated signal recommended for a safe crossing of the road by all trail users.

Along Andrew A. Robinson Elementary School campus, the trail is proposed as a side path with the crossing of Main Street at the signalized intersection of 12th Street. East of Main Street, the S-Line Connector ties into a short segment of existing trail which ends at Hubbard Street. The trail segment is proposed to follow Hubbard Street north across the active rail line and through a warehouse area providing a central feature for the adjacent warehouse buildings.

At Liberty Street, the S-Line Connector will be a side path north to 17th street and transition to a greenway trail for one block and back to a side path to 19th Street. The northern end of the connector entails easement coordination with Swisher International for the trail alignment to follow the north edge of their facility and under Martin Luther King Jr. Parkway as a greenway trail to 21st Street. The trail segment is proposed to have a bicycle/pedestrian activated signal to provide a safe trail crossing of 21st Street where the segment ends as it connects back with the existing S-Line Rail Trail.

## Overview:

**Connecting Destinations:** S-Line, Andrew A Robinson Elementary School

**Begins:** S-Line at Boulevard Street

**Ends:** S-Line at East 21st Street

**Distance:** 6,751 LF (1.3 miles)

## Opportunities and Benefits:

- Completes the missing link between the existing S-Line trails
- Establishes the opportunity for future development along the abandoned rail corridor

## Potential Obstacles:

- Requires easement acquisition from the property between Hubbard Street and Liberty Street
- Requires easement from Swisher International Property

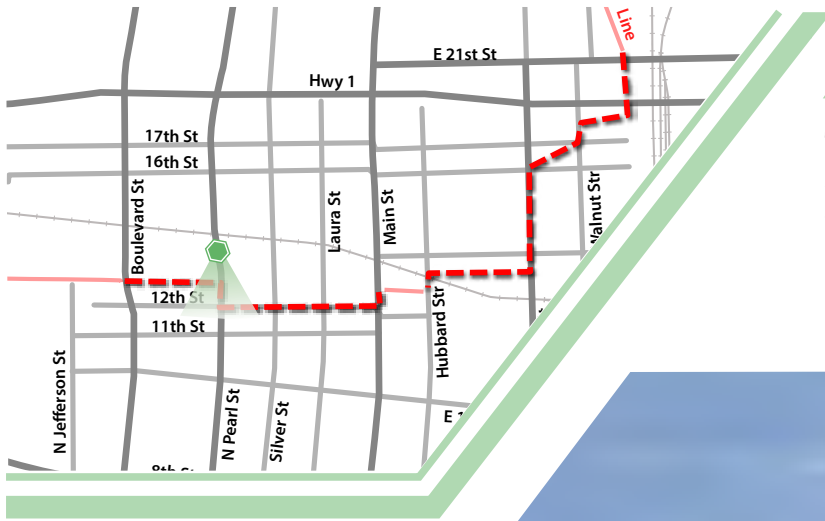
## Estimated Cost for Implementation:

<b>S-Line Connector - 6,751 LF</b>	
Planning & Engineering	\$974,676
Construction Cost (2021)	\$9,746,756
<b>Total Cost to Implement</b>	<b>\$10,721,432</b>



# Segment #4 | S-Line Connector





## Proposed Trail Crossing on Pearl Street

The proposed trail along the abandoned rail corridor will make an at-grade crossing on Pearl Street with HAWK signal and become a side path on the east side to the north side of 12th Street.



Existing conditions on Pearl Street looking south





## Proposed Side Path on 12th Street

The existing sidewalk adjacent to the elementary school will be retrofitted to be a 10' to 12' side path by relocating the security fence and the school sign and providing landscaping and rest areas.



Existing conditions on 12th street adjacent to Andrew Robinson Elementary School







## Proposed Trail along Abandoned Rail Corridor

The proposed greenway trail along the abandoned rail corridor will bring opportunities to activate the vacant buildings and create a unique experience for this trail segment with public art, lighting, retail space, and outdoor activity space.



View of the abandoned rail corridor west of Liberty Street



# Segment #5 | Hogans Creek Greenway

## Description:

With the existing linear park and pathways along Hogans Creek, extending the existing greenway north and connecting to the S-Line Rail Trail is proposed. Improvements to the existing pathways along Hogans Creek are proposed to bring the trail up to the standards outlined within this Master Plan. The planning team highly recommends to incorporate the separated trail crossing underneath the roadway bridges of Boulevard Street and North Pearl Street. Renovation of the existing bridge abutment walls, removal of the concrete walls and replacement with break-away handrails, and the widening of the underpass will ensure an inviting trail experience.

North of 7th Street, the trail connection to the S-Line Rail Trail will require coordination with various stakeholders. The restoration and improvement of Hogans Creek north of 8th Street is recommended to provide a linear greenway connection for the trail through to the UF Health campus along the east side of N. Jefferson Street. The northern end of the Hogans Creek Greenway, which is on the COJ property north of 12th Street, features a proposed boardwalk across the existing retention pond.

This one-mile segment will be completed in conjunction with the restoration of Hogans Creek, including daylighting the creek through UF Health's property. A creek restoration design for the entire length of Hogans Creek will be undertaken and will include the design of the trail. Outreach and engagement of property owners will be part of the design process.

## Overview:

**Connecting Destinations:** Henry J. Klutho Park, UF Health

**Begins:** S-line near 12th Street

**Ends:** Existing Hogans Creek Greenway at North Laura Street

**Distance:** 5,184 LF (1.3 miles)

## Opportunities and Benefits:

- Improves the crossing conditions along existing Hogans Creek Greenway
- Enhances the overall quality of the Hogans Creek Greenway to match the established design standard for the entire trail system
- Connects the Hogans Creek Greenway corridor to the S-Line Rail Trail

## Potential Obstacles:

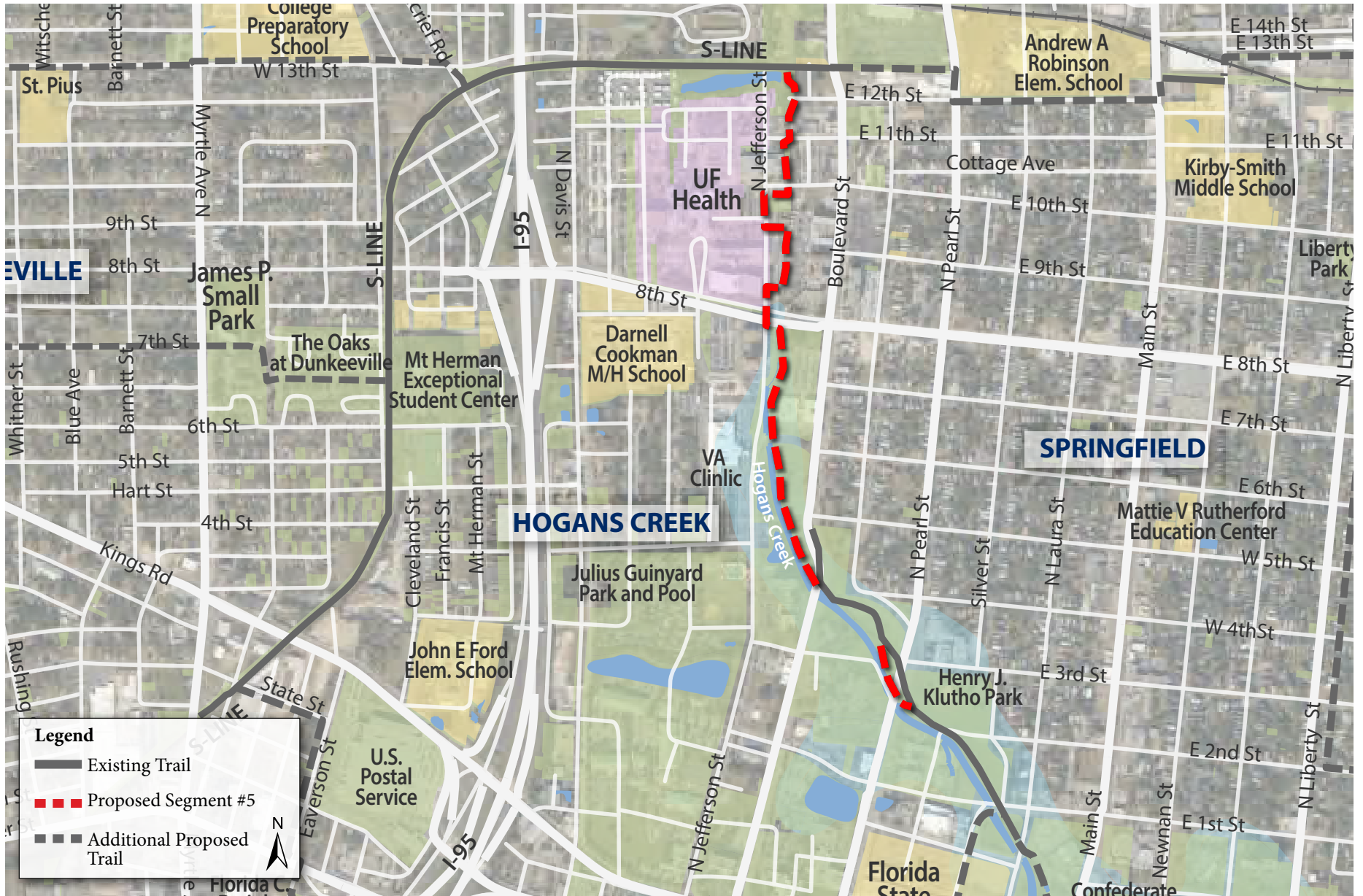
- Coordinations with UF Health on the removal of existing parking, the stream restoration, and improvements for a greenway trail require further study to better determine the timeline and estimated cost for implementation.

## Estimated Cost for Implementation:

Hogans Creek Greenway - 6,874 LF	
Planning & Engineering	\$1,170,000
Construction Cost (2021)	\$11,670,000
<b>Total Cost to Implement</b>	<b>\$12,840,000</b>

\* The above cost does not include creek restoration and daylighting the creek. Further planning and design will be required to produce an accurate cost estimate.

# Segment #5 | Hogans Creek Greenway



**Legend**

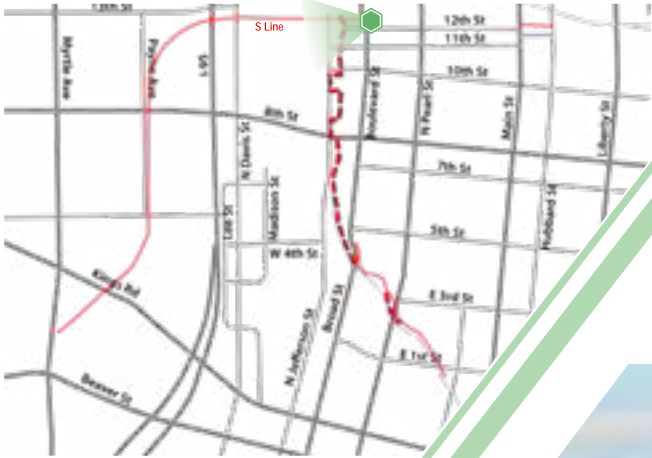
- Existing Trail
- Proposed Segment #5
- Additional Proposed Trail

N



# Proposed Trail Connection to S-Line

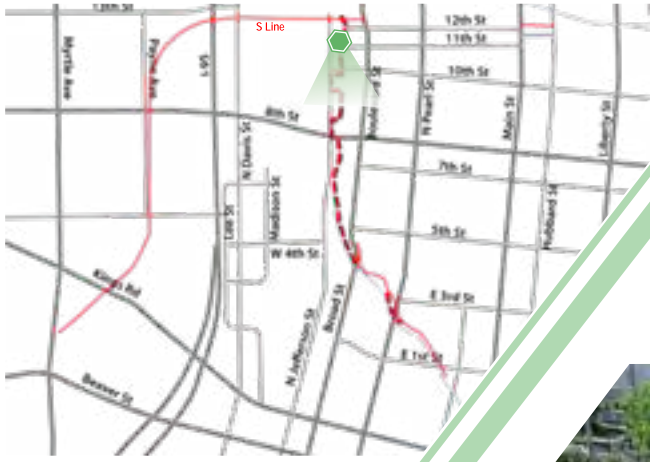
Proposed boardwalk structure will connect the greenway to the existing S-Line trail while providing an observation area over the city-owned pond.



Bird's eye view of the existing S-Line trail







## Proposed Trail along Existing Parking Lot

The proposed trail heading south on the existing parking lot of UF Health warranted the reconfiguration of the parking lot to accommodate a 5-foot minimum landscape area and a 10-foot minimum side path.



Existing conditions of a parking lot north of 11th Street





# Proposed Trail through UF Health Parking Lot

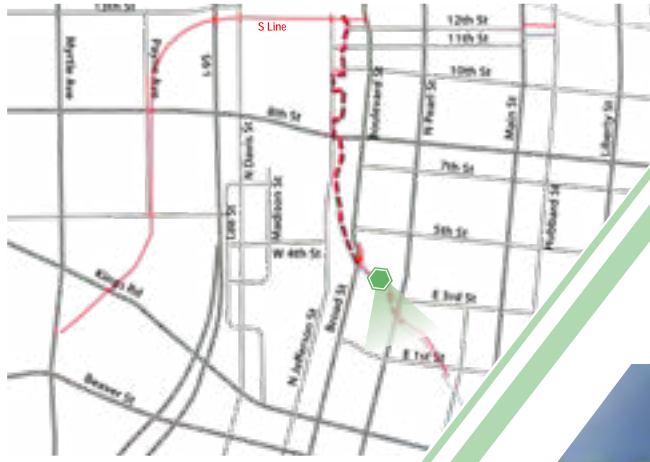
Proposed trail with the daylighted creek will create a natural phenomenon within the built out environment within the UF Health campus.



View south UF Health campus







## Proposed Trail underpass North Pearl Street

The proposed trail will provide a safer crossing by retrofitting the space under existing road bridge over Hogans Creek.

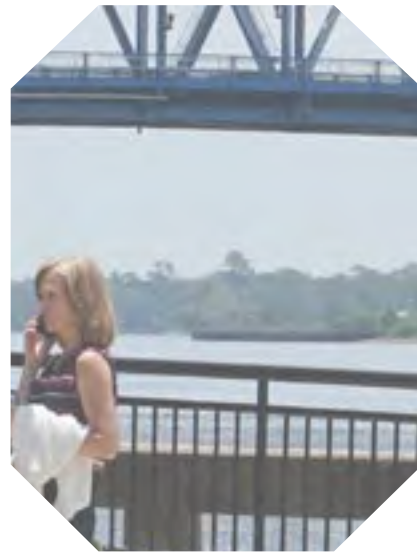
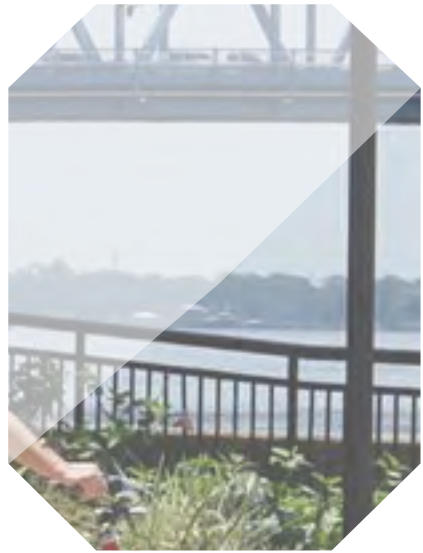


Existing Condition on Henry Klutho Park



# 04

## Implementation Plan - Tier 2





# 4 Trail Implementation Plan - Tier 2

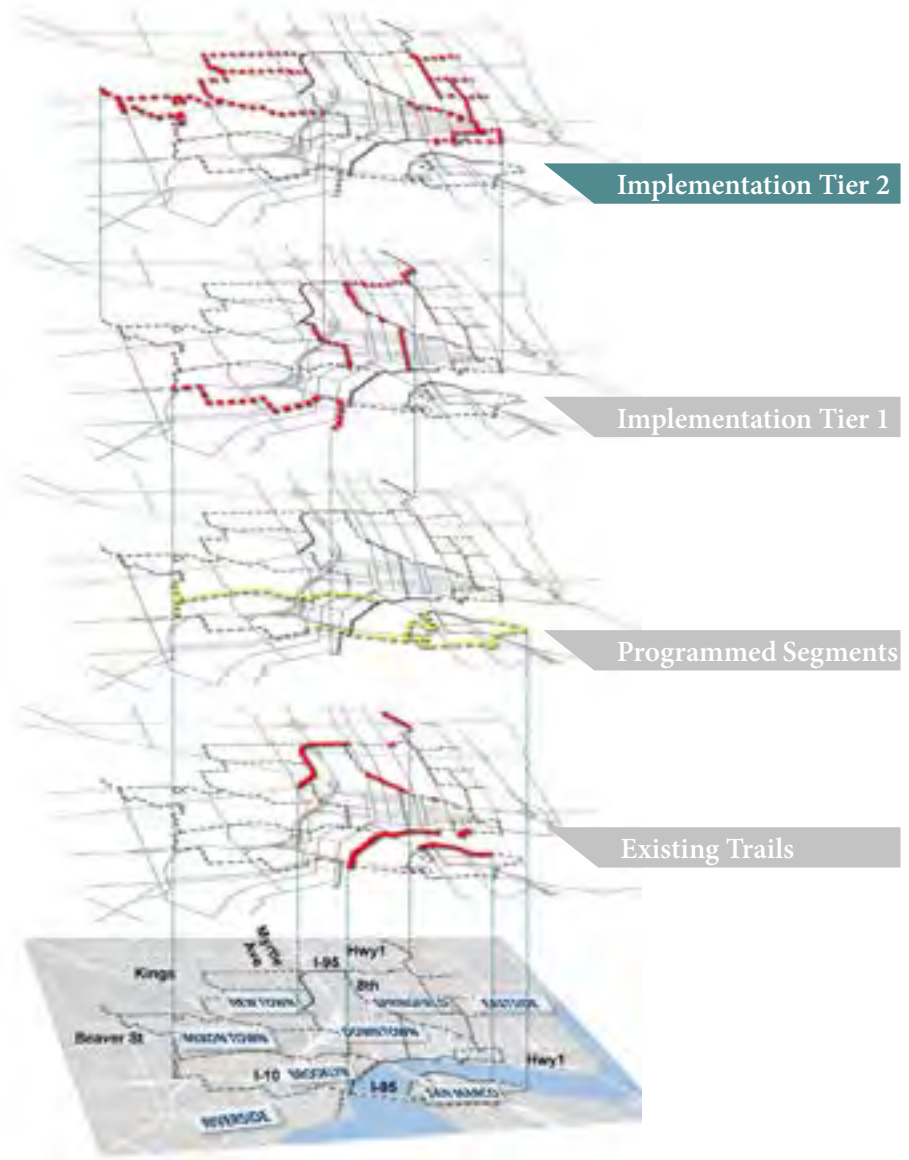
## Overview

The **Emerald Trail** Implementation Tier 2 contains four (4) trail segments as listed below. The names presented for each trail segment are working names only.

Segment #6   Westside Connector	56-59
Segment #7   Northwest Connector	60-62
Segment #8   Eastside Connector	63-70
Segment #9   Hogans Creek to Riverwalk	71-74

The following pages present the implementation Tier 2 segments in more detail, including opportunities as well as potential obstacles that will likely affect decisions regarding the order of implementation. A very preliminary estimate to design and construct each segment is also presented, along with before and after graphics of selected locations along each trail segment proposed.

Estimated cost is based on material and labor pricing from 2021. An estimated cost for easement and property acquisition is not included but should be considered prior to beginning implementation. An estimated cost for trail lighting is not included but should entail \$1,000 per fixture at a fifty-foot interval (\$500,000/mile) for areas that have desires of lighting.



Implementation Prioritization Tiers

# Emerald Trail Implementation Tier 2





# Segment #6 | Westside Connector

## Description:

The Westside Connector begins at McCoys Creek Greenway on the south end at the active rail line. The greenway will transition to a side path at King Street and cross the active rail line within the existing road crossing. With the high traffic volume along Beaver Street, the trail is proposed to cross over Beaver Street at the existing signalized intersection of King Street prior to becoming a greenway trail again along the McCoys Creek tributary north of Beaver Street.

Through Westbrook Center Park, the greenway trail is proposed as a park enhancement which will become a central amenity for the park greenspace for all to enjoy. Connections to Kipp Jacksonville Elementary and Middle School campus, West Jacksonville Elementary School, Smart Pope Livingston Elementary, and Eugene J. Butler Middle School are proposed through a series of side paths and neighborhood greenways to provide defined bicycle/pedestrian connections on and along low volume streets within the Woodstock, Robinson's Addition, and New Town neighborhoods. These connections are proposed as Tier 2 to follow the completion of the Model Project and the McCoys Creek Greenway. The Westside Connector will complete a 4.3 mile loop trail connection for the COJ's west side neighborhoods.

## Overview:

**Connecting Destinations:** Hollybrook Park, West Brook Park, KIPP Schools, West Jacksonville Elementary School, Eugene J. Butler School

**Begins:** McCoys Creek Boulevard at Leland Street

**Ends:** Florida C. Dwight Memorial Playground

**Distance:** 21,429 LF (4.1 miles)

## Opportunities and Benefits:

- Allows for multiple access points from surrounding streets among the northwest neighborhoods
- Provides connectivity to schools and parks

## Potential Obstacles

- *Requires acquisition* of properties north of Beaver Street
- *Requires easement acquisition* on the Hollybrook Homes Apartments property

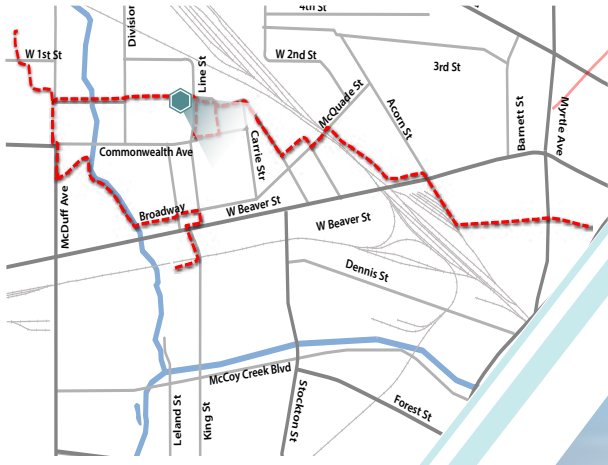
## Estimated Cost for Implementation:

<b>West Side Connector - 21,429 LF</b>	
Planning & Engineering	\$3,375,068
Construction Cost (2021)	\$33,750,675
<b>Total Cost to Implement</b>	<b>\$37,125,743</b>

# Segment #6 | Westside Connector







## Proposed Trail Connection to West Elementary School

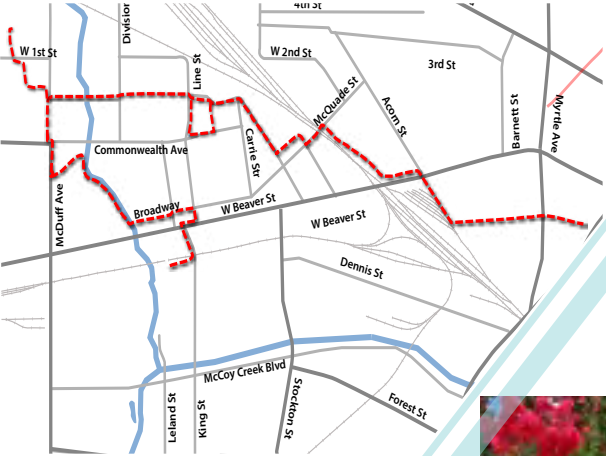
The graphic illustrates the neighborhood greenway on Placeda Street transitioning into a greenway that loops around the elementary school sports field. The trail will make an at-grade crossing on Line Street with a proposed three-way stop intersection. Recommended design features include the enhanced crosswalks, pedestrian ramps, and a pocket park at the entrance point of the loop trail to provide seating, landscaping, and a trail identification sign. Custom crosswalk could be used to provide neighborhood identifications.



Existing conditions on Placeda Street looking east towards Line Street



# Typical Neighborhood Greenway



The illustration demonstrates some typical design elements that can be applied on a neighborhood greenway. Landscape extensions could be used to calm traffic, provide shade, delineate on-street parking space, and improve the streetscape. Signage and pavement markings provide wayfinding information for the trail users, and slow motorists to ensure pedestrian/bicyclist safety. Sidewalks will be evaluated/ improved along the chosen street to ensure a safe and comfortable condition for pedestrians.



Typical neighborhood street in New Town neighborhood





# Segment #7 | Northwest Connector

## Description:

The Northwest Connector is proposed as a series of side paths and neighborhood greenways connecting the COJs northwest neighborhoods of New Town, College Gardens, and Durkeeville. The proposed connections on and along low volume streets will provide a delineated route for residents to get to Smart Pope Livingston Elementary School, Edward Waters College, James Weldon Johnson Academic and Career Center, Susie E. Tolbert Elementary School, St. Pius Parish School, and Stanton College Preparatory School.

Additional destinations along the Northwest Connector are the Jacksonville Joe James Center on 13th Street and James P. Small Park at Myrtle Avenue. The proposed trail will provide connection to the existing S-Line Rail Trail at the Mt. Herman Exceptional Student Center and at Moncrief Road.

## Overview:

**Connecting Destinations:** Livingston School, Edward Waters College, Susie E. Tolbert Elementary School, Jacksonville Joe James Center, St. Pius Parish School, Stanton College Preschool, James P. Small Park, S-Line Rail Trail

**Begins:** McQuade Street north of the active rail line

**Ends:** S-Line at Moncrief Road; S-Line at Steele Court

**Distance:** 18,458 LF (3.5 miles)

## Opportunities and Benefits:

- Allows for multiple access points from surrounding streets among the northwest neighborhoods
- Provides connections to schools and public greenspace

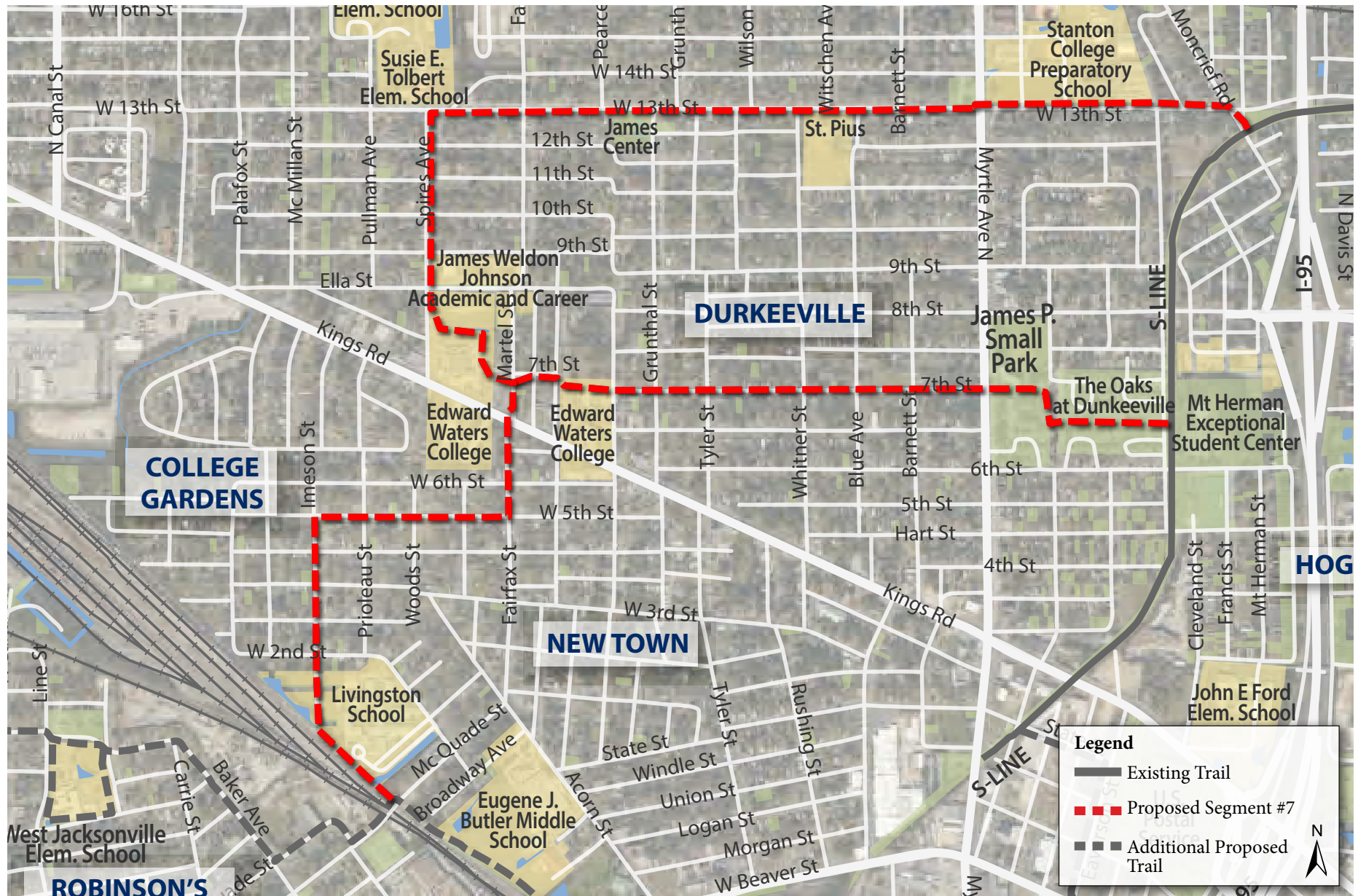
## Potential Obstacles:

- Neighborhood support will be critical to the development of the neighborhood greenway

## Estimated Cost for Implementation:

<b>Northwest Connector - 18,458 LF</b>	
Planning & Engineering	\$3,028,266
Construction Cost (2021)	\$30,282,656
<b>Total Cost to Implement</b>	<b>\$33,310,922</b>

# Segment #7 | Northwest Connector







## 7th Street to Edward Waters College

The trail connection to Edward Waters College will utilize the section of 7th Street that is currently closed and convert it as a greenway trail. A pocket park could be developed on the vacant land as shown in the illustration below.



Existing conditions on 7th Street looking east towards Edward Waters College



# Segment #8 | Eastside Connector

## Description:

The COJ's Eastside Connector will provide connections to the Springfield and Phoenix neighborhoods and add additional bicycle/pedestrian connections from the S-Line Rail Trail and the Hogans Creek Greenway. On the north end of the trail segment, the proposed connector will follow Liberty Street as a side path and transition to a green alley within the Springfield neighborhood east of Liberty Street.

The green alley will begin at Carmen Street and connect for ten blocks to 2nd Street. The green alley crossing of 8th Street will be a mid-block crossing and will include a bicycle/pedestrian activated signal. Each mid-block crossing of the green alley is proposed as a through condition for the trail user and a stop controlled condition for vehicular traffic. The design of the green alley will incorporate the needs of the adjacent property owners to identify control points where bollards will limit cut-through traffic while accommodating the vehicular access needed for the adjacent property owners.

Along 2nd Street, the Eastside Connector will become a side path and connect to the abandoned rail corridor becoming a greenway trail connection between 6th Street and Hogans Creek. A neighborhood greenway connection is proposed along Carmen Street, Evergreen Avenue, and 11th Street as a spur to Edwards Park and the Phoenix neighborhood. This connection requires the Carmen Street crossing of the active rail line to remain open to provide trail connectivity to the Phoenix neighborhood.

Continuing along 6th Street and crossing the abandoned rail corridor, a neighborhood greenway spur connection is proposed on 5th Street to Matthew W. Gilbert Middle School and Richard Brown Elementary School. The Eastside Connector also includes a side path connection along 1st Street from Robert R. Kennedy Park to A. Philip Randolph Heritage Park and Flossie Brunson Eastside Park.

The abandoned rail corridor opportunity within the Eastside Connector will require the COJ to acquire the corridor. South of Union Street, coordination with the private property owner will be required for the trail connection behind the existing warehouse building. The trail is proposed from Union Street south as a shared-use trail to allow for deliveries and vehicular access to the back of the warehouse building.

Jacksonville, Florida

Arlington Expressway on the southern end and connect to the Hogans Creek Greenway.

## Overview:

**Connecting Destinations:** Matthew W. Gilvert Middle School, Richard Brown Elementary School, Robert F. Kennedy Park, A. Philip Randolph Heritage Park, Flossie Brunson Eastside Park

**Begins:** N Liberty Street at south of E 13th Street

**Ends:** Hogans Creek Greenway south of the Arlington Expressway

**Distance:** 19,262 LF (3.65 miles)

## Opportunities and Benefits:

- Provides connections for east side neighborhoods to parks and schools
- Connects S-Line to the Hogans Creek Greenway

## Potential Obstacles:

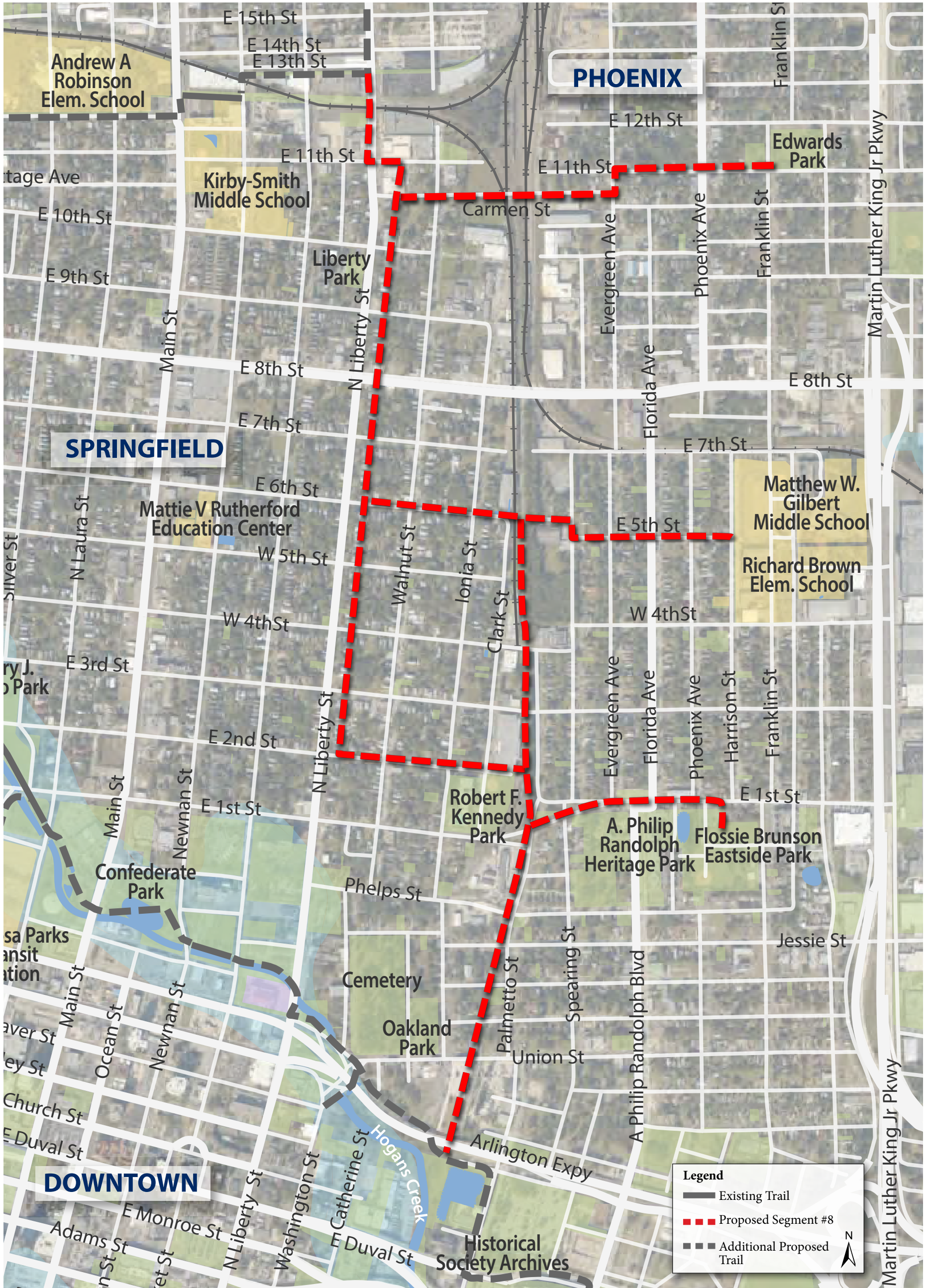
- Requires acquisition of the abandoned rail corridor and some private owned properties
- Proposed segment length needs to be phased for implementation once easements for final alignment are identified

## Estimated Cost for Implementation:

Eastside Connector - 19,262 LF	
Planning & Engineering	\$3,286,579
Construction Cost (2021)	\$32,865,788
<b>Total Cost to Implement</b>	<b>\$36,152,366</b>



# Segment #8 | Eastside Connector





## Proposed Railroad Crossing on Carmen Street

The proposed improvements at the railroad crossing on Carmen Street will include reconstructing the crossing pavement with concrete. Sharrow markings will be placed along Carmen Street to delineate the street as a neighborhood greenway. New sidewalks will be constructed on the south side of Carmen Street where the existing sidewalks are disconnected.



Existing conditions on Carmen Street at the railroad crossing looking east







## Proposed At-grade Crossing on 8th Street

The proposed green alley will make an at-grade crossing on 8th Street with a HAWK signal as demonstrated in the graphic below. A landscaped median is proposed on the east side of the crossing to restrict left-turning traffic in the west-bound side of the street until past the crossing. Trail intersection design should follow the intersection details outlined within the design standard chapter in this document.



Existing conditions on 8th Street looking east



## Proposed Springfield Green Alley

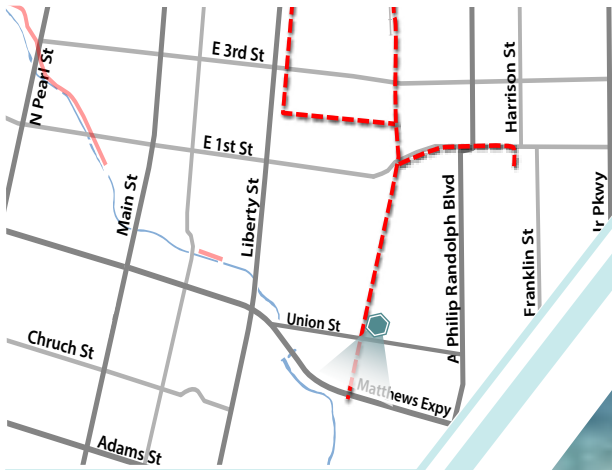
The proposed green alley will be a 8' to 10' wide concrete trail with pavement markings that regulate the shared-use condition on the alley path. Proposed design should consider incorporating the historic paver elements at each trail intersection. Handicap ramps will be placed at those intersections along with 'STOP' signs for vehicular traffic on the intersecting road. Privacy fences and bollards will be optional elements to be coordinated specifically with the adjacent residents' desires and needs.



Existing alley between Liberty Street and Walnut Street. Above photo was taken near 6th Street.







## Proposed Shared-use Plaza (Regular day)

The underutilized space at the back of the 'Art Loft' building poses a great opportunity for the proposed trail to go through and create a shared-use plaza space for public art, community activities, and events.

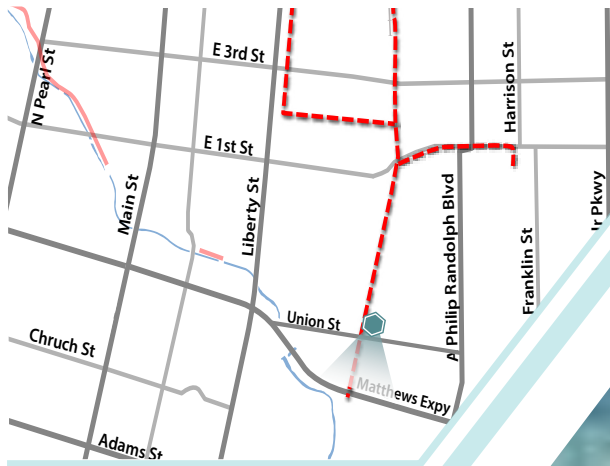


View of the 'Art Loft' building south of Union Street



## Proposed Shared-use Plaza (Events day)

The graphic below demonstrates the opportunity to temporarily close the street for events.



View of the 'Art Loft' building south of Union Street







## Proposed Trail on Abandoned Rail Corridor

The proposed trail along the abandoned rail corridor will be a 12' wide greenway trail. New canopy trees, rest areas, pet stations, and trail signs should be included along the corridor to reclaim the abandoned space as a linear park.



Existing conditions on the abandoned rail corridor



# Segment #9 | Hogans Creek to Riverwalk

## Description:

East of Main Street, this segment will extend the Hogans Creek Greenway along the creek corridor to the south of Duval Street where the segment will create a loop connection on the east side of downtown with the Northbank Riverwalk and the TIAA Bank Field, Veterans Memorial Arena, and Baseball Grounds of Jacksonville sports venues.

Along the St. Johns River, the side path that runs along Newnan Street and Courthouse Drive to Liberty Street is under construction as of November 2018. The transition from the eastern end of the Northbank Riverwalk at Catherine Street will land the trail as a riverfront greenway traveling east and bridging over the Hogans Creek confluence with the St. Johns River and connect to A.P. Randolph Street. There is a funded project along A.P. Randolph Street running north to Duval Street and along the south side of Duval Street to Palmetto Street. The trail completes a loop south of Beaver Street as a side path on the west side of Palmetto Street.

## Overview:

**Connecting Destinations:** Confederate Park, Northbank Riverwalk, Veterans Memorial Arena, TIAA Bank Field

**Begins:** Hogans Creek Greenway at Laura Street

**Ends:** Northbank Riverwalk at Newnan Street

**Distance:** **new trails:** 8,900 LF (1.7 miles)

**programmed trails:** 5,639 LF (1.1 miles)

## Opportunities and Benefits:

- Connects Hogans Creek Greenway to the Northbank Riverwalk

## Potential Obstacles:

- *Requires acquisition* from multiple properties

## Estimated Cost for Implementation:

<b>Hogans Creek to Riverwalk - 8,900 LF</b>	
Planning & Engineering	\$1,580,000
Construction Cost (2021)	\$15,750,000
<b>Total Cost to Implement</b>	<b>\$17,330,000</b>



# Segment #9 | Hogans Creek to Riverwalk



## Proposed Trail under Arlington Expressway

Proposed trail going under Arlington Expy would create an urban plaza to activate the space underneath the elevated road structure. Art elements and lighting compliment the adjacent 'Art Loft' building.



Existing conditions at south of Arlington Expy







## Proposed Pedestrian Bridge over Hogans Creek

The proposed pedestrian bridge across Hogans Creek will extend the existing Northbank Riverwalk to the east side of the creek.



View of Hogans Creek running into St. John River





# Emerald Trail Master Plan

Map Date: 02/14/19



KAIZEN COLLABORATIVE

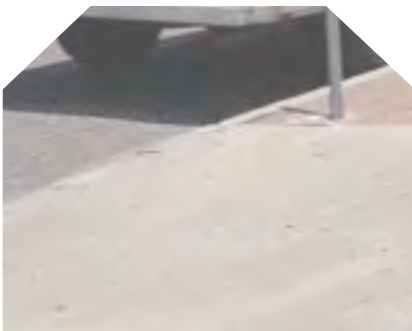
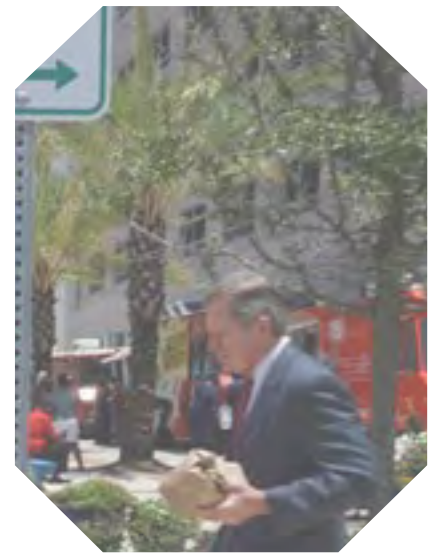
**Legend**

- Public-owned
- School
- Existing Trails
- Proposed Trails
- Programmed Segments



# 05

## Implementation Strategy



# 5 Implementation Strategy

This chapter presents a strategy with specific steps to ensure a timely, orderly implementation of this plan. The strategy includes:

- Cost Summary
- Implementation Timeline
- Formation of an Implementation Committee
- Creation of the *Friends of Emerald Trail* group
- Community Outreach
- Fundraising
- Public Relations and Marketing
- Next Steps

## 5.1 Groundwork Jacksonville as the Leader of the Implementation of the *Emerald Trail Master Plan*

### *From Dream to Reality:*

The *Emerald Trail* has been a dream of Jacksonville since it was envisioned nearly a century ago by famed architect Henry Klutho. Groundwork Jacksonville is uniquely positioned to bring this dream to life within the next 10 years.

### *Mission Statement:*

Groundwork Jacksonville was specifically created to clean and redevelop the *Emerald Trail* and convert contaminated land into parks, playgrounds, trails, and other public greenspace.

Groundwork Jacksonville has powerful partners who hold them accountable to this mission. It was formed out of a partnership between the COJ, the US National Park Service, the US Environmental Protection Agency, and Groundwork USA.

*Groundwork Jacksonville was created to clean and redevelop the Emerald Necklace and convert contaminated land into parks, playgrounds, trails, and other public greenspace.*

Groundwork Jacksonville has a proven track record. Over the last four years the organization has:

- Built community trust and strategic partnerships
- Collaborated with city, state and federal agencies
- Connected with major funding agencies and philanthropic leaders
- Garnered support from business leaders and environmental advocates
- Engaged a group of passionate volunteers
- Created public awareness that generated support for the *Emerald Trail*

In short, Groundwork Jacksonville is poised to lead the implementation of the *Emerald Trail Master Plan*.



## 5.2 Cost Summary

The estimated cost for the implementation of the 19.7 mile system is approximately \$184,329 million dollars. Acquisition is not included in the estimate. The Implementation Committee should assess acquisition costs several months prior to the beginning of each trail segment.

\* The estimated cost for Segment 5 does not include creek restoration and daylighting of the creek. Further planning and design will be required to produce an accurate cost estimate.

### Emerald Trail - Implementation Cost Summary

Mileage	Segment	Trail Name	P&E	Construction	TOTAL
1.3	1	S-Line to Stonewall Street	\$682,779	\$8,930,000	\$9,612,779
0.9	2	Hogan Street Connector	\$750,000	\$6,210,000	\$6,960,000
2.3	3	Southwest Connector	\$1,843,249	\$18,432,488	\$20,275,737
1.3	4	S-Line Connector	\$974,676	\$9,746,756	\$10,721,432
1.0	5	Hogans Creek Greenway	\$1,170,000	\$11,670,000	\$12,840,000
4.1	6	West Side Connector	\$3,375,068	\$33,750,675	\$37,125,743
3.5	7	Northwest Connector	\$3,028,266	\$30,282,656	\$33,310,922
3.6	8	Eastside Connector	\$3,286,579	\$32,865,788	\$36,152,366
1.7	9	Hogans Creek to Riverwalk	\$1,580,000	\$15,750,000	17,330,000
<b>19.7</b>		<b>TOTAL</b>	<b>\$16,690,617</b>	<b>\$167,638,363</b>	<b>\$184,328,978</b>

### 5.3 Implementation Timeline

#### Emerald Trail - 10-year Implementation Timeline

SEGMENT	TRAIL DESCRIPTION	LENGTH Miles	FISCAL YEAR													
			2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028						
1	S-Line to Stonewall Street	1.3	Acquisition	Design Phase	Construction											
2	Hogan Street Connector	0.9		Acquisition	Design Phase	Construction										
3	Southwest Connector	2.3			Acquisition	Design Phase	Construction									
4	S-Line Connector	1.3				Acquisition	Design Phase	Construction								
6	Westside Connector	4.1					Acquisition	Design Phase	Construction							
7	Northwest Connector	3.5						Acquisition	Design Phase	Construction						
8	Eastside Connector	3.7								Acquisition	Design Phase	Construction				
5 & 9	Hogans Creek Connector	3.0			Acquisition	Design Phase	Construction									
<b>Total</b>		<b>20.0</b>														

**LEGEND**

- Acquisition
- Design Phase
- Construction





#### 5.4 Formation of an Implementation Committee

The Steering Committee, which guided the planning process, must evolve into a committee charged with implementation. The job of acquainting the PATH/KAIZEN team with local needs and wants, reviewing the selected routes and choosing the final design standards has been completed upon the adoption of the *Emerald Trail Master Plan*.

Next, a new committee tasked with encouraging and overseeing implementation must be formed. The Implementation Committee needs to be a politically savvy group that can raise public and private funding allocated for the project. In addition, there needs to be adequate knowledge of the construction process among committee members to garner the respect and confidence from the COJ and the citizens at large. The committee would benefit from individuals filling the following roles:

- Key Steering Committee Members to ensure continuity
- City Manager/Staffers from appropriate departments
- Real estate or Right-of-Way Specialist
- Attorney
- Fundraising specialist
- Police/Fire representatives
- Design/construction team member
- GWJ CEO

The Implementation Committee should begin oversight of the project as soon as the COJ adopts the Trail Master Plan.

#### 5.5 Friends of the Emerald Trail

This volunteer group will advocate for the Trail and help with community engagement and education. Members will represent neighborhoods adjacent to the trail as well as key community organizations and stakeholders. Oversight for this volunteer group will be the responsibility of Groundwork Jacksonville.

#### 5.6 Community Outreach

Groundwork Jacksonville will coordinate community events, speaking engagements and volunteer opportunities along the trail. Groundwork Jacksonville intends to hire a project manager to oversee the Implementation Committee, project design and manage the implementation schedule.

#### 5.7 Fundraising

Fundraising efforts will be led by the CEO of Groundwork Jacksonville, with the support of the Groundwork Jacksonville Board of Directors, the Implementation Committee and the Friends of the Emerald Trail.

#### 5.8 Public Relations and Marketing

Groundwork will retain the services of an experienced public relations and marketing communications firm to ensure that the Emerald Trail remains visible and relevant throughout the implementation process to ensure it garners adequate government, community and financial support.

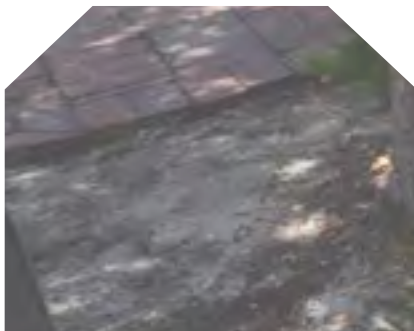
## 5.9 Next Steps

- Steering Committee presents the *Emerald Trail Master Plan* to Mayor and City Council for adoption.
- Adoption by the City Council
- Establish Implementation Committee
- Identify funding for Model Project.
- Advance ordinances re: fines for motorized use of trails and land uses adjacent to trail.
- Advance Model Project for construction
- Review prioritization plan and advance 2nd segment toward implementation.
- Identify funding for acquisition of key parcels.
- Acquire key parcels.



06

# Branding and Design Standards



# 6 Branding and Design Standards

## Overview

The following section provides the *Emerald Trail* with a variety of details, standards, and ideas to use when implementing the *Emerald Trail Master Plan*. These include:

- Trail System Naming and Logo
- Trail Signage Standards
- Trail Amenities and Furnishings
- Trail Section Details
- Intersection Details
- At-Grade Crossing Standards
- Enhanced Crosswalks
- Pocket Park Standards
- Tree Root Bridging and Tree Protection
- Trees and Infiltration Detail
- Bridges and Boardwalks
- Tunnels
- Wooden Fences and Handrails
- Structural Slab Crossing

The proposed trails should be designed and constructed in accordance with certain guidelines developed by various governmental agencies. All standards proposed for the *Emerald Trail* are intended to meet or exceed the guidelines listed below:

- AASHTO Guide to Development of Bicycle Facilities, 2007
- MUTCD (Manual on Uniform Traffic Control Devices), 2009
- ADA (Americans with Disabilities Act) requirements
- NACTO Urban Bikeway Design Guide, 2014
- City of Jacksonville Standard Specifications

## 6.1 Trail System Naming and Logo

Henry Klutho envisioned Jacksonville's Emerald Necklace in the early 20th century —with its miles of parks and greenways that link our urban neighborhoods and downtown to Hogans Creek, McCoys Creek, and the St. Johns River. A dream for more than a century, Groundwork Jacksonville is working to make The Emerald Necklace, a reality within the next 10 years.

Through brainstorming with the Steering Committee, Neighborhood Working Group along with feedback from the community, the consensus was that the Emerald Necklace had significant brand equity already. The community has yearned for this dream to be realized for so long, to abandon it for a completely new name seemed unwise. However, since Emerald Necklace is used in many other cities, the decision was made to shorten the name to the Emerald Trail.

The Emerald Trail logo pays homage to Klutho's vision of connected communities, greenscapes and waterways. The logo features bold geometric emerald-cut gemstones with intersecting 'rings' that represent the Trail network of loops and symbolize how the Emerald Trail will connect our historic urban neighborhoods, schools and businesses, to the environment and to each other.

With a clean and simple aesthetic, the main "Emerald Trail" icon can be used with the Emerald Trail font or independently, and in horizontal or vertical logo orientations for maximum flexibility of applications.

6.1 Trail System Naming and Logo (continued)





## 6.2 Trail Signage Standards

In order to inform users of the ***Emerald Trail***, the trail needs to have a consistent and clean branded signage system. The proposed sign types for the ***Emerald Trail*** are information kiosks, secondary directional signs, regulatory signs, and mile markers. The design style and the materials used in the sign structure allow the sign to be in character with both the urban and natural areas of the corridor. The following pages present the proposed trail signage that conveys the overall design intent.

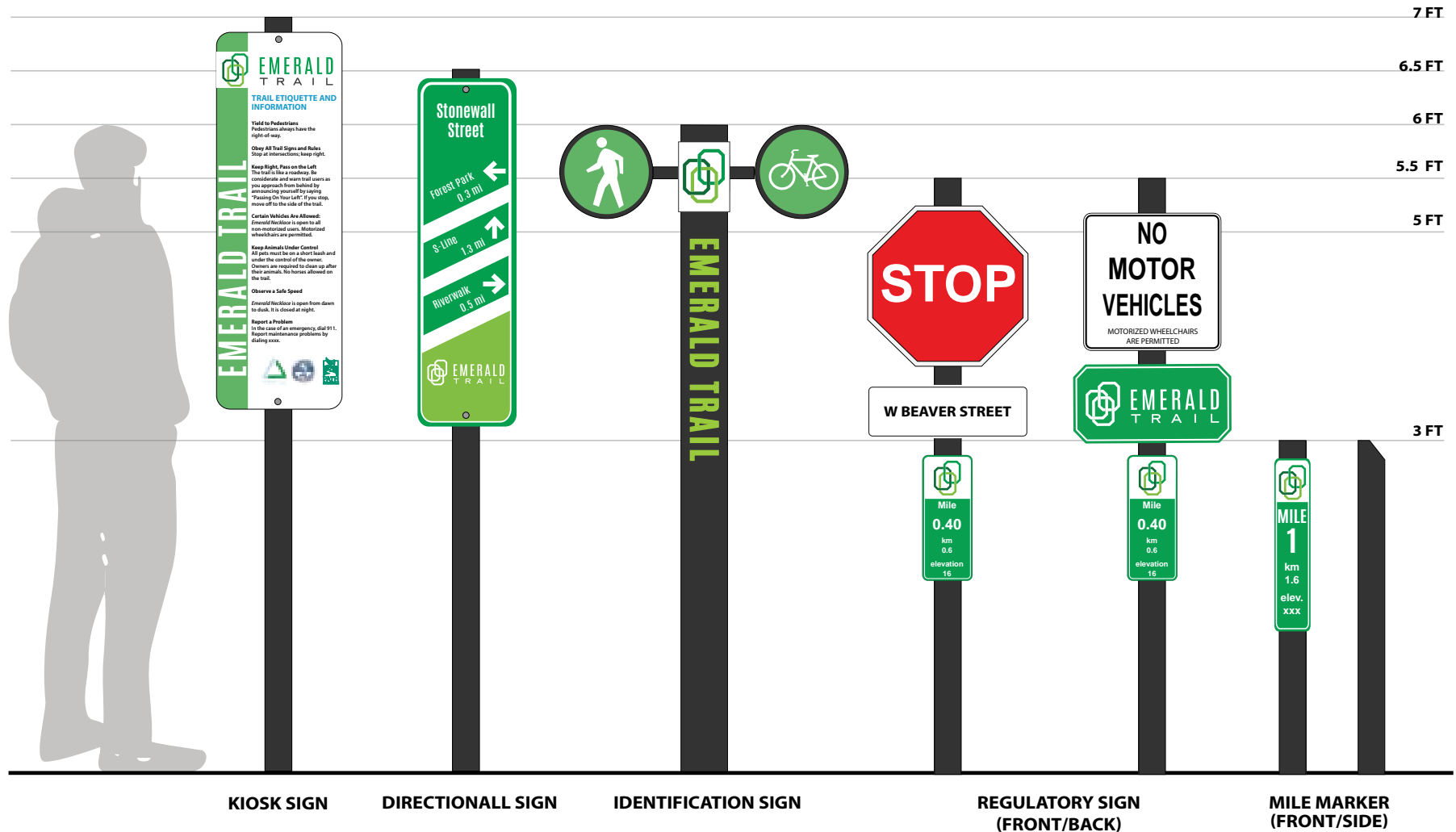
- Kiosk Signs – these are information signs to be placed at trailheads along the ***Emerald Trail***. The sign panels will provide information on trail rules, trail etiquette, recognition/acknowledgment, and/or a trail map with distance information to major destinations.
- Secondary Directional Signs – these are signs for identifying access points to the trail system from spur trails to neighborhoods, commercial areas, or shared use parking areas. The sign panels will contain the ***Emerald Trail*** logo and provide directional information.
- Identification Signs – these are signs for identifying the trail system and directing bicyclists and pedestrians when they are to be separated.
- Regulatory Signs – these are the most frequent signs along the greenway trail system. The sign panels will vary depending on information needed for the trail user to safely navigate the trail system.
- Mile Marker Signs – these are located at each one-mile distance along the trail and will have the ***Emerald Trail*** logo. The sign panel will show the distance in miles and kilometers and also include the elevation of the trail at that location.



*Examples of the logo sign panels*

## 6.2 Trail Signage Standards - Signage Concepts

The below sign concept was recommended for the *Emerald Trail* and is intended to be a complement to the existing street furniture in COJ parks. All signs to be painted aluminum and installed outside of the trail edge by 2-feet. Sign posts to be in-ground mounted into a concrete footer unless otherwise noted on construction details during implementation. Each sign panel to be attached to sign structure using 1" long, 1/4 dia. stainless steel #14A button HD Torx security metal screws.



## 6.3 Trail Amenities and Furnishings

As a complement to the existing standards for park amenities of the COJ, the following trail amenities have been selected for the *Emerald Trail Master Plan*. The powder-coated color for the bench, trash receptacle and bike rack selected by COJ and Groundwork Jacksonville is green to match the trail logo.

### Furnishings



#### Steelsites RB Collection

##### RBF-28

by Victor Stanley

Description: A bench featuring smooth lateral lines with welded horizontal steel slats. Standard length 6-feet.



#### Cycle Sentry Collection BRHS-101

by Victor Stanley

Description: Circular horseshoe bike rack constructed of 2.375 in (60 mm) OD tubular steel pipe.



#### Production Collection PRS-36

by Victor Stanley

Description: 36-gallon trash and recycling receptacle .



## 6.4 Additional Amenities



### Fixit Service Station

by Dero

Description: Powder coated black; includes all tools necessary to perform basic bike repairs and maintenance with air pump kit 3.



### Deluxe Single Pull Dog Station

by Jazzy

model #84

Description: single pull station holds up to 400 bags, Commercial-grade aluminum, durable powder coated/UV protected finish in black.



### Standard Light Pole

Description: The direct buried light pole to match the existing COJ standard should be placed along the trail and meet the COJ's standards for illumination.

## 6.5 Trail Section Details

The drawings in the following section depict the typical sections for the proposed greenway trail, side path, raised two-way cycle track, and green alley.

### Greenway Trails

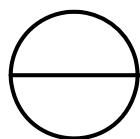
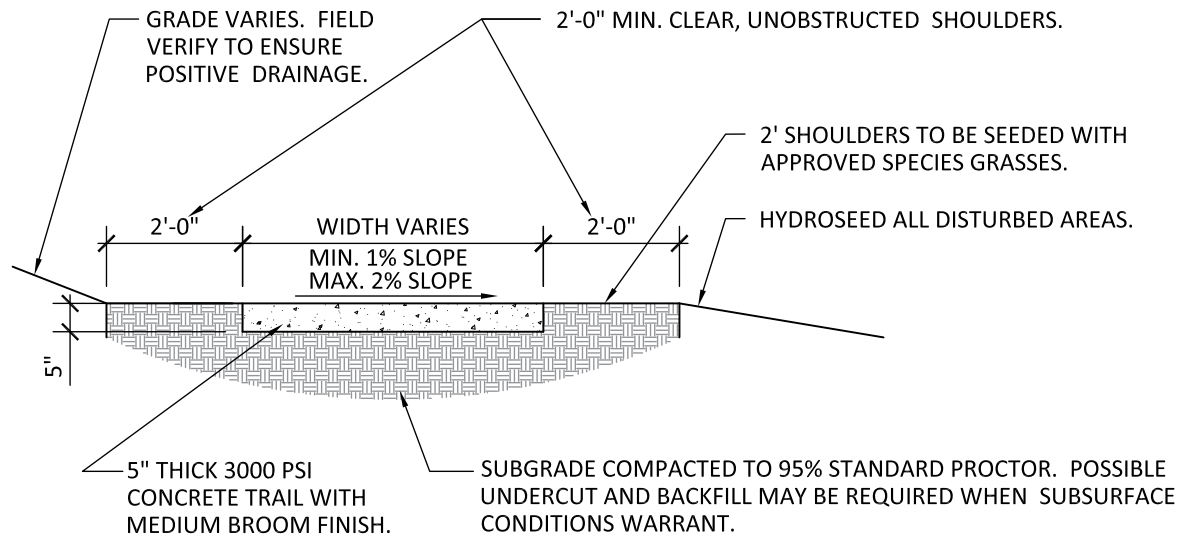
Multi-use greenway trails with a 12-foot wide concrete surface provide for low long-term maintenance. All trails to have 4" x 12' green centerline stripe and include stop-ahead markings when approaching an intersection.

#### NOTES:

1) 4" x (TRAIL WIDTH) ALTERNATING GREEN CENTERLINE STRIPING TO BE INSTALLED ALONG ENTIRE LENGTH OF TRAIL CENTERLINE.

2) CONTRACTOR TO SAW CUT CONTROL JOINT AT LEAST 1/4 DEPTH OF SLAB ACROSS ENTIRE WIDTH OF TRAIL. CONTROL JOINTS TO BE LOCATED THE SAME DISTANCE APART AS THE WIDTH OF TRAIL (I.E. 12' WIDE TRAIL TO HAVE CONTROL JOINTS EVERY 12' ALONG TRAIL). CONTRACTOR REQUIRED TO REMOVE SAW DUST AFTER CUTTING.

3) EXPANSION JOINTS TO BE LOCATED ALONG TRAIL MIN. EVERY 100' IN PLACE OF CONTROL JOINT.



## TRAIL CROSS SECTION

SCALE: 1/2" = 1'-0"

Greenway Trails (Continued)

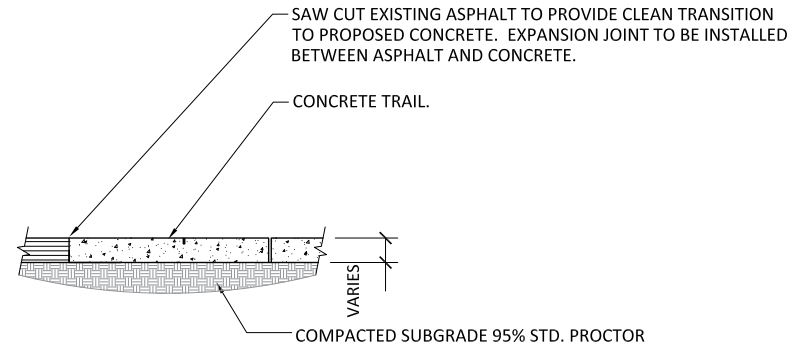
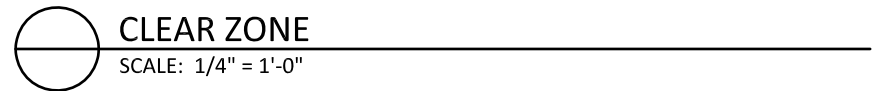
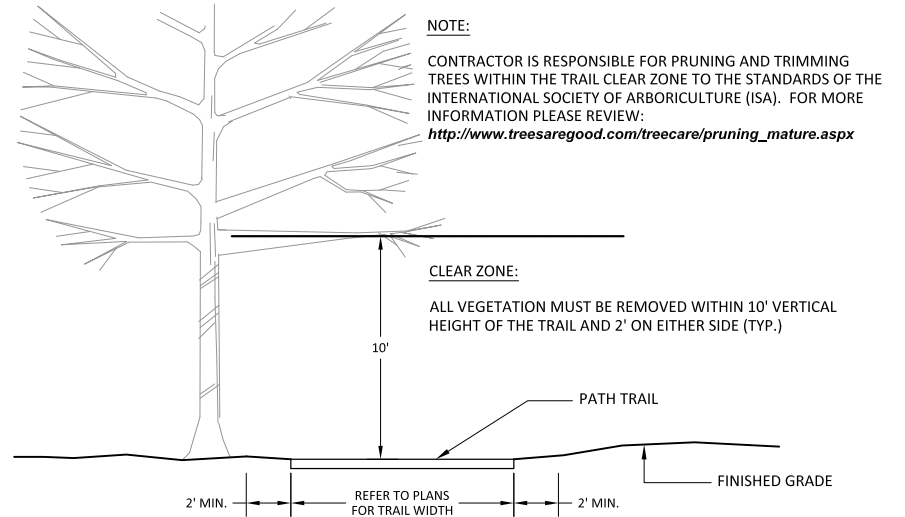
Standard greenway trail shall include a 2-foot min. clear zone on either side of the trail and a 10-foot min. vertical clearance from trail surface.



Example of a greenway trail in Carrollton, Georgia



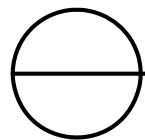
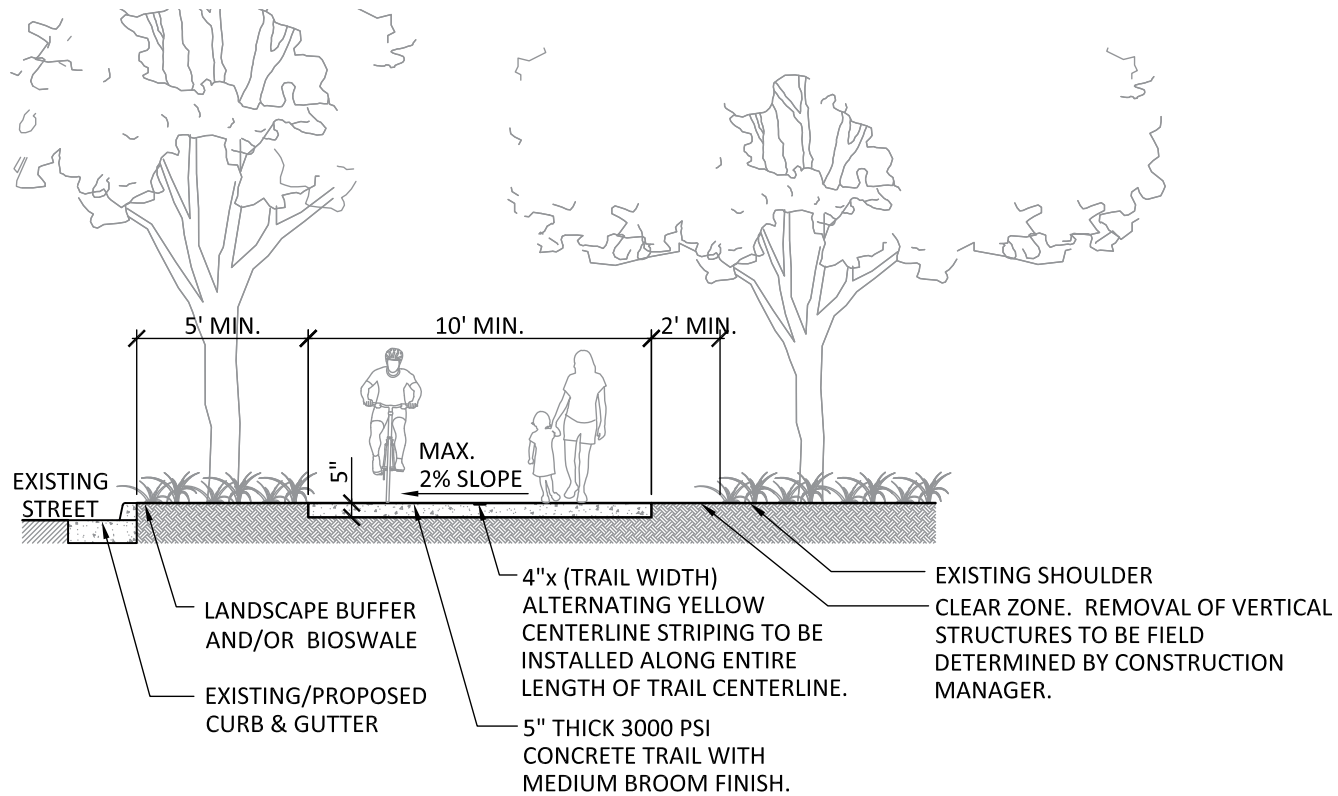
Example of a green centerline strip on a greenway trail





### Side Paths

The typical section of a side path recommends a 10-foot min. trail with a 5-foot min. landscape buffer with 2' wide curb and gutter or 6" header curb.

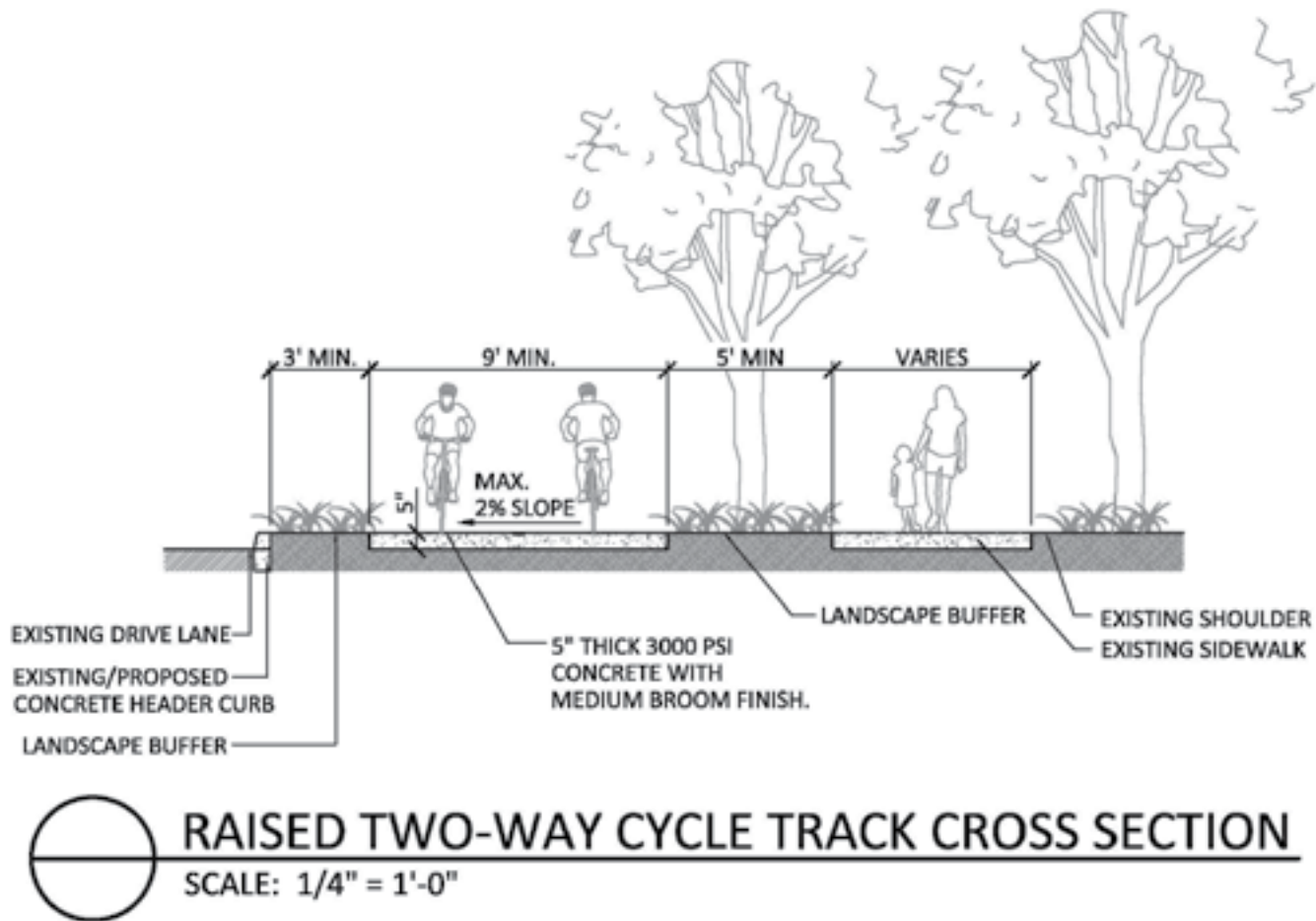


## SIDE PATH CROSS SECTION

SCALE: 1/4" = 1'-0"

### Raised Two-way Cycle Track

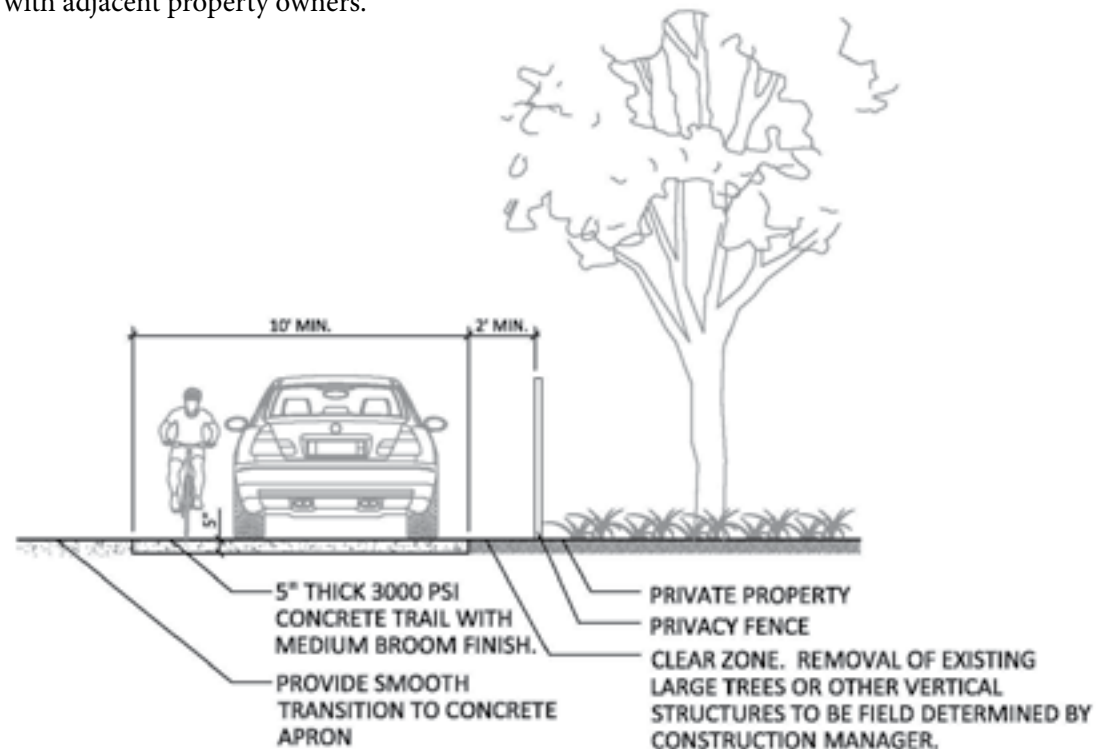
The typical section shows a 9-foot min. raised two-way cycle track with 3-foot min. landscape buffer on the street side and a 5-foot min. buffer on the pedestrian side. The buffer between sidewalks and cycle tracks could be designed as rest areas with street furnishings or as landscape areas with flush curbs.



### Green Alley

All green alleys should have MUTCD standard Shared Lane Markings to assist trail users as they share the alley with motorists, and to alert motorists of the presence of pedestrians and bicyclists within the traveled way.

The typical section drawing below illustrates the options for installing private fence and concrete apron for smooth transitions onto private parking. These additions will need to be worked through with adjacent property owners.



 **GREEN ALLEY CROSS SECTION**  
SCALE: 1/4" = 1'-0"

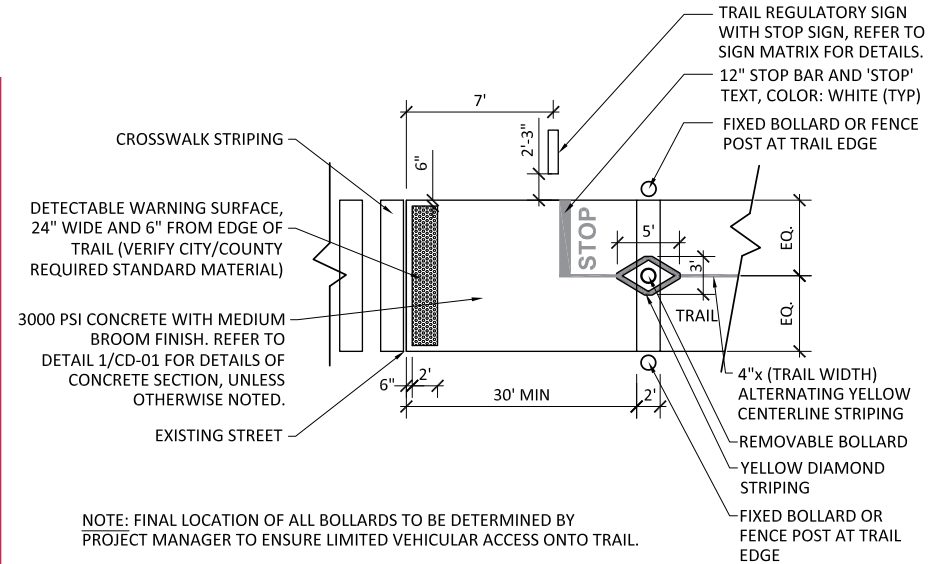


## 6.5 Intersection Details

Typical trail intersection includes signage, bollards, and pavement striping.



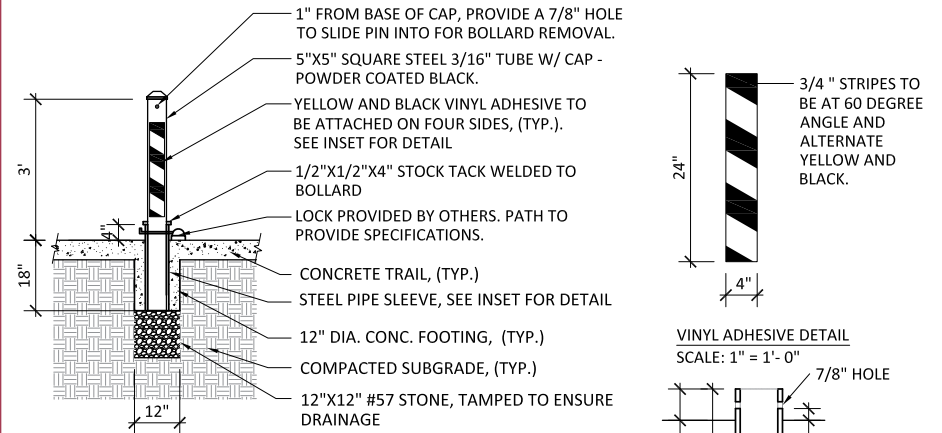
An intersection example at Spanish Moss Trail, Beaufort, South Carolina



NOTE: FINAL LOCATION OF ALL BOLLARDS TO BE DETERMINED BY PROJECT MANAGER TO ENSURE LIMITED VEHICULAR ACCESS ONTO TRAIL.

### STANDARD INTERSECTION: PLAN VIEW

SCALE: 1/8" = 1'-0"



NOTES:  
 1. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO PROJECT MANGER FOR APPROVAL PRIOR TO CONSTRUCTION.  
 2. ALL METAL TO BE POWDER COATED BLACK UNLESS OTHERWISE SPECIFIED.  
 3. VINYL ADHESIVE TO BE 3M 3930 HIGH INTENSITY REFLECTIVE VINYL WITH 3M 1160 OVER LAMINATE.

### REMOVABLE STEEL BOLLARD

SCALE: 1/2" = 1'-0"

## 6.6 At-grade Crossing Standards

U.S. Federal Highway Administration is promoting a series of pedestrian safety countermeasures through the Safe Transportation for Every Pedestrian (STEP) initiative. It outlines road diets, pedestrian hybrid beacons (PHBs), Pedestrian refuge islands, raised crosswalks, and crosswalk visibility enhancements as beneficial options for safe pedestrian crossing. It is critical for the *Emerald Trail* to adopt these standards to ensure safe trail crossing.



*A combination of a long crossing distance and multiple lanes of oncoming traffic warranted the installation of a pedestrian refuge island.*

Resource: FHWA

Jacksonville, Florida



*A pedestrian Hybrid Beacon should be considered at locations where the trail needs to cross high speed roads or multiple lanes of traffic.*



*Example of a HAWK signal at trail crossing*



## 6.7 Enhanced Crosswalks

A strong and vibrant crosswalk enhances pedestrian safety by heightening motorist awareness of the crosswalk. It is important for the COJ to consider incorporating crosswalk enhancements in car-centric areas. The enhanced crosswalks will be part of the trail branding as well.



Resource: FHWA



*Branded trail crosswalk along Cultural Corridor, City of Indianapolis, Indiana*

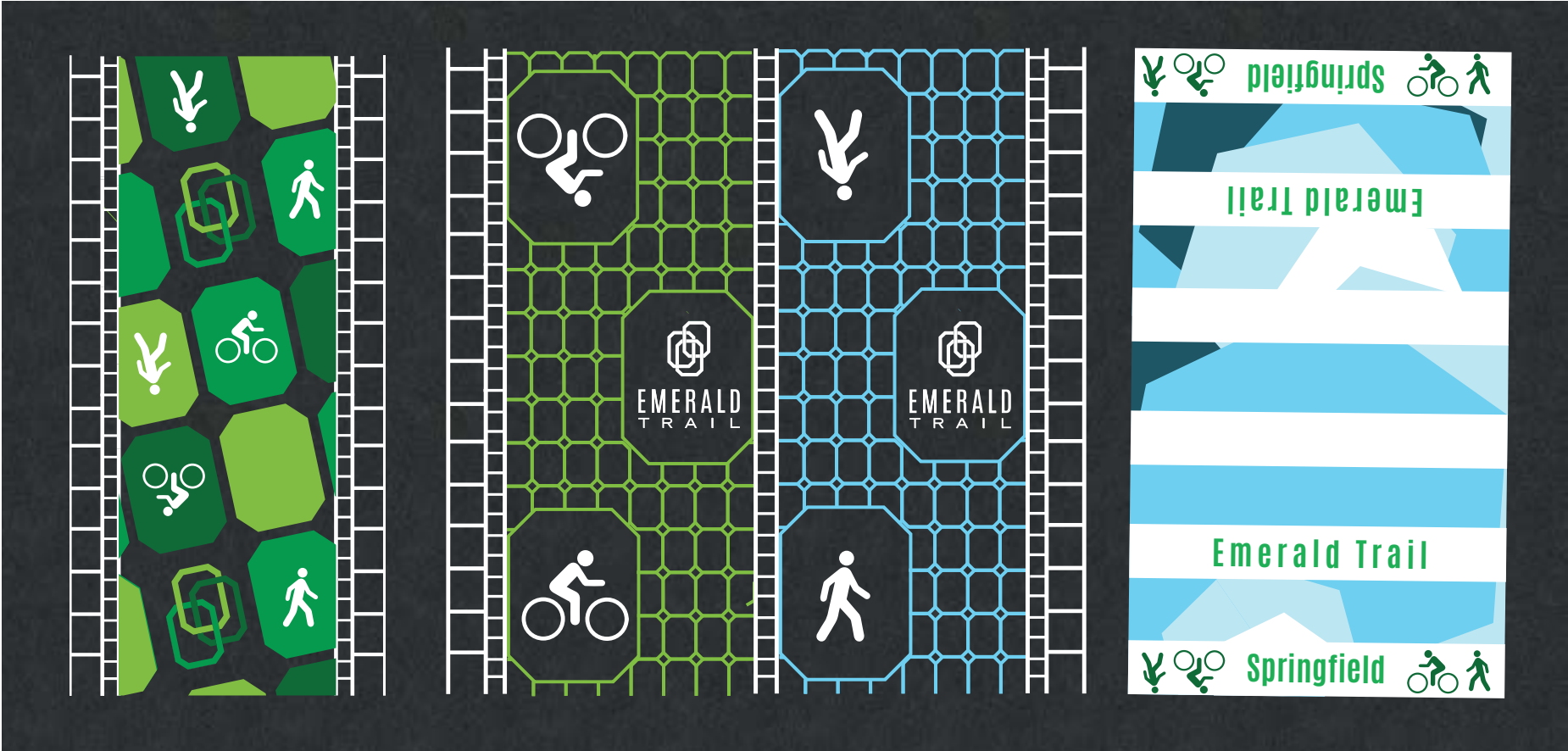


*Artistic crosswalk in downtown Decatur, Georgia*



### 6.7 Enhanced Crosswalks (Continued)

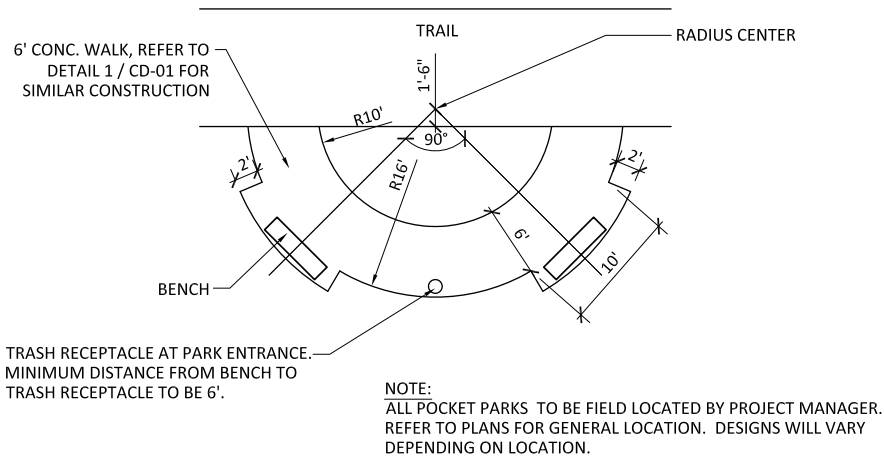
Proposed crosswalk ideas with various branding examples are illustrated below. Specific designs could be branded for different neighborhoods, nearby schools, or trail segments. Enhanced crosswalks would be used to designate trail crossings only. The width of the crosswalks would be equal to the width of the multi-use trail. Separated crosswalks for pedestrians and bicyclists would be used along cycle tracks. Crosswalks shall be applied with high skid/slip resistant thermoplastic material. Refer to DuraTherm™ for details.



Examples of potential ideas for the branded crosswalk

## 6.8 Pocket Park Standards

Pocket parks are important amenities for the *Emerald Trail* as they provide rest areas for trail users and a meet-up location with friends and neighbors. Standard furnishing and signage will be placed at pocket park locations to provide seating and information about the trail system. It is recommended to provide a pocket park every one-mile distance of a trail.



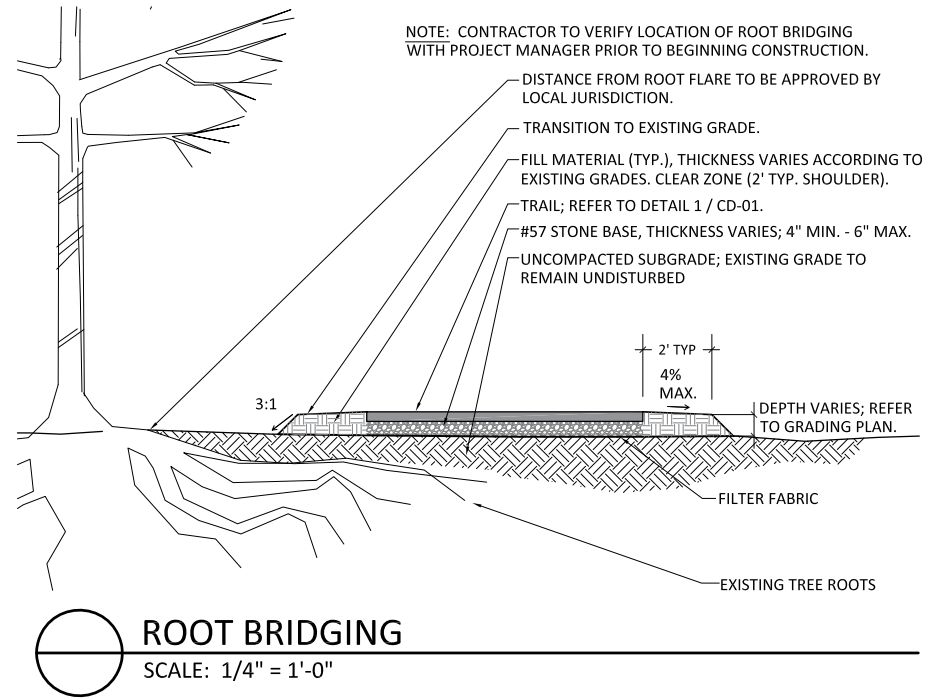
Example of a pocket park in a natural setting



Example of a pocket park in an urban environment

## 6.9 Tree Root Bridging and Tree Protection

Root bridging insures protection of trees and allows the trail to blend into a wooded setting. Tree protection fencing to be used as per COJ standards and requirements.





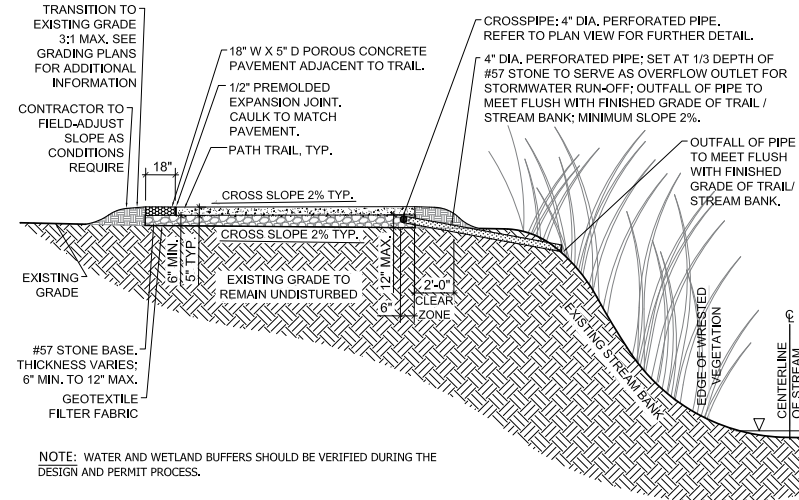
## 6.10 Trees and Infiltration Details

Every trail system needs shade to make it easy, comfortable, attractive to use the trail. The following is a list of preferred planting materials to be used along the Emerald Trail, which came directly from the COJ Tree Planting Initiative by Urban Forestry staff, COJ Landscape Architect and Arborist. The following is a list of preferred planting materials to be used along the *Emerald Trail*.

- Large Shade Trees  
Live Oak, Shumard Oak, Chinese Elm & Red Maple
- Evergreens  
Southern Magnolia & Eagleston Holly
- Smaller Trees  
Chinese Fringetree, Sweetbay Magnolia, Yaupon Holly, Crape Myrtle, American Hornbeam & River Birch
- Park & Street Median Trees  
Longleaf Pine, Sycamore & Tulip Poplar

### Infiltration Details

An infiltration system allows water to drain across the trail away from a nearby creek into a gravel drain, allowing runoff to infiltrate under the trail prior to entering the creek. This approach can be used where the trail is near the limits of a stream buffer.



**INFILTRATION DETAIL**  
SCALE: 1/4" = 1'-0"



An example of incorporating the pervious concrete strip along the trail edge

### 6.11 Bridges and Boardwalks

This page shows examples of a typical custom bridge, a prefabricated bridge, and a wooden boardwalk structure.



*Custom steel bridge allows the trail to naturally blend into wooded areas.*



*Bridges with painted finishes are timeless and suitable for urban environments*



*Prefabricated steel bridge allows the trail to cross above existing roads and waterways.*



*Wooden boardwalk structure for crossing lakes and wetlands.*

**Jacksonville, Florida**



## 6.12 Tunnels

This page shows examples of the multi-use trails going under roadway and railroad bridges



*A canopy protective structure over the trail is required when going beneath railroads*



*Multi-use trail going under a roadway*



*Box culvert structure allows the trail to pass under a roadway*



## 6.13 Wooden Fences and Handrails

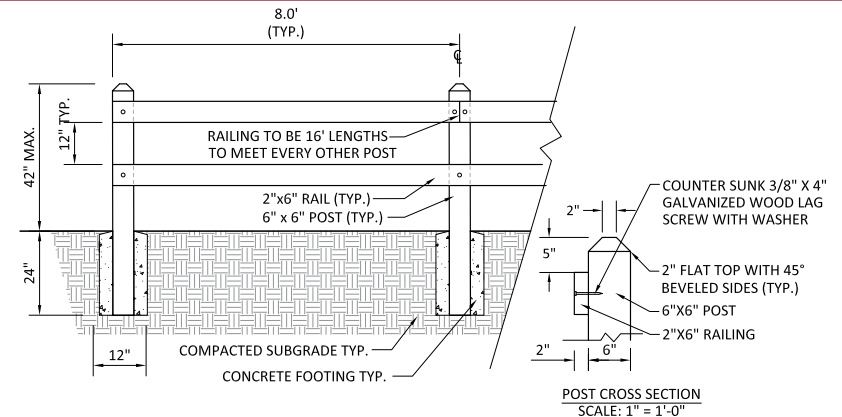
This page shows examples and details of a wooden fence and a cable handrail. Two-panel wooden fences are typically installed at trail access points to delineate space between the trail and the street. The steel handrail post with galvanized cable can establish a semi-transparent look along the edge of trail.



An example of the cable handrail with cor-ten steel posts and top rail.



Two-panel wooden fence provides separation between the trail and the parking lot driveway.



### NOTES:

1. FENCE TO BE CONSTRUCTED WITH PRESSURE TREATED WOOD.
2. RAILING TO MEET FLUSH WITH OUTSIDE EDGE OF LAST POST.
3. REFER TO CONSTRUCTION PLANS FOR FENCE LOCATIONS.

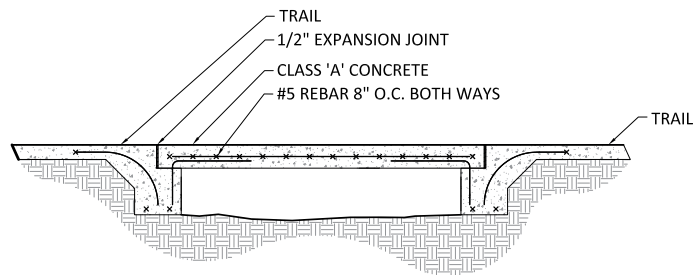


### 2 PANEL WOOD FENCE

SCALE: 1/2" = 1'-0"

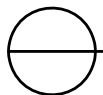
## 6.14 Structural Slab Crossings

Structural slab is an environmental friendly solution for creating a drainage swale under the trail. This page shows the construction detail and examples of the structural slab crossing.



### NOTES:

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS COMPLETED BY A LICENSED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION, FOR APPROVAL BY OWNER AND LANDSCAPE ARCHITECT.
2. TOTAL HEIGHT FROM TOP OF TRAIL SURFACE TO LOW POINT OF SWALE IS NOT TO EXCEED 30".



### STRUCTURAL SLAB CROSSING

SCALE: 3/8" = 1'-0"



# AP

## Appendix: Steering Committee Members

Kay Ehas

Groundwork Jacksonville, CEO

### City of Jacksonville

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Amy Ingles

Chris Ledew

Colin Moore

Dawn Lockhart

Elizabeth Kenny

Jeremy Norsworthy

Lori Boyer

Nancy Kilgo

City's Bike/Ped Coordinator

City's Traffic Engineer T

City's Parks Trail Planner

Mayor's Director of Strategic Partnerships

Jacksonville Sheriff's Office

Jacksonville Transportation Authority (JTA)

City Council Member

Jacksonville Electric Authority (JEA)

### Steering Committee Members

---

Amy Crane

Annie Murphy

Bill Hoff

Brenda Ford

Brenna Durden

Catherine Adkins

Cipeo Walker

Ennis Davis

James Coggin

Kellie Howard

Larry Roberts

Leon Haley

Padrica Mendez

Pamela Singleton

Rick Pariani

Suzanne Pickett

Community Foundation - donor

V.P. of Rail Yard District and owner of Eco Relics

Springfield Resident Representative

Newtown Success Zone

Environmental Attorney - DIA Board Member

CSX - real estate

Brooklyn Resident Representative

Urban Planner

Local Initiative Support Corporation (LISC) - donor

UF Health

JTC Running - donor

CEO of UF Health

N. Riverside Resident Representative

Durkeeville Historical Society

Landscape Architect

President of Eastside Community Coalition