CITY OF
FORT LAUDERDALE

All-America City

Memorandum

Memorandum No: 21-108

Date: November 12, 2021

To: Honorable Mayor and Commissioners

From: Chris Lagerbloom, ICMA-CM, City Manager

Re: Laudertrail Master Plan Update

The PATH Foundation provided an overview of the Laudertrail Master Plan at the October 5, 2021 Conference meeting. During the presentation, the PATH Foundation identified the proposed trail route, cost estimates for each segment of the proposed trail, implementation timeline, and recommended next steps.

An electronic draft Master Plan is attached, and a hardcopy will be routed to your office. Staff would like to receive any feedback associated with the proposed Master Plan on or before December 3, 2021.City staff is tentatively scheduled to bring forth a Resolution of Acceptance for City Commission consideration on December 21, 2021. Once the Master Plan is accepted, City staff's next steps include identifying additional funding, collaborating with key stakeholders and proceeding with the implementation of the model project.

Please contact Ben Rogers, Director of Transportation and Mobility, at brogers@fortlauderdale.gov with any feedback or trail recommendations.

Attachment: Laudertrail Draft Master Plan

c: Tarlesha W. Smith, Esq., Assistant City Manager
Greg Chavarria, Assistant City Manager
Alain E. Boileau, City Attorney
Jeffrey A. Modarelli, City Clerk
John C. Herbst, City Auditor
Department Directors
CMO Managers

FORT LAUDERDALE TRAIL MASTER PLAN

Draft date:
September 28, 2021

Prepared by: PATH

Prepared for: CITY OF FORT LAUDERDALE

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Fort Lauderdale Trail Master Plan

Draft date:
September 28, 2021

Prepared for:

CITY OF FORT LAUDERDALE

Prepared by:

PATH
FOUNDATION.org

Executive Summary

Most urban areas find themselves trying to retrofit bicycle and pedestrian infrastructure into their built environment to satisfy the need for its citizens to access parks, employment, and commercial centers without relying on motorized vehicles. Fort Lauderdale is no exception to this trend.

The PATH Foundation team has developed master plans for more than forty jurisdictions with similar needs. This trail master plan represents the best effort of the Path team and the local Advisory Panel to retrofit Fort Lauderdale with a safe, convenient, feasible plan for getting about the city as pedestrians and cyclists.

The plan relies on the city and Florida East Coast Railroad (FEC) negotiating alterations to their agreement that has produced existing segments of this plan. The extensions presented in this document reflect parameters utilized during the development of existing FEC segments of the trail system.

The name Laudertrail was selected by the Advisory Panel as the name of the overall network with segments recognizing previous efforts to create a trail system such as the Mockingbird Trail and the Old Dillard trail. The name Laudertrail was subsequently used by the Path team to develop logo options for the Advisory Panel to consider.

This plan is presented as five segments, radiating from the city center to key destinations and places where there were opportunities to suggest linear parks rather than road centric facilities. The plan utilizes eight miles of existing trails and acknowledges three miles of trail previously programed by the city, and proposes thirty-one miles of new trail at a cost of $90 million dollars.

This document outlines a proven procedure for implementing development of the Laudertrail. Chapter four is devoted to the implementation plan that begins with the formation of an implementation committee that will encourage timely implementation of the Laudertrail. The PATH team has helped the Advisory Panel select a model project to kick-start trail construction.

The city leaders, staff, and interested citizens will ultimately determine how fast the Laudertrail plan is developed. This document gives them the tools needed to create an amenity that will be cherished for generations to come.

The Fort Lauderdale Trail Master Plan's goal is to provide an inclusive, implementable, inspiring, interconnected, and engaging trail system safely connecting everyone in the City of Fort Lauderdale to parks, transit, local businesses, attractions, and their neighbors.

42.0 Miles

Greenway Trails, Side Paths, Green Alleys,
Neighborhood Greenways, Cycle Tracks, & Woonerf

1.2 Miles to be implemented by 2023 with an estimated cost of **$5.7M**

the complete trail system will connect **35** neighborhoods to

Holiday Park
Fort Lauderdale Beach
Mills Pond Park
Riverwalk
New River Greenway
Cypress Creek Greenway

45 Parks & Greenspaces
12 Schools
270 Businesses
2 Railroad Stations
17 Bus Routes
12 Water Taxi Stops

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1 INTRODUCTION

1 Introduction

Many cities across America are retrofitting trails into their developed areas in an effort to retain young professionals and attract businesses who want to employ them. In the City of Fort Lauderdale, employers are plentiful and the younger generation is here to stay.

The leadership in Fort Lauderdale has *chosen* to build a high quality trail system to serve as an alternate transportation system and a recreational amenity for residents and visitors to the city. They seek to enhance the quality of life for citizens by creating infrastructure that favors humans rather than cars.

A labyrinth of trails criss-crossing the city will encourage people to walk and bike rather than 'motoring' to their destination. The trail system will promote happier communities that will choose restaurants and shops based on their proximity to the trail. Businesses and restaurants will likewise locate near trails and orient to the trails rather than the streets. The trail system will become the preferred location for socializing, exercising, and getting about the city.

The trails proposed and the implementation plan presented on the following pages is the product of the PATH team, with thirty years of experience retrofitting cities with trails, working with city leaders, neighborhood advocates, and governmental agencies to provide a comprehensive plan for retrofitting Fort Lauderdale with a connected system of trails. This document should serve as a guide for trail development in the city. How fast and how well it is implemented is in the hands of the city leaders and the citizens of Fort Lauderdale.

This plan is presented as five segments emanating from the mobility hub and spoking to all sectors of the city. The segments have been divided into logical phases for implementation. A matrix detailing the length and cost of each phase is presented in the implementation chapter of the document.

The PATH team enjoyed working with the citizens of Fort Lauderdale to produce this guide for trail development. We are confident the Fort Lauderdale trail will be a success.

PATH representatives participated in a city tour led by the city's Transportation and Mobility Department to gain knowledge of the desired destinations and potential opportunities for trails


UPTOWN

2 MASTER PLANNING PROCESS

2 Master Planning Process

2.1 Overview of the Trail Planning Process

The trail planning process begins with data collection and the organization of a local Advisory Panel to guide the PATH planning team. This trail master plan will kick-start Fort Lauderdale's much needed urban trail development and help to finally realize the community's long-held vision of a network of connected parks and greenways.

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

The seven-month planning process incorporated feedback from these groups at each stage of development. Additionally, the PATH team led the City and the Advisory Panel in brainstorming sessions for trail logo and branding development. The PATH team then presented the collaborative findings to a public forum that attracted more than 120 attendees.

The ***Fort Lauderdale Trail Master Plan*** will serve as the blueprint for the City of Fort Lauderdale's multi-use trail development with an implementation goal to build approximately 31 miles of new trails in the next 10 years that will connect to existing and already planned segments including the Flagler Greenway, North Fork New River Bridge, NW 15th Avenue Complete Streets, Cypress Creek Greenway, the Riverwalk, and the Beachfront Promenade.

2.2 Advisory Panel

The Advisory Panel was created with the PATH Foundation's guidance to include representatives from city departments, major stakeholders, advocates for cyclists & pedestrians, and neighborhood representatives.

The Advisory Panel collaborated with the PATH team to establish the overall goals for the trail system, recommend trail branding and design standards, and provide local input into trail destinations, connections and routes.

Online surveys presented to the Advisory Panel resulted in ***LauderTrail*** to be the recommended trail system name.

The PATH team answers questions during the public meeting with over 120 virtual and in-person attendees held in the City Hall Commission Chambers.

The Advisory Panel met over seven months and included representatives from the following:

- FTL Transportation and Mobility (TAM)
- FTL Sustainable Development (DSD)
- FTL Downtown Development Authority (DDA)
- FTL Strategic Communications
- FTL Parks and Recreation
- Florida East Coast Railway (FEC)
- Broward County Mobility Advancement Program (MAP)
- Broward Metropolitan Planning Organization (MPO)
- Broward Workshop
- Broward BCycle
- Friends of Mockingbird Trail
- Old Dillard Foundation
- ***LauderTrail*** Working Group

(A list of individual Advisory Panel members is included in Appendix 1.0)

2.3 Data Collection and Field Work

Using the City of Fort Lauderdale's GIS data, assessment of current and future planning and development efforts, as well as feedback from the Advisory Panel, PATH's analysis of existing and proposed trail connections within the City of Fort Lauderdale focused on the following criteria:

- Feasible for construction
- Appeal to all users
- Safety of cyclists and pedestrians
- Connection to desirable destinations
- Connections to existing trails

Over a seven-month period, the PATH team met the criteria above after conducting field work and analyzing data to determine if the proposed trail routes were feasible, appealing, safe, and served the desired destinations. The planning team's findings were put onto field maps and into ArcGIS once validated by the Advisory Panel.

2.4 Establishing Planning Goals

The Advisory Panel shared the results of previous initiatives to create a system of trails in the city. 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.

Pedestrians, whether they be joggers, walkers, or simply families enjoying the outdoors, want to feel safe and enjoy their social experience. Cyclists on the other hand, can be divided into distinct groups to better understand their potential use of the trail system A Portland, Oregon study[1] outlined a city's population into four categories as listed below.

Four Types of Cyclist

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

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

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

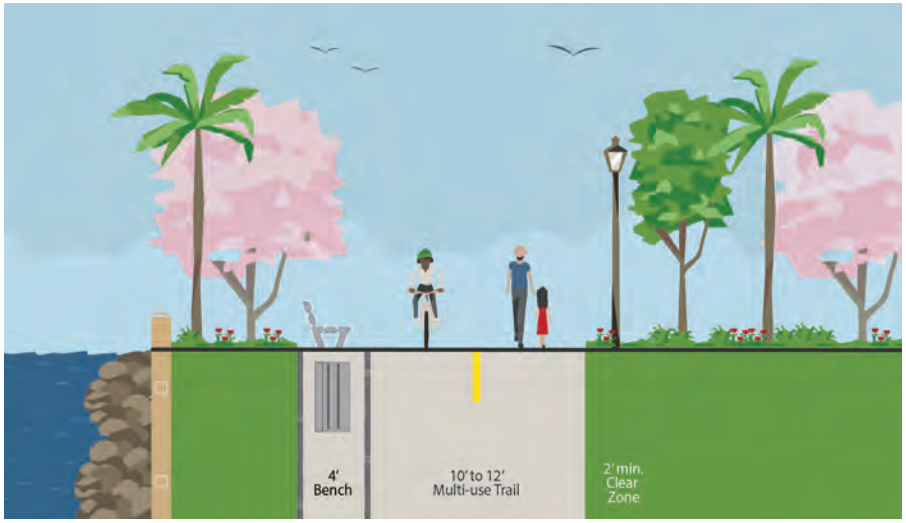
1 Dill, Jenifer, and Nathan McNeil. "Four Types of Cyclists." Transportation Research Record: Journal of the Transportation Research Board 2387.1 (2013): 129-138

2.5 Proposed Trail Types

Six types of trail facilities were identified from a multi-use trail perspective during the planning process to ensure the ***LauderTrail*** met the goals of being an inclusive, implementable, inspiring, interconnected, and engaging trail system. Multi-use greenway trails are the most desired trail type as they offer the highest quality connections for trail users. Where greenway trails are not feasible, this plan suggests buffered side paths, green alleys, buffered cycle tracks, woonerfs, and neighborhood greenways.

Greenway Trail:

Greenway trails are trails used by all non-motorized travelers and are constructed in green areas such as parks, stream corridors, undeveloped land, etc. Greenway trails should be a minimum of 10 feet wide, hard surfaced, with design and construction specifications following the American Association of State Highway Transportation Officials (AASHTO) regulations. The Advisory Panel for the ***LauderTrail*** has agreed upon a set of standards for building greenway trails, consistent with AASHTO guidelines, that are identified in Chapter 5.



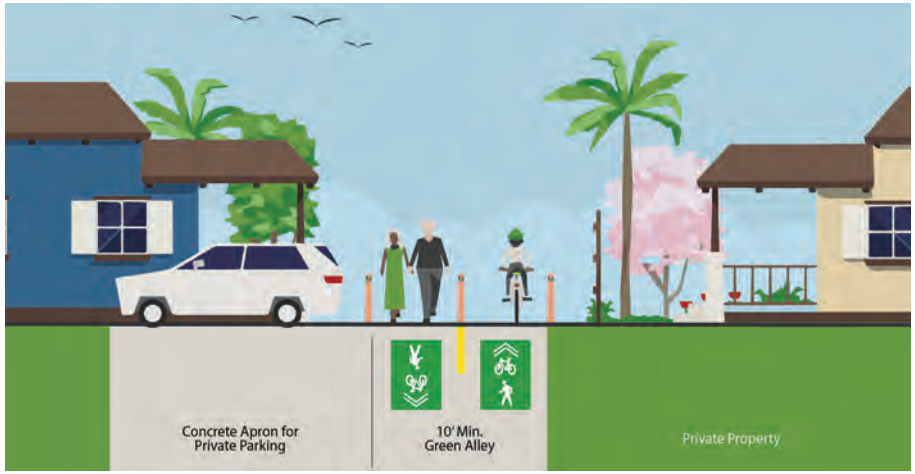
Greenway Trail Typical Section

Greenway Trail Example: Peachtree Creek Greenway , Brookhaven, GA

Greenway Trail Example: Northwest Flagler Ave, Fort Lauderdale, FL

Green Alley:

Fort Lauderdale has an abundance of underutilized alleys that could be repurposed to accommodate cyclists and pedestrians. Transforming underutilized alleyways into a safe, green, community shared-use space will provide safe, desirable connections for the proposed trail system.

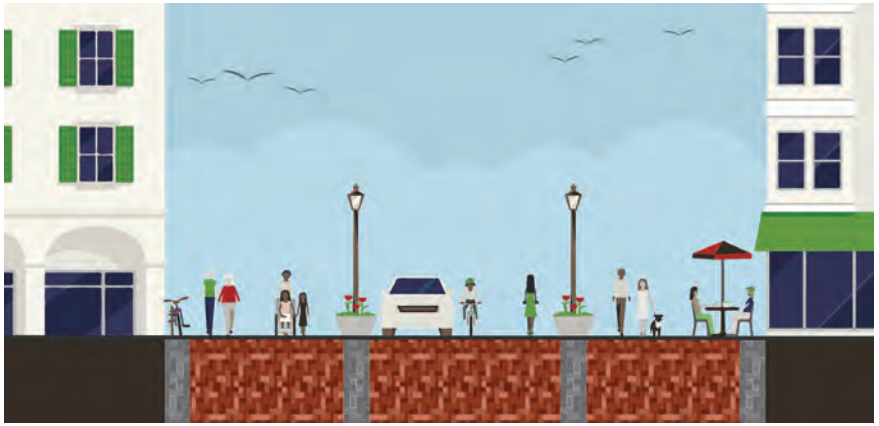


Green Alley Typical Section

Green Alley Example: Avalon Neighborhood, Los Angeles, CA

Shared-use Street (Woonerf):

Shared-use streets allow cars, pedestrians, and cyclists to travel together. They prioritize pedestrians and slow vehicular speeds by creating an environment where motor vehicle drivers can sense they are in a special place that favors pedestrians and other non-motorized vehicles. The design typically includes minimal traffic control signals or markings. These curbless streets use site furniture, landscape medians/bulb-outs, planters, and bollards to impede car travel at customary speeds.

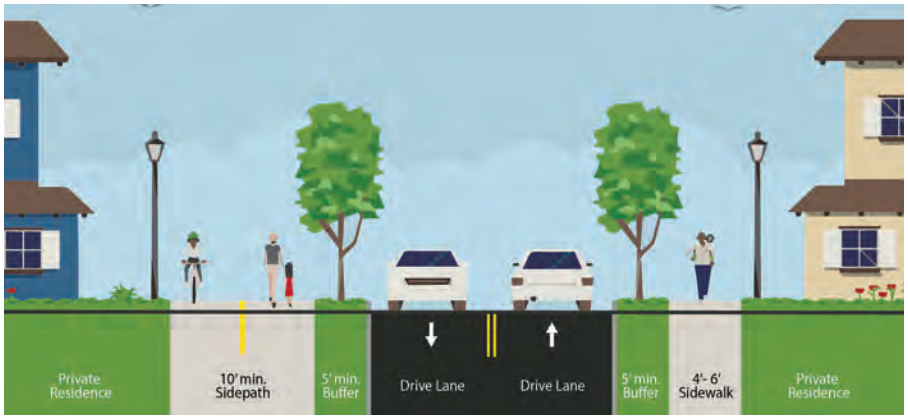


Woonerf Typical Section

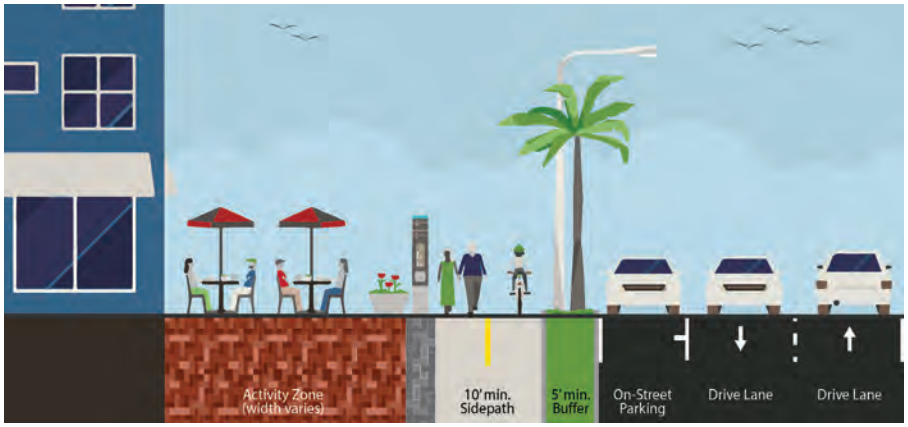
Woonerf, 1st Avenue from SW 2nd Street to the New River, Fort Lauderdale, FL

Buffered Side Path:

Shared-use trails alongside roads in public right-of-way, or buffered side paths, offer an additional opportunity for making connections. Buffered side paths should be a minimum of 10 feet wide where a 12 foot wide trail cannot be achieved. A successful buffered side path should be clear of all vertical elements such as signs, fire hydrants, and water valves. Side paths should have a 5-foot minimum landscaped buffer from the roadway and on-street markings to alert drivers of the presence of bicycles and pedestrians.

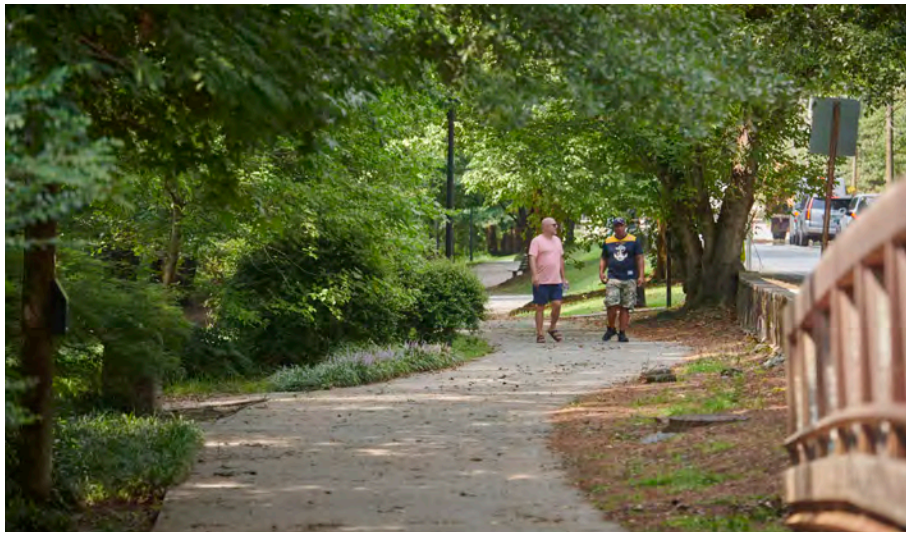


Side Path Typical Section: Residential Street



Side Path Typical Section: Urban Core

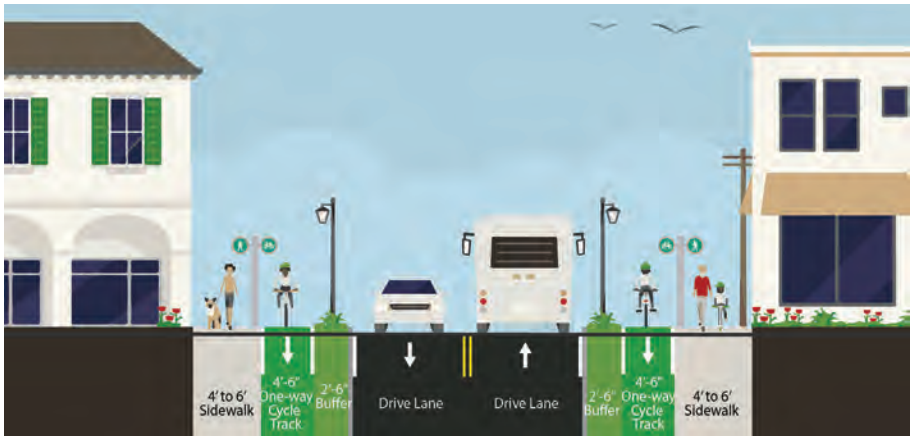
Buffered Side Path Example: Columbus , GA



Buffered Side Path Example: PATH Chastain, Atlanta, GA

Buffered Cycle Track:

Buffered cycle tracks are bicycle facilities that are vertically and horizontally separated from motor vehicle traffic and are at the level of the adjacent sidewalk. They are typically 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 buffered cycle track that crosses a signalized intersection.



Buffered Cycle Track Typical Section

Buffered Cycle Track Example: Decatur PATH, Decatur, GA

Buffered Cycle Track Example: Decatur PATH, Decatur, GA

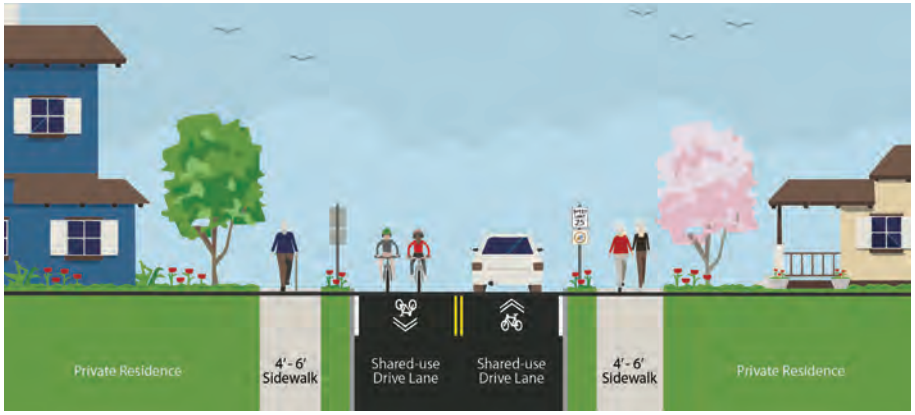
Buffered Cycle Track Example: Decatur PATH, Decatur, GA

Neighborhood Greenway:

Neighborhood greenways are streets with low motorized traffic volume and speeds that are designed and designated to give bicyclists and pedestrians travel priority. Neighborhood greenways use signs, pavement markings, and speed/volume management measures to discourage through traffic of motor vehicles, thereby creating safe and convenient bicycle crossings on busy arterial streets.

Neighborhood greenways are only proposed when other more defined facilities are not feasible to make critical connections on the trail system. It is preferred that the street selected to become a neighborhood greenway has existing sidewalks or reason for a new sidewalk. Design treatments are grouped into measures that provide the following benefits:

- **Route Planning:** Strategic street closures for direct access to destinations
- **Signs and Pavement Markings:** Easy to find and to follow
- **Speed Management:** Curb extensions create a chicane for traffic calming
- **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 Coordination with Key Stakeholders

This plan was developed in close coordination with a myriad of stakeholders and governmental agencies that include:

City of Fort Lauderdale

Department of Transportation and Mobility (TAM)

City staff from TAM was the core city management team acting as point of contact for coordination with the PATH team and other stakeholders. TAM provided the PATH team documentation of planned/funded trail segments as well as any existing/funded complete street projects which have been included in this document as supplementary connections to the ***LauderTrail***. **These projects are shown as programmed trails and programmed bike/ped improvements on the overall trail map.**

Citywide transit planning and review by the traffic engineer on proposed crossings and signals were also part of the coordination to ensure integrated planning efforts are made. See appendix 2.2, 2.3 & 2.5 for map exhibits showing this overlaid information.

City Board of Education

Meetings were Chief Education Officer Zoie Saunders to discuss the proposed trail routes with interaction of school properties.

Strategic Communications Department

City staff from the Strategic Communications Department helped guide the development of the trail branding and facilitated the public engagement process.

City Leadership

City leadership including Vice Mayor Moraitis and Commissioner Sorensen have led public engagement meetings prior to and during this planning process. Several briefing sessions were held to provide updates and gain feedback from city leadership..

Department of Parks and Recreation

Meetings with city staff have been held to review proposed trails within city parks and the recommended implementation tiers to discuss available Parks Bond funding for the trail system. Separate meetings have been coordinated with AECOM, the on-call engineering firm working alongside Parks and Recreation, to review and discuss the design standards for the model project.

Department of Public Works - Urban Forestry Program

Meetings and review coordination have been held with City Urban Forester Mark Williams to discuss regulations for protecting mangroves and rain trees as well as special permit requirements from Broward County for construction near existing mangrove areas.

Department of Public Works - Stormwater Management

City staff has reviewed and provided initial feedback on the proposed trail where it interacts with stormwater detention/retention areas. Further coordination has been scheduled to potentially combine efforts in city stormwater projects

Department of Sustainable Development

Meetings with city staff have been held to discuss the critical steps after the adoption of the final trail master plan document
Once adopted, the development review process for new developments throughout the city has potential to incorporate implement segments of the proposed trail will be required to review the master plan.

City Police Department

Meetings have been held with the Det. Jody Weymouth to discuss specific design standards pertaining to crime prevention considerations and the intent to incorporate security cameras and lighting along the trail.

Broward County

Broward Mobility Advanced Program (MAP)

A meeting has been held with county staff to discuss proposed trail types, road jurisdiction overlay, and potential trail segments that are eligible for surtax funding. (See Appendix 2.2 for map exhibit)

Broward County Transit (BCT)

Meetings have been held with county staff to exchange data and create map with planned transit route/bus stops. Design standard included bus shelter where trail interacts with a bus stop. (See Appendix 2.4 for map exhibit)

Others

Brightline

Coordination with Brightline has been done to review proposed trail and traffic modification at Brightline station on Broward Blvd. (See segment #2 Mobility Hub - Brightline Connector for details)

Florida East Coast Railway (FEC)

A site meeting has been held, followed by email coordination with the point of contact Bob Ledoux and lease administrator Nicole Radford to review the proposed trail along the FEC corridor. With the city in the process of finalizing the leasing agreement with FEC, the recommendation is to acquire the necessary easement within the railroad right-of-way that has been identified by this master plan. FEC requires 25-foot minimum buffer between the trail corridor and the centerline of track to ensure safe coexistence in the railroad right of-way. The avoidance of relocating FEC structures has been successfully incorporated into the design standards. A combination of security fencing and vegetation is proposed to deter pedestrians from crossing tracks in non-designated areas.

Florida Department of Transportation (FDOT)

Meeting has been held with FDOT Bike/Ped. Safety Traffic Specialist followed by second meeting with the design and engineering group to vet the feasibility of the proposed trail concepts within FDOT right-of-way. (See Appendix 2.2 for map exhibit)

*The PATH team and representatives of Florida East Coast Railway meet to discuss the **LauderTrail's** coexistence with FEC's corridor.*

The PATH team meets with city traffic engineer during visit to Fort Lauderdale.

2.7 Summary of Master Plan Development

The first Advisory Panel was structured as an introductory kick-off to present the objectives of the master plan and proposed trail types; as well as discuss the initial fieldwork and preliminary planning for the proposed trail connections.

Through seven months of additional fieldwork and collection of feedback from the Advisory Panel, City leadership, and key constituents, PATH refined the proposed trail alignments within the master plan and created the trail design standards along with the trail signage and amenities. The Advisory Panel provided valuable input and suggestions that were incorporated into the trail design standards in order to mold the branding of the ***LauderTrail***.

After four meetings with the Advisory Panel and one public meeting, PATH presented the Advisory Panel 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 ***Fort Lauderdale Trail Master Plan.***

The ***LauderTrail*** Advisory Panel presented the document to the Mayor and City Commission on October 5th, 2021, followed by the adoption on November 2nd, 2021.

2.8 Public Outreach

The City of Fort Lauderdale and the PATH team presented the draft ***Fort Lauderdale Trail Master Plan*** during a public meeting on August 23rd at the Fort Lauderdale City Hall Commission Chambers. During the meeting, the planning team outlined the master planning process, the proposed types of trails, and the proposed ***Fort Lauderdale Trail Master Plan*** and shared trail branding developments.

The second half of the meeting focused on gathering feedback from the community and discussing the details of the plan. Comment cards distributed to the attendees before the meeting were collected, compiled into a summary, and presented to the Advisory Panel. The vast majority of the attendees were supportive of the master plan.

The meeting was live-streamed and posted online to gain additional feedback and to allow a chance for those that could not attend in person to provide their input.

*Members of the PATH team presented the **LauderTrail** master plan within the City Commission Chambers and educated attendees on PATH's planning process.*

*The **LauderTrail's** suggested logo was on full display at the entrance to the public meeting.*

3 TRAIL MASTER PLAN

3 LauderTrail Master Plan

Overview

Based on the considerations from Chapter 2 and extensive field research, the planning team has identified 31 miles of multi-use trail and neighborhood connectivity opportunities that will help the City of Fort Lauderdale remain competitive in the region and will help develop a trail system that will provide an inclusive, implementable, inspiring, interconnected, and engaging trail system safely connecting everyone in the City of Fort Lauderdale to parks, transit, local businesses, attractions, and their neighbors.

Programmed trail segments are the proposed trail projects that have been moved forward with implementation with allocated funding. The NW 15th Avenue side path project has funding allocated for hardscape, lighting, and security cameras, with the need for identifing future funding for its landscaping and branding component.

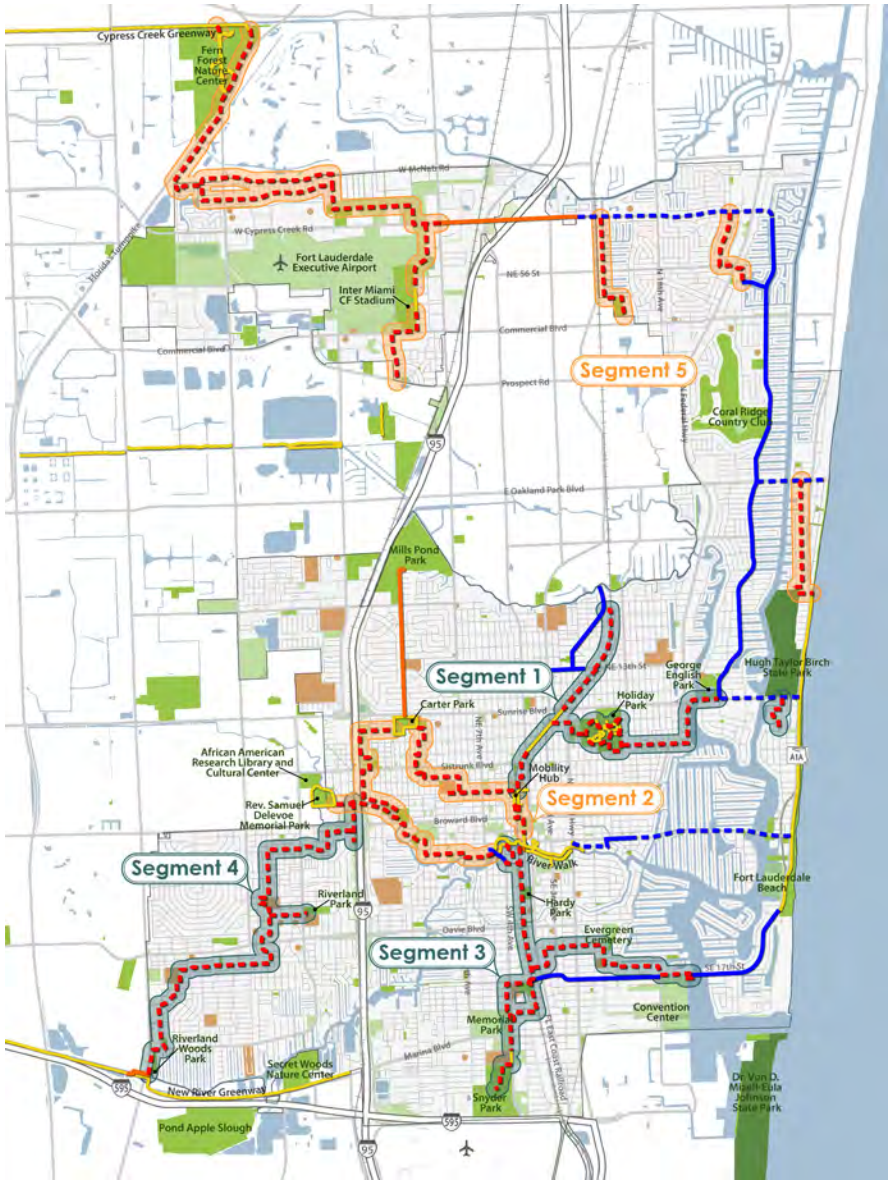
Within the overall master plan, the proposed trail system is divided into five (5) segments as listed below. The adjacent map shows how each segment interacts with the different parts of the city.

The development of the ***LauderTrail*** has taken into consideration of regional connections to the existing/planned trails within neighboring jurisdictions.

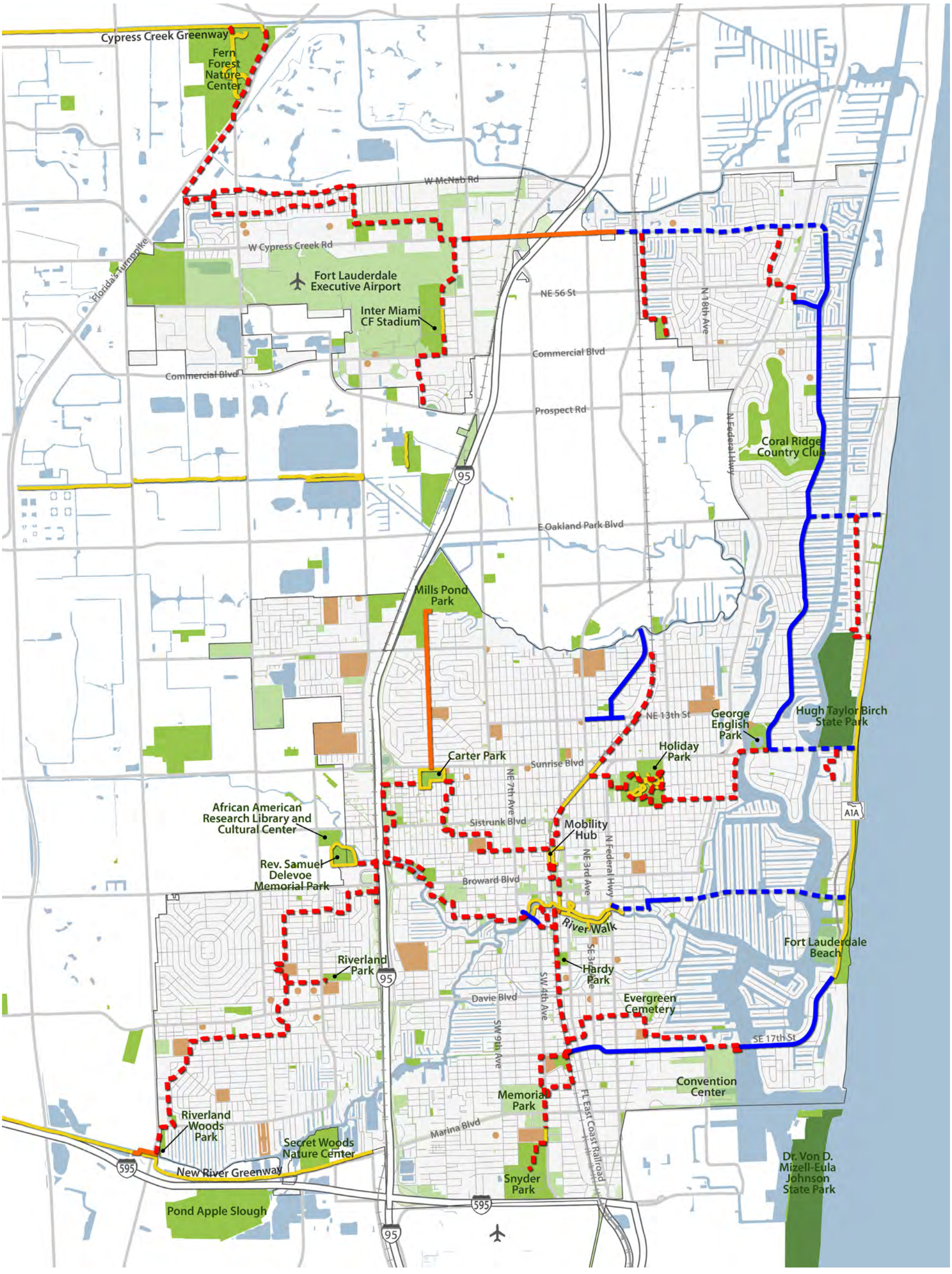
The following pages will present each trail segment in more detail, including opportunities as well as potential obstacles that will likely affect decisions regarding the order of implementation. A detailed map for each segment is included to show implementation phases as well as before and after graphics of selected locations along each proposed trail segment.

Trail Segments

Proposed Trail Segment Map



Overall Trail Master Plan



City of Fort Lauderdale Limit

Suggested Bike/Ped Improvements

Programmed Bike/Ped Improvements

Existing Trails

Programmed Trails

Proposed Trails

Parks & Open Spaces

Colleges & Schools

Public Owned Land

Segment #1 | Eastside Trail

Description:

Segment 1 completes the northern spine trail along the Florida East Coast Railway (FEC) and proposes a connection from the FEC corridor to Holiday Park and the southern end of Bayview Drive.

Phase 1a – Provides a connection between two existing trails along the FEC right-of-way. This phase interacts with the proposed FAT Village development which can be an incredible destination for trail users. It is essential that the FAT Village development will provide a seamless, separated trail through the proposed development.

Phase 1b – This phase is dependent on the redevelopment of the Searstown facility along NE 9th Street. It will provide a Buffered Side Path from the spine trail along FEC to Holiday Park. A scramble intersection is proposed with Phase 1b to get trail users safely across US 1/Federal Highway.

Phase 1c – One of the many trails traversing Holiday Park from west to east needs to be upgraded to the specifications suggested in this document to become Phase 1c. This plan proposes a corridor of trail improvements from Federal Highway NE 7th Street through Holiday Park.

Phase 1d – This phase transforms NE 7th Street into a neighborhood greenway with a sidewalk on one side for pedestrians and pavement marking improvements for cyclists. NE 20th Avenue would also be upgraded as a neighborhood greenway. The signalized intersection at NE 20th Avenue and East Sunrise Boulevard would be upgraded to provide safe crossings for trail users. Phase 1d would utilize the existing sidewalk to west of Bayview Drive on Sunrise Boulevard where it is proposed to enter the George English Park south of Bayview Elementary School. The trail would be built to the signalized intersection of Bayview Drive.

Phase 1e – Phase 1e is a continuation of the greenway trail along the edge of the FEC right-of-way with a jog at NE 17th Court to intersect Dixie Highway. It has the potential to connect to Wilton Manors and Oakland Park.

Phase 1f – The final phase of Segment 1 connects Sunrise Boulevard to Vistamar Street through the Bonnet House Museum & Gardens. The suggested bike/ped improvements along Sunrise Boulevard in this plan will offer connections to Hugh Taylor Birch State Park and the beachfront community.

Segment #1 Overview:

Connecting Destinations: Mobility Hub, Joint Government Center, FAT Village, Searstown Development, Holiday Park, Victoria Park Neighborhood, George English Park, North Dixie Highway

Begins: NW Flagler Ave at NW 4th Street

Ends: N Dixie Highway at NE 17th Court

Distance: 25,661 Linear Feet (4.86 miles)

Opportunities and Benefits:

- Completes missing links between existing trail segments
- Catalyst for future economic development along the corridor
- Partnership with FDOT for intersection bike/ped enhancement to US1/Federal Highway
- New additions and improvements to existing park infrastructure

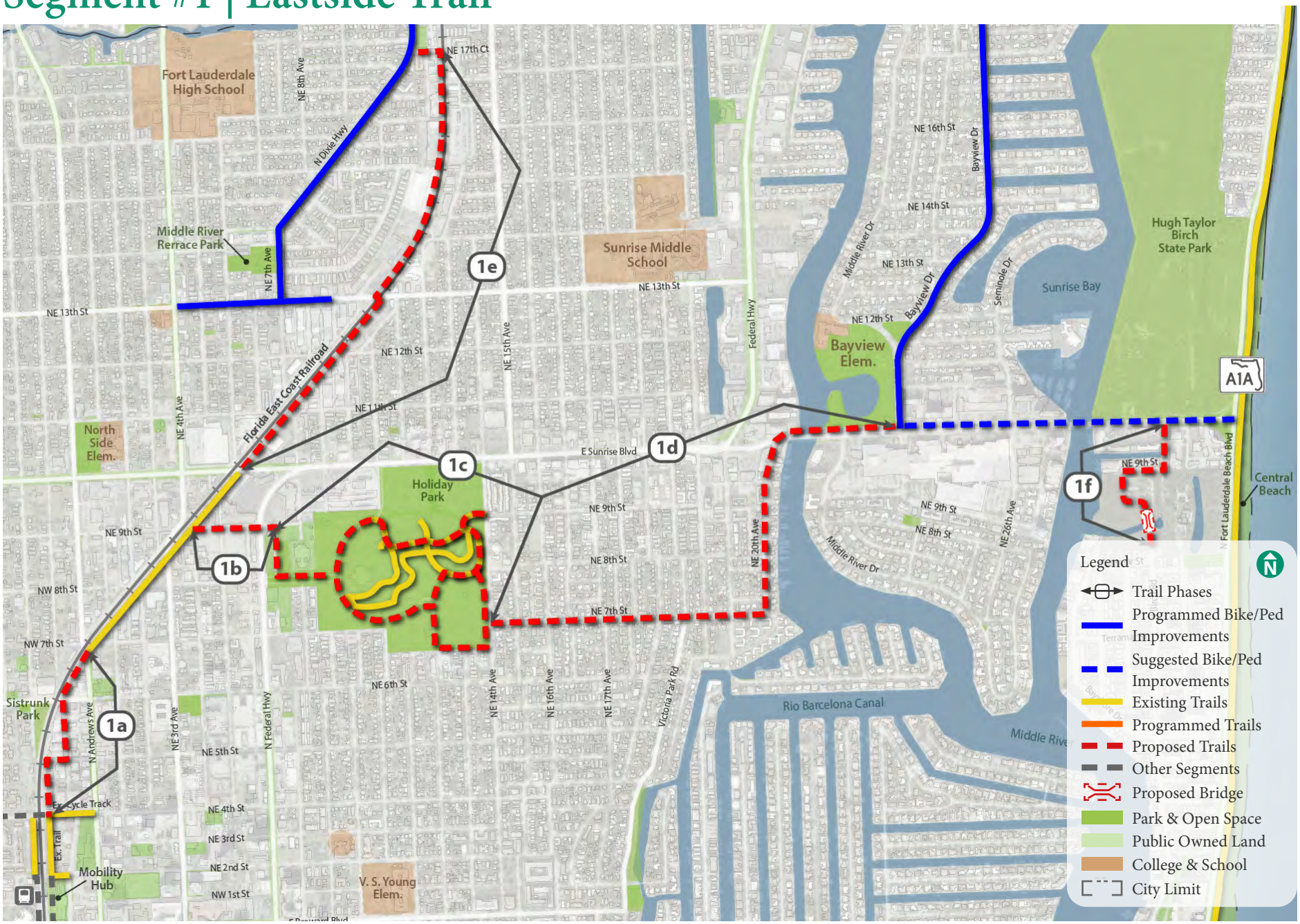
Potential Obstacles:

- Requires long-term coordination and easement acquisition with FEC
- Rapid redevelopment along the trail corridor
- Requires neighborhood buy-in for the neighborhood greenways in Victoria Park
- Requires coordination with FDOT for signalization at US 1 / N Federal Highway

Trail User Scenarios:

- Cyclists use the greenway along the FEC corridor to go to The Parker to see a musical
- A jogger uses the loop in Holiday Park for their morning exercise.
- A young boy tries to race parallel to a Brightline train on his tricycle to see if he can keep up with it
- A mom and her daughter go from their house on Bayview Drive to Holiday Park for softball practice using the new trail instead of their car
- Shoppers complete their holiday shopping with ease along the woonerf.

Segment #1 | Eastside Trail



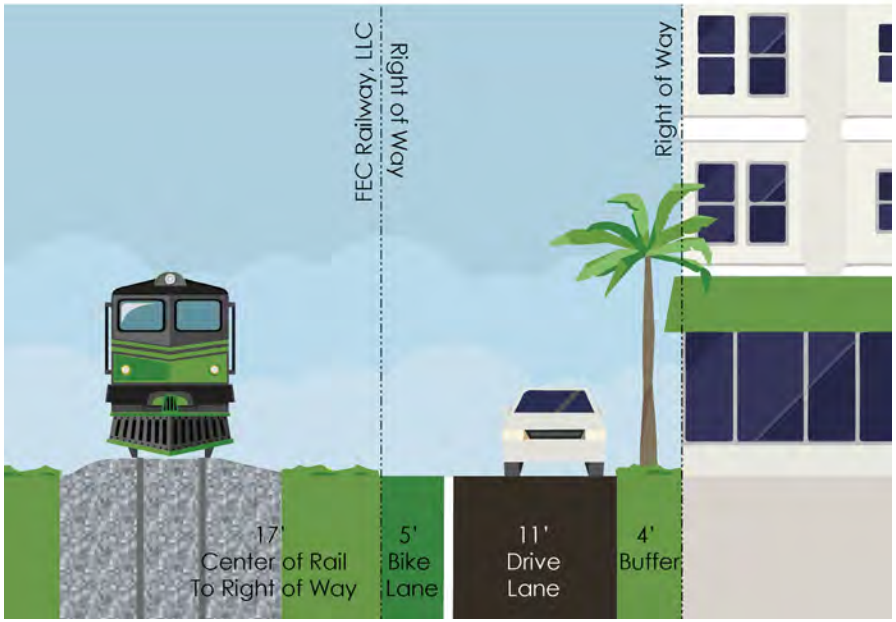
Segment #1 | NE 4th Street to NE 5th Street

Overview

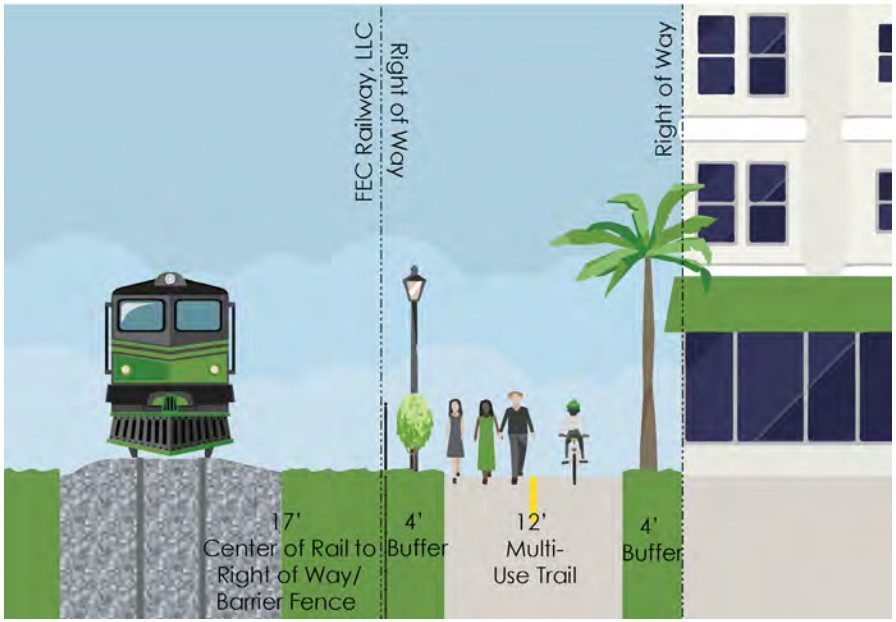
The images below highlight existing conditions along the FEC corridor. The continuation of the Flagler Greenway, a proposed greenway trail, is to be set along the eastern side of the FEC right-of-way.

Proposed Trail Type

Greenway



Existing: The above cross section illustrates a one-way, 11' wide drive lane with a 5' wide bike lane adjacent to the FEC corridor.



Proposed: The one-way drive lane is to be replaced with a 12' wide multi-use trail outside the FEC right-of-way.

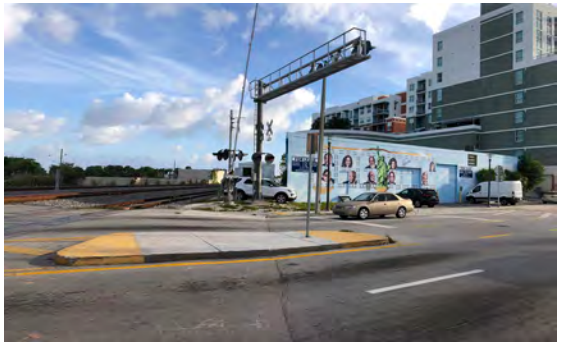
Segment #1 | North Flagler Greenway at NE 6th Street

Overview

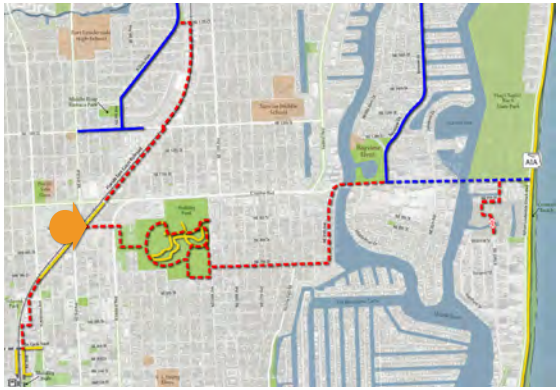
The image below illustrates a greenway trail along the eastern side of the FEC corridor with an at-grade crossing at NE 6th Street. There is an opportunity to create a street pocket park space as shown in the conceptual rendering.

Proposed Trail Type

Greenway



Existing conditions of Florida East Coast Railway corridor at NE 6th Street, looking north.



Segment #1 | Flagler Greenway to NE 9th Street

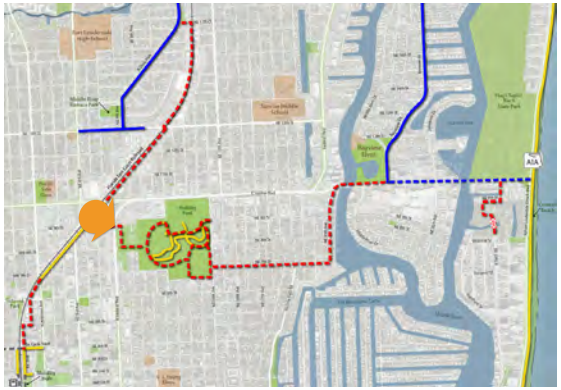
Overview

The image below illustrates a development scenario with a proposed bufferd side path along NE 9th street to connect the Flagler Greenway to Holiday Park.

Proposed Trail Type

Greenway, Buffered Side Path

Existing conditions looking east towards NE 9th Avenue and Holiday Park.



Segment #1 | NE 9th Street to Holiday Park

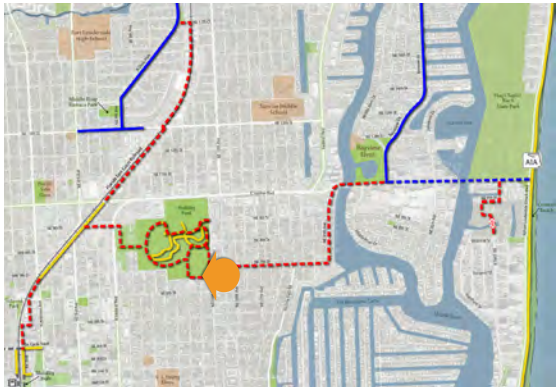
Overview

The image below illustrates the same development scenario at US 1 / Federal Highway with a proposed scramble crosswalk to get trail users safely into Holiday Park.

Proposed Trail Type

Buffered Side Path

Existing conditions of intersection of NE 9th Avenue and US 1 looking east towards Holiday Park.



Segment #1 | Holiday Park Improvements

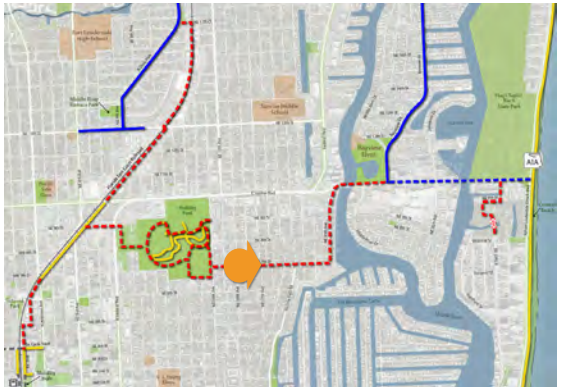
Overview

The image below illustrates a greenway trail through Holiday Park. Proposed trail design standards are to influence future park improvement plans.

Proposed Trail Type

Greenway

Existing conditions of Holiday Park looking south along NE 14th Street.



Segment #1 | NE 7th Street Neighborhood Greenway

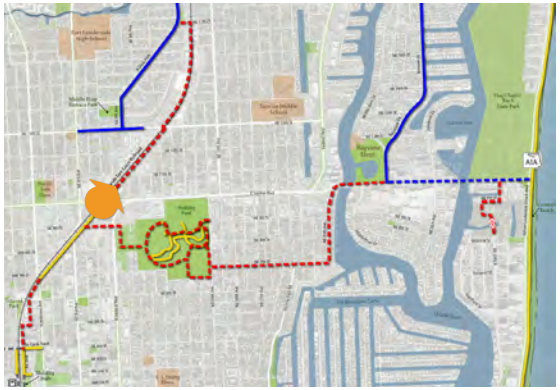
Overview

The image below illustrates a neighborhood greenway with newly constructed sidewalks and shared-use bike lane road markings. A sidewalk on either side of the street would suffice.

Proposed Trail Type

Neighborhood Greenway

Existing conditions at the intersection of NE 7th Street and NE 17th Avenue, looking east.



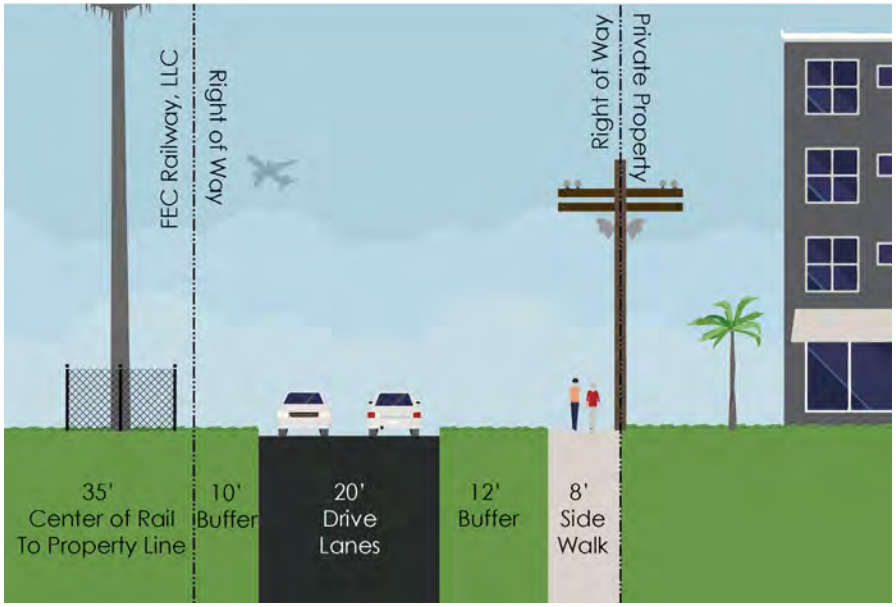
Segment #1 | Sunrise Boulevard to NE 11th Street

Overview

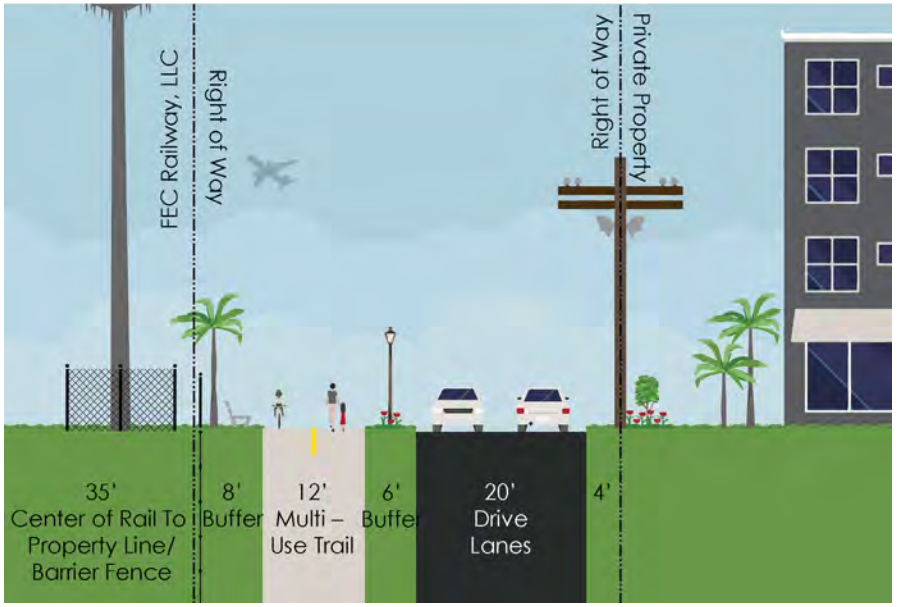
The images below illustrates typical cross sections of the FEC corridor. The conttinuation of the Flagler Greenway, a proposed greenway trail along the eastern side of the FEC right-of-way.

Proposed Trail Type

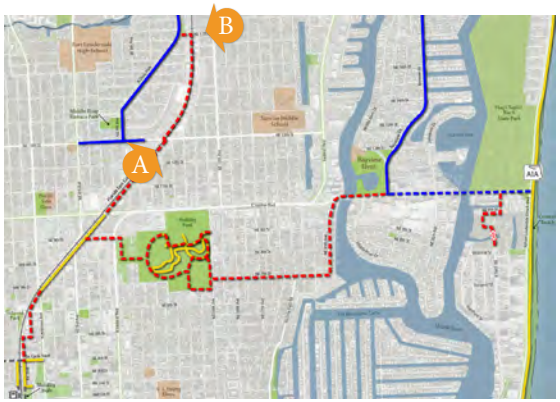
Buffered Side Path



Existing: The image above illustrates the existing conditions from Sunrise Boulevard to NE 11th Street.



Proposed: The proposed typical section above utilizes the public ROW for a 12' wide multi use trail with 10' wide drive lanes.



Segment #1 | Existing Conditions

Overview

The proposed trail will utilize the existing at-grade crossing to cross the tracks and then cross NE 13th Street on the west side of the trail to avoid any conflicts with the railroad signal structure and utility cabinet on the east side.

Proposed Trail Type

Greenway

A Existing conditions of Florida East Coast Railway crossing along NE 13th Street, looking north.

B Existing conditions of Florida East Coast Railway crossing at NE 17th Court looking south west.

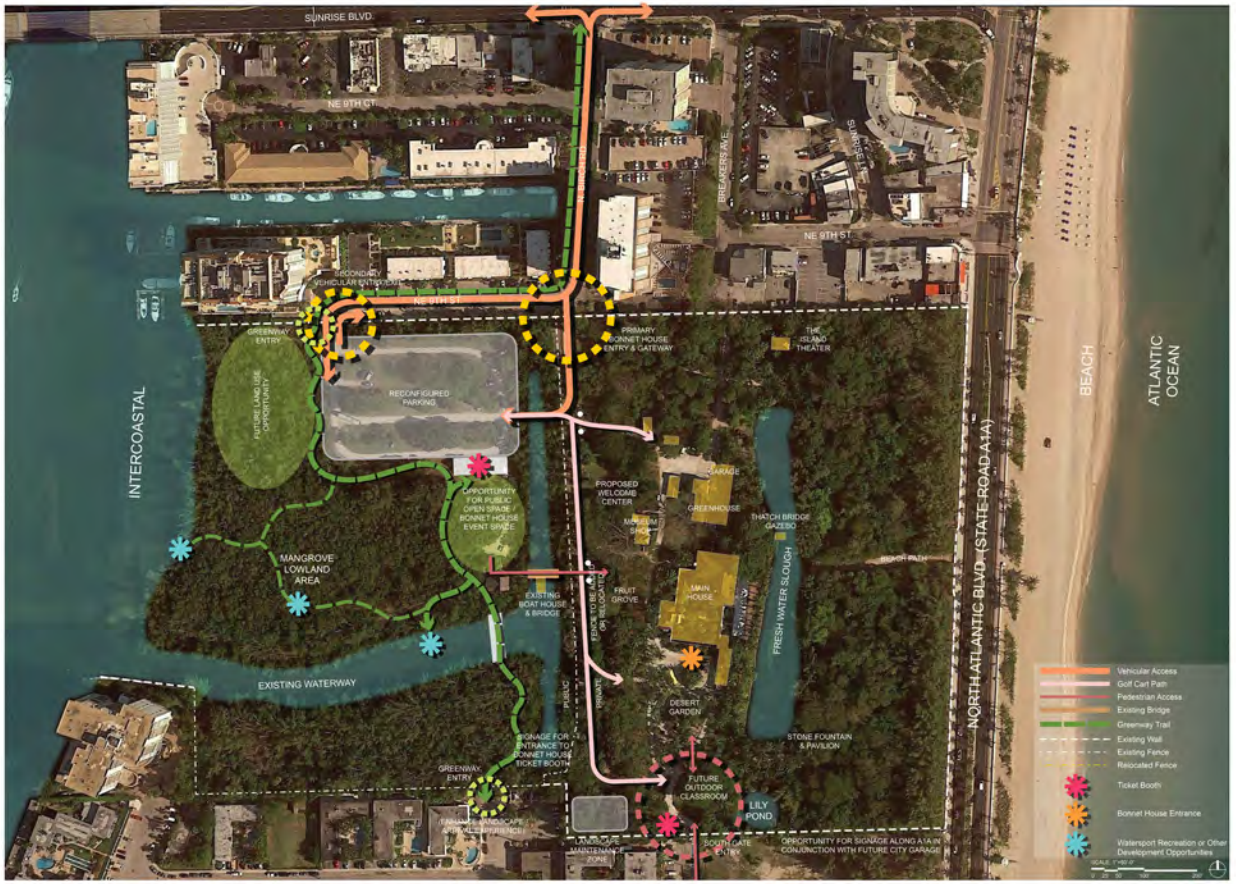
Segment #1 | Bonnet House Greenway

Overview

The plan below illustrates the Bonnet House Greenway, connecting Sunrise Boulevard to Vistamar Street. Linking this connection though the suggested bike/ped improvements along Sunrise Boulevard offers bike and pedestrian access to Hugh Taylor Birch State Park and the beachfront community.

Proposed Trail Type

Greenway



BONNET HOUSE GREENWAY STUDIES
Fort Lauderdale, Florida

OPTION 4
July 2017
EDSA

Segment #2 | Central Loop

Description:

The objective with segment 2 is to provide a family friendly connection from westside neighborhoods to the existing Riverwalk and the spine trail paralleling the FEC train tracks. Segment 2 is a combination of designated, quiet, low volume neighborhood streets north of the river and west of downtown, parks and greenspace along the river and I-95, and existing parkland and alleyways.

Phase 2a – A greenway trail along the banks of the North Fork New River from Delevoe Park to the active rail line and I-95. East of I-95, the trail will cross the river on a new trail bridge to the North Fork Elementary School grounds. The proposed bridge landing at North Fork Riverfront Park has an opportunity to become a section of boardwalk overlooking the North Fork New River along the park edge. The current park improvment project has presented opporutnity to incorporate the trail as part of the design. Phase 2a is proposed to go under Broward Boulevard with the river and emerge on neighborhood streets south of Broward. It will end at Sailboat Bend Preserve. Phase 2a is envisioned to travel through a new linear park from I-95 to the new bridge over the river.

Phase 2b – This phase takes advantage of quiet, low traffic streets from the Sailboat Bend Preserve to the existing Riverwalk at Cooley's Landing Park. (See page 38 with detailed map showing improvements to make the neighborhood streets a safe and designated connection for trail users.)

Phase 2c – This phase suggests extending the existing Woonerf north to East Broward Boulevard and building a greenway trail along the FEC right-of-way to the Mobility Hub within the future government complex development east of the railroad tracks.

Phase 2d – Phase 2d involves modification to the existing bike lanes on NW 4th Street to provide true separation from traffic. The resulting one-way cycle tracks on each side of 4th Street will entice casual cyclists and families to utilize the ***LauderTrail*** system to move about the city. Phase 2d is a necessary improvement to connect westside neighborhoods to the spine trail and mobility hub.

Phase 2e – This phase utilizes alleyways and side paths to provide a family-friendly connection between Carter Park and the proposed cycle tracks on 4th Street. Using the alleyways dramatically reduces the right-of-way acquisition while providing a safe, enjoyable venue separated from busy streets.

Phase 2f – Phase 2f is proposed as a side path as it leaves Provident Park and crosses Sistrunk Blvd at the new YMCA with a new traffic signal. Closing NW 14th Avenue from NW 7th Court to NW 7th Place will eliminate cut-through traffic and create a short linear park for the trail to traverse. Some street modifications of NW 8th Street and NW 13th Terrace will improve safety for trail users while retaining existing vehicular uses. (See page 44 for concept plan) This phase becomes a greenway trail when it enters the city-owned parcel paralleling NW 9th Street on its way to Carter Park. The ***LauderTrail*** will have to be constructed through the south half of Carter Park.

Phase 2g – This phase emerges from Carter Park as a neighborhood greenway on NW 9th Street until the street dead ends into I-95. The proposed trail turns south as a greenway trail on FDOT right-of-way. The proposed trail briefly transitions to a side path to NW 7th Street before interacting with the city-owned Technical Training Facility. This phase briefly follows Sistrunk Boulevard as a side path to NW 12th Avenue. The side path continues south to a proposed new bridge over the North Fork River. A neighborhood greenway connection along NW 3rd Court is also proposed to connect back to North Fork Elementary School.

Segment #2 Overview:

Connecting Destinations: Mills Pond Park, Delevoe Park, North Fork Elementary School, Sailboat Bend Neighborhood, Riverwalk, Brightline Station, Carter Park, Walker Elementary School

Distance: 30,530 Linear Feet (5.79 miles)

Opportunities and Benefits:

- Multiple access points from surrounding streets among the northwest neighborhoods
- Incorporating seawall and stormwater improvements through the greenspace developments along the North Fork of the New River
- Provides connectivity to schools and parks
- Additional public greenspace along the North Fork of the New River

Potential Obstacles:

- Requires multiple acquisition from properties to realize the proposed green alley phase between NW 4th St. to Provident Park
- Requires neighborhood buy-in to accept bicycles and pedestrians in the alley they utilize for backyard access
- Requires long-term coordination with FDOT to realize the trail along I-95 right-of-way from North Fork Elem. to NW 9th St.
- Requires maintenance coordination with external agencies

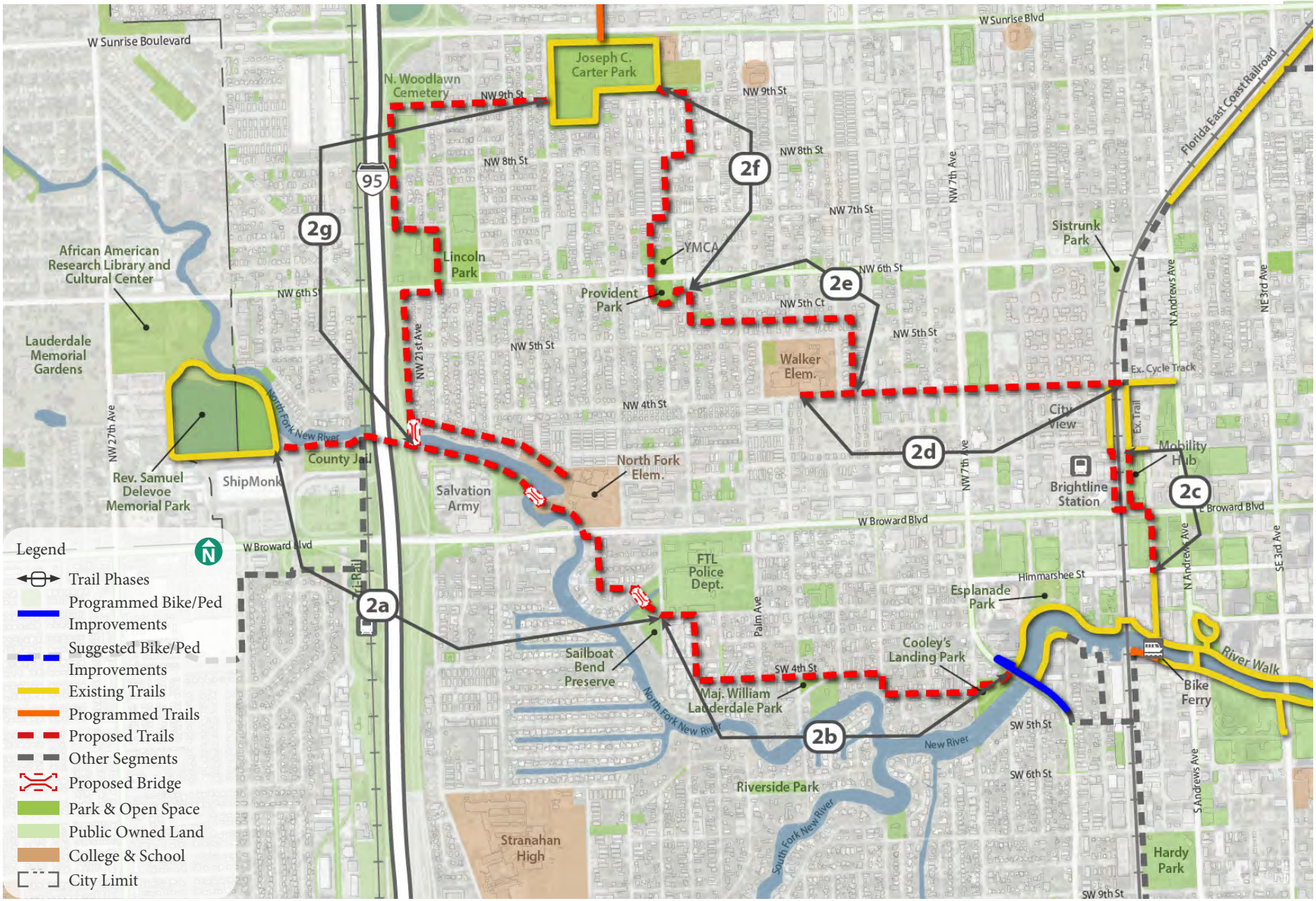
Trail User Scenarios:

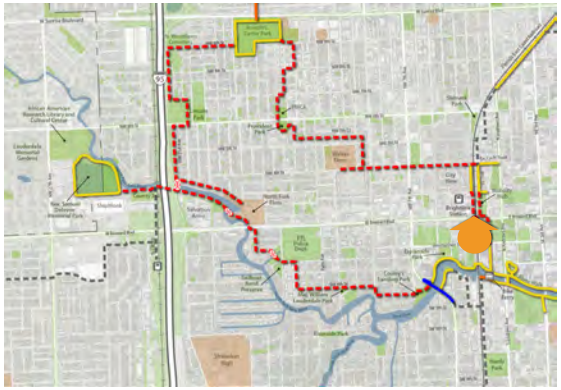
- Two parents use the greenway trail to take their child out in a stroller
- A family uses the green alley to go to a neighborhood backyard barbecue
- Teens take the greenway along the river to play a game of flag football in the park
- A woman bikes along the side path to go to her book club meeting
- A birdwatcher spots a rare water bird in the Sailboat Bend Preserve

Existing Greenway Trail connecting the Mobility Hub

Existing trail through Carter Park

Segment #2 | Central Loop





Segment #2 | Mobility Hub - Brightline Connector

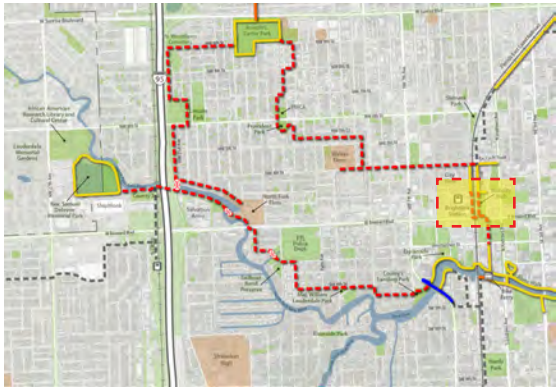
Overview

The image below illustrates a proposed bufferd side path along NW 2nd Ave connecting through Brightline Station and the future Mobility Hub on the north side of W Broward Blvd. Lane reduction and removing on-street parking will allow for the proposed trail.

Proposed Trail Type

Buffered Side Path

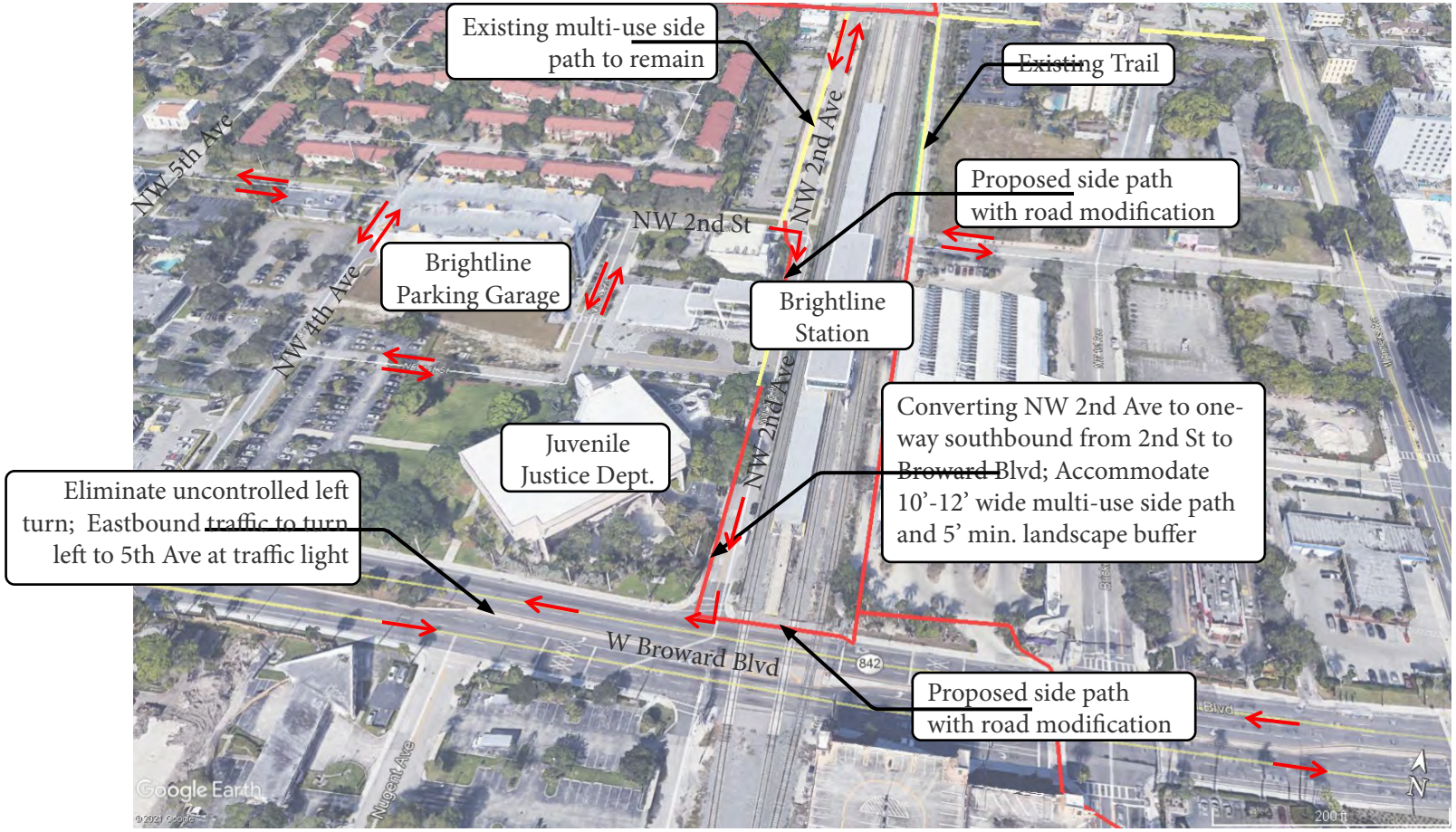
Existing condition of NW 2nd Ave looking north towards Brightline Station.

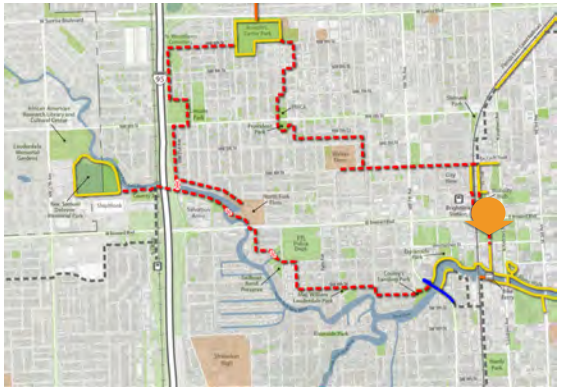


Segment #2 | Brightline Traffic Analysis

Overview

The graphic below illustrates road modifications surrounding Brightline Station and the future Mobility Hub. Traffic studies and coordiantion with both FDOT and property owners need to take place for approval of the proposed modification.





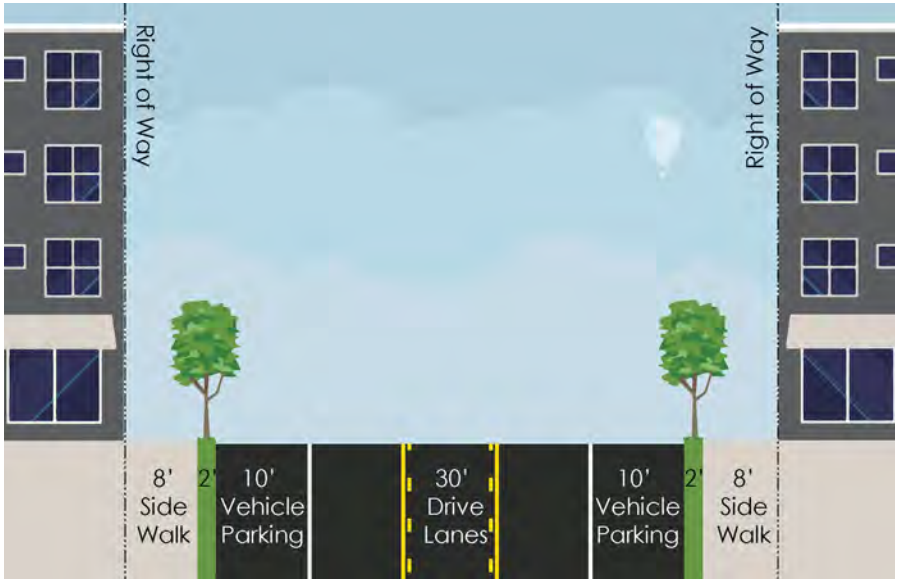
Segment #2 | Woonerf

Overview

The images below show the existing Woonerf along 1st Avenue from SW 2nd St to the North Riverwalk with the proposed typical cross section for remaining connection of the Mobility Hub to the Riverwalk.

Proposed Trail Type

Woonerf



Existing conditions from Broward Blvd to SW 2nd St.

Proposed typical section of Woonerf trail type from Broward Blvd to SW 2nd St.

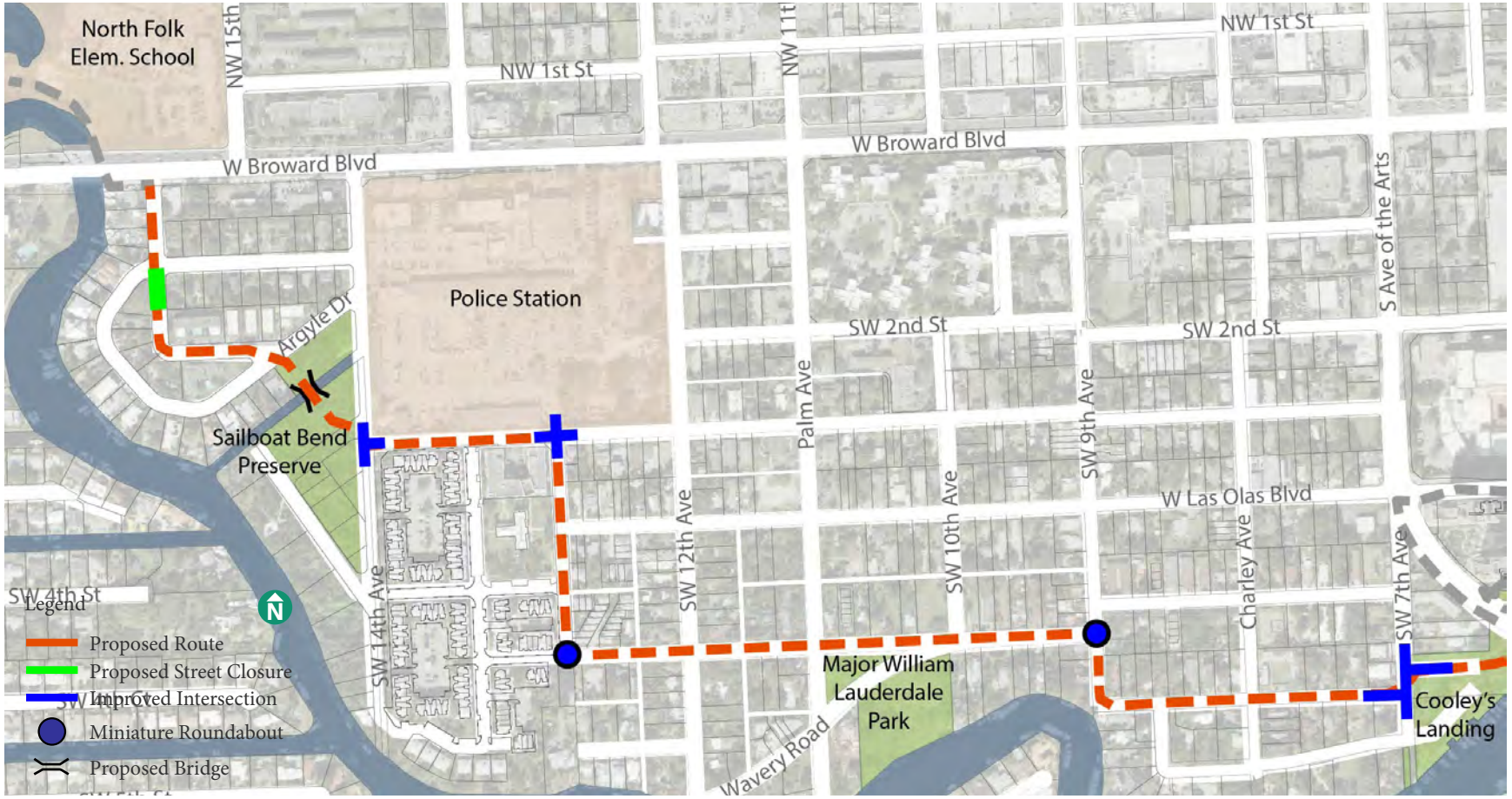
Segment #2 | Sailboat Bend Neighborhood Greenway

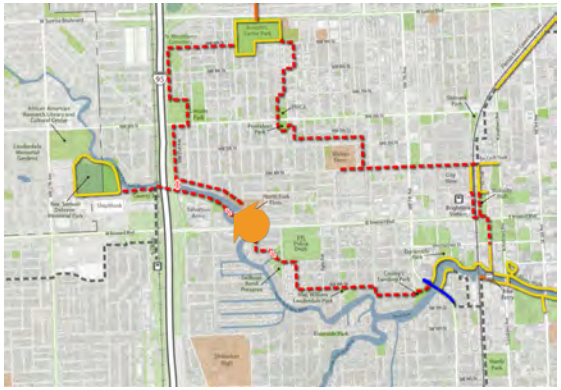
Overview

The plan below illustrates the most adaptable route for a neighborhood greenway through the Sailboat Bend Neighborhood along the North Fork New River. This segment will connect Cooley's Landing Park at the west end of the North Riverwalk to West Broward Boulevard across from North Fork Elementary School.

Proposed Trail Type

Neighborhood Greenway





Segment #2 | North Fork New River Trail Bridge

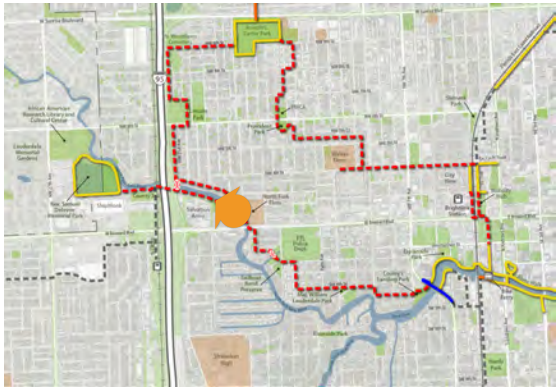
Overview

The image below illustrates a proposed greenway trail and bridge crossing the North Fork of the New River. The proposed trail route will run along the southern edge of the North Fork Elementary School property.

Proposed Trail Type

Greenway

Existing conditions of the North Fork New River looking north west from North Fork Elementary towards the Salvation Army



Segment #2 | North Fork New River Greenway Trail

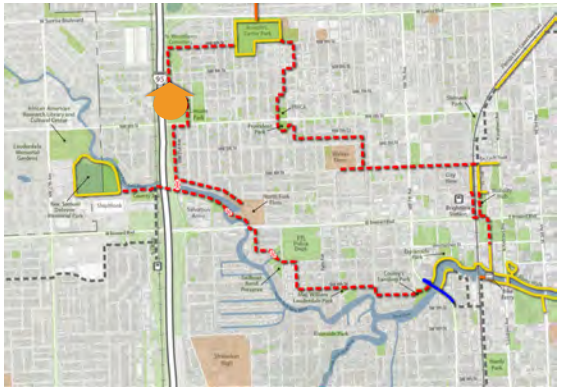
Overview

The image below illustrates a greenway trail through the North Fork Riverfront park and extend a linear park along the river to I-95.

Proposed Trail Type

Greenway

Existing conditions of North Fork New River and the Salvation Army property along NW 2nd St, facing north west.



Segment #2 | Trail along FDOT ROW Corridor

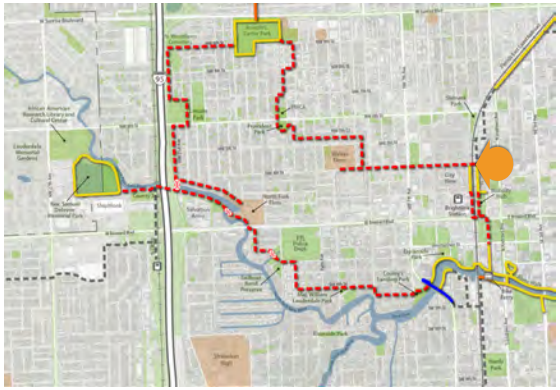
Overview

The planning team met with FDOT to present the idea of the proposed trail within I-95 right-of-way from NW 7th Street to NW 9th Street. PATH 400 trail along Georgia 400 corridor was used as a precedent of this type of trail.

Proposed Trail Type

Greenway

PATH 400
A multi-use greenway trail traverse along the GA 400 Freeway in Buckhead, Atlanta



Segment #2 | NW 4th St. Buffered Cycle Track

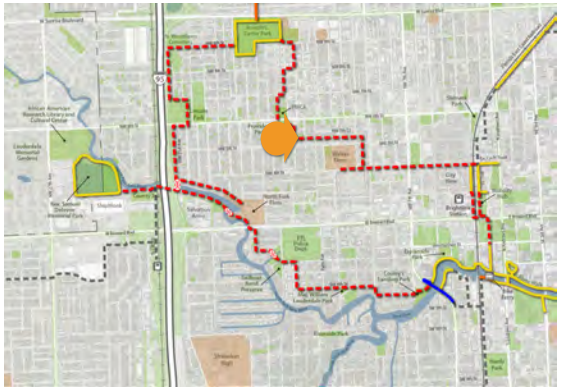
Overview

The image below illustrates a proposed buffered cycle track along NW 4th St. The continued cycle track will be raised to match the sidewalk height with a 2-6' wide landscape buffer.

Proposed Trail Type

Buffered Cycle Track

Existing condition of NW 4th St, FEC RR crossing, and NW Flalger Ave, looking west.



Segment #2 | NW 5th St. - NW 5th Ct. Green Alley

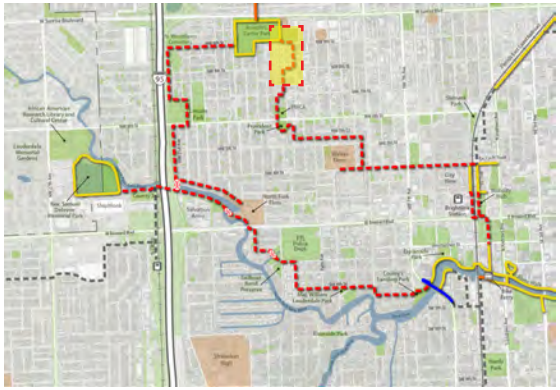
Overview

The image below illustrates a proposed green alley between NW 4th Street and NW 14th Avenue connecting Walker Elementary School to Provident Park.

Proposed Trail Type

Green Alley

Existing condition of alley between NW 5th St and NW 5th Ct, looking east.



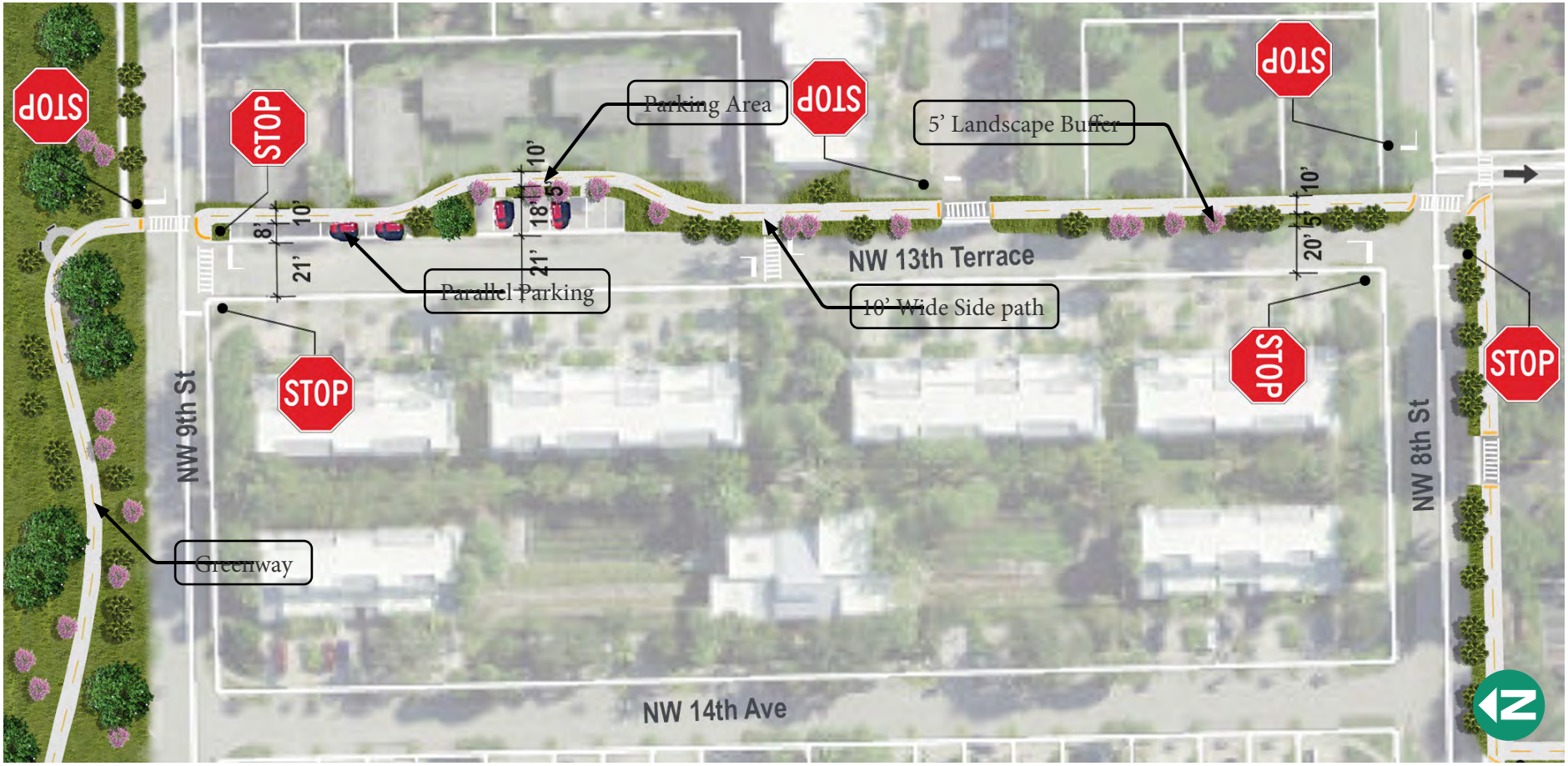
Segment #2 | Proposed Trail on NW 13th Terrace

Overview

The plan below illustrates a typical buffered side path connecting Provident Park to Carter Park via NW 13th Terrace.

Proposed Trail Type

Buffered Side Path



Segment #3| Southeast Trail

Description:

Segment 3 is a continuation of the spine trail along the FEC corridor to Snyder Park, with a further connection to the Convention Center. An existing buffered side path and ramp system along S Andrews Ave is adequate for a quality connection accross the new river. This would allow the trail to continue from the mombility hub to the south Riverwalk and connect several large parks to the city center.

The proposed connection to the Convention Center involves frequent interaction with vehicular traffic and a pedestrian bridge crossing Federal Highway. The convention center is a desirable destination and worthy of the effort and money required to link it to the system.

Phase 3a – This phase is a spur trail along SW 5th Street from the Avenue of the Arts Bridge. This spur will encourage trail users to cross the tracks at a safe, established crossing. The side path along west side of SW 3rd Avenue aims to tie in to the Riverwalk extension within the future development and attracts more trail users to the core trail system.

Phase 3b – This phase is a greenway trail beginning at the existing south Riverwalk and continuing south along FEC right-of-way to Hardy Park. It is likely to encourage economic development, such as restaurants, shops, and breweries on adjacent properties.

Phase 3c – This phase is a greenway trail from Hardy Park to SW 17th Street along the FEC right-of-way. It is proposed to cross the FEC tracks along 17th Street and enter Croissant Park. The adjacent properties will likely be developed with businesses that serve trail users.

Phase 3d – The ***LauderTrail*** will interact substantially with the park in accordance with any master plans for the park, emerging on the southwest corner, crossing over SW 4th Avenue and turning south as a green alley to SW 2nd Avenue. The green alley dead ends at Fort Lauderdale Memorial Park where the trail becomes a side path around the edge of the park. A new Hawk signal is proposed for the trail where it crosses SW 4th Avenue into Peney Park.

Phase 3e – Phase 3e is proposed as a side path to SW 4th Avenue adjacent to Memorial Park until it reaches the existing Seagull Alternative High School side path. This existing trail ends at SW 28th Street where it is proposed to extend the side path to the baseball fields, where it transitions to a greenway entering Snyder Park.

Phase 3f – The ***LauderTrail*** needs to provide a safe, discernible connection to the Broward Health Medical Center and to the Convention Center. Phase 3f crosses South Andrews Avenue as a side path to SW 16th Street before going north of the side of SE 1st Avenue to E 14th Street. The trail will transition to an elevated structure that will bridge Federal Highway creating a safe crossing for pedestrians and cyclists of US 1. The bridge, outfitted with signage and lighting, can be a gateway for the City's branding.

Phase 3g – The bridge over US 1 / Federal Highway will likely be a prefabricated, metal structure similar to existing trail bridges in neighboring cities. It can be customized with paint schemes, lighting, signs, and signs to highlight the City branding.

Phase 3h – When the eastern ramp to the bridge reaches grade, it is proposed to be a side path along SE 14th Street that turns south at 10th Avenue. It is proposed as a neighborhood greenway once it crosses SE 15th Street. A neighborhood greenway along SE 16th Street will turn south to Grande Drive, where a U turn is necessary under the 17th Street Causeway.

Segment #3 Overview:

Connecting Destinations: Riverwalk, Hardy Park, Broward Health, Convention Center, Seagull Alternative School, Croissant Park, Snyder Park

Begin: South Riverwalk

Ends: Snyder Park

Distance: 30,478 Linear Feet (5.84 miles)

Opportunities and Benefits:

- Connects downtown to the southern neighborhoods of the city
- Cohesively links parks and open spaces together
- Partnership opporutnity with Broward Health

Potential Obstacles:

- Requires long term coordination and easement acquisition with FEC Railways to realize greenway trail
- Requires coordination with FDOT for bridge across S Federal Highway
- Requires neighborhood buy-in to accept bicycles and pedestrians in the alley they utilize for backyard access
- Requires creative placemaking along SE 16th Street while maintaining its current use

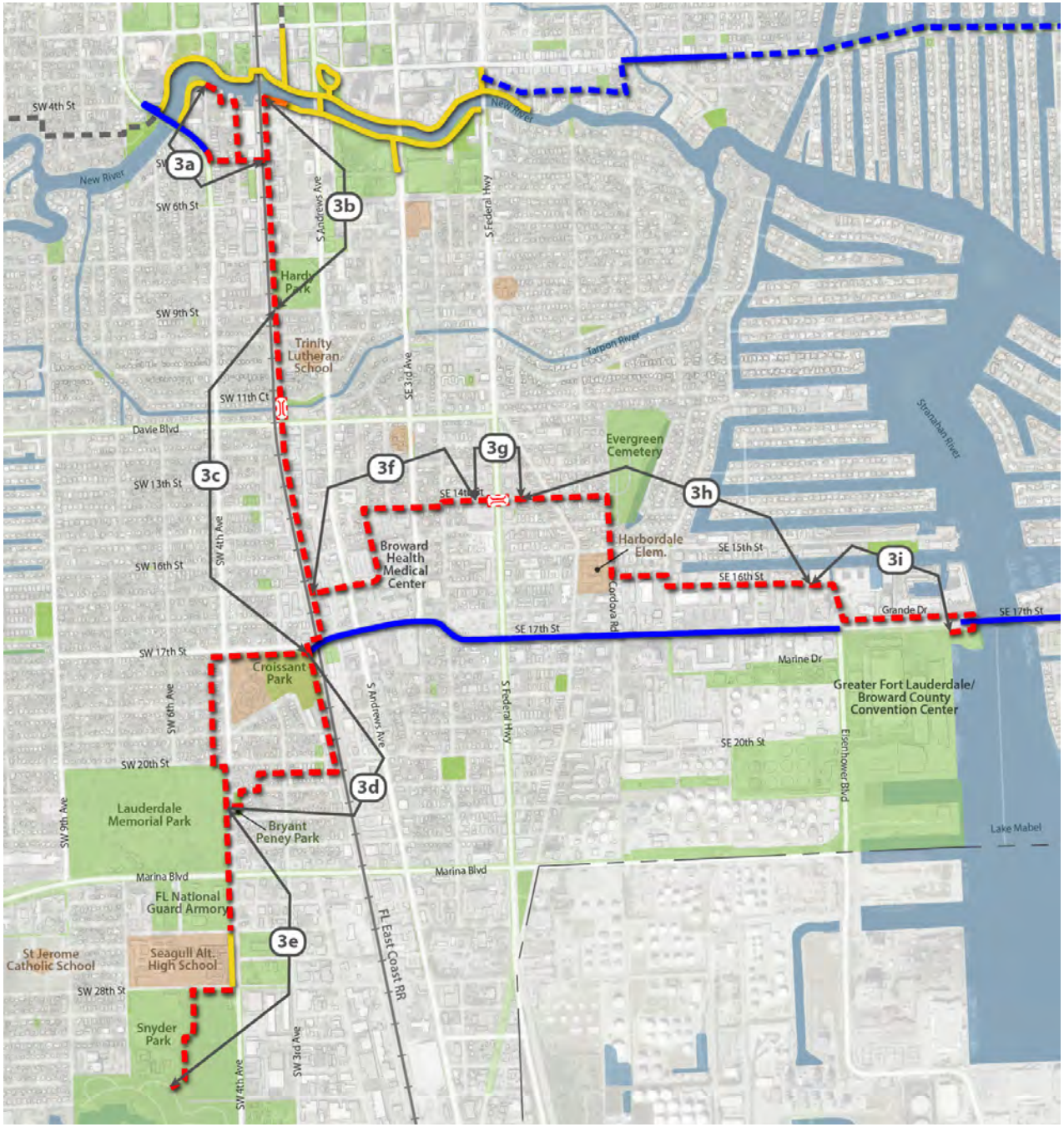
Trail User Scenarios:

- A young couple bikes along the greenway to Hardy Park for a picnic date
- A dad rides his bike with his son to Croissant Park for a swim lesson.
- A nurse walks to work from their apartment to the Health Center
- New business pop up along the greenway due to the heavy bike and pedestrian traffic
- Tourists enter the city and see the ***LauderTrail*** bridge, providing them with a new idea on what to do on their vacation

Existing conditions of FEC Corridor along SW 17th Street

Existing conditions of FEC Corridor at Florence C Hardy Park

Segment #3| Southeast Trail



Legend

- Trail Phases
- Programmed Bike/Ped Improvements
- Suggested Bike/Ped Improvements
- Existing Trails
- Programmed Trails
- Proposed Trails
- Other Segments
- Proposed Bridge
- Park & Open Space
- Public Owned Land
- College & School
- City Limit

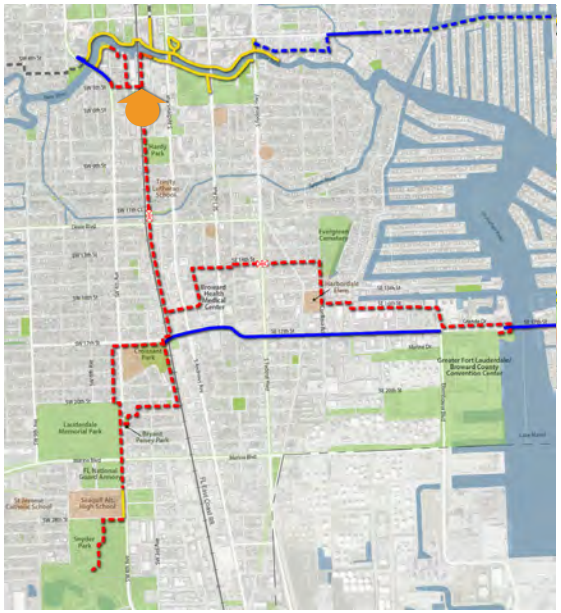
Segment #3 | Greenway at the New River Yacht Club

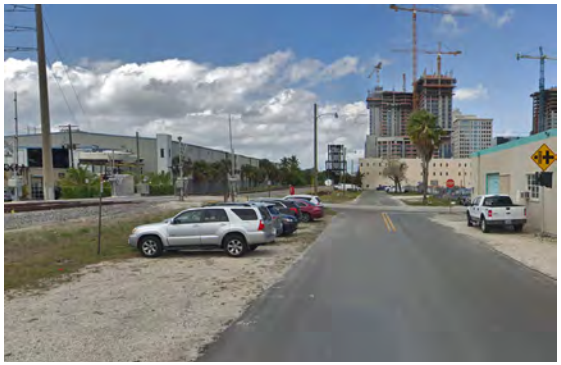
Overview

The plan below illustrates the Southeast Trail interacting with the proposed redevelopment for the New River Yacht Club along the New River. This segment will connect the southside of the Riverwalk to the Flagler Greenway and create a safe pedestrian cross condition of the FEC rail corridor.

Proposed Trail Type

Greenway





Existing condition of SW 7th St facing north towards the South Riverwalk.

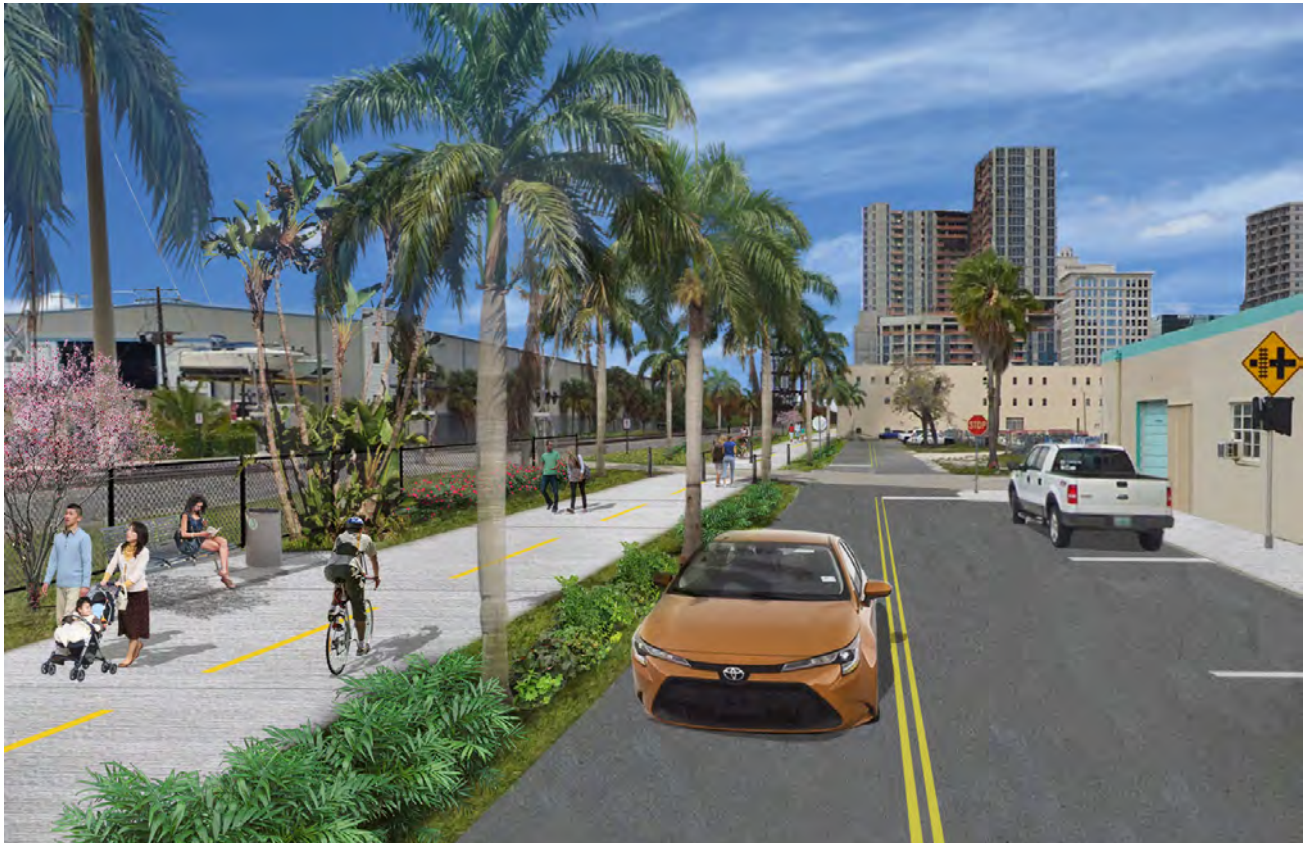
Segment #3 | SW 7th Street to South Riverwalk

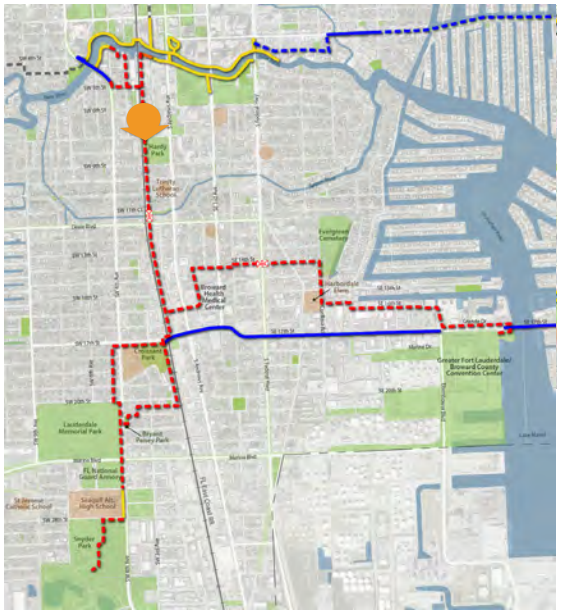
Overview

The proposed trail along SW 7th Street will be 12' wide buffered side path with a 5' minimum landscape buffer along the east side of FEC corridor connecting from the South Riverwalk to Croissant Park. The illustration below shows the trail with amenities and lighting along the corridor and fencing between the trail and the railroad.

Proposed Trail Type

Greenway





Existing condition of Florence C. Hardy Park along the FEC Railroad corridor, looking south.

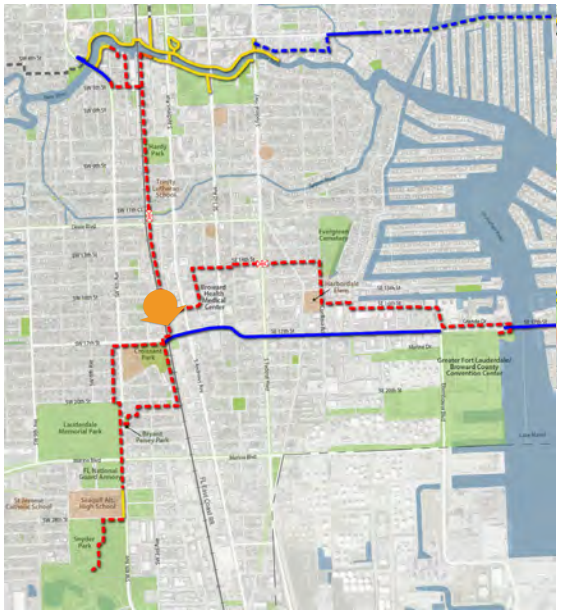
Segment #3 |Southside Trail at Hardy Park

Overview

The image below illustrates a greenway trail along the west side of Hardy Park adjacent to the FEC corridor. The proposed trail will interact with the existing Hardy Park loop trail and provide additional park amenities and access as shown in the below graphic.

Proposed Trail Type

Greenway



Existing condition of SW 17th St facing south towards the Croissant Park.

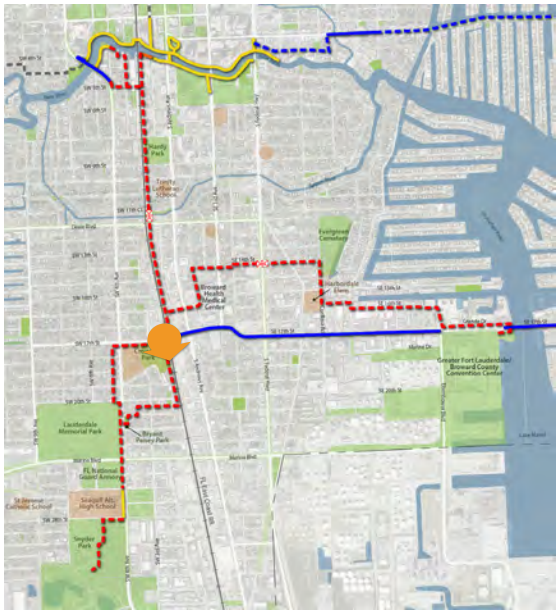
Segment #3 | South Riverwalk to SW 17th Street

Overview

There is an opportunity to close the existing gravel road and curb cut at SW 17th Street and convert the space to a pocket park. This will allow the trail to transition to a greenway before it crosses the street to Croissant park.

Proposed Trail Type

Greenway



Segment #3 | Croissant Park to SW 20th Street

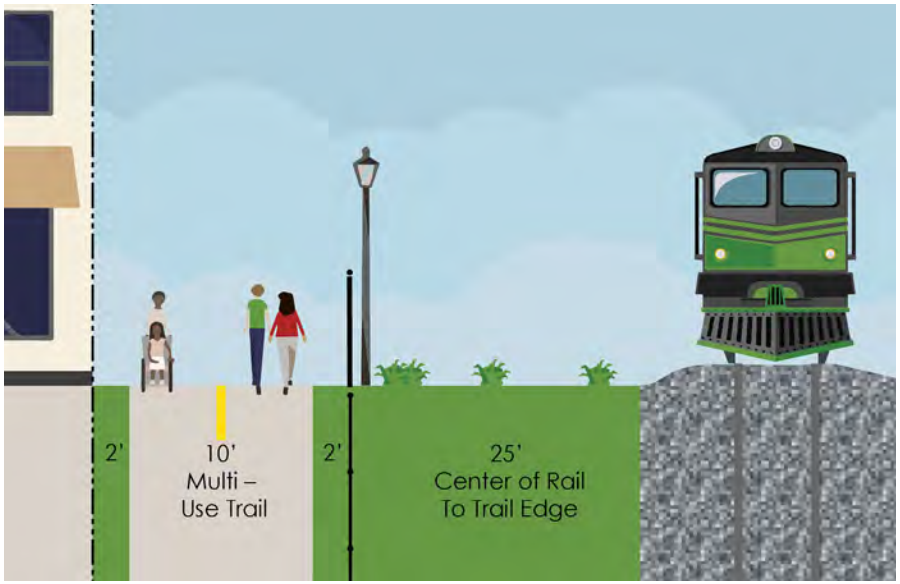
Overview

The images below show the existing and proposed conditions along the FEC corridor from Croissant Park to SW 20th St along SW 2nd Ave.

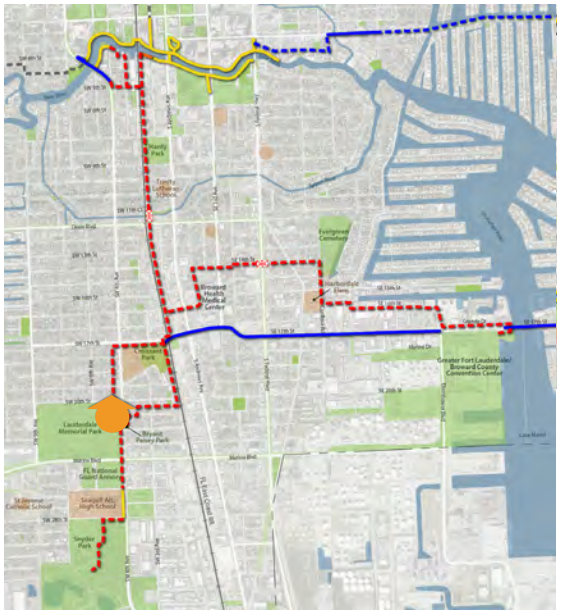
Proposed Trail Type

Greenway

Existing Conditions of the FEC corridor from Croissant Park to SW 20th St along SW 2nd Ave.



Proposed conditions of the FEC corridor from Croissant Park to SW 20th St along SW 2nd Ave.



Existing condition of alley between SW 4th & 6th Ave, facing north.

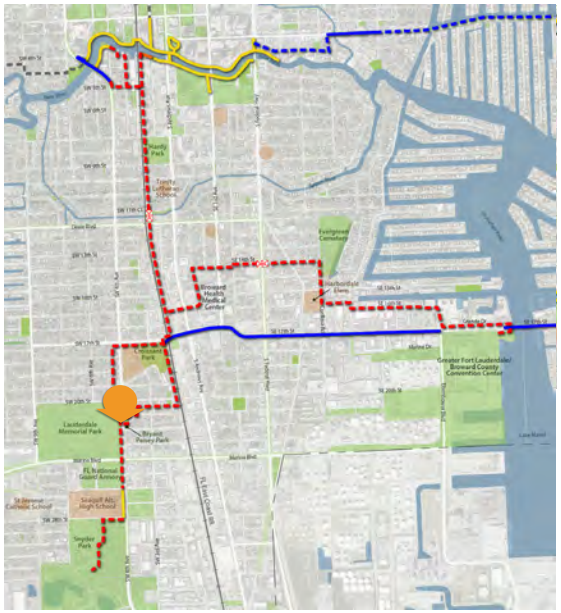
Segment #3 | Green Alley between SW 4th & 6th Avenue

Overview

The image below illustrates a green alley between SW 4th and SW 6th Ave. Boulders and/or bollards can be installed as shown in the graphic below to prevent cut through traffic without inhibiting access for adjacent residents.

Proposed Trail Type

Green Alley



Existing condition of SW 4th Ave. between Bryant Peney Park and Lauderdale Memorial Park, facing south.

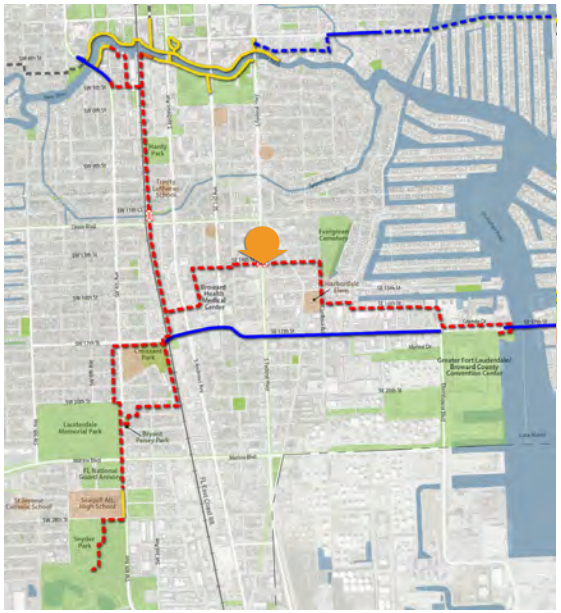
Segment #3 | Trail Crossing over SW 4th Avenue

Overview

The proposed mid-block crossing via a pedestrian Hybrid Beacon (HAWK) over SW 4th Avenue between SW 21st Street and SW 22nd Street as illustrated in the below graphic.

Proposed Trail Type

Buffered Side Path



Existing condition of U.S.-1, facing south

Segment #3 | Pedestrian Bridge over US-1

Overview

The image below illustrates a proposed pedestrian bridge over Federal Highway (US-1) at SE 14th Street.

Proposed Trail Type

Buffered Side Path

Segment #4| Southwest Trail

Description:

Trail Segment 4 connects residents to the regional New River Greenway, schools, parks, Tri-Rail and retail destinations. Primarily a neighborhood greenway, the Southwest connector utilizes the calm residential streets to provide an enjoyable experience for all trail users.

Phase 4a – Phase 4a begins at the North Fork of the New River where it will tie into the proposed Phase 2a. Phase 4a is proposed to go south to the Tri-Rail station. From the rail station, the proposed trail almost completely relies on low volume, wider streets to connect the South Fork New River to the Tri-Rail station. The PATH team evaluated all neighborhood streets in the area and recommend one route as preferred. (See map on page 57)

Phase 4b – There is the opportunity to install a separated side path along SW 29th Avenue from SW 3rd Street to SW 7th St. The city will determine if this phase should continue as a neighborhood greenway or transition to a side path.

Phase 4c –A neighborhood greenway through the River Run, Riverland West and Sunset neighborhoods from Davie Boulevard to SW 17th Street. With new crossings and traffic calming infrastructure, this connection will provide safe bike & pedestrian travel between Sheriden Technical High School and St. Thomas Aquinas High School.

Phase 4d - A neighborhood greenway along Fairfax Drive and SW 17th Street will extend from Sheridan Technical High School to an elevated boardwalk along the green space behind the Gunther car dealership parking lot. A further side path and crossing along Riverland Road will connect Riverland Woods Park. The County's programmed bridge project will link the ***LauderTrail*** to the existing New River Greenway.

Phase 4e - A proposed neighborhood greenway along the SW 10th Street will connect St. Thomas Aquinas High School to the existing trails within Riverland Park & Pool.

Segment #4 Overview:

Connecting Destinations:
New River Greenway, Riverland Park, Hays Civic Park, Sheridan Technical High School, Walker Elementary School, Riverland Park, Tri-Rail

Begin: New River Greenway at Riverland Woods Park

Ends: North Fork of the New River

Distance: 26,767 Linear Feet (5.17 miles)

Opportunities and Benefits:

- Connections for safe routes to schools for local families
- Access to existing transportation networks for further connections
- Neighborhood greenways' traffic calming meet multiple trail and non-trail related goals
- Multiple trail access points

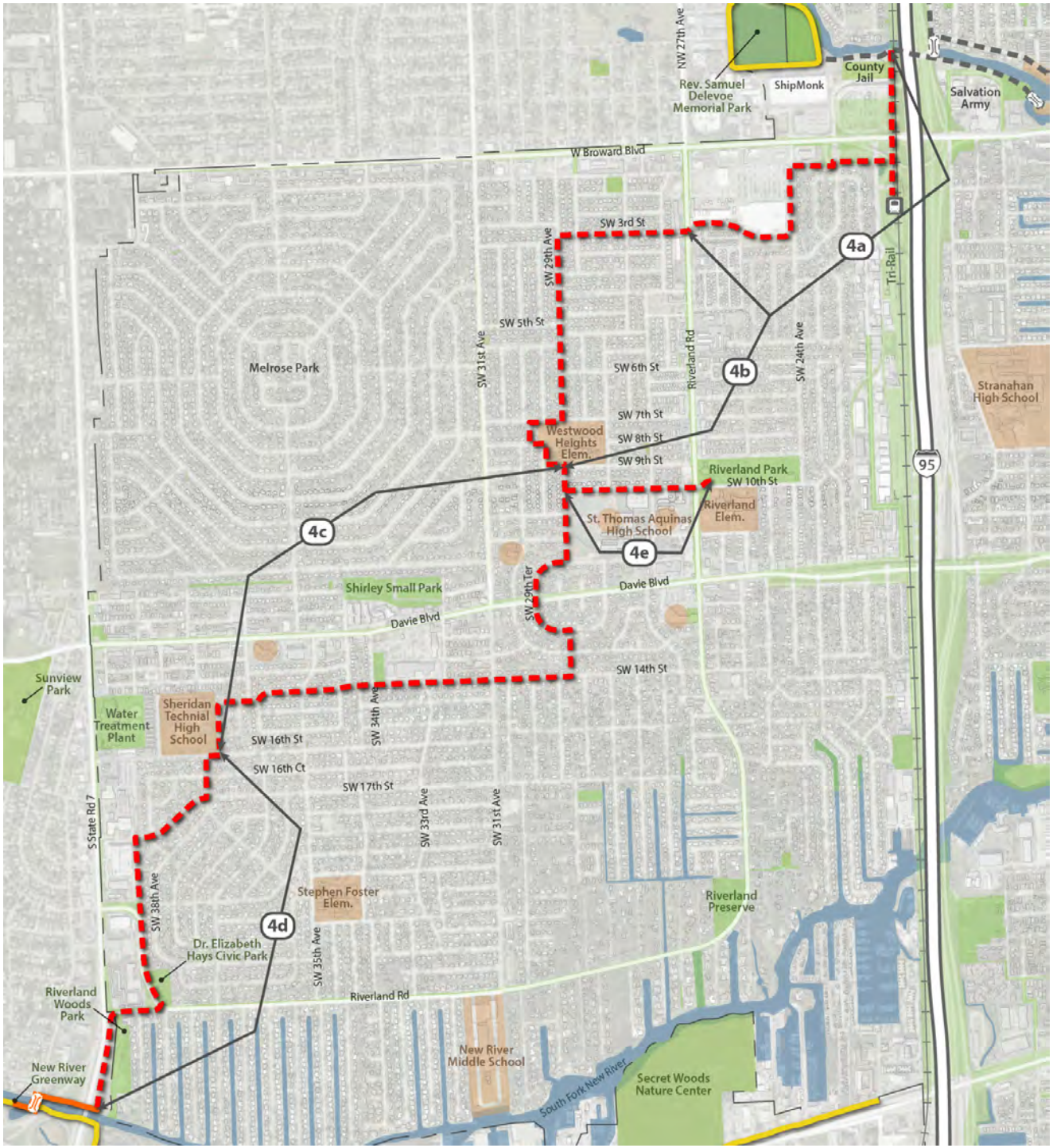
Potential Obstacles:

- Requires easements from property owners along proposed greenways and side paths
- Collaboration with the county and state for new traffic signalization

Trail User Scenarios:

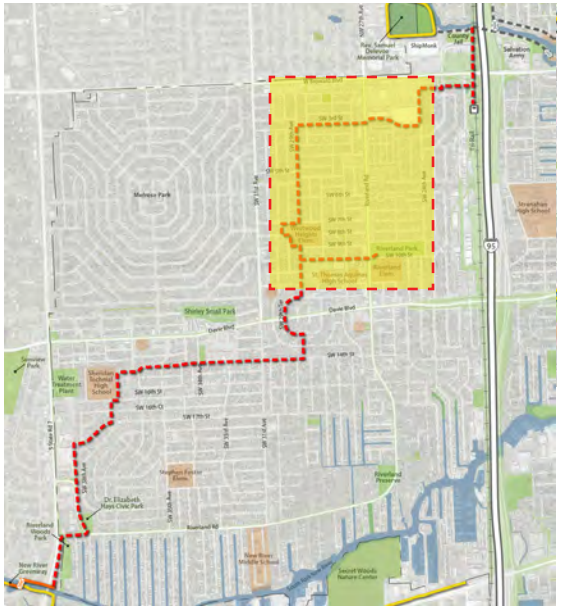
- A group of high school students use the trail to go from school to an afternoon part time job downtown
- A family bikes from their house along the trail to the New River Greenway, getting exercise and spending quality time together.
- A commuter uses the trail to go to the TriRail Station instead of driving
- A new cyclist now feels safe biking to the store to pick up groceries using the neighborhood greenway
- Families use the neighborhood greenway to explore a park that they have not yet been to.

Segment #4 | Southwest Trail



Legend

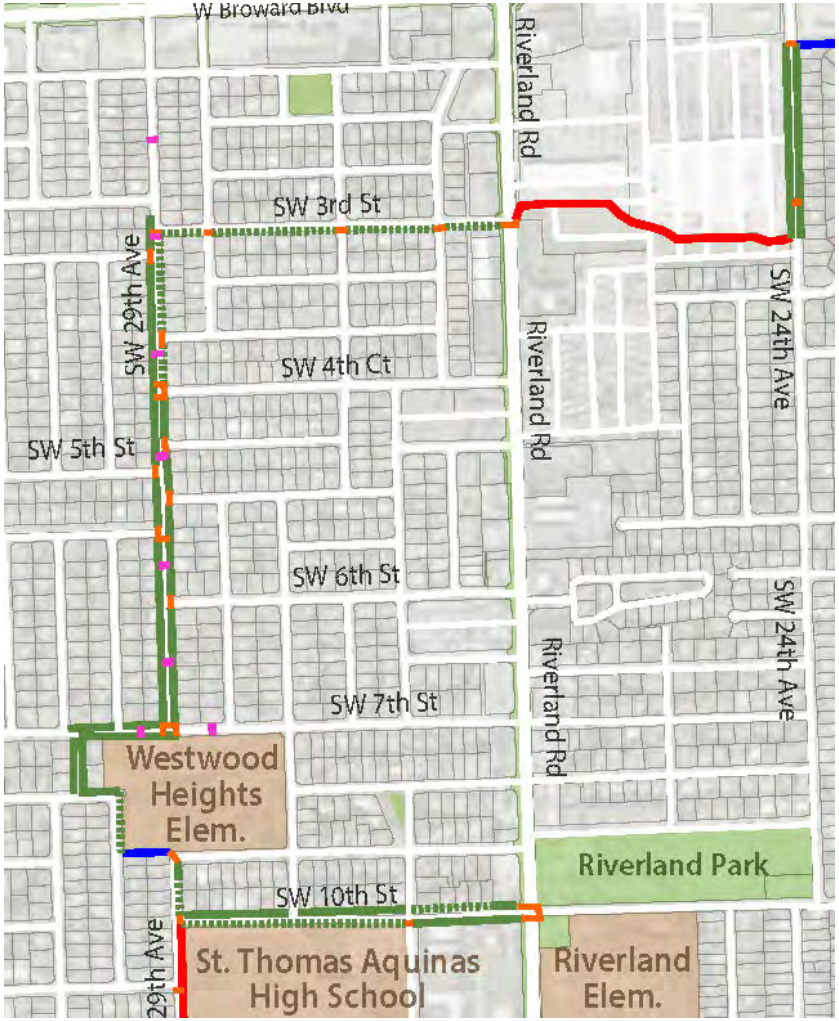
- Trail Phases
- Programmed Bike/Ped Improvements
- Suggested Bike/Ped Improvements
- Existing Trails
- Programmed Trails
- Proposed Trails
- Other Segments
- Proposed Bridge
- Park & Open Space
- Public Owned Land
- College & School
- City Limit



Segment #4 | Southwest Trail Neighborhood Greenway

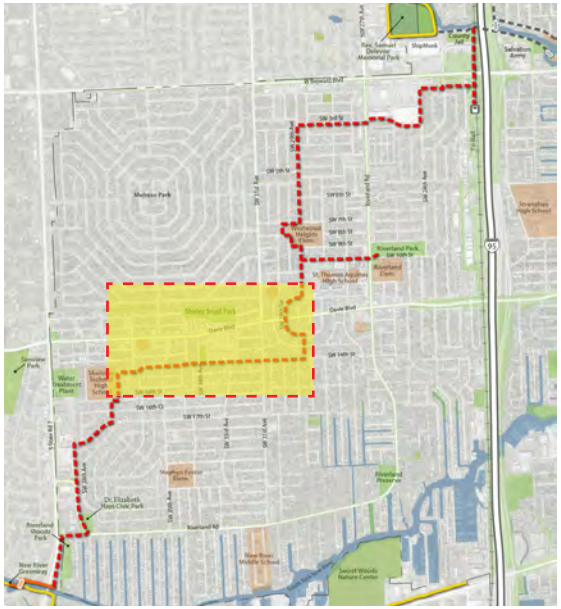
Overview

The plan below illustrates a ***neighborhood greenway*** through the River Run, Riverland West and Sunset neighborhoods from Davie Boulevard to SW 17th Street. With new crossings and traffic calming infrastructure, this connection will provide safe bike & pedestrian travel between Sheriden Technical High School and St. Thomas Aquinas High School.



Legend

- Existing Sidewalk
- Proposed Sidewalk
- Proposed Crosswalk
- Existing Speedbump
- Proposed Sidepath
- Proposed Greenway



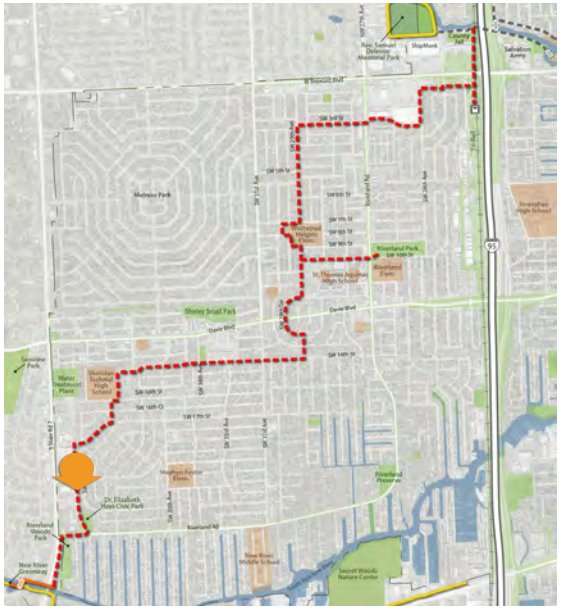
Segment #4 | Southwest Trail Neighborhood Greenway

Overview

The plan below illustrates a ***neighborhood greenway*** through the River Run, Riverland West and Sunset neighborhoods from Davie Boulevard to SW 17th Street. With new crossings and traffic calming infrastructure, this connection will provide safe bike & pedestrian travel between Sheriden Technical High School and St. Thomas Aquinas High School.

Legend

- Existing Sidewalk
- Proposed Sidewalk
- Proposed Crosswalk
- Existing Speedbump
- Proposed Sidepath
- Proposed Greenway



Existing condition of alley between Riverland Rd and SW 17th St, looking south.

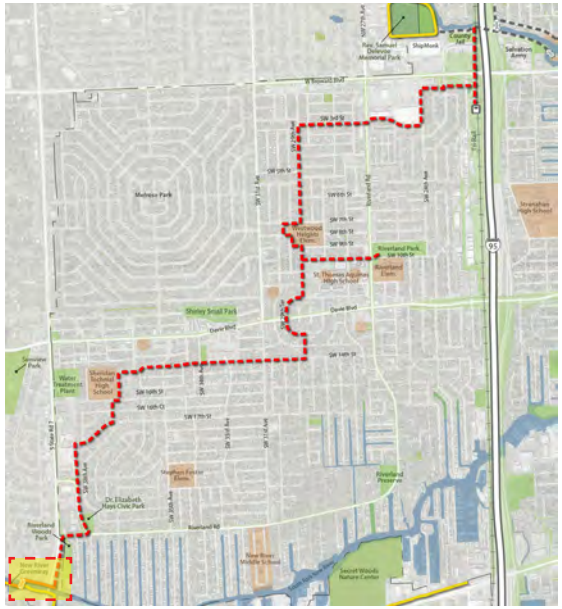
Segment #4 | Riverland Road to SW 17th Street Greenway

Overview

The image below illustrates a structural greenway trail along a sewer easement from Riverland Road to SW 17th Street. The raised trail will be designed to inundate during rain events.

Proposed Trail Type

Greenway



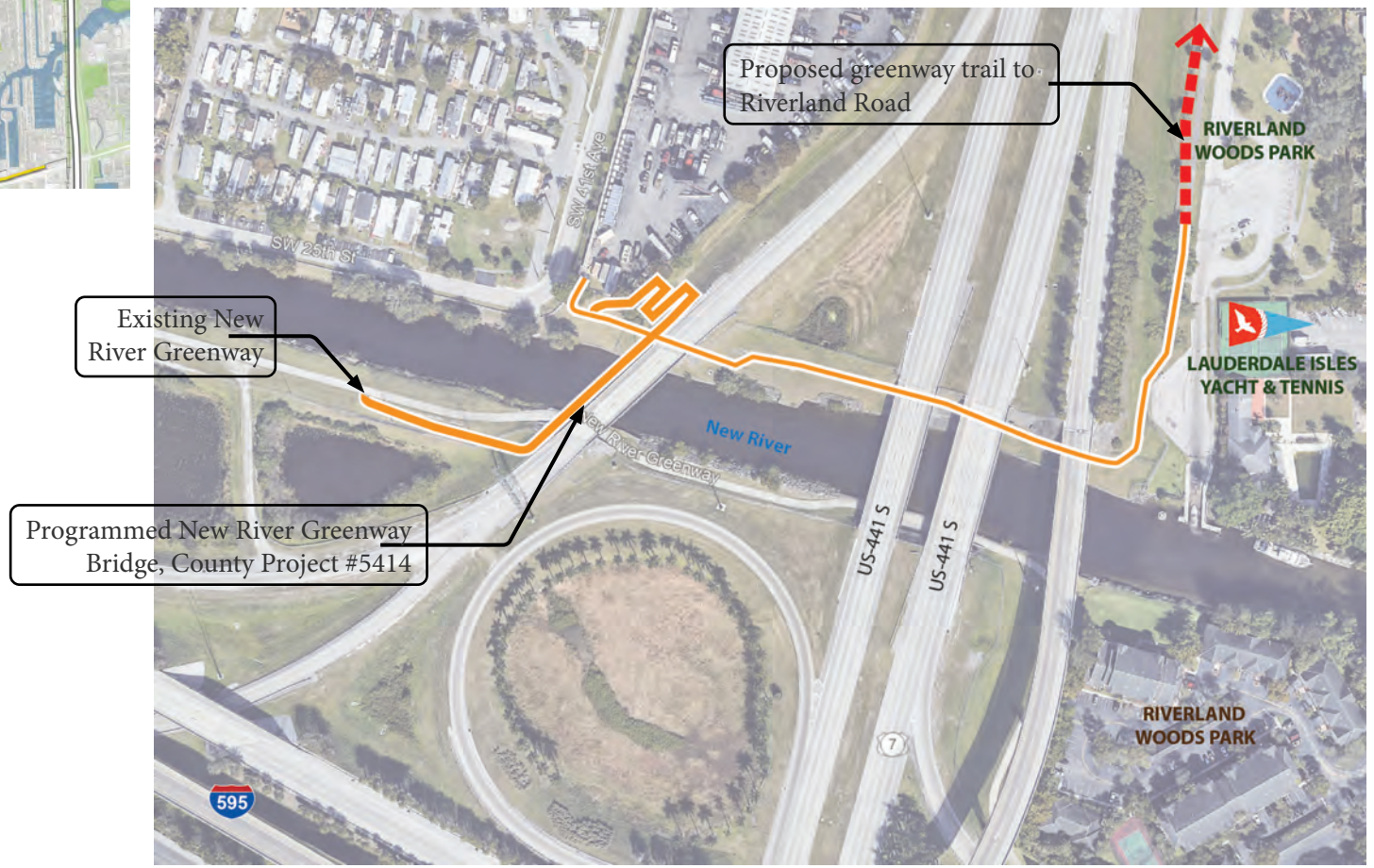
Segment #4 | New River Greenway Bridge to Riverland Woods Park

Overview

The image below illustrates the programmed bridge over the New River, County Project #5415 This regional connection will link the ***LauderTrail*** to the existing New River Greenway.

Proposed Trail Type

Greenway



Segment #5| Northside Trail

Description:

Trail Segment 5 provides connections to existing regional trails in the Northwest, desired regional destinations, and to the northern end of the beach promenade. Connections from this trail will be enjoyed by cyclists who want to connect to the Cypress Creek Greenway for an adventure, while the side paths create fast walking connections for neighborhood residents.

Phase 5a - A greenway trail links the Cypress Creek Greenway and Fern Forest Nature Center to Lyons Road. Followed then by a greenway trail traveling along the available FDOT right-of-way and Lyons Road, north of the Palm Aire Neighborhood.

Phase 5b - The neighborhood roads of North Fort Lauderdale have ample space and low traffic volume where a neighborhood greenway can easily connect NW 34th Avenue to a side path along NW 32nd Avenue. A new traffic signal at NW 68th Street will be required for safe crossing over NW 31st Avenue.

Phase 5c - A side path connects the northwest neighborhood loop to NW 62nd Street. This phase will be well suited for the new developments along NW 64th Street and provide safe access to Palm Aire Village Park

Phase 5d - A buffered side path from NW 12th Avenue will help connect residents of northwest Fort Lauderdale to Inter Miami Stadium. This segment will continue south as a side path and neighborhood greenway to the city limit line, where a new signal is proposed at the intersection of NW 15th Avenue and Prospect Road.

Phase 5e - This phase completes the northwest neighborhood loop with a side path along W McNab Rd. This connection will strength the NW multi-use connection in long term and has supports from city leadership.

Phase 5f - This neighborhood greenway through the Imperial Point neighborhood will run along NE 22nd and end at NE 62nd St to NE 55th St. Traffic calming, sidewalk improvements and wayfinding signs will create an inviting and safe experience for all trail users.

Phase 5g - A side path along NE 33rd Ave will connect the suggested bike/ped improvements along Oakland Park Blvd to the Fort Lauderdale Beach Promenade through the northeast corner of Hugh Taylor Birch State Park.

Phase 5h - The final segment of the ***LauderTrail*** is a Greenway between NE 14th Ave and the adjacent canal. This segment connects NW 62nd St to Floranada Elementary School and Floranda Park and ends at NE 50th Ct.

Segment #5 Overview:

Connecting Destinations: Cypress Creek Greenway, Fern Forest Nature Center, Drive Pink Stadium, Floranada Elementary School, Birch State Park, Beach Promenade
Begin: Cypress Creek Greenway
Ends: Beach Promenade
Distance: 57511 Linear Feet (10.86 miles)

Opportunities and Benefits:

- Connection of neighborhoods to regional destinations
- Safe walking and biking routes to schools
- Economic development along trail corridor
- Connection to shopping centers

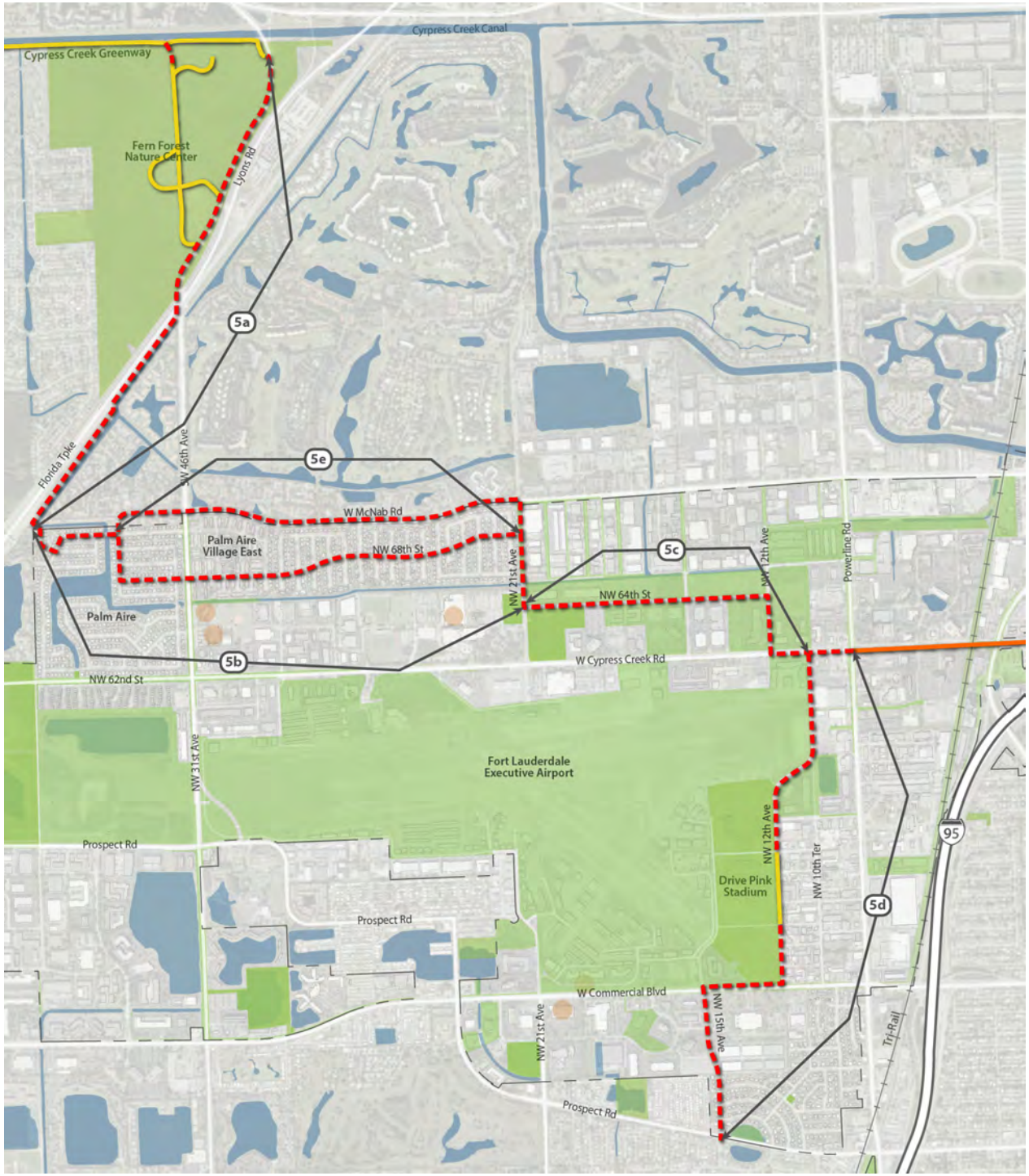
Potential Obstacles:

- Requires coordination with FDOT for greenway trail along Florida Turnpike
- Requires long term coordination with Birch State Park to realize the greenway passing through
- Requires collaboration with the county and nearby municipalities

Trail User Scenarios:

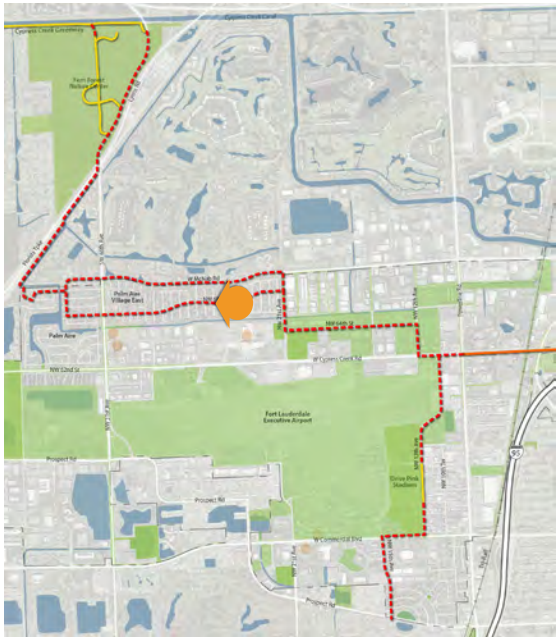
- An elderly couple takes their grandchildren on a walk from their apartment to the beach using the new side path behind their residence.
- A family bikes along the neighborhood greenway on NW 68th Street to visit their friends a few blocks over
- Neighbors walk together to go see a match at the Drive Pink Stadium
- A group of teens bike from their neighborhood to the spend the day exploring the Cypress Creek Greenway
- A young student walks with her parents pointing out the mangrove trees along the trail that she learned about in class.

Segment #5 | Northside Trail



Legend

- Trail Phases
- Programmed Bike/Ped Improvements
- Suggested Bike/Ped Improvements
- Existing Trails
- Programmed Trails
- Proposed Trails
- Other Segments
- Proposed Bridge
- Park & Open Space
- Public Owned Land
- College & School
- City Limit



Existing condition of NW 68th St, facing west.

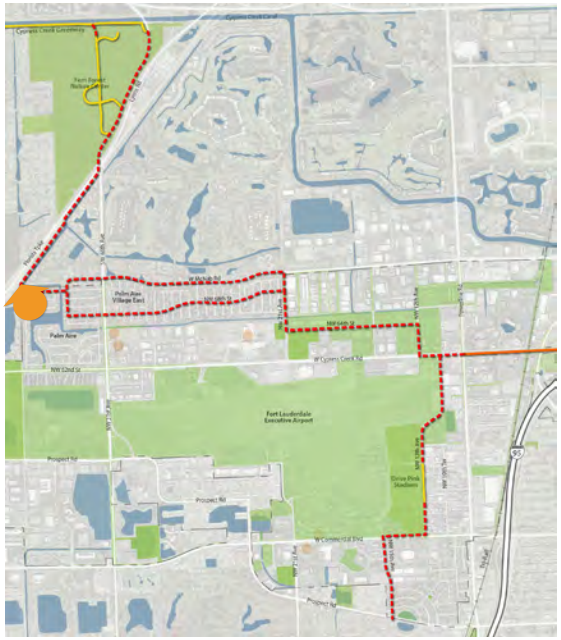
Segment #5 | Northwest Neighborhood Greenway

Overview

The image below illustrates a neighborhood greenway through the neighborhoods of North Fort Lauderdale. Lane reductions at 4 way intersections provide traffic calming and promote on-street parking. This neighborhood greenway utilizes existing sidewalks and proposed shared lane markings for cyclists.

Proposed Trail Type

Greenway



Existing condition of the FDOT owned ROW along the Florida Turnpike, looking north-west.

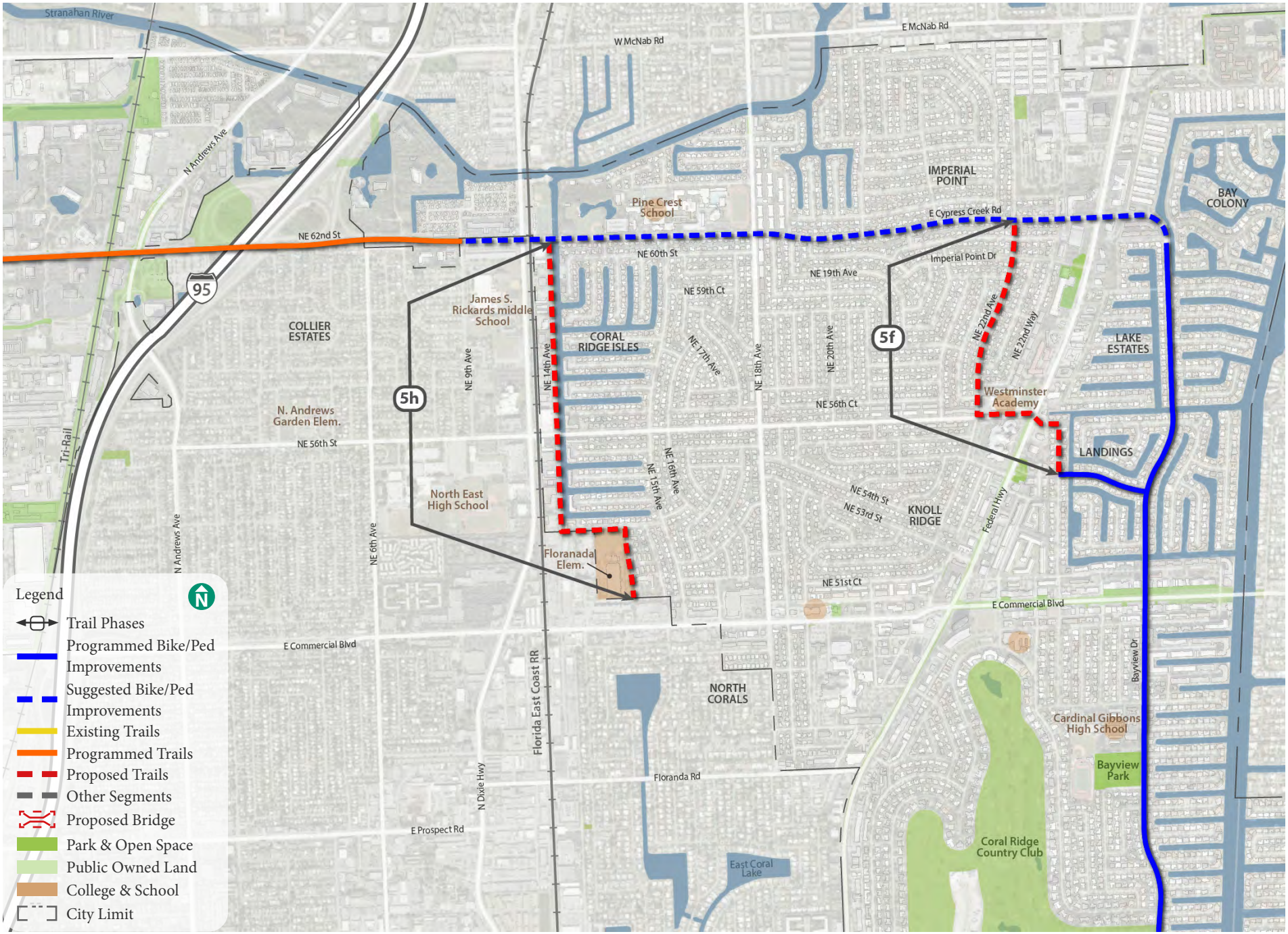
Segment #5 | Cypress Creek Greenway Connector

Overview

The image below illustrates a greenway trail along the Florida Turnpike Florida DOT right-of-way. Utilizing greenspace between the sound barrier and adjacent canal, this greenway trail will connect the neighborhoods of North Fort Lauderdale to the Fern Forest Nature Center and Cypress Creek Greenway Trail.

Proposed Trail Type

Greenway


Stranahan River
W McNab Rd
E McNab Rd
N Andrews Ave
NE 62nd St
95
Pine Crest School
IMPERIAL POINT
BAY COLONY
E Cypress Creek Rd
Imperial Point Dr
NE 60th St
NE 59th Ct
NE 19th Ave
James S. Rickards middle School
COLLIER ESTATES
CORAL RIDGE ISLES
NE 14th Ave
NE 9th Ave
NE 17th Ave
NE 18th Ave
NE 20th Ave
NE 22nd Ave
NE 22nd Way
5f
5h
LAKE ESTATES
Westminster Academy
NE 56th Ct
N. Andrews Garden Elem.
NE 56th St
Tri-Rail
LANDINGS
NE 16th Ave
NE 15th Ave
NE 54th St
NE 53rd St
KNOLL RIDGE
Federal Hwy
North East High School
NE 6th Ave
Floranada Elem.
NE 51st Ct
E Commercial Blvd
Bayview Dr
NORTH CORALS
Florida East Coast RR
Cardinal Gibbons High School
Bayview Park
Floranda Rd
N Dixie Hwy
E Prospect Rd
Coral Ridge Country Club
East Coral Lake
Legend
Trail Phases
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Existing Trails
Programmed Trails
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Other Segments
Proposed Bridge
Park & Open Space
Public Owned Land
College & School
City Limit


E Oakland Park Blvd
Bayview Dr
CORAL SHORES
Middle River Dr
NE 26thSt
Federal Hwy
BAL HARBOUR
Coral Ridge Park
CORAL RIDGE
DOLPHIN ISLES
NE 32nd Ave
NE 33rd Ave
N Ocean Blvd
NE 21st St
NE 19th St
NE 18th St
A1A
LAUDERDALE BEACH
Vista Park
Loggerhead Park
Fort Lauderdale Beach
5g
Hugh Taylor Birch
Legend
Trail Phases
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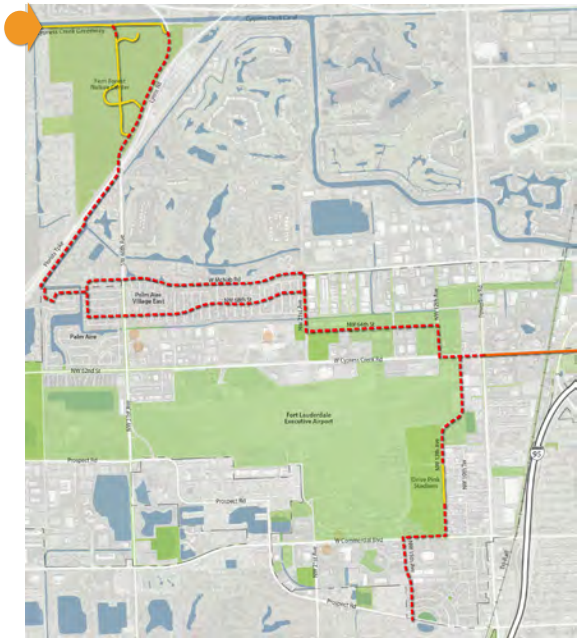
College & School
City Limit



Existing conditions of the Cypress Creek Greenway Trail, looking east.

Segment #5 |Cypress Creek Greenway Improvements

Improvements to the existing Cypress Creek Greenway are suggested to tie-in regional trails with the established trail branding and design standards. Shade trees and pocket parks will offer users a more comfortable experience. Center line strip and signage are recommended for consistence with the proposed trail system.

4 IMPLEMENTATION STRATEGY

4 Implementation Strategy

4.1 Overview

This chapter suggests strategy with specific steps to ensure a timely and orderly implementation of this plan to capture the momentum for the ***LauderTrail*** Master Plan moving from a vision to action. The following items are presented in this chapter:

- Model Project
- Implementation Priority
- Cost Estimate
- Funding Strategy
- Formation of an Implementation Committee
- Creation of the Friends Group

4.2 Model Project

The secret to advancing a trail system is to construct a model project while the ink is drying on the plan. The model project needs to meet a series of criteria informed by the purpose and objectives of the trail system to become highly used by the public. It requires local support and dedication to make it happen. In the meetings with the Advisory Panel, the PATH team recommended identifying the model project of the ***LauderTrail*** System for implementation in 2022/2023.

What makes a successful model project?

- Demonstrates amenities
- Worthy stand-alone project
- Minimal acquisition
- City-wide support
- Control over implementation timeline

The implementation of a model project was discussed during the 4th Advisory Panel Meeting, the PATH team presented the criteria for selecting a successful model project along with two suggested model project options for the Advisory Panel: The combination *Segment 3 Southeast Trail, phases 3b* and *3c* have since emerged the preferred model project as it builds off the existing south Riverwalk, connects to major parks in the south side neighborhood, and creates opportunities for a linear park. Survey, engineering, and design should be initiated for the model project as soon as the plan is adopted.

4.3 Implementation Priority

The ***LauderTrail*** Implementation Plan outlines Tier I and Tier II projects based on the following criteria:

#1: Connects desired destinations

- Connects to existing trail segments to provide greater trail use and connectivity.
- Connects to established destinations such as parks, schools, existing trails, public facilities, and commercial areas.
- Responds to public sentiment to determine the most desired trail connection within the district.
- Locates desired destinations at each end of the trail segments.

#2: Provides an inviting experience that will attract users

The trail segment provides:

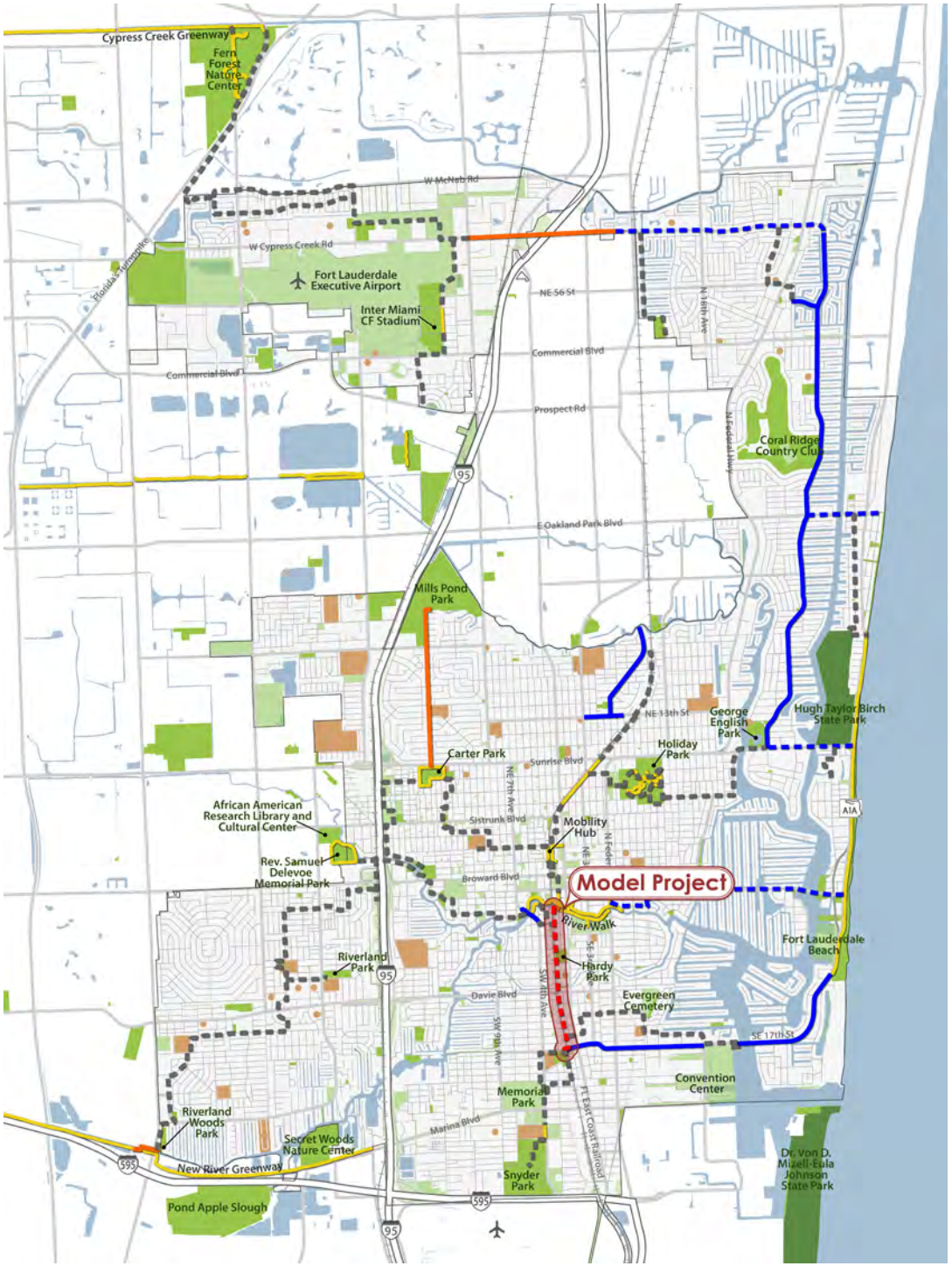
- Pedestrian and bicycle connectivity with limited interruption by traffic
- A variety of featured trail elements (i.e. bridges, boardwalks, trailheads, and other amenities)

#3: Offers an ease for implementation

Trail segment entails:

- Minimal acquisition
- Manageable level of complexity for construction
- Cost estimate within available local funding
- Feasible opportunities for additional funding
- Local permitting only
- Timeline for beginning construction within 5 years
- Requirement of private developments located along a proposed trail segment to include construction of the trail segment within the developer's project.

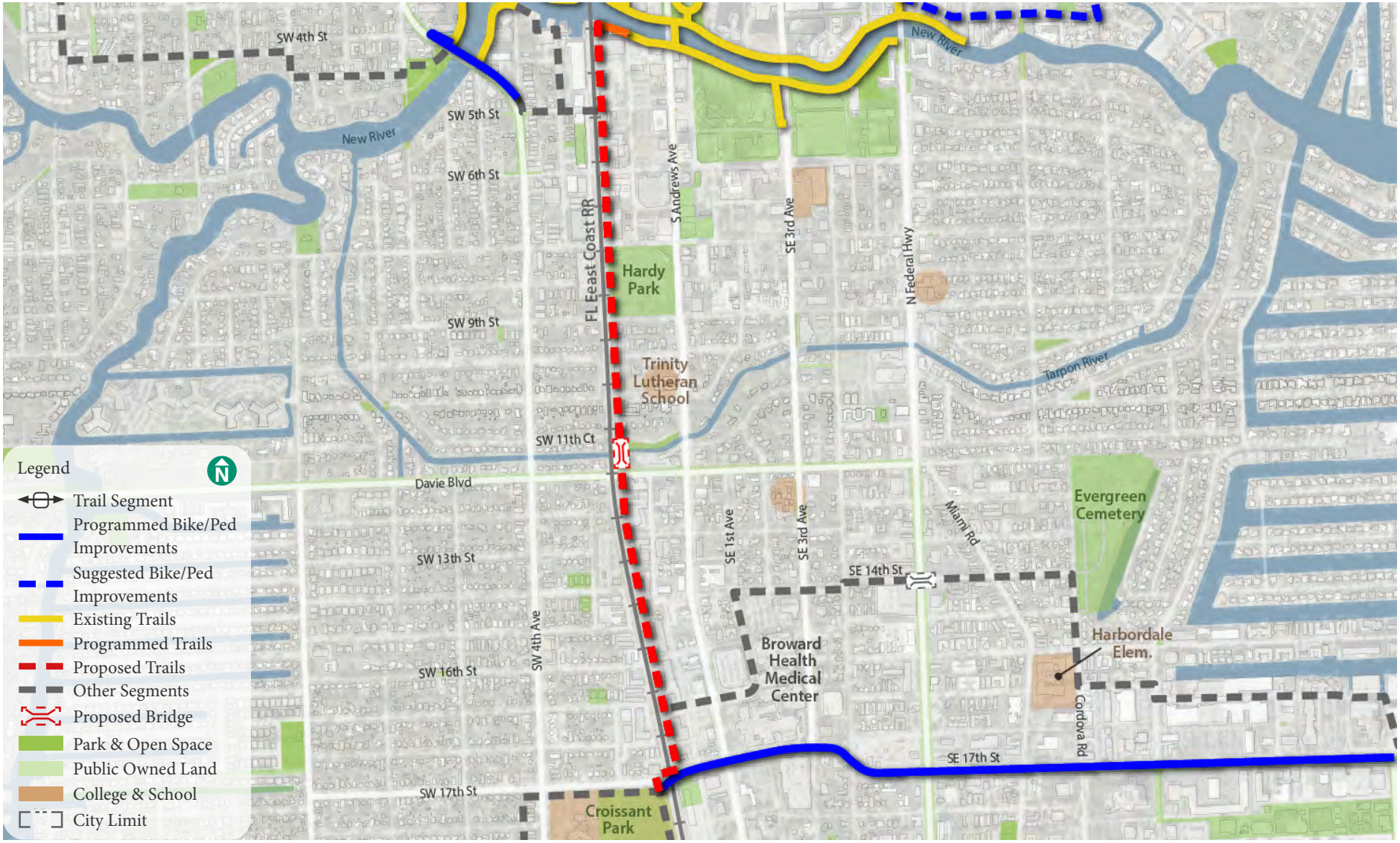
LauderTrail Implementation: Model Project



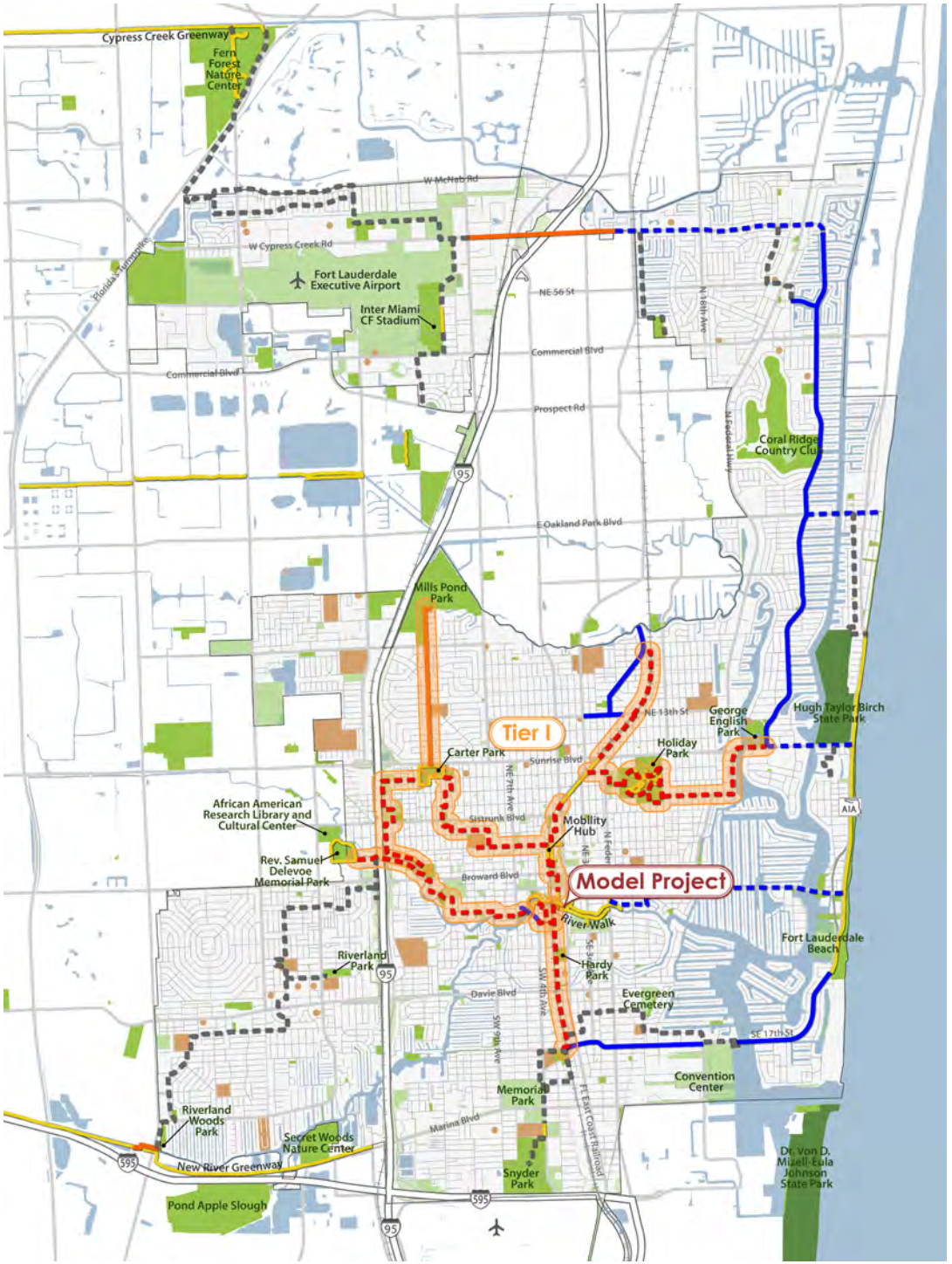
Legend

- Programmed Bike/Ped Improvements
- Suggested Bike/Ped Improvements
- Existing Trails
- Programmed Trails
- Proposed Trails
- Park & Open Space
- Public Owned Land
- College & School
- City of Fort Lauderdale Limit

Model Project: South Riverwalk to Croissant Park



LauderTrail Implementation: Tier I



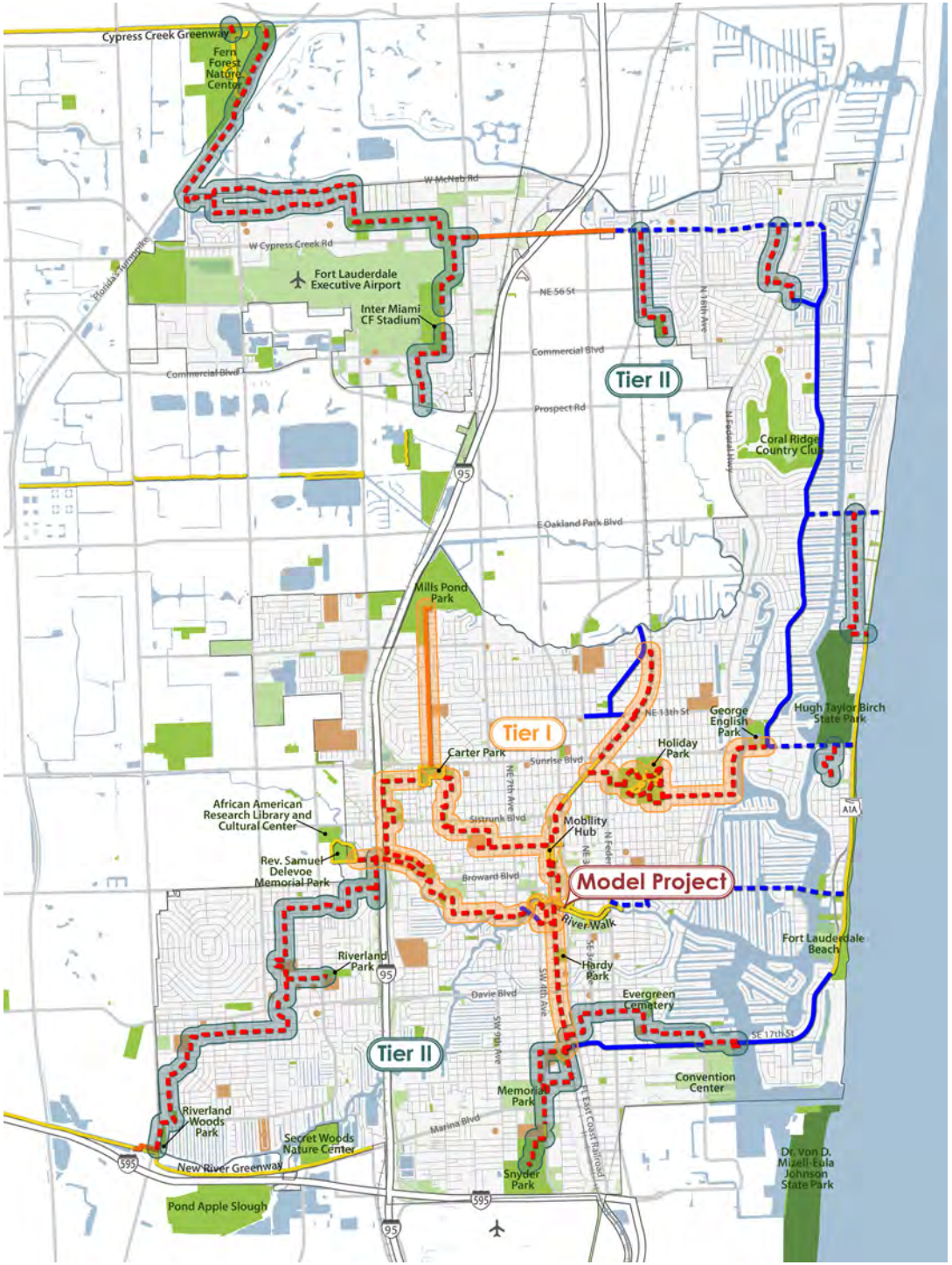
Legend

- Programmed Bike/Ped Improvements
- Suggested Bike/Ped Improvements
- Existing Trails
- Programmed Trails
- Proposed Trails
- Park & Open Space
- Public Owned Land
- College & School
- City of Fort Lauderdale Limit

LauderTrail Implementation: Tier II

Legend

- Programmed Bike/Ped Improvements
- Suggested Bike/Ped Improvements
- Existing Trails
- Programmed Trails
- Proposed Trails
- Park & Open Space
- Public Owned Land
- College & School
- City of Fort Lauderdale Limit



4.4 Cost Summary

The estimated cost for the implementation of the 31 miles system is approximately $90 million dollars with 11.2 miles of Model Project and Implementation Tier 1 trail segments for approximately $43.3 million dollars.

Model Project

Mileage	Trail Segment Name	P&E	Construction	TOTAL
1.2	Segment 3 Southside Trail - Phase 3b & 3c	$420,608	$5,264,994	$5,685,602
1.2	**Total**	**$420,608**	**$5,264,994**	**$5,685,602**

Tier 1

Mileage	Trail Name	P&E	Construction	TOTAL
0.4	Segment 1 Northside Trail - Phase 1a	$135,673	$1,676,708	$1,812,381
0.1	Segment 1 Northside Trail - Phase 1b	$50,475	$558,620	$609,095
1.8	Segment 1 Northside Trail - Phase 1c	$386,497	$4,826,365	$5,212,862
1.2	Segment 1 Northside Trail - Phase 1d	$68,145	$638,057	$706,202
1.2	Segment 1 Northside Trail - Phase 1e	$388,550	$4,774,778	$5,163,328
1.9	Segment 2 Westside Loop - Phase 2a & 2b	$449,341	$6,370,280	$6,819,621
0.4	Segment 2 Westside Loop - Phase 2c	$308,870	$2,912,734	$3,221,604
0.7	Segment 2 Westside Loop - Phase 2d	$339,341	$3,086,075	$3,425,416
0.6	Segment 2 Westside Loop - Phase 2e	$173,684	$1,854,670	$2,028,354
0.6	Segment 2 Westside Loop - Phase 2f	$169,386	$1,569,324	$1,738,710
1.6	Segment 2 Westside Loop - Phase 2g	$440,430	$5,157,365	$5,597,795
0.3	Segment 3 Southside Trail - Phase 3a	$126,346	$1,146,950	$1,273,296
11.0	**Total**	**$3,036,737**	**$34,571,926**	**$37,608,664**

Estimated cost is based on material and labor pricing from summer 2021. For each phase the estimated cost is presented to pre-construction engineering cost and construction cost. The construction cost estimate will entail trail construction per type, signage, landscape, trail amenities, lighting & security cameras. Estimated costs for easements and property acquisition are not included but should be considered prior to beginning implementation.

Cost Summary Cont'd: Tier II

Tier 2				
Mileage	**Trail Name**	**P&E**	**Construction**	**TOTAL**
0.6	Segment 3 Southside Trail - Phase 3e	$201,992	$1,941,710	$2,143,702
0.5	Segment 3 Southside Trail - Phase 3f	$180,829	$2,250,400	$2,431,229
0.2	Segment 3 Southside Trail - Phase 3g	$183,855	$2,214,830	$2,398,685
0.8	Segment 3 Southside Trail - Phase 3h	$146,385	$1,482,770	$1,629,155
0.6	Segment 3 Southside Trail - Phase 3i	$49,856	$643,365	$693,221
1.1	Segment 4 Southwest Connector - Phase 4a	$328,545	$4,009,380	$4,337,925
1.1	Segment 4 Southwest Connector - Phase 4b	$42,111	$569,450	$611,561
1.6	Segment 4 Southwest Connector - Phase 4c	$78,667	$896,960	$975,627
1.1	Segment 4 Southwest Connector - Phase 4d	$295,225	$3,766,400	$4,061,625
0.3	Segment 4 Southwest Connector - Phase 4e	$50,822	$390,940	$441,762
1.7	Segment 5 Northwest Connector - phase 5a	$510,064	$6,261,035	$6,771,099
2.1	Segment 5 Northwest Connector - phase 5b	$155,424	$1,630,520	$1,785,944
1.1	Segment 5 Northwest Connector - phase 5c	$264,583	$3,119,750	$3,384,333
1.6	Segment 5 Northwest Connector - phase 5d	$377,315	$4,545,400	$4,922,715
1.4	Segment 5 Northwest Connector - phase 5e	$336,904	$3,970,400	$4,307,304
0.9	Segment 5 Northwest Connector - phase 5f	$31,809	$353,430	$385,239
1.2	Segment 5 Northwest Connector - phase 5g	$73,610	$1,188,000	$1,261,610
1.2	Segment 5 Northwest Connector - phase 5h	$355,457	$4,357,110	$4,712,567
19.1	**Total**	**$3,663,455**	**$43,591,850**	**$47,255,305**

Total				
31.3		**$7,120,800**	**$83,428,770**	**$90,549,570**

Estimated cost is based on material and labor pricing from summer 2021. For each phase the estimated cost is presented to pre-construction engineering cost and construction cost. The construction cost estimate will entail trail construction per type, signage, landscape, trail amenities, lighting & security cameras. Estimated costs for easements and property acquisition are not included but should be considered prior to beginning implementation.

4.5 Funding Strategy

It is recommended that every effort be made to identify funding locally for developing initial trail phases rather than relying on funding from Washington or Tallahassee. The use of federal/state funding can be programmed several years in advance for extending the initial phases of the system. A public-private partnership should be created to fund development and expedite delivery of trail segments. Here are funding sources to consider when trails are built:

Local Funding

A variety of opportunities for local funding should be considered, including:

- Allocations within city/county budget
- Bond referendums
- Sales surtax generated fund
- Development impact fees
- In-kind products and services
- Philanthropic grants

State of Florida Funding

- Special project allocation

Federal Funding

Federal grants and funding program opportunities for pedestrian and bicycle projects include:

- Metropolitan Planning Organization (MPO) prioritizes and distributes federal transportation funding through the Regional Transportation Investment Generating Economic Recovery Discretionary Grant Program (TIGER)
- Federal Transit Administration Capital Funds (FTA)
- Recreational Trails Program
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Highway Safety Improvement Program (HSIP)
- Land and Water Conservation Fund (LWCF)
- National Highway Performance Program (NHPP)
- Outdoor Recreation Legacy Partnership Program (ORLPP)
- Surface Transportation Block Grant Program (STBG)
- Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program) (TA)

4.6 Formation of an Implementation Committee

The Advisory Panel, which guided the planning process, needs to evolve into a committee charged with implementation. The Advisory Panel's job of acquainting the PATH team with local needs and wants, reviewing the selected routes, and choosing the trail branding has been completed. Upon adoption of the ***Fort Lauderdale Trail Master Plan***, a new Implementation Committee, tasked with encouraging and overseeing implementation should be formed.

The Implementation Committee needs to be a politically savvy group that can raise public and private funding for the project. In addition, there needs to be adequate knowledge of the construction process among committee members to garner respect and confidence from the City and the citizens at large. The committee would benefit from individuals filling the following roles:

- Key Advisory Panel members to ensure continuity
- City staff from appropriate departments
- Pro bono real estate or right-of-way specialist
- Pro bono attorney
- Fundraising Specialist/Foundation Representative
- Police/Fire representatives
- Design/construction team member

The Implementation Committee should assume oversight of the project as soon as the City adopts the master plan.

4.7 Creation of the Friends Group

A community support organization should be formed to coordinate fund raising, public relations and support, community education and involvement, and implementation support. Named ***"Friends of LauderTrail,"*** the group will file for incorporation, appoint a board of directors, and apply for 501(c)(3) non-profit status. A website, Facebook page, and other necessary social media account should also be launched to promote the trail system.

Friends of LauderTrail will be responsible for hiring and funding a full-time Executive Director, who along with representatives of ***Friends of LauderTrail*** leadership, will serve on the Implementation Team.

4.8 Next Steps

- Adoption by the City Commission
- Establish Implementation Committee
- Allocate acquisition, P&E, and construction funding for Model Project
- Complete P&E for Model Project
- Advance ordinances re: fines for motorized use of trails and land uses adjacent to trail.
- Acquire key parcels.
- Advance Model Project to construction
- Review Implementation Priority plan and advance 2nd segment toward implementation.

Summary of 10-year Implementation Strategy

The PATH team recommends that the City Commission set a goal of completing Tier 1 projects within ten years. To meet the goal, the Commission will need to identify $4-5 million a year to develop the trail, have multiple projects in the acquisition, design, and construction phases of development at any given time, and work in partnership with the implementation committee.

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BIKE SHOP
US 1

5 BRANDING & DESIGN

5 Branding & Design Standards

5.1 Overview

The following section provides the ***LauderTrail*** with a variety of details, standards, and ideas to use when implementing the ***Fort Lauderdale 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
- Tree Root Bridging and Tree Protection
- Bridges and Boardwalks
- 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 ***LauderTrail*** are intended to meet or exceed the guidelines listed below:

- The Florida Department of Transportation Standard Specifications and Supplemental Specifications, Current Edition (FDOT Design Manual)
- 2010 Americans with Disabilities Act (ADA) Standards for Accessible Design
- Architectural Barriers Act (ABA) Accessibility Standards
- AASHTO Guide to Development of Bicycle Facilities, 2007
- MUTCD (Manual on Uniform Traffic Control Devices), 2009
- NACTO Urban Bikeway Design Guide, 2014

5.2 Trail System Naming & Logo

Through brainstorming and survey with the Advisory Panel, city's communication department along with feedback from the Commissioners, the consensus was that the ***LauderTrail*** had significant brand equity already. The decision was made based on the survey result that ***LauderTrail*** becomes the overarching name for the City of Fort Lauderdale's trail system.

The ***LauderTrail*** logo features the wave pattern of the river and the trail, representing the unique recreational opportunity along the city's waterways. The palm tree silhouette represents the new growth that will stem off ***LauderTrail*** while highlighting the city's tropical, seaside attractions.

With a clean and simple aesthetic, the main ***LauderTrail*** logo icon can be used independently, and in monotone (black & white) version for maximum flexibility of applications. A tagline can be added with the logo icon to display segment name or landmark location name as needed.

5.3 Trail Signage Standards

The proposed sign types for the ***LauderTrail*** 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.

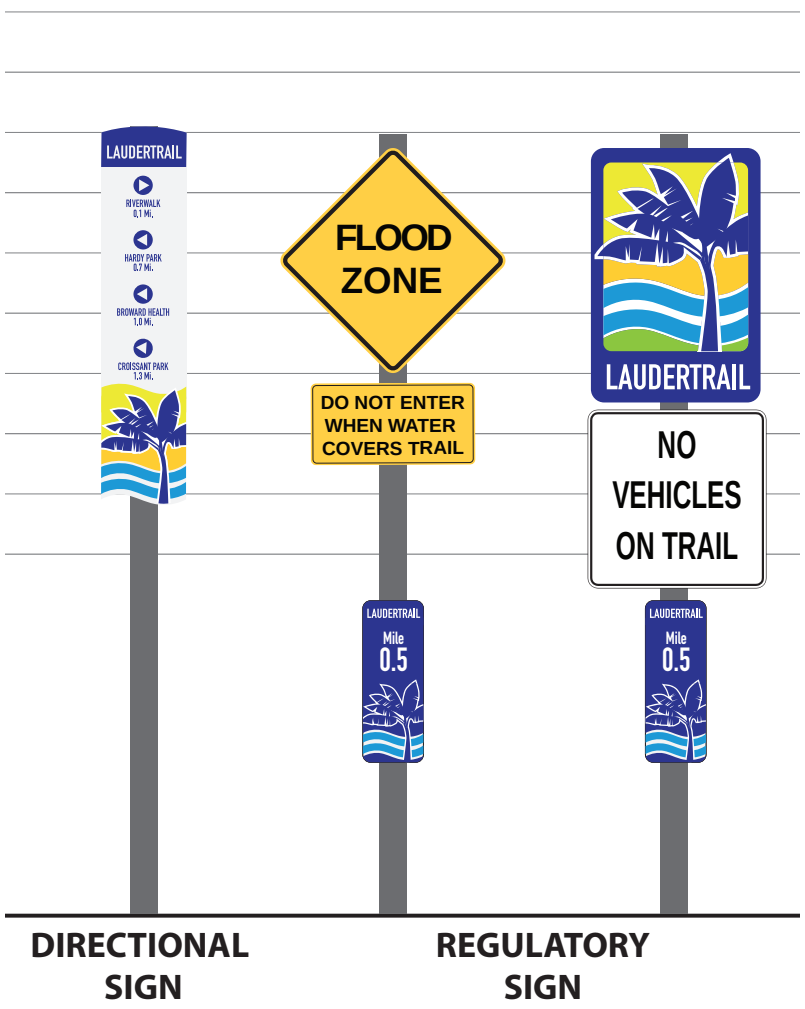
- Kiosk Signs – these are information signs to be placed at trailheads along the ***LauderTrail.*** The sign panels will provide information on trail rules, trail etiquette, recognition/acknowledgment, and/or a trail map with distance information to major destinations.

- 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 ***LauderTrail*** 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.

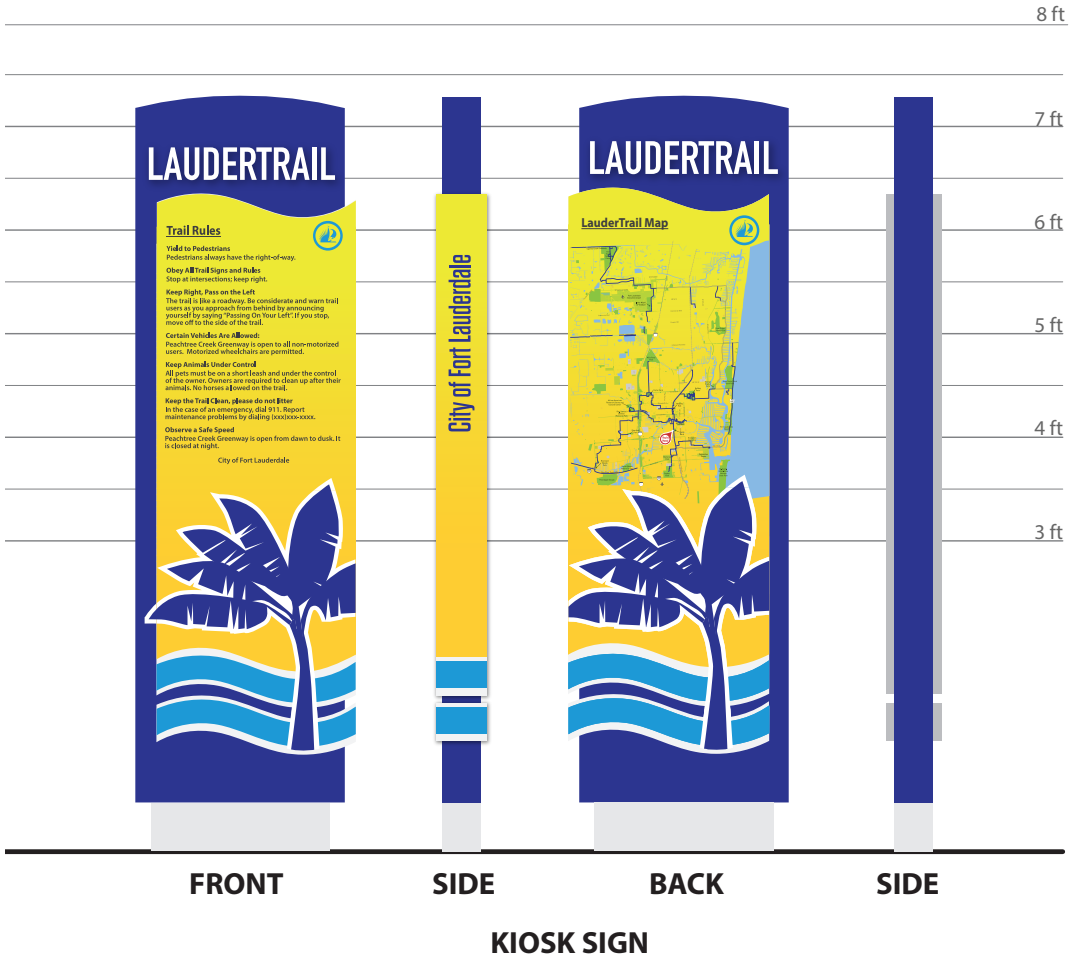
- Regulatory Signs – these are the most frequent signs along the greenway trail system. The sign panels will vary depending on information needed for the trail user to safely navigate the trail system.

- Mile Marker Signs – these are located at each one-mile distance along the trail and will have the ***LauderTrail*** logo. The sign panel will show the distance in miles and kilometers and also include the elevation of the trail at that location.



Signage Concepts

The sign concepts presented below are recommended for the ***LauderTrail*** and appear to be complementary to the city's adopted wayfinding typology. All signs to be fabricated by aluminum panel with direct printed texts/graphics. 2-feet clearance needs to be provided from sign to the trail edge. Sign posts to be in-ground mounted into a concrete footer unless otherwise noted on construction details during implementation.



5.4 Trail Amenities & Furnishings

As a complement to the existing standards for park amenities of Fort Lauderdale, the following trail amenities have been selected for the ***LauderTrail Master Plan.*** The powder-coated color for the bench, trash receptacle and bike rack selected by the City of Fort Lauderdale is to maintain visual similarity to the proposed trail logo and branding.

Furnishings

Bench

by MMCite Model: Miela
Materials: Cast Aluminum, Hardwood
Allows back or backless, standard length or chair, armrest options, powder coat color options to match signage post color or other custom colors

Bike Rack

by MMCite

Model: Lotlimit
Materials: Steel
Description: Streamlined U-shape bike rack, powder coat color option to match trail signage post or custom color

Litter Receptacles
by MMCite

Model: Prax
Materials: Steel, Hardwood
Description: Litter receptacles are available in a variety sizes, materials, colors, and/or pattern configurations. Powder coat color option to match signage post.

Bus Shelter
by MMCite

Model: Geomere
Materials: Steel, Glass, Solar Roof, Metal Roof, Green Roof
Description: Propoesed bus shelters placed at locations where trail interacts with existing transit stop

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

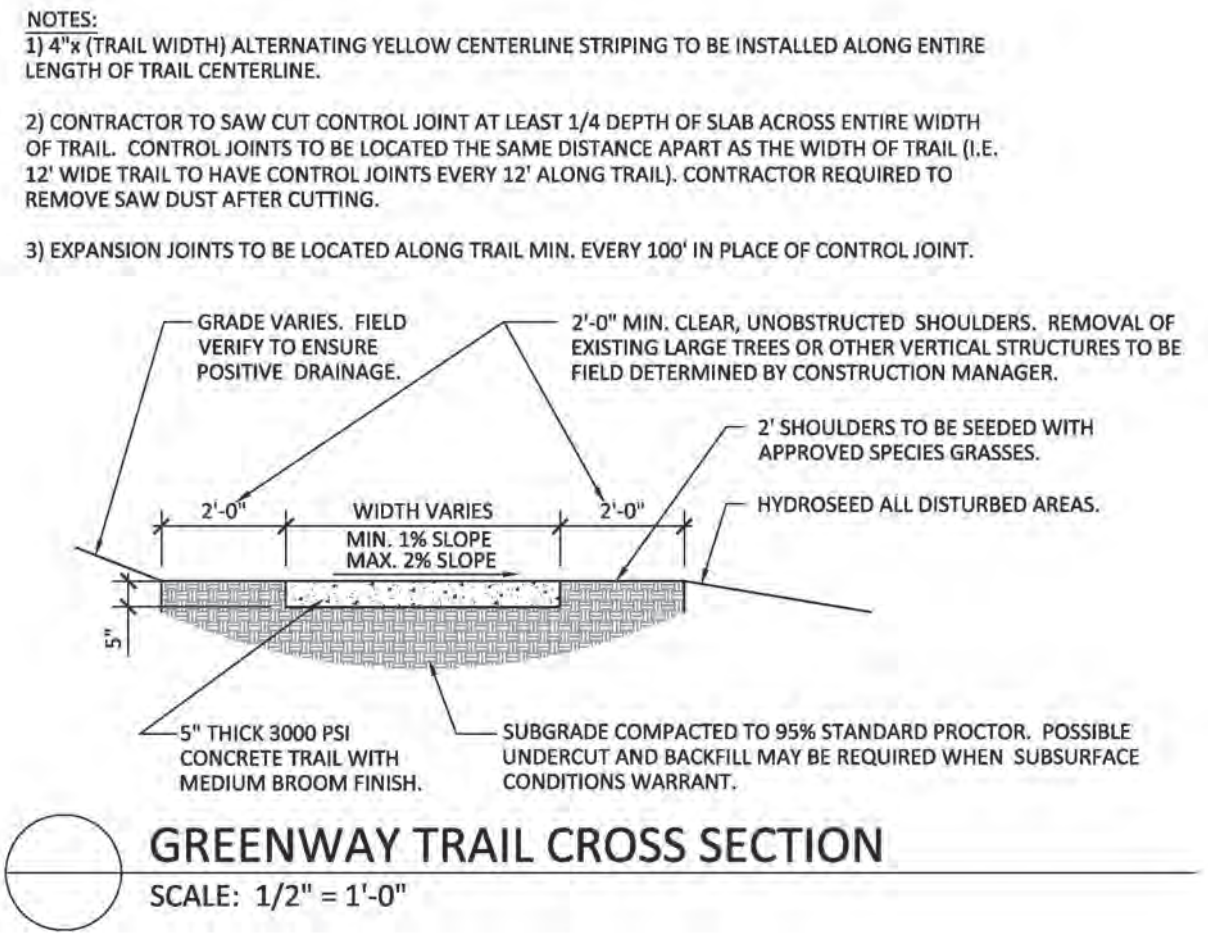
Example of light pole standard in the city.

5.5 Construction Standards

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.

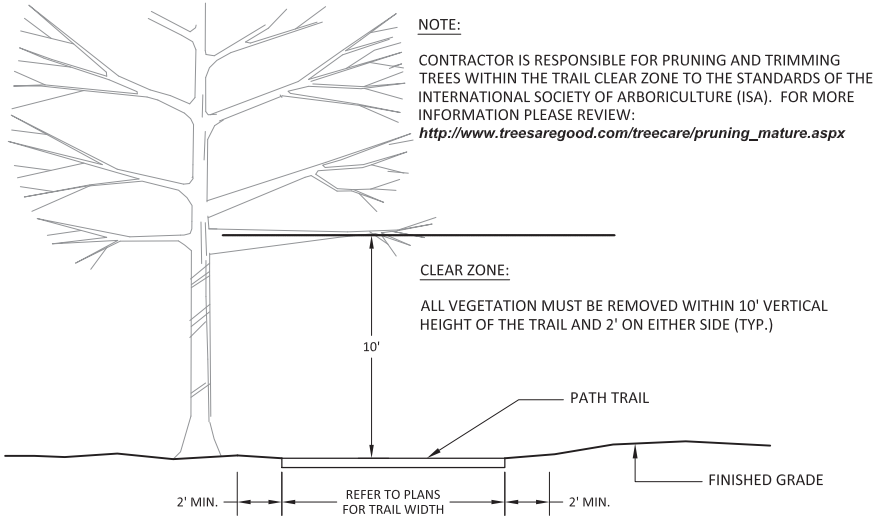


Greenway Trails (Continued)

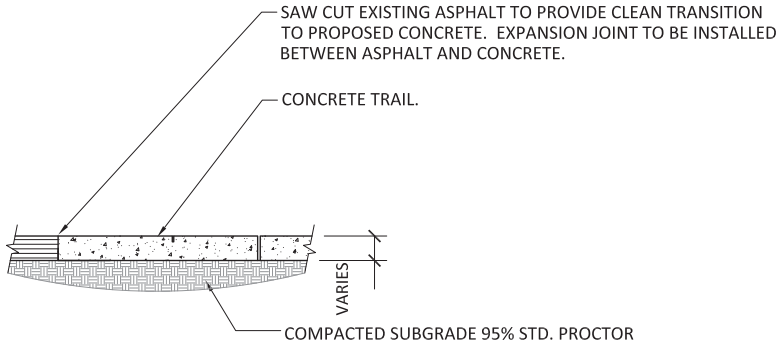
Standard greenway trail shall include a 2-foot min. clear zone on either side of the trail and a 10-foot min. vertical clearance from trail surface.

Example of a greenway trail in Carrollton, Georgia

Example of a green centerline strip on a greenway trail



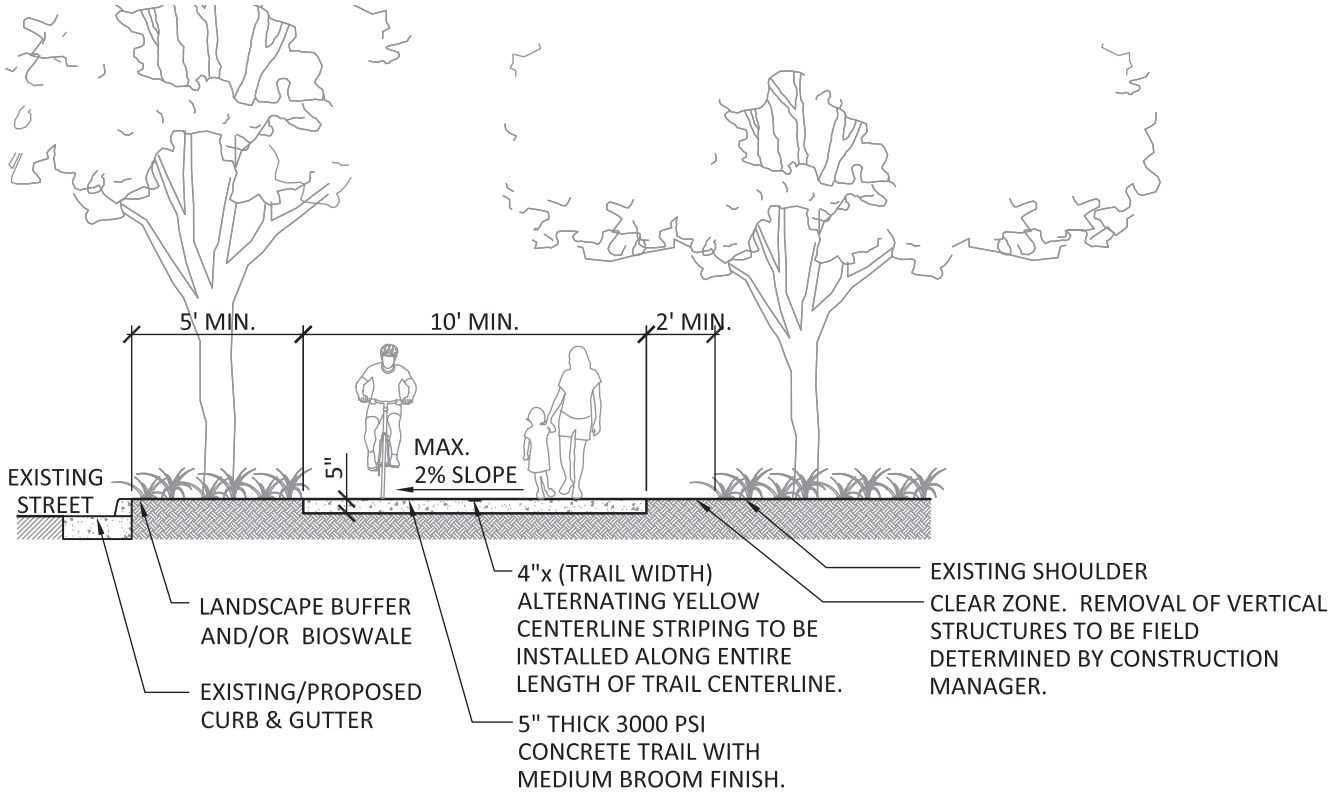
CLEAR ZONE
SCALE: 1/4" = 1'-0"



ASPHALT STREET/TRAIL TRANSITION
SCALE: 1/2" = 1'-0"

Side Paths

This typical cross section of a side path depicts a 10-foot trail with a 5-foot landscape buffer with 2’ wide curb and gutter or 6” header curb.



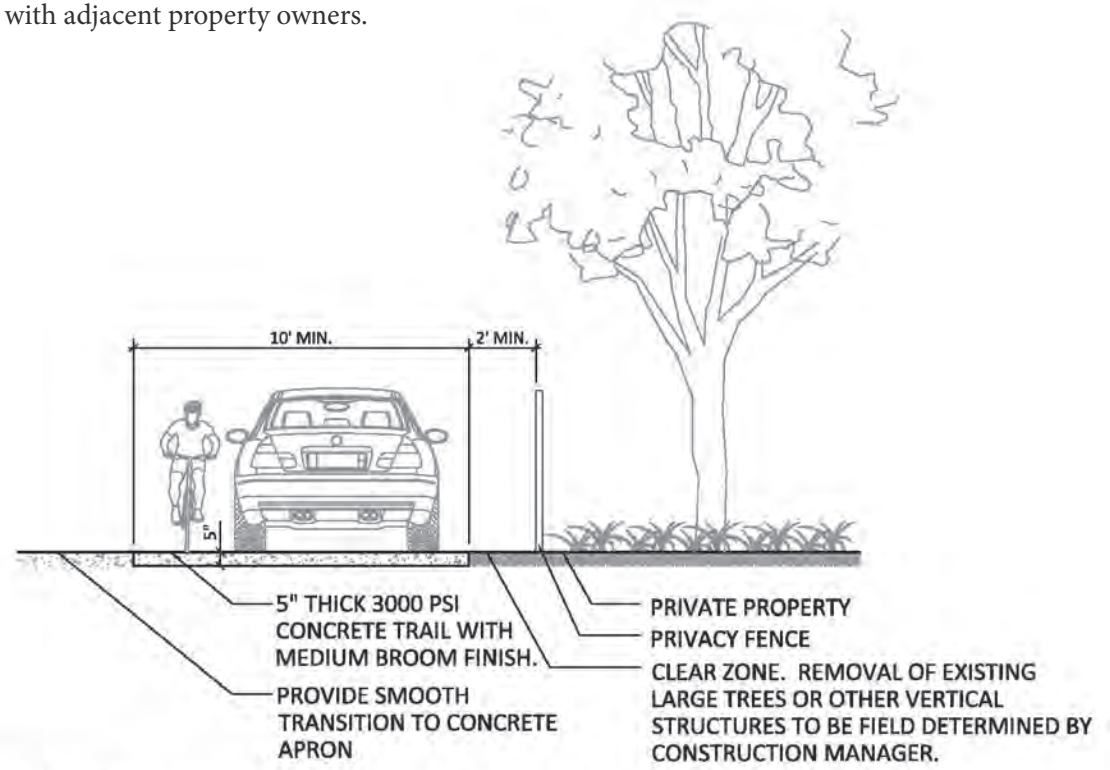
SIDE PATH CROSS SECTION

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

Green Alley

All green alleys should have MUTCD standard Shared Lane Markings to warn 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.

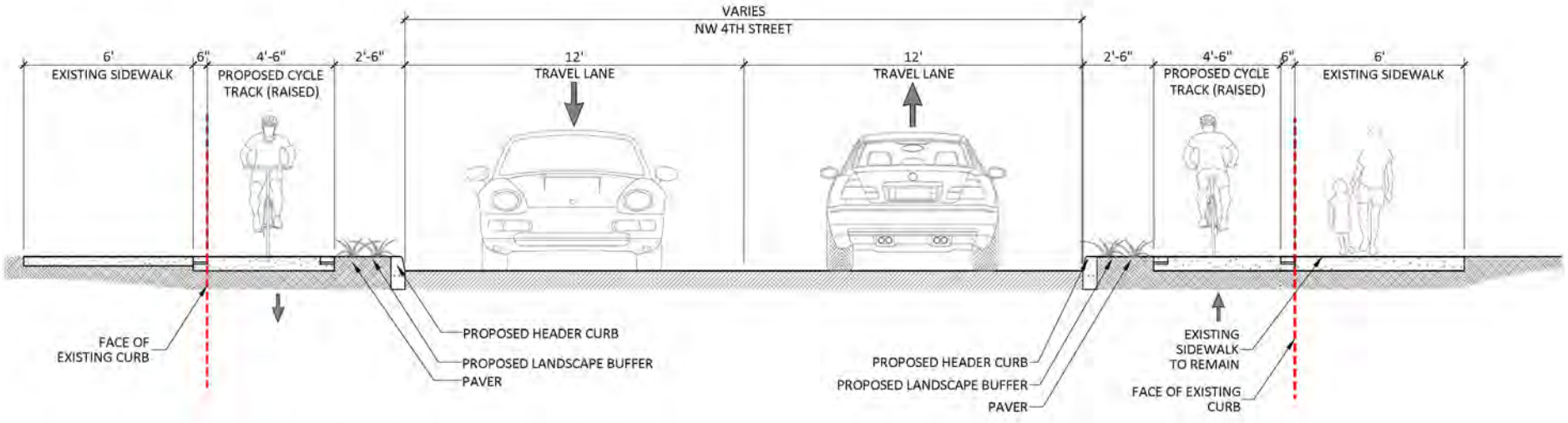


GREEN ALLEY CROSS SECTION

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

Buffered Cycle Track

- Bicycle facility separated from sidewalk and buffered from the street
- Buffered by curb, bollards, landscape area, and/or vertical elements
- Ideal for medium-high volume streets
- Utilize identification signage for pedestrians and cyclists



BUFFERED CYCLE TRACK CROSS SECTION

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

Woonerf

- Traffic calming elements, pavers, street furnishings, and signage are used to create these shared use spaces.
- Shared-use streets are curbless
- Can be closed by the city for festivals/events

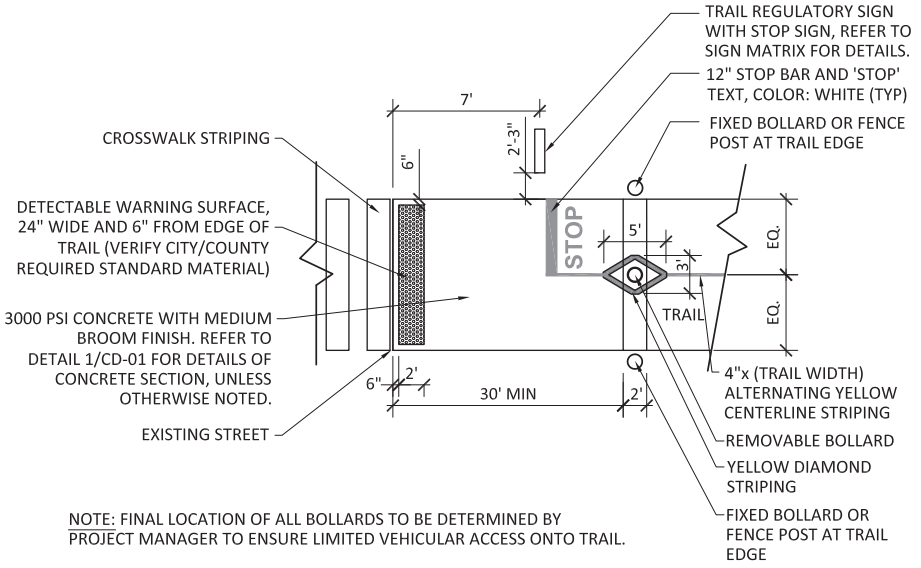
Woonerf Example: New River Street, Batavia, IL

Woonerf Example: 1st Avenue from SW 2nd Street to the New River, Fort Lauderdale, FL

Intersection Details

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

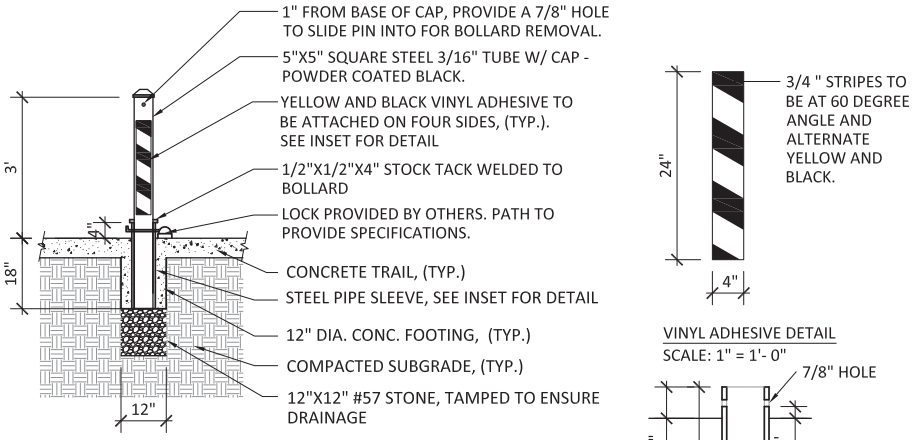
An intersection example at Spanish Moss Trail, Beaufort, South Carolina



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"

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 ***LauderTrail*** 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.

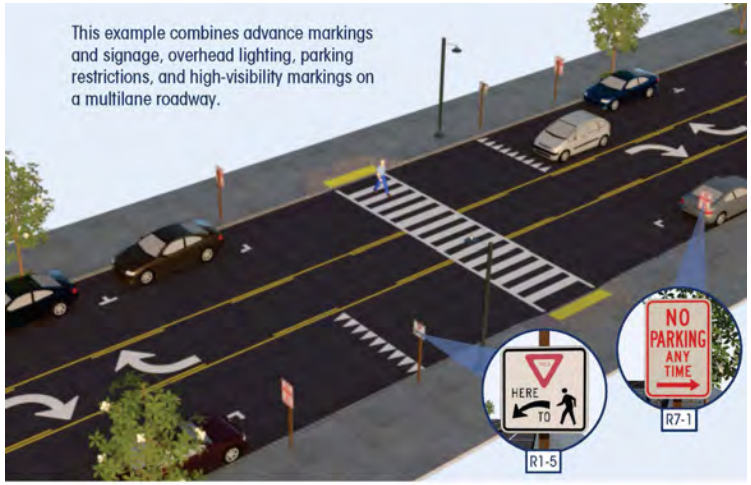
Resource: FHWA

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

Enhanced Crosswalks

A strong and vibrant crosswalk enhances pedestrian safety by heightening motorist awareness of the crosswalk. It is important for the City of Fort Lauderdale to build upon its existing series of enhanced crosswalks in car centric areas. The enhanced crosswalks will be part of the trail branding as well.



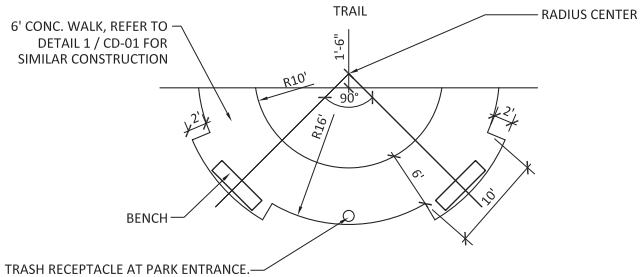
Resource: FHWA

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

Artistic crosswalk in downtown Decatur, Georgia

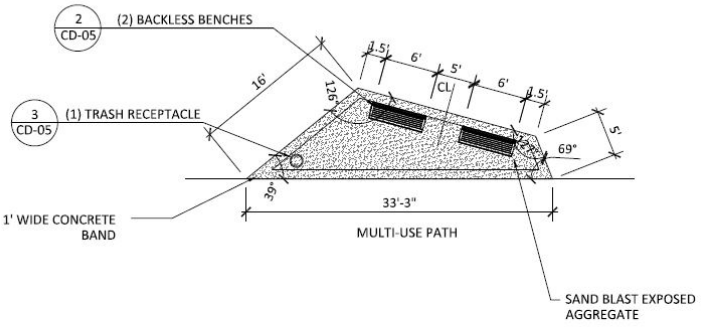
Pocket Park Standards

Pocket parks are important amenities for the ***LauderTrail*** 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.



NOTE:
ALL POCKET PARKS TO BE FIELD LOCATED BY PROJECT MANAGER. REFER TO PLANS FOR GENERAL LOCATION. DESIGNS WILL VARY DEPENDING ON LOCATION.

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



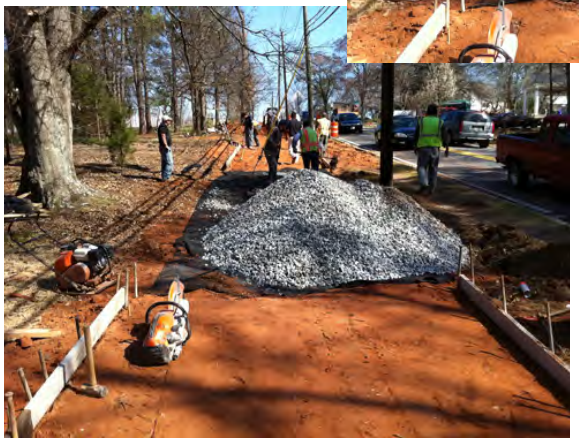
3
CD-04
POCKET PARK
SCALE: 1/8" = 1'-0"

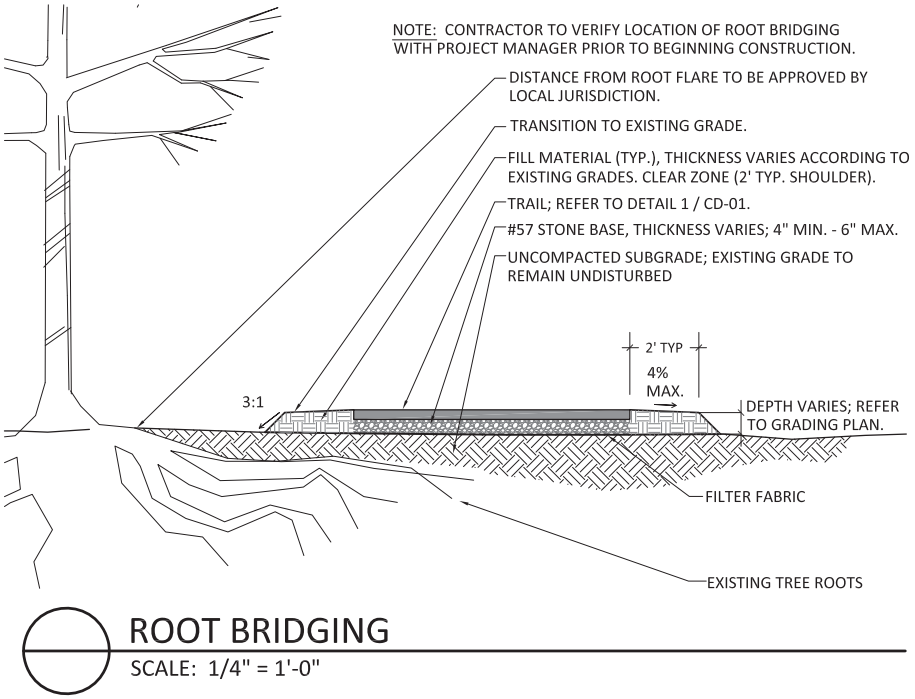
Pocket Park Example

Pocket Park Example

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 City of Fort Lauderdale standards and requirements.





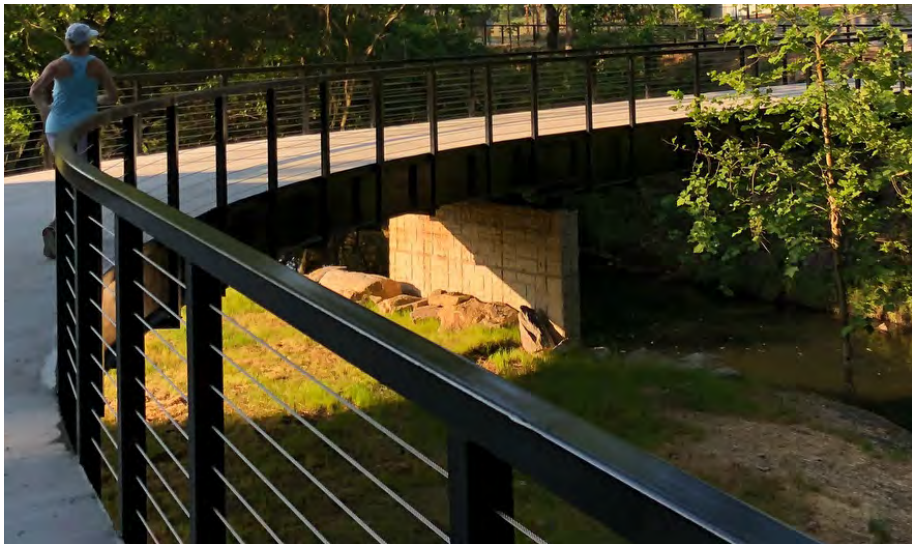
ROOT BRIDGING

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

Bridges and Boardwalks

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

Custom steel bridge can be designed to fit any setting.



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.

Fort Lauderdale, Florida

Fences and Handrails

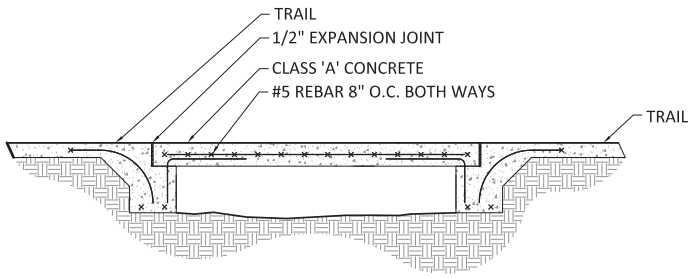
This page shows examples and details of a wooden fence and a cable handrail. Two-panel wooden fences are typically installed at trail access points to delineate space between the trail and the street. The steel handrail post with galvanized cable can establish a semi-transparent look along the edge of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

An example of the cable handrail with corten steel posts and top rail.

Post & Cable railing provides a safe trail edge while acting as a visually lighter option.

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"

Appendix 1.0
The LauderTrail Advisory Panel

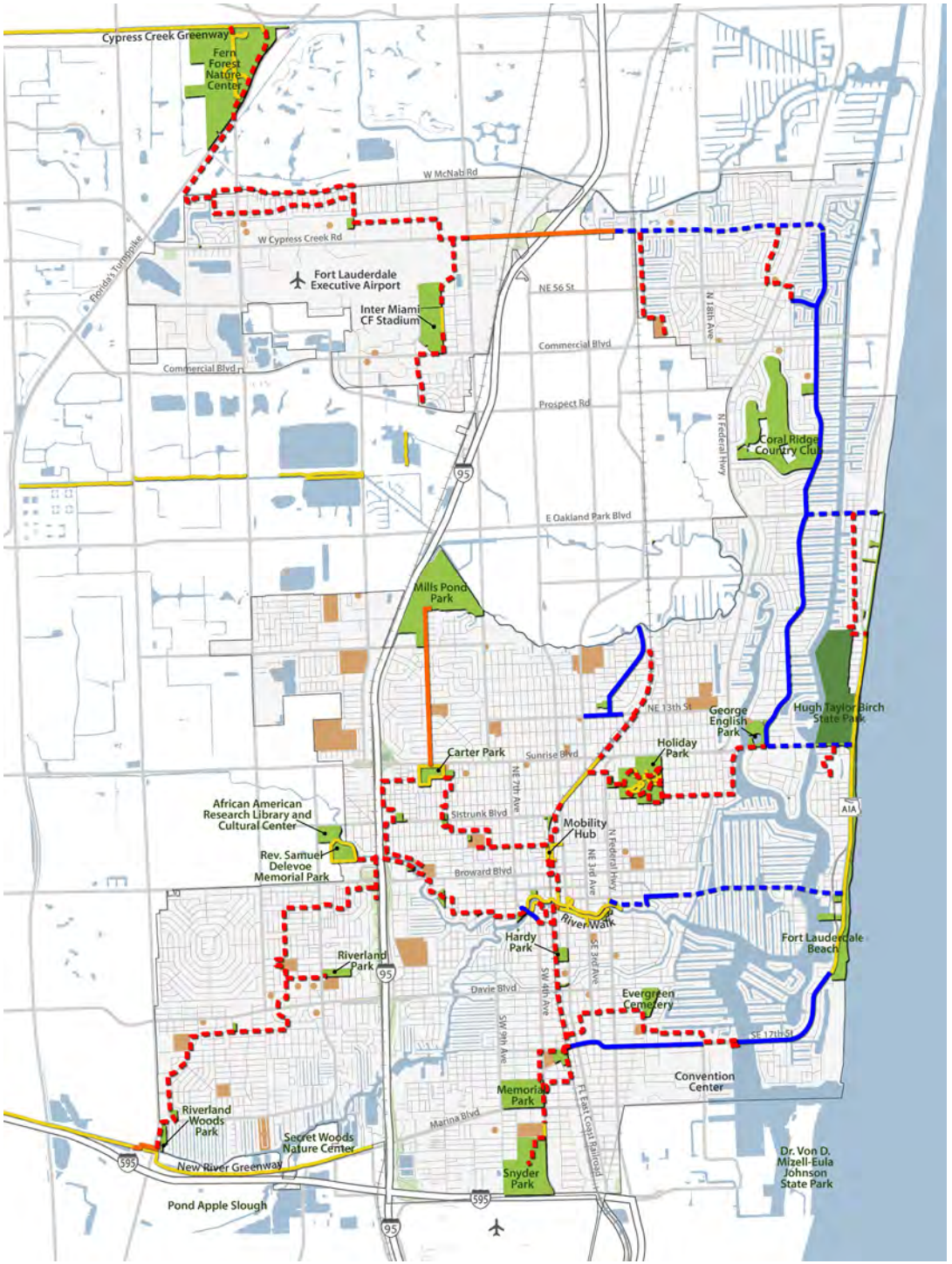
Fort Lauderdale City Management

Ben Rogers	Transportation and Mobility (TAM)
Karen Warfel	Transportation and Mobility (TAM)
Kristin Thompson	Transportation and Mobility (TAM)

Advisory Panel Members

Alex Saiz	Downtown Development Authority (DDA)
Bob Ledoux	Florida East Coast Railway (FEC)
Chris Cooper	Sustainable Development (DSD)
Dayana Diaz	Strategic Communications
Douglas Coolman	Broward Workshop
Enrique Sanchez	Parks and Recreation
Jay Schectman	***LauderTrail*** Working Group
Jeff Torkleson	Broward BCycle
Josette Severyn	Broward County Mobility Advancement Program
Kareen Boutros	Broward Workshop
Patricia West	Old Dillard Foundation
Peter Geis	Broward Metropolitan Planning Organization (MPO)
Shea Smith	Bike/Walk FTL
Terry Frank	Friends of Mockingbird Trail

Appendix 2.1:
City Department of Parks and Recreation



Legend

- Programmed Bike/Ped Improvements
- Suggested Bike/Ped Improvements
- Existing Trails
- Programmed Trails
- Proposed Trails
- Park & Open Space
- Public Owned Land
- College & School
- City of Fort Lauderdale Limit

Appendix 2.2:
Road Jurisdictions

State Roads
County Roads
City Major Roads
City Local Roads

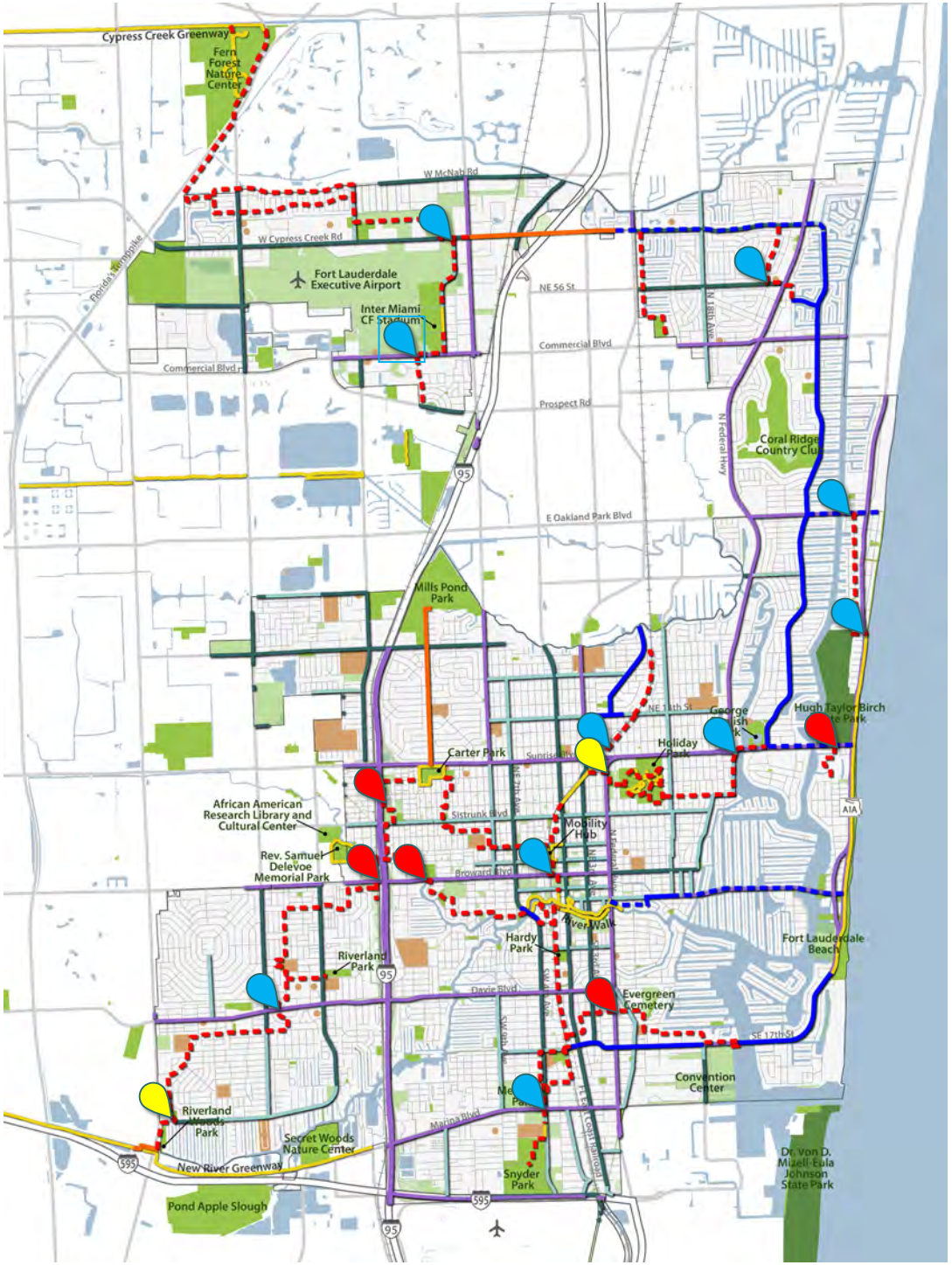
Trail Crossing with Existing Traffic Signal

New/Modified Traffic Signal

Proposed Trail along/crossing FDOT ROW

Legend

Programmed Bike/Ped Improvements
Suggested Bike/Ped Improvements
Existing Trails
Programmed Trails
Proposed Trails
Park & Open Space
Public Owned Land
College & School
City of Fort Lauderdale Limit

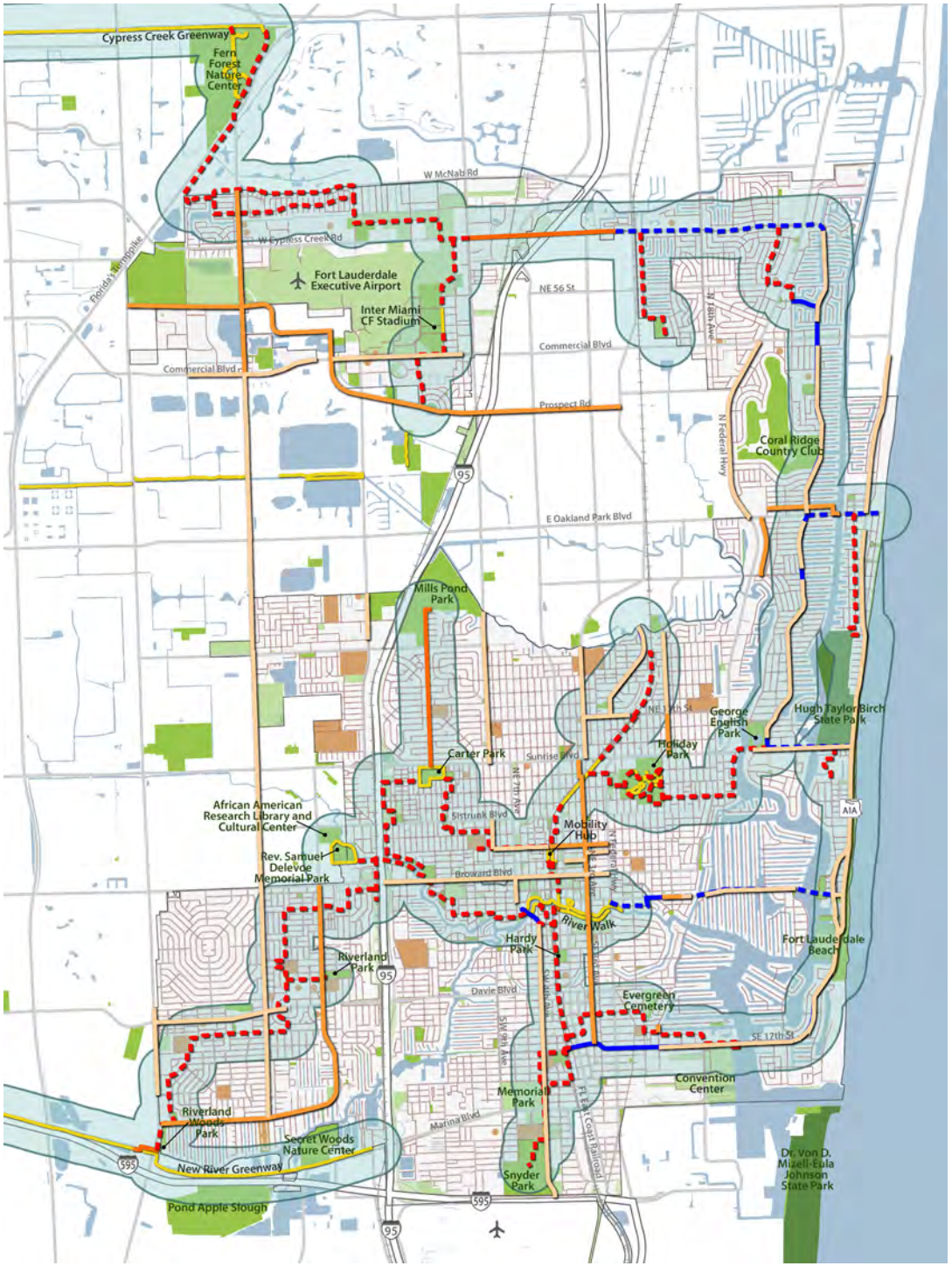


Appendix 2.3:
Bike & Pedestrian Facilities

- Existing Bike Lanes
- Planned Bike Lanes
- Existing Sidewalks
- Area within 10-minute walk of ***LauderTrail***

Legend

- Programmed Bike/Ped Improvements
- Suggested Bike/Ped Improvements
- Existing Trails
- Programmed Trails
- Proposed Trails
- Park & Open Space
- Public Owned Land
- College & School
- City of Fort Lauderdale Limit



Appendix 2.4
Broward County Transit

Transit Station

Railroad

Bus Route

Bus Stop

Legend

Programmed Bike/Ped Improvements

Suggested Bike/Ped Improvements

Existing Trails

Programmed Trails

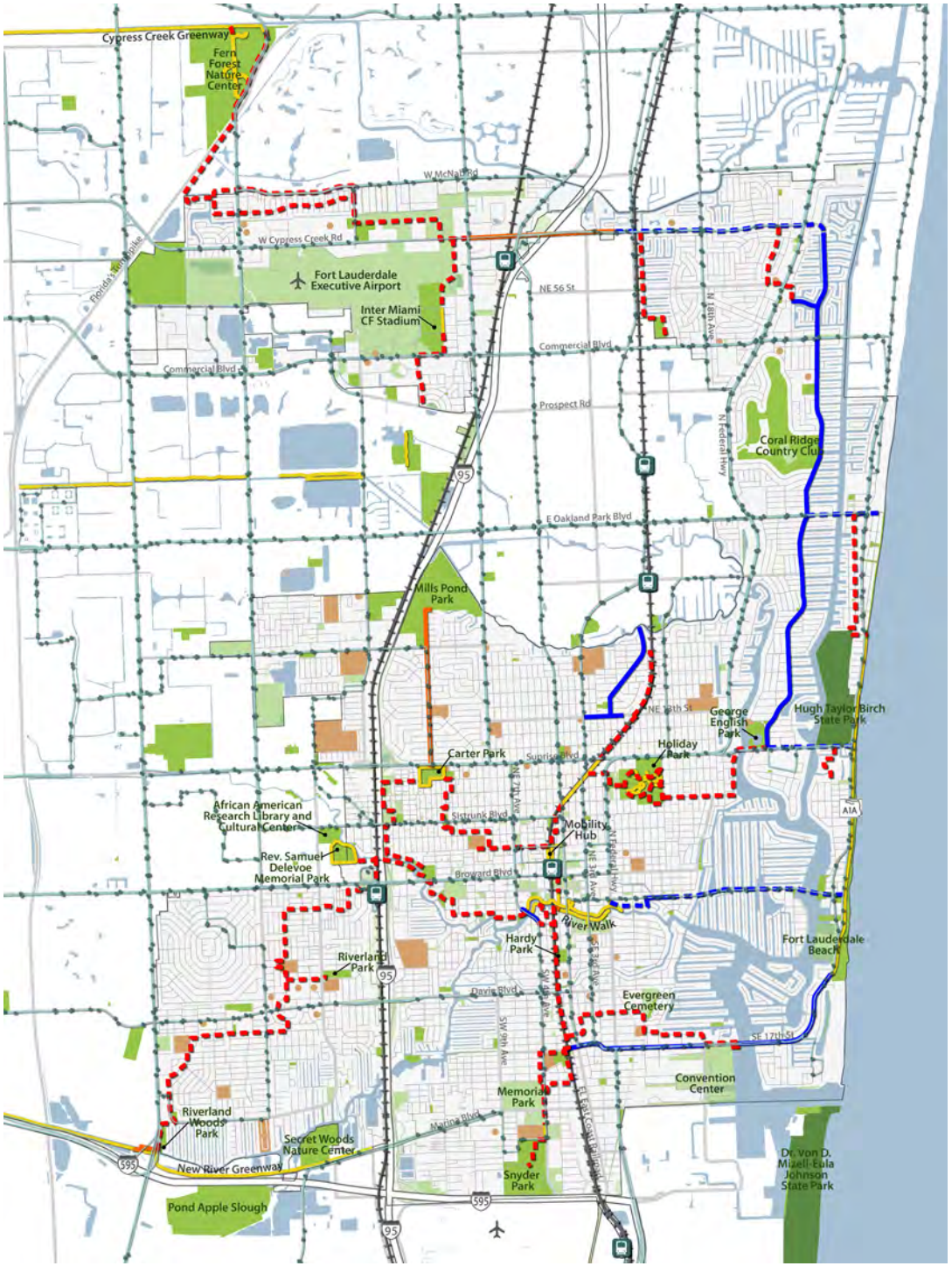
Proposed Trails

Park & Open Space

Public Owned Land

College & School

City of Fort Lauderdale Limit

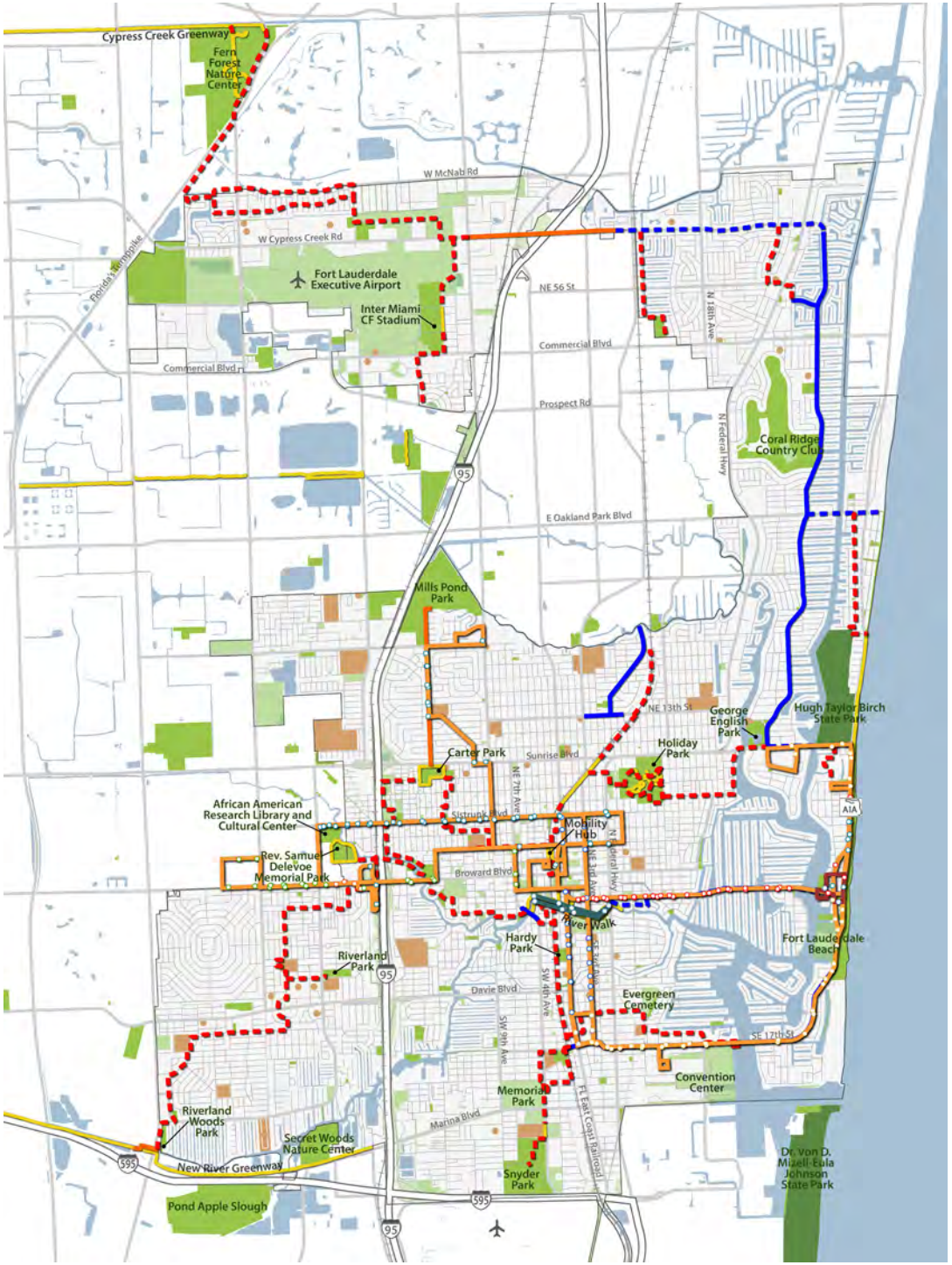


Appendix 2.5:
Fort Lauderdale Transit

- Community Shuttle
- Riverwalk Trolley
- Seabreeze Tram
- Designated Stops & Shelters

Legend

- Programmed Bike/Ped Improvements
- Suggested Bike/Ped Improvements
- Existing Trails
- Programmed Trails
- Proposed Trails
- Park & Open Space
- Public Owned Land
- College & School
- City of Fort Lauderdale Limit



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