Trail Talk: Next steps for the Coastal Trail





Coastal Trail:

24.2-mile paved trail along US 98 Scenic, Safe and flat linking Tallahassee to the coast

Part of the Capital City to Sea Trail

Capital City to Sea Trail (DEP)

- Capital Cascades Trail
- Tallahassee-St. Marks Historic Railroad
 State Trail
- Ochlocknee Bay Bike Trail (OBBT)
- Coastal Trail
- GF&A Trail



Where are we counting?

Leon County:

- 55C001 St. Marks Trailhead North
- **55C004** Capital Circle SE (Test site)
- 55C005 GF&A Trail Trout Pond
- **55C006** St. Marks Trail at Orange Ave

Wakulla County:

- **59C001** St. Marks Trail at Wakulla Station
- **59C002** Coastal Trail at OBBT
- **59C003** St. Marks Trailhead South
- **59C004** OBBT
- **59C005** Coastal Trail at Wakulla HS
- **59C006** Coastal Trail at St. Marks Trail

Site ID	ADT	ADPT	ADBT	Avg. Weekday	Avg. Weekend day
55C001	216	139	74	194	270
55C004	43	16	26	42	45
55C005	19	9	9	19	17
55C006	120	50	70	119	125
59C001	133	45	87	113	183
59C002	30	11	19	29	34
59C003	95	32	63	77	141
59C004	16	6	10	15	20
59C005	35	18	18	35	34
59C006	37	10	28	33	50

*Counts from 1/1/2024 - 7/31/2025

What the data tells us?



Panel Discussion

- How can we grow awareness and attract more users?
- What amenities & improvements are most needed?
- What partnerships & actions can we take in the next year?



Our panel Today







Cassidy Haney Florida Greenway and Trails Hugh Aaron Capital City Cyclists Michael Lewis FDOT D3

From a state perspective, what do you see as the most important next step to strengthen the Coastal Trail's role in Florida's trail network?

- A) Expanding connections: linking the Coastal Trail more directly into the statewide trail system
- B) Enhancing amenities: adding rest areas, shade, signage, and interpretive features
- C) Promoting awareness: statewide marketing to highlight the Coastal Trail as a destination
- D) Supporting funding: identifying grant programs and partnerships for future improvements
- E) Encouraging stewardship: engaging local communities and volunteers in maintenance and promotion

What type of data would be most useful to advocate for more trail funding?

- A) Volume counts & usage trends
- B) Economic impact studies
- C) Safety/incident data
- D) User demographics



What do you see as the biggest barrier to increased trail usage?

- A) Lack of awareness
- B) Connectivity gaps
- C) Safety concerns
- D) Lack of amenities



Who should take the lead role in promoting the Coastal Trail?

- A) FDOT
- B) Local governments/MPOs
- C) Non-profits & advocacy groups
- D) Community/grassroots users



HARNESSING DATA TO DRIVE NARRATIVE AND DECISION MAKING

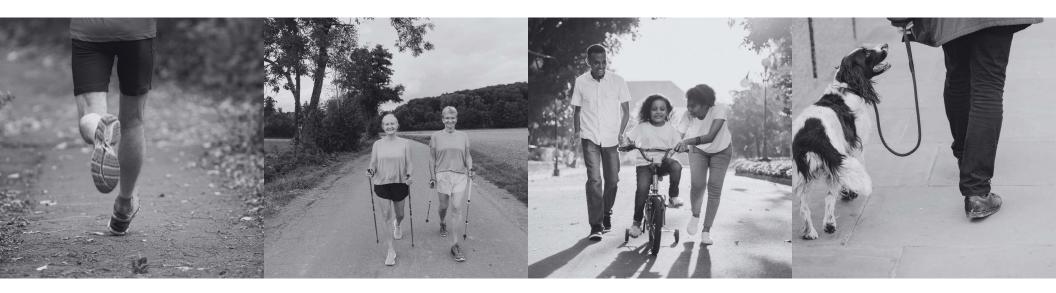


Allie Caldwell
FDOT - Roadway Design Office



GETTING THE STORY RIGHT

- What and who
- Collect and organize
- Analyze patterns
- Needs and opportunities
- Develop recommendations
- · Visualization of data
- Communication is key





WHAT'S YOUR BASELINE?

- Uses data to establish a baseline
- Understanding the current use
- Where and how often people may walk or bike
- Establishing demand and usage patterns = Determining need



ARE YOU CONNECTED?





- Assess network connectivity
- Leverage count data and GIS
- Pinpoint
 - Gaps in networks
 - Use or lack of use of network
- Guide decision making for infrastructure improvements





CAN YOU MAKE IT SAFER?



ARE YOU TRENDING?

- · Measure trends over time
- · Track activity on facilities
- Demonstrate
 - Mode shift
 - Validate investments
- Show change in behavior
- Track activity on facilities

HOW ARE YOU PRIORITIZING?



Usage, demand, and need

Support project prioritization

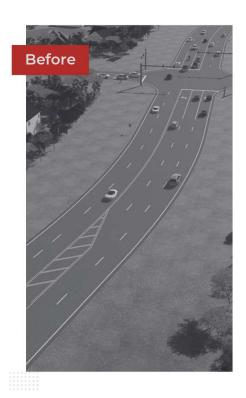


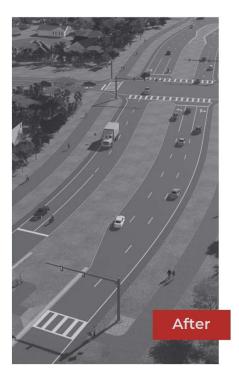




Make tough decisions with limited resources







WHAT ARE YOUR OUTCOMES?

- Measure changes and impacts
- · Before and after study
- Leverage outcomes for future projects





ARE YOUR ENGINEERING DECISIONS INFORMED?

- · Volumes, modes, locations, and facilities
 - o How might roadway design impact users?
- · Decisions should reflect behavior and need











How to Link Design and Data?

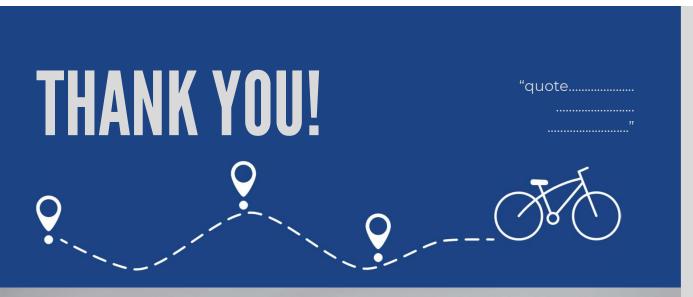
- FDOT Design Manual (FDM)
 - Statewide system
- Florida Greenbook
 - Local Roadways





FDOT Roadway Design Office Topic No: 625-000-002











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2025 Non-Motorized Statewide Meeting District One Updates

Tanya Merkle, MURP, CPM

Bicycle/Pedestrian & SUN Trail Coordinator

Mengya "Amy" Ao, PE

Bicycle/Pedestrian Safety Specialist



Florida Department of Transportation, District One



Agenda

- Bicycle/Pedestrian Master Plan
- District 1 Continuous Counters
- Legacy Trail Overpasses
- John Ringling Causeway Bridge in Sarasota
- Rich King Greenway in Collier





Bicycle/Pedestrian Master Plan







Bicycle & Pedestrian Master Plan

Inventory of existing bike/ped facilities

FDOT priority gap network

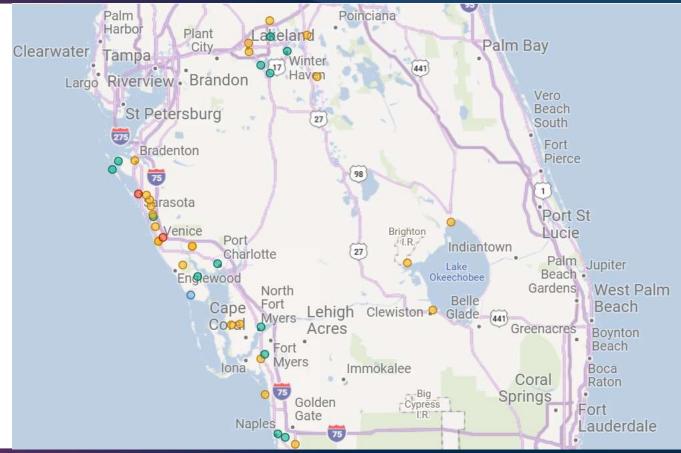






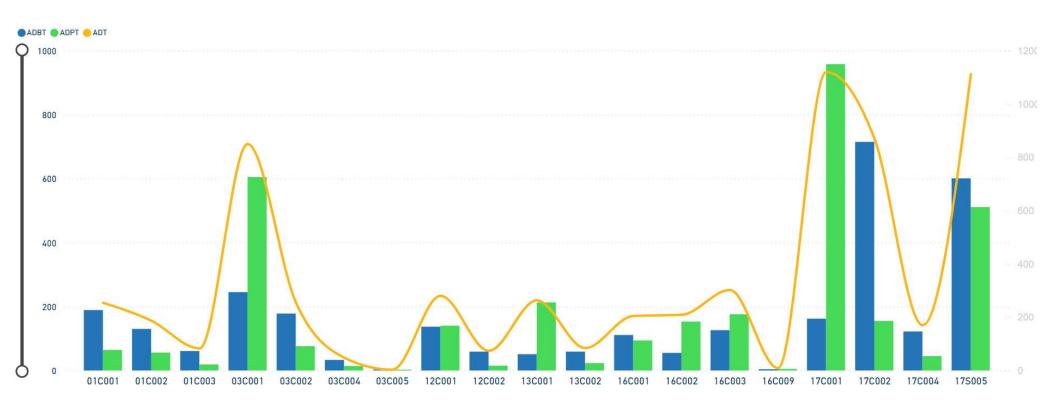
District 1 Continuous Count Sites

43 Sites:
14 Active Sites
18 Planned
Installations
7 non-FDOT





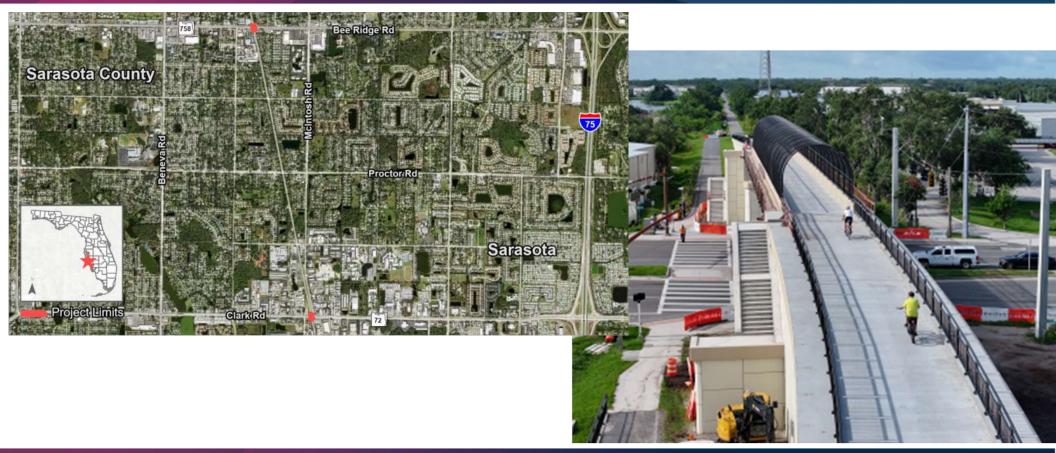








Legacy Trail Overpasses







Legacy Trail - Clark Road Overpass









Ringling Bridge - Former Bike Lane







Ringling Bridge - Shared Bus Bike Shoulder

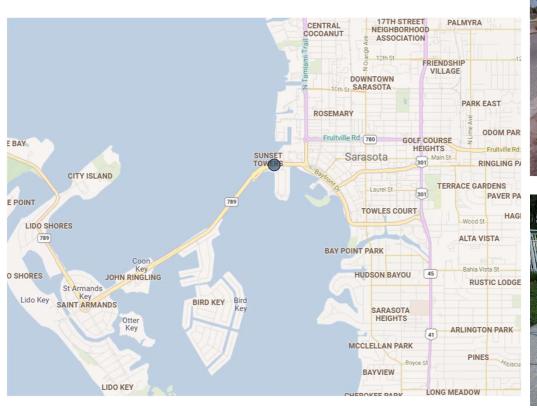








John Ringling Causeway at Siesta Key Sea Turtle Pontoon (Dual Site)





Northside



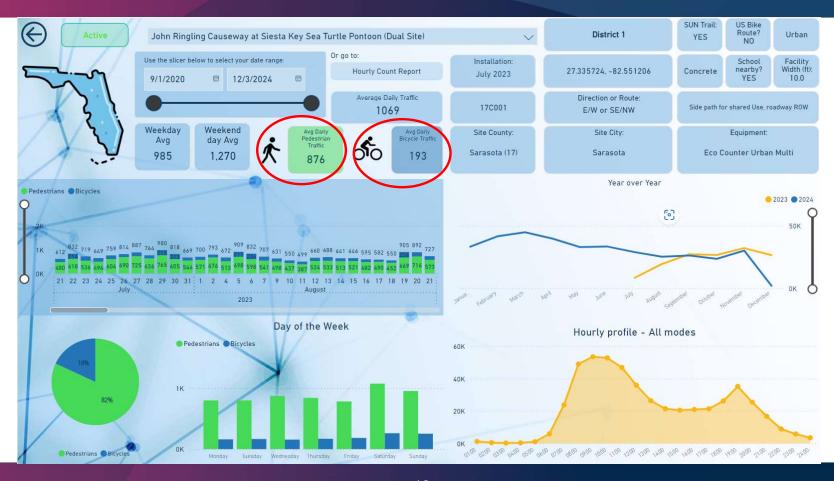


Southside





Non-motorized Counts



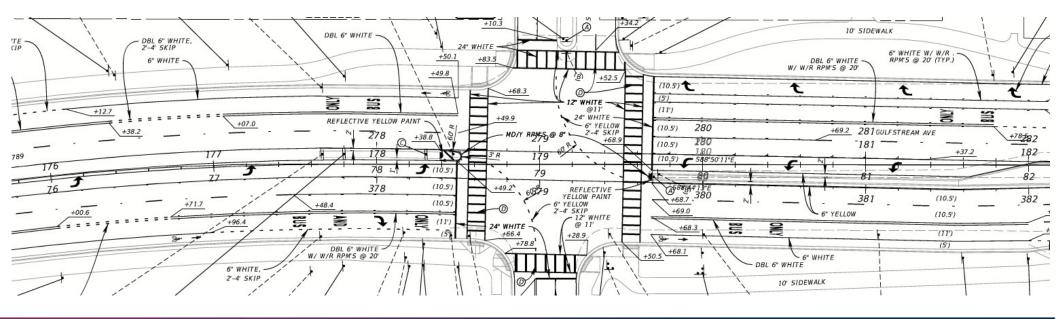




Old Draft Concept Plan along Ringling Bridge

- On-street bicycle lanes and keyholes
- 10.5' to 11' travel lane

Sunset Drive







Major Design Changes Proposed

- Add sidewalk-level separated bicycle lane per FDM 223.4.2 instead of on-street Bicycle lanes and keyholes
- Remove dedicated right-turn lanes; shared transit/right-turn preferred
- Travel lane reduction to 10' to help achieve 35 MPH target speed



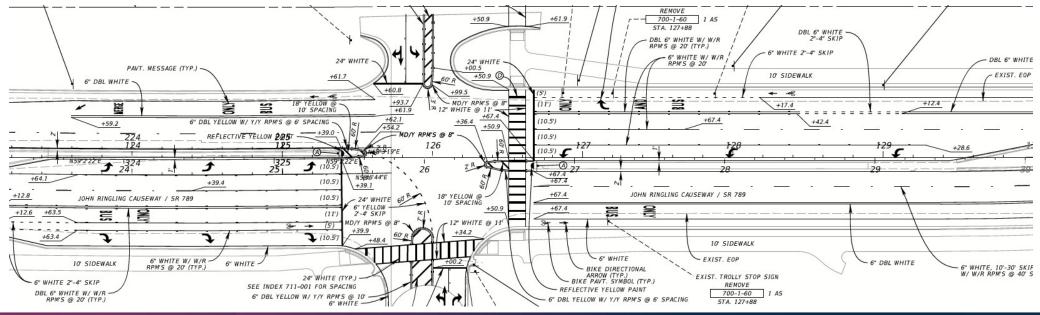




Old Draft Concept Plan along Ringling Bridge

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Bird Key Drive

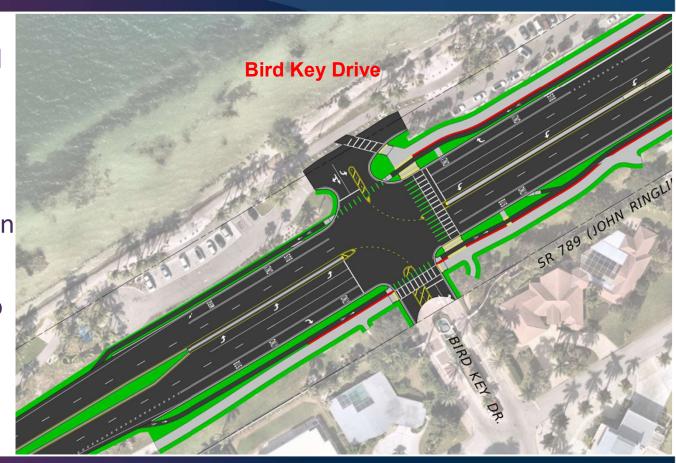






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Rich King Greenway in Collier







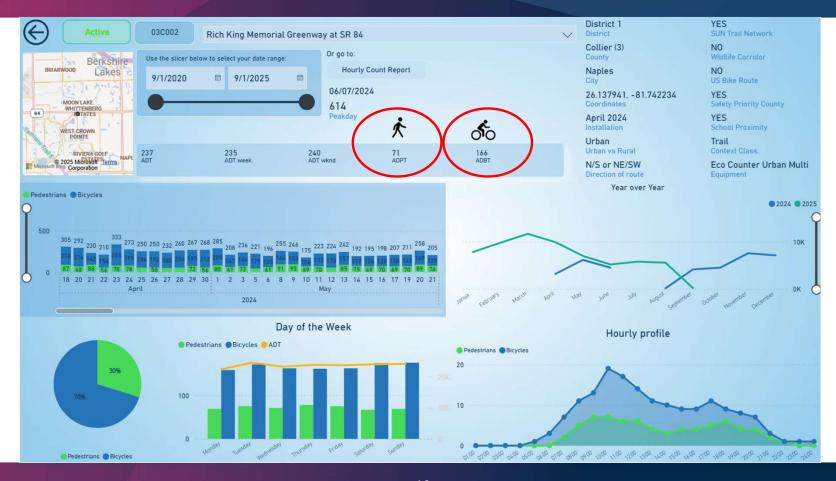
Rich King Memorial Greenway at SR 84







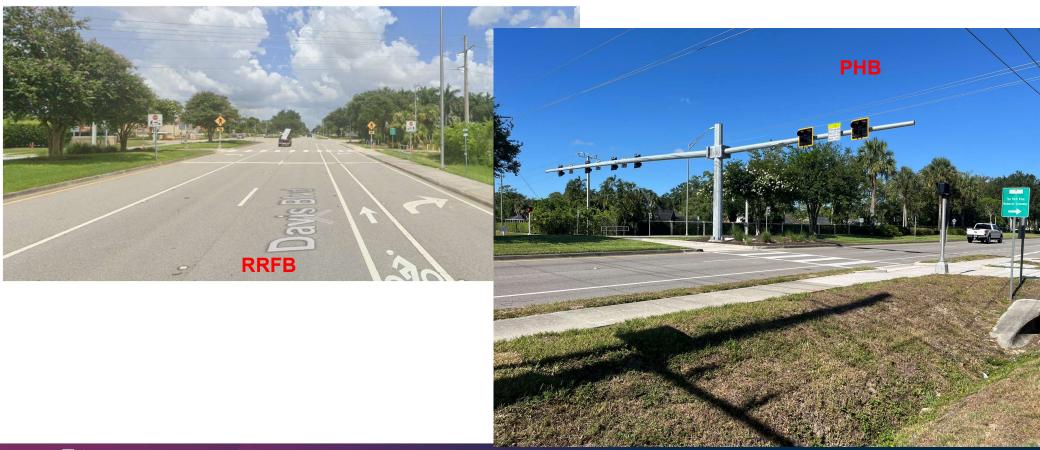
Non-motorized Counts







Before/After Improvements







Thank you!

Contact Information

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Planning Studio

FDOT District 1

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Bike/ Ped Safety Specialist

Safety Office

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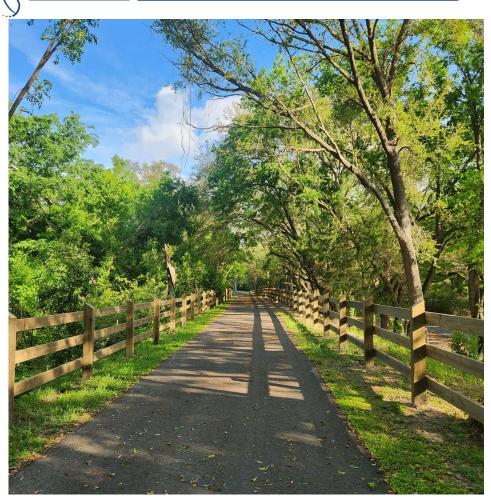


FDOT District Two Planning & Environmental Management Office

D2 Trail Inventory

Amy Roberson, D2 SUN Trail/Transportation Alternatives Coordinator

September 17, 2025



Florida Department of Transportation



BACKGROUND

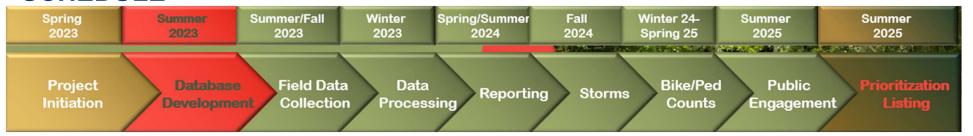
- No current trail inventory completed since inception of trail program in 2015
- Continuous request for trail information:
 - Age of trail
 - Cost of trail segments
 - Length of trail segments/Total mileage complete
 - Maintenance Responsibilities
- Funding Source
- Advertisement
- Consultant Acquired



Suwannee Greenway over Ichetucknee River



SCHEDULE





Timucuan Trail - Duval County



Inventory Objectives:

- Prioritization
- Safety Concerns
- Maintenance Concern
- Trail Connectivity



- Equipment:
- ATV
- E-Bikes
- Videolog Distance Measuring Units
- Backpack GPS Units
- iPads/Tablets
- Lessons Learned
- Identify Planned Trail Facilities
 - SUNTrail maps may not follow the correct alignment
 - · Trail facilities planned areas count in mileage
 - Document trail maintaining agencies
- Urban vs Rural Inventory
- Weather
- Temperature Issues with Equipment





NORTH FLORIDA TPO

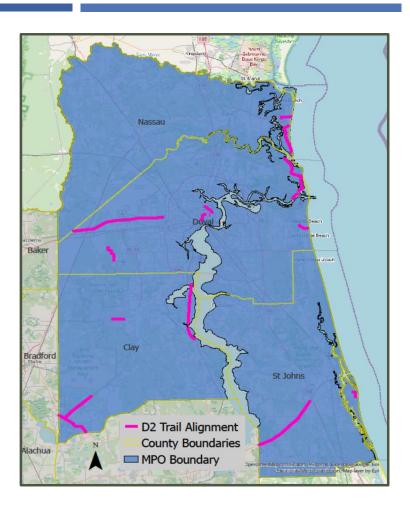
- Palatka to Lake City Clay
- CR 218 Middleburg Clay
- SR 15 GCSA Clay
- Timucuan Trail Duval
- East Coast Greenway Duval
- Cecil Recreational Trail Duval
- S-Line Duval
- Jacksonville Baldwin Duval
- Downtown JAX North to ECG Duval
- Bailey and Simmons Road Nassau
- Amelia Island Trail Phase 4 Nassau
- Armstrong Park Trail and Trail Head St. Johns
- County Park Trail Head Hastings St. Johns
- Keystone/Goldhead State Park Trail to Greencove Springs – St. Johns
- East Coast Greenway St. Johns
- Palatka to St. Augustine St. Johns
- Total Miles: 73.16



Palatka to St. Augustine



Timucuan Trail – Duval



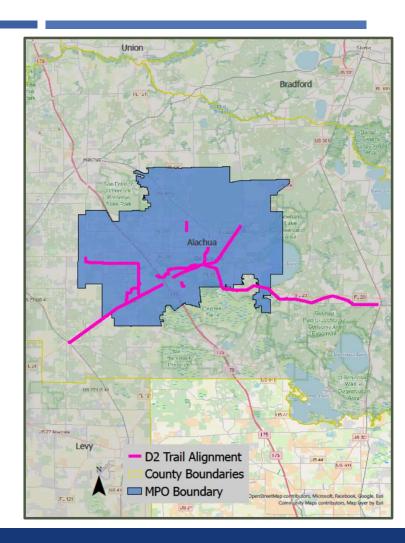


GAINESVILLE TPO

- Archer Braid
- Archer Road
- Gainesville to Hawthorne
- Gainesville to Newberry Trail
- Norton Elementary Trail
- SW 27th St
- Tower Road Trail
- Waldo Road
- Total Miles: 54.33

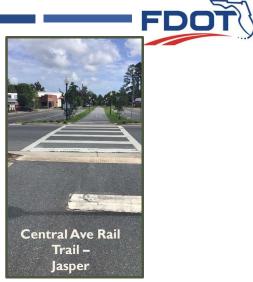


Gainesville to Hawthorne – Alachua County



RURAL TRAILS

- High Springs NW 182 Ave Alachua
- Palatka to Hawthorne Alachua
- · Palatka to Lake City Bradford
- Ichetucknee to O'Leno Trail Columbia
- Nature Coast Trail Dixie
- Old Town Elem School Dixie
- Nature Coast Trail Gilchrist
- Central Ave Rail Trail Hamilton
- CR 354 Lafayette
- Cross Florida Greenway Levy
- Nature Coast Trail Levy
- Madison County Four Freedom Trail Madison
- 309C Multi-Use Path Putnam
- Palatka to Hawthorne Putnam
- Palatka to Lake City Putnam
- Palatka to St. Augustine Putnam
- US 17 Trail-Putnam
- Live Oak Rail Trail Suwannee
- Suwannee River Greenway at Branford Suwannee
- Palatka to Lake City Union
- State Road 121 Rail Trail Union
- Total Miles: 148.18







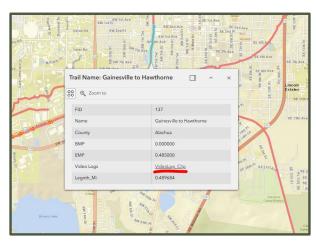
Florida Department of Transportation



FEATURES COLLECTED

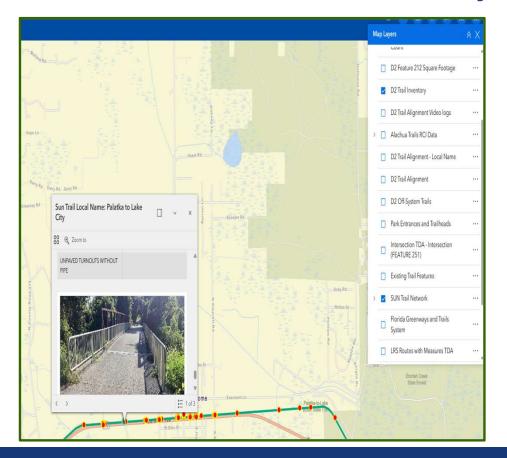
- Assessments
- Pavement Condition
- Structure Integrity
- Data Collected
- Trail Geometry (Alignment, Width, Shoulders)
- Surface Description
- Drainage (Crossdrains, Storm Sewers)
- Intersections
- Railroad Crossings
- Safety (Guardrail, Fence)
- Miscellaneous Concrete
- Lighting
- Striping
- Symbols and Messages, Striping, Crosswalks, Stop Bars
- Videolog

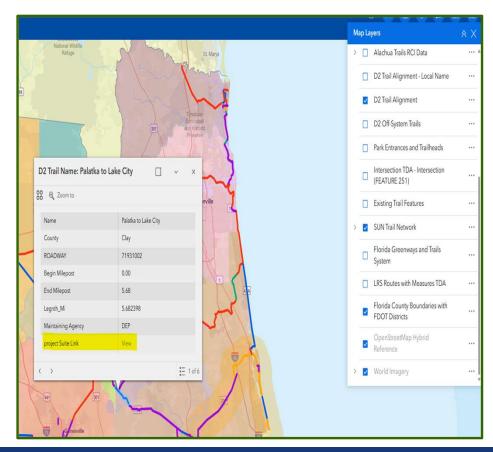














PRIORITIZING TRAIL PROJECTS

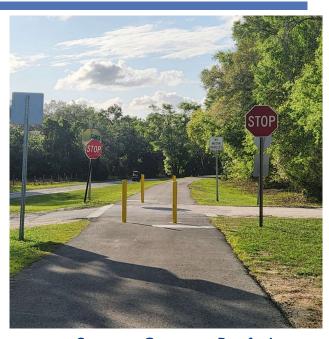
Each segment will be scored on:

- Trail Safety
- Trail Maintenance Needs
- Trail Connectivity



Live Oak Rail Trail - Suwannee County

Florida Department of Transportation



Suwannee Greenway - Branford



TRAIL SAFETY CONCERNS

Stop Bars and ADA Features



ADA Features in Place





Missing ADA Features

Crossing Safety

Missing Signage



Missing Signage and Markings



Motor Vehicle Traffic





Poor Pavement Conditions



Flooding Causing Silt Buildup



Damaged Signage



Vegetation Clearance



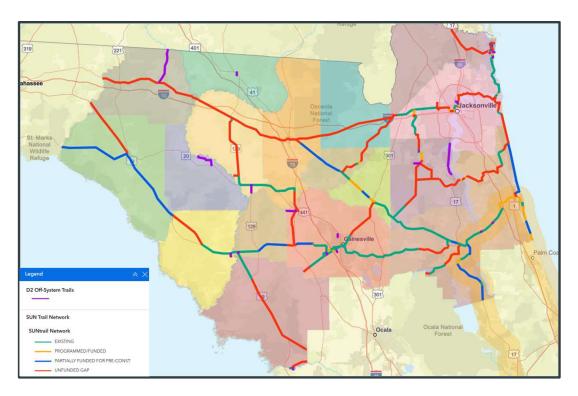
Vegetation Encroachment



Florida Department of Transportation



TRAIL CONNECTIVITY





Palatka to St. Augustine Trail - Hampton

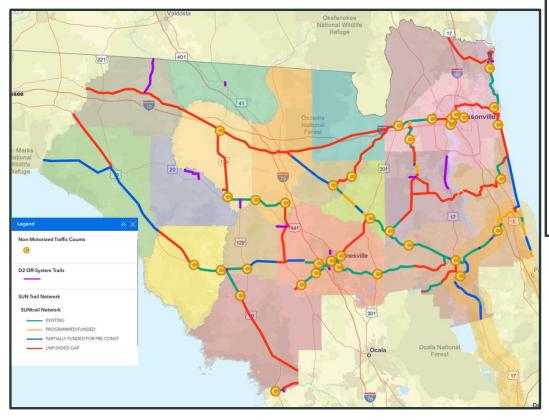


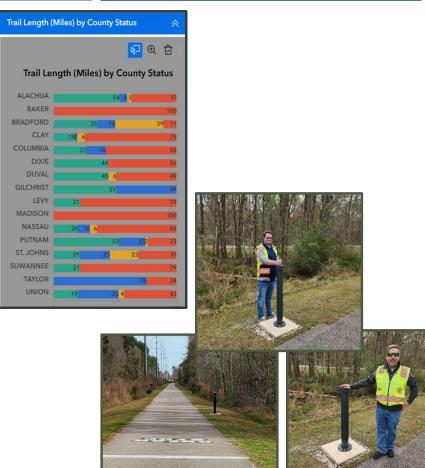
INVENTORY DATA

Name	ROADWAY	ВМР	EMP	County	County Code	Side	Feature 230 Pavement Condition Rating	F230_SURFN	Legnth_Mi	Comments
Palatka to Hawthorne	26931005	2.003	2.74636	Alachua	26	С	3.5	Asphalt	0.743366	<null></null>
Palatka to Hawthorne	26931005	0	0.814641	Alachua	26	C	3.5	Asphalt	0.814641	<null></null>
Tower Road Trail	0	9.641	9.666	Alachua	26	C	3.5	Asphalt	0.023168	Small section with crack
Archer Braid	26931003	0.388	0.852	Alachua	26	C	3.5	Asphalt	0.468121	There are cracks in different spots but the general condition is good
Archer Braid	26931003	0.853	1.224	Alachua	26	С	3.5	Asphalt	0.37565	There are cracks at different spots
Archer Road	26931002	3.006	3.817	Alachua	26	С	3.5	Asphalt	0.820987	Small cracks in a few spots and not anything major
Archer Road	26931002	8.662	9.75	Alachua	26	C	3.5	Asphalt	1.087627	Small cracks along the trail
Archer Road	26931002	10.477	11.418	Alachua	26	C	3.5	Asphalt	0.938022	At milepost 7.90, Sand is covering the trail.
Archer Braid	26931003	9.407	10.333	Alachua	26	С	3.5	Asphalt	0.585834	There are small cracks in couple of spots
Archer Braid	26931003	6.706	7.074	Alachua	26	С	3.5	Asphalt	0.369027	No Issue
Archer Braid	26931003	7.074	7.373	Alachua	26	С	3.5	Concrete	0.298613	No issue
Archer Braid	26931003	7.373	8.313	Alachua	26	С	3.5	Concrete	0.943329	No issue, Some small cracks
Gainesville to Hawthorne	26931004	15.925	17	Alachua	26	С	3.5	Asphalt	1.080992	No Major Issue, Some sealed and Small Cracks along the trail.
Gainesville to Hawthorne	26931004	0.235	0.949	Alachua	26	C	3.5	Asphalt	0.724126	Small cracks around the edges
Gainesville to Hawthorne	26931004	6.648	7.747	Alachua	26	С	3.5	Asphalt	1.110387	There are small cracks on this segment
Gainesville to Hawthorne	26931004	7.749	8.483	Alachua	26	C	3.5	Asphalt	0.735321	No Major Issue. Small cracks
Gainesville to Hawthorne	26931004	13.72	14.768	Alachua	26	C	3.5	Asphalt	1.05583	There are sealed and small cracks that are open and needs attention along the trail.
Gainesville to Hawthorne	26931004	14.769	15.924	Alachua	26	С	3.5	Asphalt	1.162227	There are small cracks around along the trail. No major issue
Gainesville to Hawthorne	26931004	17.001	17.407	Alachua	26	С	3.5	Asphalt	0.419213	This segment have shared pavement with the road and the condition is good with normal cracks.
Waldo Road	26931008	2.951	3.914	Alachua	26	С	3.5	Asphalt	0.974295	No major issue, some traverse cracks with grass growing out of it.
Waldo Road	26931008	0.359	0.857	Alachua	26	С	3.5	Asphalt	0.508802	Small cracks along the trail.
Waldo Road	26931008	0.858	1.259	Alachua	26	С	3.5	Asphalt	0.419128	There are cracks along the trail.
Waldo Road	26931008	1.26	2.02	Alachua	26	C	3.5	Asphalt	0.769931	It is in good condition and just some small cracks.
Waldo Road	26931008	2.02	2.95	Alachua	26	C	3.5	Asphalt	0.936388	Small cracks along the trail with no major issue
Waldo Road	26931008	3.916	4.496	Alachua	26	С	3.5	Asphalt	0.581101	Traverse crack with grass growing out if it.
Gainesville to Newberry Trail	26931006	2.683	7.645	Alachua	26	C	3.5	Asphalt	0.772552	Raveling is present all along the trail. There are also patched areas present along the trail.
Gainesville to Newberry Trail	26931006	2.683	7.645	Alachua	26	C	3.5	Asphalt	0.806773	There are cracks all along the trail. Raveling is also present. There are small manholes in this trail and also some areas that have been



Non-Motorized Traffic Counts





Baldwin Trail - Duval County

Non-Motorized Traffic Data Dashboard







Thank you! Questions?

Amy Roberson
Planning Supervisor
Planning & Environmental
Management Office
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Email amy.roberson@dot.state.fl.us





Amelia Island Trail - Nassau County



Enhancing Mobility & Safety of Pedestrian and Bicycle

Michael Lewis, PE Traffic Safety Program Manager FDOT District 3



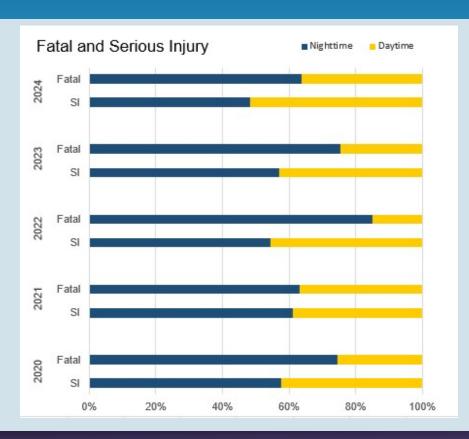






District 3 Pedestrian Crash Facts





Total Pedestrian Crashes by Severity							
Severity	2020	2021	2022	2023	2024		
Fatality	59	65	47	53	44		
Serious Injury	71	67	88	84	83		
Injury	334	332	388	392	394		
PDO	77	58	73	75	54		
Total	541	522	596	604	575		

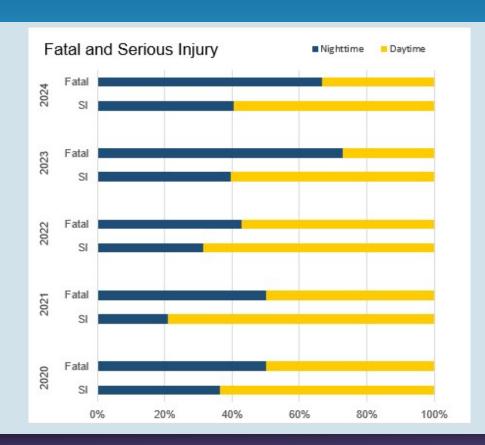
Nighttime Pedestrian Crashes by Severity							
Severity	2020	2021	2022	2023	2024		
Fatality	44	41	40	40	28		
Serious Injury	41	41	48	48	40		
Injury	125	117	123	149	116		
PDO	28	19	24	19	14		
Total	238	218	235	256	198		





District 3 Bicycle Crash Facts





Total Bicycle Crashes by Severity							
Severity	2020	2021	2022	2023	2024		
Fatality	8	12	14	11	12		
Serious Injury	22	38	38	38	32		
Injury	170	182	210	218	263		
PDO	63	35	77	70	53		
Total	263	267	339	337	360		

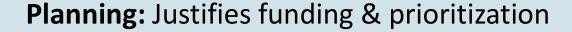
Nighttime Bicycle Crashes by Severity								
Severity	2020	2021	2022	2023	2024			
Fatality	4	6	6	8	8			
Serious Injury	8	8	12	15	13			
Injury	37	44	51	55	54			
PDO	11	8	19	12	9			
Total	60	66	88	90	84			





Value of Non-Motorized Traffic Data

Why: Helps identify high-use corridors for improvements



Performance Tracking: Monitors usage after construction













US 98 / 3-Mile Bridge Over Pensacola Bay

Signature Project: High-profile multimodal crossing, bike lanes, shared-use paths, and pedestrian facilities

Data Component: Automatic counters help track daily/seasonal patterns

Use Case: Justify investments in similar bridge projects across the District

Deployment Date: Apr. 2022





Lynn Haven Rails-to-Trails

Conversion of abandoned rail corridor into a multi-use trail

- 3.1-mile multi-use trail along a former Air Force supply railroad bed
- Two trailheads and multiple pedestrian access points
- Safety features like yellow flashing lights at road crossings
- Amenities such as signage, lighting, and rest areas

Deployment Date: Sept. 2023













SunTrail Segment (US 98, Franklin County)

2.48-mile segment east of Ochlockonee Bridge

- 1st of 6 Parts segments of 21.3-mile system connecting to St. Marks Trail (Capital City to the Sea Trail)
- Design completed FY 2025; Construction scheduled FY 2029

Opportunity: No counters currently in design

Perfect chance to integrate non-motorized data collection

Benefits of adding counters

- Track regional connectivity once complete
- Justify future trail segments
- Provide usage patterns for local communities and tourists







Carabelle Pedestrian Crosswalk Improvements

Midblock Pedestrian Signal

Data Component: Crash Data, Pedestrian volume counts, Community Feedback

Deployment Date: Feb. 2024





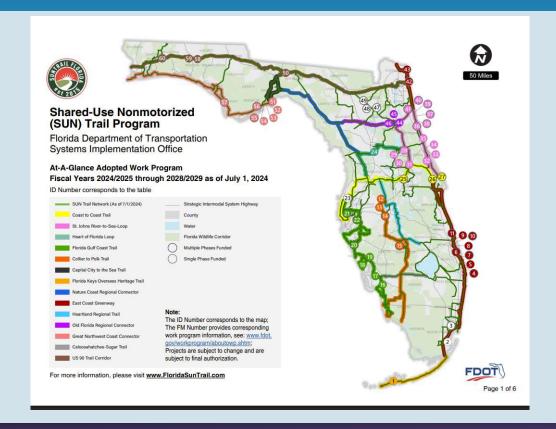
Franklin County, FL







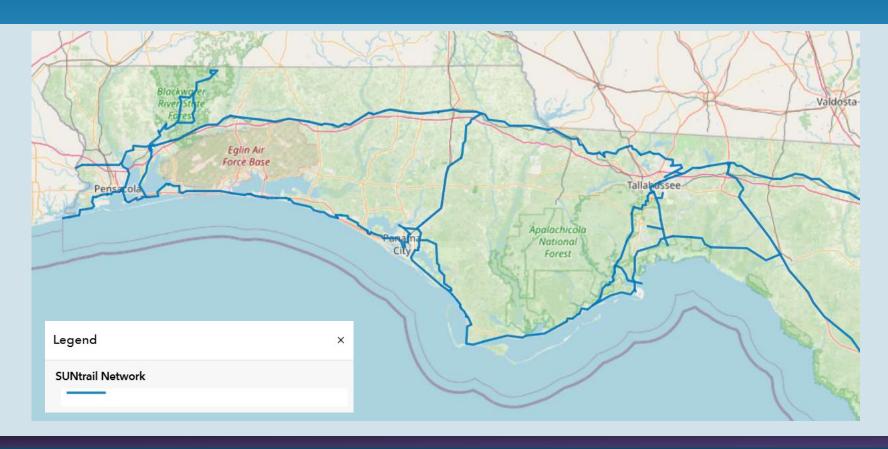
SunTrail Program







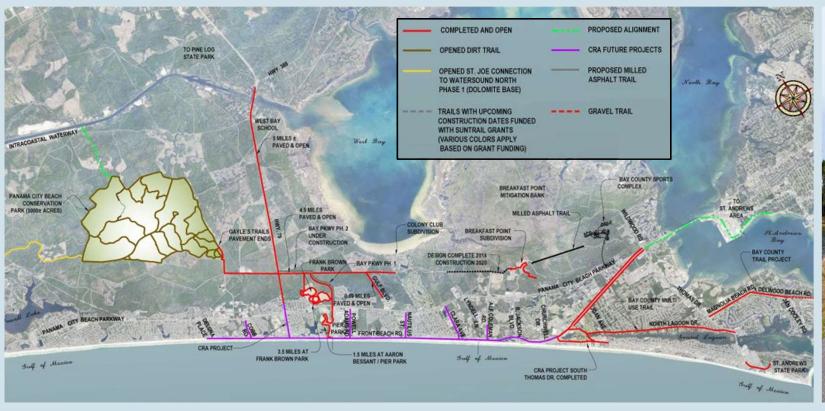
SunTrail Program – District 3







Panama City Beach - Gayle's Trails





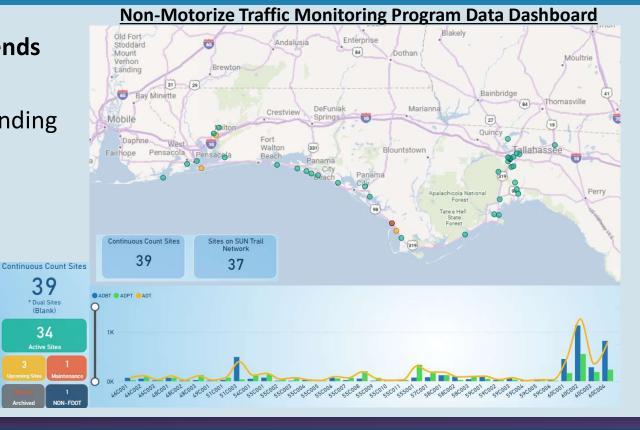


Regional Connectivity & Data Opportunities

34

Data helps tell the story of usage trends

- Identifies high-demand corridors
- Supports grant applications and funding allocations
- Tracks usage trends
- Supports maintenance schedules





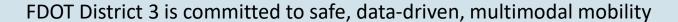
Key Takeaways



District 3 has exciting bike/ped projects already delivering value

<u>Data collection is key</u> to demonstrating usage and shaping investments

Future opportunities: Integrate counters in SunTrail and beyond







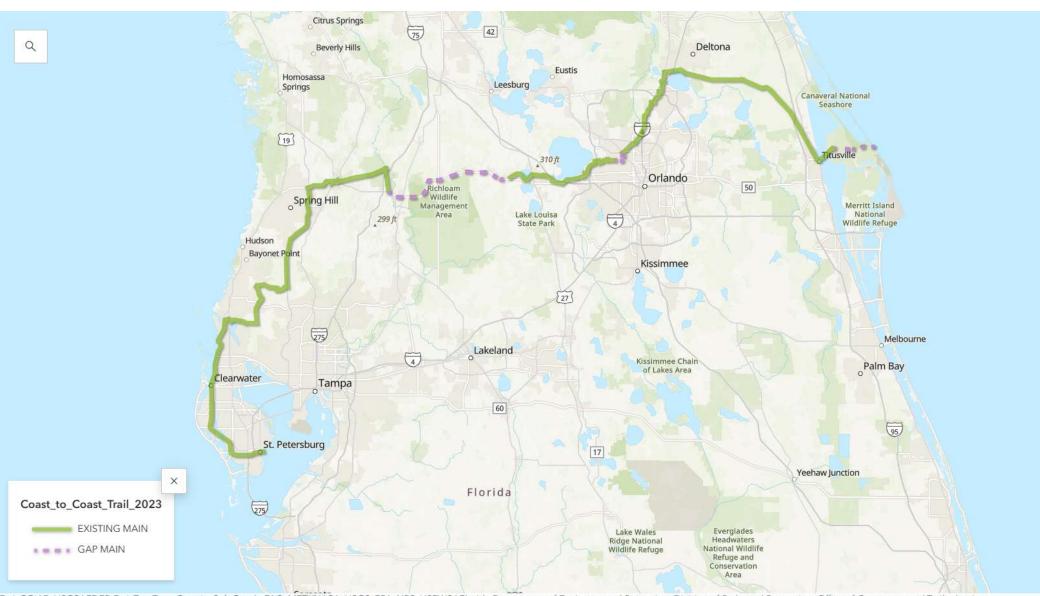




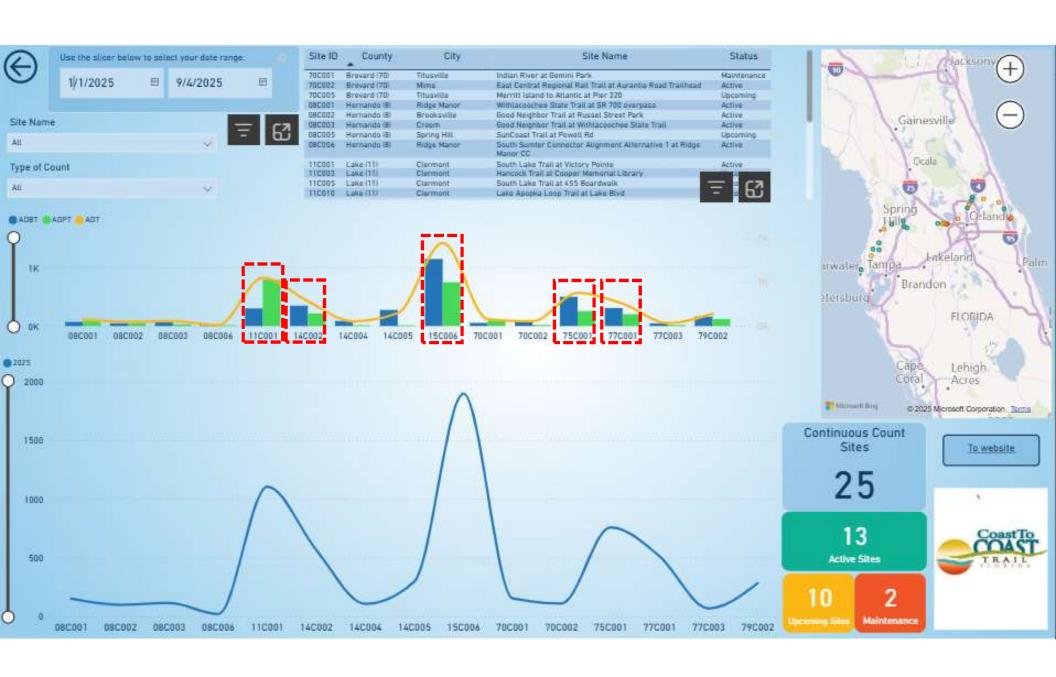
Trail Talk: Exploring the Future of the Coast-to-Coast Trail

2025 FDOT Statewide Non-Motorized Traffic Monitoring Program



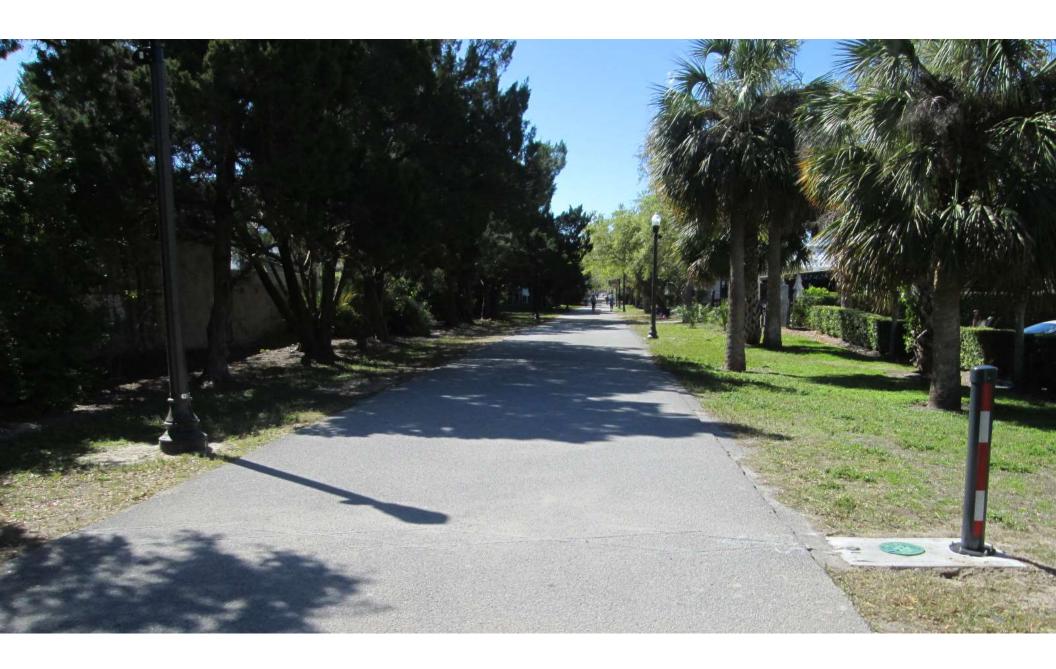


Esri, CGIAR, USGS | FDEP, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS | Florida Department of Environmental Protection, Division of Parks and Recreation, Office of Greenways and Trails, Jessi...













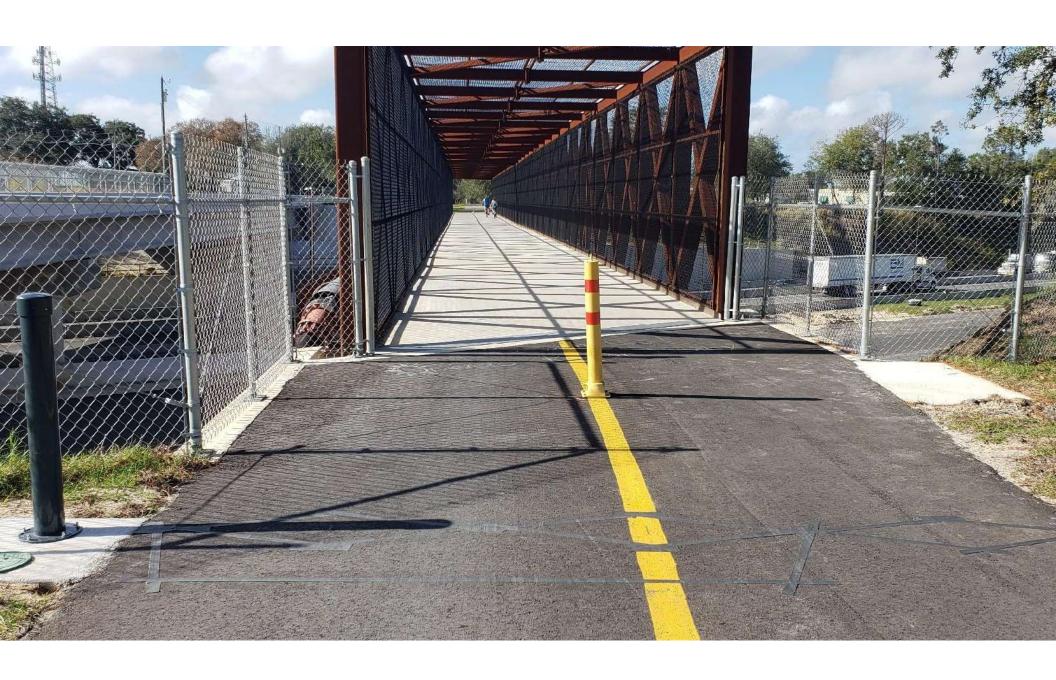












Our panel today



Aish Sandineni, FDOT D5 SUNTrail Coordinator Kelly Morphy, Consulting Program Director with Strongfoot Group Gallus Quigley, Lake County Recreation Coordinator - Trails

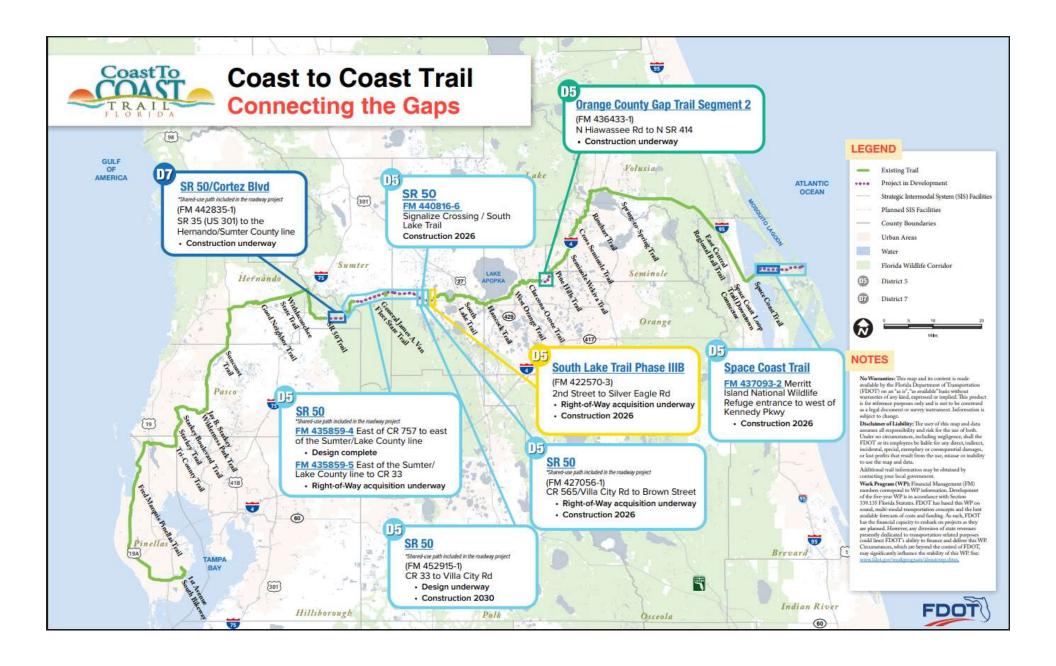






Panel Discussion

- What are some the upcoming projects for the C2C?
- From your role, what does "success" look like for this trail—whether in terms of ridership, community impact, or long-term vision?
- For communities along the route, what's one action they can take now to get the most benefit from the Coast-to-Coast Trail?



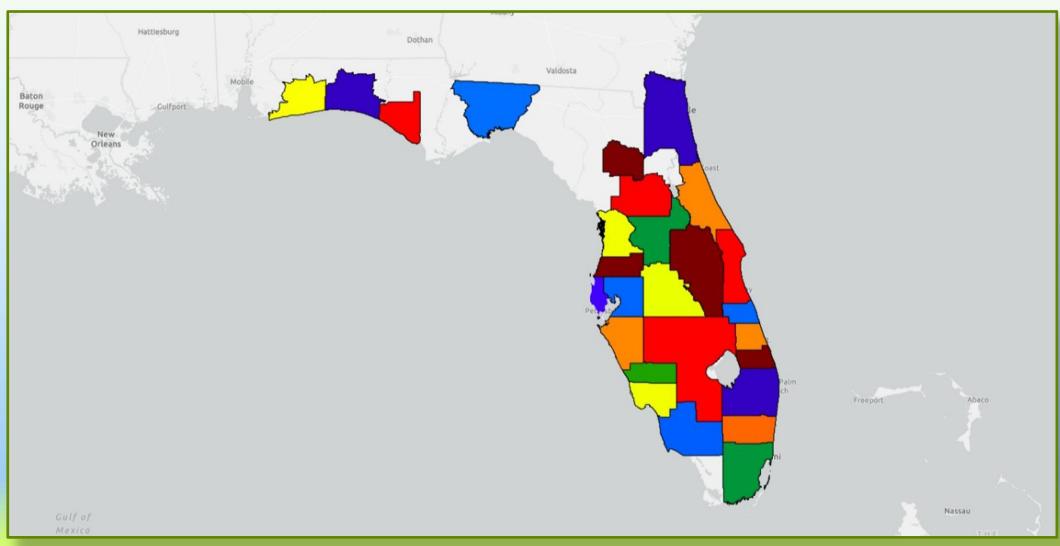


Capital Region Transportation Planning Agency (CRTPA)

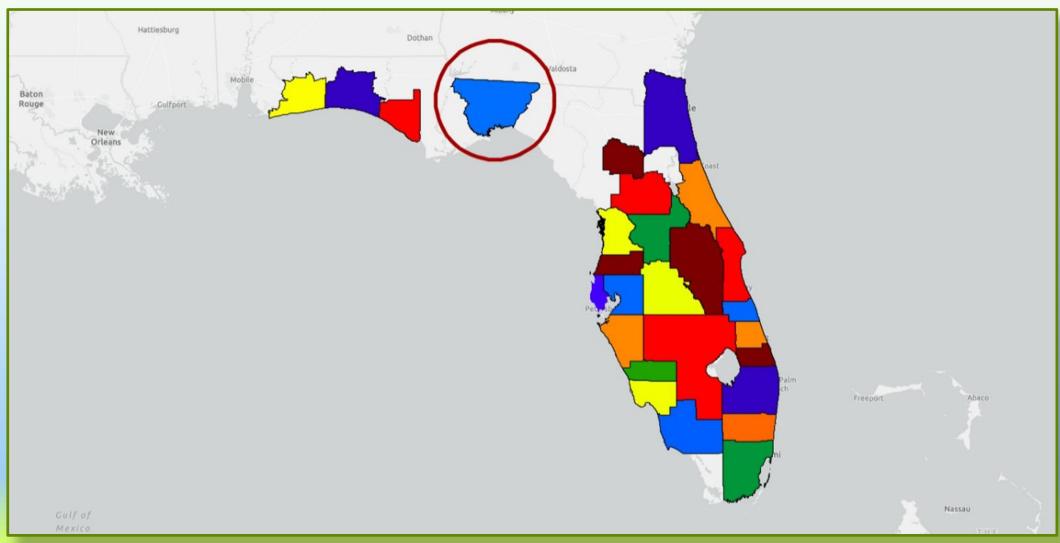
Regional Trail System

2025 STATEWIDE NON-MOTORIZED TRAFFIC MONITORING PROGRAM MEETING



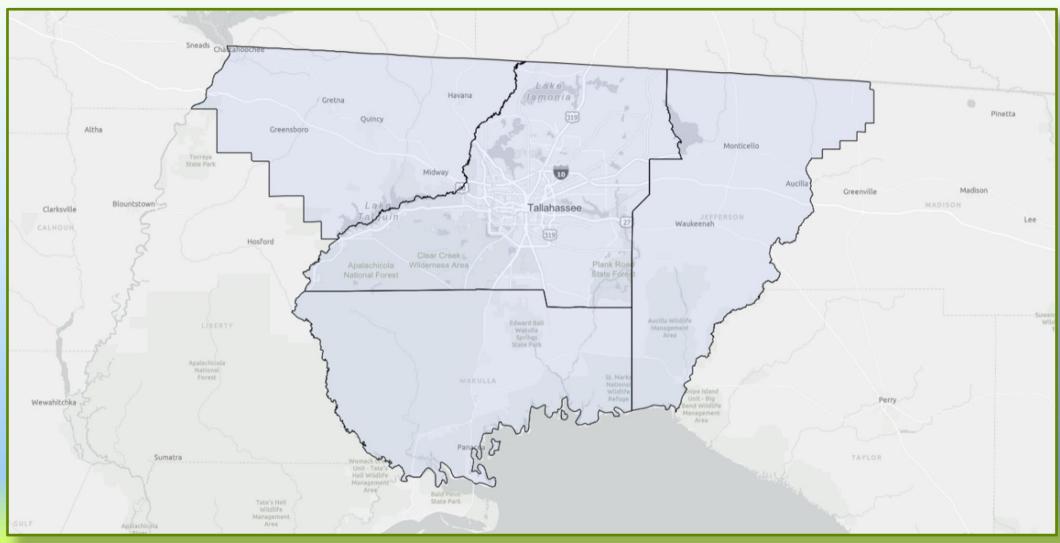




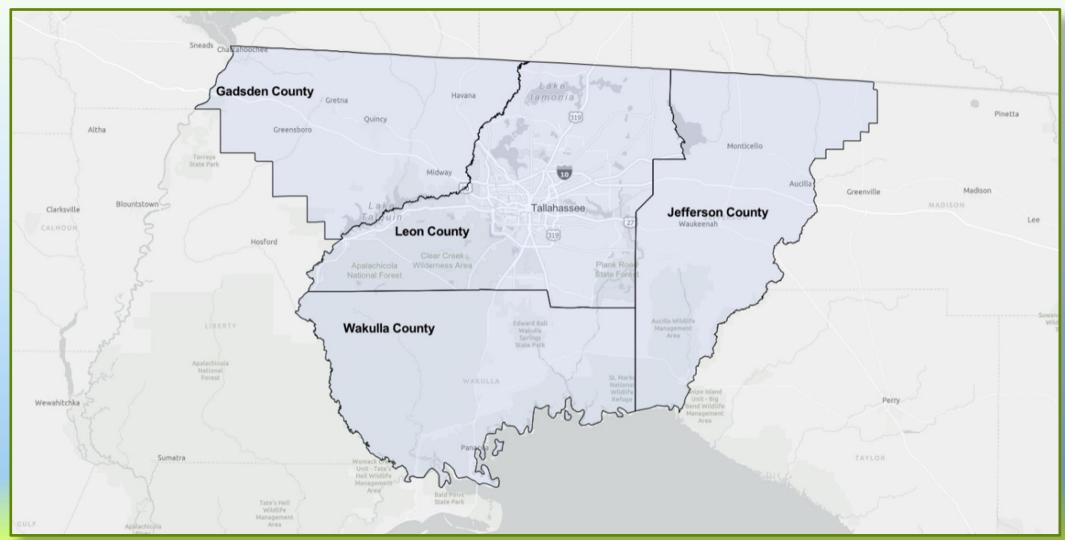


CRTPA Location

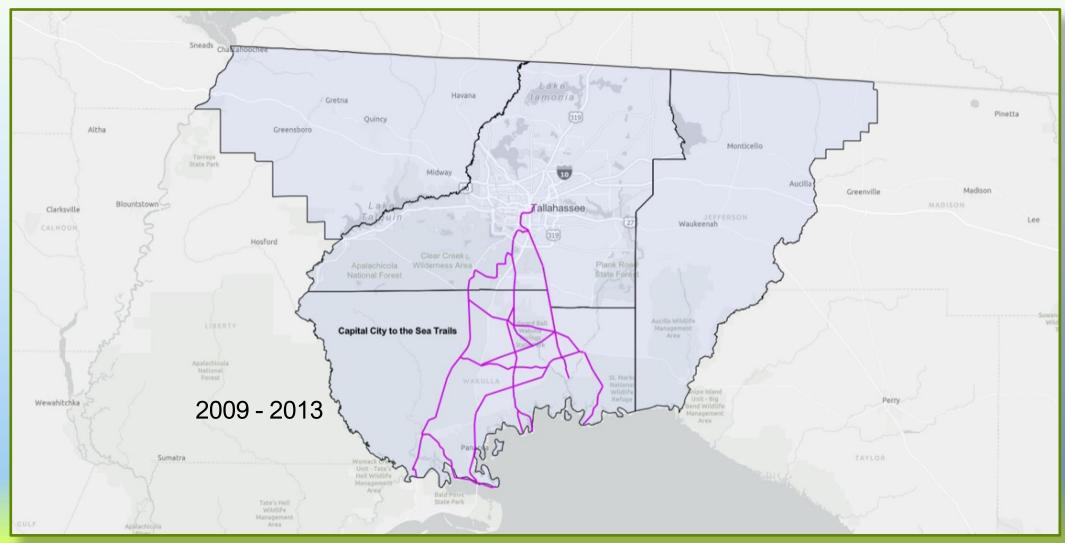




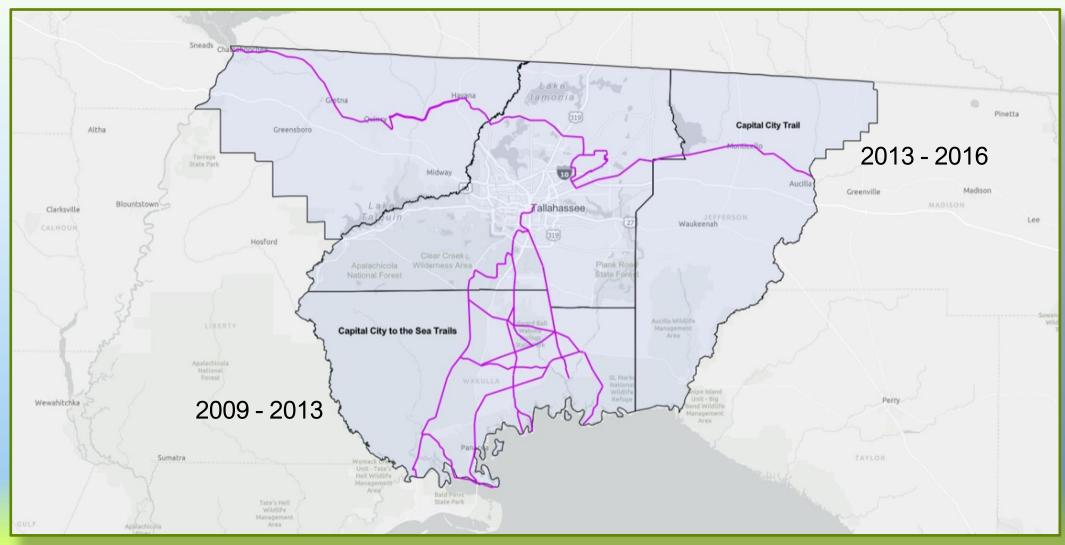




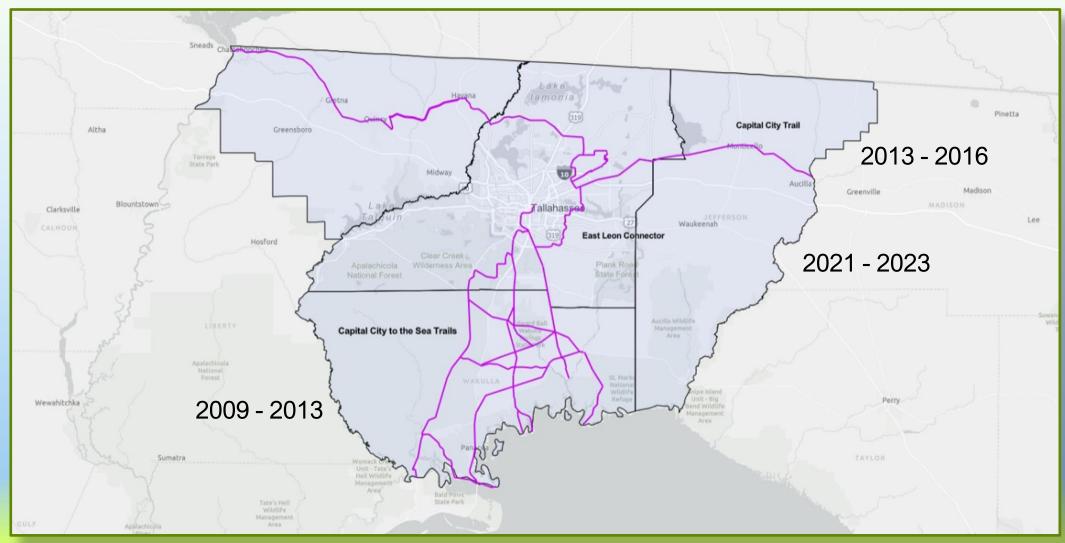




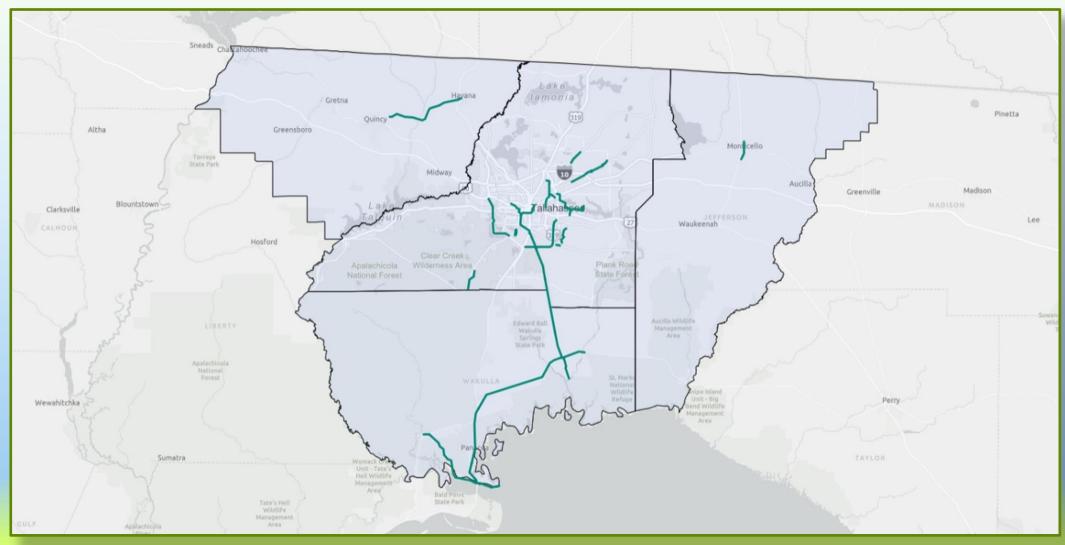




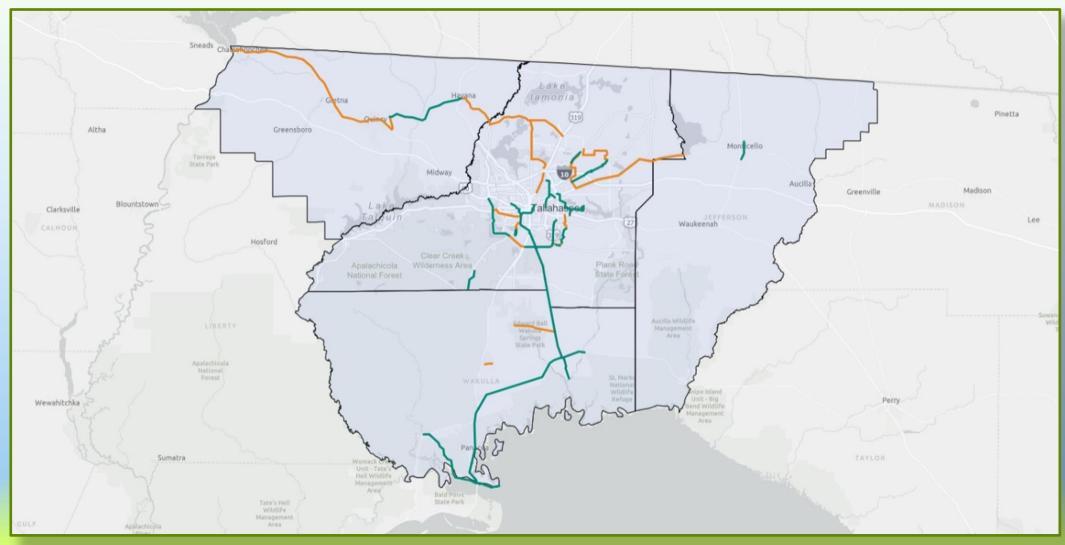




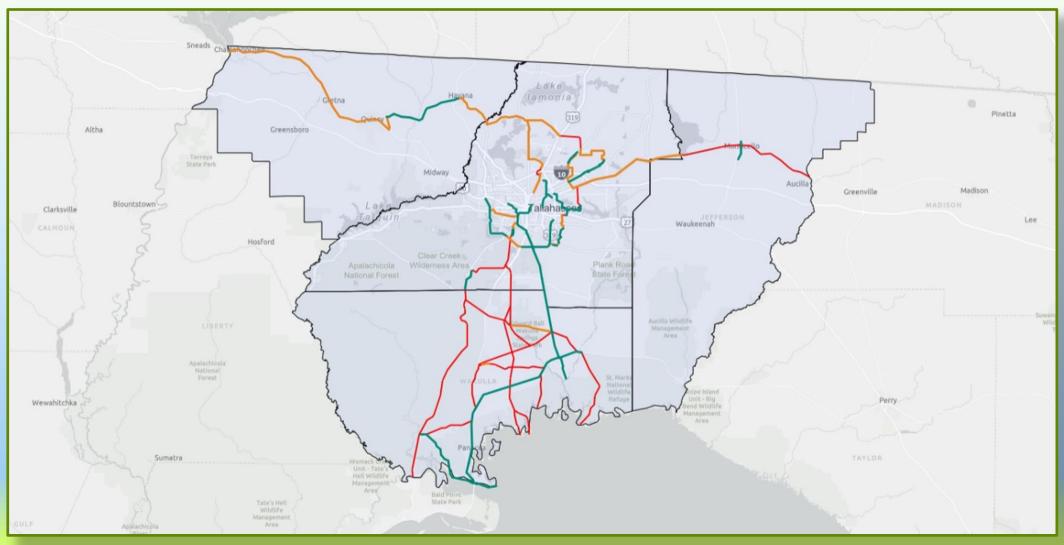




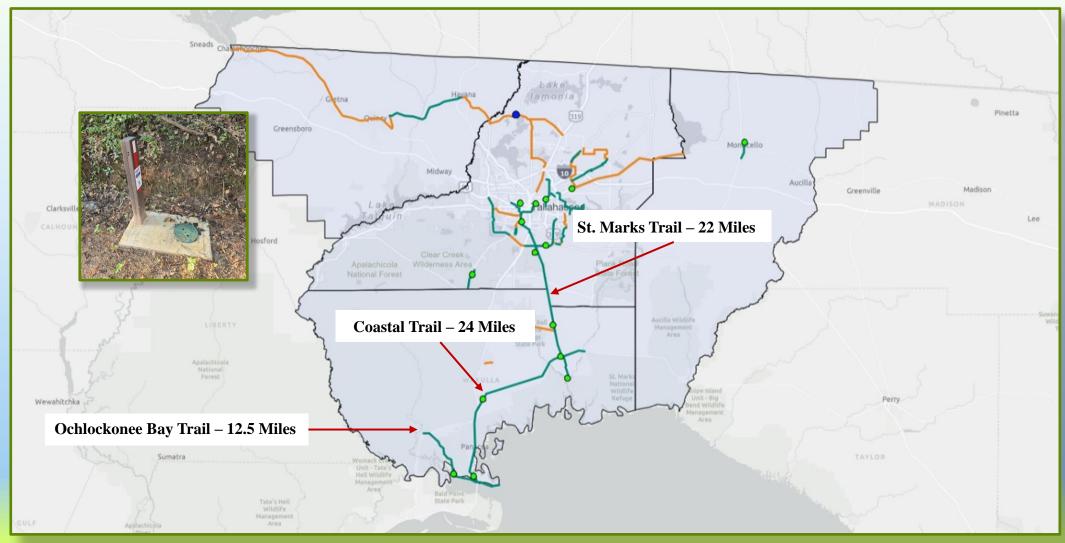




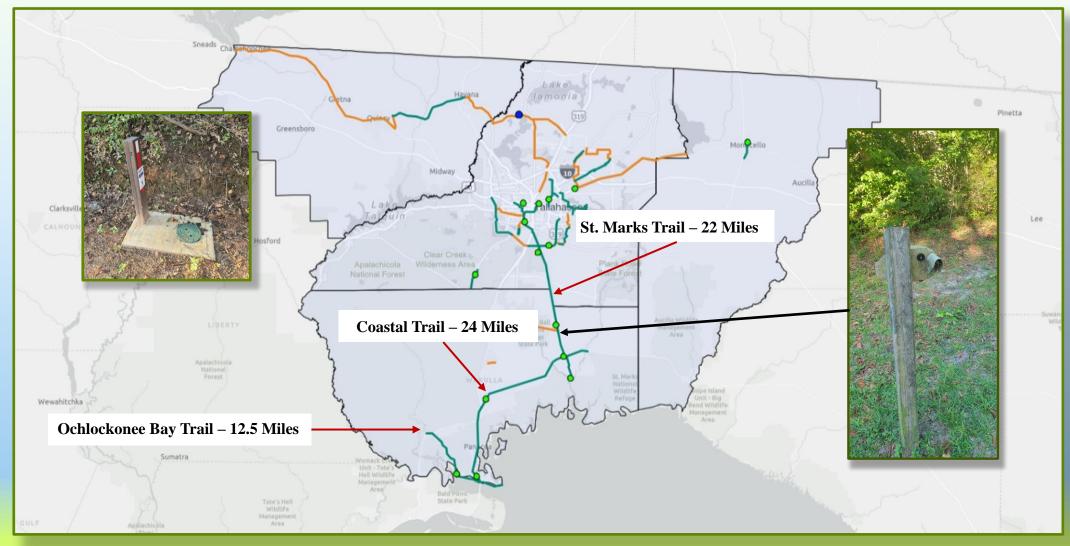




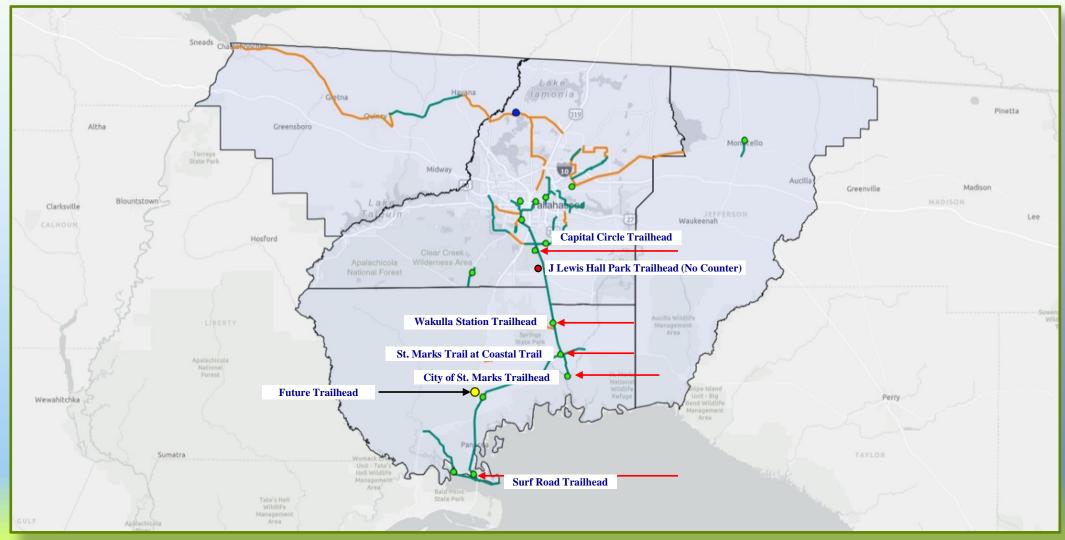




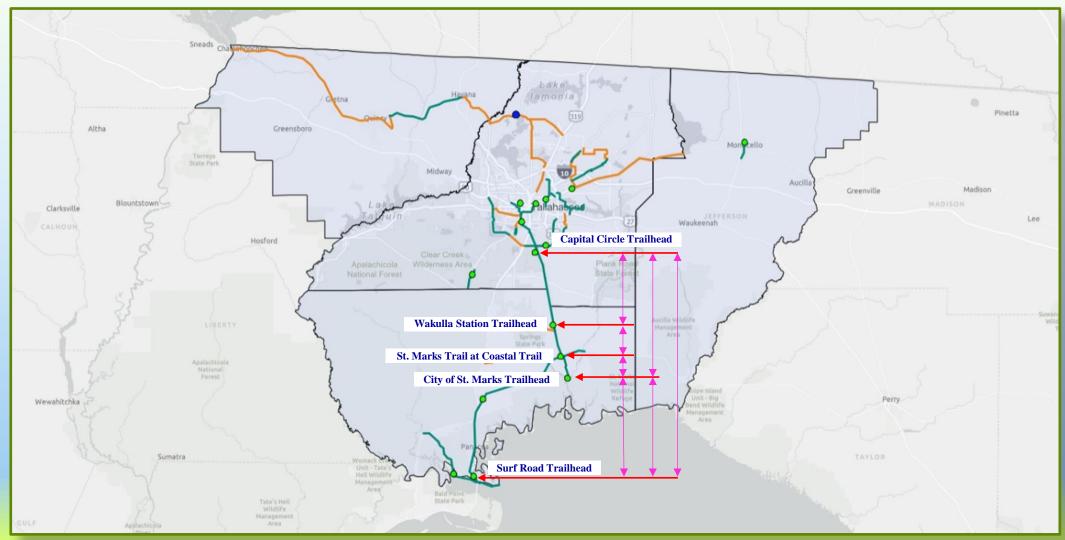








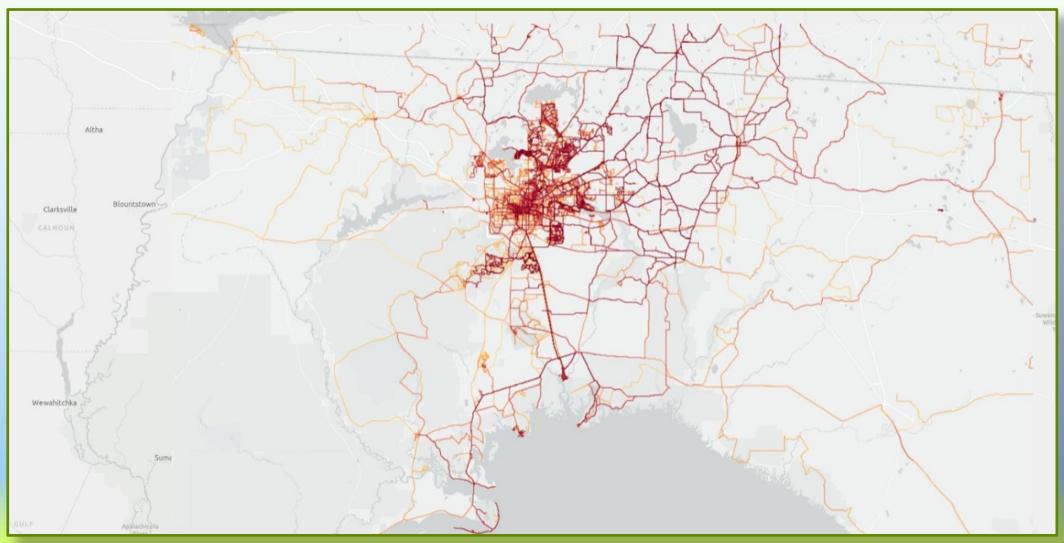




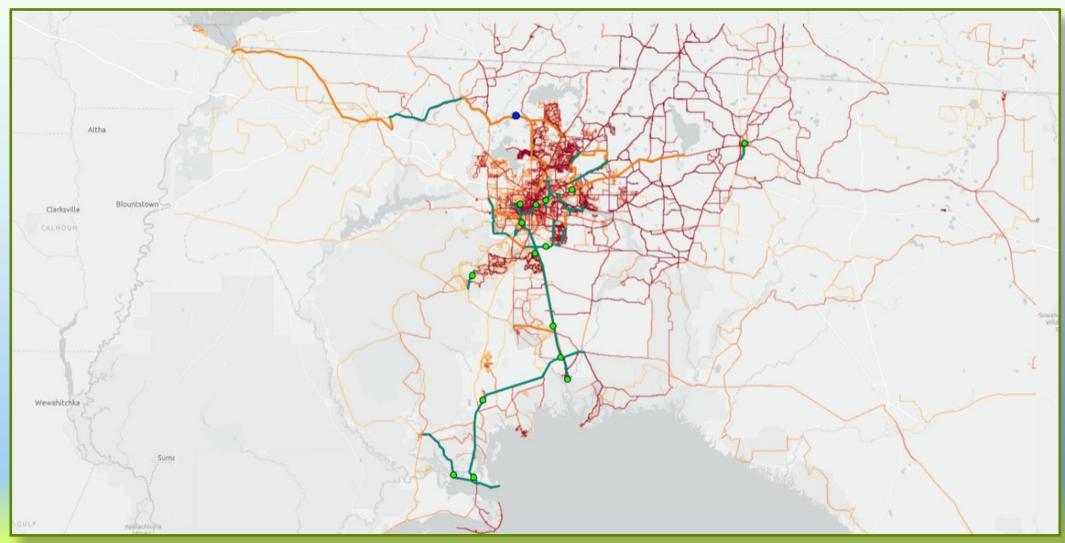




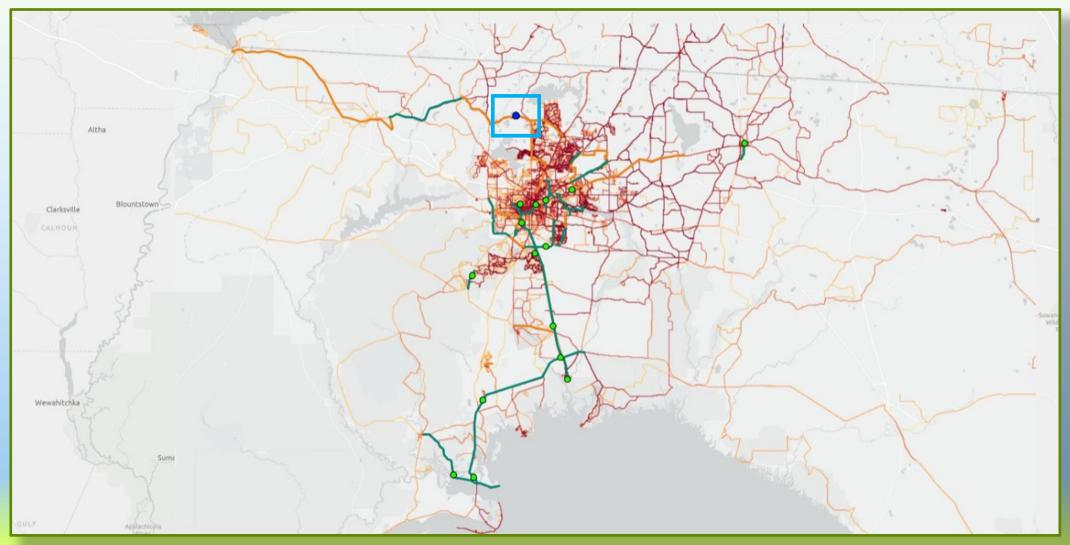




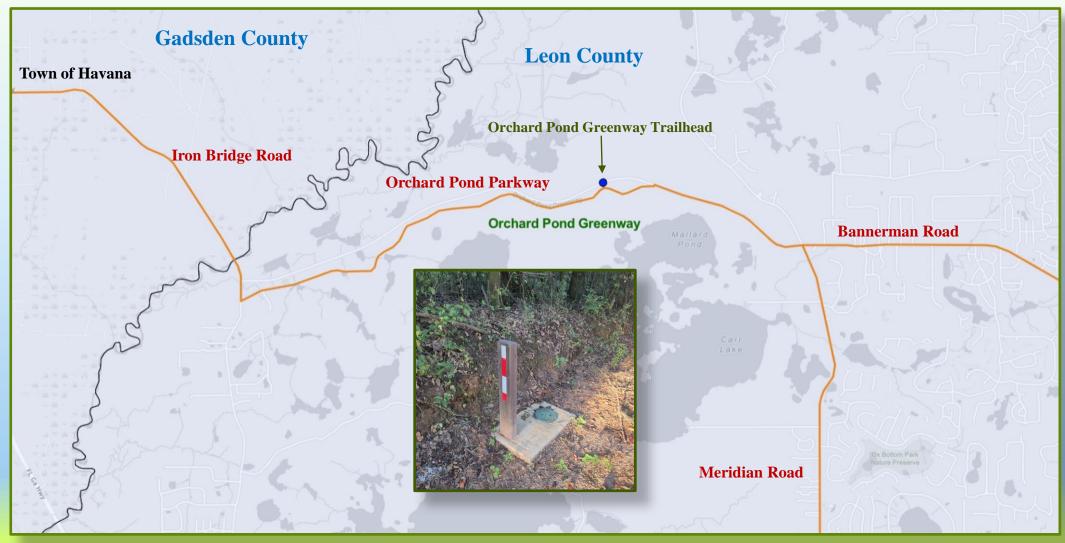












Sarasota County

Patrick Lui

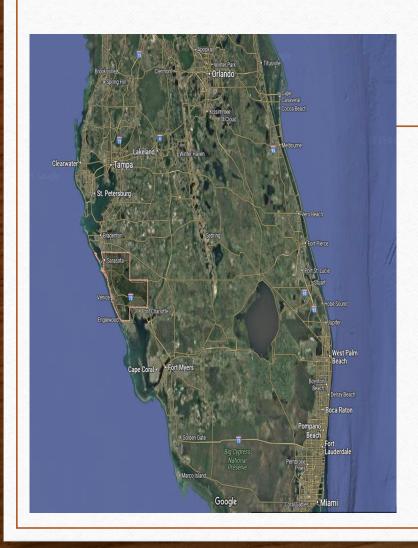
Bicycle, Pedestrian and Trails Coordinator

Jakob Thayer
Environmental Specialist II

FDOT Non-Motorized Traffic Monitoring Statewide Meeting

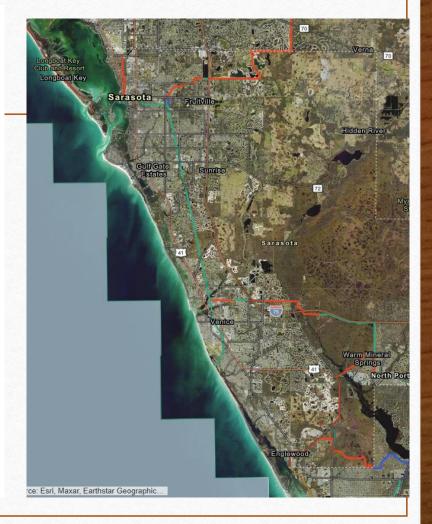


Gulf Coast Trail













The Legacy Trail

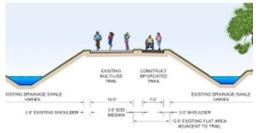






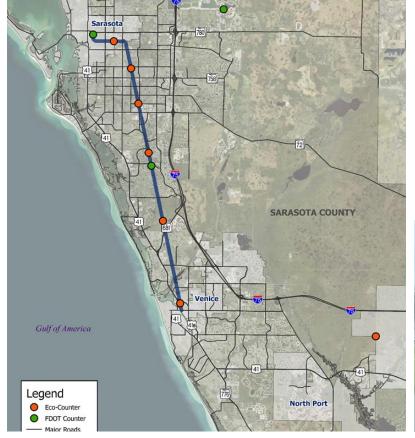


GACY TRAIL PHOTO WITH ADDED BIFURCATED TRAIL



TED TRAIL - TYPICAL CROSS SECTION

Trail Evolution











660,000 Unique Users!

Counter Program



Early lessons



Early Lessons







- Requires dedicated staff to regularly repair and maintain
- EcoCounter Tech support is virtual, which has its challenges
- Environmental Factors
 - Bugs, Wind, Weather

Early Lessons

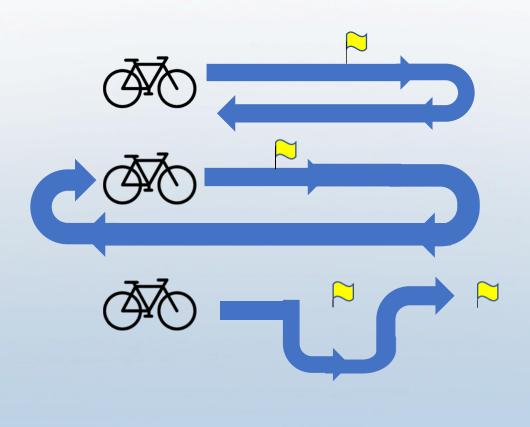


How do we know how many uses we really have?

Need to know

- How many hits
- Counter relative distances
- Average distance traveled





Trail Survey



Legacy Trail Usage Survey 2023

1. How do you typically use the Trail? Circle ONE:

Bike Walk Run Skate Scooter Skateboard

☐ Electric?

2. How often do you use the Trail for this type of trip?

Number of months per year 6

Number of times per month 12

3. Draw a line on the map showing your typical (or Today's) route.

CIRCLE the START and END of the trip and indicate the START with the letter "S".

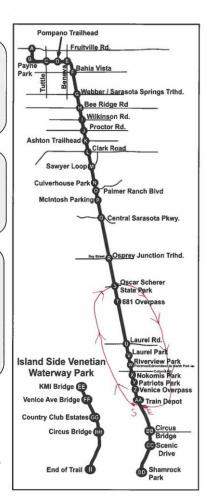
USE ARROWS to SHOW DIRECTION of TRAVEL.

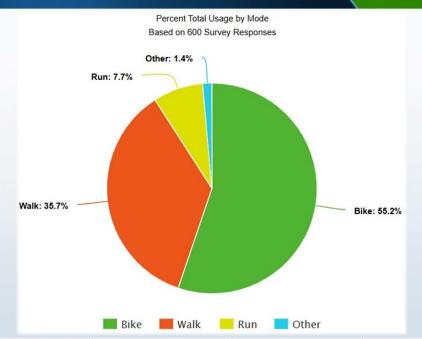
If you leave the trail for part of your journey, please show where you leave and return to the trail.

Notes:

Location of Survey: Osprey Junction

Date: 4/18/23





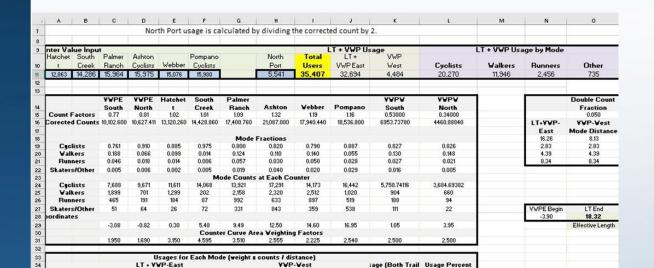
	Number of People Responding	Average Distance per Trip (miles)	Standard Deviation	95% Confidence Interval
Bike	495	16.26	0.44	[15.45, 17.06]
Walk	77	2.83	0.19	[2.47, 3.20]
Run	18	4.39	0.59	[3.24, 5.55]
Other	10	8.34	2.4	[3.65, 13.04]

Calculations

Cyclists

Walkers





20,270.0451

11,945,9182

57.25% 33.74%

A		$\Lambda I - A$	
$\frac{1}{N_{u}} = a_{ave}$	\rightarrow	$N_u = \frac{1}{d_{ave}}$?

 N_{η} : Number of uses

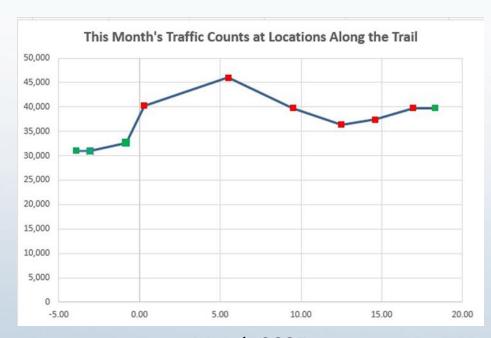
 d_{ave} : Average distance traveled on trail per use

A: Area under the counter curve

Runners 2,488,63234 180,28741 2,458,0850 8,34%	Year Adjusted Unadjusted Variance
13 -3.90 10,103 This Month's Traffic Counts at Locations Along the Trail 14 -3.08 10,103 This Month's Traffic Counts at Locations Along the Trail 15 -0.82 10,627 25,600 13,120 17 5.48 14,429 18 9.49 17,401	2022 649,512 1,400,879 73.29%
13 12.50 21.087 0 14.60 17.940 1 16.95 18.537 22 18.32 18.537 34	2023 676,558 1,514,616 76.49%
5 6 6 9 5,000 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	2024 644,408 1,452,774 77.09%

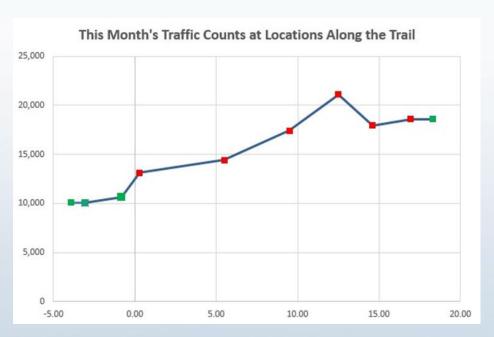
Data analysis





March 2025





July 2025





OBT

Orange Blossom Trail Safety Project

Orange Blossom Trail (U.S. 17-92/U.S. 441) Safety Improvements from South of Holden Avenue to 34th Street

Presented By: Stephanie Phillips, CPM, PMP, RSP1 Bicycle & Pedestrian Coordinator FDOT District 5 Office of Safety

Financial Project Identification (FPID) No.: 447395-1 Orange County, Florida







Orange Blossom Trail Safety Project

- 62% minority
- 23% Hispanic
- 25% HH below poverty level
- **20% HH** do not own a vehicle
- **51% HH** own one vehicle
- High Spanish and Creole speaking



Project Area Demographics











Project Area Overview

- 1-mile of Orange Blossom Trail/US 441 from Holden Avenue to 34th Street
- C4 Context Class, 6 lane divided
- Highest crash corridor in the District
- Between 2018-2023
 - 45 pedestrian and 11 bicyclist crashes
 - 8 pedestrian fatalities
- High walking, biking and transit usage











Infrastructure



- Speed limit reduction from 40 mph to 30 mph
- 3 new crosswalks with PHBs, raised crosswalks and in-pavement lighting
- Upgrade 3 existing PHBs with raised crosswalks and in-pavement lighting
- Narrowed lanes to 10' striping at each PHB, through crosswalk limits
- Realigned bus stops with crosswalks
- In road pedestrian pavement markings
- Enhanced lighting and dynamic speed feedback signs
- Pedestrian channelization with landscaping
- Construction completed Fall 2023
- More than 2 years without a pedestrian or bicycle fatality!!





OBT Study Corridor Flyover

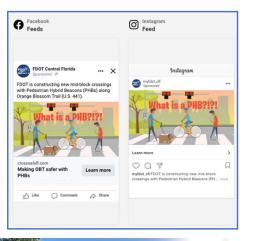






PUSE HARRID BEACON DE LA CROSSING CROSS

Outreach Initiatives









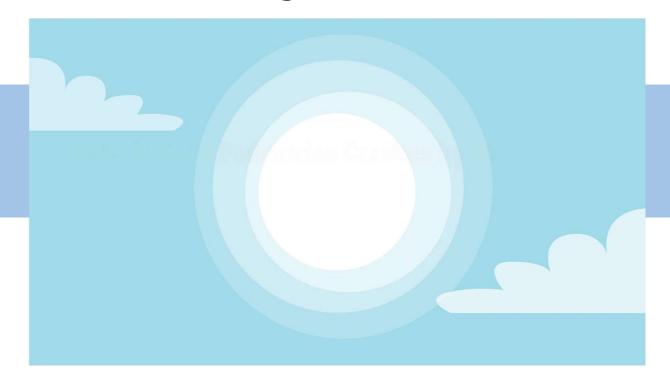








Pedestrian Hybrid Beacon PSA





Before – After Evaluation Elements

- Number of people crossing OBT
 - Time Lapse Video
- Number of people using crosswalks
 - Time Lapse Video
 - Direct observation
- Origin and Destination of Pedestrian Movements
 - Time Lapse Video
 - Origin and Destination Analysis
- Number of people activating PHB crossings
 - Direct Observation
- Motorist yield rates to pedestrians
 - Direct Observation
- Motorist speeds along corridor
 - Spot Speed Study
- Motorist travel times along corridor
 - Travel Time Study







Before - After Study Results

Speed data collection dates

- Pre-data 08/10/22
- Post-Data 12/11/23; 05/22/24; 06/24/25

Results

- 85th percentile speed dropped 4 to 8 mph
- Largest change in speed (8 mph) between 35th and 36th street
- This is where the highest speeds are expected, due to the proximity of the I4 interchange.
- Motorist travel time increased 60 seconds
- Motorist yield rates Pre-Improvement (3 PHBs)
 - 92.8% motorist yield rate
 - 99.7% opportunity to cross (able to cross before the cycle ended)
- Post-Improvement (6 PHBs)
 - 74.8% motorist yield rate
 - 99% opportunity to cross



Thank you!



DO THE RIGHT THING. YIELD TO PEOPLE CROSSING.







Introduction

DISTRICT 6



Shereen Yee Fong, MS-CE

SIS Coordinator

Community Planning Coordinator

Interim Bicycle / Pedestrian / ADA



Elvira Astorga

Bicycle / Pedestrian / ADA / SUN Trail

Coordinator



AGENDA

- Speaker Introduction
- Trail Network Overview
- Trails of Focus
- Atlantic Greenway
- Rickenbacker Causeway
- Krome Path
- What SUN Trail Data Reveals about our Network







District 6 SUN Trail Network (Miami-Dade)



Named trails



237.6 Miles of total SUN
Trail Nativork Trail Network



72.2 Total miles of existing SUN Trail Network



District 6 SUN Trail Network



Atlantic Greenway

10.8 Miles

Surrounded by palm trees and meandering through South Beach, this 10.8-mile trail traverses one of the country's most popular destinations.



Rickenbacker Causeway

8.5 Miles

Along this popular route, pedestrians and cyclists will have beautiful views of Biscayne Bay, beaches, and palm trees.



Krome Path

18.5 Miles

Krome path is in western Miami-Dade travelling north and south along the County's agricultural areas.

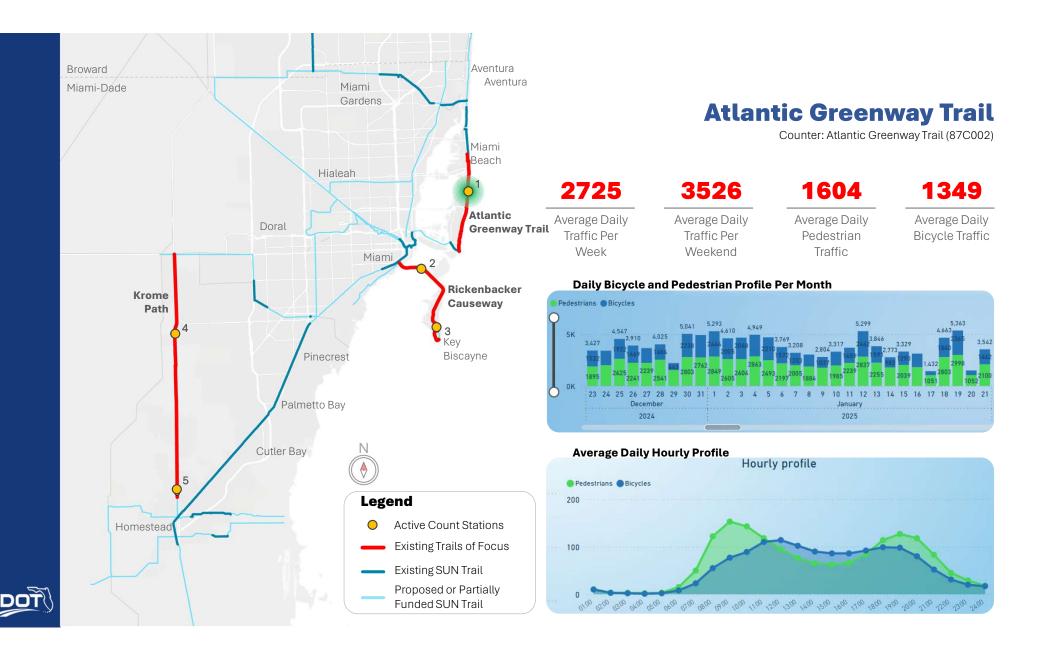
Active Non-motorized Counters

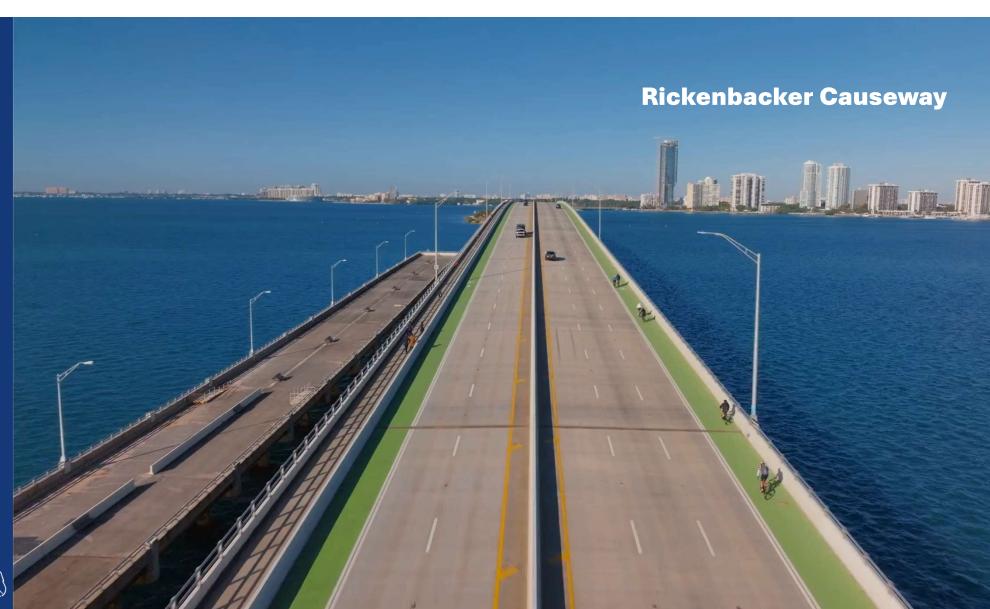
Active Non-inotorized Counters			
MAP ID	Counter ID	Trail	Activation Date
1	87C002	Atlantic Greenway	Sept. 2024
2	87C004	Rickenbacker Causeway	August 2024
3	87C007	Rickenbacker Causeway	May 2024
4	87C001	Krome Path	Jan 2020
5	87C013	Krome Path	May 2025



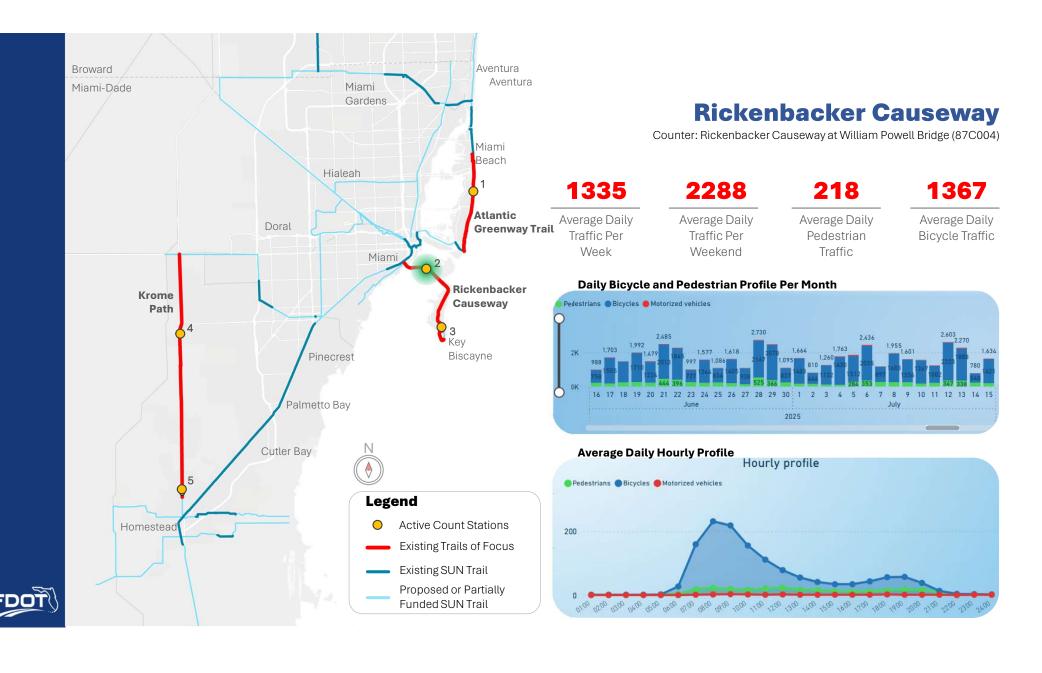


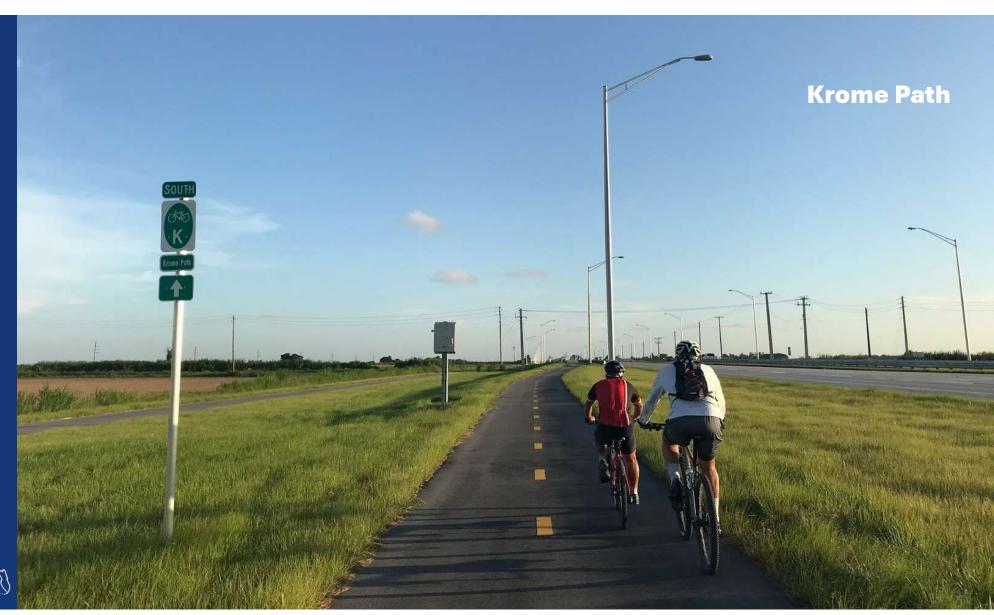




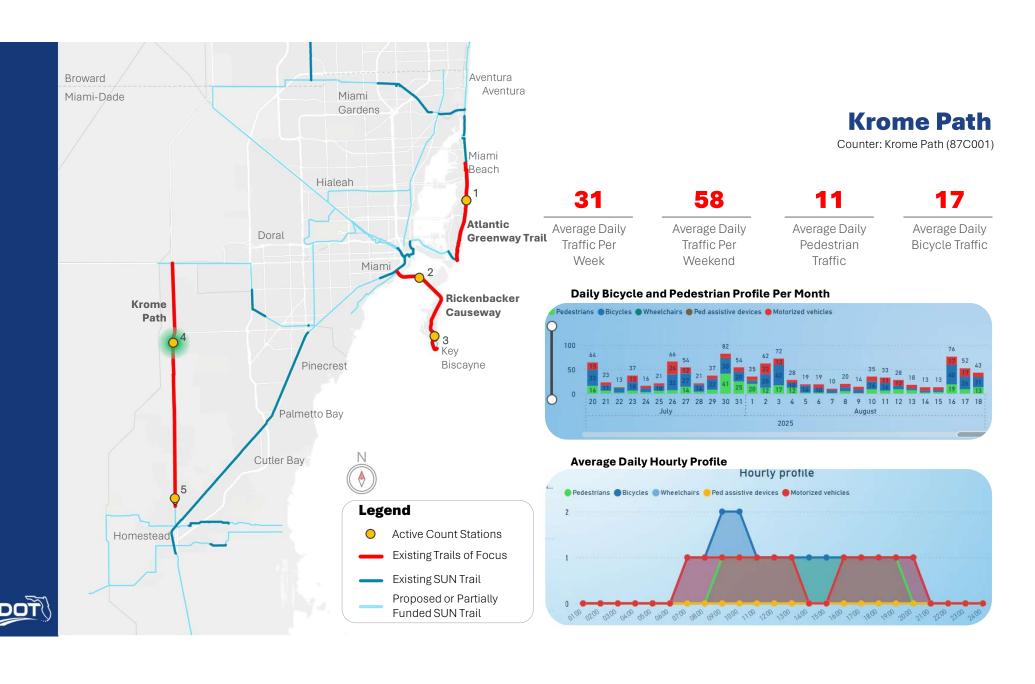












Non-motorized Traffic Cross Comparison

	Atlantic Greenway Trail	Rickenbacker Causeway	Krome Path
Average Daily Traffic Per Week	2725	1335	31
Average Daily Pedestrian Traffic	3526	2288	58
Average Daily Pedestrian Traffic	1604	218	11
Average Daily Bicycle Traffic	1349	1367	17



Essential Trail Features for Success - Connectivity







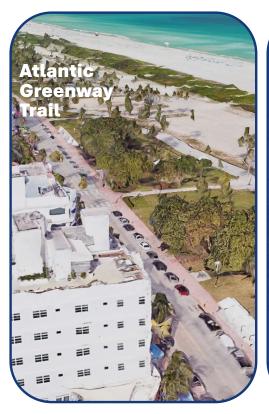
Legend

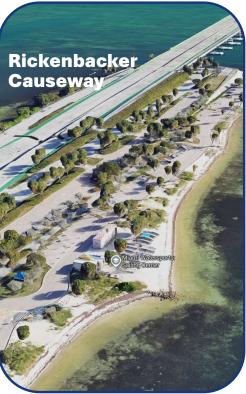
Focus Trail

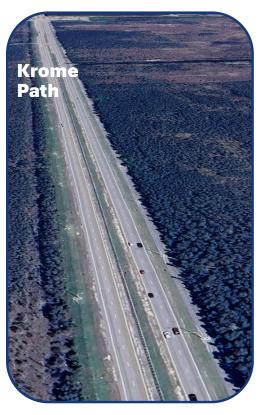
Existing Dedicated Bicycle Facility



Essential Trail Features for Success - Parking











District Seven Non-Motorized Counts Telling a Story

Tina Russo, FDOT D7 Safety Office





Partnerships: Pasco County Parks, MPO



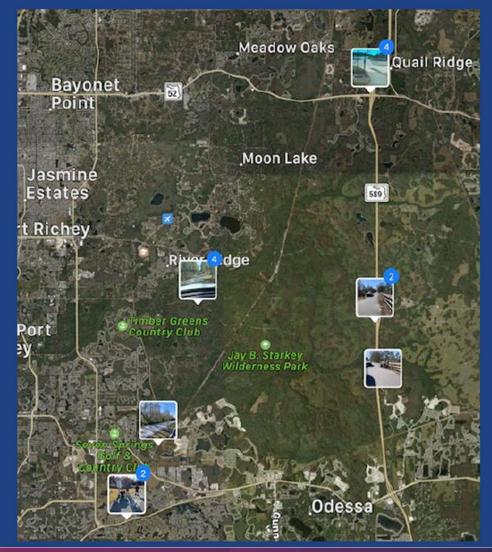
PASCO COUNTY GOALS AND OBJECTIVES

- Partnership with Pasco MPO and Pasco County Parks
- No counts in the past of any type of our trails/multi-use path
- Uniqueness of Pasco County Bike Ped system
- Data + Numbers = Story







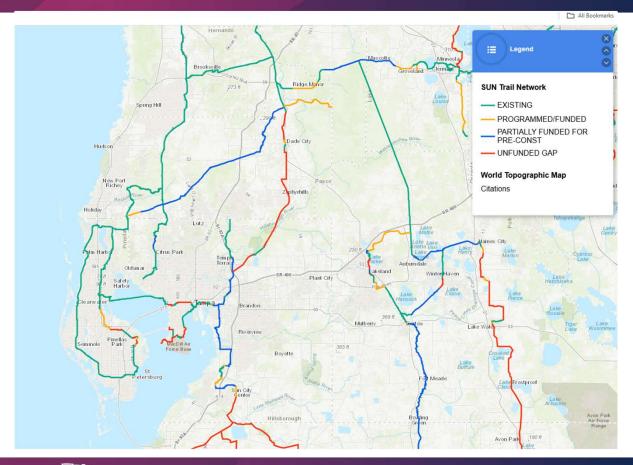


- •5 Locations
- 3 Trails systems
- All Coast 2 Coast Trail





Location, Location, Location

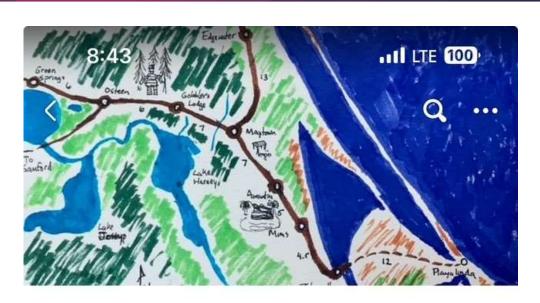


Goals for short term count locations:

- Test sites for future long term site locations
- Future locations to support future FDOT projects both programmed and unprogrammed.
- > Support trip generations







Florida Coast to Coast (C2C) Trail

Public group · 19.7K members ·

- What we the data to tell us?
- No crash history?
- Nine Counties/twenty three jurisdictions.
- What do we need the data to tell us?
- The future?





Future Projects/Current Projects



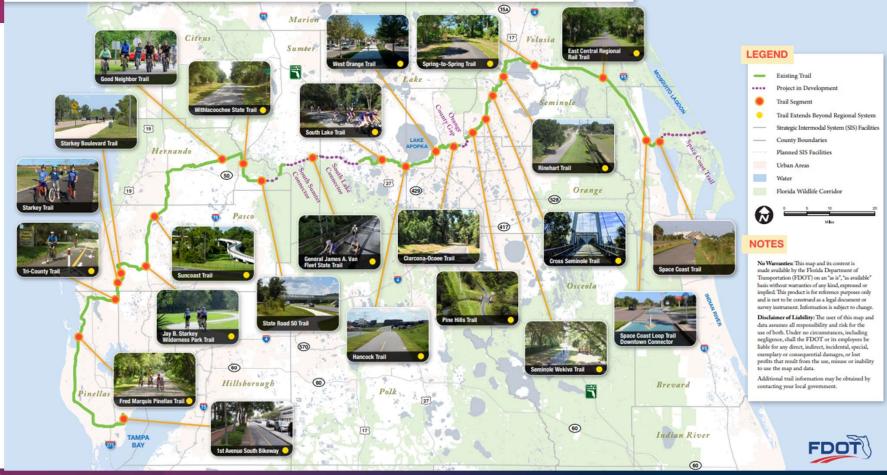






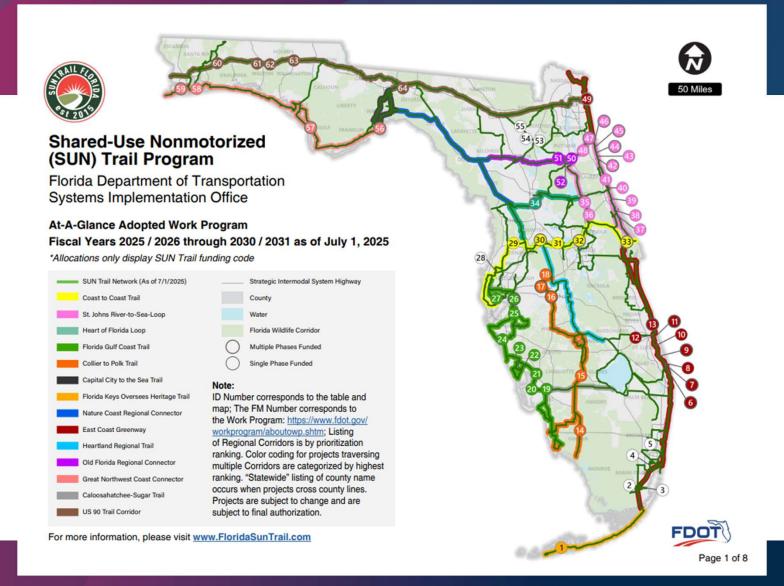
Shared-Use Nonmotorized (SUN) Trail

Regional System - Coast to Coast Trail













Thank You!



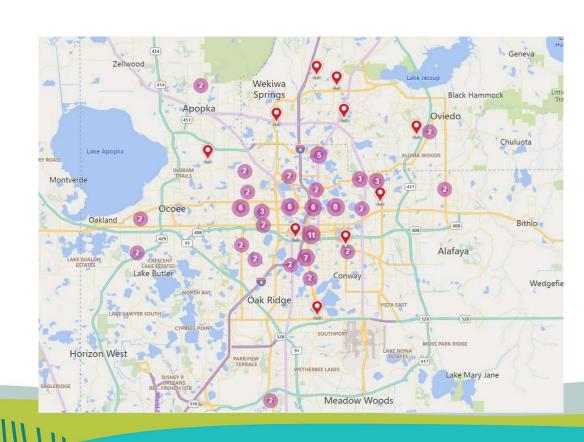


MetroPlan Orlando Pedestrian & Bicyclist Counts



This Presentation

- Miovision Overview
- MetroPlan Deployments
- Cross Tabs
- Risk Analysis







Miovision: Scout & Scout Plus

- Portable video: 48 hours (longer w/multiple batteries)
- Video uploaded for Al analysis (or onboard)
- All modes
- Speed
- Turning movements
- Near Miss





Advantages

- Differentiates between peds and cyclists
- Can address direction (with versus facing traffic)
- Can count bicyclists in mixed traffic





MetroPlan Applications

- 2019 Bikeway Crash Risk Analysis
- 2021-22 Programmed Projects Baseline Counts & Paths
- 2023-25 New Facility Use, Baseline Counts, & Pedestrian Exposure for Safety Analysis
- 107 Locations & Counting





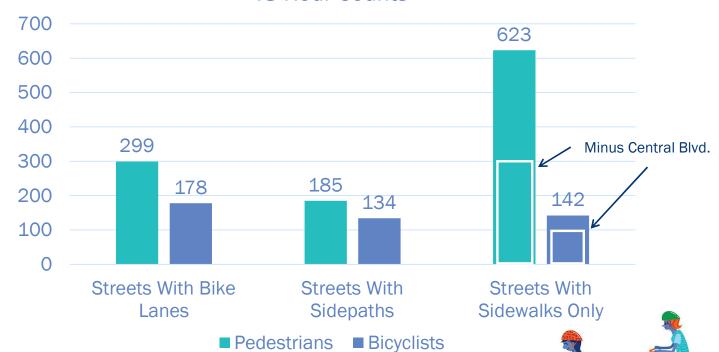


Cross Referencing Counts to Other Factors



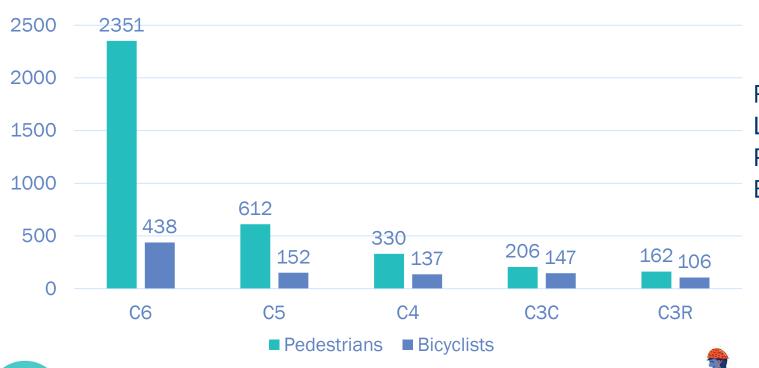
Counts by Bikeway Type

48-Hour Counts





By Context Class



Ratio Highest to

Lowest

Pedestrians: 14.5

Bicyclists: 4.1





By Bicycle Level of Traffic Stress (BLTS) & Context Class

Context Class	Bicyclist Level of Traffic Stress				
	1	2	3	4	All
C6	174		966		438
C5		220	156	135	152
C4	191	121	134	187	137
C3C	107	48	18	175	147
C3R	130	37	178	98	106
All Contexts	141	101	190	149	140







Bicyclist Crash Risk Analysis

- Bicyclist Crashes by Location, Position, Direction & Type
- Bicyclist Counts by Position & Direction



Facing Traffic Versus With Traffic

Crashes Per Million Bicyclist Miles Traveled





Relative Risk for Motorist-Caused Crashes: Bicyclist With Flow of Traffic

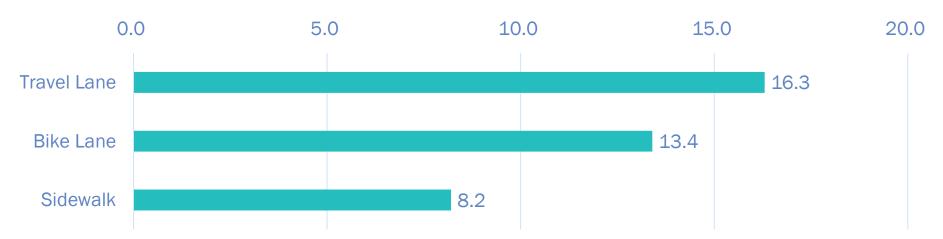






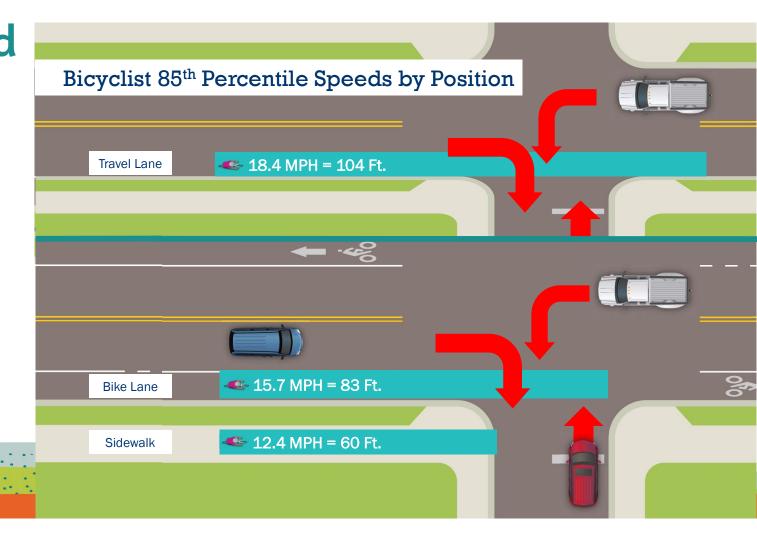
Relative Risk for Motorist-Caused Crashes: Bicyclist With Flow of Traffic

Motorist-Caused Turning & Crossing Crashes per Million Bicyclist Miles



Why would motorists do a better job of yielding to sidewalk cyclists when sidewalks are neither designed nor designated for bicyclists?

Bicyclist Speed Affects Crash Risk for Motorist-Caused Turning & Crossing Crashes







Mighk Wilson | mighk.wilson@metroplanorlando.gov MetroPlanOrlando.org | (407) 481-5672 250 S. Orange Ave., Suite 200, Orlando, FL 32801







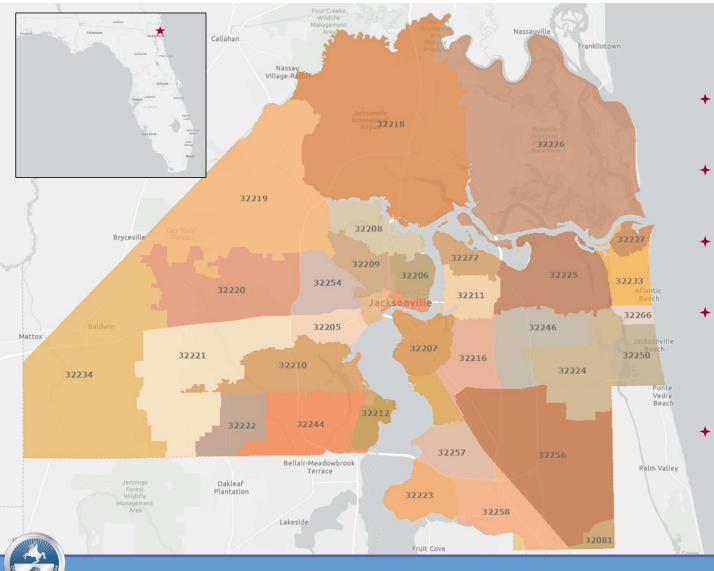
FDOT: 2025 Statewide Non-Motorized Traffic Monitoring Program Meeting

September 17, 2025 – Matt Fall, Sr Bike-Ped Coordinator: mfall@coj.net

WWW.JACKSONVILLE.GOV/PEDBIKE



- How NM user data supports safety projects
- What to include when developing NM data collection programs
- City of Jacksonville partnership with FDOT NM Data Team



TY OF JACKSONVILLE, FLORIDA

CITY SNAPSHOT

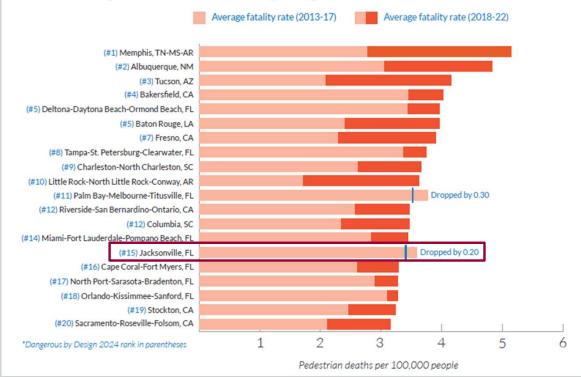
- Roughly 1M population: 949,611 reported in 2020 Census
- + 15th highest in ped fatalities, 3rd highest in bike fatalities
- + COJ is largest city in contiguous U.S.
- Government consolidation took place in the late 60s merging Duval County with the City of Jacksonville
- ~16-miles to the Atlantic Ocean from downtown





All but two of the top 20 are getting more deadly

The most dangerous metro areas are getting more deadly



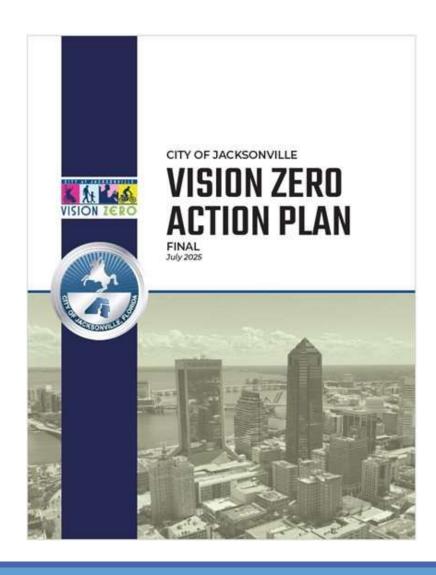
SOURCE: SMART GROWTH AMERICA, DANGEROUS BY DESIGN 2024







JACKSONVILLE.GOV/PEDBIKE



Demonstration Projects Supported by Extensive User Counts – Before/After Reports







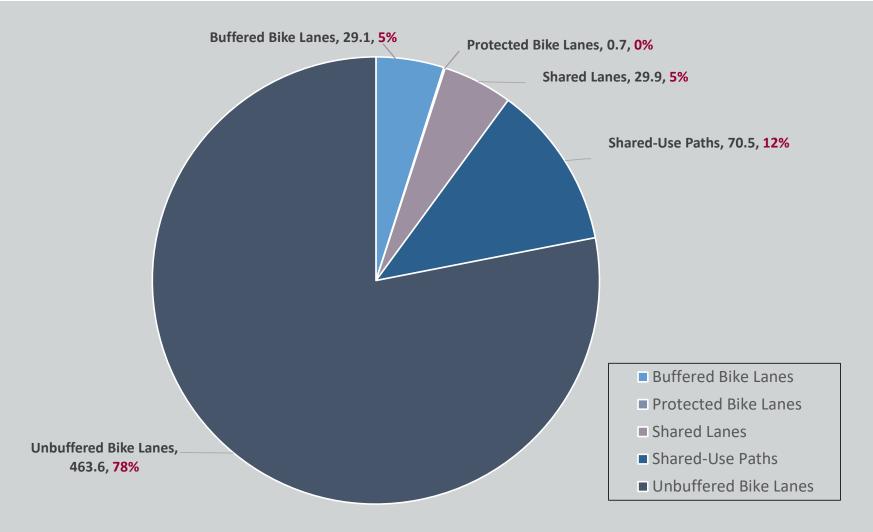




Non-Motorized User Counts Provide Planners Justification









Development of a Non-Motorized User Counts Strategy

City of Jacksonville Non-Motorized User Counts Strategy Report 2025



- Use to support existing capital projects lists, HINs, priority projects, quick build projects, interagency projects
- + Clear alignment with agency goals and policies: Vision Zero Action Plan, Resilient Jacksonville, 20-is-Plenty, etc.
- Detail partnerships with state and regional agencies: FDOT and TPO partnership is clear
- Multi-faceted approach: Local jurisdictions may need to combine manual counts, automated counters, Strava data, etc.

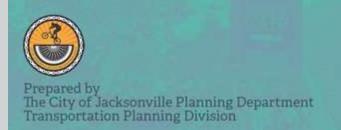


Prepared by The City of Jacksonville Planning Department Transportation Planning Division



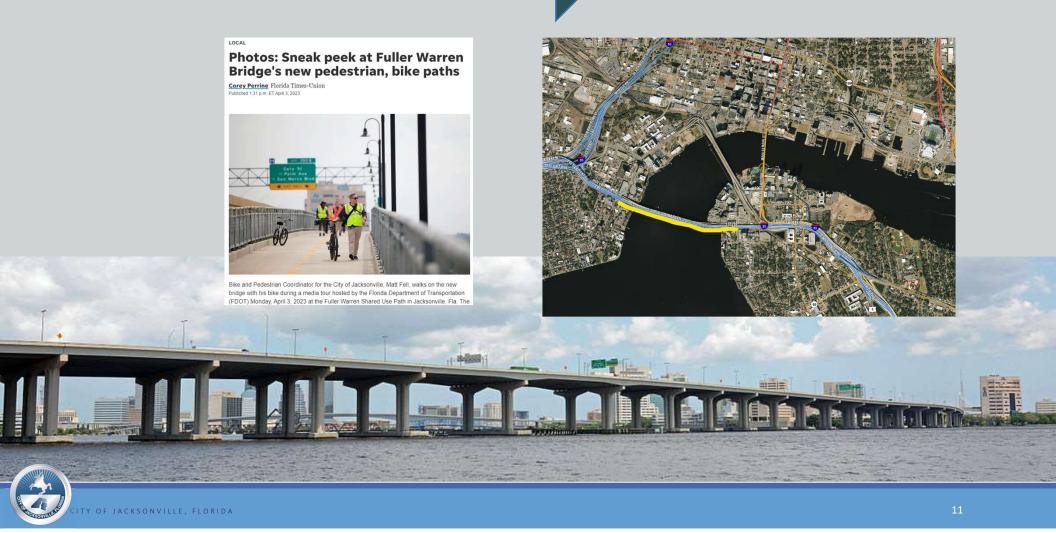
Resources for developing Local Non-Motorized User Count Strategy

City of Jacksonville Non-Motorized User Counts Strategy Report 2025

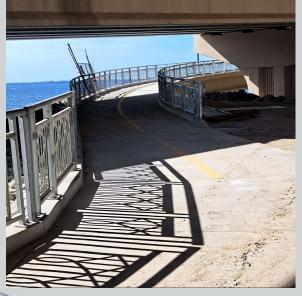


- NACTO: Making Bikes Count: Effective Data Collection, Metrics, & Storytelling (2022): Excellent!
- + AASHTO: Guide for the Development of Bicycle Facilities (5th Edition, 2024): Brief mention of user count strategies
- + Transportation Research and Education Center (TREC) at Portland State University: Guide to Bicycle & Pedestrian Count Programs (through IPBI, 2016/2020)
- + FHWA's Traffic Monitoring Guide (TMG 2022):
 Comprehensive federal standard for non-motorized counting in Chapter 4: Non-Motorized Traffic Monitoring
- + COJ Non-Motorized User Counts Strategy Report (2025): Steal this report!

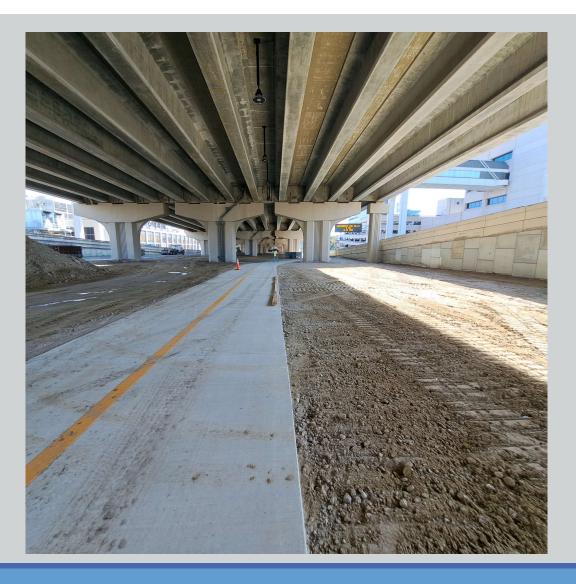
Partnership with FDOT NM Data Team in COJ







ITY OF JACKSONVILLE, FLORIDA

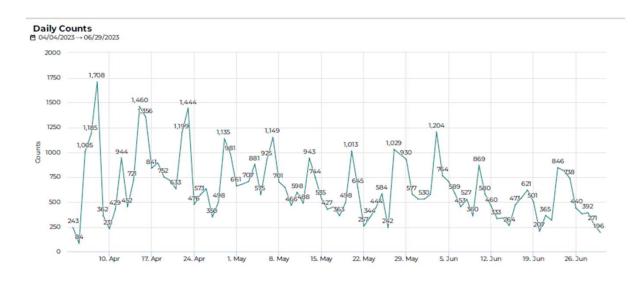




56,982 total users648 daily average

APRIL 4, 2023 – JUNE 30, 2023

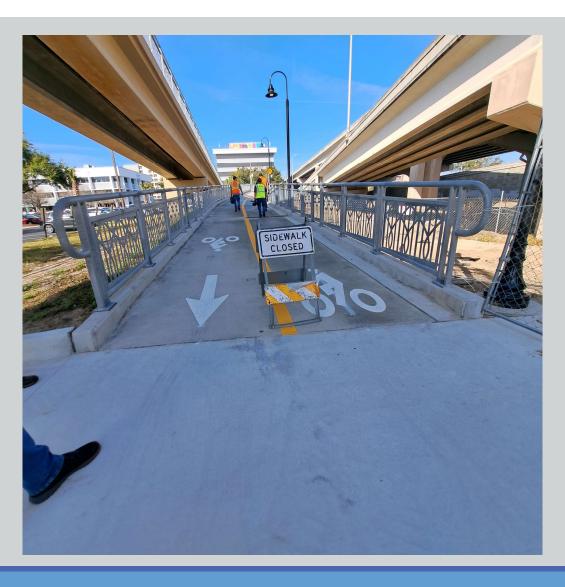










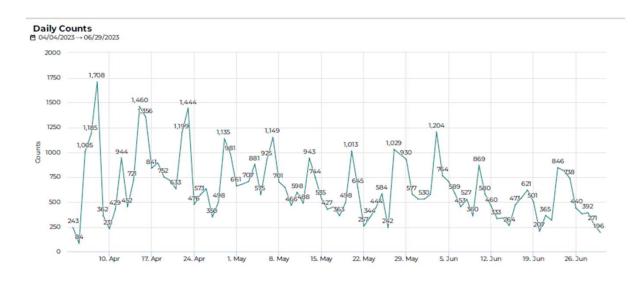




83,614 total users950 daily average

APRIL 4, 2023 – JUNE 30, 2023









Fuller Warren Bridge: West Ramp Permanent Counter





MAY 9, 2022 – MAY 8, 2023 **52,008** total users **160** daily average







2023: Permanent Counter









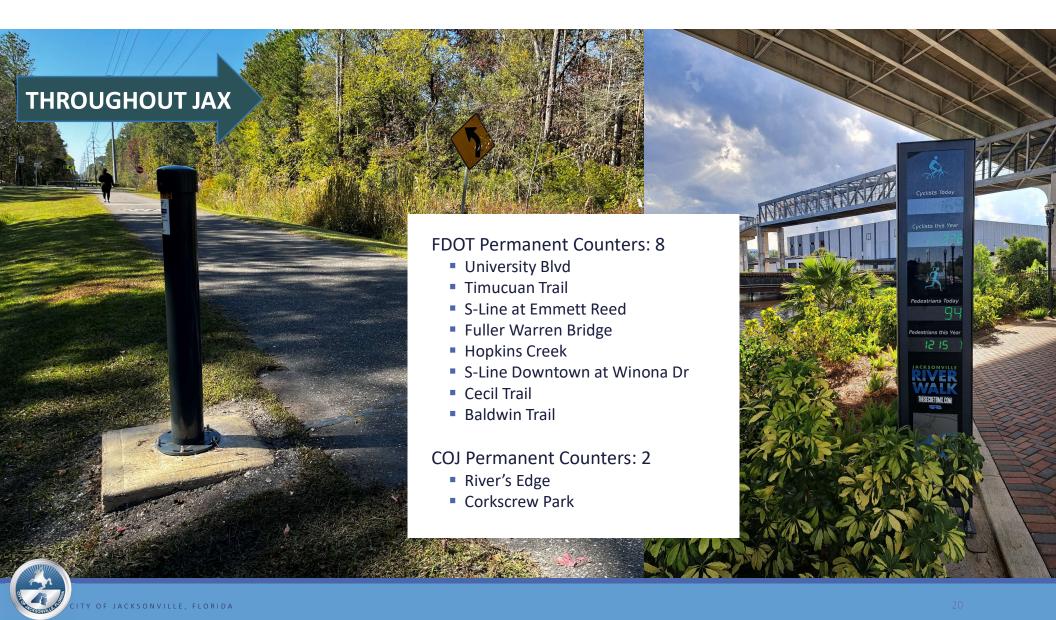
2024:
Permanent
Counter





- Adjacent to first U.S. "Turbo Roundabout"
- Located at Jacksonville University & intersection of Merrill Rd & University Blvd, 2 High-Injury Routes (HIN)
- COJ, FDOT, & JTA all currently have safety projects along both routes









Matt Fall Sr Bike-Ped Coordinator mfall@coj.net

WWW.JACKSONVILLE.GOV/PEDBIKE







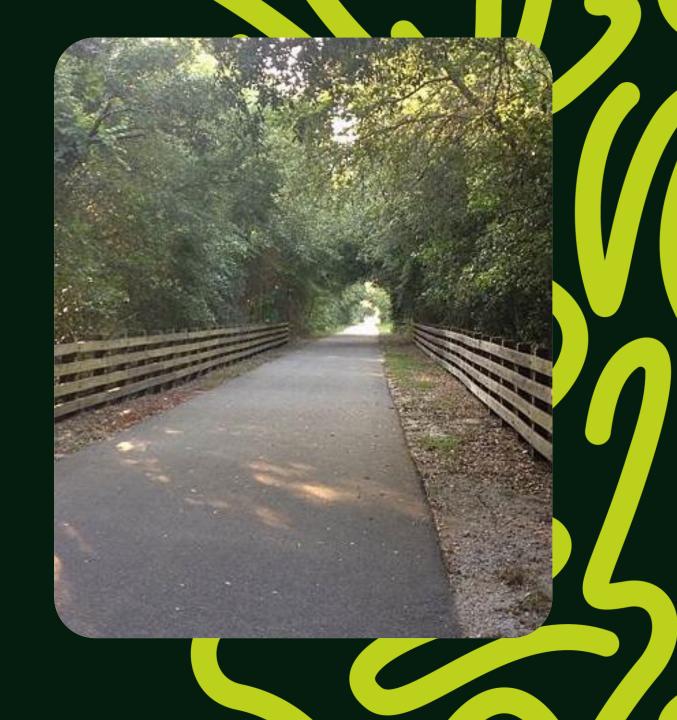


September 17 2025

Connecting Everyone, Everywhere By Trails

Ken Bryan Sr. Strategist for External Relations





THE NATION'S LARGEST TRAILS, WALKING AND BIKING ADVOCACY ORGANIZATION

Our Mission

We are building a nation connected by trails, reimagining public spaces to create safe ways for everyone to walk, bike and be active outdoors.













INFRASTRUCTURE

We will proliferate the development of trail and active transportation networks nationwide.

INVESTMENT

We will grow public funding to create, connect and maintain trails, while improving the effectiveness of those resources and creating new opportunities for investment.

PARTICIPATION

We will encourage and inspire more people to use trails across the country, hastening a culture shift where communities demand trail systems as essential for their well-being and the well-being of the places they live.



ROI of Active Transportation

- U.S. economic impact = \$34.1 billion (potential \$138.5 billion)
- Local spending impact = \$10.6 billion (potential \$21 billion)
- Health cost savings = \$20 billion (potential \$92 billion)

RailsToTrails.org/ATTA

The Impact of the Great American







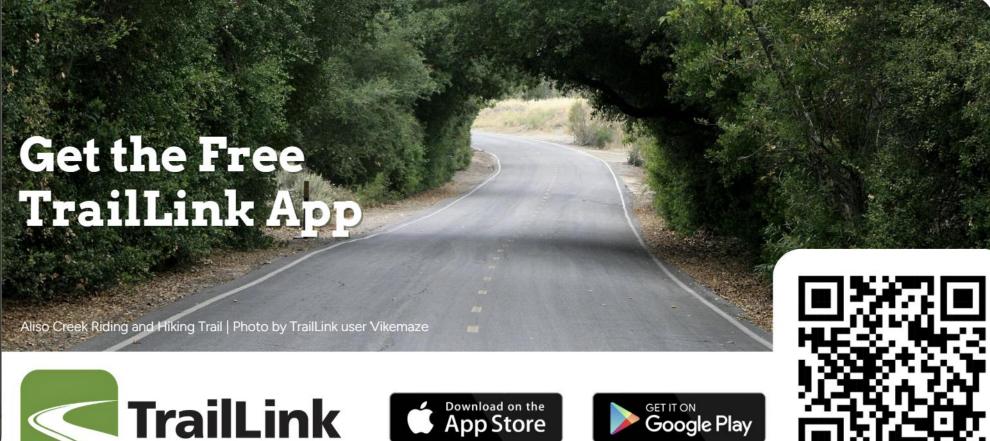
\$22.8M IN NEW TAX REVENUE



\$161M GDP CONTRIBUTION







T-MAP - Trail Modeling and Assessment Platform



Tools To Help Build The Case

Analyze trail connectivity

Collect bike and pedestrian counts

Estimate/Forecast Demand

Assess Impacts (health, environment, economy, etc.)





Go Counter Free App

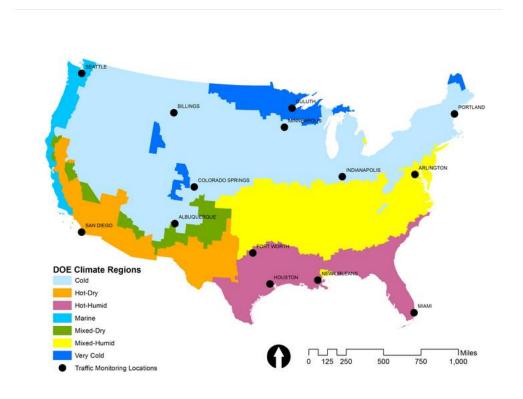




Trail Traffic Calculator



Trail Traffic Calculator



Resources

- T-MAP Fact Sheet
- T-MAP FAQ
- T-MAP Webinar (register to view)

Tools

- GoCounter Trail Counting App
- Trail Traffic Calculator

Published Research

Explore RTC's most recent research published with our academic partners.

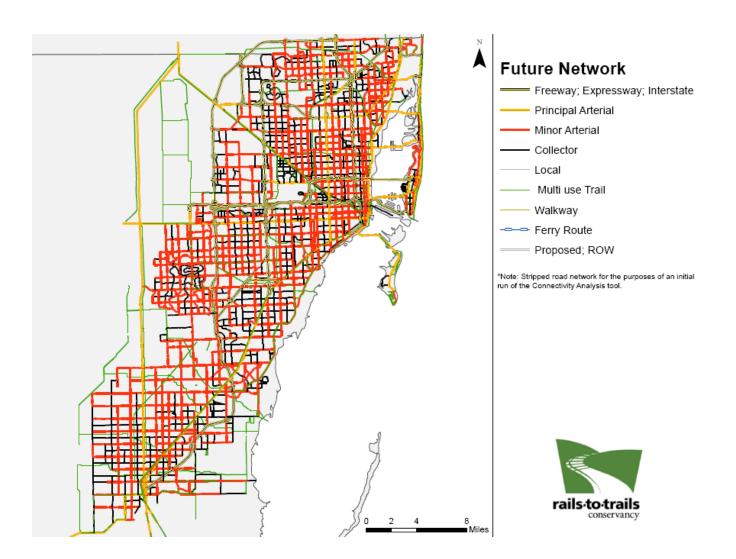
Publications and Presentations

Related Links

- Arlington Bicycle & Pedestrian Counters
- Seattle's Spokane Street

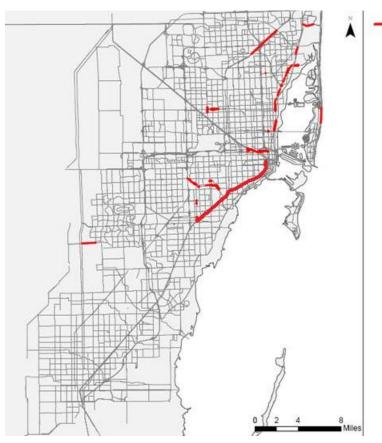
Future Facilities





Connectivity Potential





Potential Priority Project New Opportunities for Conecctivity

Merrick Trail

Flagler Trial

Atlantic Trail

Miami River Greenway

Gold Coast Trail

Overtown Greenway

Ludlam Trail

Unity Trail

NW 2nd Ave (Bike Facility)

Oleta Link

Sevilla Ave (Bike Facility)

Black Creek Trail

Krome Trail

Memorial Trail

Snapper Creek Trail

SW 16th St. (Bike Facility)

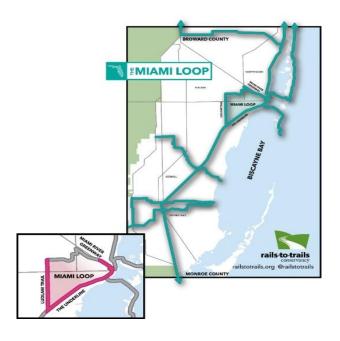
SW 104th St. (Bike Facility)

Lehman Link

Collins Canal Trial

West Kendall Trail





Measure Health Impacts



Health Impact Calculations for The Underline (M-Path) in Miami, Florida. 2015

Trail	City	State	Miles	Surface Bicycle AADT		Pedestrian AADT	% Cyclists	% Weekend	SCF	Survey response rate	N				
M-Path	Miami	FL	9.4	Paved	177	82	68%	47%	0.65	12%	59				
Health impacts from tra	ail use for a	ll diseases	combined (avo	oided hosp	ital cases and t	reatment costs, p	er year)								
Hospital cases, treatment costs All modes			Bicycling				Walking				Running				
Impact measure/Trail	Trail lengt Avoided c Avoided cos		Avoided costs	AADT Bike Avoided cases Avoided cos			Range %	AADT Walk Avoided c Avoided costs		Range %	AADT Run Avoided c Avoided cos		Avoided costs	Range %	
M-Path	9.4	0.03	\$1,536	177	0.02	\$1,162	-10,+15	86	0.01	\$322	-31,+38	11	(\$52	-27,+55
Health impacts from tra	ail use for a	II-cause m	ortality (avoide	d premati	ire deaths, VSL	, per year)									
All-cause mortality, VSL All modes			Bicycling				Walking				Running				
Impact measure/Trail	Trail lengt	Avoided o	Avoided costs	AADT Bik	Avoided cases	Avoided costs	Range %	AADT Walk	Avoided o	Avoided costs	Range %	AADT Run A	voided	Avoided costs	Range %
M-Path	9.4	0.13	\$1,223,611	177	0.1	\$905,240	-9,+14	86	0.03	\$266,722	-31,+38	11	0.01	\$51,649	-34,+67
Health impacts from tra	ail use, for	heart disea	ise (CVD) (avoid	ded hospit	al cases and tre	atment costs, pe	r year)								
Hospital cases CVD, treatment cos All modes			Bicycling				Walking				Running				
Impact measure/Trail	Trail lengt	Avoided o	Avoided costs	AADT Bik	Avoided cases	Avoided costs	Range %	AADT Walk	Avoided o	Avoided costs	Range %	AADT Run A	voided	Avoided costs	Range %
M-Path	9.4	0.02	\$725	177	0.01	\$565	-10,+15	86	0	\$138	-30,+40	11	(\$22	-37,+73
Health impacts based o	n net gain	in physical	activity from tr	rail use, fo	r all diseases co	ombined (avoided	l hospital c	ases and treati	nent costs	, per year)					
Net PA, Hospital cases,	treatment	Al	l modes		Bio	yding				Walking			F	unning	
Impact measure/Trail	Trail lengt	Avoided o	Avoided costs	AADT Bik	Avoided cases	Avoided costs	Range %	AADT Walk	Avoided o	Avoided costs	Range %	AADT Run Avoided c Avoided		Avoided costs	Range %
M-Path	9.4	0.02	\$1,130	177	0.01	\$885	-11,+16	86	0	\$211	-37,+44	11	(\$34	-41,+82
Health impacts based o	n net gain	in physical	activity from tr	rail use, fo	r all-cause mort	tality (avoided pr	emature de	eaths, VSL, per	year)						
Net PA, All-cause mortality, VSL All		l modes		Bicycling			,		Walking		Running				
Impact measure/Trail	Trail lengt	Avoided o	Avoided costs	AADT Bik	Avoided cases	Avoided costs	Range %	AADT Walk	Avoided o	Avoided costs	Range %	AADT Run A	voided	Avoided costs	Range %
M-Path	9.4	0.09	\$872,526	177	0.07	\$656,529	-11,+16	86	0.02	\$183,002	-37,+45	11	(\$32,995	-47,+95
Health impacts from tra	ail use for a	ll diseases	combined (avo	oided hosp	ital cases and a	bsentee costs, pe	er year)								
Hospital cases, absentee costs All modes				Bicycling				Walking				Running			
Impact measure/Trail	easure/Trail Trail lengt Avoided c Avoide		Avoided costs	AADT Bik	Avoided cases	Avoided costs	osts Range % AADT		Avoided o	Avoided costs	Range %	AADT Run Avoided c		Avoided costs	Range %
M-Path	9.4	0.03	\$16	177	0.02	\$11	-10,+15	86	0.01	\$4	-31,+38	11	(\$1	-27,+55







Resources and Tools

Technical Assistance

Web Resources

- ☐ TrailNation Playbook
- ☐ Trail-Building Toolbox basic information on how to build a trail
- ☐ Resource Library digital repository
- ☐ Webinars & online dialogues
- ☐ Federal Funding Resources Federal funding page, federal funding tool, *Inside Track* newsletter

Available at railstotrails.org/resources



Reach Out!

Ken Bryan

Senior Strategist

ken@railstotrails.org





TrailNation Summit



October 27-29, 2025 Cleveland, Ohio



Register Today: RailsToTrails.org/Summit



Florida Committee Chair | Colin Moore

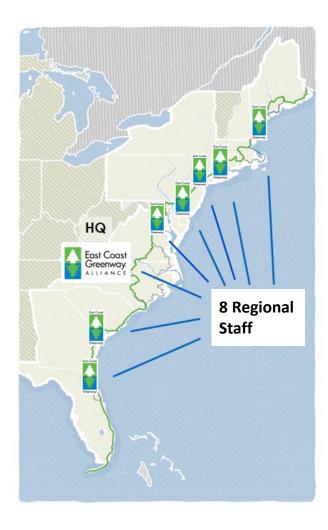


Connecting people to place, Maine to Florida.

The East Coast Greenway is a 3,000-mile-long biking and walking trail in development, connecting our nation's most populated corridor from Calais, ME to Key West, FL:

- 15 states + DC
- 25 major cities
- 450 communities
- 25 million people w/in 5 miles







Partners with local, state, and national agencies and organizations to...

Advocate, plan, and promote the development, stewardship, and public enjoyment the East Coast Greenway





Connecting local and regional trails together.

The East Coast Greenway is about 35% complete with over 1,100 miles of shared-use biking and walking paths, being linked together up and down the coast.



ACCELERATE GREENWAY DEVELOPMENT

Grow & support a coalition



Organize public support



Outreach to electeds



Assist with funding applications



Map and plan route



Assist with trail plans & studies



TRACK & CELEBRATE PROGRESS

Designate trails



Track trail progress, investment, usage



Present to committees, partners



Document trail conditions



Generate media attention



Share best practices, impact



ACTIVATE & PROMOTE GREENWAY

Sign route



Promote trail use, maintenance



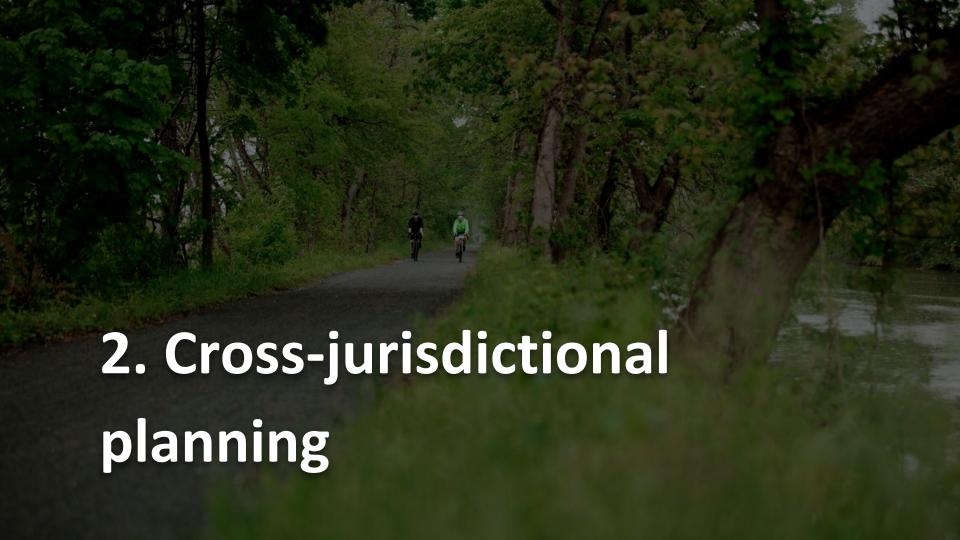
Lead / Participate in Events



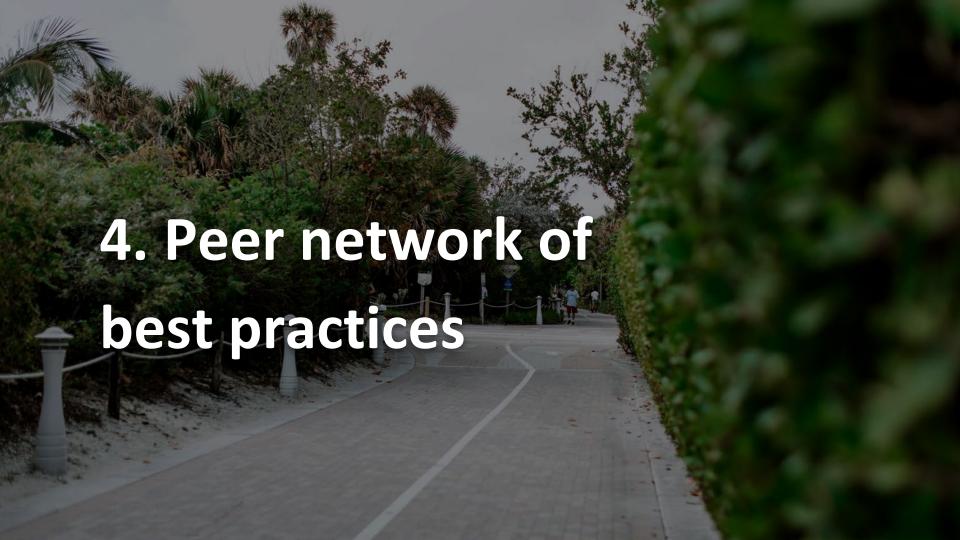
















D&R Canal Trail Bridge over US-1, Lawrence Towns

major rivers and interstate highways. These d existing bridges, to new construction and reone-size-fits-all bridge design endorsed by strategizing bridge design and cost. The All design specifications; and for existing brid-

Bridge design must ensure that transitions of trail users. Bridges are crucial lin! effort must be made to create by dismount. This is achieved by incorpor active transportation users from motoris width. "Dismount" signs and instruction

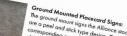
Bridge designs have primarily used th

- 1. steel arch/beam,
- suspension.
- 4. cable stayed

USABLE

The East Coast Greenway arrow plaques should be used in tandem ine to secure vieterinary and w produce shown we used in tourien, with a standard Greenway sign, or a local real wayfinding system sign mort includes the Greenway togu. Arrow produces one un important component of the trail signage element, allowing users in pentan component or the non-synutye element, volunting users of decide on the direction and receive turn instructions to enhance to decide on the direction and receive turn instructions to enhance their experience. The Alliance stocks five types of arrow plaques, so their experience. The Alliance stocks tive types of arrow plaques, so when in doubt, contact the appropriate staff for the region (contact when in doubt, contact the appropriate start for the region (Contact information can be found at severa greenway and observed our team).

• Made of .063 gauge aluminum Engineer grade reflective vinyl sheeting Signs are pre-drilled with 3/8" holes · Graphic and text silkscreened Bold black outline of arrow for visibility The Alliance only stocks the standard signs, both the 5.5° x 15° signs and the 5.5° x 5.5° arrows, to mark the Greenway create The Greenway curve change should be closed disorder blacks that standard Greenway in the stand The Alliance only stocks the standard signs, both the 5.5° x 1.5° signs and the 5.5° x 5.5° arrows, to mark the standard resource can be found in the Annance of Section to Standard Greenway sign. A



The ground mount signs the Alliance stocks are 3.75*x8* and are a peel and slick type design. The Alliance has a square corresponding arrow design that is 3.75° x 3.75° which requires glue/coulk. These lay flush to the ground, no worries around Imposing or getting cought on it. Vendor claims a 7-year lifespon. mpping or guining coughi un it. vanous exists a x-year measuring what a handful in the field for about 1.5 years so far,



GATEWAY MONUMENT

JUNCTURE NAVIGATION

KIOSK

DIRECTION





Reedy Creek Trail, Roleigh

NC. Photo by ECGA



37





East Coast Greenway Route Types

Envisioned Route:

The long-term, entirely off-road final route of the East Coast Greenway; follows existing and planned trails.

- → Includes only designated shared-use trails OR protected bikeways + walkways in parallel
- → Also called the "permanent route"
- → Rare exceptions can include extremely low-volume, low-speed, shared street links between trails in which no other options are feasible

Biking and Walking Facility Types

Shared Use Paths for biking, walking, and active transportation





Two-way cycletrack



One-way separated

bike lane

High Stress

Interim Route:

The current travel route of the Greenway: follows both trails and recommended on-road routes between trails; to be replaced by the "envisioned" route once the planned trails are developed and become usable.

- → Includes unprotected road riding and walking
- → Preference given to lowest stress route available
- → Also called "travel" or "public" route

Low Stress Shared street







No shoulder, high (width varies) speed/volume

Sidepath

Cycletracks + Sidewalks include

physical barrier-separated bike lanes

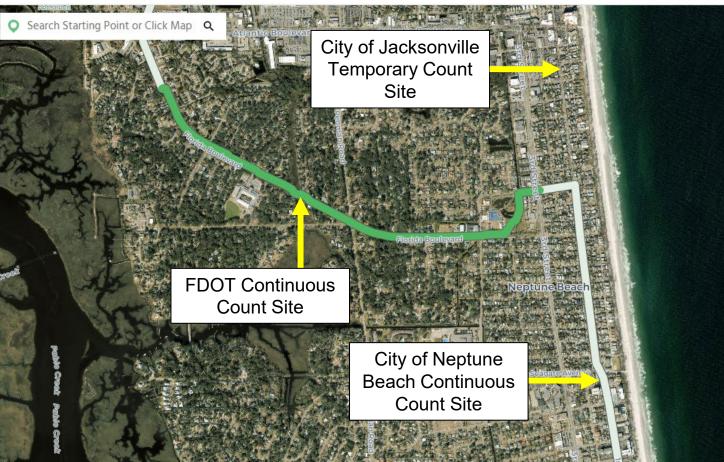
Physical separation from traffic

Shared space with traffic

Shared Lane

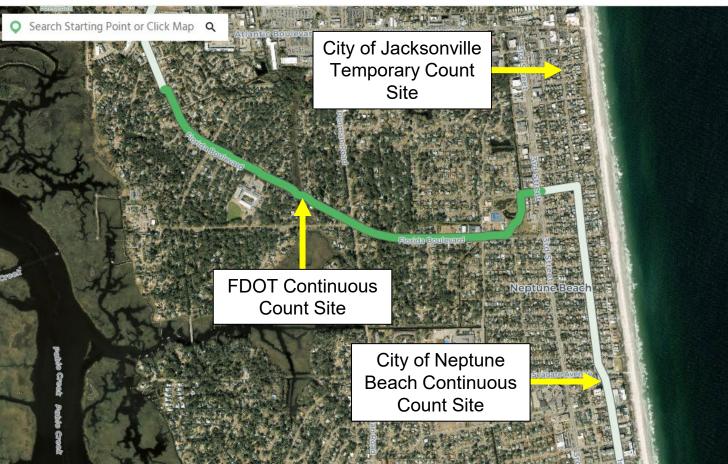












greenway.org



From July/21 to July/22 collected a year's worth of cyclist data from City of Jacksonville's Eco-Counter



greenway.org



Peak Bicycle Counts: 7/4/21 - 5,970 7/4/22 - 7,353

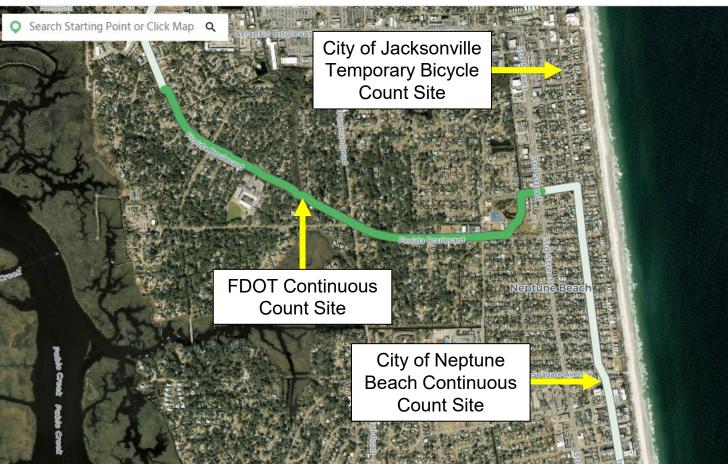


Even outside July 4th First St in Neptune Beach would rank 5th in average daily cyclists based on data from U.S. cities with public counters!

- 1. New York 4,374
- 2. Seattle 2,006
- 3. Madison 1,272
- 4. San Francisco 1,103
- 5. Neptune Beach 863









Peak Counts: 7/4/24 - 16,000 7/4/25 - 16,935

ADT: 1/1/24 to 12/31/24 - 1,032 1/1/25 to 7/4/25 - 1,414



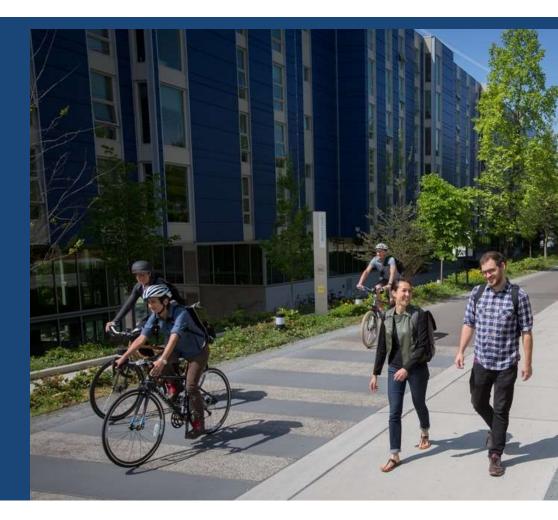


MARLIN Engineering, Inc.

The Rise of the Non-Motorized Data Wrangler



Building Strong Bicycle & Pedestrian Count Programs in Florida



Presented By: Eric Katz, AICP, PMP











Everglades National Park

MARLIN



Enter the Data Wrangler

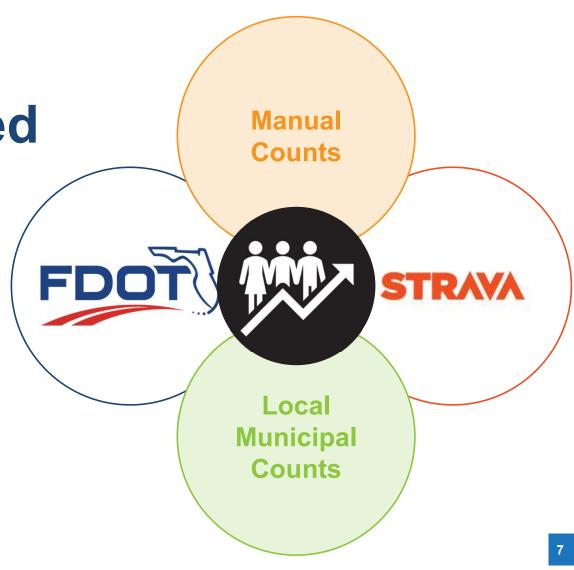
- Steward + translator of active transportation data
- Research → Review → Analyze → Synthesize
- Makes data open, shareable, and actionable





You Don't Need Equipment to Start

- Many existing data sources:
 MPOs, FDOT, universities,
 advocacy groups, private sector
- Wrangler integrates external data into internal systems
- Partnerships form before buying devices





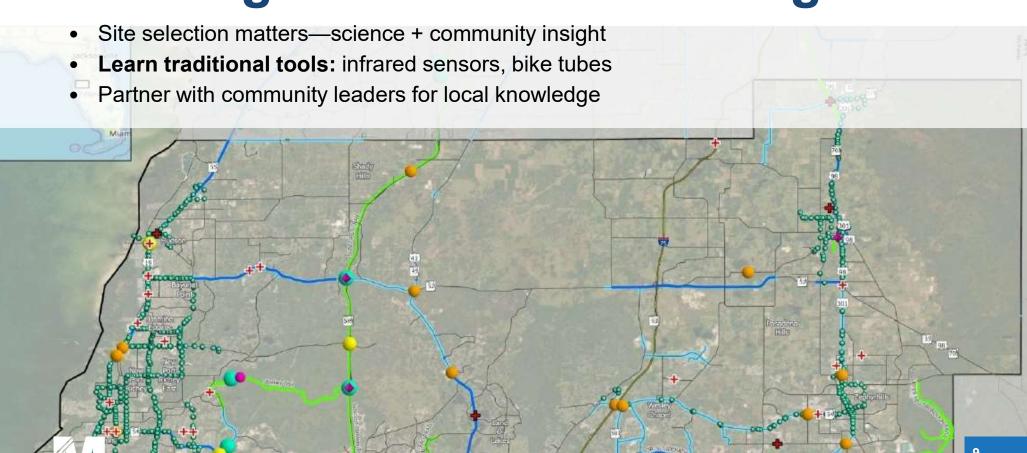


8

Dry Tortugas



Building Toward Custom Programs



Defining Goals & Objectives

- What do we want the data to accomplish?
- Safety improvements, crosswalks, demand tracking?
- Create a Strategic Plan
- No goals? → Start broad with valid AADTs

Federal Highway Administration Traffic Monitoring Guide **Traffic** Monitoring Guide

December 2022











Affordable Equipment = Low Risk, High Value

Counters are more affordable than ever Start small, scale smart

Early data = strong project justification







Evolution of the Count Program

Year 2

Partnerships/ Pilot Counters

Year 4

Data Collection/ Analysis Year 6

System Maintenance



Year 1

Research/ Data Gathering

Year 3

Data Collection/ Analysis Year 5

Regional System with Annual Reports

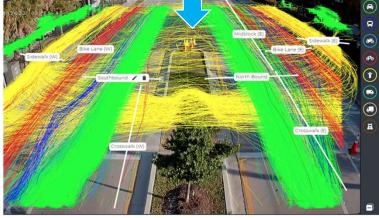


Cutting-Edge Tools & Technology

- Al-powered smart cameras (classify, track behaviors)
- Near-miss detection (proactive safety insights)
- Big data integration (apps, mobile, mobility providers)





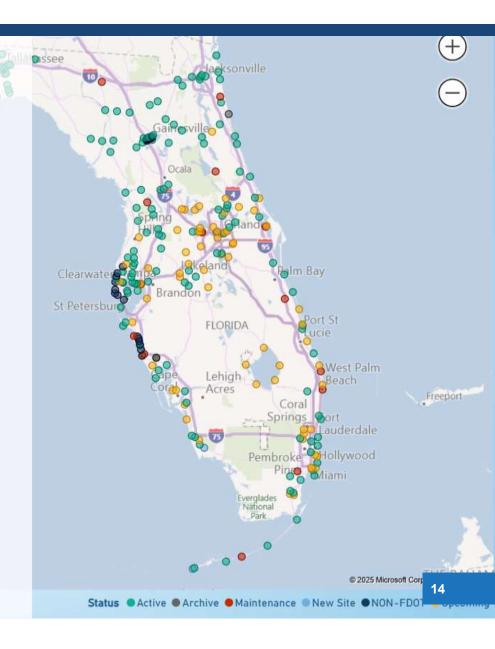






Florida's Opportunity

- Growth = urgent need for active transportation planning
- Equal footing with cars
- Funding a wrangler role positions
 Florida at the cutting edge



Call to Action

Key Points:

- Fund the wrangler role
- Start with existing data
- Define goals, build partnerships
- Scale with affordable counters
- Embrace cutting-edge tools
- Data Wranglers connecting with other data wranglers!
- Elevate biking + walking in Florida



"This is Bubba, our new Data Wrangler."



MARLIN Engineering, Inc.

Questions & Discussion



Thank you for your time. I'm happy to take questions.





























Tampa placed its Eco-Counter at the corner of North Boulevard and West Cass Street.

Leader in active mobility count data solutions

Trusted by organizations for 20+ years across USA, Canada and Worldwide







Working with:

State DOTs, Cities, MPOs, Non-Profits







Range of solutions:

- Urban & natural environments
- Mobile & permanent counters
- Data Analysis and Reporting Software
- Discreet & public-facing options





















Data that makes the difference...



Understand

- ✓ Usage and flows
- ✓ Weather impact
- ✓ Safey Analysis



Convince

- ✓ Budgetary justifications
- ✓ Public communication



Plan

- ✓ Growth
- ✓ Design
- ✓ Maintenance



Evaluate

- ✓ Infrastructure improvements
- ✓ Events and initiatives





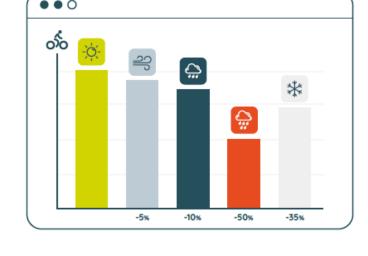
— Agenda



· Analyzing the impact of weather on non-motorized trips













Impact of Events - San Diego's Bike Day



San Diego County Increases Bike Ridership by 40% in one day



The data behind the success of Bike Anywhere Day

At a Glance

- + Bike Anywhere Day is an annual cycling event organized by SANDAG in San Diego County
- Ridership increased 40% on commuter bikeways and 37% on recreational bikeways on the event day compared to similar days in the year
- + Bike volumes went back to normal the week after the event



The Challenge:

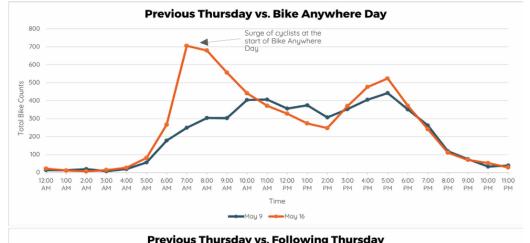
Each year, the San Diego Association of Governments (SANDAG) organizes Bike Anywhere Day, an event where the people of San Diego County are encouraged to alleviate traffic and reduce air pollution by biking for a full day.

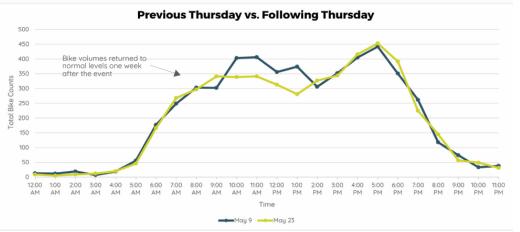
Significant time and resources from both SANDAG and volunteer organizations are needed to make this event happen. SANDAG wanted to know: how successful was it?

Key Questions

- 1. How much did ridership levels change compared to a typical day?
- 2. Did the event generate sustained bike ridership?

Data Analysis and Visualization







Full case study: bit.ly/bikeanywhereday2024



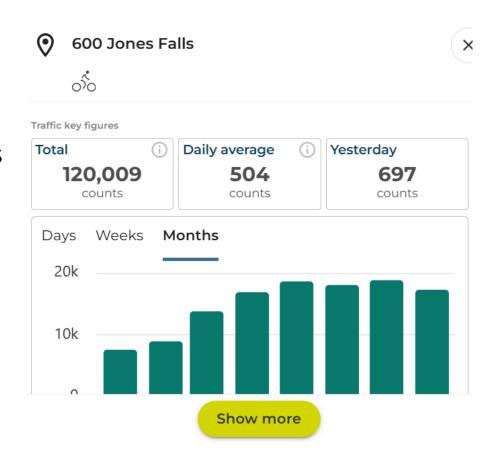




· Count data for public engagement and storytelling

Data sharing for transformation

- + **Promote** active transportation initiatives within community
- + **Encourage** cycling or pedestrian policy
- + Engage with the public by sharing data





Real-Time Displays for a high-impact communication

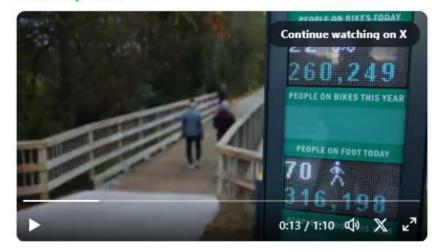






365 days. 3701,755 runners, walkers and cyclists counted! On February 1, 2022, @gvilleparksrec installed a counter along the Swamp Rabbit Trail near Unity Park in partnership with @theprismahealth and @BikeWalkGVL.

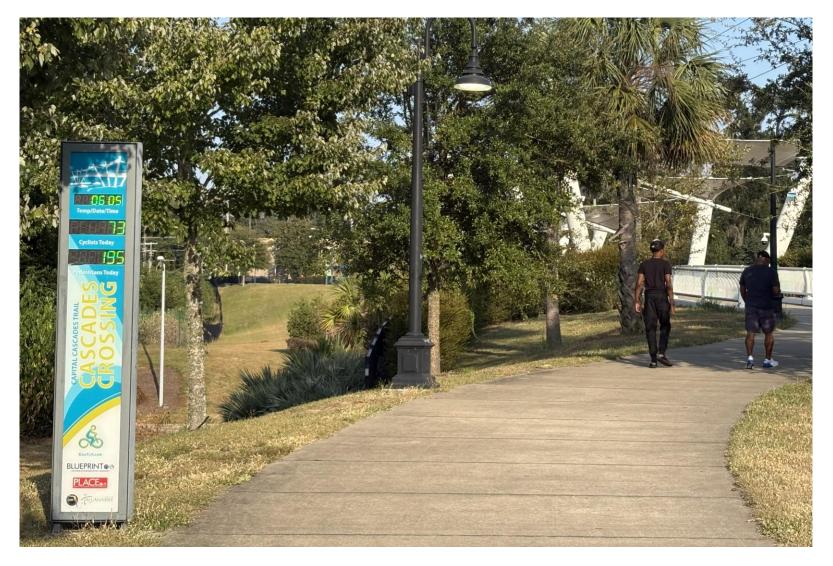
#mobility #SRT



A real-time **Cyclist and Pedestrian** counter on **the Swamp Rabbit Trail** in **Greenville, South Carolina** to promote active living and outdoor recreation



Real-Time Displays for a high-impact communication





Count Data for Evaluation, Design and Safety

Infrastructure evaluation and improvements

Supports funding requests and grants

Shape planning and design

Inform safety evaluation and improve analysis











· City of Montreal - Roadway space allocation by mode

REV – Express protected bikeway network



70%



Average daily traffic to data in 2025 – 4500 bike trips 🚲



54% 15% 31%

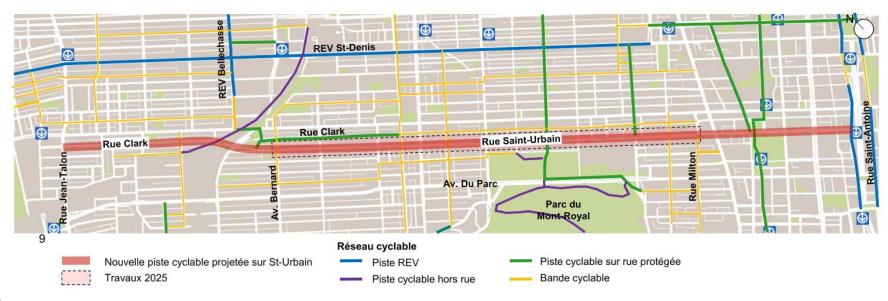


八





City of Montreal – Re-allocation of infrastructure

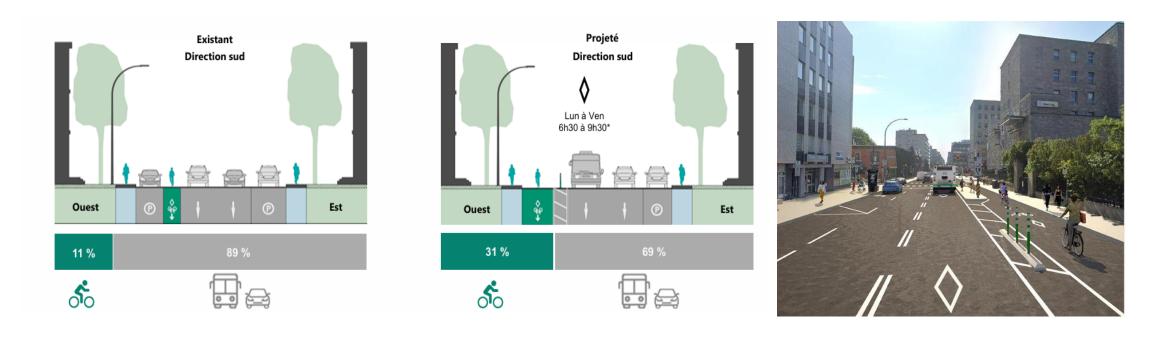


Context

- Busy urban roadway corridor with history of crashes and transit delays.
- Major continuous north-south link to downtown
- Avg of 1,300 cyclists currently using this corridor each day



City of Montreal – Re-allocation of infrastructure

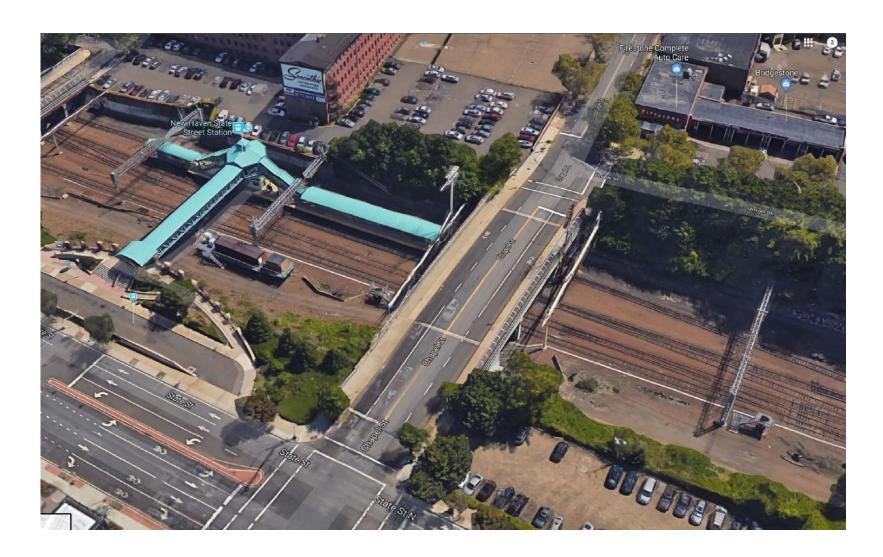


Rebalance roadway to reduce conflicts, promote safe cycling infrastructure, increase cycling volumes and prioritize transit

Desired Outcomes: Safer crossings, reduced severe crashes, **increased bicycle volumes**, improved bus reliability, and calmer traffic.



New Haven, Connecticut – Improving Safety on a Ped Bridge

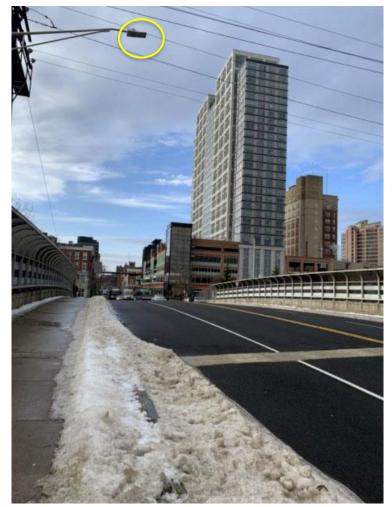






New Haven, Connecticut – Improving Safety on a Ped Bridge







New Haven, Connecticut – Improving Safety on a Ped Bridge

Count data showed large variation of volumes on one side of the Chapel Street Bridge

- The side with lighting had almost double the volumes of people
- Town Green District used this to show that people were more comfortable walking on the illuminated path, especially at night
- Used this insight to win \$40,000 from the Ikea Foundation to install new lighting on the bridge to improve pedestrian safety and comfort

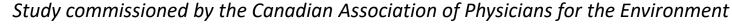


City of Vancouver – Improving Road Safety with Data

Objectives

- Promote active transportation as part of achieving its Vision Zero goal by 2040
- Create a well-connected and protected network of bikeways
- Increasing road safety is key to making cycling safer and more accessible.



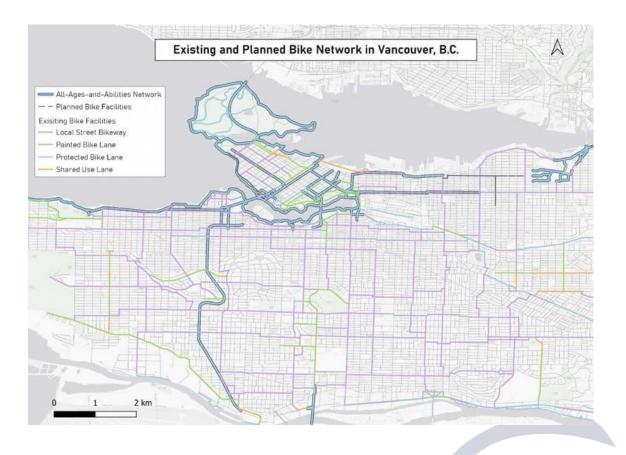




City of Vancouver - Improving Road Safety with Data

Methodology

- Historical data: Analyzing count data from 2010 to 2020 to assess increases in cycling volume
- Heat map creation: Combining counter data with anonymized GPS bike routes showed which intersection to prioritize
- Crash risks: Combining bicycle volumes with crash data to map frequency and rate of collisions

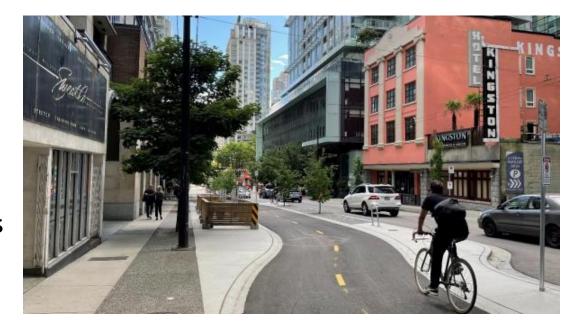




City of Vancouver – Project Outcomes

Key Findings from data

- Collision risk is highest in late fall and early winter
- Winter cycling retention is increasing each year
- 3. Higher risk intersections are located on major arterials with high traffic volumes and no protected cycling infrastructure
- 4. As the expanded protected bikeway network opened, reported collisions decreased





Hessen, Germany - Statewide Counting Program

- Population: About 6.3 million people (2024)
- Largest city: Frankfurt am Main Germany's financial hub, home to the European Central Bank
- Area: 8,147 sq mi (about the size of New Jersey)
- 8,700 miles of cycling routes across Hessen
- Statewide Active Mobility Strategy to make walking and cycling safe, convenient, and attractive for everyday mobility.
- Strong emphasis on integration with public transport and providing mobility options





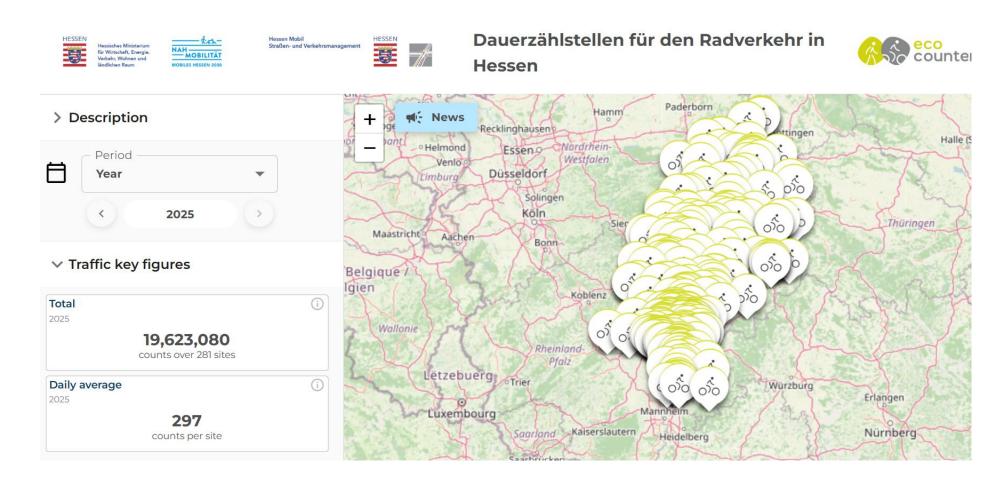
Hessen, Germany – Deployment and Structure

- Statewide network of continuous bicycle count stations.
- ZELT Evo inductive loop bicycle count stations
- 2022 2024: 270 installations → 2025/2026: +230 stations
 - 500 permanent bike count stations in total
- Funded via Hessen Climate Plan (€7.3M)
- Shared collaboration between State of Hessen & local agencies





Statewide Counting Program – Public Data



Data available via public webpage portal: https://hessen-mobil.eco-counter.com/



Hessen, Germany – Program Objectives

Cycling Infrastructure Planning

Predictive Models for Cycling Demand

Transparency and Public Engagement







Opportunities and takeaways for Florida

 Positioning FDOT's NMTMP as the foundation connecting design, safety evaluation, and statewide monitoring.



 Develop public-facing dashboards to build trust and support MPO/local government decision-making.



 Explore AI-based monitoring to complement counts with qualitative information and behavioral safety diagnostics





Opportunities and takeaways for Florida

- Apply corridor-level before/after evaluations (Montreal) to quantify crash reductions and monitor evolution of volumes.
- Use conflict analysis (Vancouver) to assess design effectiveness at intersections and signal changes.
- Integrate permanent count networks (Hessen) into planning models to better represent bicycling and walking demand statewide.



Thank you!





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