



## BICYCLE-PEDESTRIAN ADVISORY COMMITTEE (BPAC)

### Regular Meeting

Thursday, September 19, 2024  
 3:00 pm

#### Public Participation/Accessibility

Participation in Person: Public comments may be provided in person at the meeting. Persons who require special accommodations under the Americans with Disabilities Act (ADA) or persons who require translation services (free of charge) should contact the St. Lucie TPO at 772-462-1593 at least five days prior to the meeting. Persons who are hearing or speech impaired may use the Florida Relay System by dialing 711.

Participation by Webconference (not intended for Committee Members): Using a computer or smartphone, register at <https://attendee.gotowebinar.com/register/4249421567473067605>. After the registration is completed, a confirmation will be emailed containing instructions for joining the webconference. Public comments may be provided through the webconference chatbox during the meeting.

Written and Telephone Comments: Comment by email to [TPOAdmin@stlucieco.org](mailto:TPOAdmin@stlucieco.org); by regular mail to the St. Lucie TPO, 466 SW Port St. Lucie Boulevard, Suite 111, Port St. Lucie, Florida 34953; or call 772-462-1593 until 2:30 pm on September 19, 2024.

### AGENDA

1. Call to Order
2. Roll Call
3. Comments from the Public
4. Approval of Agenda
5. Approval of Meeting Summary
  - *July 25, 2024 Regular Meeting*
6. Action Items
  - 6a. US-1 Corridor Congestion Study Scope of Services: Review of the US-1 Corridor Congestion Study draft Scope of Services.
 

*Action: Recommend approval of the draft Scope of Services, recommend approval with conditions, or do not recommend approval.*

- 6b. Florida Shared-Use Nonmotorized (SUN) Trail Port Connector Feasibility Study: Review of the draft Preferred Alternatives of the SUN Trail Port Connector Feasibility Study.

*Action: Recommend endorsement of the Preferred Alternatives, recommend endorsement with conditions, or do not recommend endorsement.*

7. Discussion Items

- 7a. Autonomous Vehicle Study Update: Presentation of an update to the Autonomous Vehicle Study.

*Action: Discuss and provide comments.*

- 7b. St Lucie County Sustainable Mobility Infrastructure Study: Presentation of the St Lucie County Sustainable Mobility Infrastructure Study.

*Action: Discuss and provide comments.*

8. Recommendations/Comments by Members

9. Staff Comments

10. Next Meeting: The next St. Lucie TPO BPAC meeting is a joint meeting with the Technical Advisory Committee and the Citizens Advisory Committee scheduled for 1:30 pm on Tuesday, November 19, 2024.

11. Adjourn

NOTICES

The St. Lucie TPO satisfies the requirements of various nondiscrimination laws and regulations including Title VI of the Civil Rights Act of 1964. Public participation is welcome without regard to race, color, national origin, age, sex, religion, disability, income, or family status. Persons wishing to express their concerns about nondiscrimination should contact Marceia Lathou, the Title VI/ADA Coordinator of the St. Lucie TPO, at 772-462-1593 or via email at lathoum@stlucieco.org.

Items not included on the agenda may also be heard in consideration of the best interests of the **public's health, safety, welfare, and as necessary to protect every person's right of access.** If any person decides to appeal any decision made by the St. Lucie TPO Advisory Committees with respect to any matter considered at a meeting, that person shall need a record of the proceedings, and for such a purpose, that person may need to ensure that a verbatim record of the proceedings is made which includes the testimony and evidence upon which the appeal is to be based.

Kreyol Ayisyen: Si ou ta renmen resevwa enfòmasyon sa a nan lang Kreyòl Ayisyen, tanpri rele nimewo 772-462-1593.

Español: Si usted desea recibir esta información en español, por favor llame al 772-462-1593.



BICYCLE-PEDESTRIAN ADVISORY COMMITTEE (BPAC)  
 REGULAR MEETING

DATE: Thursday, July 25, 2024

TIME: 3:00 pm

MEETING SUMMARY

1. Call to Order

The meeting was called to order at 3:10 pm.

2. Roll Call

The roll was conducted via sign-in sheet, and a quorum was confirmed with the following members present:

Members Present

Jennifer McGee, Vice Chair

Terry Davis

Joyania Hawthorne

Anna Santacrose

Carrie Wilbur

Representing

St. Lucie County Environmental Resources Department (ERD)

Resident Bicycling

St. Lucie County Parks and Recreation

St. Lucie County Disability Representative

Port St. Lucie Parks and Recreation

Others Present

Kyle Bowman

Peter Buchwald

Yi Ding

Marceia Lathou

Stephanie Torres

Rachel Harrison

Sandra Bogan

Representing

St. Lucie TPO

St. Lucie TPO

St. Lucie TPO

St. Lucie TPO

St. Lucie TPO

Recording Specialist

St. Lucie County ERD

James Brown (via web)	Florida Department of Transportation (FDOT)
Jacquelyn Burrows (via web)	FDOT
Robert Cursey	Benesch
Steve Infanti (via web)	Benesch
Michael Melendez	FDOT
Carlos Rodriguez (via web)	Metric Engineering
Victoria Williams	Florida's Turnpike

3. Comments from the Public – None.

4. Approval of Agenda

\* MOTION by Mr. Davis to approve the agenda.

\*\* SECONDED by Ms. Santacroce Carried UNANIMOUSLY

5. Approval of Meeting Summary  
 • May 23, 2024 Regular Meeting

\* MOTION by Mr. Davis to approve the Meeting Summary.

\*\* SECONDED by Ms. Hawthorne Carried UNANIMOUSLY

6. Action Items

6a. Project Development and Environment Study (PD&E) for Widening Florida's Turnpike from State Route 70 (Okeechobee Road) to State Route 60 (Yeehaw Junction): An update by Florida's Turnpike on the PD&E for the widening of the Turnpike from State Route 70 to State Route 60.

Mr. Buchwald described the phasing of the Turnpike's efforts to widen the mainline corridor in St. Lucie County before explaining the significance of the PD&E to the overall project development process. He then introduced Mr. Rodriguez, who described the geographical limits of the Turnpike segment included in the PD&E under discussion, displayed diagrams of the existing and planned design of the mainline facility, and explained why the widening had been identified as a need. Mr. Rodriguez presented the two alternatives under consideration for the redesign of the interchange at State Route 60 and reported on the status of the

DRAFT

proposed Northern Connector interchange. He concluded with an outline of the schedule for the widening project.

- \* MOTION by Mr. Davis to recommend endorsement of the PD&E alternatives.
- \*\* SECONDED by Ms. Santacroce Carried UNANIMOUSLY

6b. Congestion Management Process (CMP) Major Update:  
Review of the draft CMP Major Update.

Mr. Buchwald introduced Mr. Ding, who explained how the Congestion Management Process (CMP) was funded and updated. He invited Mr. Cursey to continue, and Mr. Cursey began by describing the purpose and components of the CMP. He provided an overview of the scope of the Major Update, identified the members of the Working Group assembled to facilitate it, and defined the CMP network. Mr. Cursey described how several corridors within the network had been identified as needing improvements and subsequently prioritized before noting the recommended project phasing and implementation timeline.

Mr. Davis questioned the inclusion of the Port St. Lucie Boulevard segment between the Turnpike and Bayshore Boulevard on the CMP needs list. Mr. Buchwald explained that congestion had been observed at the intersection of Port St. Lucie Boulevard and Bayshore Boulevard during peak hours, causing traffic to back up onto the bridge over the Turnpike. In response to Vice Chairwoman McGee's question, Mr. Buchwald explained that the Port St. Lucie Boulevard segment was able to be included on the prioritized corridor list because the State portion of the facility only extended eastward from Bayshore Boulevard.

Discussion ensued regarding the improvements recommended for Oleander Avenue, with Mr. Cursey clarifying that the proposed multi-use path would extend from Azalea Avenue to Antilles Avenue. Mr. Davis noted that a child had died several years before in an accident that occurred south of Edwards Road and expressed concern at the lack of pedestrian facilities in that vicinity. Mr. Buchwald indicated that pedestrian improvements had been planned for the segment of Oleander Avenue immediately south of Edwards Road, although issues had arisen with Florida East Coast Railway regarding the rail crossing. In answer to Vice Chairwoman McGee's question, Mr. Buchwald indicated that the sidewalk was planned to eventually extend from Edwards Road to Midway Road.

Mr. Davis expressed his appreciation for the traffic signal recently installed at the intersection of Bayshore Boulevard and Lakehurst Drive and commented on its benefits for the neighborhood.

\* MOTION by Mr. Davis to recommend adoption of the draft CMP Major Update.

\*\* SECONDED by Ms. Santacroce Carried UNANIMOUSLY

## 7. Discussion Items

7a. Transportation Asset/Service Vulnerability Assessment Update: A presentation on the development of the St. Lucie County Community Resilience Plan.

At Mr. Buchwald's invitation, Ms. Torres recounted the history of the TPO's involvement in the county-wide efforts to plan for the impacts of climate change and natural disasters, explaining that several grants had been received for the purpose of assessing and mitigating those impacts. She invited Ms. Bogan to provide an update on the Vulnerability Assessments and Regional Resilience Plan, and Ms. Bogan began with an explanation of community resilience and resilience planning. She identified the agency partners participating in the Resilience Steering Committee, noted the objectives and funding sources for the planning efforts, and presented several statistics demonstrating the potential impacts of environmental stressors on local facilities. Ms. Bogan described possible adaptation strategies along with the Florida Transportation Plan Focus Areas and then outlined the project schedule.

Ms. Santacroce cited an Environmental Planning Agency analysis that had identified the transportation and electricity production industries as leading causes of greenhouse gas emissions. Noting that electric vehicles (EVs) were still too costly for the average consumer to afford, she commented on the need to focus on reducing emissions during electricity production, perhaps through greater dependence on solar energy. Ms. Bogan speculated that the high cost of EVs might be regulated by supply and demand and noted that the TPO had already produced a plan for EV charging station locations, remarking on the importance of providing more mobility options.

Vice Chairwoman McGee commended the local agencies for providing more transportation alternatives but noted that the multi-use paths could be made more appealing by enhancing the shade and landscaping features. Ms. Bogan agreed, adding that green features were important

for health and safety as well as for the facilities' longevity. She then commented on the likelihood of the transportation system transforming as younger generations aged.

Mr. Davis described several transportation innovations he had noticed when traveling in Asia, including solar arrays used as shade structures over parking lots and multi-use paths. He commented on Puerto Rico's installation of electrical microgrids as a resilience strategy and remarked on the need for individual efforts to promote resilience alongside communal planning. Ms. Bogan noted that individuals could help drive community planning efforts, and discussion ensued regarding the need for more greenways in the TPO area.

8. Recommendations/Comments by Members – Mr. Davis elaborated on the public transportation system in Thailand, describing the pedestrian overpasses he had seen there and suggesting that similar facilities be considered for busy roadways locally to promote safety for students in particular.

Mr. Melendez explained that he would be serving as the FDOT District 4 representative while Claudette de los Santos was on maternity leave. He reported that the Bicycle-Pedestrian Master Plan update had recently been initiated and noted that he would be reaching out soon to discuss its development. Mr. Buchwald recommended that the update be presented to the Advisory Committees and TPO Board at upcoming meetings.

Mr. Melendez noted that the data generated by the statewide Nonmotorized Traffic Monitoring Program was available to the public. Mr. Buchwald and Ms. Torres identified the locations where the bicycle-pedestrian counters for the program had been installed in the TPO area. Mr. Melendez described changes that had recently been made to the program's website, and Ms. Torres offered to provide the members with the website link. Mr. Buchwald expounded on the data produced by some of the local counters and indicated that the TPO would welcome additional equipment. In response to a question by Mr. Melendez, Ms. Torres recounted her discussions with FDOT staff regarding the procurement of more counting stations.

9. Staff Comments – At Mr. Buchwald's invitation, Ms. Williams reported on upcoming improvement projects for Turnpike facilities in the TPO area.

Ms. Torres announced the plans for an upcoming bicycle helmet-fitting certification class. She detailed the benefits of certification and requested that anyone interested in participating contact her.

10. Next Meeting: The next St. Lucie TPO BPAC meeting is a regular meeting scheduled for 3:00 pm on Thursday, September 19, 2024.

11. Adjourn – The meeting was adjourned at 4:20 pm.

Respectfully submitted:

Approved by:

\_\_\_\_\_  
Rachel Harrison  
Recording Specialist

\_\_\_\_\_  
Vennis Gilmore  
Chairman





## AGENDA ITEM SUMMARY

Board/Committee:	Bicycle-Pedestrian Advisory Committee (BPAC)
Meeting Date:	September 19, 2024
Item Number:	6a
Item Title:	US-1 Corridor Congestion Study Scope of Services
Item Origination:	Unified Planning Work Program (UPWP)
UPWP Reference:	Task 2.3 - Traffic Count Program Management
Requested Action:	Recommend approval of the draft Scope of Services, recommend approval with conditions, or do not recommend approval.
Staff Recommendation:	Based on the scope and cost being consistent with Task 2.3 of the UPWP, it is recommended that the US-1 Corridor Congestion Study Scope of Services be recommended for approval.

### Attachments

- Staff Report
- US-1 Corridor Congestion Study Scope of Services



## MEMORANDUM

TO: Bicycle-Pedestrian Advisory Committee (BPAC)

THROUGH: Peter Buchwald  
Executive Director

FROM: Yi Ding  
Transportation Systems Manager

DATE: September 10, 2024

SUBJECT: US-1 Corridor Congestion Study Scope of Services

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### BACKGROUND

As part of the 2025 Traffic Count Management Program (Program), the US-1 Corridor Congestion Study (Study) is programmed for FY 2024/25 in Task 2.3 of the TPO's Unified Planning Work Program (UPWP). As part of the Study, additional traffic count data will be collected through the Program and analyzed to quantify the level of congestion on US-1 from Prima Vista Boulevard to the Martin County Line and on nearby parallel corridors. Based on the analysis, strategies will be developed to reduce the traffic congestion on this segment of US-1 for project development and programming.

### ANALYSIS

The attached draft Scope of Services for the Study was prepared by Benesch, one of the TPO's General Planning Consultants. Benesch has provided the traffic count collection and Traffic Count Data Management System (TCDMS) maintenance services since the inception of the Program. Benesch also completed the recent Major Update to the Congestion Management Process.

The draft Scope of Services is consistent with the scope outlined in the adopted UPWP. Benesch proposes a cost of \$19,994 for the Study which is within the UPWP task budget.

**RECOMMENDATION**

Based on the scope and cost being consistent with Task 2.3 of the UPWP, it is recommended that the US-1 Corridor Congestion Study Scope of Services be recommended for approval.

**ST. LUCIE COUNTY  
TRAFFIC COUNT PROGRAM MANAGEMENT**

**U.S. 1 CORRIDOR CONGESTION STUDY  
SCOPE OF SERVICES**

*Prepared For:*  
**St. Lucie Transportation Planning Organization**  
*Coco Vista Center  
466 SW Port St. Lucie Boulevard  
Port St. Lucie, FL 34953  
ph (772) 462-1593*



*Prepared By:*  
 **benesch**

*100 W. Cypress Creek Road, Suite 980  
Fort Lauderdale, FL 33309  
ph (954) 641-5680*

**August 31, 2024**

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## INTRODUCTION

As part of the 2025 Traffic Count Management Program, additional traffic count data will be collected and analyzed to quantify the level of congestion on U.S. 1 from Prima Vista Boulevard to the Martin County Line and nearby parallel corridors. Strategies will be developed to reduce the traffic congestion on the segment of U.S. 1 based on the analysis for project development and programming. This activity is included in Task 2.3 – Traffic Count Program Management of the St. Lucie TPO 2024/25 – 2025/26 UPWP.

The study will be accomplished through the following tasks:

- Task 1 Traffic Data Collection and Gathering:** Benesch will compile all available traffic data within the US-1 study segment and parallel corridors. This will include current and historic traffic data from the Traffic Count Data Management System (TCDMS) and the Florida Department of Transportation (FDOT) for the purpose of performing detailed congestion analysis and track trends. Benesch will also compile data from RITIS and REPLICA to measure and analyze congestion within the corridor.
- Task 2 Daily and Peak Hour Congestion Analysis:** Daily Level-of-Service (LOS) will be calculated, the peak period will be determined, and peak-period LOS will be determined. Delay, speed, and queue lengths will be reviewed as available from RITIS. REPLICA will be the primary source in determining origins and destination of trips observed along the U.S. 1 corridor. These are other available sources will be used to gain insight into trip making and travel characteristics.
- Task 3 Develop Strategies to Reduce Traffic Congestion:** Benesch will develop recommended strategies to reduce congestion on U.S. 1. The strategies considered will be consistent with those utilized in the TPO's Congestion Management Process. The anticipated traffic reduction of recommended strategies will be quantified, and planning level cost estimates will be developed. Benesch will research, review, and consider impacts to congestion of any existing and planned projects by FDOT, the TPO, and other local implementing agencies.
- Task 4 Documentation:** Benesch will prepare a technical memorandum to document the analysis, findings, and recommendations. A draft version will be submitted to the TPO for review. A final technical memorandum will be produced which incorporates comments from the TPO.
- Task 5 Presentations:** Benesch will prepare a PowerPoint presentation which summarizes the study process, findings, and recommendations. Benesch will participate in presenting to the TPO committees and Board.

**Budget:**

The services described herein shall be completed at a not to exceed cost of \$19,993.30 based on the effort estimate included herein as Attachment 1. Invoices shall be based on the percentage of completion of work accomplished and as documented in the project status report.

**Schedule:**

The tasks shall be completed by June 30, 2025.

Attachment 1

U.S. 1 Corridor Congestion Study										
ACTIVITY	Principal-in-Charge \$ 269.00	Project Manager \$ 229.84	Senior Planner \$ 127.44	Senior Engineer \$ 196.95	Engineer \$ 102.86	Planner \$ 81.34	Engineer Tech. \$ 57.35	Admin/ Clerical \$ 68.29	TOTAL HOURS	COST BY ACTIVITY
<b>Conduct U.S. 1 Corridor Congestion Study</b>	2	20	34	22	40	14	14	2	148	\$ 19,993.30
<b>Task 1 Traffic Data Collection and Gathering:</b> Benesch will compile all available traffic data within the US-1 study segment and parallel corridors. This will include current and historic traffic data from the Traffic Count Data Management System (TCOMS) and the Florida Department of Transportation (FDOT) for the purpose of performing detailed congestion analysis and track trends. Benesch will also compile data from RITIS and REPLICa to measure and analyze congestion within the corridor.		2	2	2	4	6	4		20	\$ 2,237.34
<b>Task 2 Daily and Peak Hour Congestion Analysis:</b> Daily Level-of-Service (LOS) will be calculated, the peak period will be determined, and peak-period LOS will be determined. Delay, speed, and queue lengths will be reviewed as available from RITIS. REPLICa will be the primary source in determining origins and destination of trips observed along the U.S. 1 corridor. These are other available sources will be used to gain insight into trip making and travel characteristics.		2	8	2	4	4	4		24	\$ 2,839.30
<b>Task 3 Develop Strategies to Reduce Traffic Congestion:</b> Benesch will develop recommended strategies to reduce congestion on U.S. 1. The strategies considered will be consistent with those utilized in the TPO's Congestion Management Process. The anticipated traffic reduction of recommended strategies will be quantified, and planning level cost estimates will be developed. Benesch will research, review, and consider impacts to congestion of any existing and planned projects by FDOT, the TPO, and other local implementing agencies.		4	4	12	16		4		40	\$ 5,667.68
<b>Task 4 Documentation:</b> Benesch will prepare a technical memorandum to document the analysis, findings, and recommendations. A draft version will be submitted to the TPO for review. A final technical memorandum will be produced which incorporates comments from the TPO.	2	4	4	4	16			2	32	\$ 4,537.26
<b>Task 5 Presentations:</b> Benesch will prepare a PowerPoint presentation which summarizes the study process, findings, and recommendations. Benesch will participate in presenting to the TPO committees and Board.		8	16	2		4	2		32	\$ 4,711.72
<b>Total Hours:</b>	2	20	34	22	40	14	14	2	148	
<b>Total Labor:</b>	\$ 538	\$ 4,597	\$ 4,333	\$ 4,333	\$ 4,114	\$ 1,139	\$ 803	\$ 137	\$ 19,993	\$ 19,993.30
									<b>TOTAL COSTS:</b>	\$ 19,993.30



## AGENDA ITEM SUMMARY

Board/Committee:	Bicycle-Pedestrian Advisory Committee (BPAC)
Meeting Date:	September 19, 2024
Item Number:	6b
Item Title:	Florida Shared-Use Nonmotorized (SUN) Trail Port Connector Feasibility Study
Item Origination:	Unified Planning Work Program (UPWP)
UPWP Reference:	Task 3.5 – Bicycle Pedestrian / Complete Streets Planning
Requested Action:	Recommend endorsement of the Preferred Alternatives, recommend endorsement with conditions or do not recommend endorsement.
Staff Recommendation:	Based on the feasibility of and the endorsement by the Fort Pierce City Commission of the Preferred Alternatives, it is recommended that the Preferred Alternatives be recommended for endorsement.

### Attachments

- Staff Report
- Presentation





Coco Vista Centre  
 466 SW Port St. Lucie Blvd, Suite 111  
 Port St. Lucie, FL 34953  
 772-462-1593 www.stlucietpo.org

## MEMORANDUM

Board/Committee: Bicycle-Pedestrian Advisory Committee (BPAC)

THROUGH: Peter Buchwald  
 Executive Director

FROM: Stephanie M. Torres  
 Bicycle Pedestrian Program Manager

DATE: September 10, 2024

SUBJECT: Shared-Use Nonmotorized (SUN) Trail Port  
 Connector Feasibility Study

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### BACKGROUND

The Florida Shared-Use Non-Motorized (SUN) Trail Program allocates \$50 million annually for the development of a statewide paved trail system benefiting bicyclists and pedestrians across Florida. By 2026, the SUN Trail Program, in collaboration with the Florida Department of Transportation (FDOT), will have invested over \$20 million toward completing the Statewide SUN Trail Network and extending the East Coast Greenway throughout St. Lucie County.

The East Coast Greenway (ECG) is a multi-purpose path spanning 15 states and connecting 450 cities and towns over 3,000 miles from Florida to Maine. Within St. Lucie County, three ECG segments have been completed: Indian Hills Recreation Area, a portion of the Savannas Recreation Area, and the multi-use path along Green River Parkway connecting St. Lucie and Martin Counties. Additionally, two projects, known as the Savannas Gap Trail, linking the Green River Parkway to the Savannas Recreation Area are currently under construction and managed by FDOT. The first segment is from Walton Road to Kitterman Road, and the second segment is from Lennard Road to the Savannas Recreation Area. Both are estimated to be completed in the Fall of 2025.

Collaboration between the St. Lucie Transportation Planning Organization (TPO) and St. Lucie County resulted in successful SUN Trail funding for a

Feasibility Study for the SUN Trail Port Connector Project. The proposed SUN Trail Port Connector aims to cross the Florida East Coast (FEC) Railroad corridor, enhancing connectivity and accessibility for residents and visitors alike.

Because Kimley-Horn has completed several other SUN Trail feasibility studies in the past, including the feasibility studies in the TPO area for the Florida East Coast Railroad Overpass and the Savannas Gap Trail, they were tasked with completing the Feasibility Study. The Study includes identifying alignments for the SUN Trail, identifying and mitigating environmental impacts, preparing proposed typical sections, providing construction cost estimates for each alternative and determining the preferred alternatives. The Preferred Alternatives of the Feasibility Study are being provided to the TPO Advisory Committees for review, comment, and recommendation.

## ANALYSIS

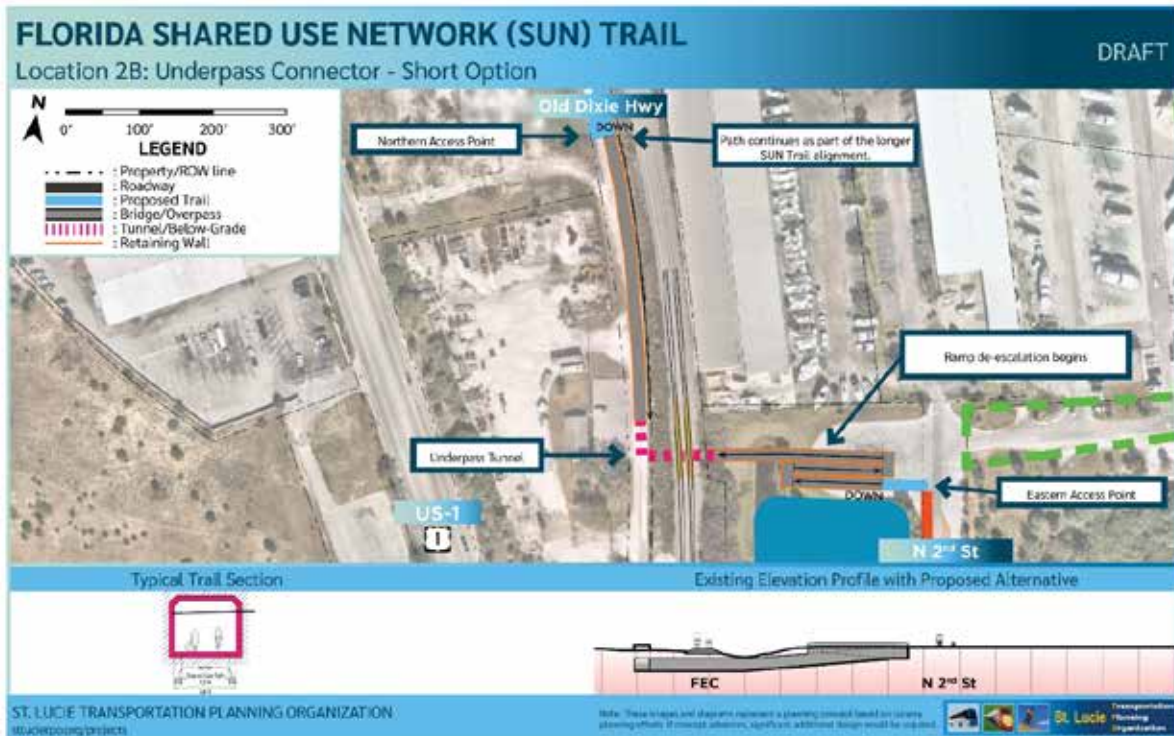
The Preferred Alternatives were developed with comprehensive community input and collaboration. The public outreach efforts included:

- Regular Meetings: Ongoing discussions between the interagency working group to ensure coordinated efforts.
- Stakeholder Input: Gathering valuable feedback from key stakeholders to guide project development.
- Community Workshop: A workshop held in February 2024 to engage with the community and gather their insights.
- US Mail: Sending community engagement information via traditional mail to reach a broader audience.
- Social Media: Social Media posts directing users to an online survey to collect widespread community feedback.

The feedback gathered reflected the need for roadway connectivity in part of the Port redevelopment activities expected to occur per the 2020 Port Master Plan. Additionally, providing non-motorized facility connections to Lincoln Park, and the residential communities near it, was mentioned to be a top priority to increase accessibility to Harbour Pointe Park.

Six different alignment alternatives (A-E) explored overpass, underpass and at-grade facilities. From these alternatives the most viable overpass and underpass options were selected based on the analyses conducted and the feedback received to date.

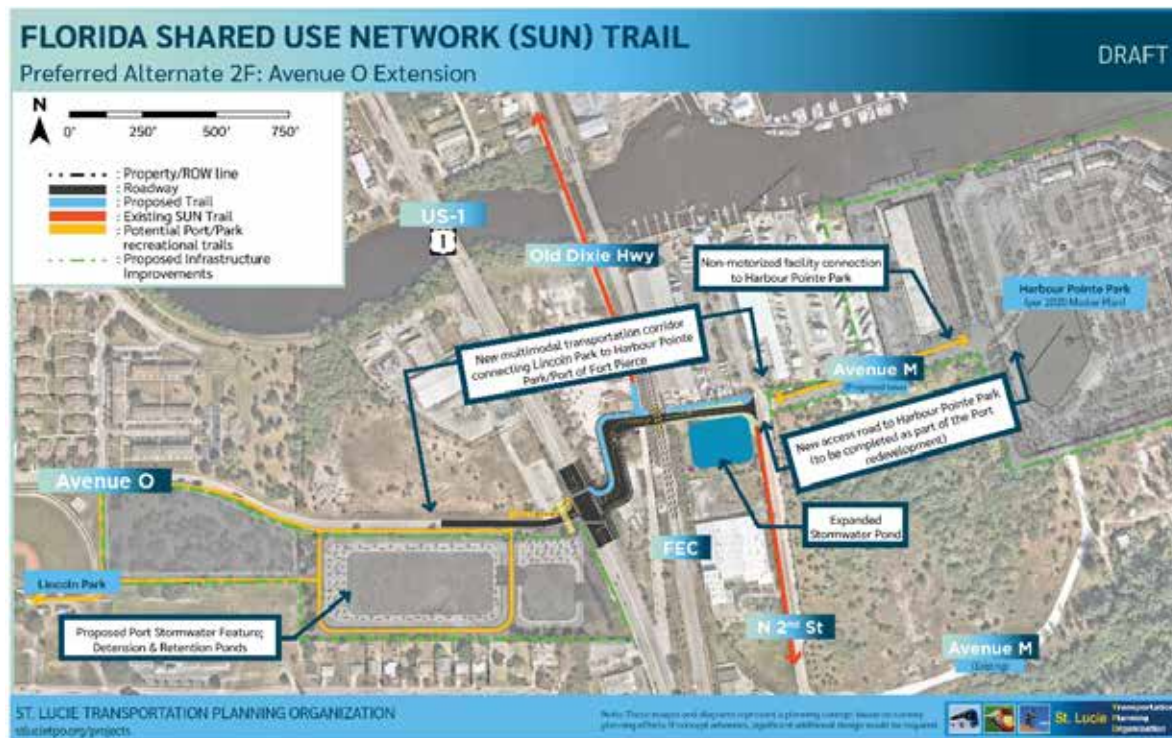
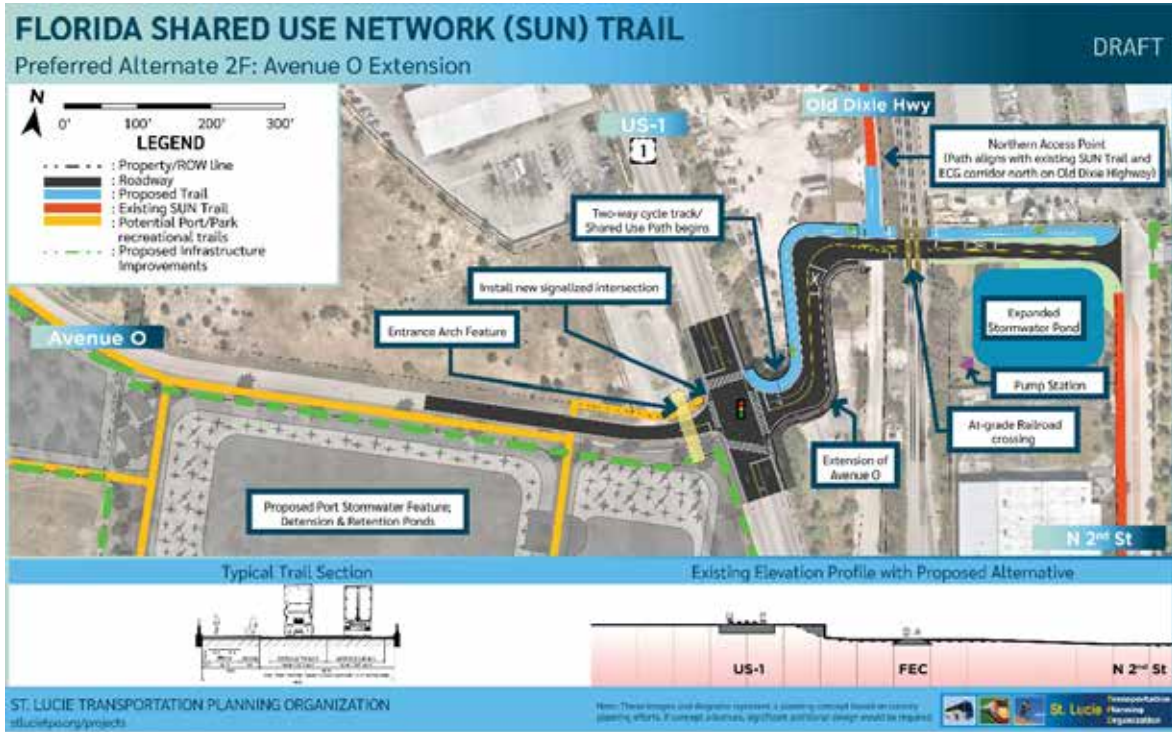
Alternative 2 B: Underpass Connector – Short Option (Phase 1)  
 Construction Cost: \$14,730,000



Alternative 2B is a culvert underpass that provides a trail beneath the FEC Railway connecting N 2nd Street with Old Dixie Highway. East of the FEC Railway, the underpass is aligned in the area north of the existing retention pond. The entrance to the underpass, and start of the de-escalation, begins west of N 2nd Street along the south side of the existing truck turnaround semi-circle. The underpass then completes a series of switchbacks to meet the required clearance distance below the FEC Railway and then continues west before passing beneath the railroad. After the pathway crosses beneath the FEC Railway it turns north along the east side of Old Dixie Highway where it eventually reaches ground level to connect to the existing SUN Trail alignment. Additionally, the underpass must include water treatment strategies to prevent flooding and pooling of water to ensure the overpass is always accessible. Pump systems can be installed within the retaining walls, adding approximately 2 feet of width on either side of the underpass. Additionally, using a pre-fabricated culvert can be an advantage that saves on construction costs associated with 2B.

# Alternative 2F: Port to Parks Connector – At-Grade Crossing Option (Phase 2)

Construction Cost: \$8,850,000.00



Alternative 2F extends the existing Avenue O roadway to the east through a new signalized intersection at US-1, intersecting with Old Dixie Highway, as well as crossing the FEC Railway at-grade, before continuing to connect to the existing North 2nd Street roadway to provide a gateway into the reimagined Harbour Pointe Regional Park. An at-grade sidewalk maintains separation from the road and motorists. Nonmotorized users can also access the path at any point along the Avenue O extension, adds a roadway network link for motorists traveling to and from the Port area, and is estimated to have the lowest project cost. The wedged parcel between US-1 and Old Dixie Highway provides adequate length for an at grade option to meet the elevation of US-1 without drastic slopes, allowing users to traverse the trail more comfortably. It will incorporate several new crosswalks, asphalt paving, median striping, railway indicators on the road as well as at the FEC crossing. This alternative achieves connectivity to the communities and recreation facilities west of US-1, while also providing a direct connection into the gateway corridor envisioned for the new Harbour Pointe Park, noted in the Port of Fort Pierce Master Plan.

Because Alternative 2F is a concept that requires coordination across several entities that could exceed the FDOT programmed design funding timeframe, Alternative 2B (short-option underpass) was determined to be the Phase 1 Preferred Alternative for a shared-use underpass below the FEC Railway and Alternative 2F (at-grade option) was determined to be the Phase 2 Preferred Alternative. Alternative 2B is a grade-separated crossing of the FEC railroad providing non-motorized access to the northern area of Harbour Pointe Park. The alignment of the underpass at the northern end of the port creates a direct connection into Harbour Pointe Park at North 2nd Street to link users from the SUN Trail network into a regional recreation destination. Unlike Alternative 2F, the concept does not rely on the acquisition of the land parcel between Old Dixie Highway and US-1.

The Florida Department of Transportation (FDOT) has allocated \$1.1 million in Fiscal Year 2024/25 for the design of the Preferred Alternative Phase 1 which the City of Fort Pierce agreed to manage at the September 9, 2024, City Commission Meeting. In addition, the City Commission endorsed the Preferred Alternatives at the Meeting.

## RECOMMENDATION

Based on the feasibility of and the endorsement by the Fort Pierce City Commission of the Preferred Alternatives, it is recommended that the Preferred Alternatives be recommended for endorsement.



# Florida Shared-Use Network (SUN) Trail

## Port of Fort Pierce Connector Feasibility Assessment

Prepared By:

**Kimley»Horn**

September 2024

# SUN Trail Design Criteria

## Path width

- 10-14 feet

## Path surface

- ADA-compliant hard surface pavement

## Vertical clearance

- 10 feet minimum
- 12 feet preferred

## Horizontal clearance

- 4 feet from edge of pavement

## Grades

- Up to 5% running slope
- Short distances of steeper grades may be provided when necessary



# Potential Connector Locations

- Rail spur
- Truck turnaround
- Fisherman's Wharf to US-1





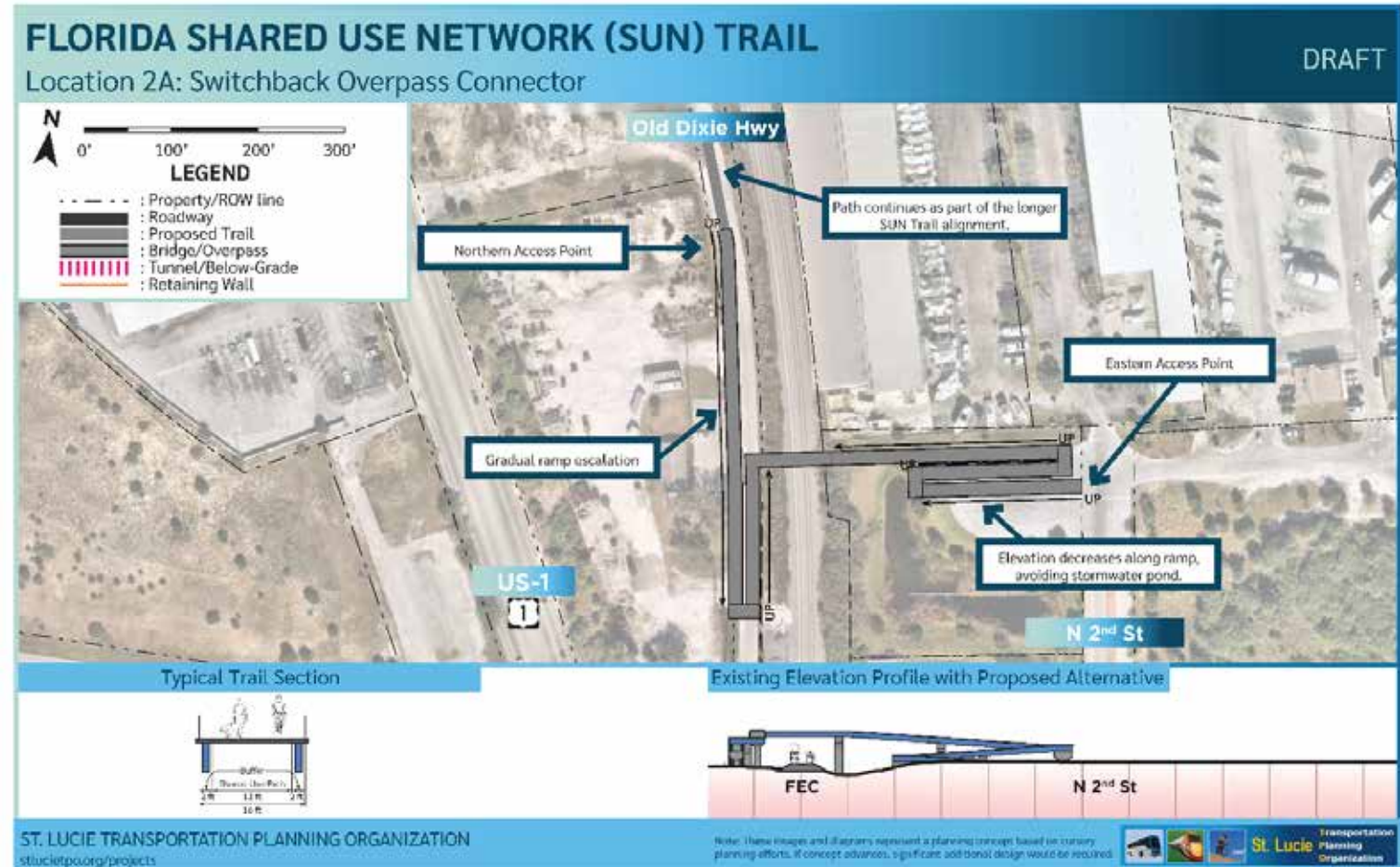
# Truck Turnaround / Retention Pond Alt.

- Primary focus for alternatives analysis
  - General location for alternatives 2A-2F
- Public Ownership of retention pond
- Wedge parcel west of Old Dixie Highway currently privately owned



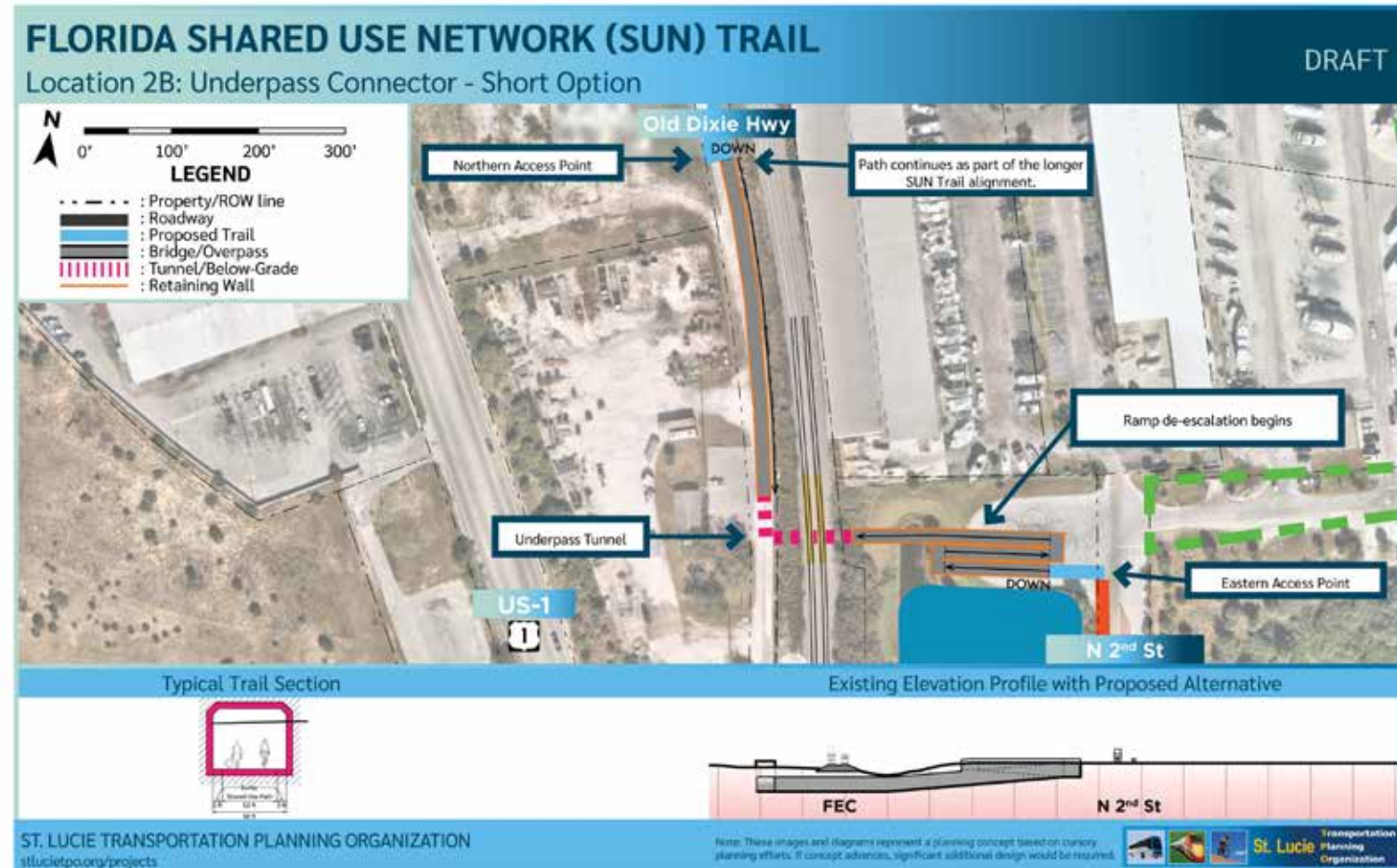
# 2A – Switchback Overpass Connector

- Elevated trail from N 2<sup>nd</sup> St to Old Dixie Hwy, over FEC Railway
- Switchbacks necessary to achieve accessible slope standards (max 5%)
- Eastern entrance aligns with envisioned entrance into Harbour Pointe Park



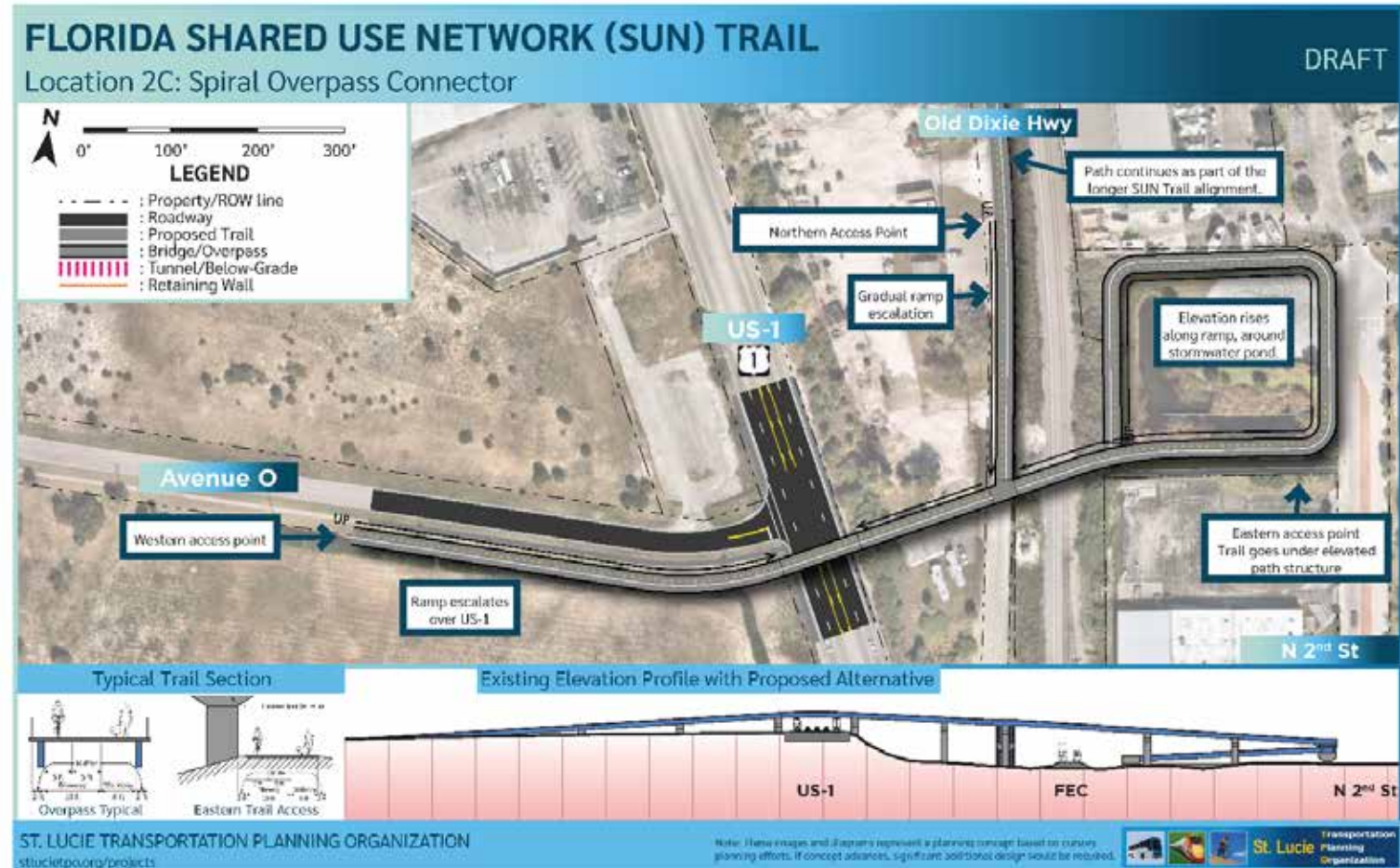
# 2B – Underpass Connector – Short Option

- Culvert-style underpass that would connect N 2<sup>nd</sup> St with Old Dixie Highway
  - Connection with planned shared-use path along Old Dixie Highway (also the current SUN Trail alignment)
- De-escalation begins along N 2<sup>nd</sup> Street to meet accessible slope standards (max 5%)



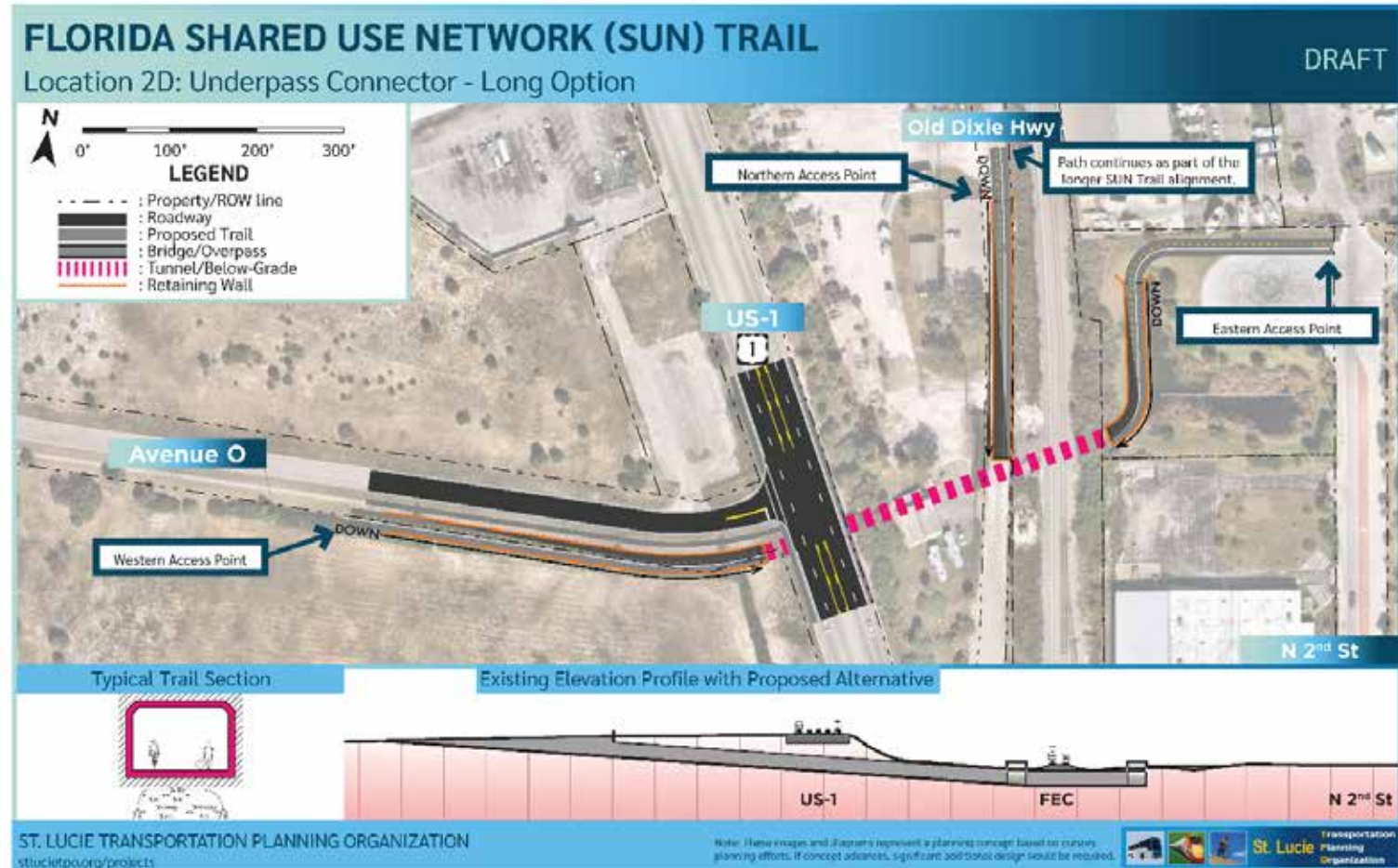
# 2C – Spiral Overpass Connector

- Connects N 2<sup>nd</sup> St to Avenue O, utilizing higher land elevation for an overpass
  - Path continues north to connect with existing SUN Trail alignment along Old Dixie Hwy
- Incorporates connectivity to the communities and recreation facilities west of US-1



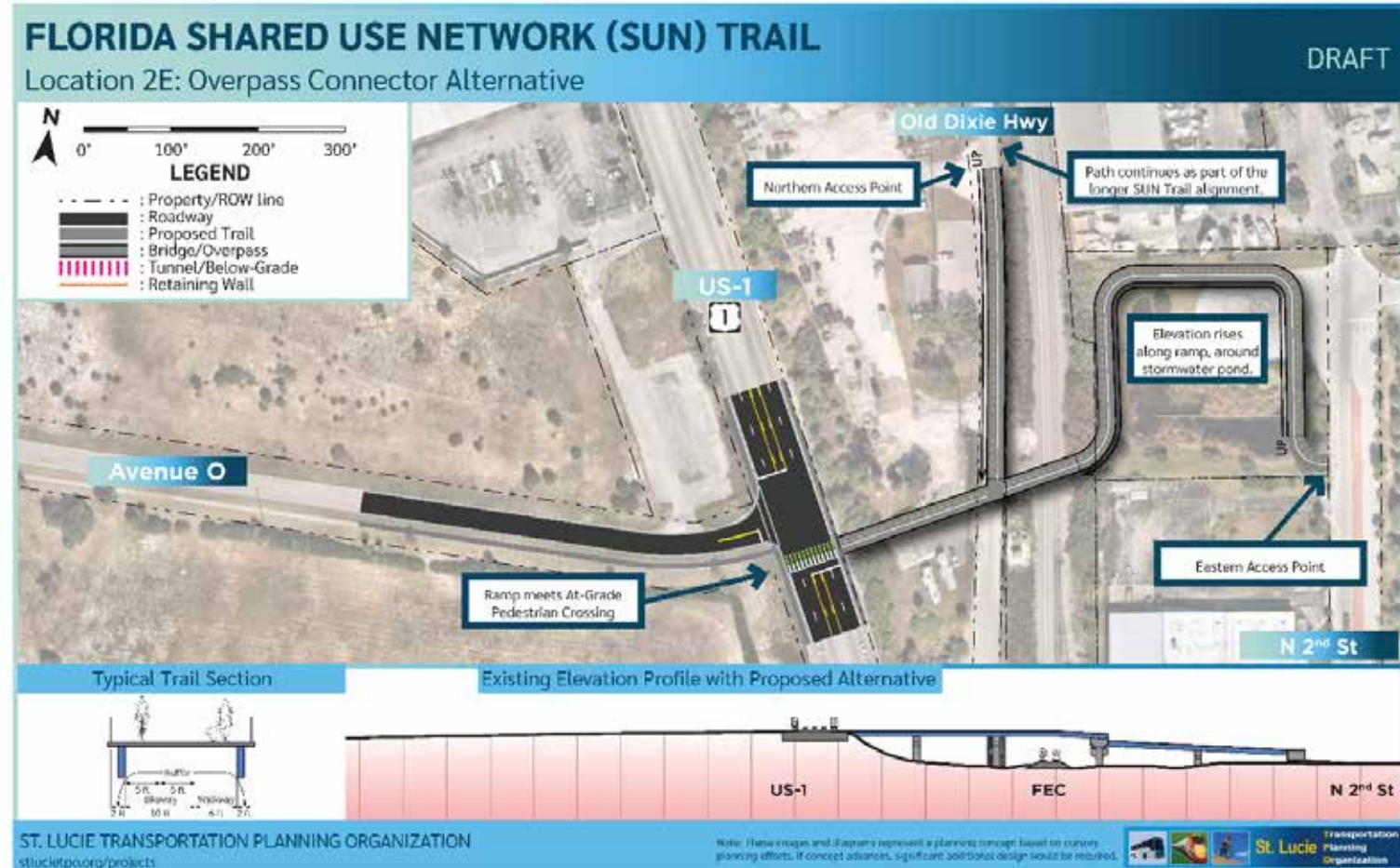
# 2D – Underpass Connector – Long Option

- Links to communities west of US-1 and connects to existing SUN Trail alignment along Old Dixie Hwy, and east to Harbour Pointe Park
- The elevation difference between US-1 and Old Dixie Highway requires a longer underground path to maintain accessibility



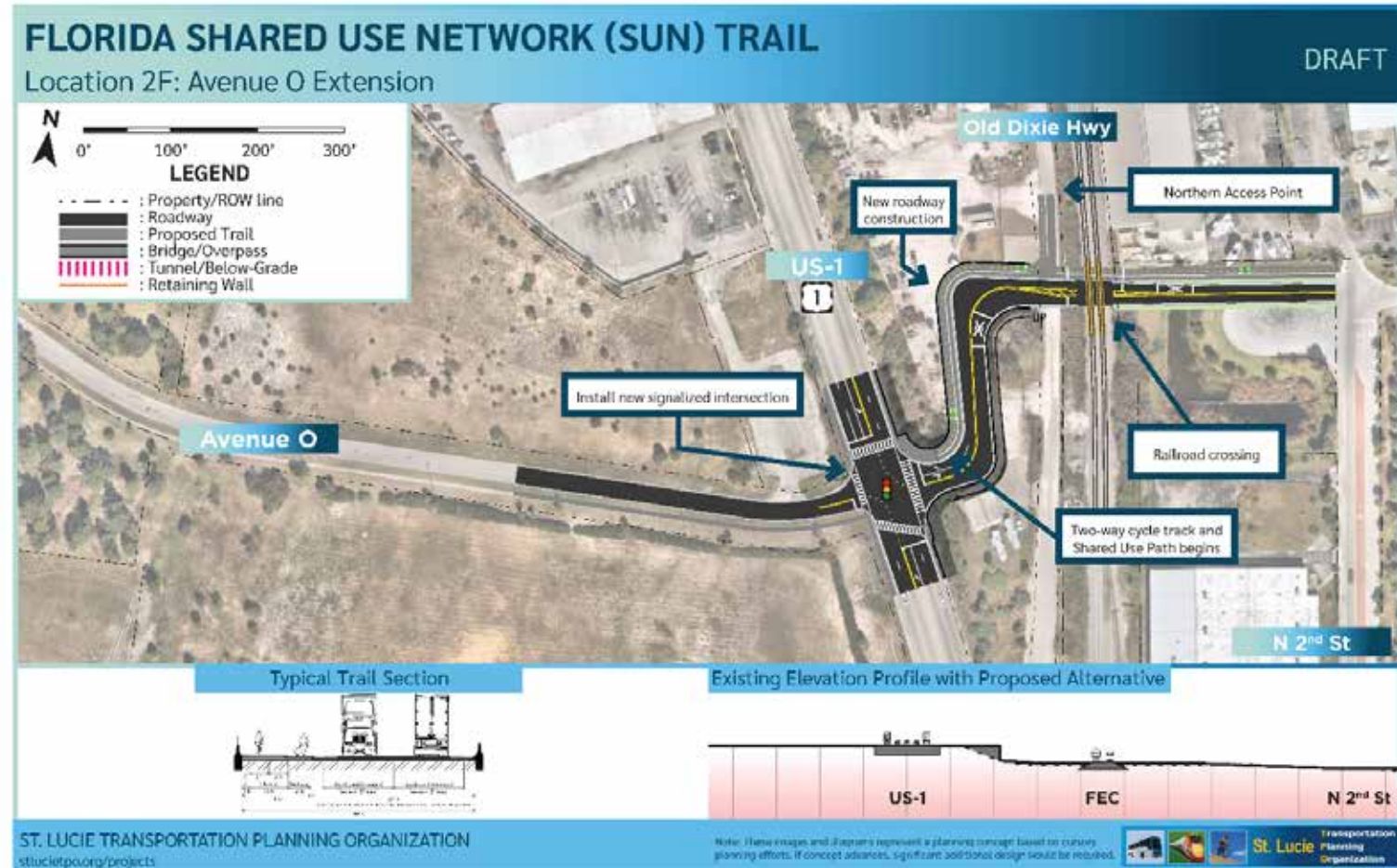
# 2E – Overpass Connector

- Medium-distance overpass concept that uses gradually sloped ramps to connect N 2<sup>nd</sup> St to US-1.
- Path features a more direct elevation to reach the minimum necessary vertical clearance over the FEC Railway
- Path meets US-1 at-grade and will include signalization at this intersection.
- 2E is approx. 550 feet shorter than 2C.



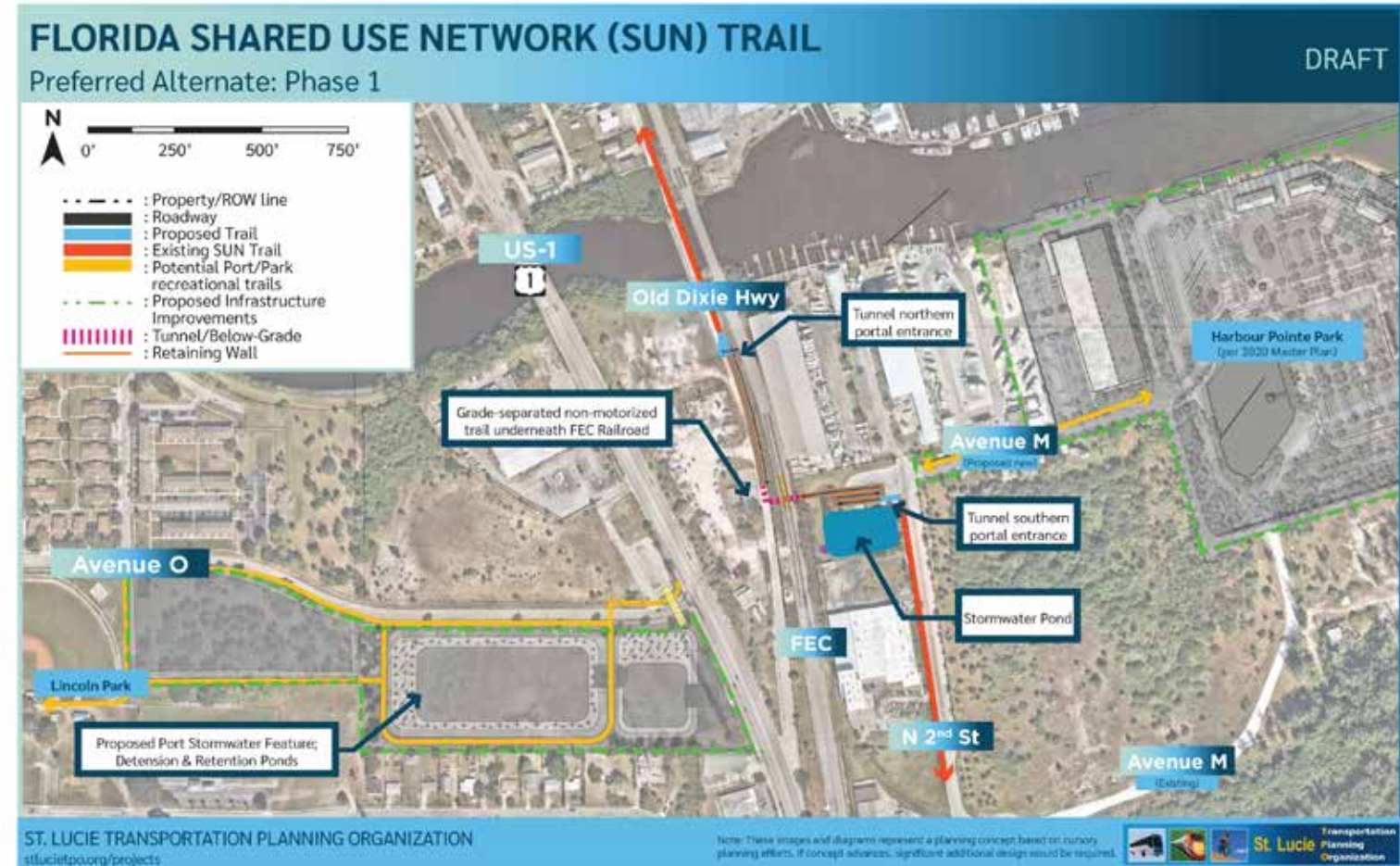
# Additional Opportunity 2F – Avenue O Extension

- Extends the existing Avenue O roadway eastward, crossing the FEC Railway at-grade, and connecting to the existing N 2<sup>nd</sup> St roadway
- Includes an off-road 2-way cycle track/shared-use path running parallel to the Avenue O extension
- Provides bike/ped and vehicle access from Lincoln Park area to regional port destination
- **Challenge:** FEC requires 2 rail crossings to be closed for the opening of one new crossing



# Preferred Alternative

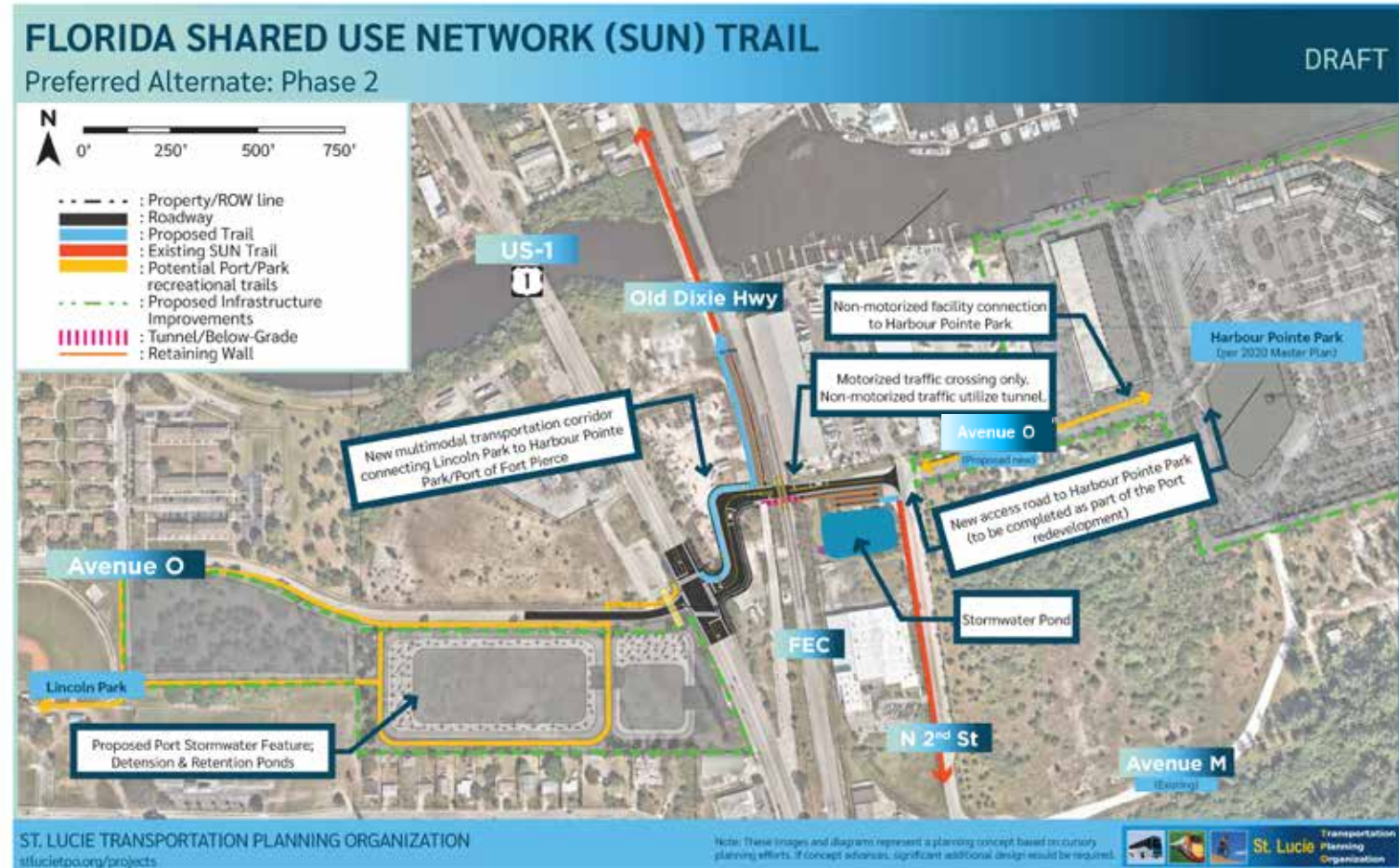
- **Two-phased Implementation approach**
- Phase 1 includes the addition of Alternative 2B Underpass
- Phase 2 involves the addition of Alternative 2F
- Phasing allows for non-motorized grade separated connection under the FEC railroad while the Port to Parks Connector is being developed.





# Preferred Alternative (Port to Parks Connector)

- Alternative 2F has slight modifications to accommodate both facilities
- **Benefits:**
  - Meets SUN Trail requirements (grade-separated 10ft. SUP)
  - Inclusion of Avenue O concept provides connectivity to communities west of US-1
  - Roadway extension provides essential road network addition as the port grows





PORT OF  
**FORT  
PIERCE**  
MASTER PLAN



**MASTER PLAN &  
REINVESTMENT STRATEGY**



# Thank You

Prepared By:

**Kimley»»Horn**



Coco Vista Centre  
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AGENDA ITEM SUMMARY

Board/Committee: Bicycle-Pedestrian Advisory Committee (BPAC)

Meeting Date: September 19, 2024

Item Number: 7a

Item Title: Autonomous Vehicle (AV) Study Update

Item Origination: Unified Planning Work Program (UPWP)

UPWP Reference: Task 3.10 – Automated/Connected/Electric/  
Shared-Use (ACES) Vehicles  
Planning

Requested Action: Discuss and provide comments to Staff.

Staff Recommendation: It is recommended that comments be provided  
regarding the AV Study Update.

Attachments

- Staff Report
- AV Study Update



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## MEMORANDUM

TO: Bicycle-Pedestrian Advisory Committee (BPAC)

THROUGH: Peter Buchwald  
 Executive Director

FROM: Marceia Lathou  
 Transit/ACES Program Manager

DATE: September 10, 2024

SUBJECT: Autonomous Vehicle (AV) Study Update

---

### BACKGROUND

Transportation planning implies a focus on the future. Many experts believe the future of transportation is Autonomous Vehicles (AVs). AVs, also known as driverless cars, are already being tested on city streets and freeways in major U.S. cities. According to the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA), "The continuing evolution of automotive technology aims to deliver even greater safety benefits than earlier technologies."

Transformative technologies are characterized by inflection points – time periods that signal significant change. Inflection points often occur when innovation, economics, and regulatory frameworks converge. Despite significant progress, AVs have not yet reached an inflection point of mass adoption. Nevertheless, due to the speed of technological advancements, governments must factor AVs into the planning process.

The TPO has developed several plans and studies related to AVs including the *ACES (Automated/Connected/Electric/Shared-Use) for Transit Vehicles* study, the *Electric Vehicle Charging Station Plan*, the *Sustainable Transportation Plan*, and the *Micro-Mobility Plan* among others. The TPO's FY 2024/25 – 2025/26 Unified Planning Work Program (UPWP) calls for an AV Study Update.

## ANALYSIS

The AV Study Update analyzes trends in autonomous trucking, robo-taxis/AV shuttles, and Advanced Driver Assistance technologies. The following are selected takeaways:

- Autonomous trucks are poised to become the first driverless vehicles deployed in significant numbers on public roads.
- Waymo and Cruise, leaders in the AV space, are deploying robo-taxis on city streets and freeways.
- Tesla is scheduled to make an announcement regarding its robo-taxi initiative soon.
- NHTSA wants to make certain automated features mandatory in new vehicles.
- A driverless shuttle operates in the Tradition area of Port St. Lucie.
- AV technology adoption is supported by many of the goals outlined in the TPO's SmartMoves 2045 Long Range Transportation Plan (LRTP).
- The benefits of AVs generally outweigh the disadvantages.
- Governments can help shape the future of AVs.

The TPO has kicked off the development of its 2050 LRTP, which will include an in-depth consideration of the role of AVs in the future of the transportation system in the TPO area.

## RECOMMENDATION

It is recommended that comments be provided regarding the AV Study Update.



# Autonomous Vehicle (AV)

## Study Update

September 2024

**DRAFT**

*Prepared by the St. Lucie TPO*

Prepared by the St. Lucie Transportation Planning Organization (TPO)

Contact: Marceia Lathou  
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## AUTONOMOUS VEHICLES (AVs)

AVs have merged into the transportation system at a slower than anticipated pace. In 2021, the U.S. Department of Transportation (DOT) prepared the *Autonomous Vehicle Comprehensive Plan* to help stakeholders prepare for a revolution. Fast forward to 2024, and the complexity of AV technology is characterized by baby steps instead of revolutionary strides.

Major automakers who once pledged to produce AVs have walked back on these commitments. No automaker has produced a fully autonomous vehicle for mass consumption although many manufacturers are producing higher levels of automation. Following is a list of AV hierarchies:

Level 0 No driving automation, though the vehicle may have some automated features.

Level 1 Limited driver assistance. The car can control either speed or steering, but not both at the same time. An example is cruise control.

Level 2 Automated cars can control both speed and steering at the same time, but only under certain conditions. The driver must remain ready to take over driving if needed.

Level 3 The car is able to drive on its own under certain conditions but will alert the driver of the need to take control.

Level 4 The car is able to handle most normal driving conditions. If the car encounters a situation it cannot handle, the car will pull over or stop.

Level 5 The car can drive itself in all conditions.

Currently, the most advanced passenger AVs exist in the form of robo-taxis.

## ROBO-TAXIS

Robo-taxis are generally Level 4 autonomy vehicles travelling within geofenced areas relying on maps provided by a transportation company. These maps are kept current with assistance from the vehicle itself, which reports back on roadway conditions.

Waymo and Cruise are leading players in the field of robo-taxis. The companies are at different stages of deployment and have different approaches to technology and testing.

Waymo, a subsidiary of Alphabet Inc., has been testing autonomous vehicles for over a decade. These vehicles have accumulated millions of miles in both simulated and real-world conditions. Waymo vehicles are equipped with an array of sensors, including LiDAR, radar, and cameras, and use a sophisticated AI (artificial intelligence) system to navigate and make decisions. As Waymo describes the process, the robo-taxi dubbed Waymo Driver “. . . understands how a car moves differently than a cyclist, pedestrian, or other object, and then predicts the many possible paths that the other road users may take, all in the blink of an eye.”

Cruise, owned by General Motors, is also heavily invested in autonomous vehicle technology and has been testing its vehicles extensively, particularly in San Francisco. Cruise vehicles also use a comprehensive suite of sensors and AI to navigate and operate safely.

Cruise is known for its focus on urban environments and complex driving scenarios. Because Cruise has been actively testing its vehicles in dense urban areas, unique challenges arise. Consequently, the company has reported a variety of safety incidents.

Cruise recently paused all its driverless operations after a series of safety incidents in California. The California Department of Motor Vehicles (DMV) subsequently suspended Cruise’s autonomous vehicle deployment and driverless testing permits. The DMV provided Cruise with the steps needed to apply to reinstate its suspended permits. Cruise has since resumed operations in cities outside California, albeit with enhanced safety procedures. Uber recently announced a partnership with Cruise.

Waymo has reported relatively low numbers of safety incidents and has an extensive safety and testing program. Waymo currently offers rides in driverless passenger cars in several major cities, mostly on city streets, but testing is occurring on freeways as well.

Tesla is poised to enter the robo-taxi space with Elon Musk, Tesla's CEO, touting a major announcement coming in early October 2024.

Musk has spoken about Tesla's potential to launch an autonomous ride-hailing service. This service would allow Tesla owners to earn income by having their vehicles operate as self-driving taxis when not in use. Tesla's robo-taxi concept would rely on Tesla's FSD (Full Self Driving) technology and is aimed at creating a network of autonomous vehicles that can provide transportation services on demand.

## AV SHUTTLES

Whereas robo-taxis operate similar to Uber or Lyft, AV shuttles operate more like fixed-route buses, running along specified routes and stopping at specified locations. AV shuttles operate throughout the nation including in St. Lucie County. The St. Lucie County shuttle is called TIM (Tradition in Motion).

### Tradition in Motion (TIM)

TIM operates in the Tradition area of Port St. Lucie, which is west of I-95 generally between Crosstown Parkway and Becker Road. Tradition is a master planned community consisting mostly of single-family homes and townhouses with several large apartment complexes, and commercial plazas. The TIM network is part of Tradition's larger plan called the T-Trail, which will consist of miles of trailheads for shuttle riders, bicyclists and pedestrians.

TIM's vehicles are staffed by tour guides. Beep, the operator of TIM, is an autonomous mobility solutions provider of driverless shuttles and fully managed services in both private and public communities. According to Beep's website, the personnel in Beep's Command Center located in Orlando continuously monitor the movement and operation of the shuttle using cameras installed inside and outside the shuttle. The attendant can communicate with the command center at any time should the need arise.

TIM vehicles are 100-percent electric. The shuttle has no steering wheel or pedals. The shuttle can travel up to 15mph.

## AUTONOMOUS TRUCKING

The first widespread deployment of driverless technology was initially assumed to be ride-hailing but self-driving trucks are now poised to become the first driverless vehicles deployed in significant numbers on public roads.

Whereas robo-taxis generally start out with a human operator onboard, autonomous trucks tend to be operated remotely, controlled from other sources such as satellites and GPS. A device implanted in the truck allows a human operator to “see” and control the truck’s movements.

Economic incentives exist to develop autonomous trucking, among them a shortage of truck drivers, a shortage that is forecast to worsen. A factor in this shortage is the challenge of being away from home for extended periods on long-haul routes. Although autonomous trucking is expected to benefit long-haul trucking there is expected to remain a need for drivers to deliver goods and services locally.

Autonomous trucks are already appearing on highways in some stage of testing. According to the National Conference of State Legislators, Florida is one of 29 states that have enacted legislation related to testing autonomous trucks.

Autonomous technology will create efficiencies by allowing for truck platooning: convoys of trucks spaced much closer together than would be permitted with full human control. According to a Library of Congress research guide, “By 2027 fully autonomous trucks, including truck platoons of two or more trucks in which all trucks have a driver, but only the driver of the lead truck has full control of the vehicle, are anticipated to appear on highways.”

A few companies are frequently cited as front-runners in the autonomous trucking space. These include Aurora, Plus.ai, Gatik, and Kodiak Robotics. Each of these companies is leading in different aspects of autonomous trucking technology, and their leadership status can vary based on specific criteria such as technology readiness, deployment scale, and industry partnerships. As technology continues to evolve, these leaders may shift, as new contenders enter the field and existing contenders drop out. Both Aurora and Kodiak Robotics claim they will have driverless trucks on highways within the next year.

Texas, a hub of AV trucking, can provide lessons learned to other states in their acceptance of the technology. Many factors have drawn AV trucking operators to Texas. These include business-friendly regulations, workforce capabilities, vast highway infrastructure, multimodal freight activities, strong research and development community, encouragement of public-private partnerships, and favorable weather conditions.

Texas embraced AV innovation early on. The state legislature passed its first regulation of autonomous vehicle technology in 2017. A statewide task force was created that provides Texans with a single, unified source of information regarding the coordination and advancement of automated technologies across the state. Members of the task force include representatives from other state agencies and public entities, as well as key industry stakeholders. The statewide task force now boasts numerous subcommittees.

Texas' location as a traditional transportation hub is yet another factor attracting autonomous trucking. The state is home to several truck routes between major cities that cannot be completed in a single day due to driver hours-of-service limitations. Such truck routes are especially suited for AV trucking.



## DRI VER ASSI STANCE TECHNOLOGI ES

Many of today's new vehicles feature "driver assist" capabilities that increase safety for drivers, passengers, and pedestrians. These technologies can steer, accelerate, and brake a vehicle autonomously. Some features are designed to warn of a crash while others are designed to take action to avoid a crash.

Today's driver assist technologies are designed with the assumption that the driver will continuously monitor the driving environment and will be prepared to take control of the vehicle as needed. According to the National Highway Traffic Safety Administration (NHTSA) "There are no vehicles available for purchase today that allow drivers to disengage from the driving task. Vehicles with partial automation capabilities are the highest level of automation that the public can purchase today."

NHTSA highlights the following types of driver automation assistance:

### Forward Collision Warning

Detects a potential collision with a vehicle ahead and provides a warning to the driver. This is a NHTSA recommended safety technology.

### Lane Departure Warning

Monitors the vehicle's position within the driving lane and alerts the driver as the vehicle approaches or crosses lane markers. This is a NHTSA recommended safety technology.

### Rear Cross Traffic Warning

Warns the driver of a potential collision, while in reverse, that may be outside the view of the backup camera.

### Blind Spot Warning

Warns of a vehicle in the driver's blind spot.

In addition to the above-described systems, there are partially automated systems that include features like adaptive cruise control and lane assist technologies.

According to a recent press release, NHTSA is developing proposed rule-making that would require automatic emergency braking (AEB) and pedestrian AEB systems on passenger cars and light trucks.

As described in the press release, an AEB system uses various sensor technologies and sub-systems that work together to detect when the vehicle is close to crashing, and then automatically applies the vehicle brakes if the driver has not done so or applies more braking force to supplement the driver's braking as necessary to avoid or mitigate the severity of the crash.

The proposed rule is expected to dramatically reduce crashes under certain conditions. NHTSA projects that this rule, if finalized, would save at least 360 lives a year and reduce injuries by at least 24,000 annually. In addition, these AEB systems would result in significant reductions in property damage caused by rear-end crashes. Many crashes would be avoided altogether, while others would be less destructive.



Source: GAO (photo). | GAO-24-106255



## LONG RANGE TRANSPORTATION PLAN (LRTP) COMPLIANCE

AVs could lead to reductions in traffic congestion, increased mobility for all, and connectivity among vehicles and infrastructure. To reap these benefits, AV pilot programs are being established throughout the country.

The University of Oregon developed *Autonomous Vehicles: A Guidebook for Cities* as a tool to help stakeholders prepare for and respond to autonomous vehicle testing, pilots, and deployments in their respective jurisdictions. Stakeholders include the public, AV developers, state and local governments, and nonprofit organizations.

A key takeaway from the University's guidebook is that before launching any AV pilot program, stakeholders must determine if their goals and their community's vision align with AVs. In other words, do not adopt technology for technology's sake. The following section analyzes goals in the TPO's SmartMoves 2045 Long Range Transportation Plan (LRTP) which align with AV deployment.

### Goal One: Support Economic Activities

#### Autonomous Trucking

Trucking supports local economies, and AVs would facilitate trucking. AV trucks could improve supply chain management and could allow vehicles to operate in complex environments 24/7.

Congestion is one of the highest costs for freight movement, and AVs could dramatically reduce congestion by enabling truck platooning which could reduce energy costs as well.

AV trucking could reduce labor expenses which could make business operations more productive.

#### Robo-taxis/AV Shuttles

AV shuttles/robo-taxis could promote increased access to goods and services.

The ability of AVs to reduce car accidents, injuries and fatalities could itself result in economic savings.

AVs will impact land use. Currently, a significant amount of land is needed for parking traditional autos when not in use. This land could be freed up for more productive purposes.

Since AVs tend to drive more efficiently than humans, AV shuttles/robotaxis could potentially reduce traffic congestion. According to auto insurer Progressive, the most common causes of traffic congestion are car accidents, road debris, road construction, rush hours, and phantom traffic jams. Reduced traffic congestion generally leads to economic growth.

#### Driver Assistance Technologies

Driver assistance technologies hold the potential to reduce traffic crashes and save thousands of lives each year, the economic benefits of which are enormous. These benefits can be quantified in terms of insurance savings, reduced healthcare costs, and reallocation of emergency-related resources, among others.

Goal Two: Provide Travel Choices

#### Autonomous Trucking

Autonomous trucking will allow freight companies to operate vehicles 24/7 thus enabling them to avoid rush hours whenever possible. Fewer trucks on the road would lead to reductions in traffic congestion. Less traffic congestion would improve the range of travel times available to non-freight movement.

#### Robo—taxis/AV Shuttles

AVs could enable commuters to be productive while traveling, consequently resulting in greater control of personal time and choices for where people choose to work. With their abilities to operate 24/7, AVs would result in more flexibility in travel times and less congestion during commute hours, thus improving travel time reliability for all users.

#### Driver Assistance Technologies

Based on their improvements to safety, driver assistance technologies would support drivers in travelling during all hours of the day. For example, many senior drivers choose not to drive at night due to glare from oncoming headlights or streetlights or even during the day due to blinding sun. Driver assistance technologies also support drivers whose capacity to drive is diminished, for instance through fatigue or distraction.

## Goal Three: Maintain the Transportation System

### Autonomous Trucking

Most AVs are electric vehicles (EVs). A drawback of EVs is they generally weigh more than gas-powered vehicles, thus producing more wear and tear on roadways. This could result in greater deterioration of roadway surfaces and could also impact bridges, parking garages, parking lots, and driveways.

### Robo-taxis/AV Shuttles

Robo-taxis/AV shuttles, being EVs, will produce more wear and tear on roadway infrastructure because EVs are generally heavier in weight than gas-powered vehicles. However, robo-taxis/AV shuttles could reduce the overall number of vehicles on the road, thus mitigating the impact of the added weight.

### Driver Assistance Technologies

Driver Assistance Technologies will make driving easier, more efficient, safer, and more accessible. As driving becomes more efficient and safer more drivers will opt to drive, leading to greater deterioration of roadway surfaces.

## Goal Four: Provide Equitable, Affordable, and Sustainable Urban Mobility

### Autonomous Trucking

To the extent driverless trucks reduce shipping costs and to the extent those savings are passed on to consumers, driverless trucks could contribute to equity and affordability.

The sustainability aspect of driverless trucks relates to the potential for decreased gas consumption in their capacity as EVs.

In general, technology becomes more affordable as it matures, and it is conceivable that small trucking companies could eventually have driverless trucks in their fleets.

Because no human is needed behind the wheel to drive or operate these trucks and because there is a shortage of truck drivers, autonomous trucks could lead to goods being distributed in rural areas that previously were not served.

Robo—taxis/AV Shuttles

AVs could provide greater freedom for persons with disabilities, those without driver’s licenses, older adults who can no longer drive, and for persons who simply choose not to drive.

In terms of affordability, owning a personal car is more expensive than the occasional use of Uber/Lyft, which in turn is more expensive than public transit.

AV shuttles, if more cost efficient than traditional transit, could benefit residents of rural areas, where the operation of traditional transit is cost prohibitive.

In terms of sustainability, in general, EVs are more environmentally friendly than their gas-powered counterparts.

Driver Assistance Technologies

A safer driving environment could encourage walking and bicycling, especially in historically disadvantaged communities where studies show that crashes involving vulnerable road users are more prevalent.

Automobile crashes themselves create huge economic burdens across a wide spectrum of society. Reducing this burden would be a social benefit.



## Goal Five: Improve Safety and Security

### Autonomous Trucking

Common causes of truck accidents are driver fatigue or driver distraction. By eliminating human factors, autonomous trucking could improve roadway safety. Autonomous trucks, being newer vehicles, also would benefit from the latest tech advances in safety that assist in crash avoidance and prevention.

Technology presents the challenges of cybersecurity and privacy concerns. Vehicle connectivity exacerbates these concerns. Vehicle connectivity is expected to be a hallmark of autonomous trucking. Connected vehicles use vehicle-to-vehicle, vehicle-to-infrastructure, and infrastructure-to-vehicle communication to exchange information between vehicles, drivers, the roadside, bicyclists and pedestrians. To earn public trust, cybersecurity and privacy concerns due to vehicle connectivity must be addressed.

### Robo-taxis/AV Shuttles

AVs could improve safety by eliminating human error, the main cause of car accidents. Robo-taxis/AV shuttles could further enhance roadway safety by virtue of getting more cars and drivers off the roads.

Security is more problematic. AVs are expected to be connected vehicles, a connectivity which relies on computer software. All software is vulnerable to interference by bad actors. On the other hand, gas-powered vehicles are becoming increasingly connected, so this vulnerability would not be limited to AVs.

### Driver Assistance Technologies

Automobile manufacturers are making continuous improvements in safety, resulting in newer vehicles being safer than older vehicles. When driver assistance technologies are made mandatory, the safety gap between older and newer vehicles will widen.

The extent to which driver assistance technologies are wireless could present cybersecurity issues. These issues could be mitigated by proactive security enhancements.

## AV BENEFITS/DISADVANTAGES

### Autonomous trucking benefits:

- Cost savings due to more efficient deliveries
- Reduced pollution due to more efficient deliveries
- Increased safety due to reduced chance of human error
- Reduced fuel consumption due to truck platooning which reduces wind resistance
- 24/7 operations
- Connectivity among vehicles and infrastructure

### Autonomous trucking disadvantages:

- Job losses in certain categories
- Implementation expense
- Obsolescence due to rapid changes in technology
- Cybersecurity risks
- Computer malfunction risks
- Delays resulting from AV's inability to react appropriately under novel driving conditions

### Robo-taxis/AV Shuttles advantages:

- Help seniors stay independent
- Help persons with disabilities achieve independence
- Reduce the number and duration of traffic jams
- Improve safety since most traffic accidents result from human error
- Decreased fuel consumption since most AVs are electric
- Lower transportation costs due to reductions in human labor costs
- Improved connectivity among vehicles and infrastructure
- Reduced strain on the healthcare system due to fewer traffic accidents

Robo-taxis/AV Shuttles disadvantages:

- Elimination of certain jobs
- Social isolation for passengers who value driver interaction
- Delays since AVs may not react appropriately under novel driving conditions
- Potential disruptions to emergency vehicles
- Cybersecurity risks
- Higher initial costs

Driver Assistance Technologies benefits:

- Improved traffic safety
- Reduced fuel consumption in their capacity as newer vehicles
- Decreased insurance costs
- Increased mobility

Driver Assistance Technologies disadvantages:

- Decreased driver awareness of surroundings
- Potential for computer malfunctions
- Increased manufacturing costs
- Potential for distracted driving



## RECOMMENDATIONS

Although AV deployment is driven by the private sector, governments are partners in the process. Governments can provide guidance, implement best practices, conduct research, initiate pilot programs, and develop assistance to help stakeholders plan and make the investments needed to be proactive about technology.

Technology, especially in its beginning stages, has its fair share of issues and concerns. Even in its mature stages, technology solves certain problems and creates others. Therefore, the pros, cons, and unintended consequences of AVs must be monitored. Considerations that merit further study by governments include:

- Safety for all road users
- Shifts in travel behavior and mode choice
- Environmental justice and affordability
- Transportation network impacts
- Land use impacts
- Energy use
- Emergency services impacts
- Workforce impacts





## AGENDA ITEM SUMMARY

Board/Committee:	Bicycle-Pedestrian Advisory Committee (BPAC)
Meeting Date:	September 19, 2024
Item Number:	7b
Item Title:	St. Lucie County Sustainable Mobility Infrastructure Study
Item Origination:	Unified Planning Work Program (UPWP)
UPWP Reference:	Task 3.9 - Environmental Planning Task 4.2 - Intergovernmental Planning and Coordination
Requested Action:	Discuss and provide comments
Staff Recommendation:	It is recommended that the Study is discussed and input and comments are provided.

### Attachments

- Staff Report
- Presentation



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## MEMORANDUM

TO: Bicycle-Pedestrian Advisory Committee (BPAC)

FROM: Peter Buchwald  
 Executive Director

DATE: September 10, 2024

SUBJECT: St. Lucie County Sustainable Mobility Infrastructure Study

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### BACKGROUND

St. Lucie County received a Federal grant through the Community Development Block Grant Mitigation Program (CDBG-MIT) to conduct a Sustainable Mobility Infrastructure Study incorporating land use planning, comprehensive planning, regional mitigation planning, and resiliency planning. The Corradino Group was retained by the County to complete the Study and will provide a presentation for input and comments as part of the public participation efforts of the Study.

### ANALYSIS

One of the outcomes of the Study pertinent to the St. Lucie Transportation Planning Organization will be to revise the County Right-of-Way Protection Map based on sea level rise projections, the need for and the locations of stormwater capacity, elevated street sections, and public infrastructure mitigation.

### RECOMMENDATION

It is recommended that the Study is discussed and input and comments are provided.

# St. Lucie County

## Sustainable Mobility Infrastructure Study

St. Lucie TPO  
September 17<sup>th</sup> & 19<sup>th</sup> 2024

St. Lucie Transportation Planning Organization  
466 SW Port St. Lucie Boulevard, #111  
Port St. Lucie, Florida 34953

# Purpose of the Study

## Federal Project Description:

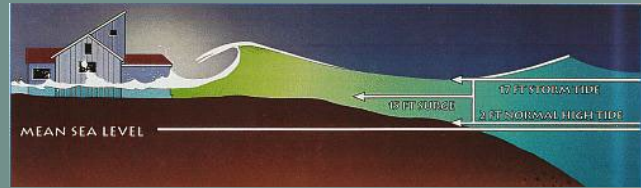
- Develop a Countywide Mobility Infrastructure Plan incorporating: land use planning, comprehensive planning, regional mitigation planning, and resiliency planning

## Funding:

- funding to St. Lucie County via State of Florida Department of Economic Opportunity (DEO), now incorporated as a division of the Florida Department of Commerce
- federally funded by Community Development Block Grant Mitigation Program (CDBG-MIT)
- federal funding to St. Lucie County is \$210,000 with \$40,000 match by St. Lucie County

## Federal and County Outcome:

- Revise the County Right-of-Way Protection Map, based on: sea level rise projections, need for and location of stormwater capacity, elevated street sections, public infrastructure mitigation.



# Transportation Resiliency: Climate & Growth to Year 2100

Planning Horizon	Climate Projections	Growth and Transportation Projections
	<p><b>Natural Systems:</b></p> <ul style="list-style-type: none"> <li>• long-term effects</li> <li>• small short-term human effect</li> </ul>	<p><b>Human Systems:</b></p> <ul style="list-style-type: none"> <li>• in-migration, outmigration, birth rate, life expectancy</li> <li>• policy dependencies</li> <li>• technological dependencies</li> <li>• macro socio-behavioral dependencies</li> </ul>
2045	<ul style="list-style-type: none"> <li>• sea-level rise forecasts</li> <li>• storm event tidal surge forecast</li> <li>• rainfall inundation forecasts</li> </ul>	<ul style="list-style-type: none"> <li>• population forecasts</li> <li>• employment forecasts</li> <li>• trip generation trends</li> <li>• modal split trends</li> <li>• existing + committed development</li> </ul>
2070	<ul style="list-style-type: none"> <li>• sea-level rise forecasts</li> <li>• storm event tidal surge forecast</li> </ul>	<ul style="list-style-type: none"> <li>• population forecasts out of range</li> <li>• employment forecasts out of range</li> </ul>
2100	<ul style="list-style-type: none"> <li>• rainfall inundation forecasts</li> </ul> <p><i>pervious area can be affected by land use changes</i></p>	<ul style="list-style-type: none"> <li>• modal split unknowns – range of modes undefined</li> <li>• land development dependent on policy and economics</li> </ul>

# Planning Methods

Planning Horizon	Climate Projections (Natural Systems)	Growth and Transportation Projections (Human Systems)
2045	<ul style="list-style-type: none"> <li>• sea level rise, hurricane tidal surge, and storm event rainfall quantity and frequency based on regional models</li> </ul>	<p>population, employment, trip generation, modal split, trip distributions and roadway network assignments based on:</p> <ul style="list-style-type: none"> <li>• St. Lucie Comprehensive Plan Future Land Use Map</li> <li>• St. Lucie Long Range Transportation Plan (LRTP)</li> </ul>
2070	<ul style="list-style-type: none"> <li>• sea level rise, hurricane tidal surge, and storm event rainfall quantity and frequency based on regional models</li> <li>• rainfall flooding is also dependent on impervious ground cover policy from land use scenario</li> </ul>	<p>review trend, identify scenario, and identify policy to guide outcomes for:</p> <ul style="list-style-type: none"> <li>• land use intensity and geography</li> <li>• population growth: number and distribution</li> <li>• employment growth: sectors and location</li> </ul>
2100	<ul style="list-style-type: none"> <li>• what level of climate catastrophe to mitigate for?</li> </ul>	<ul style="list-style-type: none"> <li>• generalized trip pattern impacts</li> <li>• adoption support for mobility technology</li> </ul>

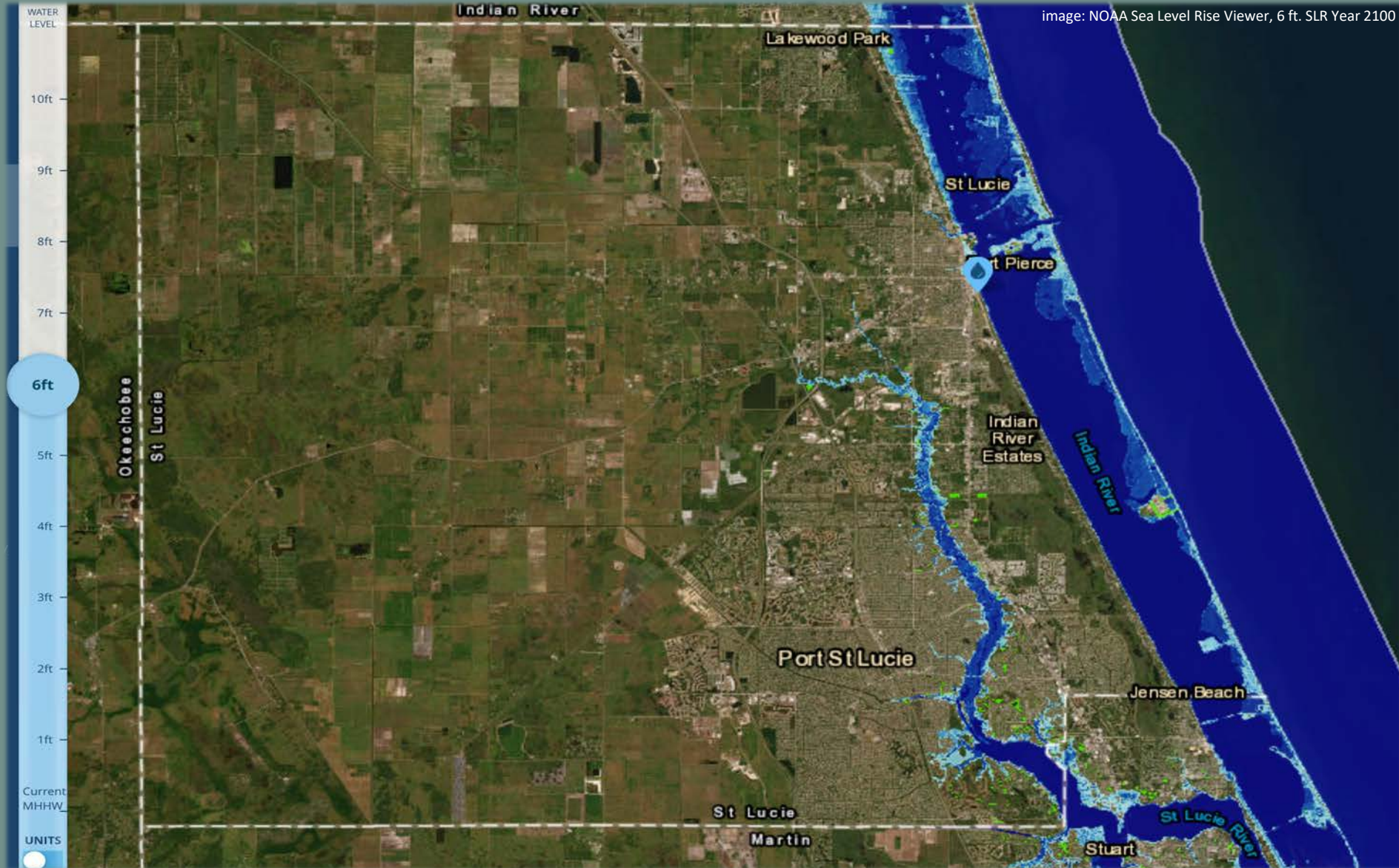
# Climate Change

# ROW Plan Dependencies - Natural <sup>64</sup>

Flood Height Scenarios							
		2040		2070		2100	
Sea Level Rise	NOAA Sea Level Rise (SLR) Projections Virginia Key	Intermediate Low 0.69 ft.	Intermediate High 1.41 ft.	Intermediate Low 1.25 ft.	Intermediate High 3.28 ft.	Intermediate Low 1.77 ft.	Intermediate High 6.00 ft.
High Tide	NOAA tidal gage Cape Canaveral Station #8721604 5-Year High (height: NAVD)	4.55 ft.	4.55 ft.	4.55 ft.	4.55 ft.	4.55 ft.	4.55 ft.
Non-Event Height	SLR + High Tide	5.25 ft.	5.96 ft.	5.80 ft.	7.83 ft.	6.32 ft.	10.55 ft.
Storm Surge	NOAA SLOSH Model Maximum of Minimum (MOM) South Florida Basin (2016) Category 5 Hurricane (NAVD)	15.80 ft.	15.80 ft.	15.80 ft.	15.80 ft.	15.80 ft.	15.80 ft.
Event Height	SLR + Hurricane Surge	16.49 ft.	17.21 ft.	17.05 ft.	19.08 ft.	17.57 ft.	21.80 ft.
100-Year Storm 72-Hour Rainfall Event	South Florida Water Management District (SFWMD) and USGS "Future Extreme Rainfall Change Factors"	50 <sup>th</sup> percentile 1.20 intensification factor 17.76 inches maximum		75 <sup>th</sup> percentile 1.45 intensification factor 21.46 inches maximum		100 <sup>th</sup> percentile 1.45 intensification factor 21.46 inches maximum	



# Sea Level Rise (SLR) Projections



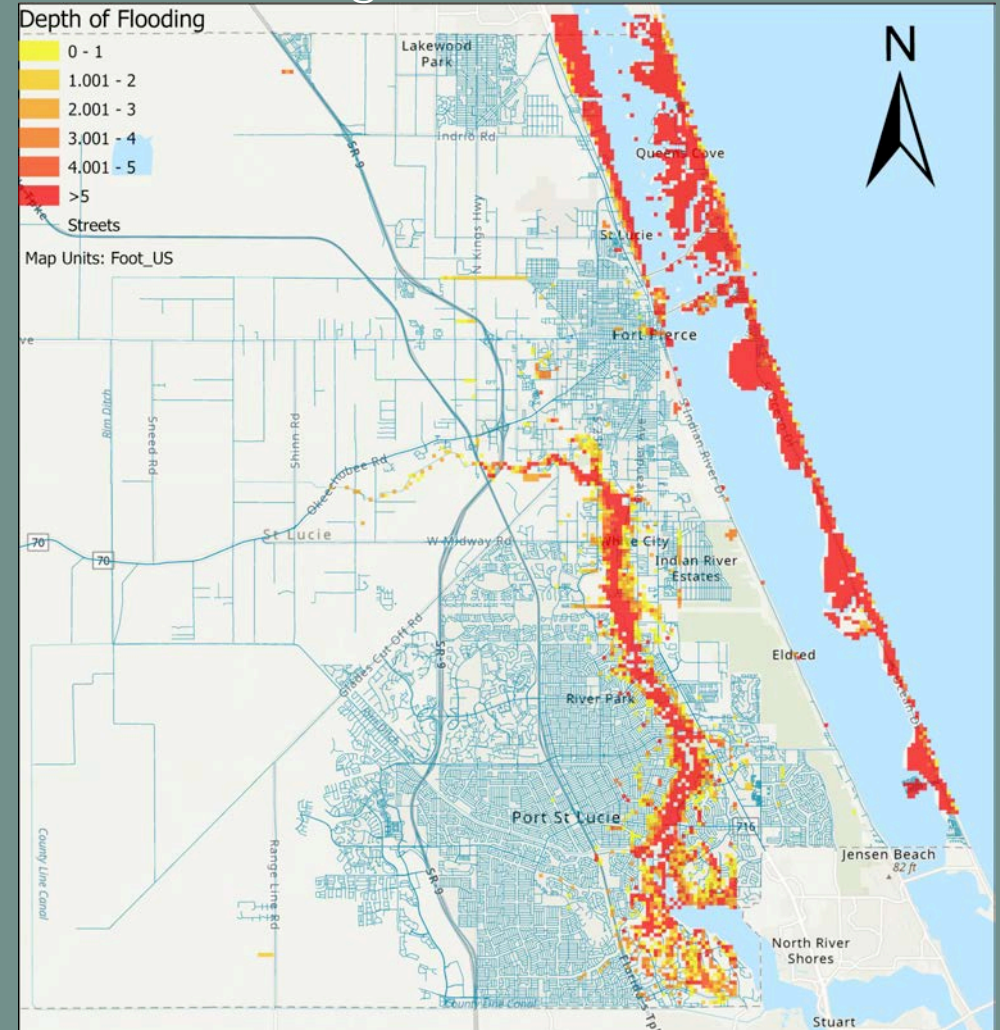
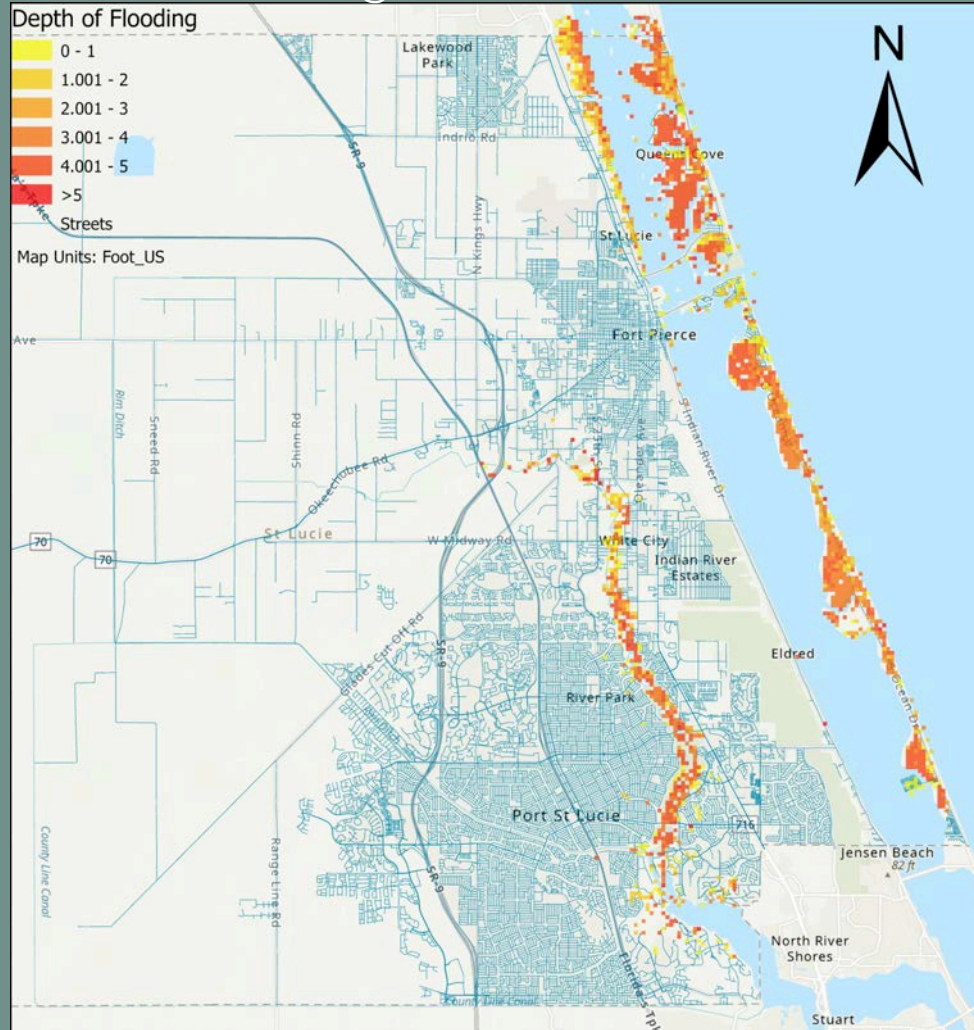
# Sea Level Rise (SLR) Projections

Base Year 2025

Maximum High Tide Elevation 4.55 ft.

Horizon Year 2100

Maximum High Tide Elevation 10.55 ft.



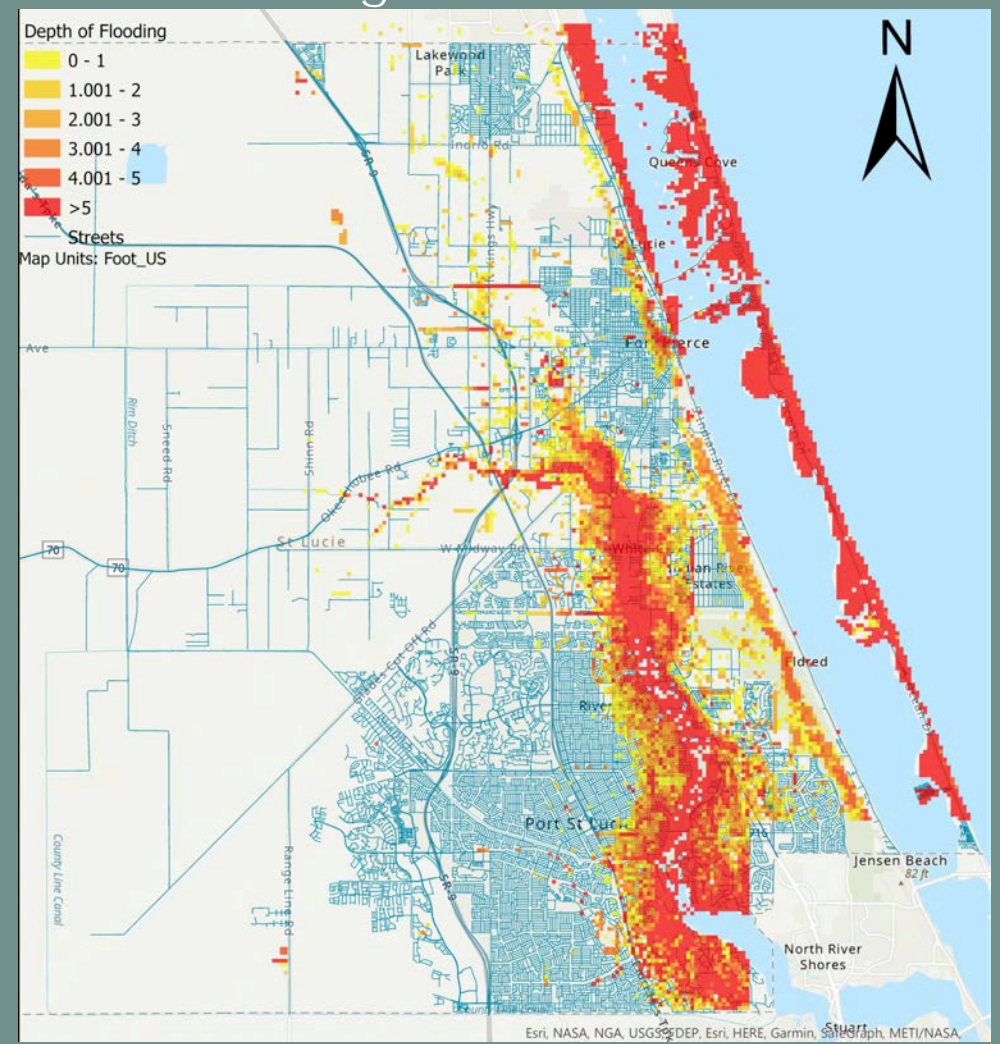
# Storm Surge Projections



# Storm Surge, Category 5 Hurricane

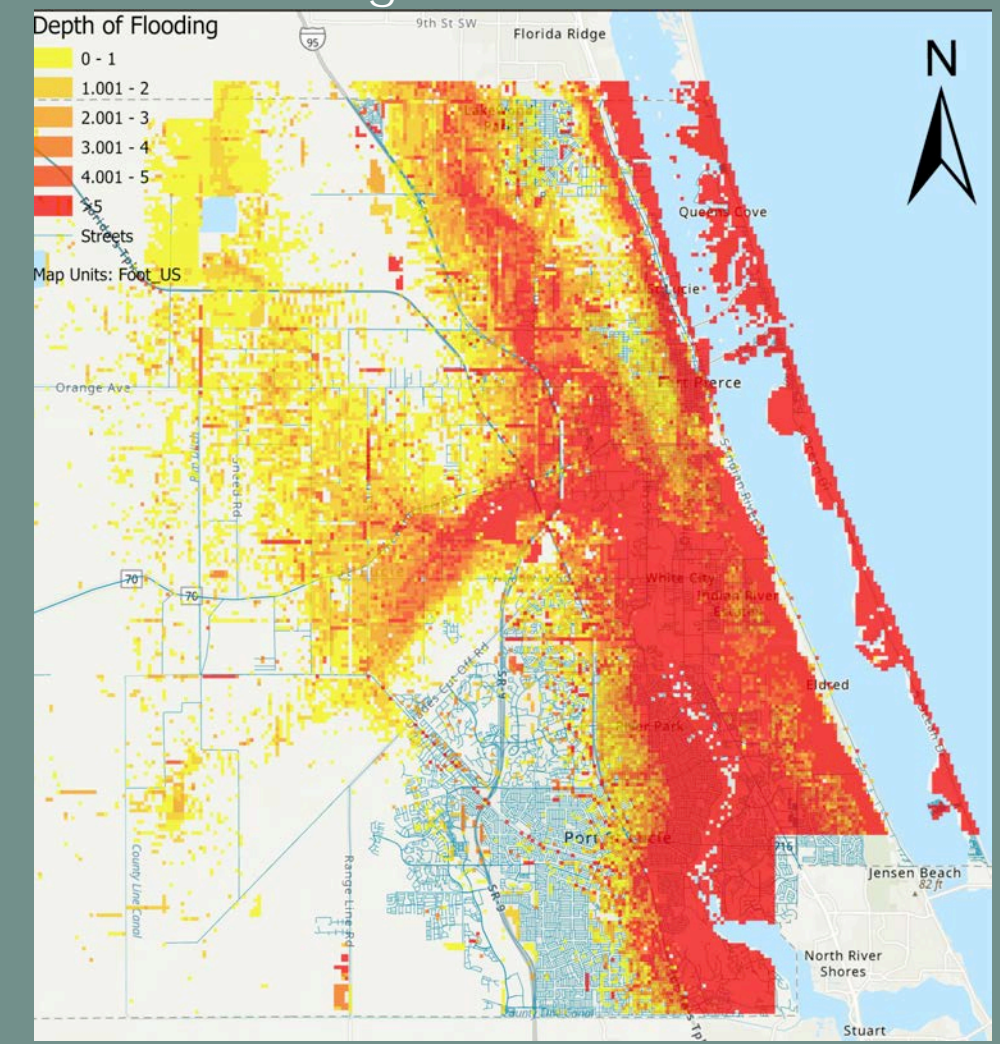
## Base Year 2025

SLR + Storm Surge Water Elevation 15.80 ft.



## Horizon Year 2100

SLR + Storm Surge Water Elevation 21.80 ft.



# Extreme Rainfall Severity Projections



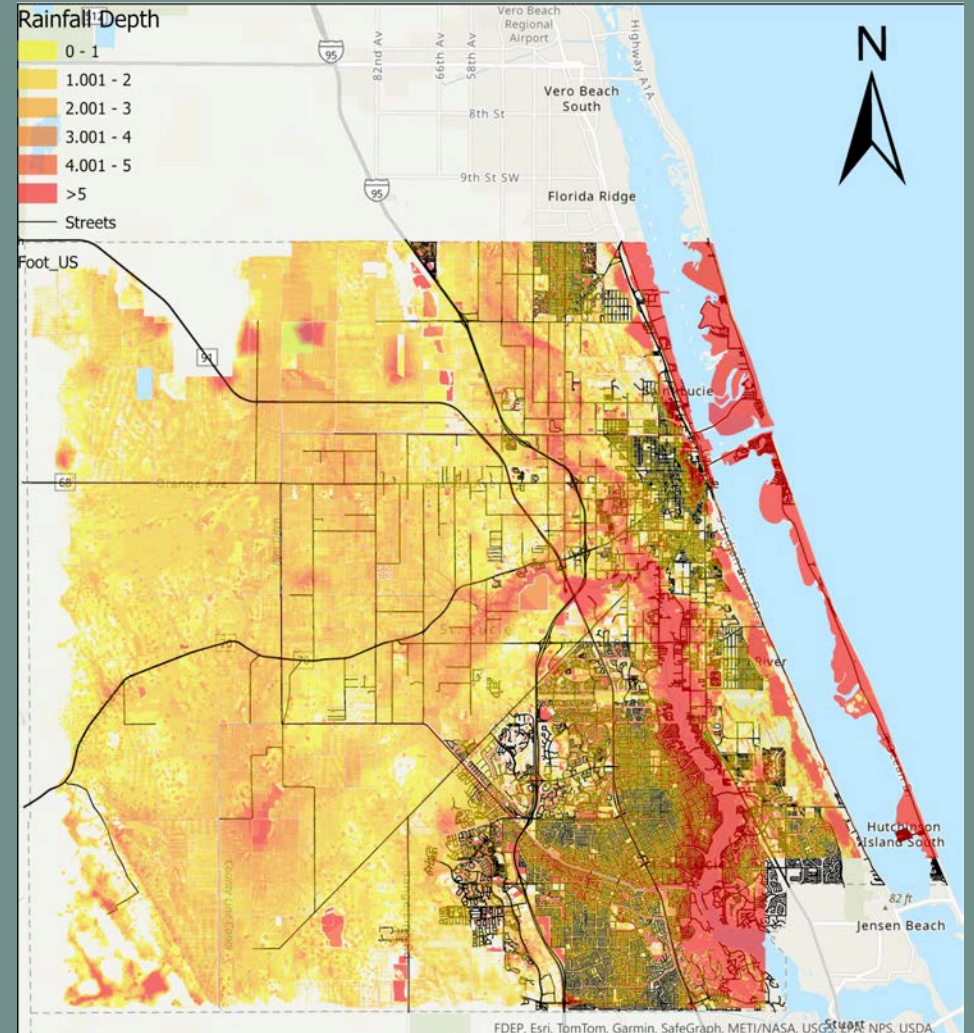
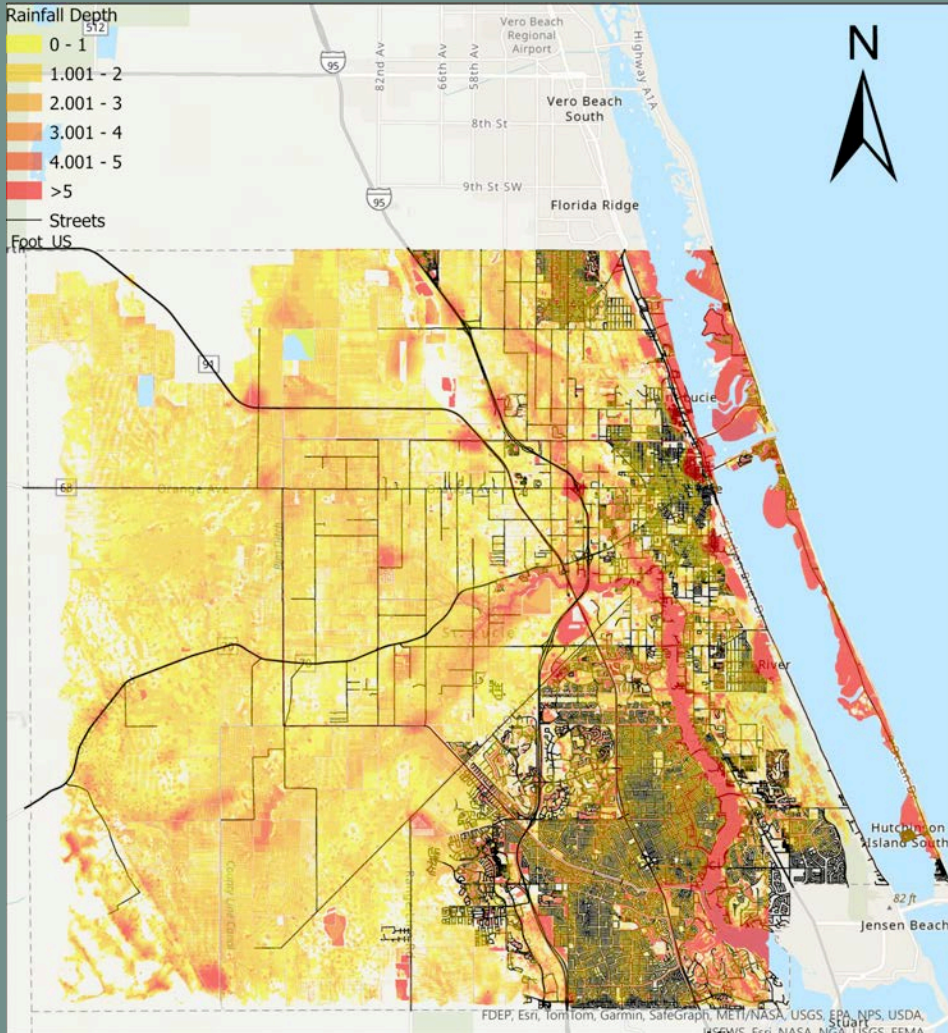
# Extreme Rainfall Projections

## Base Year 2025

100-Year Storm Rainfall Depth for 72-Hours 14.80 in.

## Horizon Year 2100

100-Year Storm Rainfall Depth for 72-Hours 21.46 in.



# Land Use & Growth

# Plan Input Dependencies - Human <sup>72</sup>

Scenario	Effect	2045	2070	2100
Lane Miles	based on <i>St. Lucie LRTP</i> and demand forecast	1,100	to be determined	to be determined
Directional Links	based on <i>St. Lucie LRTP</i> and demand forecast	4,256	to be determined	to be determined
Population	based on <i>Treasure Coast Regional Planning Model (TCRPM)</i>	based on St. Lucie Transportation Model inputs	extrapolate mid-line 2045 growth curve	extrapolate mid-line growth curve from 2070
Employment	based on <i>Treasure Coast Regional Planning Model (TCRPM)</i>	based on St. Lucie Transportation Model inputs	extrapolate mid-line 2045 growth curve	extrapolate mid-line growth curve from 2070
Planned Development	LRTP + approved DRI's – based on <i>2045 Revised Land Use Data Report, March 2023</i>	Visions at Indrio, LTC Ranch, Oak Ridge Ranch, Verano, Western Grove, Southern Grove, Riverland, & Wilson Grove	extrapolate mid-line 2045 growth curve and apply to TAZ per density and MU criteria below.	extrapolate mid-line 2070 growth curve and apply to TAZ per density and MU criteria below.
High Density Development	<i>TPO Carbon Footprint Reduction Strategies Report, May 2023.</i>	reduction of VMT of 0.37% with projected growth	need to identify TAZ to apply to, and use extrapolated growth curve – apply only to new development – still suburban – see MU	
Mixed-Use Development	<i>TPO Carbon Footprint Reduction Strategies Report, May 2023.</i> Increased population growth above projection with increase of VMT	population same as LRTP with reallocation to 68 TAZs at 10 DU/ac. and 15 DU/ac with Mixed Use (VMT reduced 0.67%)	need to identify TAZ to apply to and use more aggressive density / intensity and more aggressive extrapolated growth curve that reflect policy requirements and LDR that implement it.	

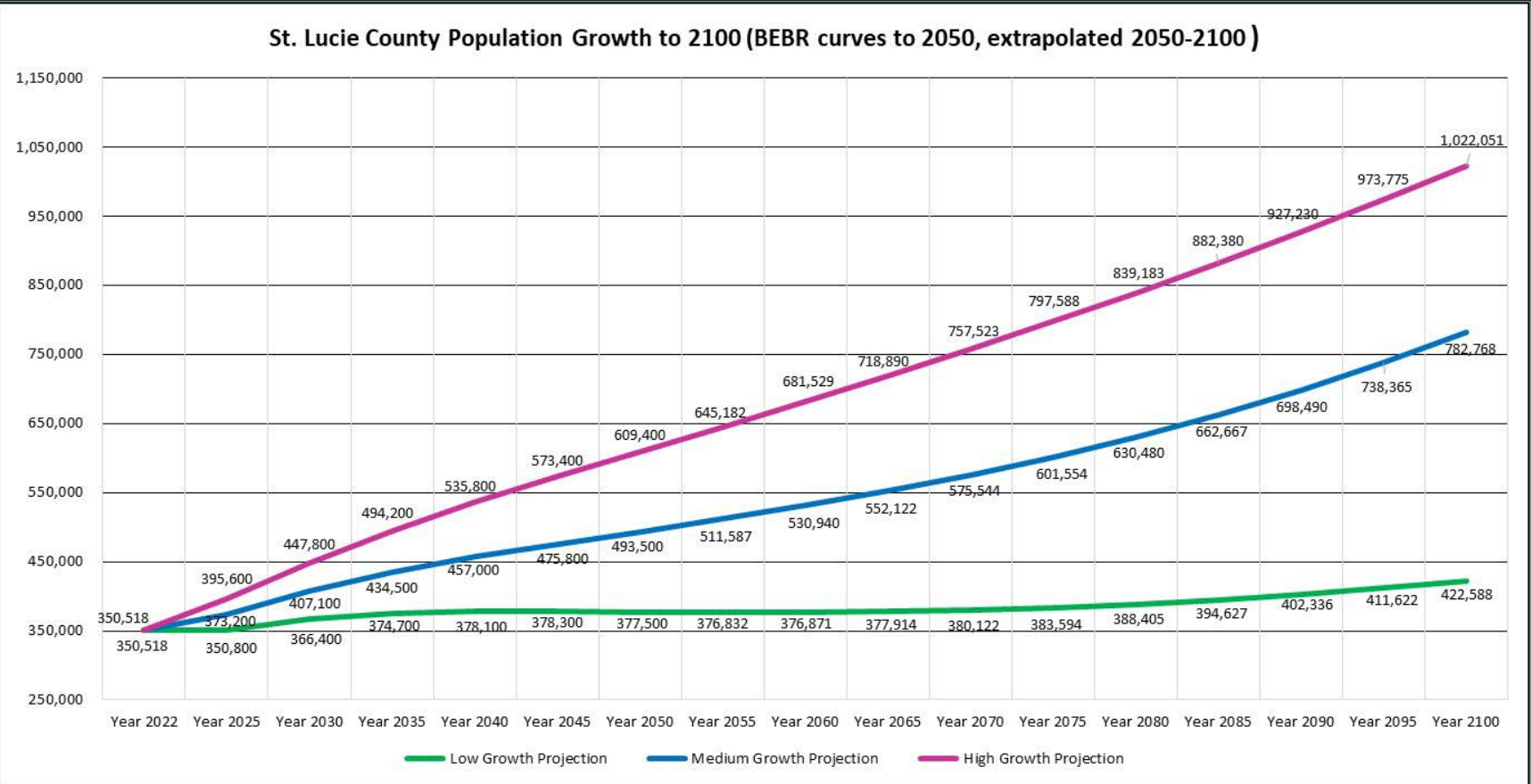


# Plan Input Dependencies - Human <sup>73</sup>

Scenario	Effect	2045	2070	2100
Multi-Modalism (transit)	<i>TPO Carbon Footprint Reduction Strategies Report, May 2023.</i>	reduction of VMT of 0.71% with projected growth.	the 2070 projection goes beyond planned transit improvements. Should use policy mode split for target year, with policy focused on significantly higher mode split for new and existing high density mixed-use areas, and areas with ACES network hubs	
Telecommuting (HBW, HBSch, HBO, NHB, NHBW)	<i>TPO Carbon Footprint Reduction Strategies Report, May 2023.</i> Reduction of VMT with projected growth	reduction of VMT of 6.0% with projected growth.	extrapolate curve with some high-level research on max limit to determine 2100.	
Automated Transportation Management (V2I, V2V)	incrementally reduced impact on VMT due to improved mobility sharing and links to transit. increase in roadway capacity when critical mass of automated vehicles and infrastructure is reached	<i>TPO Carbon Footprint Reduction Strategies Report, May 2023</i> identified reduction of carbon emissions but not VMT	project effect of ACES network of automated and connected intermodal technologies - - need to research and estimate at high level.	
Urban Services Boundary (USB) Expansion	increases the need for new roadways and provides opportunities for high-density, mixed-use development with additional ACES infrastructure.	<ol style="list-style-type: none"> <li>1. South of Midway, north of Glades Cut-Off, west of I-95 to approx. Carlton / Ideal Holding Road</li> <li>2. East of I-95 north of Indrio Road</li> </ol>	to be determined (Header Canal Rd longitudinal parallel?)	to be determined (Sneed / Carlton Road / C-24 Canal - longitudinal parallel)
New Roads, Lanes other Links		to be determined	to be determined	to be determined

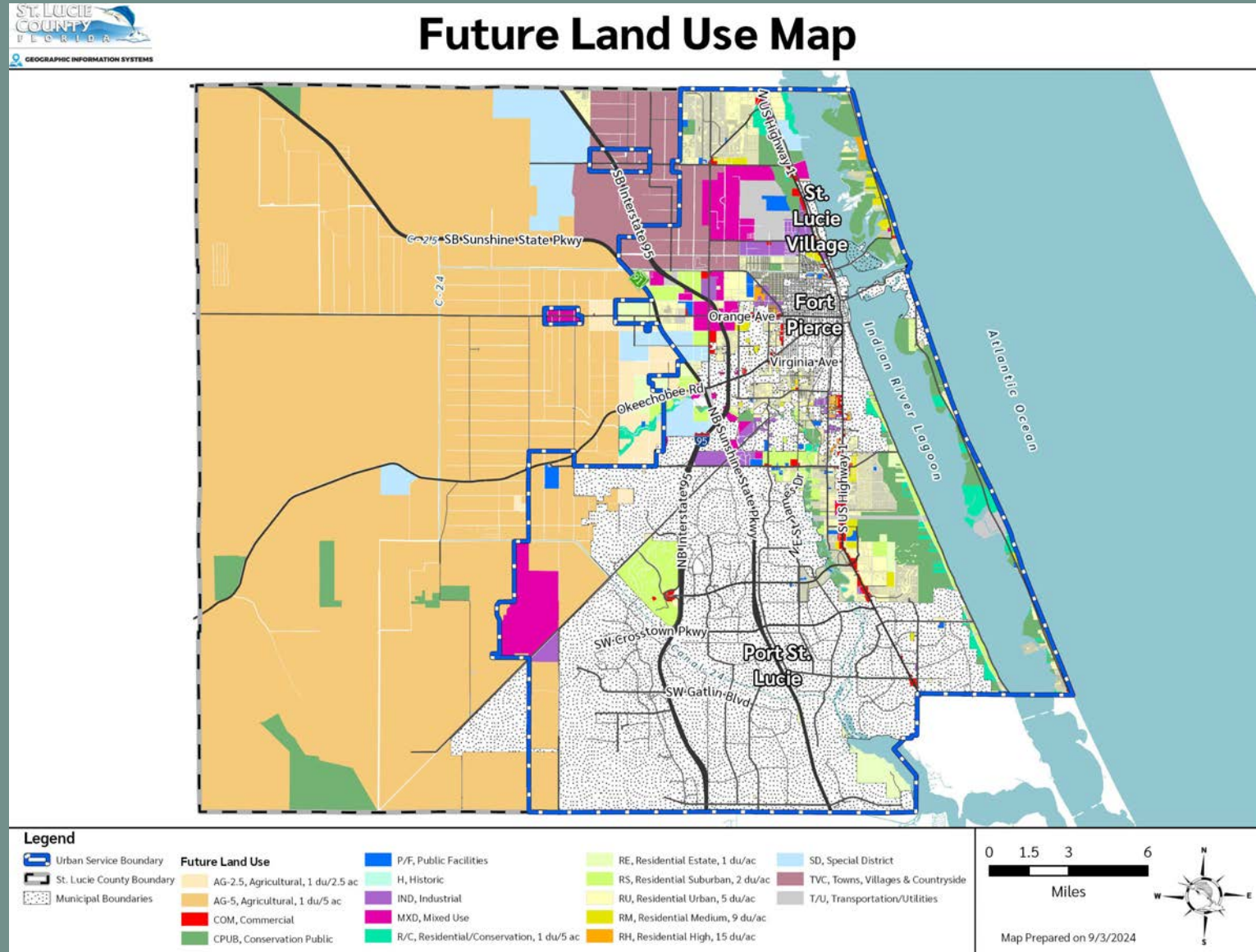
# Population Growth

- projecting beyond 2050 accelerates divergence
- disruptive change in economic cycles, impact land development and in-migration beyond forecasts



# Future Land Use Map

- maintains resource land for agriculture, energy generation, groundwater recharge
- preserves habitats and other environmentally sensitive areas
- provides limits for water and stormwater infrastructure
- implies limits to the high-capacity mobility network



# Urban Services Boundary

- changes to USB westward impacts mobility network
- future growth affected by:
  - infrastructure
  - development density
  - resource land (agriculture, energy production, environmental management)
- generally not affected by sea-level rise and tidal flooding

# Alternative Development – Sustainability Hubs

- concentrated high-density development at nexuses of mobility infrastructure
- downtown or Regional Activity Centers
- mixed-use and internally walkable
- self-contained ecosystems for daily needs
- includes inter-modal support systems to enable travelers change modes, and have long distance travel support
- includes all support systems for region during natural disasters and emergencies
- lowest impact on land consumption
- outlined in the St. Lucie TPO "Automated Connected Electric and Shared (ACES) Transportation Plan" July 2023.



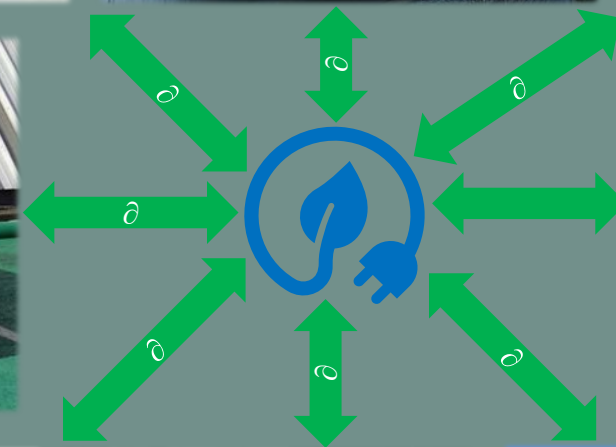
# Mobility Network & Street Sections

## Effort:

- finalize multi-modal needs
- finalize modal split, trip demand

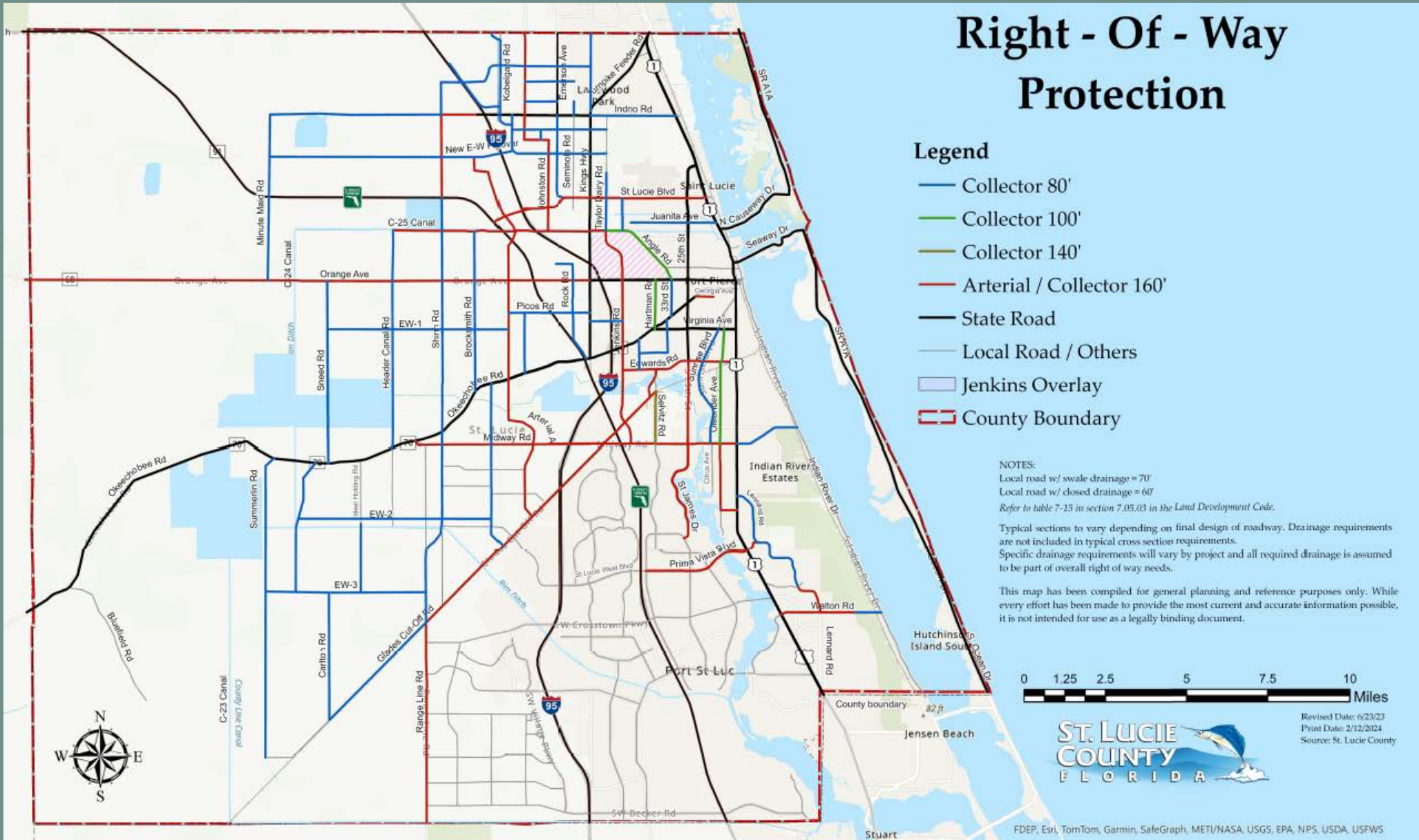
## Result – Map Series

- Years 2045, 2070, 2100
- vehicular master grid
- mass transit master grid
- bicycle & micro-mobility grid
- pedestrian master street grid
- freight movement master grid
- ACES multi-modal master grid



# Right of Way Reservations

# Right-of-Way Reservations





# Infrastructure Technology

## Urban:

- constrained rights-of-way
- curb-and-gutter
- roadway elevation challenged by development
- multi-modal infrastructure integrates w/ vehicles



## Suburban / Rural:

- potential to reserve rights-of-way
- swale drainage and areas for retention
- roadway elevation more possible
- room for dedicated multi-modal lanes



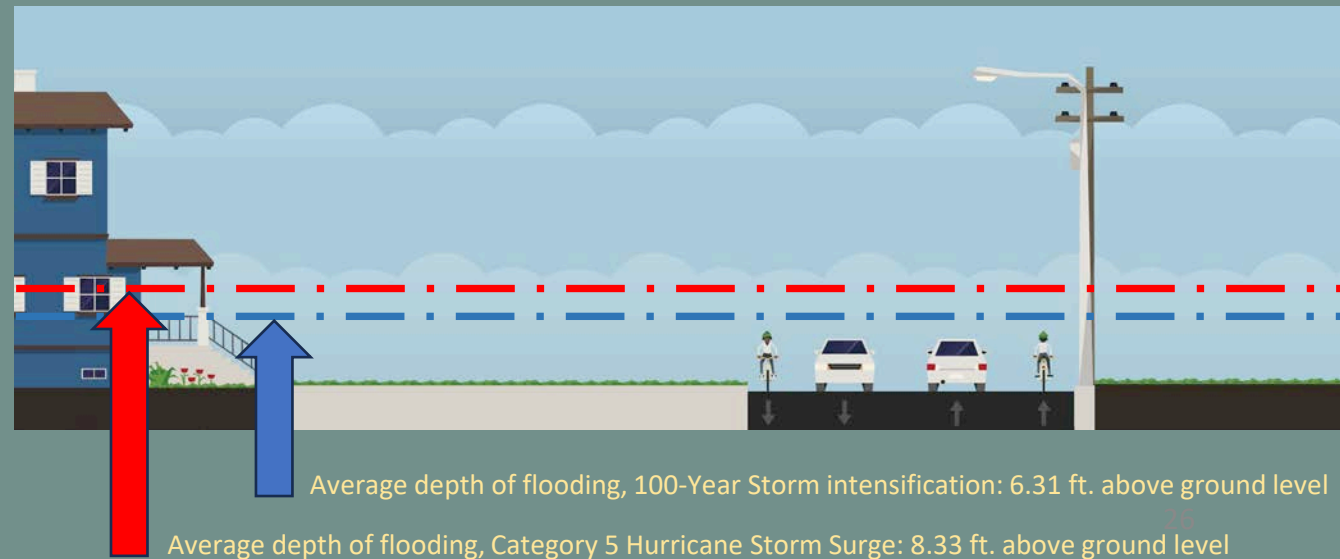
# ROW Outcomes, Sample Sections




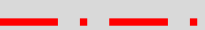

# Suburban ROW Climate Resiliency

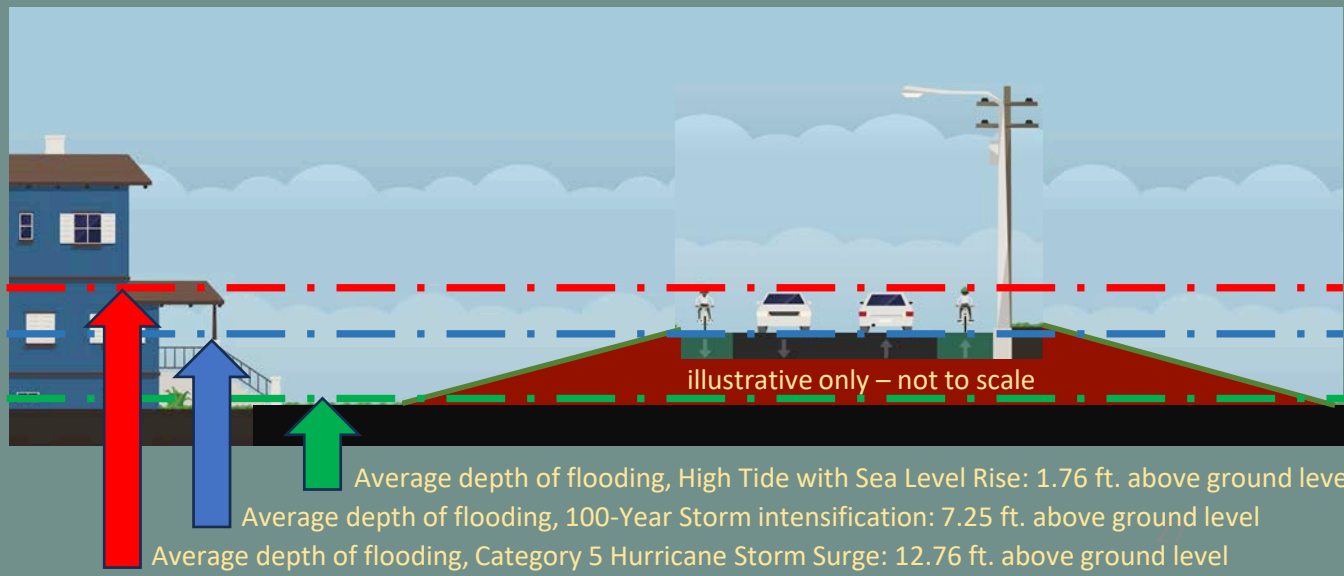
# Edwards Road, Selvitz to S 25 St. Year 2045 <sup>84</sup>

Edwards Road Segment	Selvitz Road to S. 25 <sup>th</sup> Street
Functional Classification	minor arterial
Right-of-Way Section	60 ft.
Vehicular Travel Lanes	two 11 ft. travel lanes LT lanes at intersections
Bicycle Lanes	undesignated 4 ft. each side
Sidewalks	none
Transit	none
Vehicle Capacity (FDOT generalized LOS, urban)	1,481/ hr. (peak hour, two-way)
People Capacity, all modes	2,161/ hr. (bike lanes: 680)
Drainage	swale
Environment	suburban low density
Street Elevation (average of NAVD by TAZ)	11.32 ft. (TAZ 591, 593, 597, 598)
Sea Level Rise High Tide (max of TAZ)	- 6.52 ft. <span style="color: green;">— · — · — ·</span>
Category 5 Hurricane Storm Surge (max of TAZ)	+ 8.33 ft. <span style="color: red;">— · — · — ·</span>
100-Year Rainfall Event (max of TAZ)	+ 6.31 ft. <span style="color: blue;">— · — · — ·</span>
Mitigation Strategies (least impact appropriate to context)	increase road elevation w 4% swale, drainage engineering, increase BFE & freeboard (LDR)
Right-of-Way Reservation	at 9 ft. roadway elevation increase, 60 feet existing plus 212 ft each side



# Edwards Road, Selvitz to S 25 St. Year 2100 <sup>85</sup>

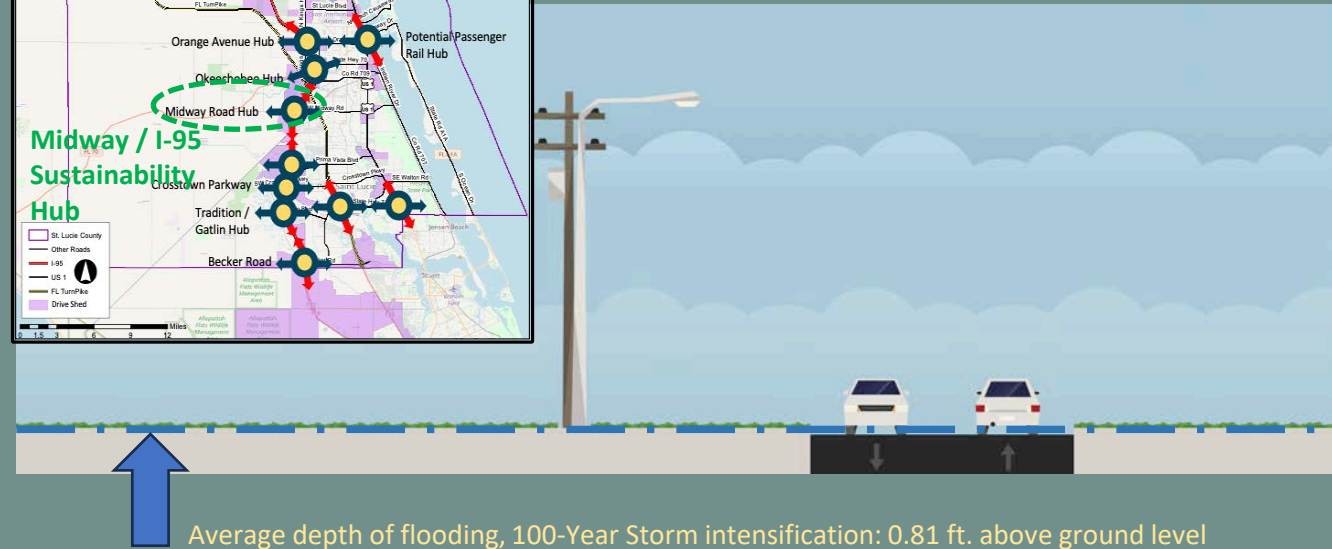
Edwards Road Segment	Selvitz Road to S. 25 <sup>th</sup> Street
Functional Classification	minor arterial
Right-of-Way Section	60 ft.
Vehicular Travel Lanes	two 11 ft. travel lanes LT lanes at intersections
Bicycle Lanes	undesignated 4 ft. each side
Sidewalks	none
Transit	none
Vehicle Capacity (FDOT generalized LOS, urban)	1,481/ hr. (peak hour, two-way)
People Capacity, all modes	2,161/ hr. (bike lanes: 680)
Drainage	swale
Environment	suburban low density
Street Elevation (average of NAVD by TAZ)	11.32 ft. (TAZ 591, 593, 597, 598)
Sea Level Rise High Tide (max of TAZ)	+ 1.76 ft. 
Category 5 Hurricane Storm Surge (max of TAZ)	+ 12.76 ft. 
100-Year Rainfall Event (max of TAZ)	+ 7.25 ft. 
Mitigation Strategies (least impact appropriate to context)	increase road elevation w 4% swale, drainage engineering, increase BFE & freeboard (LDR)
Right-of-Way Reservation	at 9 ft. roadway elevation increase, 60 feet existing plus 212 ft. each side



# Suburban ROW Resiliency to Growth

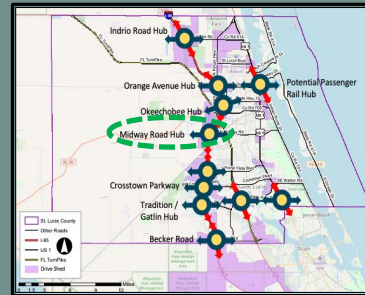
# Midway Road west of Selvitz Rd. Year 2045 87

Midway Road Segment	Selvitz Rd to Glades Cut Off Rd
Functional Classification	major arterial
Right-of-Way Section	160 ft.
Vehicular Travel Lanes	two 12 ft. travel lanes LT & RT lanes at intersections; currently being expanded to 4 lane, divided section
Bicycle Lanes	none
Sidewalks	none
Transit	none
Vehicle Capacity (FDOT generalized LOS, urban)	1,481/ hr. (peak hour, two-way)
People Capacity, all modes	2,161/ hr.
Drainage	swale – to be curb & gutter
Environment	suburban
Street Elevation (average of NAVD by TAZ)	19.72 ft. (TAZ 638, 705, 666, 1018, 1029)
Sea Level Rise High Tide (max of TAZ)	-15.49 ft. <span style="color: green;">■</span> <span style="color: green;">■</span> <span style="color: green;">■</span> <span style="color: green;">■</span>
Category 5 Hurricane Storm Surge (max of TAZ)	- 0.12 ft. <span style="color: red;">■</span> <span style="color: red;">■</span> <span style="color: red;">■</span> <span style="color: red;">■</span>
100-Year Rainfall Event (max of TAZ)	+ 0.81 ft. <span style="color: blue;">■</span> <span style="color: blue;">■</span> <span style="color: blue;">■</span> <span style="color: blue;">■</span>
Mitigation Strategies (least impact appropriate to context)	drainage engineering for severe storm rainfall events, and 1 ft. road elevation
Right-of-Way Reservation	160 ft. – no increase

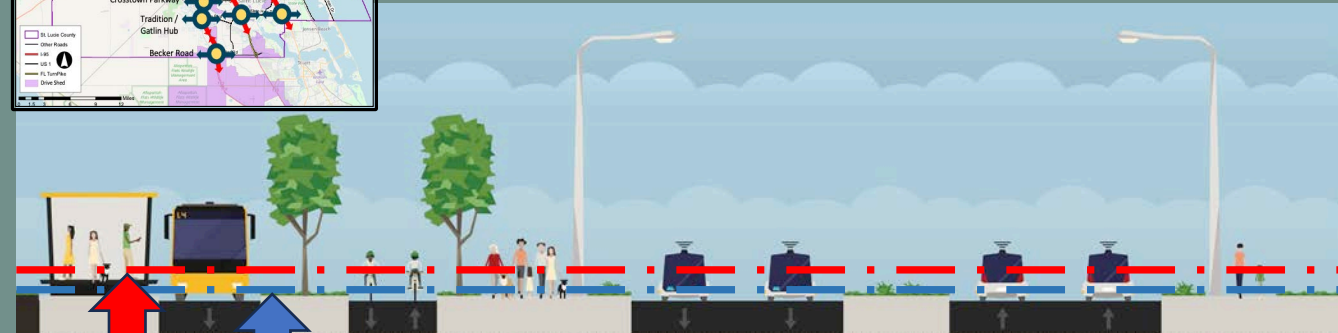


# Midway Road west of Selvitz Rd. Year 2100 88

Midway Road Segment	Selvitz Rd to Glades Cut Off Rd
Functional Classification	major arterial
Right-of-Way Section	160 ft.
Vehicular Travel Lanes	two 12 ft. travel lanes LT & RT lanes at intersections; currently being expanded to 4 lane, divided section
Bicycle Lanes	none
Sidewalks	none
Transit	none
Vehicle Capacity (FDOT generalized LOS, urban)	3,040/ hr. (peak hour, two-way)
People Capacity, all modes	19,000+ / hr.
Drainage	swale – to be curb & gutter
Environment	suburban
Street Elevation (average of NAVD by TAZ)	19.72 ft. (TAZ 638, 705, 666, 1018, 1029)
Sea Level Rise High Tide (max of TAZ)	- 6.37 ft. <span style="color: green;">— · — · — ·</span>
Category 5 Hurricane Storm Surge (max of TAZ)	+ 3.90 ft. <span style="color: red;">— · — · — ·</span>
100-Year Rainfall Event (max of TAZ)	+ 1.09 ft. <span style="color: blue;">— · — · — ·</span>
Mitigation Strategies (least impact appropriate to context)	elevate roadway 2 to 4 ft., drainage engineering for severe storm rainfall events
Right-of-Way Reservation	160 ft. + up to 50 ft. increase



infrastructure to support sustainable growth network  
Midway / I-95 Sustainability Hub



Average depth of flooding, 100-Year Storm intensification: 6.31 ft. above ground level  
 Average depth of flooding, Category 5 Hurricane Storm Surge: 8.33 ft. above ground level



# ROW Acquisition

# ROW Acquisition Process

	Identify Alternatives	Alternative Benefits	Environmental Impacts	Safety Impacts	Consistency with Long Range Planning	Planning / Zoning	Purchase Cost	Tax Revenue Impact
Purchase	review per County CIP requirements	review per County CIP requirements	review	review	review	review and negotiate	negotiated price	tax revenue reduced
Eminent Domain	required analysis	required analysis	required analysis	required analysis	required analysis	can't leave legally non compliant	assessed cost may have to take the whole property	tax revenue reduced
Development Agreement	not required	not required	review	review	review	by agreement	no purchase cost	may have parity
Transfer of Development rights	not required	not required	review	review	review	by agreement	no purchase cost	may have parity
Right-of-Way Dedication	not required	not required	review	review	review	by agreement	no purchase cost	tax revenue reduced
Easement Dedication	not required	not required	review	review	review	by agreement	no purchase cost	neutral

# ROW Acquisition by Location

## Urban Areas:

- Functionally constrained with buildings and high-value investments near right-of-way / property lines.
- Long term planning to acquire upon redevelopment
- Coordinate with local jurisdiction and their redevelopment efforts

## Suburban Areas:

- Very difficult where single-family homes are affected.
- Commercial is less problematic, especially if parking
- Coordinate with local jurisdiction redevelopment efforts, and need to change zoning code

## Exurban Areas:

- large property owners in agriculture, energy, other production and resource management
- acquisitions are generally less difficult



# What's Ahead Public Meetings

# Public Participation

## Public Input

- |   |                         |   |
|---|-------------------------|---|
| 1. St. Lucie County   | March 20, 2024          | County Commission Chamber                   |
| 2. St. Lucie TPO staff meeting                                | April 18, 2024          | St. Lucie TPO Board Room                    |
| 3. St. Lucie County Commission – informal                     | September 10, 2024      | County Commission Chamber                   |
| 4. St. Lucie TPO Citizens Advisory Committee                  | September 17, 2024      | St. Lucie TPO Board Room                    |
| 5. St. Lucie TPO Technical Advisory Committee                 | September 17, 2024      | St. Lucie TPO Board Room                    |
| 6. St. Lucie TPO Bicycle & Pedestrian Advisory Committee      | September 19, 2024      | St. Lucie TPO Board Room                    |
| 7. Public Workshop: <i>introduction, information, Q&amp;A</i> | September 24, 2024, 6pm | Riverwalk Center, 600 N. Indian River Drive |
| 8. Public Workshop: <i>workshop - future scenarios</i>        | October 2024            |   |

## Plan Adoption

- |  |               |
|--|---------------|
| 9. Draft Mobility Infrastructure Plan        | October 2024  |
| 10. Final Mobility Infrastructure Plan       | November 2024 |
| 11. St. Lucie County Commission Presentation | December 2024 |



# Workshop Decisions

to develop future scenario  
& make policy recommendations

1. Geography of Growth
2. Technological Accommodation
3. Level of Climate Mitigation