

BROWARD COMPLETE STREETS STREETS TEAM



PROGRESS REPORT SEPTEMBER 2023



Resilient Environment Department • Urban Planning Division • Natural Resources Division • Environmental Permitting Division • Public Works Department • Highway Construction and Engineering Division • Highway and Bridge Maintenance Division • Traffic Engineering Division

Front cover image credit: South Dixie Highway Lane Repurposing Project presentation (2023)



ABOUT THE COMPLETE STREETS TEAM

The BrowardNEXT Land Use Plan defines “Complete Streets” as roadways designed and constructed for all modes of transportation – automobiles, buses, bicycles, pedestrians, and freight vehicles, and for all users, regardless of age or ability. Complete Streets enhance the community’s quality of life, result in positive health benefits, and have a positive impact on the economy.

Broward County, the Metropolitan Planning Organization (MPO), the Florida Department of Transportation (FDOT), and local municipalities are working together to convert our roadways into Complete Streets. The process requires looking for opportunities and identifying funding, but also providing guidelines and flexibility in roadway development standards, to balance the demands of the users of the system and potential “costs”.

A component of the County’s “Complete Streets” initiative was the creation of the County staff “Complete Streets Team,” a multi-disciplinary group of professionals from Public Works, Transportation, Parks and Recreation, Resilient Environment, the Planning Council, and the Mobility Advancement Program, among others. The Team meets quarterly, but often holds meetings on an “as needed” basis to review proposed changes to the County Roads and regional facilities and local roads, as requested, to provide recommendations to the Board of County Commissioners.

PROJECT STATUS

Highlights

Below are highlights of some the projects presented at the CST meetings held between July 2022 and August 2023, which are currently in different states of implementation. The annual schedule of quarterly meetings is approved in November of the previous year. Special meetings are scheduled as needed and per request of the CST Co-Chairs.

Meeting September 2022 – 2023: No meetings were held between September and December 2022. In 2023 meetings were scheduled for January 18, April 19, and July 19. Additional special meetings are also summarized below.



January 18, 2023 – Center Turn Overpass – Christopher Restrepo, MPO



Figure 1 - Illustration of a Center Turn Overpass. (Source: Broward MPO).

By request from CST members, Mr. Restrepo reprised an earlier presentation made for the MPO Technical Advisory Meeting. The type of facility is being considered for selected high-capacity intersections with roads six (6) lanes or wider with demonstrated safety issues. The CST shared questions and concerns regarding the incorporation of buses and bike lanes; the height of the structure; turning radii; and the need to conduct outreach for older drivers. Mr. Restrepo responded that the ceiling height underneath the structure was 16.5 feet and the estimated cost would be around \$53M, excluding the cost of ROW acquisition, where needed.

January 26, 2023 & February 6, 2023-Special Meetings about Sawgrass Expressway South Interchanges – Teresa Price, FDOT Turnpike Enterprise

This meeting was scheduled due to Broward County staff concerns with how bicycle travel was being accommodated in the design of the underpasses. FDOT staff explained that efforts were being made to connect existing bicycle lanes to facilities on the opposite side of the intersection, where existing. The group explored several potential connections to Markham Park and or the Conservation Levee Greenway, including at the new interchange planned at NW 8th Street in the City of Sunrise, and the Sunrise Blvd and Commercial Blvd interchanges. Ms. Price offered to reach out to Broward County Parks about access to the eastern park exit near NW 8th St used for event overflow. Other potential connections at interchanges did not appear to be feasible for trailhead additions due to a new stormwater pond to be built on the west side of the Sunrise interchange and the FPL station at Commercial.

The group also discussed the need to accommodate a new bike/pedestrian bridge that is planned to be built from the FLA Live Arena west to the Conservation Levee Greenway, between Sunrise Blvd and the new multi-directional interchange at Pat Salerno Drive. The County wants to ensure sufficient clearance between the facilities. A follow up presentation for the full Complete Streets Team (CST) was left for future scheduling (see more below).





Figure 2 - Map of Sawgrass Expressway Interchange Improvement projects.

March 2, 2023-Special Meeting – Dixie Highway South Project-Internal Discussion

Special Meetings are held from time to time to internally discuss issues with a project prior to meeting with the project consultants and city staff. At this meeting BCT, HCED, TED and UPD staff discussed concerns with whether outreach conducted by the consultants was sufficient. There were also concerns with demonstrated decreases in LOS at some intersections, which is generally not a project parameter, however since some Broward Commissioners have voiced misgivings about lane repurposing projects, it may become an issue. Other concerns included the lack of continuity of the two-way bike lanes through an intersection, which in some locations was proposed to shift from one side of the roadway to the opposite side, creating potential conflicts with vehicles.

April 19, 2023-CST Meeting – Dixie Highway South Project – Vanessa Leroy, Sustainable Development Director, City of Hallandale Beach

The CST met with representatives from the MPO, FDOT, City of Hollywood and City of Hallandale Beach. Ms. Leroy, Hallandale Beach Sustainable Development Director, initiated the presentation on behalf of the cities and project managers and consultants. This project has a long trajectory and has been subject to multiple outreach efforts. It has also achieved the support of both cities. Project leads have met several times with the County's Traffic Engineering and Maintenance staff to discuss drainage, among other issues. Due to potential impact on local traffic, County staff requests were made to conduct additional modeling and

diversion analysis. SYNCHRO analyses were requested if the capacity within 500 ft radius of an intersection is shown to be compromised by the proposed changes or lane use at a signal is reassigned. In an earlier communication County Traffic Engineering wrote, "Maintaining intersection capacity has the benefit of "storing" the traffic as close to the signal as possible and averts rapidly growing queues. These are common specially on single lane approaches." (Traffic Engineering Comments Memo, 2021).

The meeting was used to clarify several CST member questions. The Co-Chairs engaged the CST members in a discussion of whether the outreach conducted to date appeared to be sufficient to meet the intent of the CST outreach recommendations. The following are some highlights from the discussions:

- County staff highly support the project and some of the design details will be worked out during the design phases.
- Outside lanes for buses need to be at least 11-feet wide.
- ADA standards require accommodating bus stops on a platform of at least 8-feet.
- Bicycles and pedestrians will travel side-by-side on elevated five-foot + six-foot zones dedicated to each mode, respectively.
- The intersection at Johnson Street needs to have more than just one through lane. The following image shows a potential alternative.

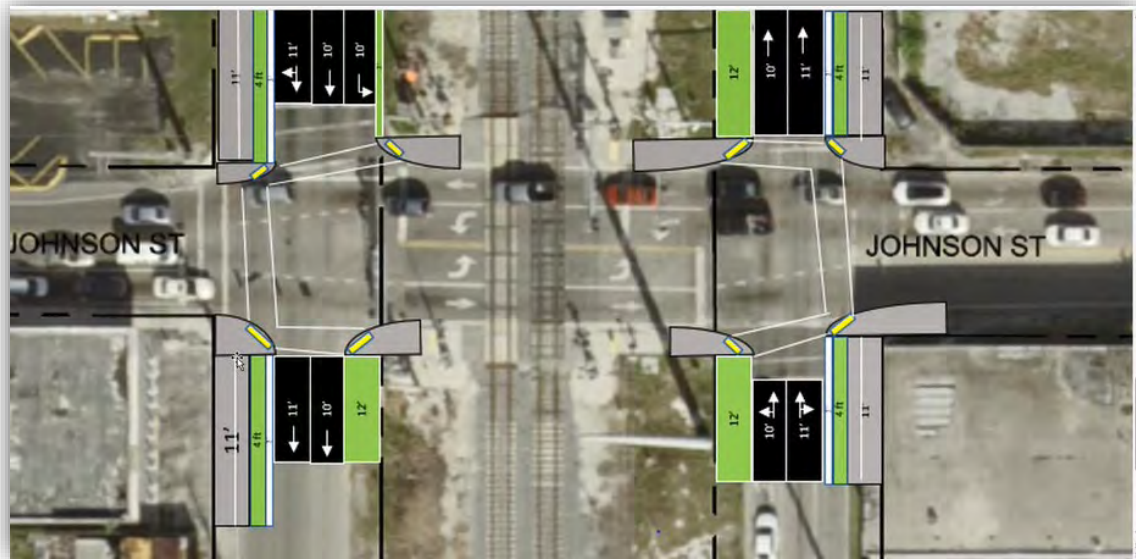


Figure 3 - Proposed intersection improvements at the Johnson Street intersection.

- Efforts will be made to maintain and enhance landscaping along the corridor as much as possible to help "cool" the travel paths.
- The attendees agreed that the only thing missing was publishing a notice in the Administrative Register, which was considered at this time not significant enough to hold up the process. It is important that City elected officials and County

Commissioners, particularly the ones in the affected districts, were notified. City staff should be prepared to produce a list of who has been notified in case it is requested by the County Commission. Given the scope of the project, it would have been preferable that more had been done to ensure that the public was well notified. However, both CST Co-Chairs agreed that the project appears to have substantially met the CST guidelines, with publishing it in the Federal Register excepted. The CST Co-Chairs committed to move the item to the County Commission, who will decide if they have issues with the outreach. This item will be submitted in early fall—August/beginning of September, in time for the January 2024 funding deadline. The target meeting is Thursday, September 7, 2023.

- City staff confirmed that the resolutions had been voted on at a public meeting that was also noticed at least seven (7) days prior (per State Statute).
- Any ROW dedication needed is being addressed through agreements with new development.

May 11, 2023 – CST Meeting - Midtown Plantation and Proposed Bridge to SR 84

As part of the Midtown Plantation Master Plan, a congestion relief connection is being proposed from SW 17th Street connecting south to westbound SR 84. This project hopes to reduce trips at the University Drive and Pine Island Drive intersections with SR 84.



Figure 4 - Potential location of the proposed bridge, west of University Drive.

The City of Plantation has requested permits to cross the SFWMD right-of-way, which will also impact the New River Greenway, a significant component of the County’s Greenway Master Plan. The City is requesting an amendment to the 2045 MPO Plan to move the project to “illustrative” status. Design to be completed this year. It should be noted the requested connection is located within the jurisdiction of the Broward Municipal Services District.

At a special meeting with HCED and MAP staff, the attendees discussed safety features that would be installed to promote safe bicycle and pedestrian crossings at the intersection between the greenway and the bridge. Enhancements along the sidewalks north of the intersection were also addressed. Concerns included ensuring adequate lighting and signage for all modes. The image below shows some of the improvements being proposed for the project design, based on conversations with the County.

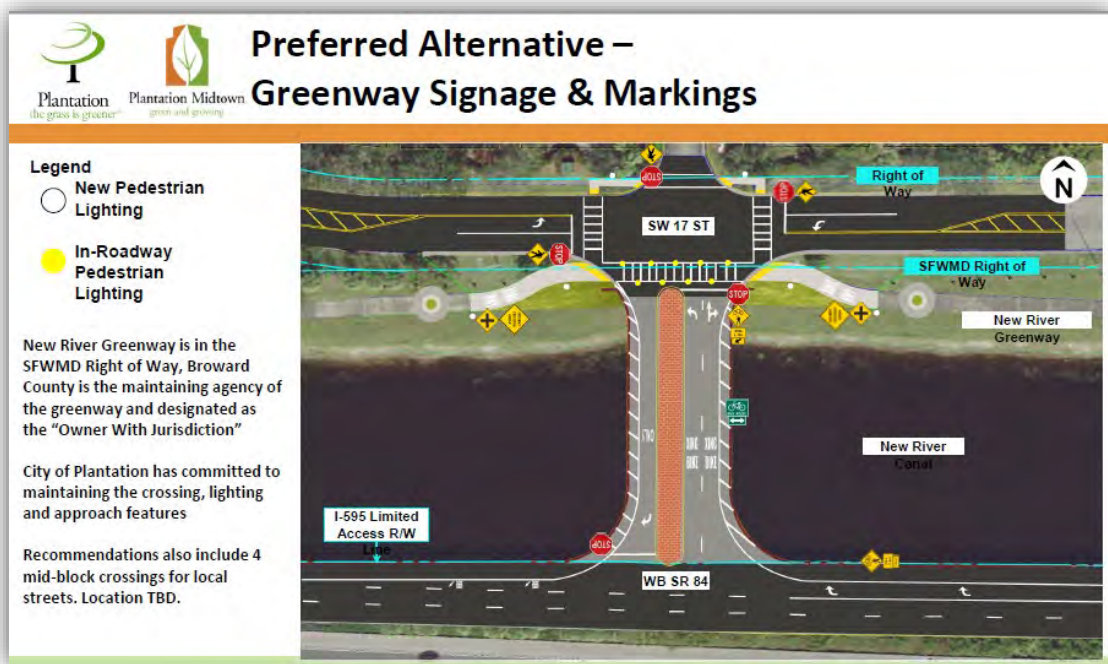


Figure 5 - Presentation slide with proposed signage and marking concepts.

July 19, 2023– CST Meeting - Broward Intersection Study & Sawgrass Expressway South Interchanges

A. Broward County Intersection Improvement Study, CTS Engineering

The goal of the study is to develop capacity and safety improvement projects at signalized intersections within Broward County. Data has been gathered for 1400 County intersections, which will be narrowed to a shortlist of 100. Filtering the intersections includes nine criteria under four goal headings: Safety, Mobility, Multimodal, and

Socioeconomic factors. Design concepts will be developed and programmed after the intersections are evaluated and ranked in coordination with County staff.

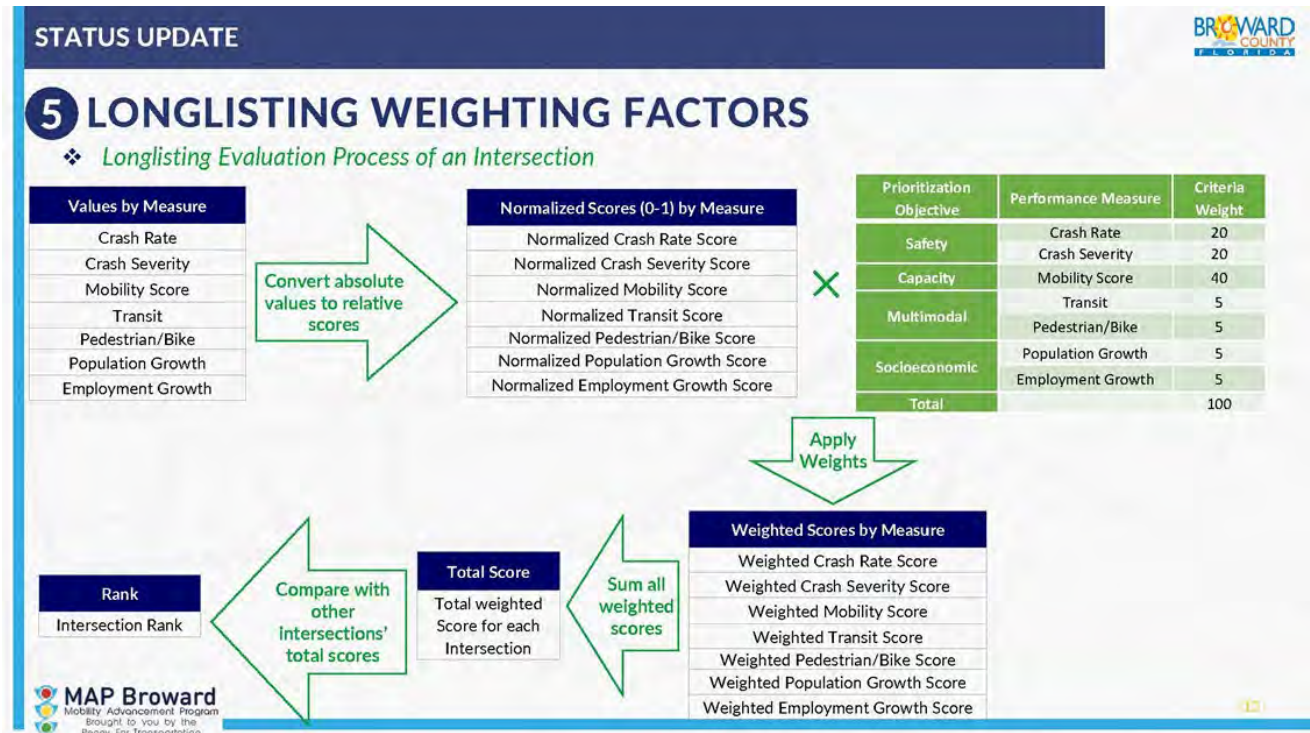


Figure 6 - Slide #5 from the Intersection Study Presentation-Longlisting Evaluation Process of an Intersection (CTS Engineering, 2023)

B. Updates to the Sawgrass Expressway Expansion and Interchange Improvements, Anthem Consulting & HTNB for FDOT

The goal for this presentation was to share the results of the coordination efforts with local community leaders and the prevailing design elements relating to bicycle, pedestrian and transit commuters. Mr. Christopher provided an overview of the 21-mile Sawgrass widening project and discussed the bicycle, pedestrian and transit features for NW 8th St, Sunrise Blvd, Pat Salerno Blvd, Oakland Park Blvd, and Commercial Blvd.

The existing interchanges do not currently include bicycle facilities. In coordination with Broward County and the affected cities, Turnpike Enterprise determined that the locations were not appropriate for extending bicycle facilities westward. Intersections near the interchanges will include new ADA compliance, sidewalks, pedestrian signals and crossings. Transit facilities would be extended to or improved at the transit stops where service is available near the project locations. Below are some highlights from the coordination:

- NW 8th Interchange. Staff had previously requested that bicycle facilities be added to connect with Markham Park. Park representatives indicated that the access point from NW 8th in Sunrise was primarily for vendor use only during special events and was not desired



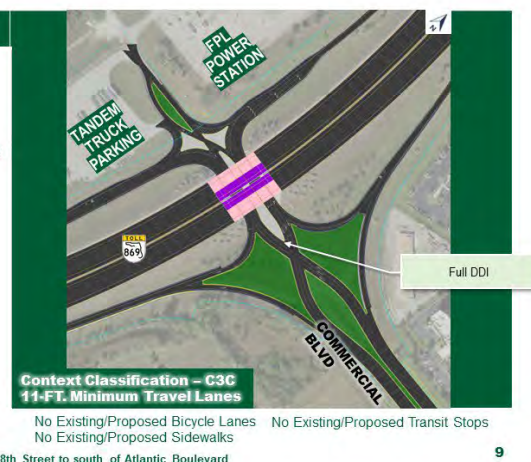
for public access. Park staff requested to provide a gate closer to the new single point interchange. Existing access to adjacent properties would be maintained and intersection improvements at International Parkway will mainly focus on new ADA compliant sidewalks, pedestrian signals and crossings.

- Interchange at Sunrise Blvd. A partial diverging diamond interchange (DDI) is proposed to improve safety and operations. Based on coordination with Broward County and the City of Sunrise, bicycle facilities at this location are not warranted. Intersection improvements will include new ADA compliance, sidewalks, pedestrian signals and crossings. In as far as transit at this location, there are no existing or proposed stops at this location.
- Pat Salerno Dr Interchange. An agreement between Broward County and Florida's Turnpike Enterprise will provide a full directional interchange, which includes new ramp movements to and from the north. West of the Expressway is an existing L 35 Canal, as well as elevated interchange ramps. Bicycle lanes are not proposed at this location; however, sidewalk gaps will be addressed and there will be new ADA compliant intersection and sidewalk improvements with pedestrian signals and crossings at NW 136th street.
- Interchange at Oakland Park Blvd. A partial DDI is proposed to improve safety and operations with a new barrier separated connector distributor roadway on the west side next to the L 35 Canal. New ADA compliance, sidewalks, pedestrian signals and crossings will be provided at the intersection.
- Interchange at Commercial Blvd. A full DDI is proposed to improve safety and operations. West of the Expressway is the L 35 Canal, a tandem truck parking lot and an FPL power station, as well as proposed interchange ramps. Existing bicycle lanes will be restored east of the interchange along both directions of traffic extending from Madison Ave to the Hiatus Rd intersection. Improvements will include new ADA compliance sidewalks, pedestrian signals and crossing resulting from coordination with Broward County Transit.

Bike/Ped/Transit Features

Commercial Boulevard/SR 869 Interchange

- Full Diverging Diamond Interchange (DDI)
 - Tandem Truck Parking Lot
 - FPL Power Station
 - Not an origin/destination for B/P/T commuters
- North of Madison Ave. Intersection
 - Pedestrian and Bicycle Facilities – None
- Broward County Transit (BCT)
 - No existing/proposed stops



Sawgrass Expressway (SR 869) Widening and Interchange Improvements from south of NW 8th Street to south of Atlantic Boulevard

Figure 7 - Slide depicting a full DDI at the Commercial Blvd. Interchange (Anthem & HTNB, 2023)

POLICIES & STANDARDS

Shared-Use Paths

The Broward Highway Construction & Engineering Division is re-evaluating bicycle facility design standards, including grade separated travel paths for bicycles. For the past few years, the focus on safety has been on adding buffer strips between vehicular travel lanes and bike lanes within the roadbed.

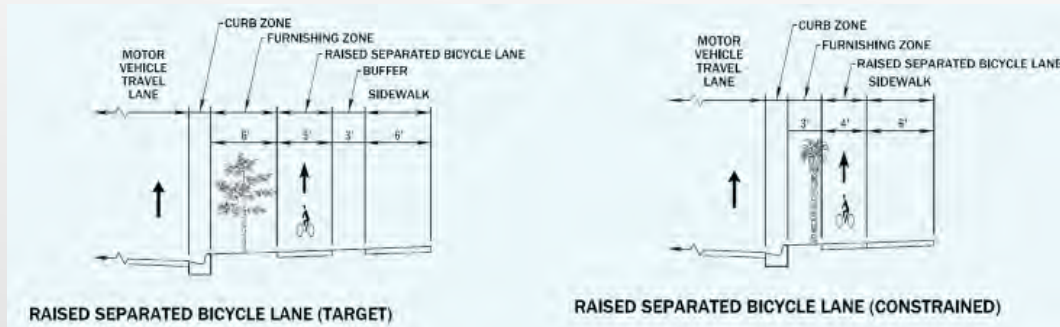
However, residents have demonstrated a preference for grade-separated facilities such as wider sidewalks and shared-use paths, particularly when the other option is providing narrow or un-buffered on-street bike lanes in constrained ROW conditions if speed limits are 40 mph or higher. Additionally, people prefer that shared paths be separated by mode type, for example separating walking and biking paths using signage, different textures or materials, marking lanes, and/or using landscaped buffers as separators, which are perceived as the safest. In constrained conditions, the preferred design includes a shared use path with 4-ft. bike lane next to a 6-ft. sidewalk. Below are some illustrations related to this topic.



Figure 8 - Photo of separated bicycle lane and shared-use path (Broward Highway Construction and Engineering Division)

Broward County Highway Construction and Engineering Division is re-evaluating bicycle facilities

Now: Separated bicycle lanes -use paths



Source: BrowardMPO Complete Streets Design Guidelines 2.0



Figure 9 - Profile images of separated bicycle lane and shared-use path (Broward Highway Construction and Engineering Division-BHCED)

Sample Projects

Pine Island Road Capacity Expansion Project from Griffin Road to Nova Drive

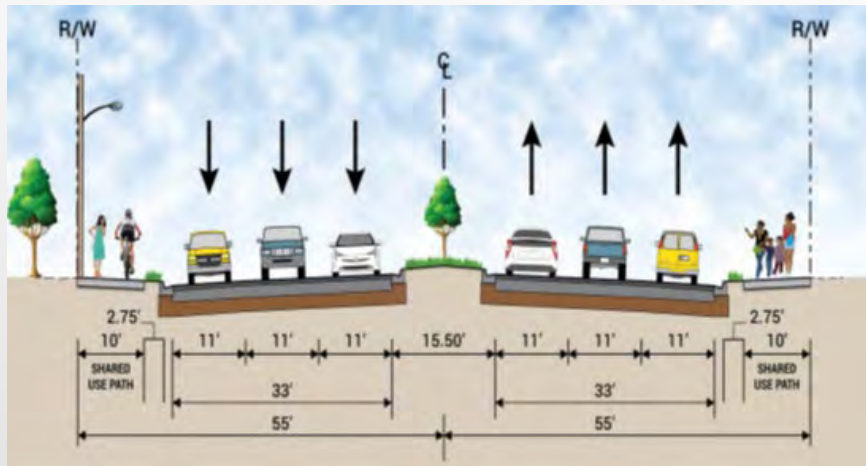


Figure 10 - Proposed shared use path on Pine Island Road. (BHCED)



Separated bicycle lanes or Shared-use paths

Benefits:

- Greatest degree of separation and protection from motorized traffic, which can encourage cycling
- Fewer potential conflicts between bicycles and vehicular traffic
- Separated bicycle lanes receive less wear and tear than travel lanes
- Separated bicycle lane cross slope provides for less collection of debris and puddling on the path
- Cost saving potential if road curb and drainage structures -street bike lanes can be eliminated (eliminate replacing)

Challenges:

- Right-of-Way limitations and restrictions
- Addressing side street and driveway openings
- Special maintenance procedures
- Special considerations to avoid conflicts between bicycles and pedestrians



Figure 11 - Benefits and Challenges of separated bicycle lanes. (HCED)

FUNDING & GRANTS

Mobility Advancement Program (MAP)

The [Mobility Advancement Program \(MAP\)](#) was created by Ordinance in 2019 after a 30-year transportation surtax was approved by County voters in 2018. The program provides funding for local mobility projects. An online [interactive map](#) was created to track projects by location. The Five-Year Plan for Municipal Capital Projects is updated and published annually on the MAP website. MAP staff currently participate in the CST meetings as part of the Team.

MAP currently has 66 projects programmed through 2027, valued at \$150,907,530, classified as bicycle/pedestrian and/or multi-use path project types for new or improved pedestrian and bicycle facilities. The [MAP Municipal Projects](#) page lists over 110 projects requested and at different stages of completion.

Broward Metropolitan Planning Organization (MPO)

In 2018 Broward County HCED applied for a grant with the MPO for NW 19th Street from NW 31st Avenue to Powerline Road. In 2019 HCED was awarded a grant of \$1.6 million for construction and CEI, and the funding was applied to FDOT's work program as a Local Agency Program (LAP) project. The official design kickoff for the LAP project was held in November 2022.



The project scope is to construct a raised median with landscaping where feasible. Milling and resurfacing is included to extend the service life of the road. Existing pedestrian crosswalks and pedestrian ramps will be brought up to ADA standards. Staff will also coordinate lighting improvements at the intersections with FPL and local maintaining agency. Previously, FDOT proposed to install bike lanes along the corridor by reducing travel lanes, but the community did not want to proceed with that concept. Construction is expected to begin in February 2025.

EDUCATION & OUTREACH

Air Quality Program

To reduce air pollution and green-house-gas (GHG) emissions from mobile sources caused by increases in vehicles on Broward's roadways, the County's Air Program emphasizes the importance of **green transportation**. In particular, **Air Quality promotes electric vehicle usage as well as bicycle commutes**. Below is a list of relevant events which helped further promote our ongoing **green transportation** campaigns in the past year:

- **National Drive Electric Week at Fort Lauderdale's Sunday Jazz Brunch (September 2022):** The public event focused on the benefit of electric vehicles, along with county fleet and transit electrification efforts.
- **Mobility Week at the Lauderdale Transit Center in partnership with BCT (October 2022):** This public event highlighted County efforts such as bus electrification, air quality monitoring, and bicycle maintenance for residents, many of whom use public transportation on a regular basis.
- **Green Your Ride at the WWS Building in Pompano Beach (October 2022):** In honor of Car Care Month, the Air Program held an event for employees to learn simple yet effective car care maintenance tips to reduce emissions.
- **Lunch and Learn – [Report Smoking Vehicles](#) and EVs in partnership with OPC (October 2022):** Since vehicles are the main source of air pollution in Broward County, a virtual training was provided for County employees to help identify and report vehicles that emit excess visible smoke. The benefits of EVs and EV charging at County facilities were also highlighted during this event.
- **Love to Ride Florida Challenge through Love to Ride USA (October - November 2022):** The event encouraged employees who live close to work to commute by bicycle, for environmental and health benefits. Competing for most miles travelled and trips logged, the event generated interest in bicycling and created a sense of community. Our County Team earned first place for large Florida organizations that participated.





Figure 12 - Images from 2022 Broward Air Quality Events

Broward County Transit (BCT)

Broward County Transit has officially launched their multi-billion-dollar [Premium Mobility Plan \(PREMO\)](#) that will forever improve the transportation landscape in Broward County. This transformational initiative will add over 200 miles of new premium transit services to its existing service network. It will also create new jobs, stimulate economic development, connect major points of interest, and provide Broward County residents and visitors with multimodal transit options. Over the past year, BCT has been studying transit needs and conducting public outreach to determine the best means to better connect people and places.

This countywide network of premium transit services will provide convenient mobility that is attractive, safe, reliable, and frequent. The PREMO plan includes: 11.5 miles of Commuter Rail, 23.3 miles of Light Rail Transit (LRT), 76 miles of Bus Rapid Transit (BRT), and 100 miles of High Frequency Bus Service. Corridor recommendations are based on current ridership, ridership potential, community feedback, and economic development opportunities. Through PREMO we have a unique opportunity to connect Broward County's three major economic engines with fast, reliable and convenient transit service. With direct connections to the Airport, Seaport, and Convention Center; Broward County will be one of the leading intermodal transit providers in the country. Overall, this transformational PREMO plan will change the way Broward County Connects!

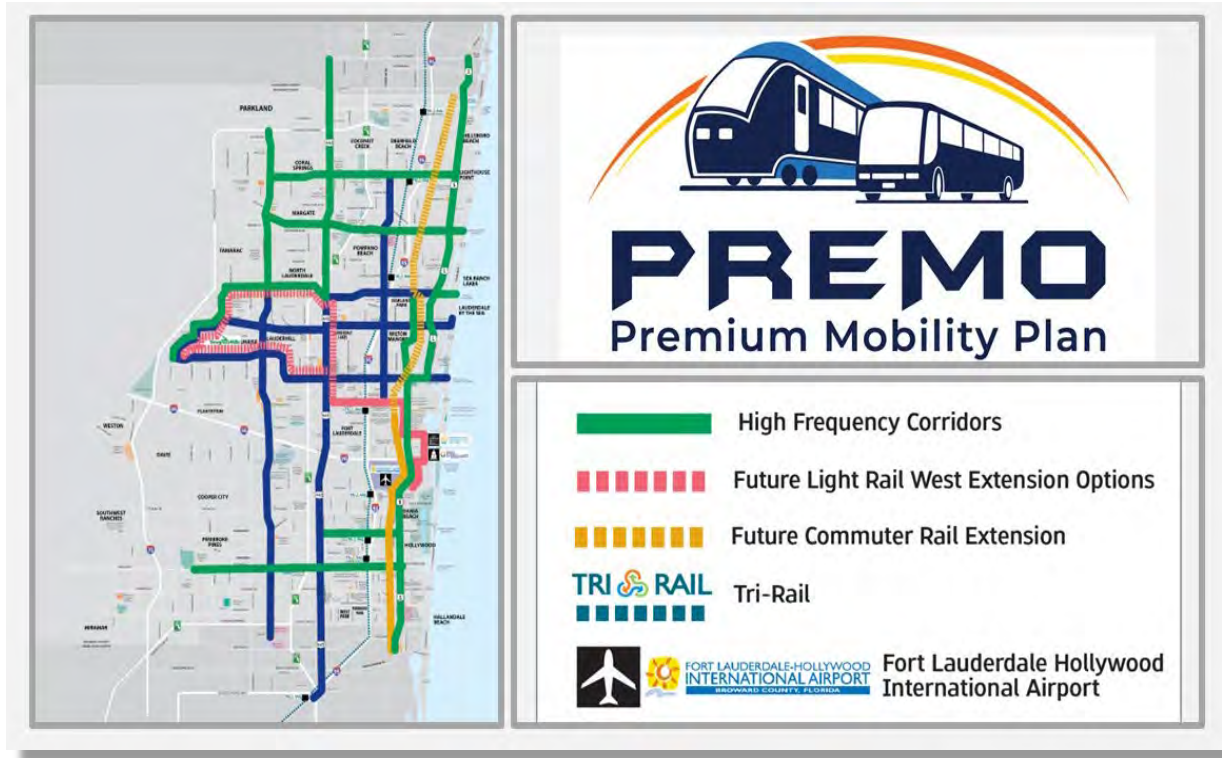


Figure 13 - BCT Premo Plan Mobility Map

Broward Bicycling and Pedestrian Advisory Committee (BPAC)

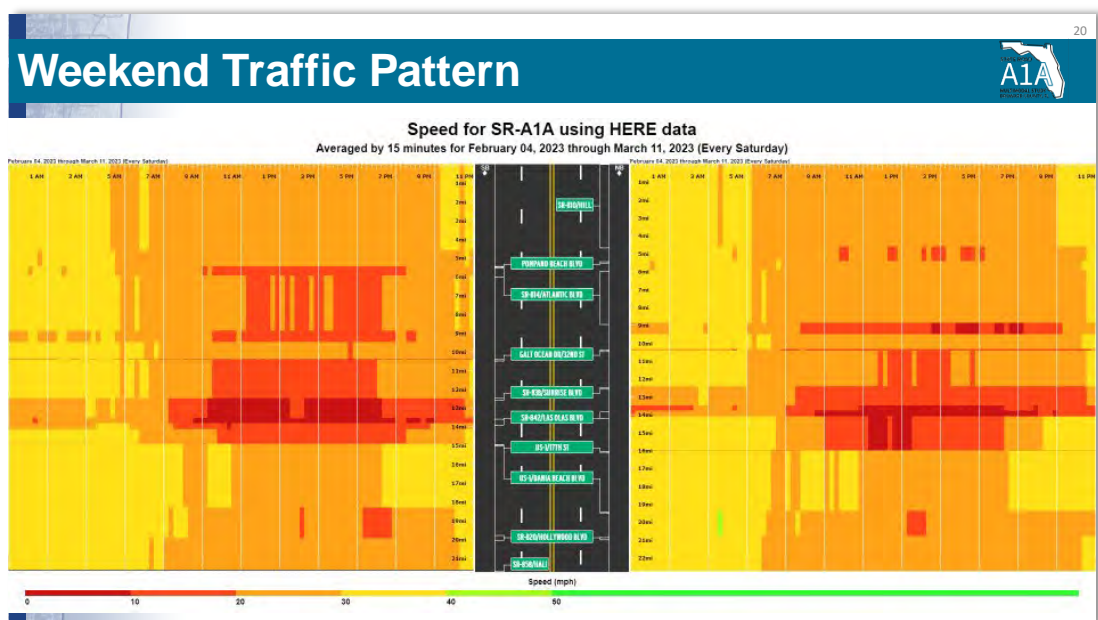
The BPAC has established in the Broward County Administrative Code since 1981 with the following purposes:

- Study and advise the Broward County Board of County Commissioners, with the cooperation and assistance of the County Administrator, on all matters related to bicycling and walking.
- Review Broward County road construction projects at their planning and design stages for the possible inclusion and/or placement of bicycle and pedestrian facilities.
- Develop programs to encourage bicycling and walking throughout Broward County.

Between September 2022 and July 2023, the BPAC met six times. Meetings were dedicated to adopting new goals and reviewing FDOT and County projects to provide feedback from the bicyclist and pedestrian perspective. The following is a list of presentations held at meetings:

- September 14, 2022 – Broward County Bicycle Facilities: new strategies and standards. Presented by Laila Kitchen, PE, Highway Construction & Engineering (HCED)

- December 14, 2022 - Questions about Bicycle Safety Design for Richard Tornese, HCED Director. Mr. Tornese fielded questions from the BPAC about safety features that are considered during project design, facility maintenance, and two-way bicycle lanes.
- January 25, 2023 – BPAC Goal Setting Workshop – facilitated by Sara Forelle and Tonya Fletcher, Broward County Urban Planning Division.
- March 8, 2023 - Broward MPO’s Complete Streets Initiative – Fazal Qureshi, Transportation Engineering Project Manager, Broward MPO.
- May 3, 2023 - FDOT Sunrise Blvd/US 1 Gateway project - Carlos Cejas, P.E. (Vice President), Nelson Mora, P.E. (Senior Project Manager), Gannett Fleming, Inc.
- July 12, 2023 - FDOT District 4 – A1A Multimodal Study – Wade Walker, Kittelson & Associates and Peng Zhu, PhD, PE, PTOE, TranSystems (project manager).



• Figure 14 - Average speed by segment and time of day. Source: A1A Multimodal Study, 2023.



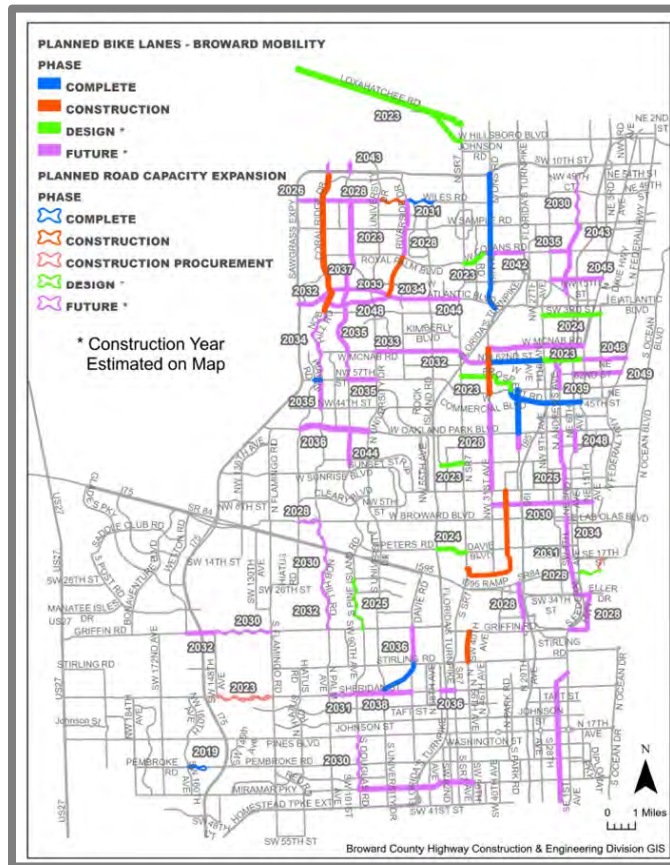


Figure 15 - Planned Bike Lanes in Broward (Broward County Highways Construction and Engineering Division)

Bicycle Month Events



Every March, Broward County celebrates Bicycle Month with a Proclamation. This year's proclamation was drafted by BC Parks and Recreation, BC Urban Planning Division, the Bicycle & Pedestrian Advisory Committee (BPAC), and the Mobility Advancement Program (MAP).





Broward County Parks and Recreation Events in March

The Parks and Recreation Division kicked off the [PEDALPALOOZA](#) month of activities with a flyer and schedule posted on their website. Municipalities partnered on events, including the City of Lauderhill and the Town of Davie. Several of the more focused events featured education through Bike Rodeos, skill lessons, and helmet fittings. Annual favorites were also featured, including tandem riding for special populations, racing at the Velodrome, and guided tours. Self-guided scavenger hunts were also provided at several parks.

Sponsors included Flipany, Miami Masters and Miami Health Systems (MHS), who donated either or both new bikes and helmets to give away at the events. Broward B Cycle donated free E-Bike passes valid for a year. Future educational partnerships with MHS and Broward Safe Kids are currently under discussion to address reducing bike riding accidents, which fall within the top 10 types of accidents involving children.

Below are photos that highlight some of the events that took place this year.

Figure 16 – Below, Bike Rodeo at Vista View Park in Davie



Figure 17 – Above, Slow Roll Event at Lauderhill





Figure 18 - Photo of Special Pops Tandem Program (2023)

2022-2023 TEAM MEMBERSHIP

NAME	DEPARTMENT	DIVISION
Tony Hui	Broward County Public Works	Department
Richard Tornese, <i>CST Co-Chair</i>	Broward County Public Works	Highway Construction and Engineering Division
Laila Kitchen <i>CST Co-coordinator</i>	Broward County Public Works	Highway Construction and Engineering Division
Scott Brunner	Broward County Public Works	Traffic Engineering Division
Andrew Sebo	Broward County Public Works	Traffic Engineering Division
Anh Ton	Broward County Public Works	Highway Bridge Maintenance Division
Coree Lonergan Cuff	Broward County Public Works	Transit Administration
Tim Garling	Broward County Public Works	Transit Administration
Arethia Douglas	Broward County Public Works	Transit Administration
Barney McCoy	Broward County Public Works	Transit Administration
Romary Justafort	Broward County Public Works	Transit Administration
Kurt Petgrave	Broward County Public Works	Transit Administration
Jennifer Jurado	Broward County Resilient Environment	Department
Josie Sesodia	Broward County Resilient Environment	Urban Planning Division
Darby Delsalle, <i>CST Co-Chair</i>	Broward County Resilient Environment	Urban Planning Division
Heather Cunniff	Broward County Resilient Environment	Urban Planning Division
Sara Forelle <i>CST Co-coordinator</i>	Broward County Resilient Environment	Urban Planning Division
Ryan Flaherty	Broward County Resilient Environment	Environmental Permitting Division
Monica Pognon	Broward County Resilient Environment	Natural Resources Division
Dan West	Broward Parks & Recreation	Administration



NAME	DEPARTMENT	DIVISION
Barbara Blake Boy	Broward County Planning Council	
Dawn Teetsel	Broward County Planning Council	
Julie Bernal	Broward County Planning Council	
Gretchen Cassini	Broward County Administration	Mobility Advancement Program
Josette Severyn	Broward County Administration	Mobility Advancement Program
Min-Tang Li	Broward County Administration	Mobility Advancement Program
Roxanne Riggs	Broward County Administration	Mobility Advancement Program
Maximiliano Goldstein	Broward Bicycling and Pedestrian Advisory Committee (BPAC)	

