BROWARD COMPLETE STREETS MASTER PLAN

Better Streets • Better Communities • Better Broward

Broward MPO
Metropolitan Planning Organization

Move People & Goods | Create Jobs | Strengthen Communities

Consultant Team

Kimley-Horn (Lead)

Alta Planning+Design

Urban Health Partnerships

Marlin Engineering

March 2019

Letter from the Broward MPO Executive Director

At its core, the ***Broward Metropolitan Planning Organizations' (MPO)*** Complete Streets Initiative aims to provide safe, comfortable, and convenient choices for travel by all users. The Broward MPO has identified safety as one of the agency's highest priorities. Complete Streets not only provide safer and seamless travel options, they also help to protect the environment, create healthy neighborhoods, and stimulate economic growth all while improving mobility to meet the needs of the people in our communities.

With a commitment of over **$300 million dollars**, the Broward MPO is creating projects that incorporate Complete Streets principles and connect communities throughout Broward. None of this would have been possible without the close working partnership developed with our 31 member municipalities, Broward County Government, the School Board of Broward County and the Florida Department of Transportation.

To continue creating a safe and balanced transportation system, encouraging healthier communities, and increasing the economic vitality of the region, the Broward MPO has developed the ***Broward Complete Streets Master Plan***. The goal of the Complete Streets Master Plan is to guide the MPO's investment in Complete Streets by developing a prioritized list of projects. The Plan is based on data-driven technical analysis, applied criteria, and local partner government input. Most importantly, it incorporates community feedback gathered through a very successful public outreach campaign.

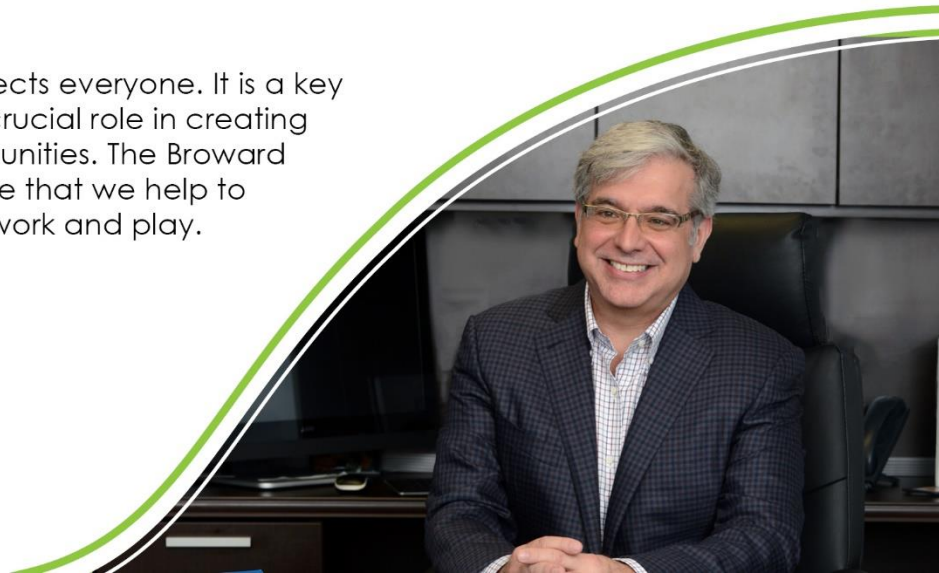
Highlighted by the demand and equity analysis conducted, this Plan focuses on prioritizing areas with a greater number of desired destinations, such as centers for education, employment and healthcare. Access to transit and strategies to complete first- and last-mile connections are key elements to creating a comprehensive Plan to connect the people of Broward to the places they work, shop, learn and travel. Further, our focus was placed on communities with a greater need for multimodal facilities. This ensures the mobility needs of historically disenfranchised and underrepresented communities are clearly included in the fabric of the Plan.

The ***Complete Streets Master Plan*** reflects the desires and needs of Broward's diverse communities. The MPO's public outreach effort for this Plan included direct contact with over 1300 residents of our region and involved robust conversations with communities and their leaders. Connectivity, comfort level and access to areas of interest were recurring themes gathered through public outreach, and based on these factors, areas of concentrated activity (bundle areas) were formed to guide implementation of this Plan. This outreach campaign also shaped the determination of project priority, location and type of facility.

We recognize that transportation affects everyone. It is a key component of our lives and plays a crucial role in creating safer, healthy and connected communities. The Broward MPO continues to work hard to ensure that we help to make Broward a great place to live work and play.

Sincerely,

Gregory Stuart, Executive Director



Background

Brief History of Complete Streets Program

2009

The Broward Metropolitan Planning Organization (MPO) board adopted the 2035 "Transformation" Long Range Transportation Plan (LRTP). This Plan allocated 70% of the projected funding to transportation modes (transit and bicycle/pedestrian) other than the automobile.

2010

Broward MPO, together with the Florida Department of Transportation (FDOT) developed the Broward MPO Mobility Program. The goal of this program was to move active transportation projects from planning to design and ultimate to construction.

2011

Broward Regional Health Planning Council (BRHPC) secures Centers for Disease Control (CDC) Community Transformation Grant (CTG) to create healthy and safe places in Broward by promoting an active lifestyle.

2012

Broward Regional Health Planning Council (BRHPC), Smart Growth Partnerships, and the Health Foundation of South Florida establishes a partnership with the Broward MPO to develop the ***Broward Complete Streets Guidelines*** as part of the CDC CTG Transforming our Community's Health (TOUCH) Grant.

Broward MPO Board endorses the ***Broward Complete Streets Guidelines***.

Broward MPO formally establishes the ***Complete Streets Advisory Committee (CSAC)*** to guide the Broward MPO's Complete Streets Initiative. The Initiative's main intent is to provide the necessary tools and resources for local governments seeking to implement Complete Streets in their respective communities.

The Broward MPO successfully programs approximately $15 million in bicycle/pedestrian improvements in its Transportation Improvement Program (TIP). This initial investment includes multiple projects located in various municipalities throughout the Broward Region.

2013

Broward MPO develops a ***Model Complete Streets Policy and Plan Framework*** to assist member governments with their Complete Streets efforts.

CSAC selects two ***Complete Streets Demonstration projects*** – Hollywood Boulevard (Urban Context) in the City of Hollywood and Sunset Strip (Suburban Context) in the City of Sunrise.

Background

Brief History of Complete Streets Program (cont.)

2013 *(cont.)*

The Broward MPO completes its ***Multimodal Level of Service tool*** to measure the benefits of a more flexible tool than the traditional roadway-based level of service tool. The two demonstration projects are analyzed and evaluated utilizing the Multimodal Level of Service (MMLOS) tool.

City of Deerfield Beach becomes the first City in the State of Florida to adopt Complete Streets Guidelines based on the *Broward Complete Streets Guidelines* developed by the Broward MPO.

2014

Broward MPO hosts the first ***Safe Streets Summit (SSS)*** in the City of Hollywood to provide training and education to local government staff and elected officials interested in adopting Complete Streets.

The City of Sunrise, in conjunction with the Broward MPO, hosts the inaugural ***Let's Go Biking!*** Event.

The Broward MPO successfully programs over $100 million in bicycle/pedestrian projects in the region for the next five years.

City of North Lauderdale, City of Coconut Creek, and City of Lauderhill become the first communities in Broward to participate in Walking Audits to help their communities understand the walking and bicycling needs in their area.

2015

The Broward MPO hosts a groundbreaking ceremony to kick off the construction of the initial investment of $15 million in pedestrian and bicycle improvements.

The Broward MPO publishes the ***Complete Streets Evaluation Toolkit*** to evaluate Complete Streets projects utilizing metrics related to transportation, safety, health, and economic development.

2016

Broward MPO is awarded a ***Transportation Investment Generating Economic Recovery (TIGER)*** to fund an additional $19 million of Complete Streets projects in Broward.

The City of Dania Beach hosts the Broward MPO's inaugural ***Let's Go Walking!*** Event.

Background

Brief History of Complete Streets Program (cont.)

2017

The Broward MPO breaks ground on two Complete Streets demonstration projects in the City of Hollywood and City of Sunrise.

Broward MPO breaks the $200-million-dollar mark for funded bicycle/ pedestrian projects in the 2019 Tentative Work Program.

Broward MPO initiates the development of the Complete Streets Master Plan (CSMP). This effort will guide future investments by creating a prioritized list of projects based on technical, data-driven analysis and community and local partner input.

Broward MPO establishes a Project Advisory Committee (PAC) to guide the development of the ***CSMP***.

The Broward MPO develops and publishes the Broward Bike Suitability Map.

The Broward MPO partners with the Palm Beach Transportation Planning Agency (TPA) and the Miami-Dade Transportation Planning Organization (TPO) to host the ***4th Annual SSS*** in the City of Sunrise.

2018

A Ribbon Cutting Ceremony is held for the Sunset Strip Demonstration project in the City of Sunrise.

Broward MPO staff holds meetings with local member governments to review list of recommendations and provide opportunities for input ensuring the local perspective is included in the ***CSMP***.

Broward MPO provides American with Disabilities Act (ADA) Transition Plan training and Technical Assistance to municipalities.

2019

Broward MPO Board adopts the ***CSMP***.

Acronyms

3R	Resurfacing Program
5-E	Engineering, Education, Enforcement, Encouragement, And Evaluation
ACS	American Community Survey
BCT	Broward County Transit
BCTED	Broward County Traffic Engineering Division
BEDI	Brownfields Economic Development Initiative
BMSD	Broward Municipal Services District
BPSAP	Bicycle and Pedestrian Safety Action Plan
BUILD	Better Utilizing Investments to Leverage Development
CBDG	Community Development Block Grant
CIP	Capital Improvement Plan
CSAC	Complete Streets Advisory Committee
CSLIP	Complete Streets and Other Localized Initiatives Program
EPA	Environmental Protection Agency
FDEO	Florida Department of Economic Opportunity
FDOT	Florida Department of Transportation
FEC	Florida East Coast
FHWA	Federal Highway Administration
GIS	Geographic Information Systems
HBRRP	Highway Bridge Replacement and Rehabilitation
HSIP	Highway Safety Improvement Program
HUD	Housing and Urban Development
LAP	Local Agency Program
LE	Lane Elimination
LEP	Limited English Proficiency
LFA	Local Funding Agreement
LRTP	Long Range Transportation Plan
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
NCTR	National Center for Transit Research

NHS	National Highway System
PAC	Project Advisory Committee
PIP	Public Involvement Plan
ROW	Right-of-Way
SERPM	Southeast Florida Regional Planning Model
SRB	Safe Routes Broward
SRTS	Safe Routes to School
STBG	Surface Transportation Block Grant Program
SUN	Shared-Use Nonmotorized
TAP	Transportation Alternative Program
TDP	Transit Development Plan
TIGER	Transportation Investment Generating Economic Recovery
TIP	Transportation Improvement Program
TOD	Transit Oriented Development
TPA	Transportation Planning Agency
TPO	Transportation Planning Organization
TSP	Transit Signal Priority
USDOT	U.S. Department of Transportation
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled

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Chapter 1. Introduction

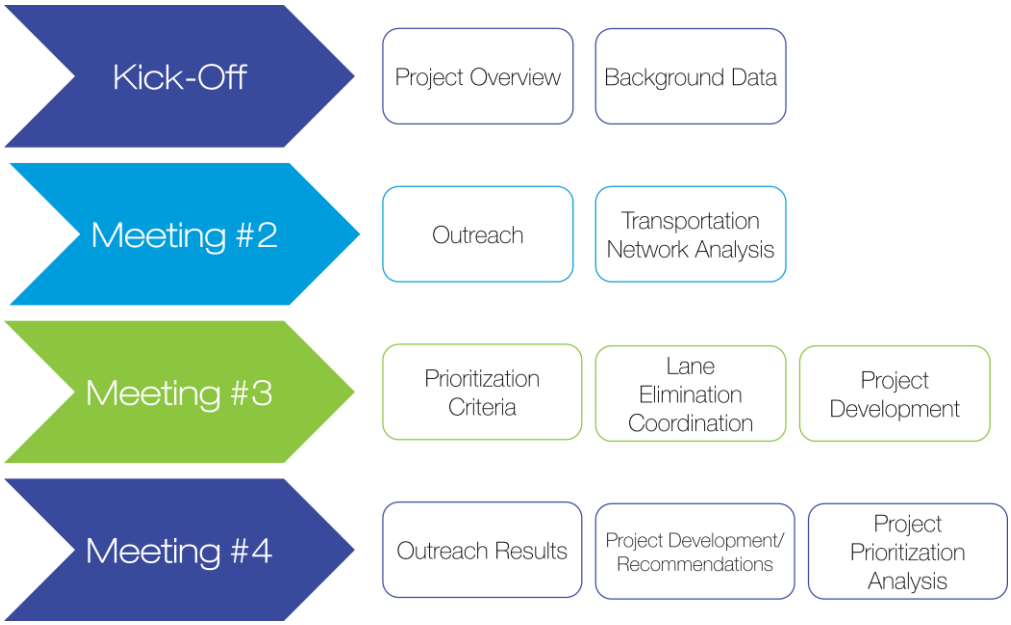
Complete Streets policies in Broward County were first established in 2014 when they were adopted by the Broward County Board of County Commissioners into the Broward County Comprehensive Plan. The 2035 Broward Transformation Long Range Transportation Plan (LRTP) concentrated on funding premium transit, Broward County Transit (BCT), community buses, mobility hubs, Tri-Rail, pedestrian walkways, bicycle infrastructure and greenways. Approximately 79% of the available funds were allocated to alternative transportation modes. This was the foundation of the *Broward MPO Complete Streets Initiative*. *The Complete Streets Initiative* focuses on understanding the importance of creating a transportation system that addresses the needs of all users of the road, including the needs of people who walk, bike, and utilize transit. The program is intended to provide the necessary tools to our local governments in implementing Complete Streets in their respective communities. It also serves as a platform to move active transportation projects forward.

The Broward MPO Complete Streets Master Plan is intended to guide future investment in Complete Streets improvements by developing a prioritized list of projects based on technical, data-driven analysis, including access to transit. Projects identified will be based on Complete Streets principles that create safe streets at a human scale.

Photo Credit: Kimley-Horn, Minneapolis (Intersection Green Bike Lane Extension Markings)

The Master Plan process provided ample opportunities for transportation partners' input throughout the duration of its development, such as the Project Advisory Committee (PAC). The PAC was formed as a working group of the Complete Streets Advisory Committee (CSAC) to gain input from the Broward MPO and its partners.

There was a multi-disciplinary cross-section of the CSAC on the PAC working group involved in the Master Plan development. Four meetings were held throughout the span of the Master Plan to provide updates to the PAC. In addition to the PAC meetings, brief presentations were prepared for the CSAC meetings to keep CSAC members apprised of the process and solicit input and feedback along the way.



The Complete Streets Master Plan leverages and expands the momentum developed by the MPO through public engagement, technical data analysis, and identifying and prioritizing an interconnected system of projects that will be implemented through the Commitment 2045 Metropolitan Transportation Plan (MTP).

Chapter 2. Master Plan Framework

The Master Plan framework included a best practices literature review to identify master plan elements to incorporate into the project development. In addition, a map series was prepared using available geographic information systems (GIS) data.

Literature Review

National Center for Transit Research (NCTR) Capturing the Benefits of Complete Streets, 2015

The National Center for Transit Research (NCTR) prepared research on capturing the benefits of Complete Streets. It provides in-depth research on the linkage between Complete Street projects and job creation, increasing private investment and property values, and overall enhanced economic activity. If alternate modes increase the sense of safety along a corridor, more users might use the corridor more often and provide a boost to the surrounding business.

Both quantitative and qualitive methods were used in evaluating five Complete Streets case study sites. These sites were selected based on New York City Department of Transportation published reports, local planning staff, and other professionals input and knowledge.

Quantitative Measures

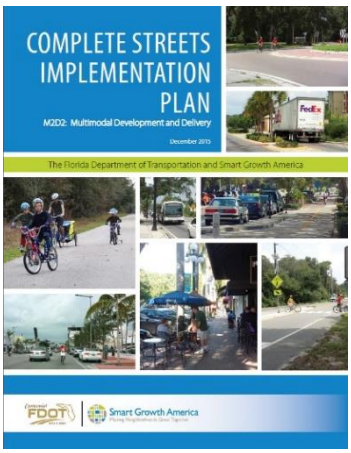
- Employment – employment information can be used to assess economic vitality
- Land Value – county property appraiser databases are easy to access and provide data on market values, sale prices, and property taxes paid for the current year and for several previous years

Qualitative Measures

- Local reports or articles about the projects and discussions with individuals representing the local government, local chambers of commerce and adjacent businesses

There is a strong association between Complete Streets projects and increased economic activity. Implementing recommendations from the Broward MPO Complete Streets Master Plan can have economic benefits.

Florida Department of Transportation (FDOT) Complete Streets Implementation Plan, 2015



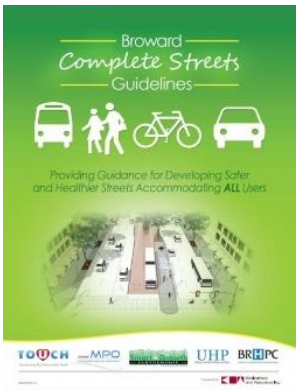
The Florida Department of Transprtation (FDOT) developed a Complete Streets Implementation Plan in partnership with the national not-for-profit organization Smart Growth America. The Plan is intended to guide the Department's effort towards integrating a Complete Streets framework into its practices to ensure that all future transportation projects and programs address all network users needs and priorities. It lays the foundation for integrating a context-sensitive approach to decision-making into FDOT's practices during visioning, planning, programming, project development, design, operations, and maintenance that considers and balances the needs of all users of Florida's transportation network.

Implementation of the Plan is achieved through a comprehensive framework that addresses decision-making processes, past department standards and policies, performance measurement, education and training, and internal and external communication.

Goals

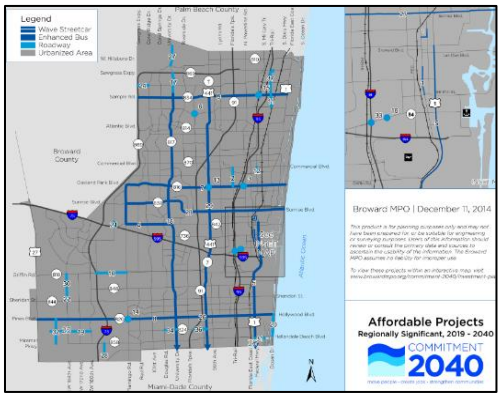
- Safety for all Transportation System Users
- Access to Destinations
- Economic Competitiveness
- Environmental Sustainability
- Public Health
- Social Equity
- Quality of Life

Broward Complete Streets Guidelines, 2012



The Broward Complete Streets Guidelines are based on Complete Streets principles that aim to provide engineers and planners with the tools necessary to design streets for people for all ages and physical abilities and accommodate all travel modes. This document assists local governments in design guidance on new streets and modifying existing streets. It starts with the premise that any changes or improvements to streets should add value to the adjacent land and neighborhoods. The design of pedestrian facilities that provide a seamless path of travel throughout the community and is accessible to all users should consider five important elements: sidewalks, curb ramps, crosswalks, signals, and bus stops. Bikeway types and design provides a system of facilities that offer enhancement, guidance, and/or priority to bicyclists over other roadways in the network.

Commitment 2040, Long Range Transportation Plan, 2014



The Commitment 2040 Long Range Transportation Plan provides a vision for the future transportation network through the year 2040. It builds upon previous transportation plans and public input to address the needed transportation improvements and investments to reach its three goals: Create Jobs, Strengthen Communities, and Move People. The affordable transit projects are listed in **Table 1**. Project recommendations are focused on upgrading corridors to support enhanced bus service by increasing the number of buses, including shelters, and bike and pedestrian amenities. The affordable roadway projects are shown in **Table 2** which identifies roadways to be reconstructed to include multimodal alternatives. Multimodal projects such as the bicycle, pedestrian, transit and local roadway improvements will undertake additional coordination with both the public and planning partners.

Table 1. Commitment 2040 – Affordable Transit Projects

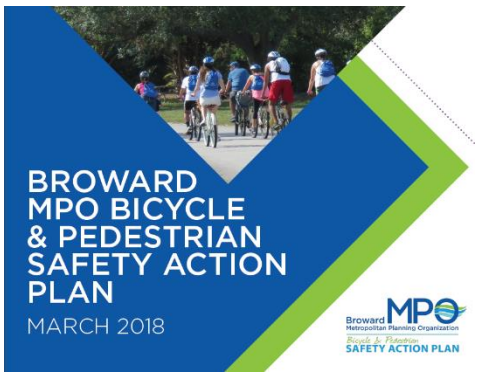
Road Name	Location	Time Period
SR 842/Broward Boulevard	Sawgrass Mills Mall and SR 817/University Drive	2019-2020
SR 5/US 1	Aventura Mall and Downtown Terminal	2019-2020
SR 816/ Oakland Park Boulevard	Sawgrass Mills Mall and SR A1A	2019-2025
SR 820/Hollywood/ Pines Boulevard	US 27 and SR A1A	2019-2025
SR 834/Sample Road	SR 869/Sawgrass Expressway and SR A1A	2019-2025
SR 817/University Drive	Golden Glades and north of SR 834/Sample Road	2026-2030
SR 838/Sunrise Boulevard	Sawgrass Mills Mall and SR A1A	2026-2030
SR 7/US 441	Golden Glades and Sample Road	2031-2040

Table 2. Commitment 2040 – Affordable Roadway Projects

Road Name	Location	Time Period
NW 21 Avenue	SR 816/Oakland Park Boulevard and SR 870/Commercial Boulevard	2019-2020
NE 3 Avenue	SR 834/Sample Road and Copans Road	2021-2025
NE 6 Avenue	Prospect Road and SR 870/Commercial Boulevard	2021-2025

Road Name	Location	Time Period
SR A1A	SR 858/Hallandale Beach Boulevard and SR 820/Hollywood/Pines Boulevard	2026-2030
Wiles Road	Sawgrass Expressway and Coral Ridge Drive	2026-2030

Broward MPO Bicycle and Pedestrian Safety Action Plan (BPSAP), 2018



The Broward MPO's Bicycle and Pedestrian Safety Action Plan (BPSAP) is a plan to improve safety for all roadway users in the Broward region by shifting the transportation focus from moving cars to moving people. The Action Plan analyzed historical bicycle and pedestrian crash data and identified crash patterns in order to develop recommendations and countermeasures to improve Broward's unsafe bicycle and pedestrian environment.

The hot spots identified are classified into five different typologies; urban intersection, suburban intersection, urban corridor, suburban corridor, and beach access corridor. The location of the hot spots was used as a prioritization criterion in the Master Plan. The Action Plan identifies key action items, partner organizations, and time frames to guide the work of the MPO and its partners in improving walking and bicycle safety.

CALLS TO ACTION	PRIORITY ACTION ITEMS
Set the Stage	Identify areas throughout the County where bicyclists and pedestrians are the priority movement
Create Safe Streets	Implement "quick build" temporary projects that showcase innovative bicycle and pedestrian infrastructure
	Align design standards with the bicycle and pedestrian safety goals for the region
Prevent Aggressive Behavior	Institute a district-wide bicycle and pedestrian safety school education program
All Hands on Deck	Create an educational program with law enforcement that focuses on bicycle and pedestrian laws

Safe Routes Broward Application

The Safe Routes Broward (SRB) Application gathers data from community members on needed infrastructure safety concerns that would improve their commute as a pedestrian, bicyclist, transit rider, or motorist. SRB is a non-emergency reporting system and makes reporting an issue easy through the mobile app.

53% of the community members inputs are related to sidewalks

Stakeholders from the 5-E (engineering, education, enforcement, encouragement, and evaluation) domains receive requests and respond accordingly. Residents can track the status of reports they or other members of the community have submitted. Data gathered from SRB assisted with evaluating existing conditions for the Complete Streets Master Plan from a community's perspective.

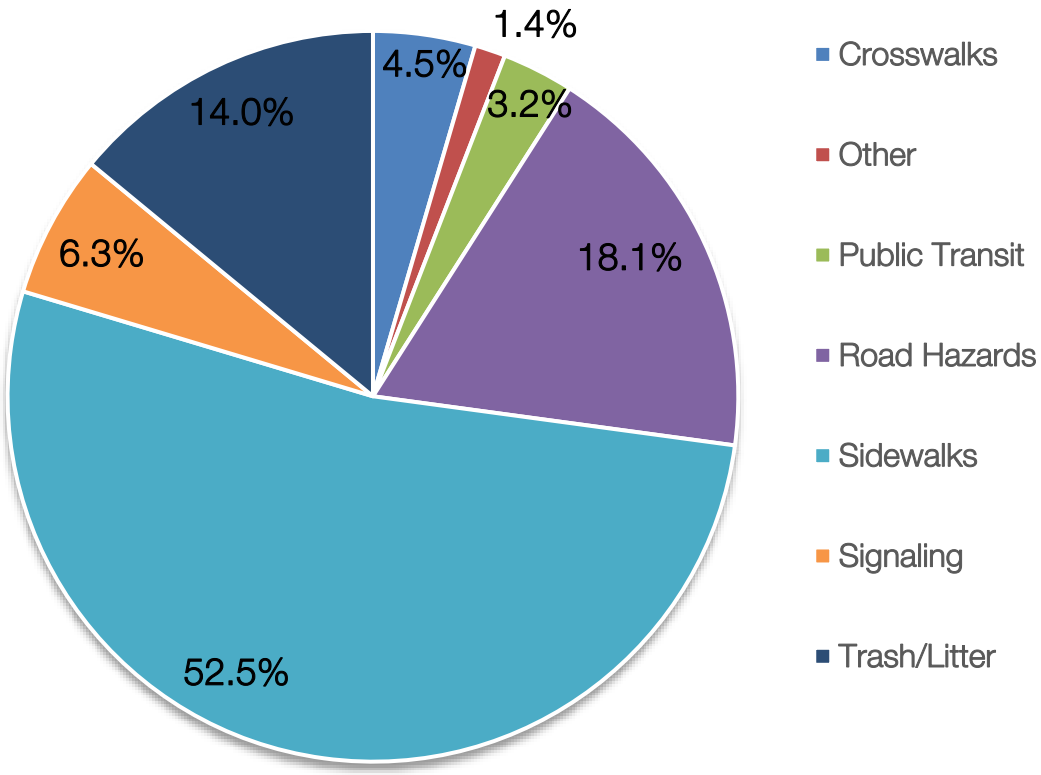


Figure 1. SRB Application Data

The top three categories of concerns raised by community members were Sidewalks, Road Hazards, and Trash/Litter as shown in **Figure 1**. Example reports from the community include "*no sidewalk, the pole takes nearly half of already narrow sidewalk, overgrown bushes take up lots of space and reduces sidewalk space, & etc*." Recognizing community members concerns will provide input to better design and recommendations for the Master Plan.

Safe Routes Broward Weblink: http://touchbroward.org/hcz/srb/

GIS Data Map Series

The GIS data map series was developed utilizing information gathered from the literature review, stakeholder involvement, socioeconomic statistics, and past projects. The maps illustrate key mobility conditions within Broward County.

Bicycling and walking can increase physical activity and transform individual health, community health, and environmental conditions. The existing facilities in Broward County represent an incomplete network are not comfortable for all users. The development of the Master Plan aims to increase opportunities for active transportation and a more complete network for all users.

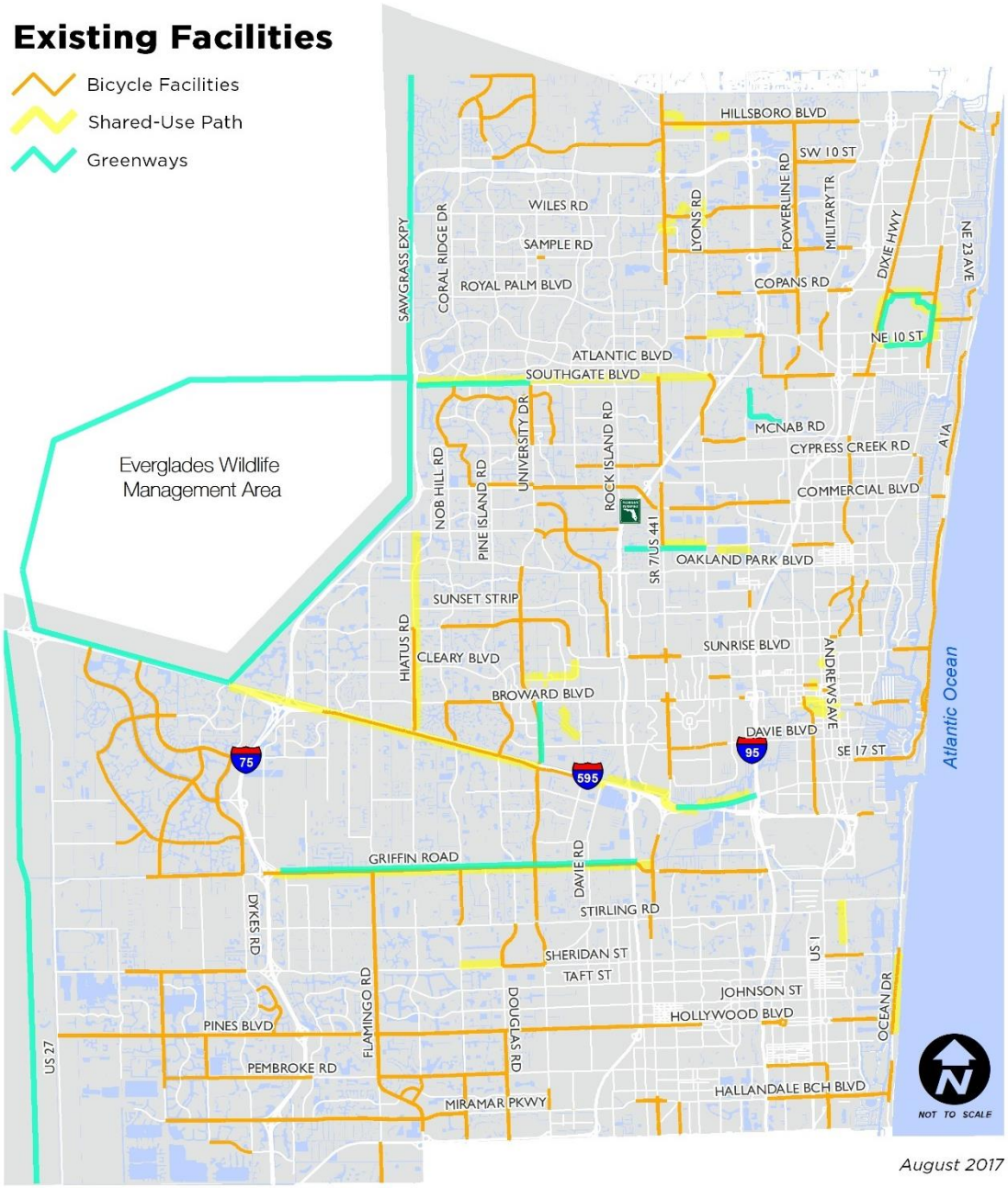


Figure 2. Existing Facilities

The BCT bus network provides service to 410 square-miles with 35 fixed routes. It is the second-largest transit system in Florida. Users must be able to access transit stops on foot and/or by bike. Improving pedestrian and bicycle safety are important to transit access by providing connections to transit stops.

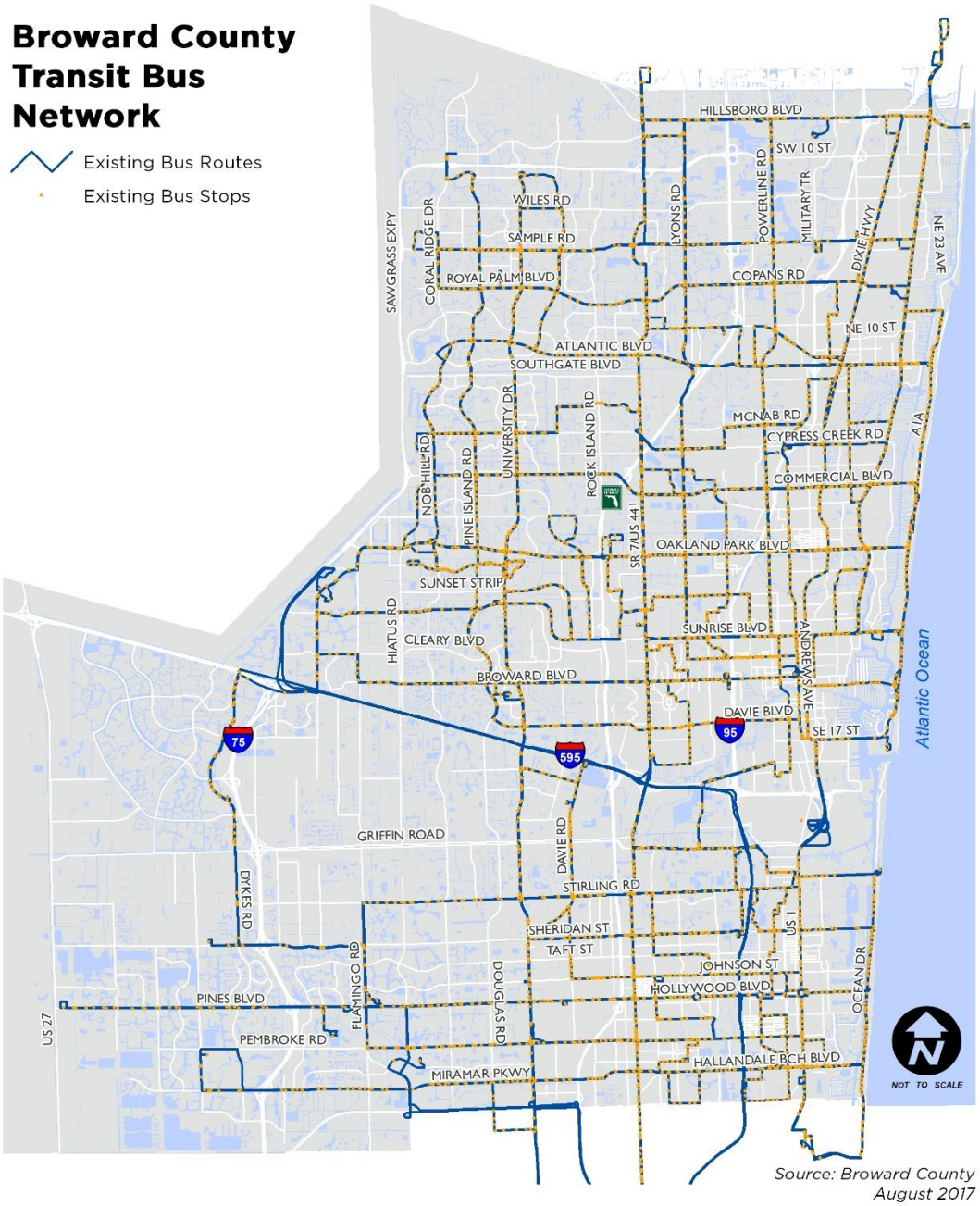
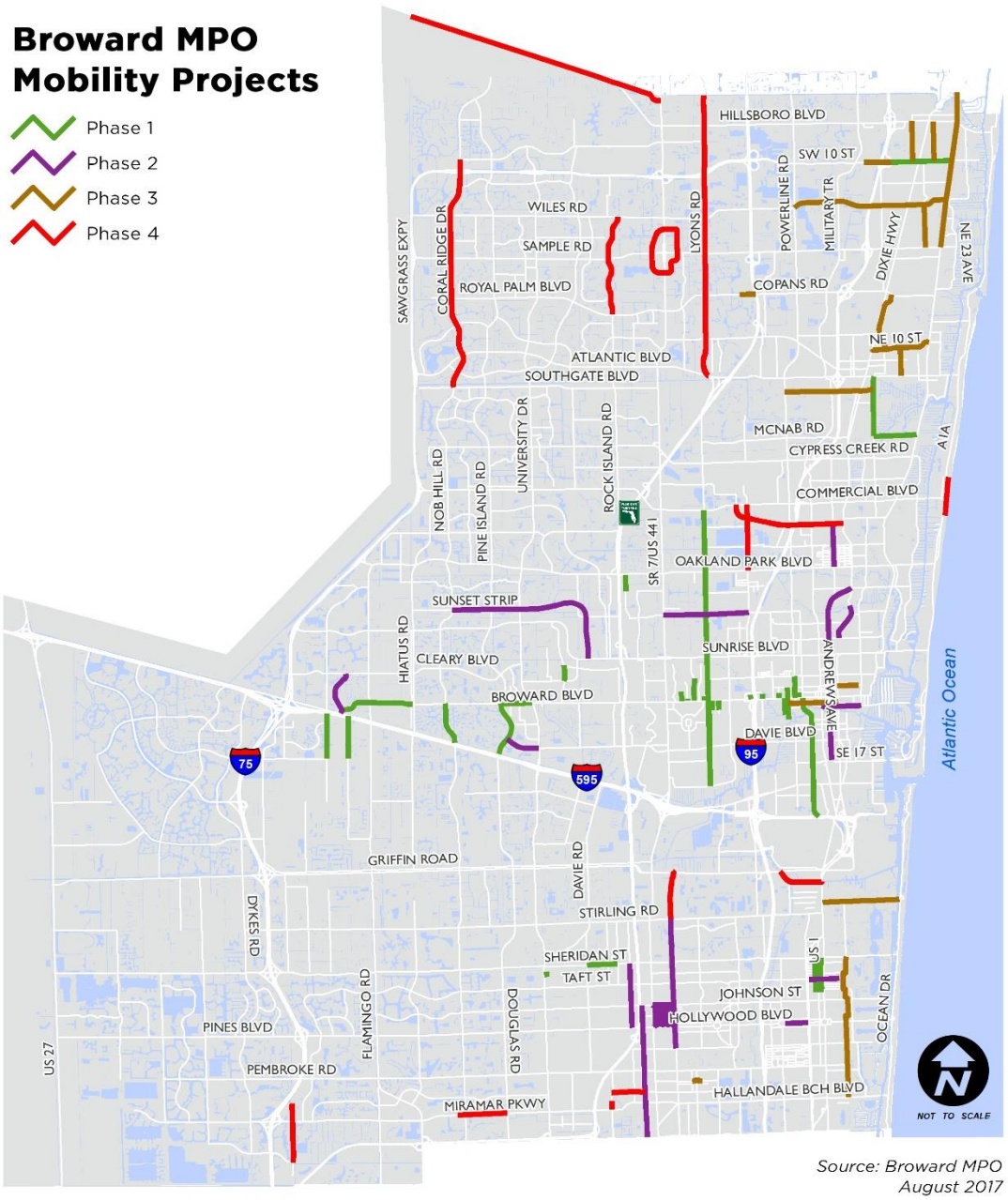


Figure 3. Broward County Transit Bus Network

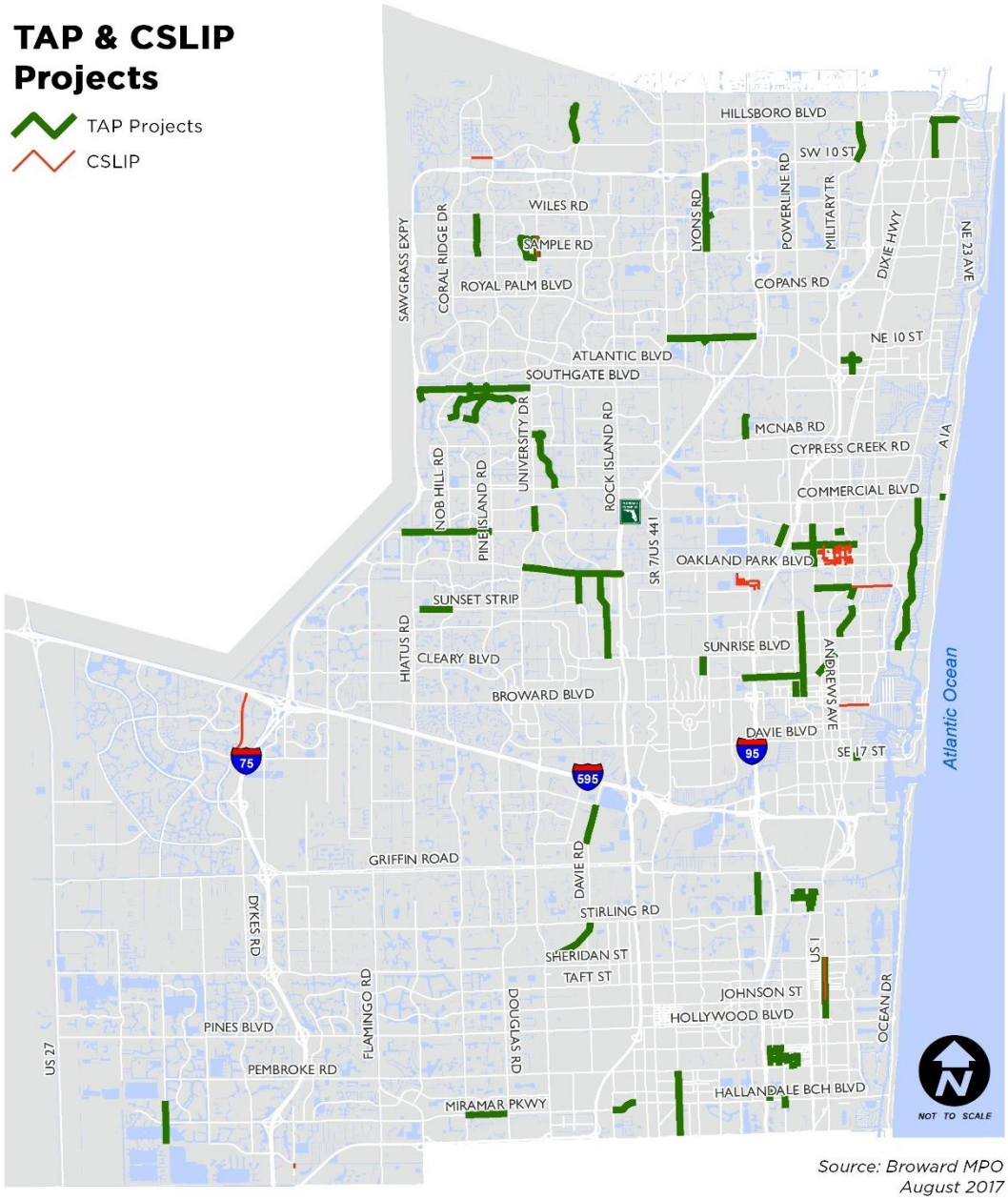
The Broward MPO's Mobility program serves as the implementation arm of the Complete Streets Initiative and focuses on implementing projects and improvements that provide additional transportation options other than the automobile. These projects fill vital gaps in Broward's pedestrian and bicycle network.



Source: Broward MPO
August 2017

Figure 4. Broward MPO Mobility Projects

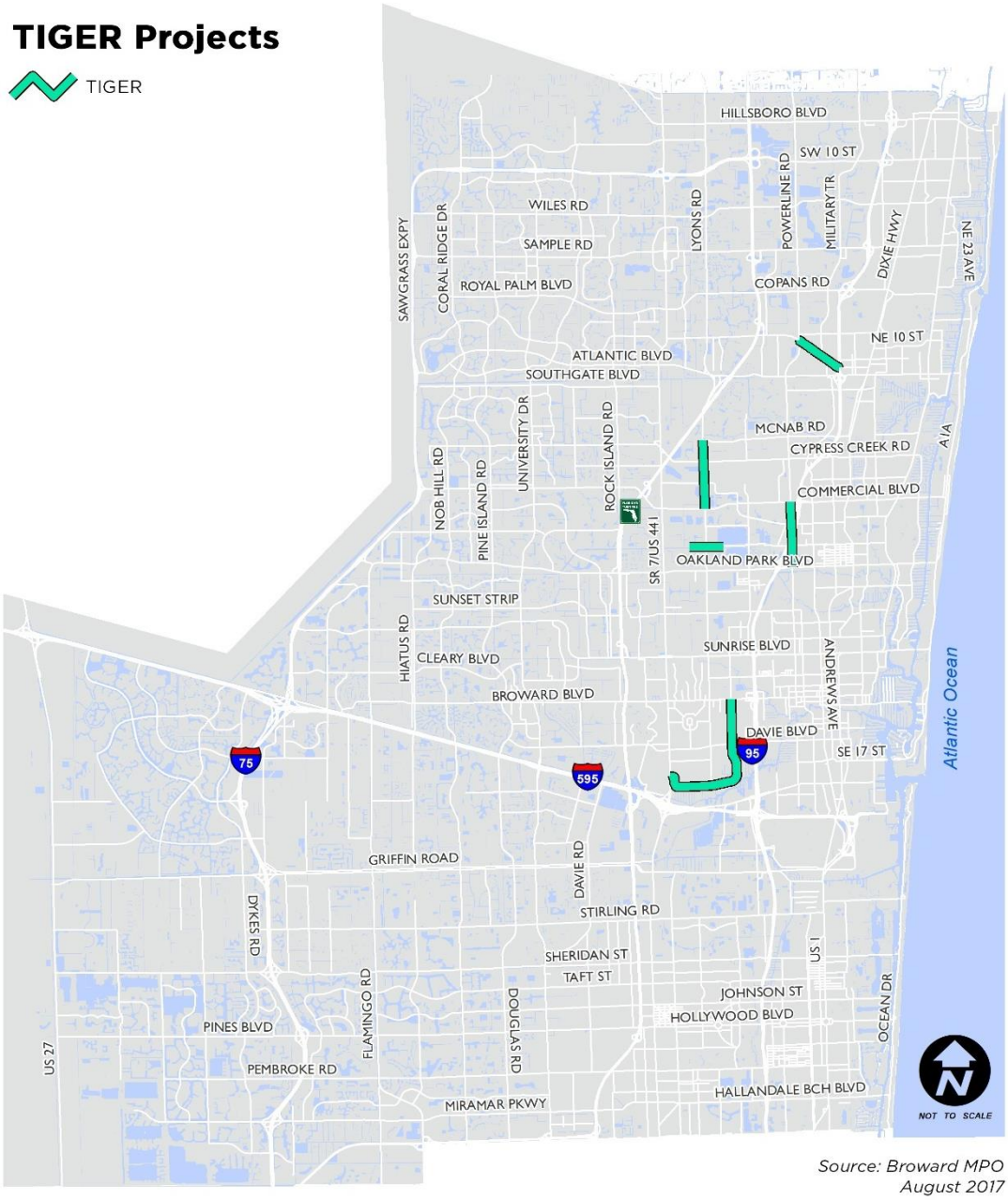
The Transportation Alternative Program (TAP) was merged to the Complete Streets and Other Localized Initiatives Program (CSLIP). CSLIP can potentially fund mobility projects such as, but not limited to, complete streets projects, traffic calming and intersection improvements, ADA upgrades, mobility hubs, bus shelters, bike racks, and technology advancements such as transit signal priority (TSP) and traffic control devices.



Source: Broward MPO
August 2017

Figure 5. TAP & CSLIP Projects

The Broward MPO was awarded a Transportation Investment Generating Economic Recovery (TIGER) Grant in 2016 from the U.S. Department of Transportation (USDOT) for its Regional Complete Streets Initiative. The grant will help fund $19.1 million dollars' worth of pedestrian and bike improvements in the cities of Fort Lauderdale, Lauderdale Lakes, Oakland Park, and Pompano Beach.



Source: Broward MPO
August 2017

Figure 6. TIGER Projects

Chapter 3. Master Plan Engagement

Extensive community engagement strategies were implemented with the intent of gaining community input to inform the development of the Master Plan. The engagement process utilized best practices in transportation planning and public health to show an intentional approach to a conveniently sampled group of 48 community partners and 1,338 residents from the community at-large and 29 municipalities.

A Public Involvement Plan (PIP) was developed early in the process before the community engagement phase began. The PIP laid out the different components of what the process would entail. A large portion of the PIP focuses on the multiple strategies that would be used to gain community input. These strategies were selected based on the demographics analysis within Broward County. An analysis was done on underrepresented or hard to reach areas in Broward County. The Transportation Outreach Planner, which is a tool that is widely used by planning organizations within the South Florida area, was used to select the specific outreach strategies. The Miami-Dade Transportation Planning Organization (TPO) created Transportation Outreach Planner to help assess the unique characteristics of different communities, such as culture, economics, and geography, to implement better public involvement techniques. In 2010, the Broward MPO and Palm Beach Transportation Planning Agency (TPA) adopted the tool to be used as a guide for public involvement in both counties.

Additionally, the PIP set the framework for the branding, messaging, and type of input needed. The branding was created to be consistent with existing Broward MPO and Complete Streets branding. The branding was utilized in all materials for outreach, including the community survey, social media posts, email blast, and educational materials. Messaging was a critical piece in reaching as many residents and partners in Broward County. The PIP aimed for messaging to be relatable, but also educational. The focus of the educational messaging was to provide context about how a community's streets could be different through implementation of Complete Streets improvements.

In October 2017, the public input phase began. SpeakUp Broward was the backbone platform used to promote and engage residents to participate in the community survey. SpeakUp Broward social media accounts were used to distribute information about the Master Plan and engaged residents in taking part in the survey. Extensive outreach was done with community and transportation partners utilizing their tools and connections to neighborhoods to get the word out about the Complete Streets Master Plan and community survey.

Two focus groups were conducted – one in each of the identified target audiences of Dania Beach and Lauderdale Lakes. The focus group process was developed based on standard practices. The criteria and questions for each group were established before each meeting was conducted by a trained facilitator. Location-specific meetings were held near residents living in the harder to reach communities. In addition, one-on-one interactions were conducted with 100 individuals, 64 of which took the survey.

The 5E Model

The 5E model stands for Education, Engineering, Enforcement, Encouragement, and Evaluation. The 5E model is a commonly used method to comprehensively address transportation issues at the community level to inform infrastructure and non-infrastructure projects. The 5E's each overlap with one another to provide specific details about the types of projects, efforts, and tactics that are most important or needed in the community to achieve higher levels of walking, biking, or accessing transit. Input gathered from the different strategies for engaging the community were analyzed with respective quantitative and qualitative techniques. It was separated out into themes by the 5E's for ease of informing the Master Plan's prioritizations of Complete Streets improvements.

Strategies for Engaging the Community

Both High-Touch and High-Tech strategies were conducted to gain a diverse sampling of input. High-touch strategies are those that involve face-to-face outreach and work directly with the community. They are utilized to ensure specific target groups or more vulnerable populations are incorporated into the public process. High-tech strategies are strategies that involve technology and digital resources for outreach and indirectly gain input from the community. They are emphasized in mass communications and utilized to reach a wider audience.

While the intended audience of the community survey included all of Broward County, one of the main goals of the public involvement process was to gain input from communities that have been underrepresented and hard to reach in past Broward MPO planning efforts. These communities have been underrepresented in the past partly because traditional public involvement has not been geared toward connecting with hard to reach communities and also because of a lack of trust between government agencies and underrepresented populations. Specific census tract data can be used as an indicator of traditionally hard to reach communities. Three target areas were identified using data related to minority populations, lower than average income levels, higher need for more efficient transportation options, above County rates for diabetes and limited access to healthy foods. **Figure 7** displays the three target areas – Northern Broward County, Southern Broward County, and Specific Zip Codes (33441, 33060, 33068, 33319, 33309, 33313, 33311, 33312, and 33023).

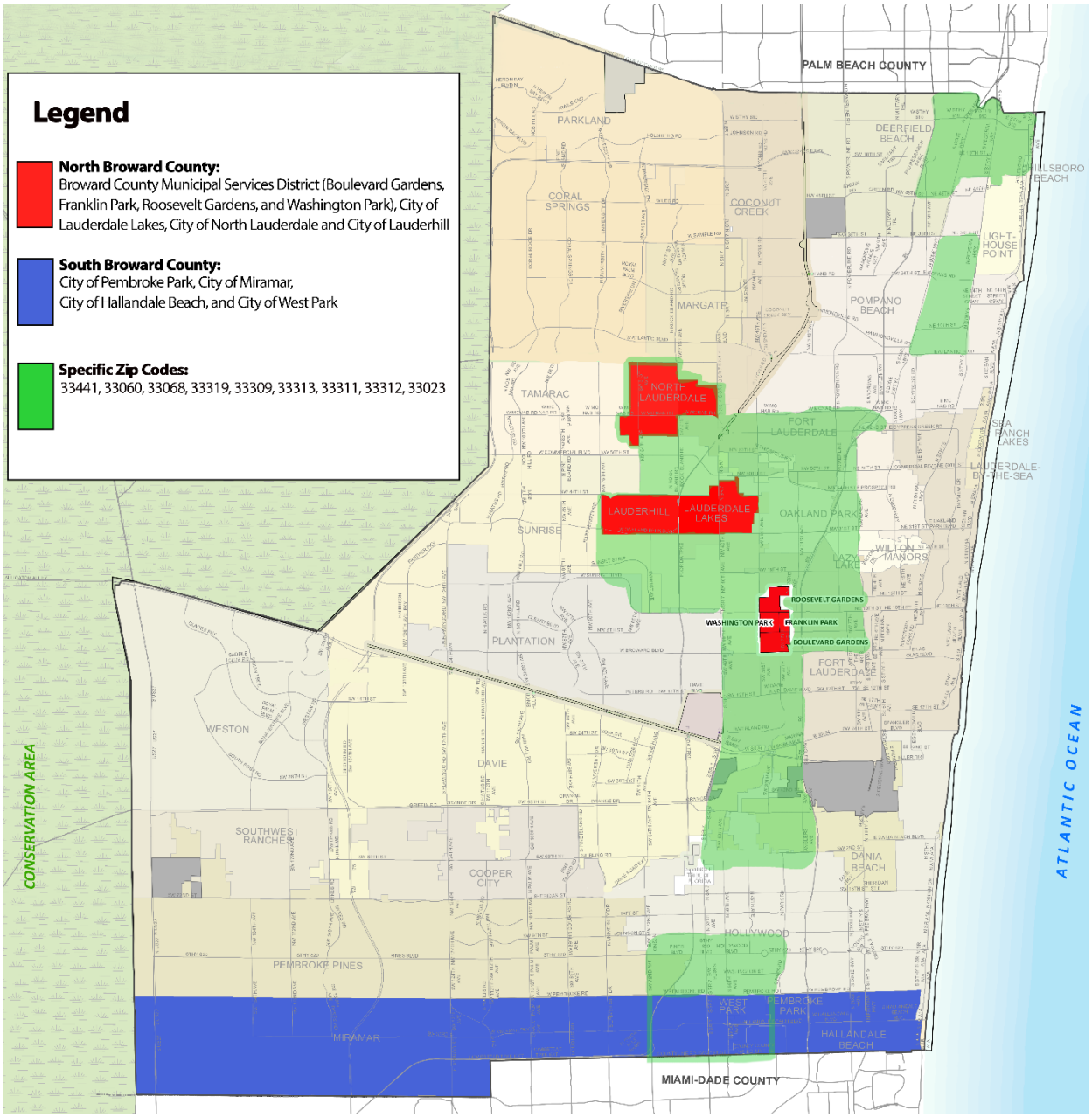
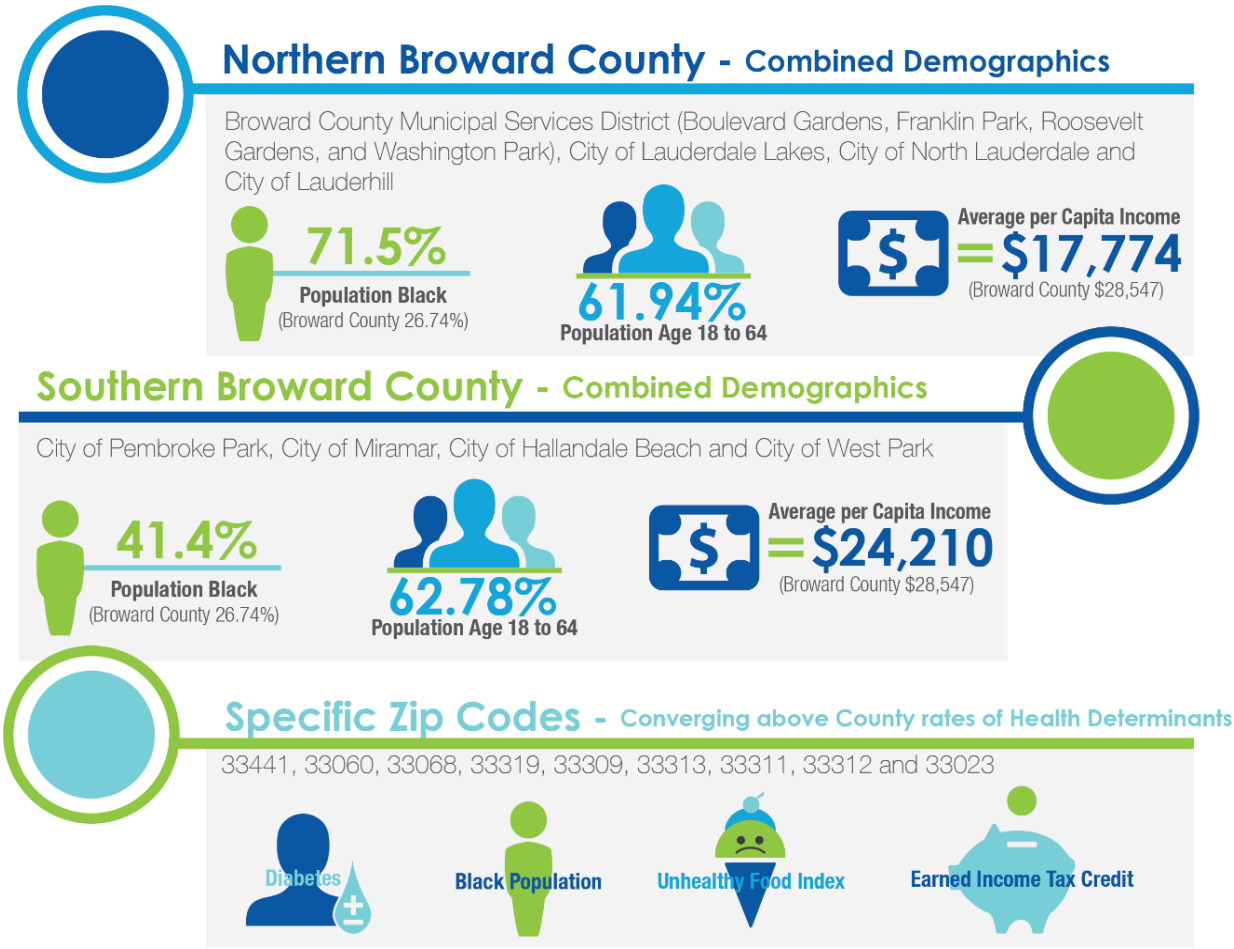


Figure 7. Target Area Locations



High-Touch

Focus Groups

Two focus groups were conducted; One in the City of Lauderdale Lakes, on October 25, 2017 and the other in the City of Dania Beach, on October 26, 2017. Based on the 5E's, several themes and subthemes emerged during data analysis. It is important to note that although the same themes emerged from both communities, subthemes sometimes surfaced in one community but not the other.

One-on-One Interactions

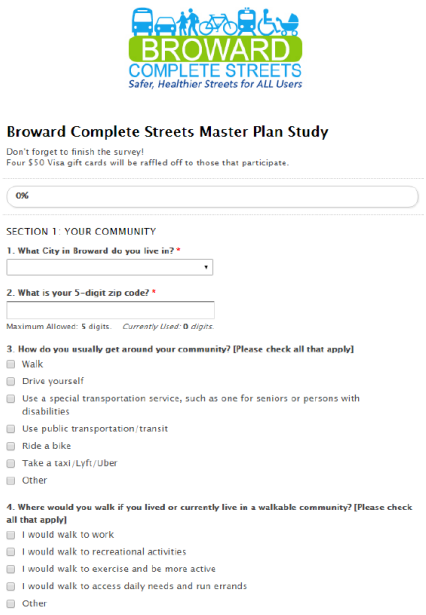
One-on-one interactions with 100 individuals were completed over a two-week period. Interactions took place at a variety of different places such as, community parks and at preschool parents and neighborhood groups residing in Royal Palm, Rock Island, and Margate. Information on what the

Broward MPO is, what the Master Plan was aiming to achieve, and an overview of the benefits of Complete Streets were shared with each participant. The targeted average time of interaction per participant was 12 minutes.

High Tech

Community Survey

An online community survey was conducted from October 25, 2017 to November 13, 2017. The survey was promoted through social media and email blasts. The Broward MPO website was the primary platform that supported the survey and SpeakUp Broward hosted the social media promotion of the Complete Streets Master Plan survey. Facebook advertisements were distributed to reach additional communities included in the target areas. Over 150 partners were connected to enhance the promotion and help reach a greater number of residents. The community survey was also translated into Spanish and Creole. The targeted Facebook advertisements were created in both languages to promote in specific areas.


BROWARD COMPLETE STREETS
Safer, Healthier Streets for ALL Users

Broward Complete Streets Master Plan Study

Don't forget to finish the survey!
Four $50 Visa gift cards will be raffled off to those that participate.

0%

SECTION 1: YOUR COMMUNITY

1. What City in Broward do you live in? *

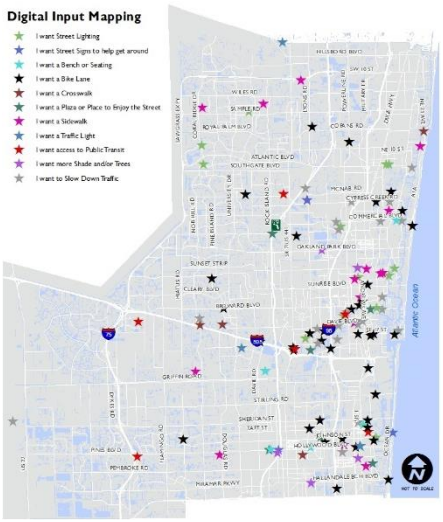
2. What is your 5-digit zip code? *

Maximum Allowed: 5 digits. *Currently Used: 0 digits.*

3. How do you usually get around your community? [Please check all that apply]
- Walk
- Drive yourself
- Use a special transportation service, such as one for seniors or persons with disabilities
- Use public transportation/transit
- Ride a bike
- Take a taxi/Lyft/Uber
- Other

4. Where would you walk if you lived or currently live in a walkable community? [Please check all that apply]
- I would walk to work
- I would walk to recreational activities
- I would walk to exercise and be more active
- I would walk to access daily needs and run errands
- Other

Digital Input Mapping



Digital Input Mapping was used as a tool to collect input from Broward County residents as part of the community survey. It allowed the opportunity for participants to plot specific points in their neighborhood that they want to see street improvements.

Partner Survey

An online Community Partner Survey was conducted from October 25, 2017 to November 13, 2017. The survey was promoted through email and phone outreach to technical partners and stakeholders across Broward County that had experience in transportation planning.

Public Involvement Survey Results

Demographics

A total of 1,350 Broward residents and stakeholders participated in the Complete Streets Master Plan public involvement efforts. Approximately 95% (1,289) of participants who took part in the Community Survey were residents. **Figure 8** is a summary of demographic information of the Community Survey participants.

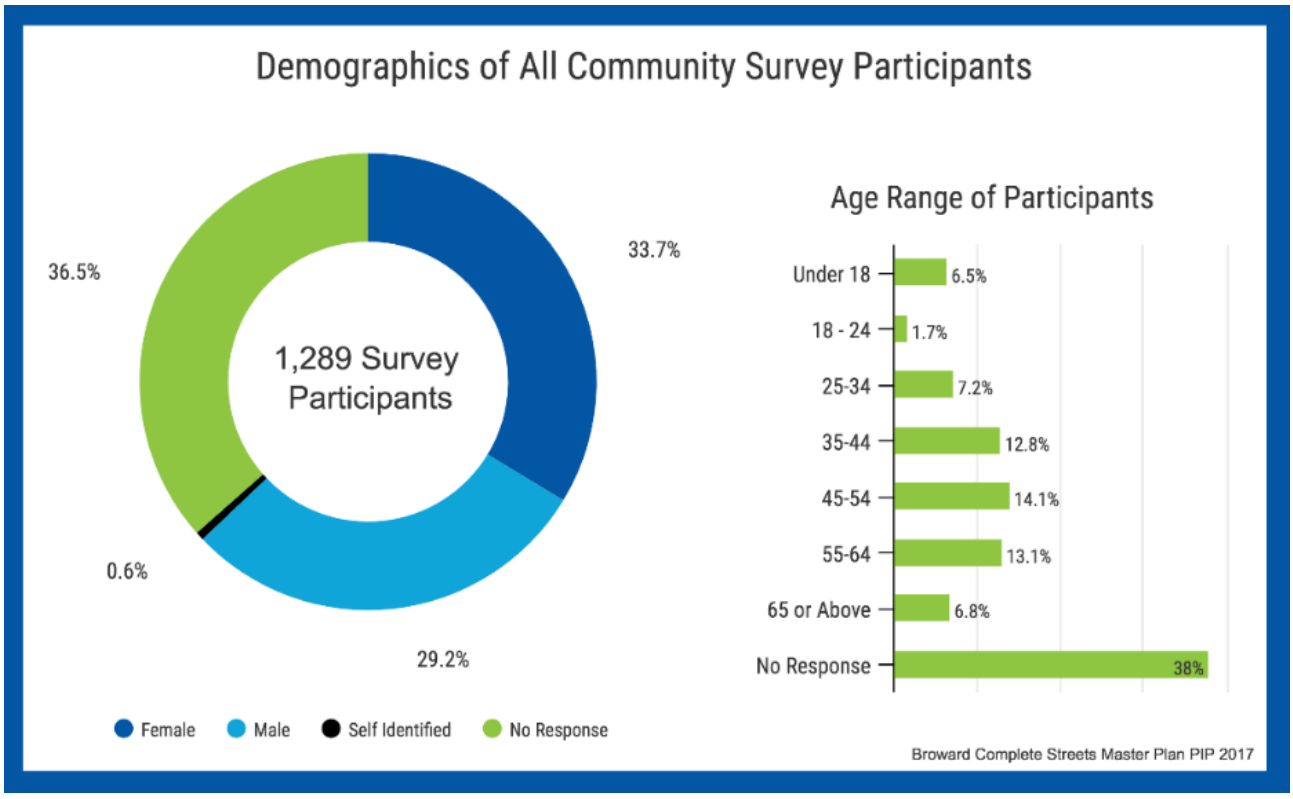


Figure 8. Community Survey Demographics

The results of the Community Partner Survey taken by the focus groups (joined by 13 residents) and 48 stakeholders is summarized in **Figure 9**.

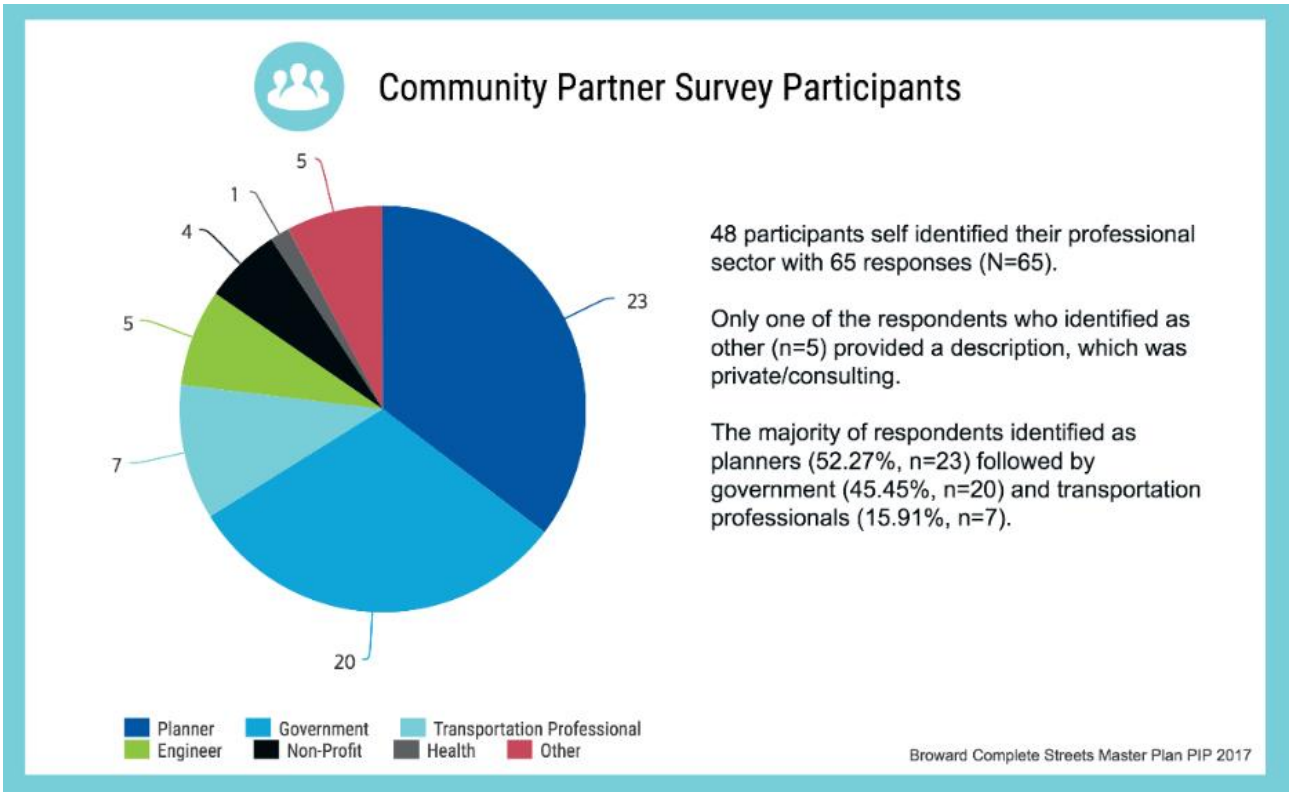


Figure 9. Community Partner Survey Participants

Participants in the Community Survey represented 29 municipalities. **Figure 10** provides a summary of the number of participants from each municipality represented who participated in the survey.

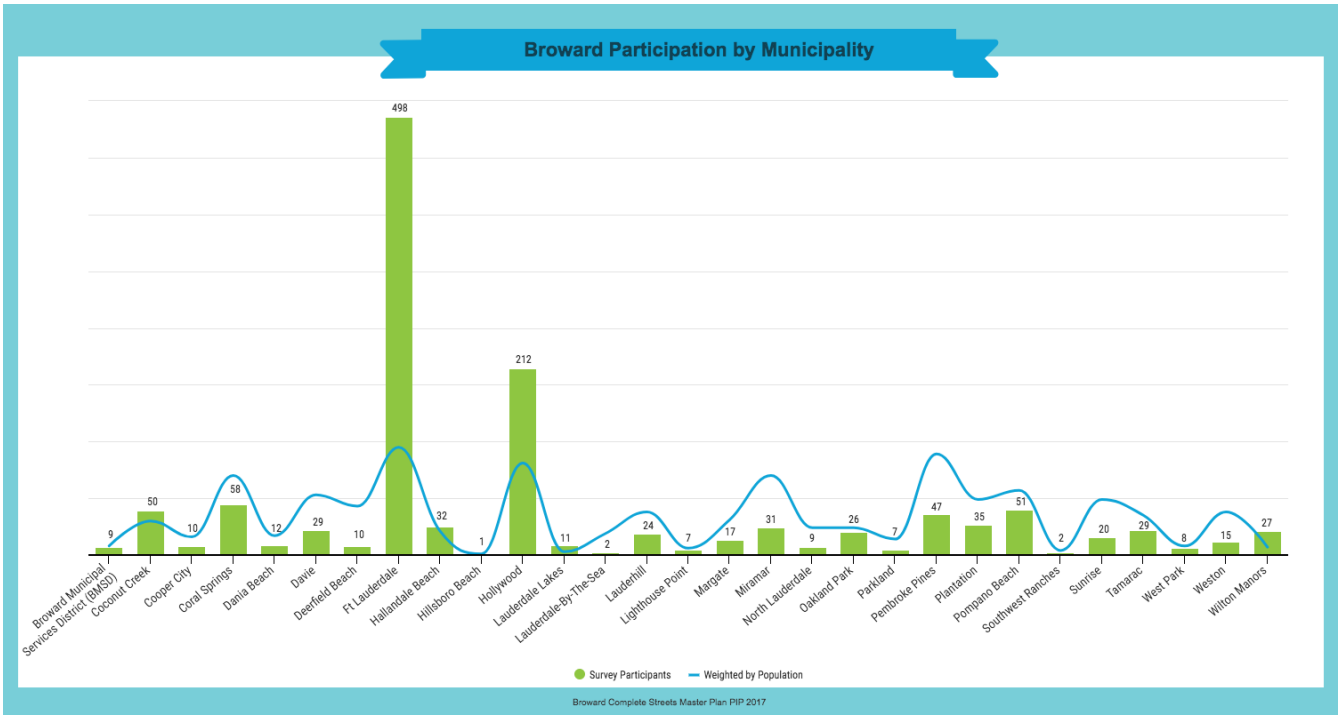


Figure 10. Community Survey Participation by Municipality

As a result of high-touch and high-tech strategies, 29% of Community Survey participants were from subpopulations that are historically underrepresented in transportation planning. This included participation from all but one targeted municipality and/or zip-code. In the Target Areas, on average females are represented 12% more than males, while in the overall results across all areas in Broward the difference is less than 5%. **Figure 11** provides a summary of the demographic information for each Target Area.

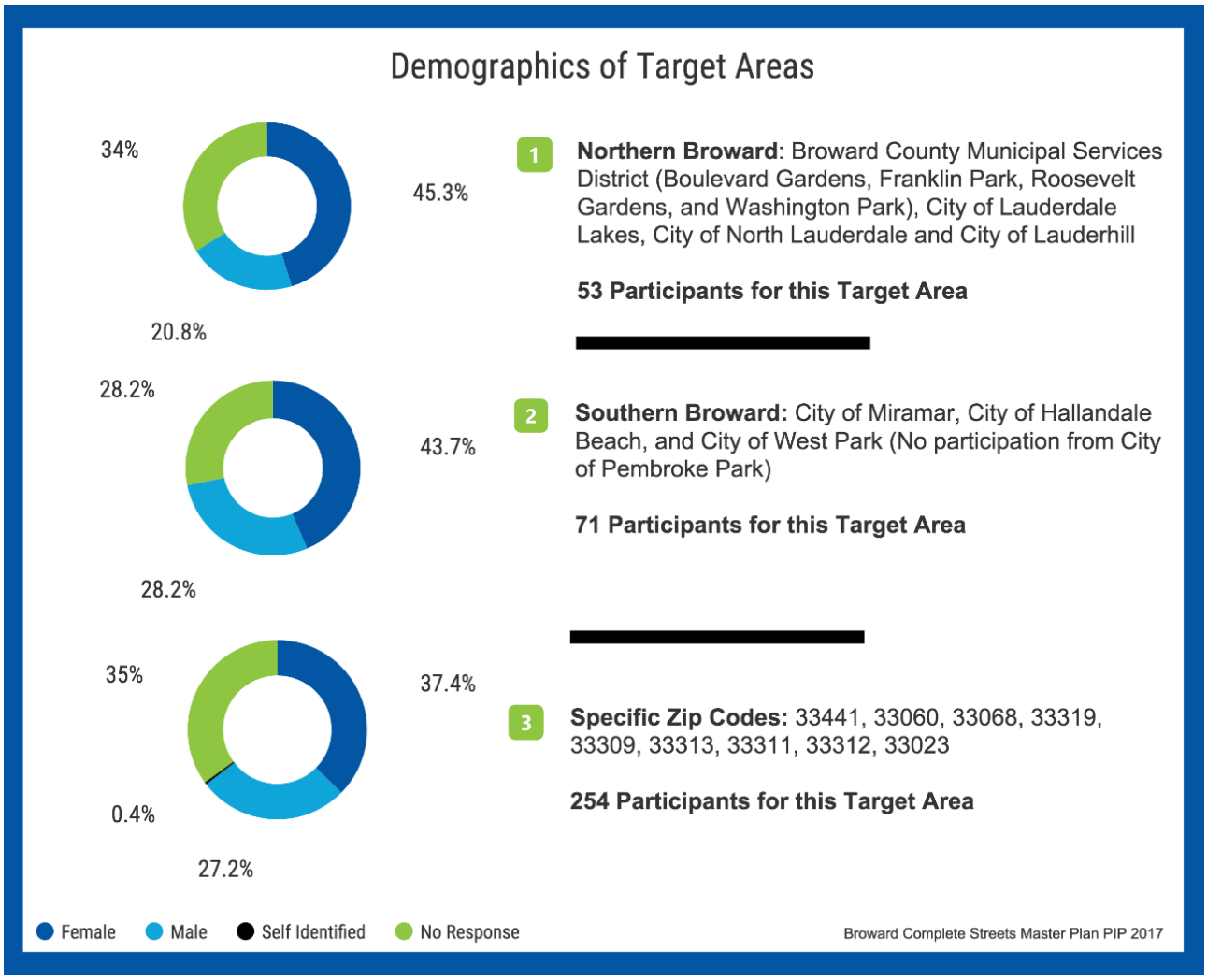


Figure 11. Community Survey by Target Area

Community Survey participants were asked to select all modes of transportation they use to get around their communities. Most residents (45.2%) throughout Broward County selected driving as a main mode to get around their community and similar proportions were seen in all Target Areas. All of Broward as well as Target Areas 1, 2, ad 3 had similar and low proportions (1.9%) for the *other* category option that was not identified. **Figure 12** is a summary of the transportation modes selected by residents used to get around their community.

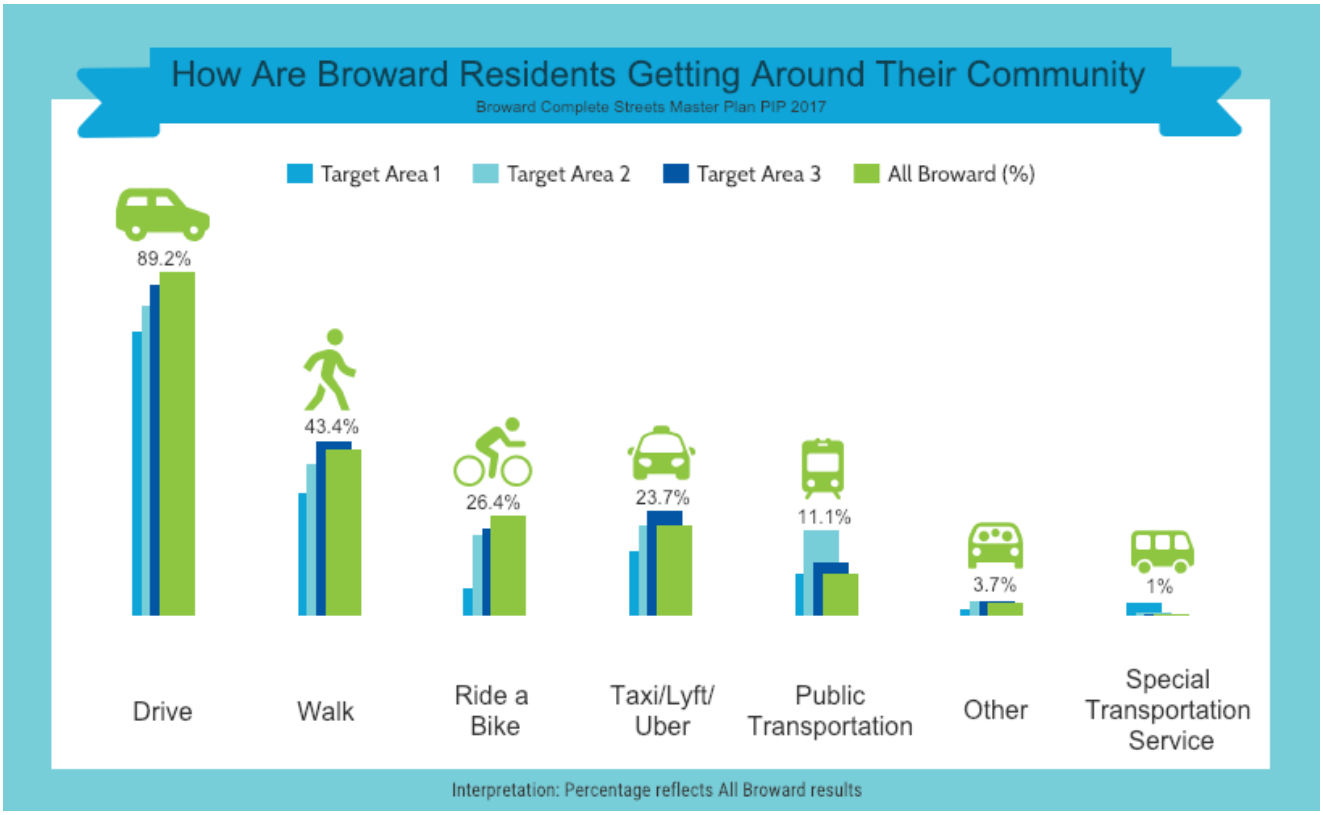


Figure 12. How Residents Get Around their Community

Education

As a result of varying strategies, many of the Community Survey participants were new to providing input on Complete Streets planning. The majority (66%) had never provided feedback on their streets, and 42% were in favor of receiving educational information. Approximately one-third of Community Survey respondents preferred receiving educational information through social media or the web followed by a range of 13%-16% of participants viewing television, phone call or text messages, flyer, and physical mail favorably. Nearly 10% viewed radio as a preferred method. **Figure 13** is a summary of the preferred methods for receiving information by participants of the survey.

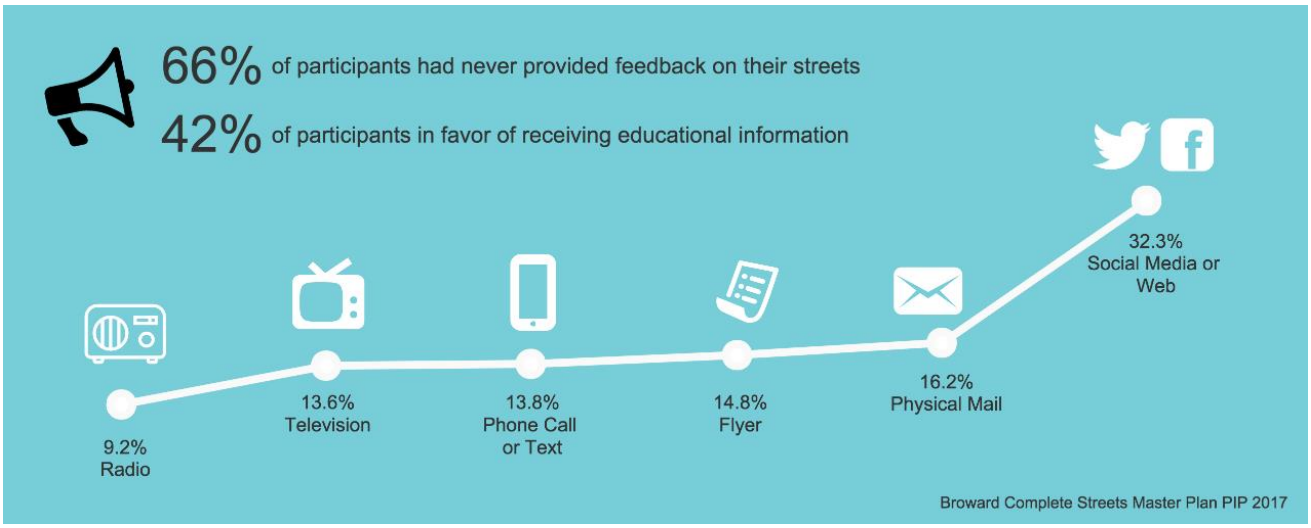


Figure 13. Preferences for Receiving Educational Information

A smaller group of residents from two underrepresented communities in transportation planning participated in focus groups and shared specific tactics that they felt would be effective in community educational efforts. A summary of the tactics and themes discussed within the focus groups is provided in **Figure 14**.

Through the Community Partner Survey, stakeholders suggested outreach tactics that were aligned with those mentioned by the community. The most preferred way of being engaged was through social media or web. Aside from high-tech tactics, community partners described the importance of shifting culture and having well rounded educational tactics in order to guide the

community through the Complete Streets learning curve and set a foundation for meaningful two-way engagement.

Table 3 list all tactics provided by the community partners. Tactical urbanism was described as a best practice in engaging the community. Through the tangible Complete Streets project, tactical urbanism served the purpose of demonstrating what could be done in the right of way and assisted in educating and shifting the culture both at the city and among residents. Several respondents mentioned the need for an outreach specialist to understand how foreign the Complete Streets concept is to the general population.

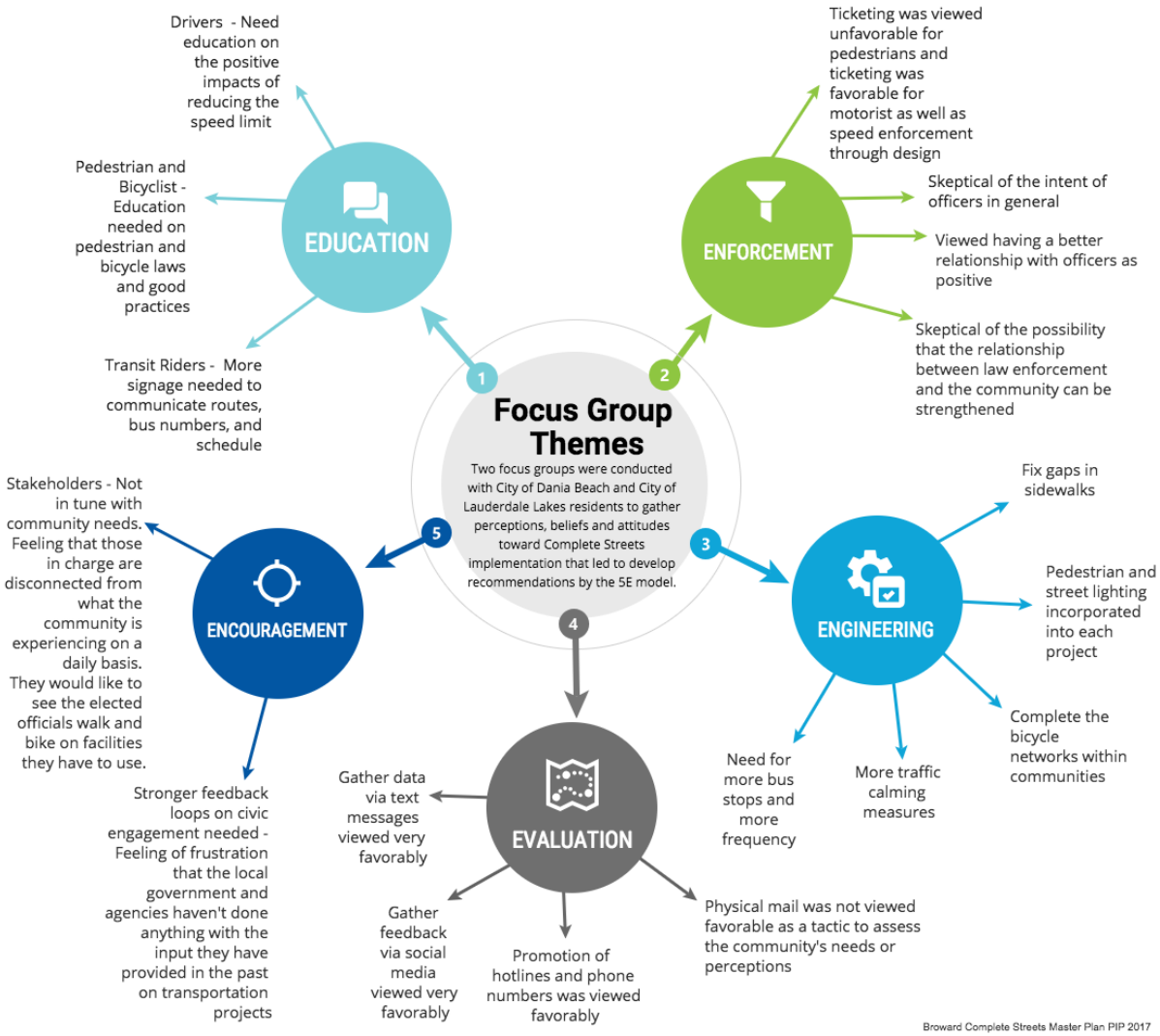


Figure 14. Focus Group Themes

Table 3. Educational Tactics

Educational Tactics for Engaging the Community in Complete Streets Planning
Attending HOA Meetings
Brochures/Leaflets
Community Workshop
Door to Door Hangers
Group Classes at Parks
Mailings through Water/Utlity Bill
Mailings to those Immediately Affected
Multi-media Campaign
Outreach Booths at Local Festives
Outreach through the City's Official Website
Partner with Fast Food Establishments to Post Messages on Take-Away Bags or Cups
Partners with Businesses
Places of Worship, Meditation, or Religous Gathering
Postings at Bus Stops
Postings Inside Buses and Trains
Promotional Videos
Public Meetings
Schools
Social Media
Tactical Urbanism Projects

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Engineering

Approximately 62% of Community Survey participants reported that bike lanes and walkable access to transit were important or very important. Over 76% considered sidewalks along all local streets important or very important. **Figure 15** summarizes the results of the survey question asking participants to rate importance of facilities within the community.

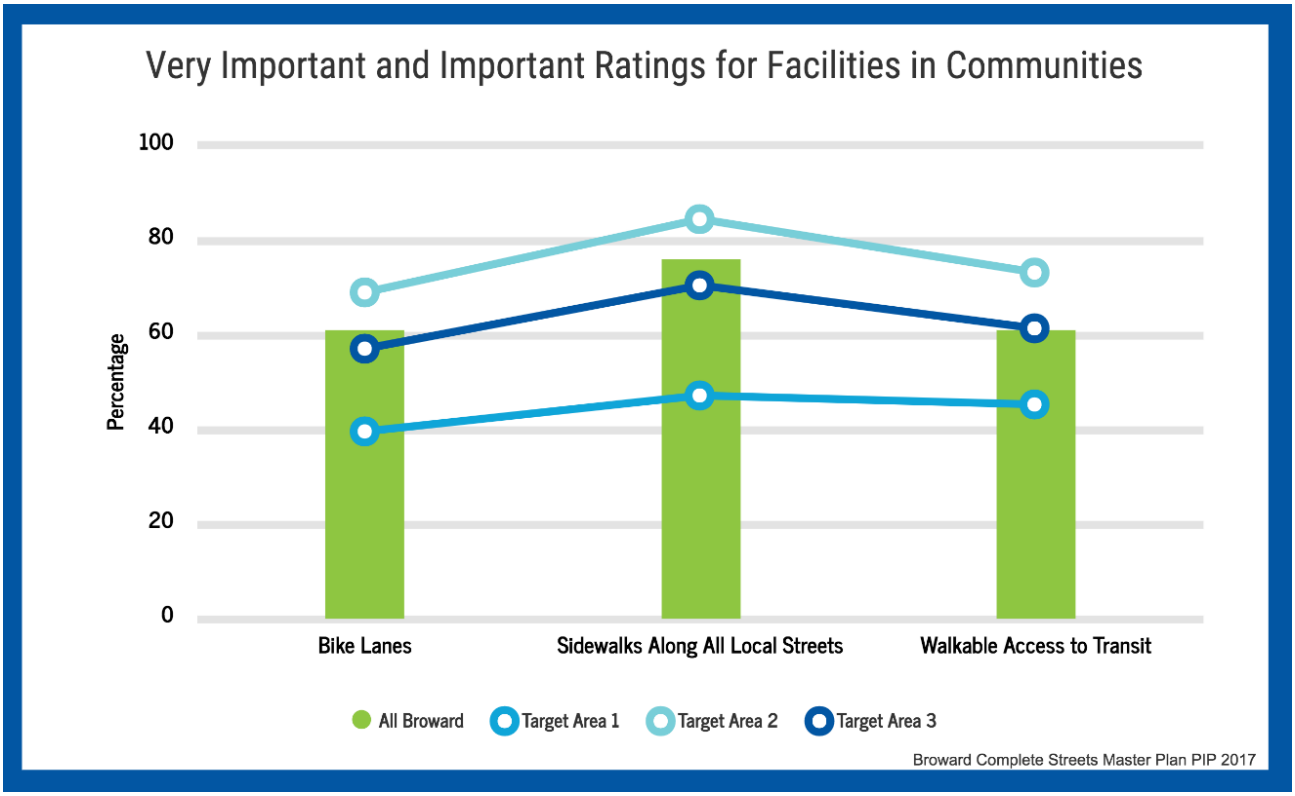

Figure 15. Participants Rating Very Important to Important for each category

Community Survey participants were asked if they had sidewalks and if they responded yes then they were asked a follow-up question, "do you use them, why or why not". **Figure 16** summarizes the participants responses to their use of sidewalks when present.

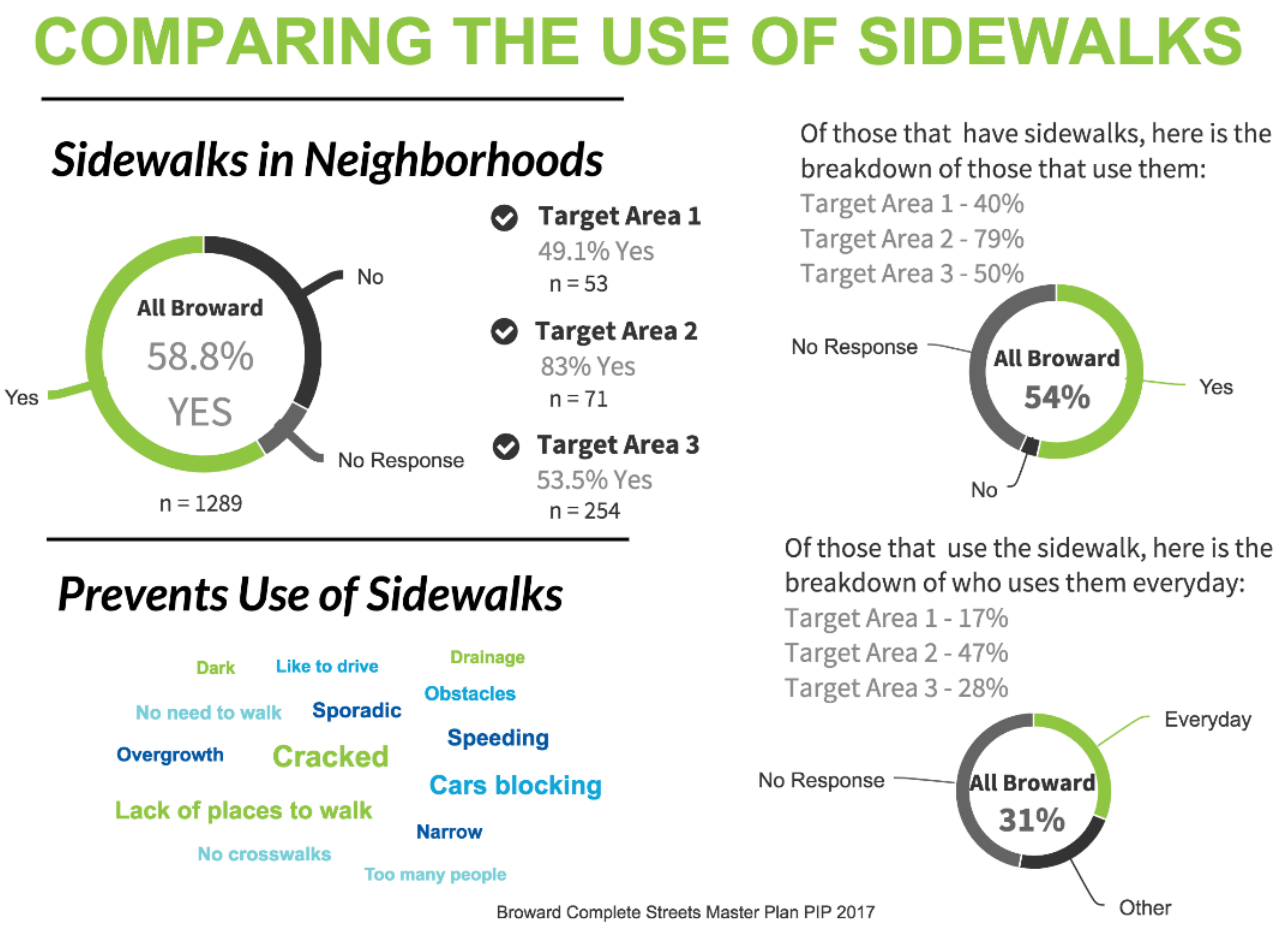

Figure 16. Comparing Use of Sidewalks

Community Survey particpants were asked if they had bike lanes and if they respodned yes then they were asked a follow-up question, "do you use them, why or why not". **Figure 17** summarizes the participants responses to their use of bike lanes when present. The main safety concerns are related to traffic speed and the lack of a separated/protected place to ride a bike.

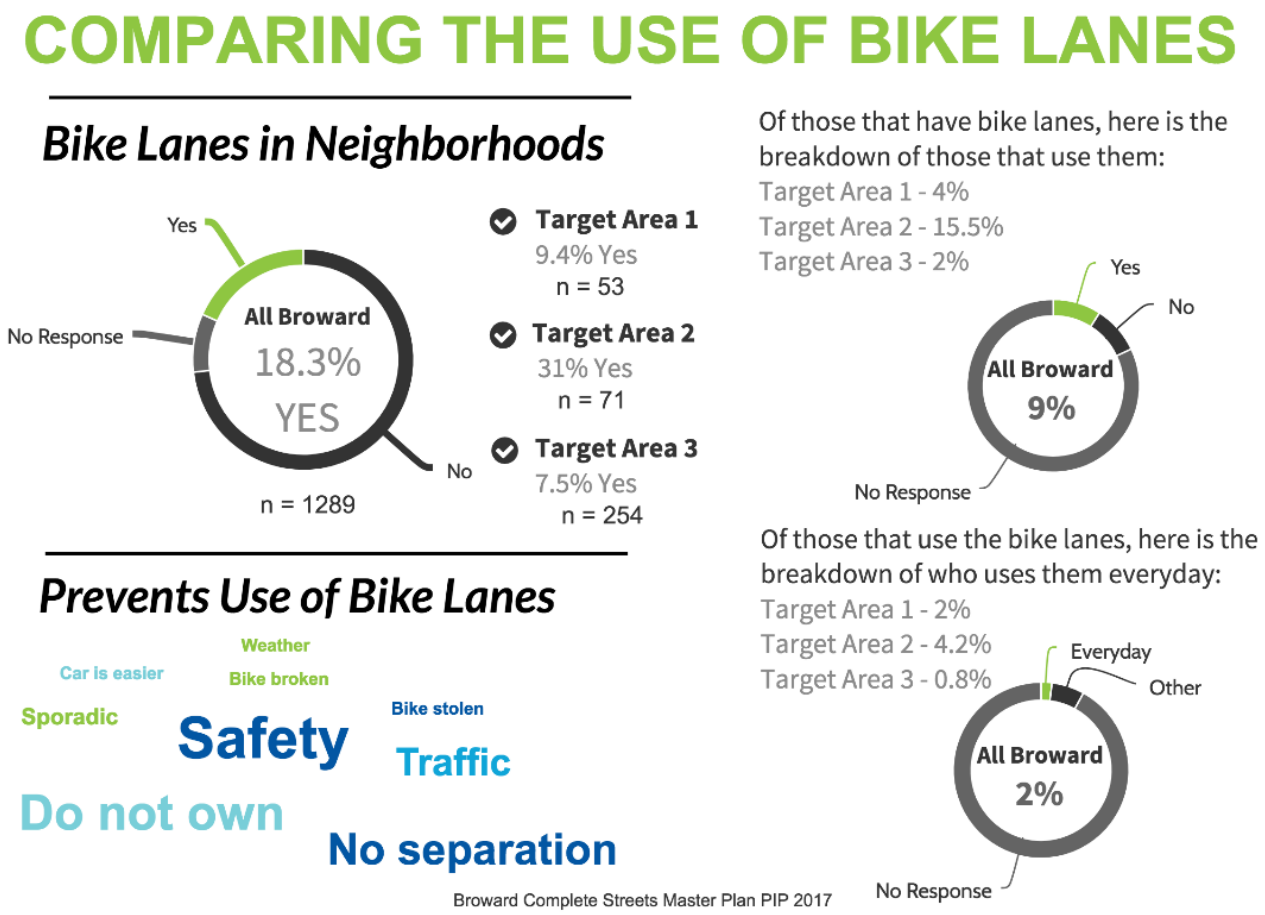

Figure 17. Comparing Use of Bike Lanes

Figure 18 demonstrates the bicycling barriers that pose most concern for all Community Survey participants; traffic on Broward roads is of greatest concern at almost 70% for all of Broward including Target Areas 1, 2, and 3. Lack of bike lanes or other protective place to ride ranked second with an average 55% for all of Broward and a significantly higher percent for Target Area 2 (Southern Broward) with 75%. Target Areas 1, 2, and 3 had higher percentages compared to all of Broward in not owning or being able to afford a bike, unpredictable trips during the day, and fear of crime.

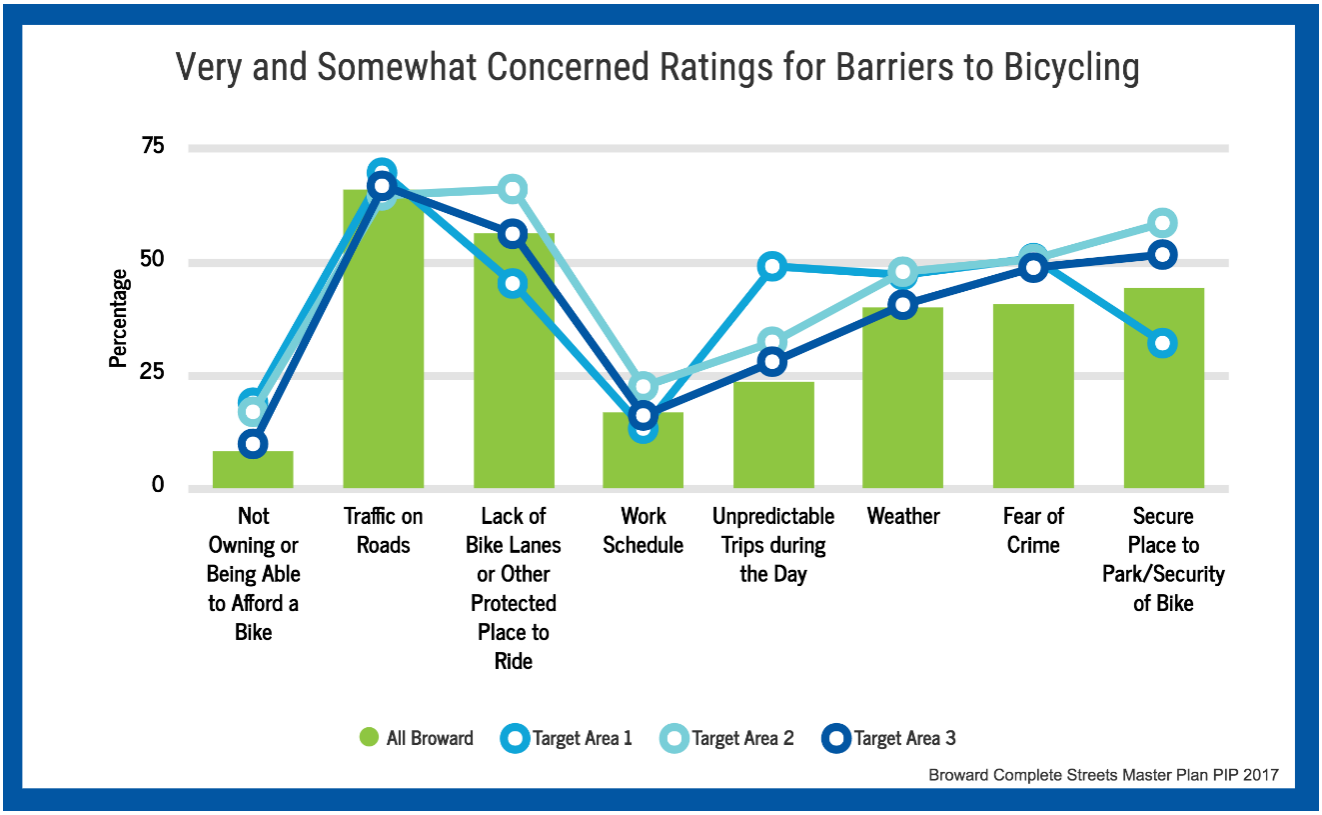

Figure 18. Bike Barriers

The majority of all Broward residents that participated in the Community Survey (66%) do not ride transit and only a smaller group does (12%). **Figure 19** summarizes the survey participant's responses of their use of public transit.

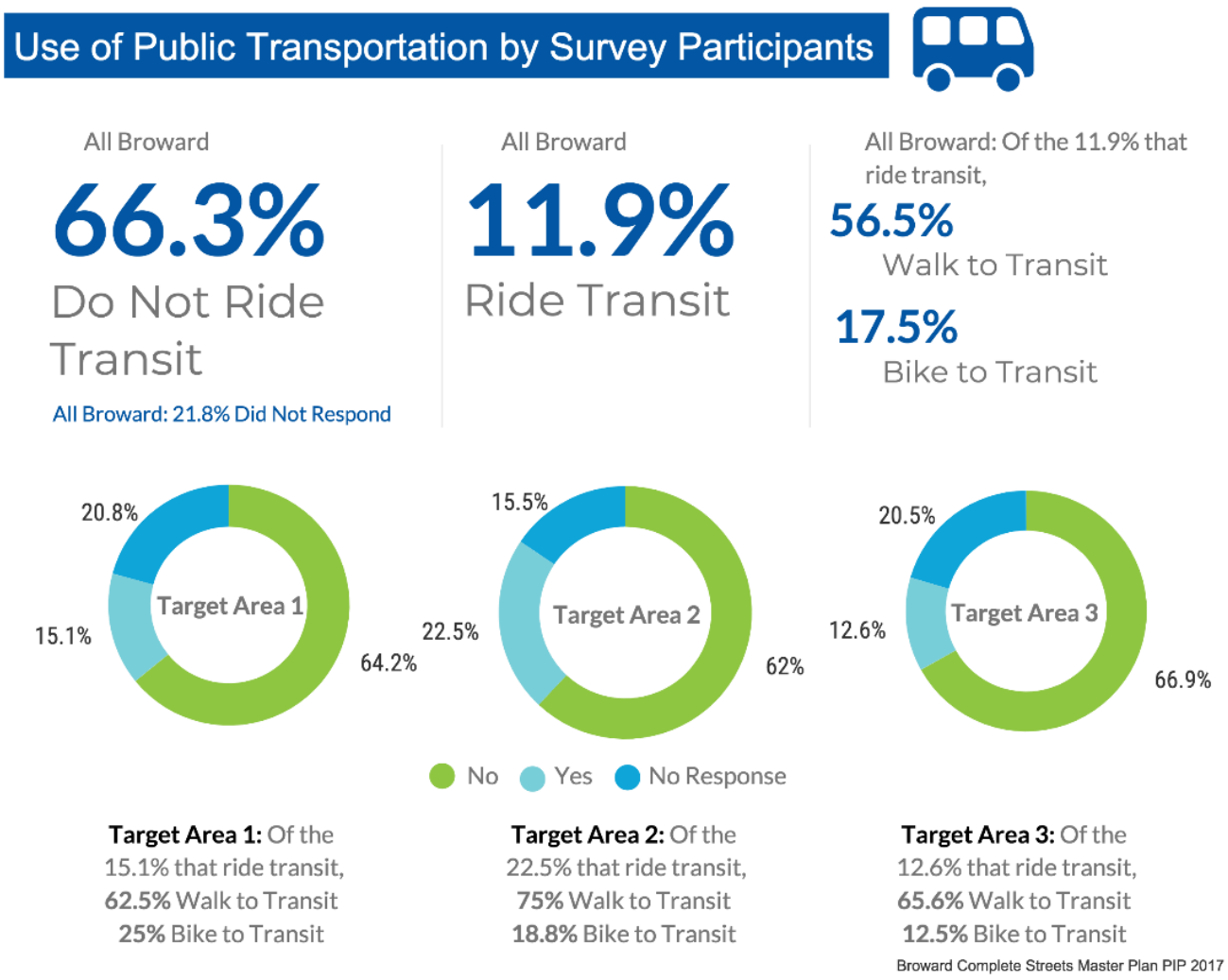

Figure 19. Transit Usage

Figure 20 summarizes the survey participant's responses to where they would most likely walk to in a walkable community. If Broward residents lived in a walkable community they would most likely walk for exercise (35%), followed by recreational activities, and going to daily needs and running errands (26%). Only 10% said they would walk to work if they resided in a walkable community.

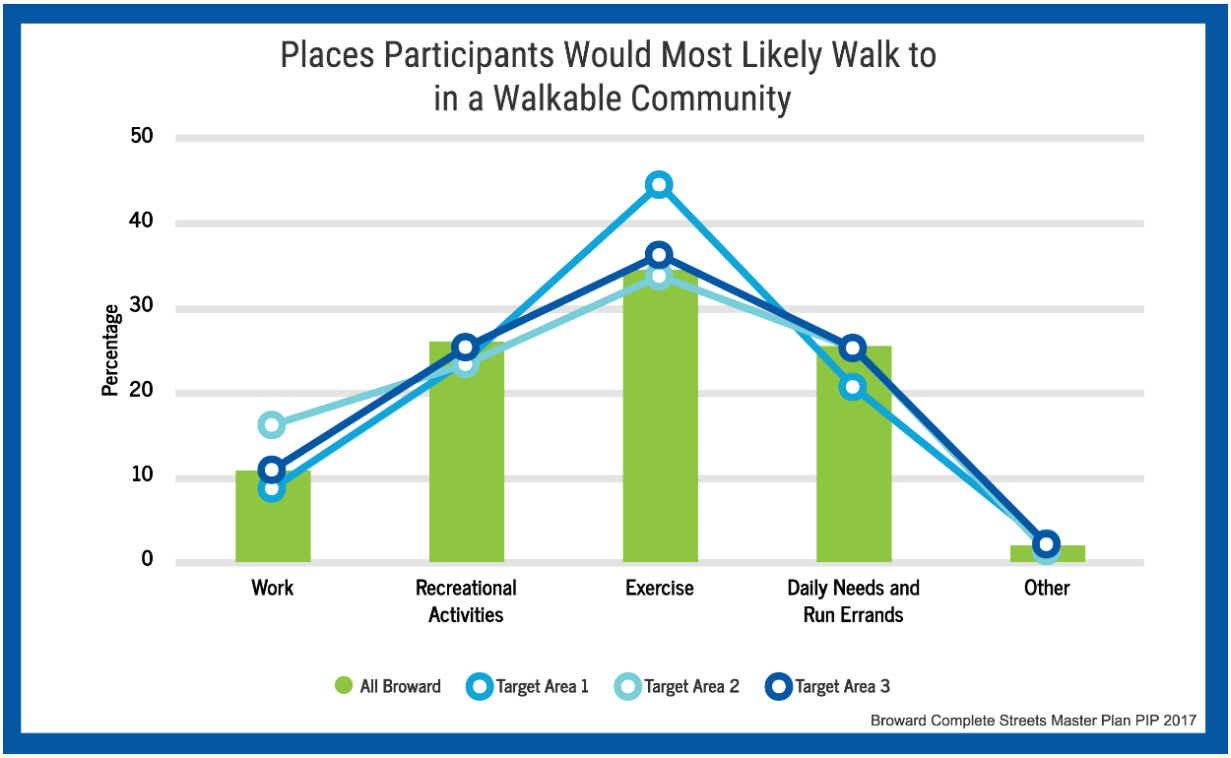

Figure 20. Destinations in a Walkable Community

All of Broward residents including Target Areas 1, 2, and 3 had similar responses of where they would ride a bike if they lived in a bikeable community. **Figure 21** summarizes the survey participant's responses to places they would most likely bike to in a bikeable community. The destinations ranked as follows:

1. for exercise purposes[1] (~34%),
2. recreational activities[2] (~28%),
3. for daily needs and to run errands (~23%), and
4. to commute to work (13%).

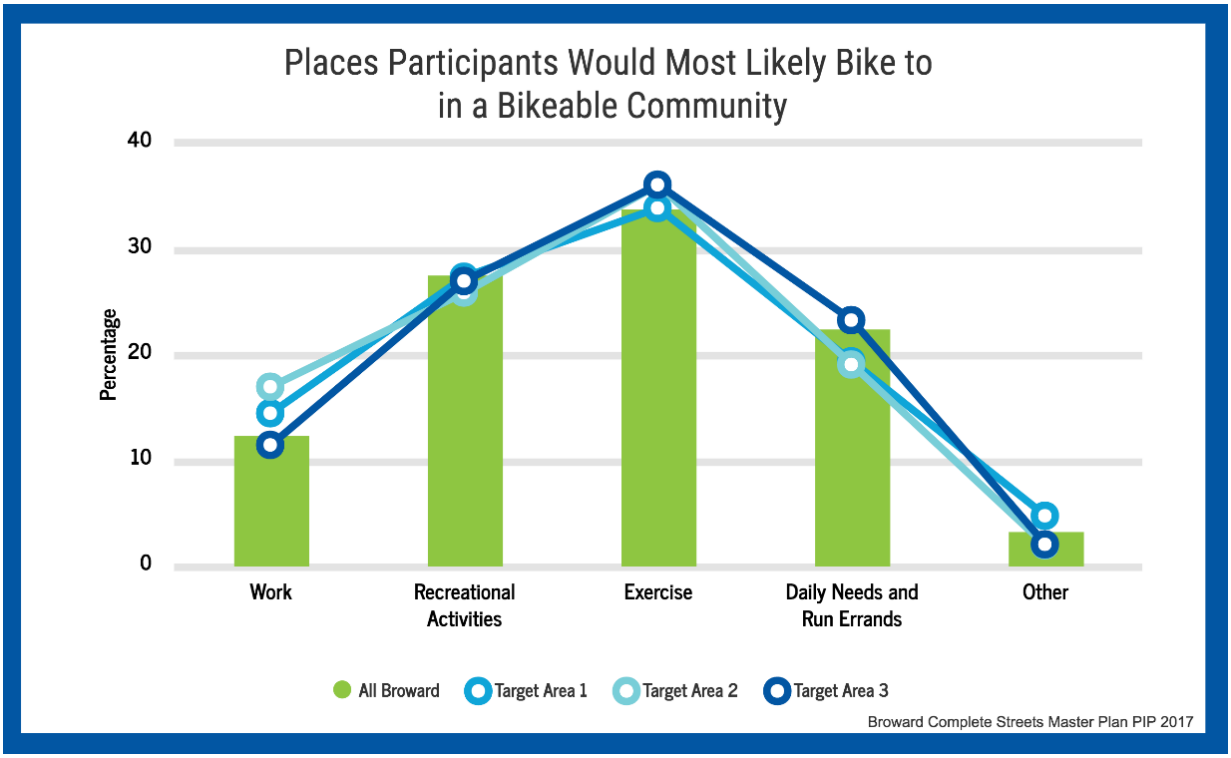

Figure 21. Destinations in a Bikeable Community

[1] To use the bicycle/pedestrian facilities to bike/walk on the road for exercise
[2] To access to activities within parks

The Community Partner survey also highlighted features in the pedestrian, bicycle, and transit realms that professional stakeholders felt were essential to be prioritized countywide. The features most important to the focus group participants are presented in **Table 4** with the frequency of the response represented by the height of the box the feature is presented in.

Table 4. Local Factors Related to Walking, Biking, and Accessing Transit

Transit	Walk
Not Frequent Enough	Shade
Not Convenient Enough	Wide Sidewalks
	More Pedestrian Crossings
More Pedestrian Crossings	Walk/Bike to Transit Linkages for Low Income Comm.
	Feeling Unsafe Due to Lack of Facilities, Lighting, and Speed Control
Need for Improved Scheduling Cooridnation	Safe Surfaces
	Need for Visible & Readable Signage
	Crosswalk Island Refuge Needed
Walk/Bike to Transit Linkages for Low Income Comm.	**Bike**
	Protected/Separated/Road Buffered Bike Lanes Needed
Shade	Walk/Bike to Transit Linkages for Low Income Comm.
Lack of connectivity	Shade
	Feeling Unsafe Due to Lack of Facilities, Lighting, and Speed Control
Need for Visible & Readable Signage	Safe Surfaces
Safer Shelters and Waiting Areas Needed	Need for Visible & Readable Signage

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The specific locations where residents want to see street improvements were captured by Digital Input Mapping, the results are shown in **Figure 22**.

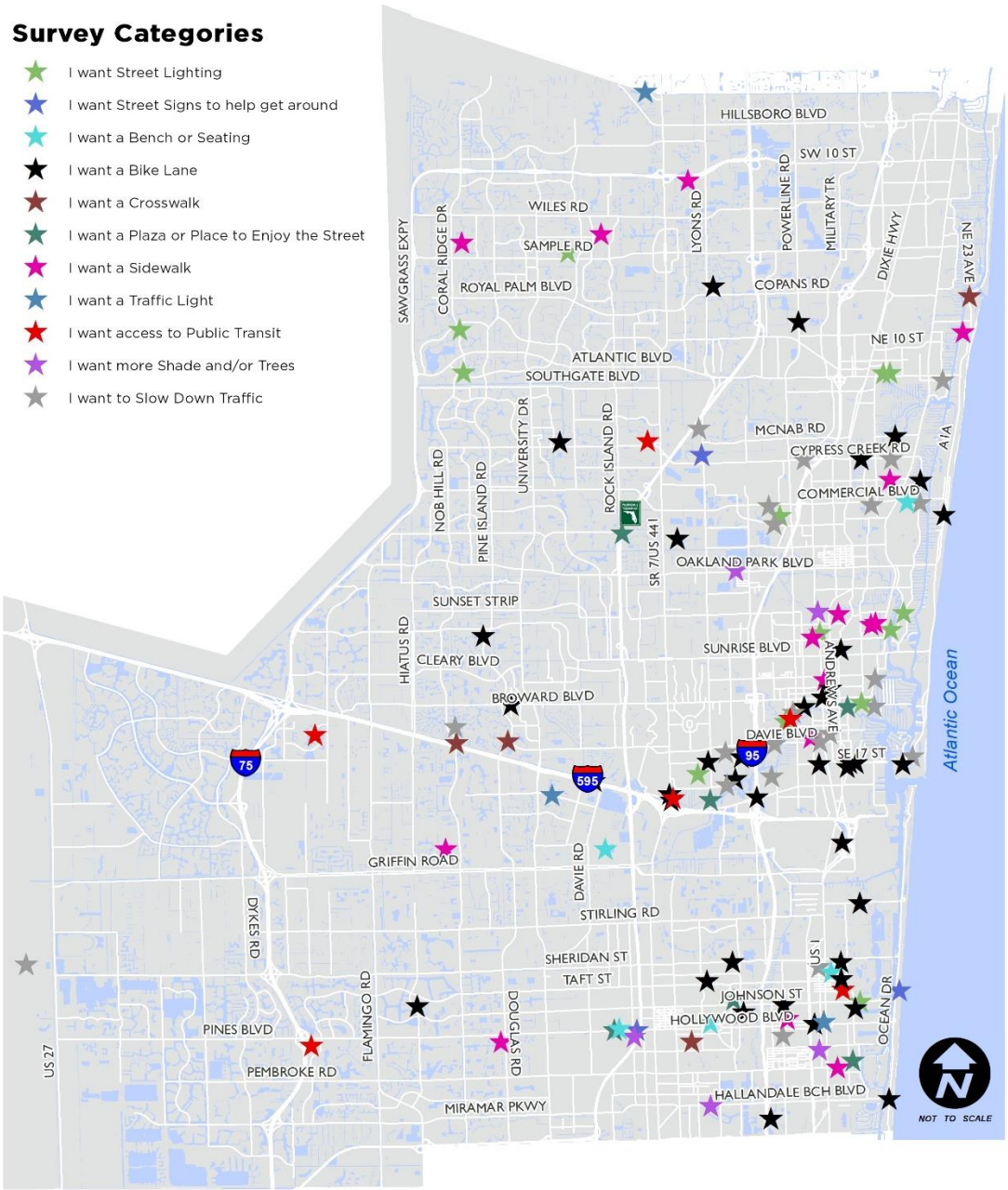

Figure 22. Digital Input Map

Participants were encouraged to pull from their professional outreach experience to inform survey responses. Through the Community Partners Survey, additional pedestrian and bicycle specific priority locations and general path prioritizations around institutions like schools, hospitals, universities, parks, etc. were provided and are listed in **Table 5**.

Table 5. Pedestrian and Bicycle Priority Locations

Community Partner Priorities for Pedestrian Facilities		Community Partner Priorities for Bicycle Facilities
Locations		
Johnston Street		Johnsons Street
Broward Blvd		Broward
Dixie Highway		Dixie Highway
Downtown urban areas such as Fort Lauderdale		SR7 @ Oakland Park Blvd
FDOT SR 7 Corridor		NE 3rd Ave., Broward to Sunrise
Sunrise Blvd., NW 16th Ave to FEC Tracks		State Road 7 and Oakland Park Blvd.
Taft Streets		McNab/Cypress Creek
SR 7 & Oakland Park Blvd.		Las Olas through the Isles to the beach
University Dr.		Las Olas
Las Olas Blvd.		Hillsboro Boulevard
Hillsboro Blvd.		NE 20th Ave
US 1		University Drive
SR A1A		Taft Street
FDOT Oakland Park Blvd		US 1
Sunrise Blvd and SR A1A		Atlantic Blvd
NW 31 Ave and NW 41 St		NW 31st Ave
Commercial Blvd		NE 18th Ave., Commercial to Prospect
Las Olas through the Isles to the beach		NW 31st Ave & NW 41st St
NE 20th Ave		Parks Road
Park Road		University
Las Olas Blvd.		Federal Highway
NW 7 Ave/NE 33rd St		C-13 Greenway Trail/SR7 & NW 31st Ave
Broward County - 31st Ave		Las Olas BLVD, SE 15th Ave to Isles
Broward Blvd and Andrews Ave		Southgate BLVD
Rock Island Road		MLK/SW 3rd Ave
Area from Broward to Sunrise and FEC RR to US 1		Area from Broward to Sunrise and FEC RR to US1
MLK/SW 3rd Ave		
Themes		
Intersections		Bus stops
Safe routes to schools		Access to recreation areas
Schools		Near schools
Mid-block Crossings		Schools
Surrounding Parks		Shopping centers
Areas around major transit hubs		Access to employment hubs
Transit routes and stops		Parks
Parks		Transit Corridors - TriRail/BCTP
Shoulder of the road		Parks
Access to transit		Access to schools
Areas around schools and higher learning institutions		Multimodal Hubs/Greenways
Low-income neighborhoods		

Forty-three percent (43%) of the community partner priorities for pedestrian facilities were identical or very similar to the priorities listed for bicycle facilities. The overall themes were similar, however additional emphasis was placed on how difficult, inconvenient, intimidating, and in some cases unsafe it is to cross the street at the locations listed in the **Table 5**. In addition, why locations were of priority for pedestrian facilities included the mention of the Vision Zero policy that aims to have no fatalities or serious injuries involving road traffic and how focusing on arterial corridors as well as specific dangerous intersections, mid-block crossings, and improvements to the shoulders of the road will help achieve the policy's intent. Two additional differences between the pedestrian and bicycle facilities was the focus on locations adjacent to, or crossing rail road tracks and in low-income communities.

One respondent stressed the need to increase access along east-west corridors, with Johnson Street, Taft Street, and Park Road as priorities in a coordinated effort with Pembroke Road and Sheridan Street. This will increase local alternative transportation options from the beaches to the Everglades. Another respondent focused on areas in the City of Fort Lauderdale that could increase tourism and encourage residents to stay outdoors and active in the community to help local businesses thrive.

Enforcement

Among the Community Survey participants there was consistent support for various enforcement tactics. Respondents agreed that police departments and crossing guards need to be involved in creating a safe environment for pedestrians and bicyclists. The following three tactics received an equal amount of support across all Broward resident respondents including Target Areas 1, 2 and 3.

- community relationship building (36%)
- police presence (32%)
- increased enforcement (28%)

Figure 23 summarizes the survey responses associated with police involvement.

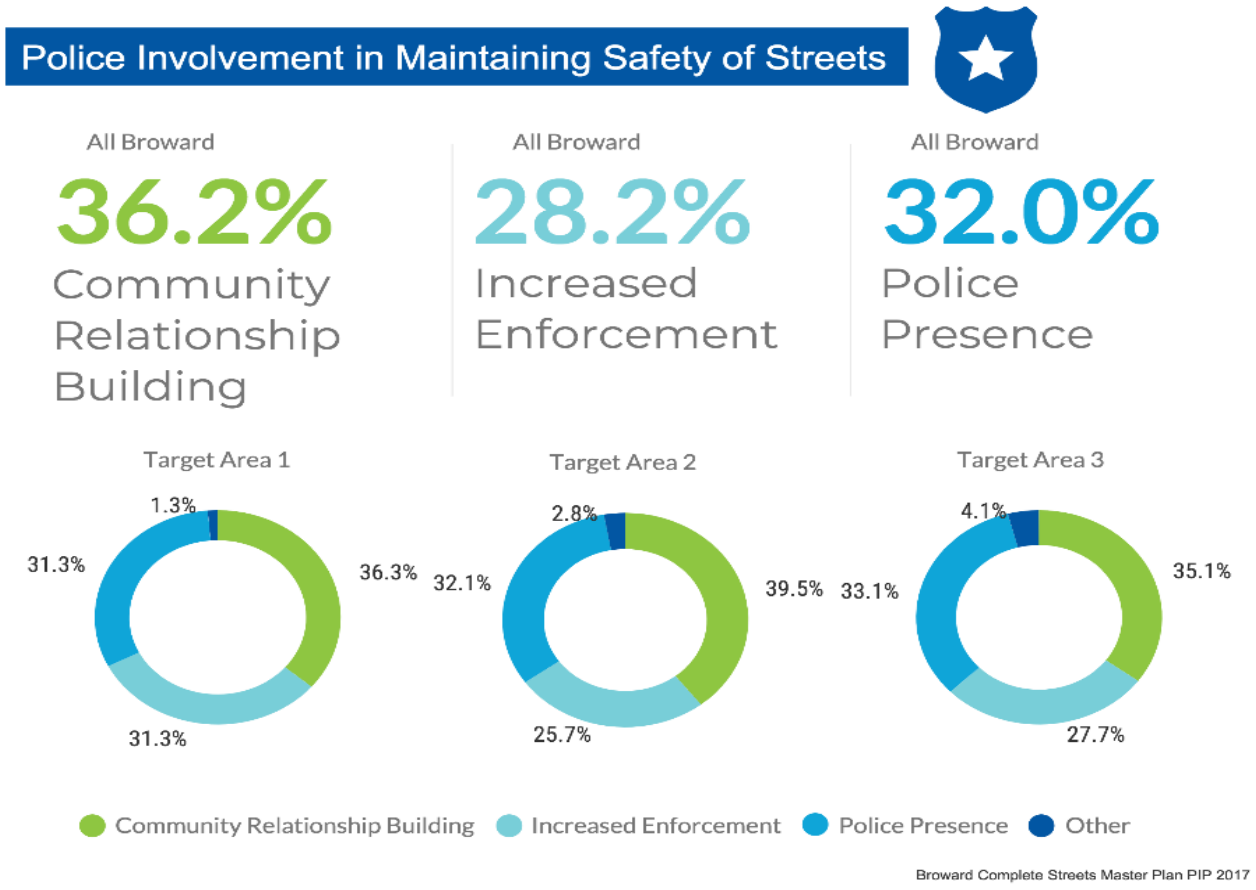

Figure 23. Police Involvement in Maintaining Safety

Focus group participants stated that they viewed ticketing pedestrians unfavorably while ticketing of motorists and speed enforcement through design was viewed favorably. Concerns with social profiling and the officers' '*true intentions*' surfaced in both groups. Although some focus group participants were skeptical that the relationship between the community and officers could be strengthened, all viewed having a '*better*' relationship with officers as something positive. **Table 6** provides a summary of the enforcement themes and tactics suggested by the community partners.

Approximately one-third of Community Partners (31%) provided enforcement tactics to inform the Complete Streets Master Plan. A total of seven themes were produced from the tactics provided by the participants.

The last theme, "utilize supportive technology" carried the most weight as more than one-quarter (27%) of respondents described a mixed-method approach with both formal and informal enforcement personnel that would be most success in shifting culture and assuring the community at large is abiding by the laws.

Table 6. Enforcement Themes and Tactics

Enforcement Themes and Tactics Suggested by Community Partners
POLICY. Tactics: Instate policy that supports Complete Streets. A county wide vision zero effort to help reduce pedestrian and bike fatalities and serious injuries
EDUCATE ON ENFORCEMENT. Tactics: Proceed through Home Associations and Civic Associations such as the Hollywood Council of Civic Associations.
SIGNAGE. Tactics: Educate on the basics of road etiquette through signage.
ENGAGE VARIOUS LEVELS OF ENFORCEMENT PERSONNEL. Tactics: 2-step process. 1- Informal interaction on the roadway. Enforcement conducted by countywide rotating temporarily assigned "ambassadors" that can educate pedestrians, mass transit riders, and even vehicles. 2- Enforcement expanded to include BSO Deputies and MPO/City Staff dedicated to continue the education process.
DATA. Tactics: Target high crash areas. Become aware of enforcement needs through charettes, SWOT analysis and walking audits. Target major intersections; specially on 6 land 45mph routes.
SPEED ENFORCEMENT. Tactics: Replicate school zone approach: The efforts for school zones worked whatever was done there. Majority do not speed there even though there are not officers involved.
UTILIZE SUPPORTIVE TECHNOLOGY. Tactics: Reinstate red-light camera technology County wide to support safety improvements.

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Encouragement

Results that inform how culture can be shifted from car-centric to multimodal begin with understanding what is of most concern to the residents. Focus group participants expressed concerns of stakeholders not being *'in-tune'* with community needs. Specifically stating that those in charge are disconnected from what the community is experiencing on a daily basis. The participants would like to see elected officials walk and bike on facilities that community members must use to get to places on foot or by bicycle. Participants expressed frustration with local government and agencies due to the perception that they have not demonstrated how the community's input has informed projects. **Figure 24** summarizes the desired organizational changes.

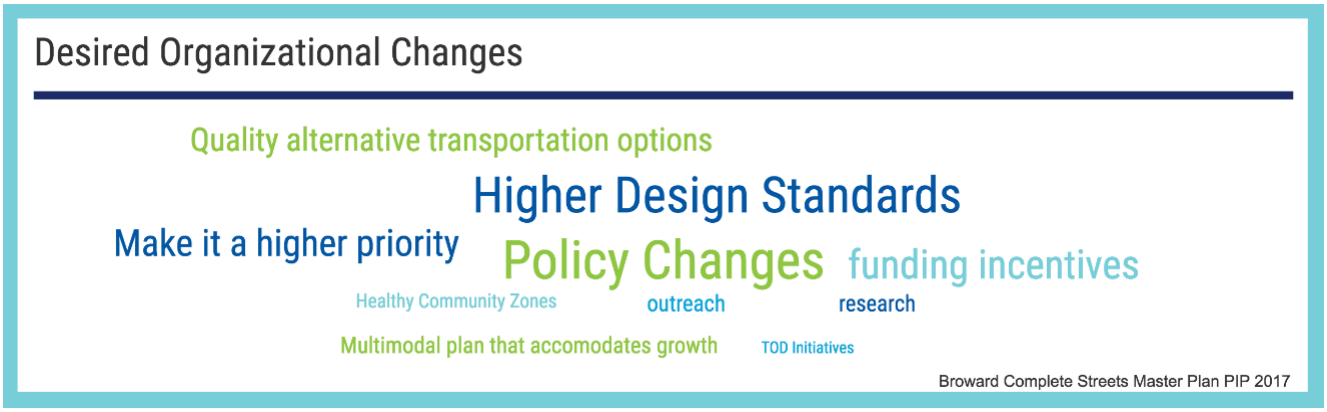


Figure 24. Desired Organizational Changes

Within the Community Partner Survey, participants were asked about how a sustainable organizational shift could occur to support Complete Streets. A few community partners felt that organizational sustainable shifts toward multimodal transportation has occurred or are in progress. For example, a respondent expressed that, "*The {Lauderdale Lakes} Healthy Community Zone program plays a strong role in addressing public/pedestrian safety and in expanding transit related neighborhood connections and facilities expansion/improvements on an on-going basis.*" While other respondents felt limited within their current structure, they would like to see tactics that aimed at requiring higher design standards so that only protected bike lanes or marked crosswalks are allowed through the County. Respondents suggested additional sustainable tactics such as

funding incentives and policy changes while calling for support of Transit Oriented Development (TOD) initiatives, research, multimodal plans, and quality alternative transportation options that reflect Complete Streets as a high priority at the local and state government level.

Creating support for sustainable change within the community was noted as a more difficult challenge than seeking organizational change among several Community Partner respondents. Some community partners described Broward having a lack of quality transportation options, therefore, making it very difficult to seek a sustainable shift toward active transportation. Others suggested tactics that described in detail a network of attractive walking and biking systems that were seen as most critical in changing behaviors are shown in **Figure 25**.

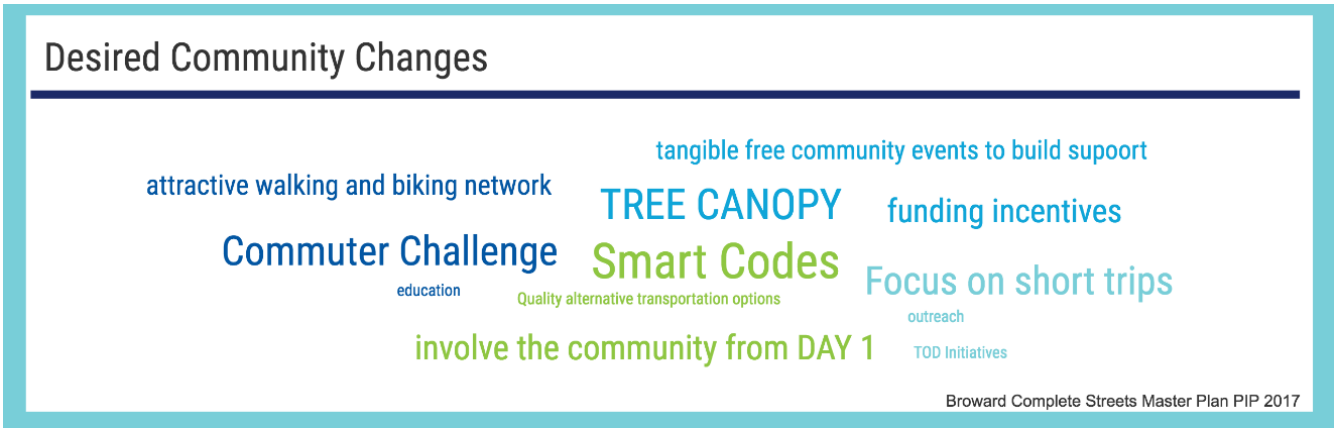


Figure 25. Desired Community Changes

Community partners suggested making short trips such as lunch and daily errands the focus and not necessarily commuting trips, which are harder to change and often longer trips. One respondent states, "*It needs to be a balance of education, enforcement, engineering, evaluation, encouragement such as Vision Zero prescribes.*" Although supporting land use codes that encourage Smart Growth and TOD's can largely focus on the commuter, they also provide a safe and convenient environment for shorter daily trips. Shade and tree canopy were often mentioned as an absolute need in South Florida for both short and longer trips on foot or bike.

Another major theme among community partners was the need to provide incentives for active transportation. For example, one respondent suggested awarding desired/good behavior through community recognition or award. While another respondent encouraged the Broward MPO to

follow the Maricopa Association of Governments (MAG) in Phoenix by paying $1 per day to carpool or to do a commuter challenge that pays people to walk, bike, and ride transit rather than drive. Even providing discounted tickets to schools, cities, and large companies to ride transit was suggested.

The most common response was the need to a comprehensive ongoing campaign to shift culture and create sustainable change among Broward residents. Focus on building awareness around the factors of active transportation's economics; time well spent; health (physical and psychological) and environmental impacts (emissions).

Evaluation

Evaluation is a critical method to assess if priorities and goals are being met. A large portion of Community Survey participants (66%) had not provided input related to their streets previously. Participants are interested in staying connected and in reporting or providing input. The preferred method is through a text message or phone app.

Community Survey participants that had given feedback in the past had mixed responses on the experience being negative or positive. Of those who responded to the question related to their experience proving input, Target Area 2 was the only subset of all residents in Broward that had an overall positive experience (67%). All residents in Broward (71%), Target Area 1 (57%), and Target Area 3 (62%) had an overall negative experience, including always negative, sometimes negative, and neutral experiences. **Figure 26** summarizes the suggested evaluation tactics to be used for future evaluations.

Focus group participants expressed three ways to effectively assess the community's input on a project: gathering data via text messages was viewed very favorably; gather feedback via social media; and promotion of hotlines and phone numbers. Physical/snail-mail was not viewed as a favorable tactic to assessing the community's needs or perceptions.

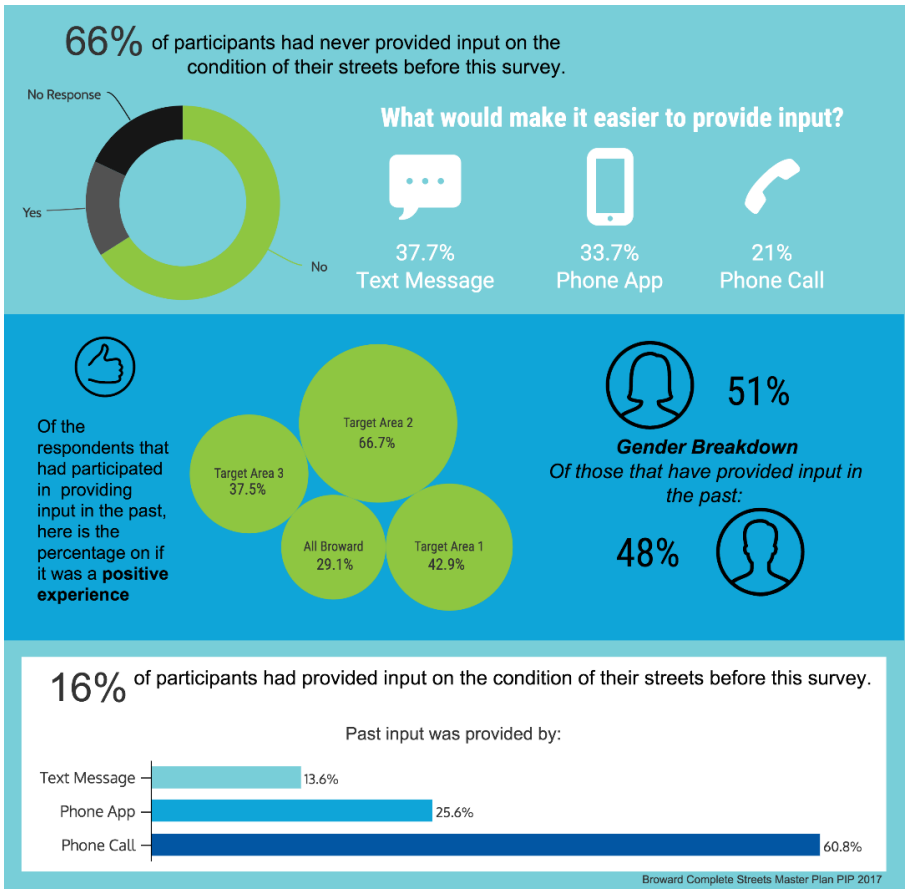


Figure 26. Evaluation Tactics

Discussion and Conclusion

The process of engaging the community

The high-touch and high-tech public engagement strategies that produced extensive feedback from more than 1,300 stakeholders provided a two-way conversation between Broward MPO and the community at large. The results informed the development of a prioritized list of Complete Streets projects and balance technical expertise with the community's input and experience. The Broward MPO designed the public engagement process to utilize mixed methods to target subsets of the population that had been historically underrepresented in their transportation planning process.

The vast majority (66%) of the participants had not previously participated in a public input process about their streets. The Broward MPO commits to communicating with all participants that provided

their contact information to demonstrate how their input impacted the development of the Complete Streets Master Plan. In addition to establishing stronger feedback loops in civic engagement, the Broward MPO will also explore supplemental context sensitive solutions to not only designing the roads but also engaging the community. As per the results, utilizing snail mail to provide education would not be a successful tactic in assessing or gaining input from the community.

The subset communities described as Target Area 1 – Northern Broward, Target Area 2 – Southern Broward and Target Area 3 – zip-code focused had varying needs from the all Broward respondents emphasizing the need for context sensitive solutions to education, enforcement, engineering, encouragement, and evaluation strategies.

Other themes were salient across all of Broward. For example, residents and stakeholders would like to see a multifaceted approach to implementing enforcement with community relationships at the forefront. The priorities described by the residents and community partners highlighted the need to focus on multimodal transportation projects throughout the county with standards that require protected facilities, prioritizes gaps, and supports access to transit and local anchor institutions. Most participants reported that exercise would be prioritized if they had access to sidewalk and bike facilities, which could yield better health outcomes, less traffic on the roads, more economic savings, less carbon emissions, and better quality of life countywide. The Broward MPO will continue to reflect on the input to strengthen community relationships and devise a transportation system that has positive impacts on the community's prosperity and is genuinely reflective of the residents' and community partners' needs and desires. **Appendix A** includes the backup documents to the public input.

Photo Credit: Kimley-Horn, Minneapolis (Two-Way Raised Separated Bicycle Lanes)

Chapter 4. Transportation Network Analysis

Mapping techniques to identify problem spots and network gaps will allow recommendations to be developed that target investment into the intersections and streets that have the greatest potential to serve transportation needs.

Gap Analysis

By evaluating the gaps within the bicycle and pedestrian facilities, new networks can be created for better cohesion within a neighborhood as well as other municipalities. A comprehensive review of the existing gaps with the intention of closing gaps creates a complete and user-friendly network. People want livable communities where they can walk, bicycle, and socialize. **Figure 27** depicts the existing gaps in Broward County. There are more bicycle facility gaps than sidewalk facility gaps. Starting in the 1950's and continuing into the beginning of the 21st century, the United States built the Interstate highway system and thousands of connecting arterials. During this period, bicycle and pedestrian planning was given a lower priority. Now that every road is almost to capacity, and space for construction of new roads is scarce, bicycle and pedestrian planning is picking up.

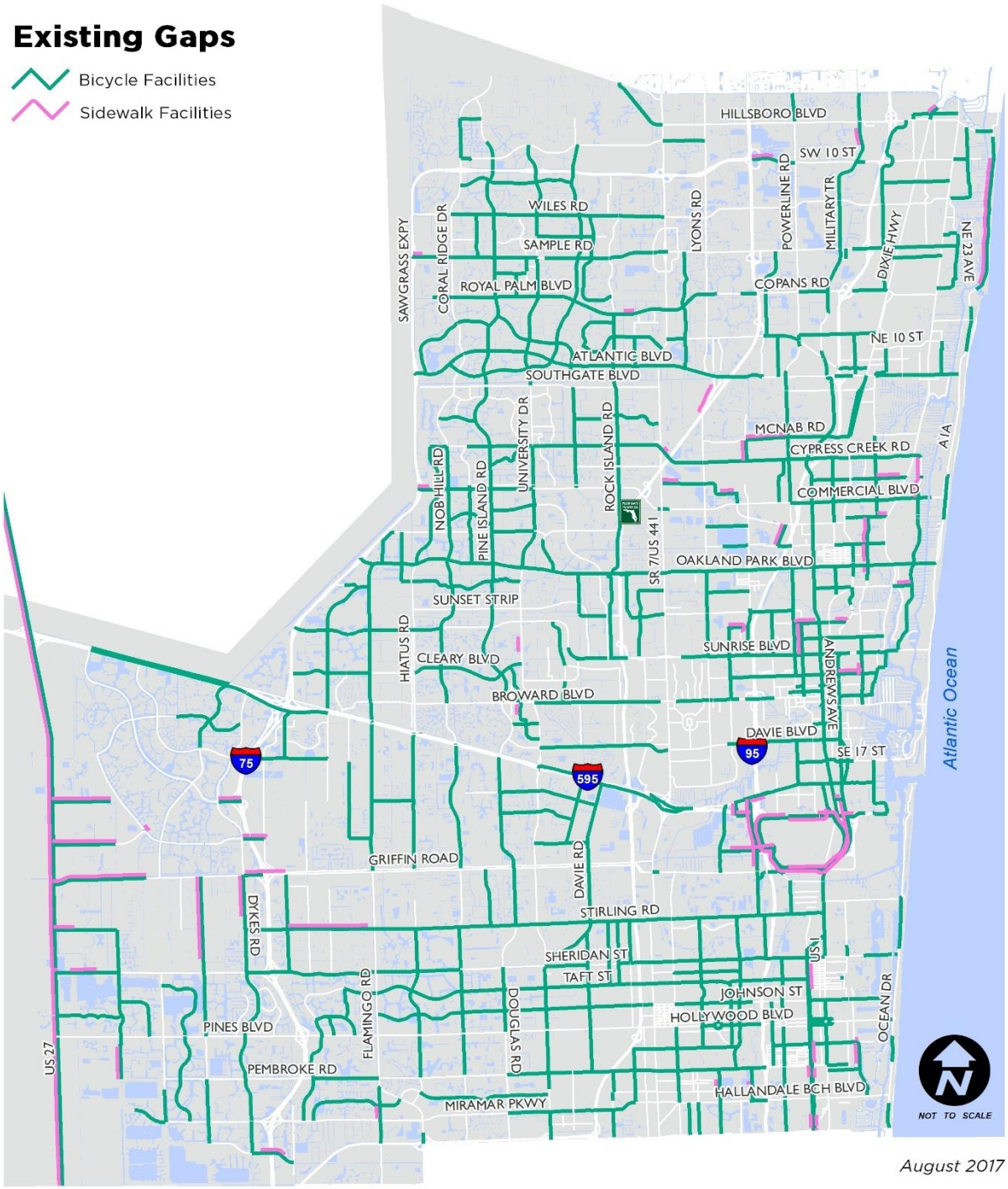


Figure 27. Existing Gaps

Photo Credit: Kimley-Horn, City of Coral Gables

Photo Credit: Kimley-Horn, City of Lauderhill

Pedestrian and Bicycle Supply and Demand Analysis

To quantify and visualize demand for bicycle and pedestrian travel county-wide, a bicycle and pedestrian demand analysis was completed. The demand analysis is an objective, data-driven process that estimates the cumulative demand representative of where people live, work, shop, play, learn, and access transit by quantifying factors that generate bicycle and pedestrian movement. The resulting composite demand map summarizes the geographic distribution of bicycle and pedestrian demand throughout Broward County. The results of the analysis were used to help inform and prioritize potential bicycle and pedestrian project recommendations.

The Pedestrian and Bicycle Demand Analysis model provides a general understanding of expected walking and biking activity by analyzing spatial data representative of origins and destinations in the County. In the model, walking and biking demand is influenced by where people live, work, shop, play, learn, and access transit. The resulting analyses shows where people are likely to walk and bike based upon the demand model inputs.

The demand model identifies expected walking and biking activity by overlaying the locations where people live, work, play, shop, access public transit and go to school into a composite sketch of regional demand. The demand model's scoring method is a function of density and proximity. Scores are a result of two complementing forces: distance decay – the effect of distance on spatial interactions yields lower scores for features farther away from other features; and spatial density – the effect of closely clustered features yields higher scores. Scores will increase in high feature density areas and if those features are close together. Scores will decrease in low feature density areas and if features are further apart. The result is a composite analysis of location-based characteristics that identify areas with high propensity for walking and biking.

Data Inputs

Data inputs for six categories (live, work, shop, play, learn, access to transit) were incorporated into the demand analysis. The sources for the inputs are listed in **Table 7**.

Table 7. Source of Demand Model Inputs

Data Input	Data Purpose	Source	Notes
Live – Population Density	Areas with higher population density have higher rates of walking and biking. Population density was analyzed at the census block level to identify areas of high and low population density.	2010 U.S. Census	Computed at the block level
Work – Employment Density	Like population density, higher densities of workers translate to higher propensity for people to walk and bike. Employee density was analyzed at the census block level to identity areas for high and low population density.	2014 Longitudinal Employer-Household Dynamic (LEHD), Work-Area Characteristics	Computed at the block level
Shop – Retail Density	Retail shopping areas are also attractors for walking and biking trips. Density of retail jobs, which can be used as a proximity for density of stores, was used to analyze areas with higher retail density.	2014 LEHD, Work-Area Characteristics	Computed at the block level
Play – Existing Parks and Trails Facilities	Trails and parks are attractors and generators of walking and biking activity. Proximity to trails and parks was analyzed.	Broward County	State, regional, and local parks and trails
Learn – School Locations	Schools are a significant source of walking and biking by populations that either can't drive because they are not old enough or are more likely to walk and bike for economic reasons. Proximity to elementary, middle, and high schools, as well as universities, was analyzed.	Broward County	Includes public and private elementary, middle, and high schools; college and universities

Data Input	Data Purpose	Source	Notes
Transit – Transit Stop Locations	Almost all transit trips end with a walking or biking trip. Bus stops and train stations can be significant attractors and generators of walking and biking activity. Proximity to bus stops and train stations was analyzed.	Broward County	Bus stop and other relevant transit center locations

Demand Model Input Maps

Figure 28 through Figure 33 displays the concentration of the individual inputs used to develop the Composite Demand Map. These maps illustrate how the Demand Model supports a holistic profile of factors to identify high-demand areas in Broward County.

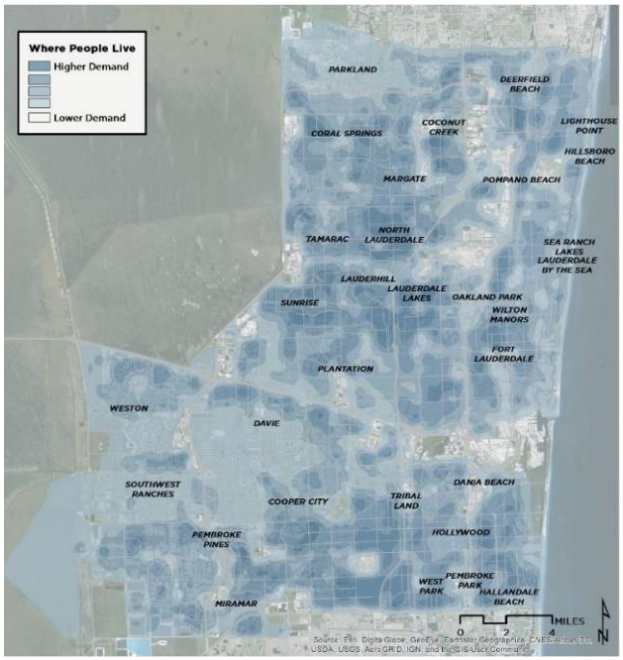


Figure 28. Where People Live

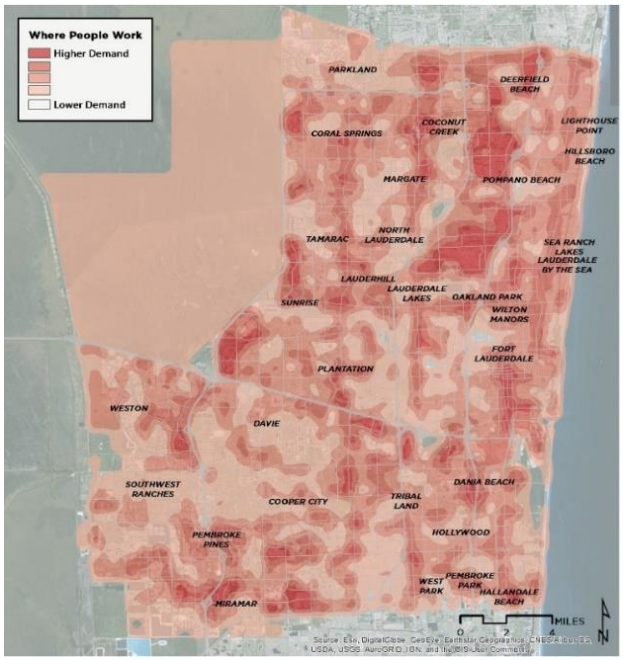


Figure 29. Where People Work

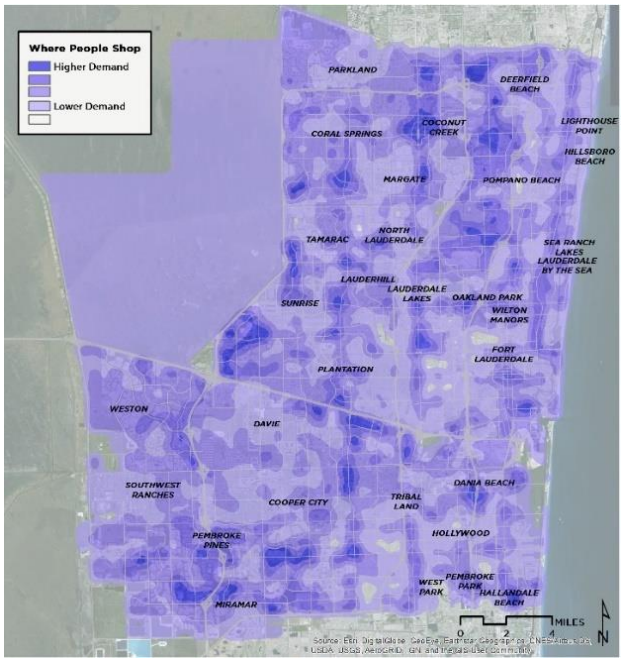


Figure 30. Where People Shop

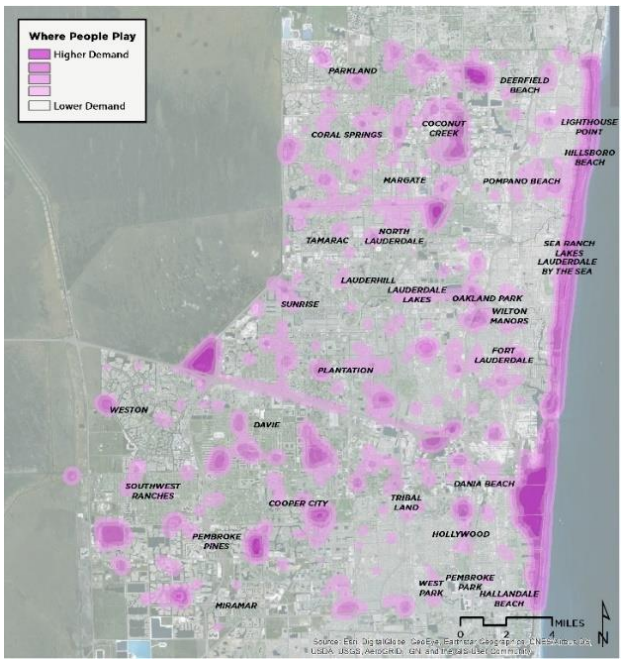


Figure 31. Where People Play

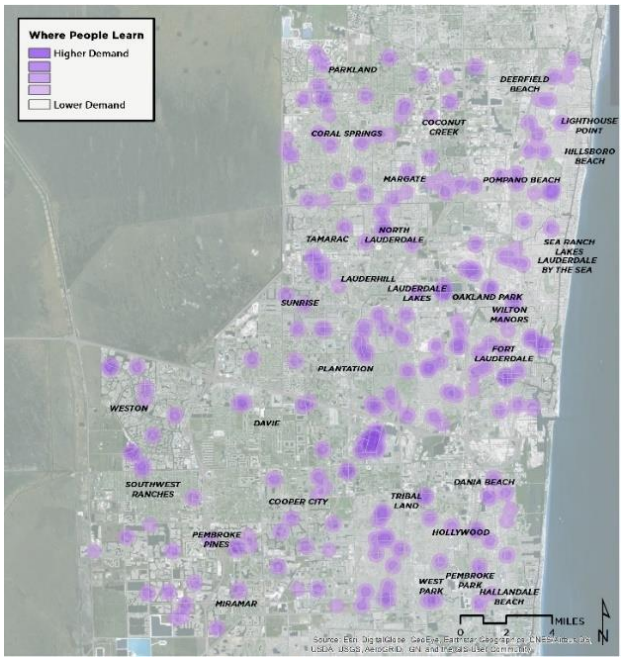


Figure 32. Where People Learn

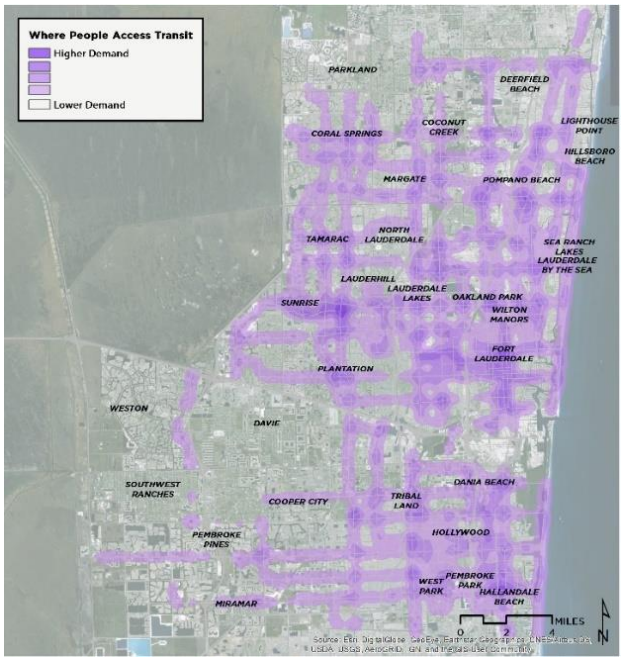


Figure 33. Where People Access Transit

Equity Analysis

For many people, walking, bicycling and transit represent their only options for transportation. Those who use these modes out of necessity tend to be lower-income, at-risk populations. Making improvements for these people is critical, since they rely on walking, bicycling and transit to meet their daily needs.

The equity analysis considers demographic factors, which when combined, indicated where there are concentrations of historically vulnerable populations. Active transportation investments in these areas could help alleviate a broader range of issues, such as access to jobs, education, and healthcare. The analysis also provides a starting point for identifying priority areas where improvements could be focused.

The equity analysis for Broward County uses a combination of six socioeconomic indicators from the United States Census Bureau to identify where vulnerable populations are concentrated.[3] This section describes the rationale for the selection of the six indicators, presents the composite equity results, and presents maps for each of the indicators.

Indicators

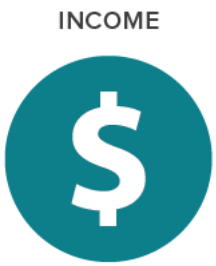
Indicators used in this analysis were selected using best practices and extensive literature review and research. A description of the indicators, rationale, and key findings follow.

Age Indicator – People under the age of 18 years of age and over the age of 65 years of age.

Rationale and Findings – The population under 18 and over 65 years of age is thought to have a higher active transportation infrastructure need because they have less access to motor vehicles and may rely more on active modes

[3] All data was obtained from the 2011 to 2015 American Community Survey (ACS) 5-year estimates, and analysis was conducted at the Census Tract level for Broward County.

of transportation. As a whole, approximately 36% of Broward County is under 18 or over the age of 65.



Income Indicator – Households at or below 200% of the Federal Poverty Level.

Rational and Findings – Poverty is a socioeconomic vulnerability, linked with limited access to resources, such as transportation. 39% of all Broward County households are at or below 200% of the Federal Poverty Level.

Language Indicator – Limited English Proficiency (LEP) is measured as percentage of households in which individuals over the age of five identify as not speaking English well or at all.

Rationale and Findings – Individuals that meet this indicator tend to rely more on active transportation as their primary means of transportation than the average English speaker. Just over 7% of households in the census tracts in Broward County identify as LEP. While the data indicates that 7% of the studied area have LEP, there are some tracts where more than 50% of persons meet this indicator.

Race Indicator – Non-white is measured as the percentage of all individuals not identifying as white and not of Hispanic origin. This includes people identifying as Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, or some other race.

Rationale and Findings – Racial or ethnic minorities are more likely to live in areas with poor or limited active transportation facilities, and tend to be more dependent on transit and active transportation. Broward County's non-white population represents 54% of the areas total population.

Education Indicator – This indicator represents the percentage of the population over 25 years of age that does not have a high school diploma or equivalent.

Rationale and Findings – Nationwide those without high school diplomas have the highest rates of walking and the second highest rates of bicycling to and from work. Twelve percent (12%) of Broward County's population does not have a high school diploma or equivalent.

Commute Indicator – Motor vehicle access is measured from a question on the American Community Survey about whether a household has access to one or more cars, trucks, or vans.

Rationale and Findings – Households with limited or no access to motor vehicles by necessity have to take advantage of other transportation options such as walking, bicycling, and transit. Eight percent (8%) of Broward County households meet this indicator.

Equity Analysis Indicator Maps

The individual equity indicators are combined to produce the composite equity map. Maps displaying the individual equity indicators are displayed in **Figure 34** to **Figure 39**. These maps illustrate the percentage of the Broward County's population that meet the criteria for each variable by census tract.[4]

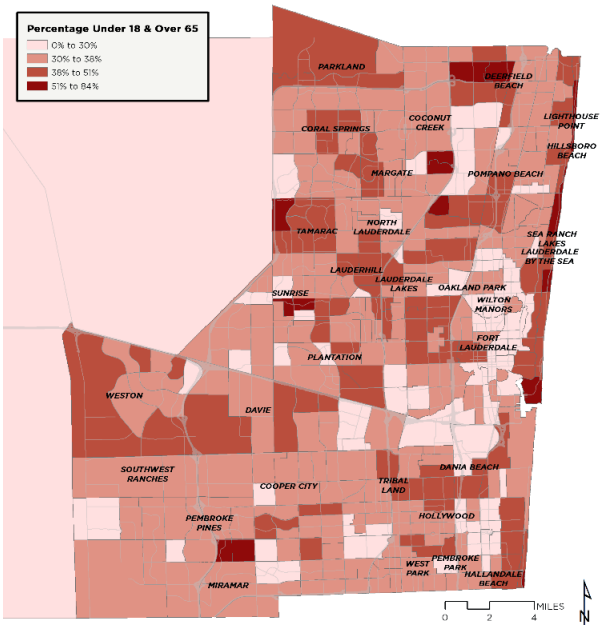


Figure 34. Percentage of Population under 18 and Over 65 Years of Age

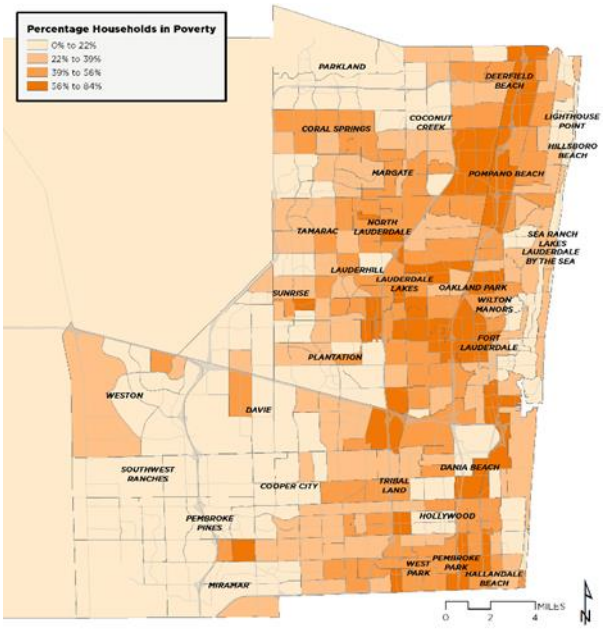


Figure 35. Percentage of Individuals of Working Age Living At or Below 200% Federal Poverty Level

[4] The statistical method used to create the percentage categories is Natural Jenks, which uses natural breaks in the data to create the four classes of percentages.

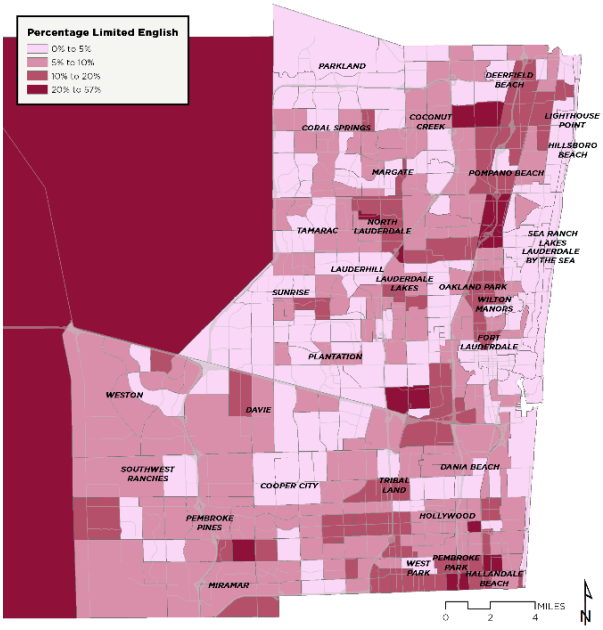


Figure 36. Percentage of Population with Limited English Proficiency

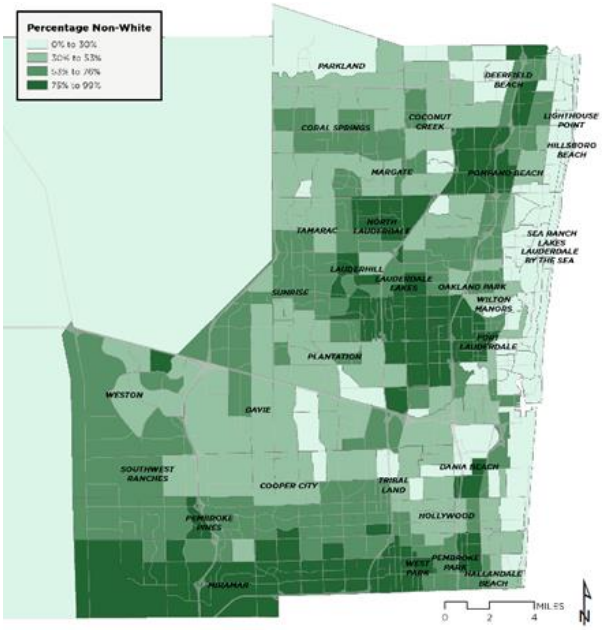


Figure 37. Percentage of Population that Identifies as Non-White

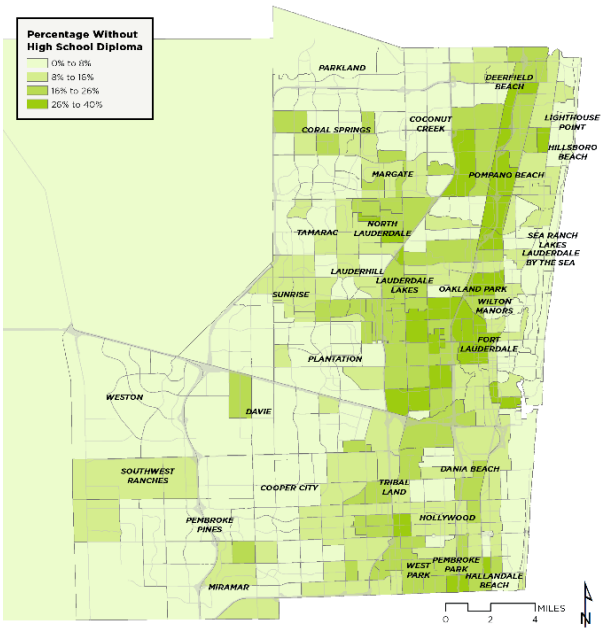


Figure 38. Percentage of Population Over 25 Years of Age Without a High School Diploma or Equivalent

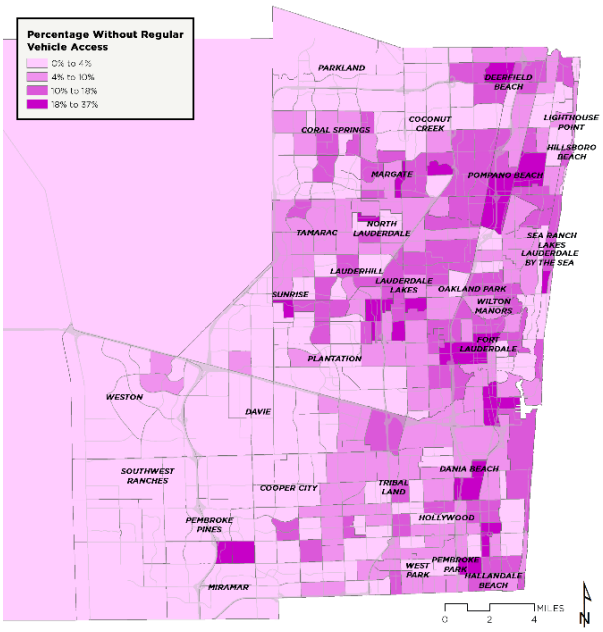


Figure 39. Percentage of Households without Regular Access to a Motor Vehicle

Composite Results

Demand Composite Results

The demand model's scoring method is a function of density and proximity. Areas that have more features and features that are closer together have higher scores. Low feature density areas and areas where features are further apart received lower scores. Composite demand is calculated by summing all five categories: Live, Work, Play, Learn, and Access to Transit. All categories are given the same weight in the Composite Map.

The analysis reveals high demand areas exist throughout the County, yet in a distributed manner with little areas of concentration. Areas with higher demand concentrations are located in Hallandale, Fort Lauderdale, Sunrise, Tamarac, and Coral Springs. Additional hotspots which are more distributed throughout the county are located in Deerfield Beach, Pompano Beach, Lauderhill, Dania Beach, and Davie. Many other hotspots are located in various geographic areas.

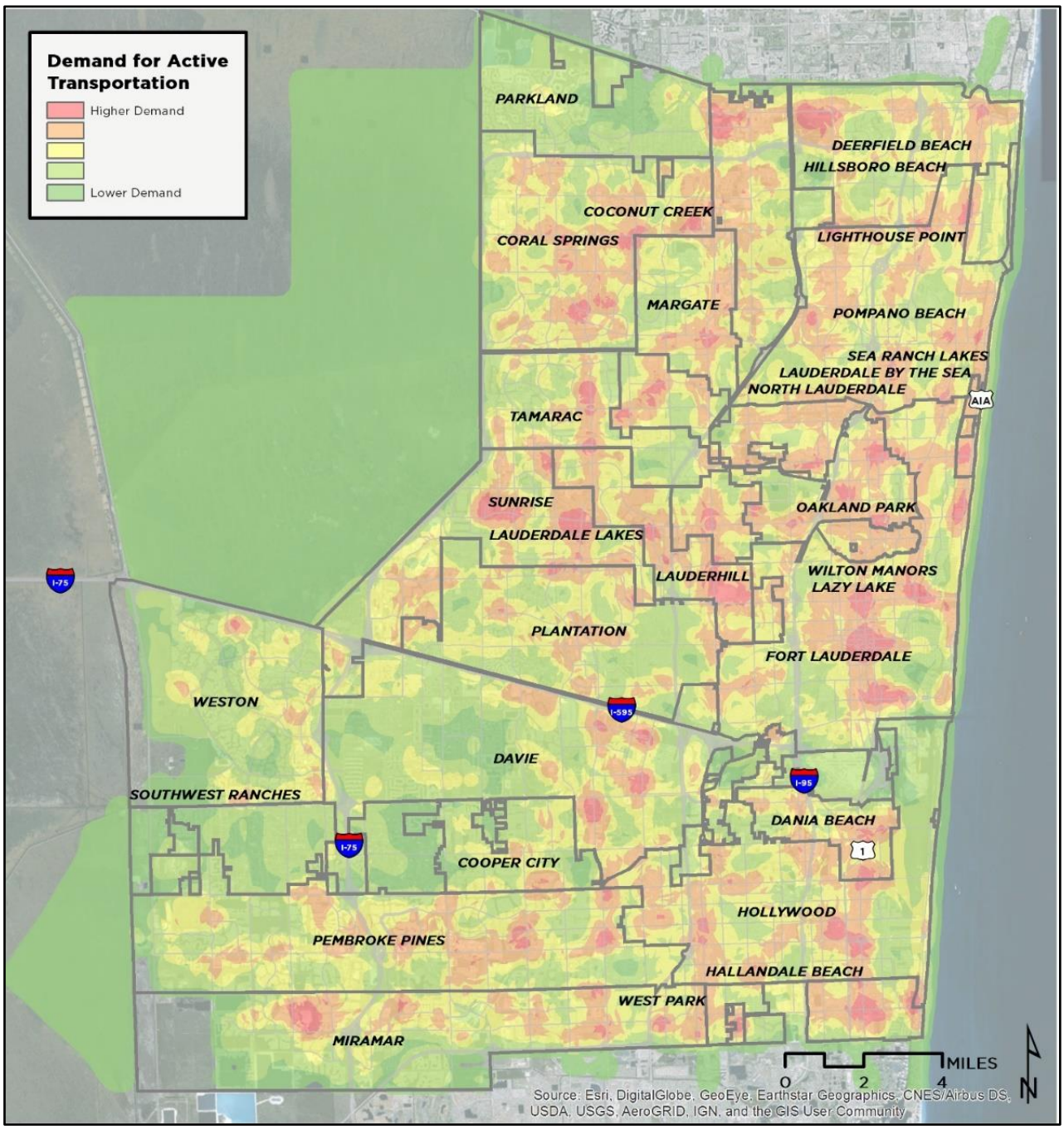


Figure 40. Composite Demand Map – Demand for Active Transportation

High Demand Map

Figure 41 reveals numerous disconnected hotspots throughout the county. Thus, some walk and bike thresholds for these areas may be relatively small due to their isolation. The High Demand Map illustrates where these hotspots are located throughout the county. These locations are concentrations of places where people may be willing to walk or bike and provide an indicator of potential locations for future improvements.

Transportation network improvements that are focused in high demand areas have the potential to increase the number of trips being made to destinations near these hot spots. Providing for safe, convenient and comfortable facilities will encourage people to bike or walk to these places rather than drive.

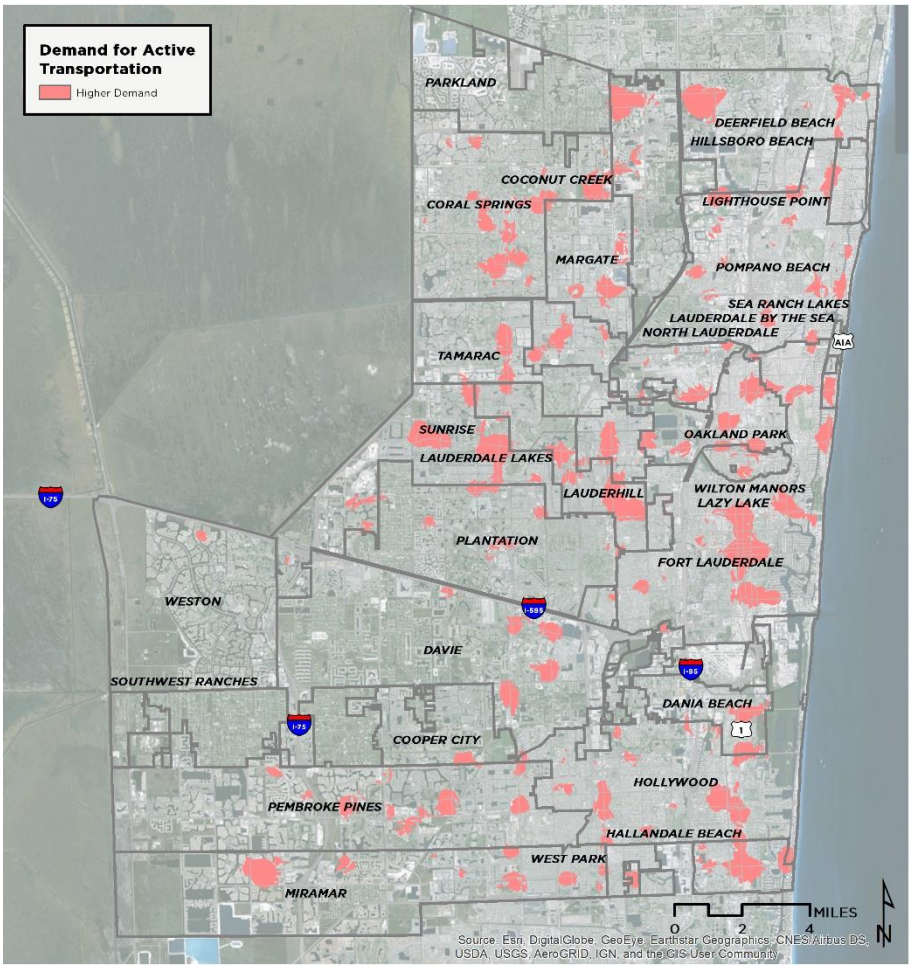
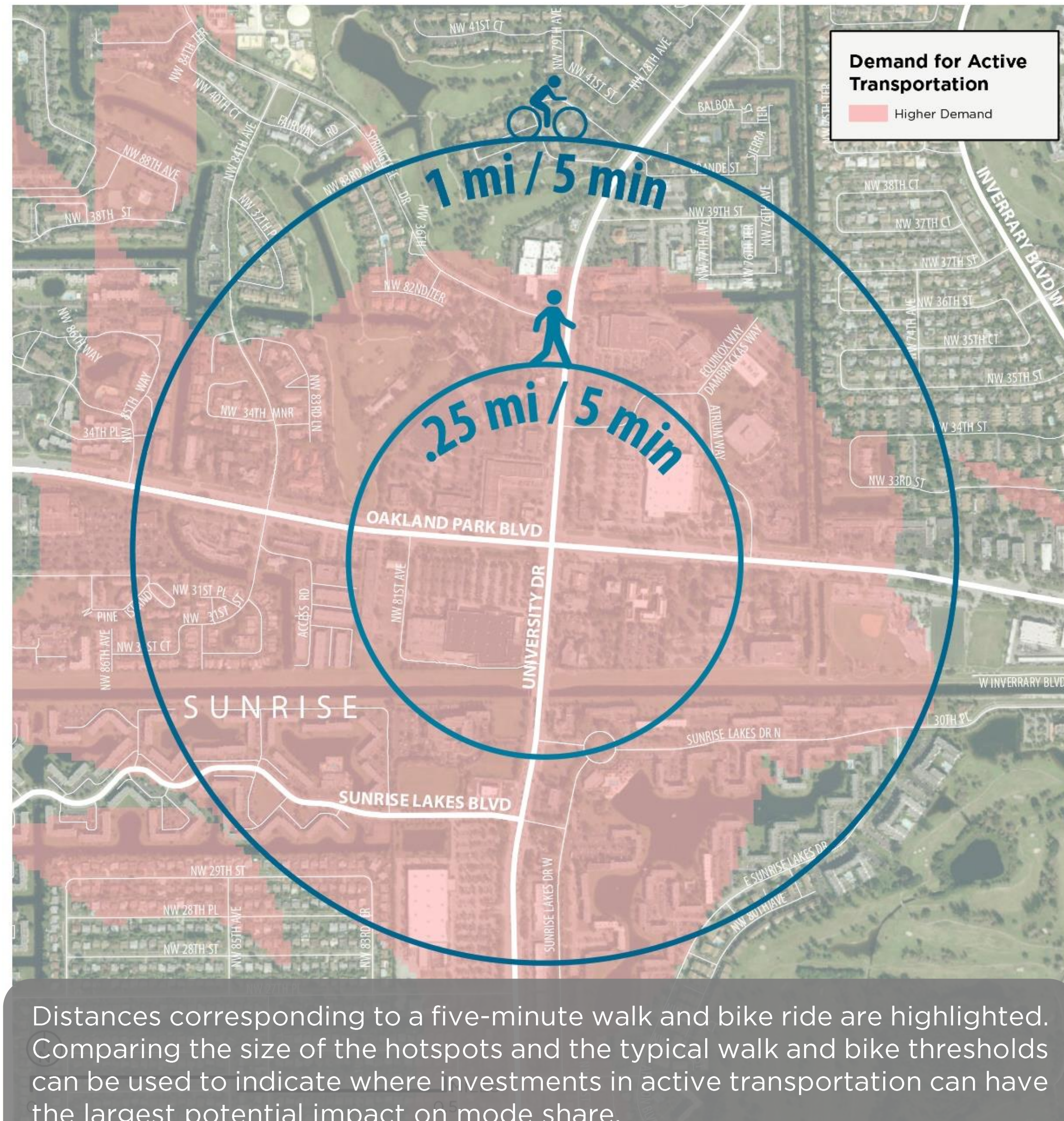


Figure 41. Demand for Walking and Biking High Demand Location Map



Distances corresponding to a five-minute walk and bike ride are highlighted. Comparing the size of the hotspots and the typical walk and bike thresholds can be used to indicate where investments in active transportation can have the largest potential impact on mode share.

Figure 42. Demand Snapshot – Sunrise, Florida

Equity Composite Results

The Composite Equity Map shown in **Figure 43** uses a four-tiered scale to show concentrations of the six vulnerable population indicators described in the previous section.[5] Red represents higher concentrations of the combined six characteristics, and green represents lower concentrations.

The composite equity analysis results identify areas that demonstrate a relative need for transportation investments based on concentrations of historically vulnerable populations. While this analysis does not directly assess access to existing walking and bicycling facilities, the results identify areas where more facilities may be needed, or where access to existing facilities should be improved. The project team will use the resulting composite equity map to identify focus areas for new investments that may address equity needs.

The analysis reveals high concentrations of vulnerable populations along the Interstate 95 Corridor from the northern border of Broward County south to Oakland Park, and between I-95 and the Florida Turnpike. Areas with large vulnerable populations include Lauderdale Lakes, Lazy Lakes, western Fort Lauderdale and a large area of Pompano Beach. There are additional concentrations of vulnerable populations located near Pembroke Pines, Miramar, Pembroke Park, West Park, Hallandale Beach, southwest Hollywood, and along the eastern portion of the Broward County/ Miami-Dade County border.

With the exception of one area in Hallandale Beach, the entirety of the Atlantic Coastline includes low concentrations of vulnerable populations.

[5] The composite map is developed based upon results for each census tract compared to all census tracts within Broward County. This isolates census tracts that have relative need identified through these indicators compared to other census tracts in the community. For each census tract, the composite equity score reflects the distance from the mean of the comparative geography.

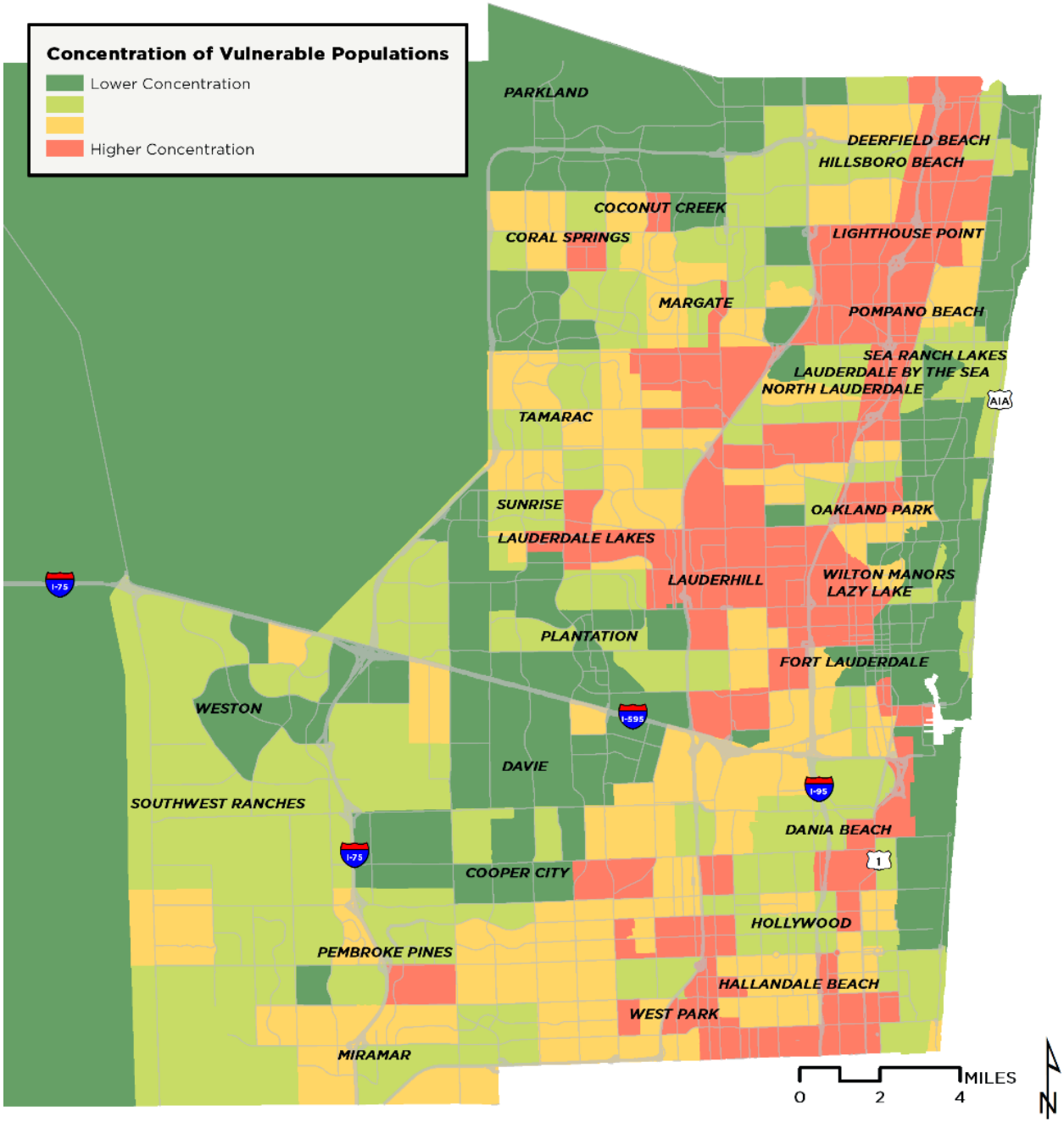


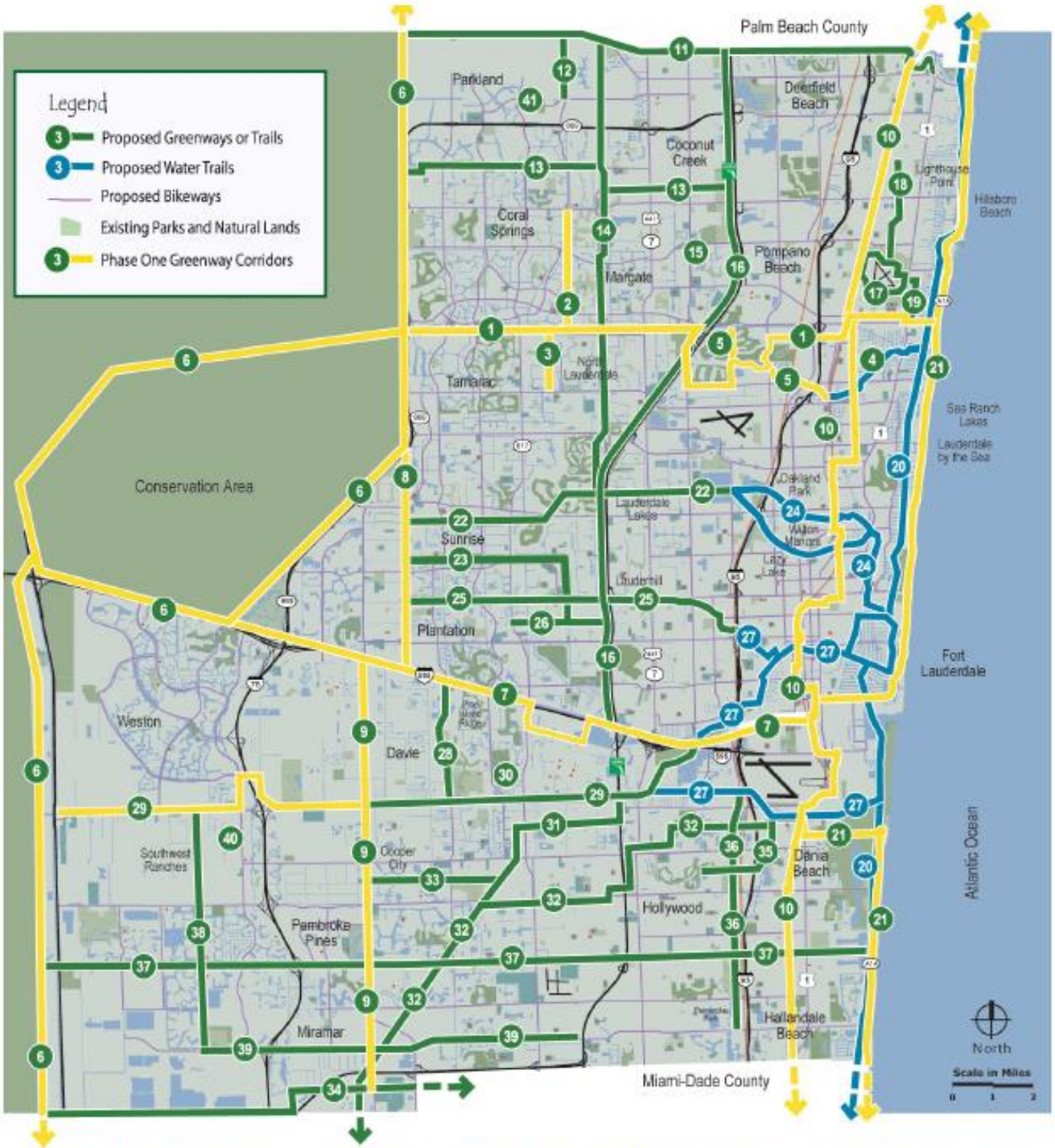
Figure 43. Composite Equity Map – Concentration of Vulnerable Populations

Greenways Integration

The *Broward Complete Streets Greenways Integration Study* identifies potential policy changes and strategies to provide a connected network of safe alternative modes of transportation and linking neighborhoods to each and other points of interest. The study was funded through a grant from the Florida Department of Economic Opportunity (FDEO). The study identified connectivity and accessibility opportunities, conducted municipal/agency outreach, identified common policies shared by greenways and Complete Streets, and identified strategies and recommendations to address deficiencies and needs.

The *Broward County Greenways Master Plan* outlines a fully-funded countywide network of bicycle and equestrian paths, nature trails and waterways that are safe and clean. The countywide greenway system will connect each neighborhood and provide opportunities, as well as alternative modes of transportation. The *Greenways Master Plan* contains over 370 miles of regional greenways, bikeways, land trails and water trails which resulted in 41 proposed corridors. Priority "phase one" corridors were identified during the planning process and form a framework that traverses all parts of the County. The *Broward County Greenways Master Plan* is shown in **Figure 44** and listed projects in **Table 8.**

Proposed development activities include pedestrian and bicycle friendly features such as paved trails, pedestrian bridges, narrowing of roads, widening of sidewalks, landscaping, signs, bike racks, air stations, drinking fountains and benches.



Note: The Broward County Greenways Master Plan map was produced in 2002 and therefore does not include "The Wedge", which has since been added as part of Broward County via agreement with Palm Beach County.

Figure 44. Broward Greenways Master Plan

Table 8. Broward Greenways Master Plan

Map Index*	Name	Approx. Length Miles	Location	Type
1	C-14 Canal / Cypress Creek Greenway	**12.9	C-14 Canal	Multipurpose Path
2	Riverside Dr. Canal Trail	1.5	Riverside Dr. Canal	Multipurpose Path
3	N. Lauderdale South Trail	2.8	Canal	Multipurpose Path
4	Snook Creek	3.0	Snook Creek Canal	Water Trail
5	Cypress Creek	3.0	Cypress Creek Canal	Multipurpose Path
6	Conservation Levee	48.4	Levee	Multipurpose Path
7	New River/SR 84 Greenway	11.7	SR 84/New River R.O.W.	Multipurpose Path
8	Hiatus Rd. C-42 Canal Trail	5.3	C-42 Canal	Multipurpose Path
9	Flamingo Road Trail	10.9	Flamingo Rd. R.O.W.	Multipurpose Path
10	Dixie Highway/FEC Trail	28.6	Dixie Hwy./FEC R.O.W.	M. Path, B. Lnes, Swalks
11	Hillsboro Canal Greenway	12.7	Hillsboro Canal	Multipurpose Path
12	Parkland Trail	1.7	Canal	Multipurpose Path
13	Creek/Springs FPL R.O.W. Trail	7.6	Power Easement	Multipurpose Path
14	Rock Island Road FPL R.O.W. Trail	11.1	Power Easement	Multipurpose Path
15	Coconut Creek Trails		City-wide	M. Path, B. Lnes, Swalks
16	Turnpike Greenway	17.1	Turnpike R.O.W.	Multipurpose Path
17	Pompano Air Park	4.4	Existing Path	Multipurpose Path
18	NE 15 Ave/SE 2 Ave Trail	2.5	NE 15th/SE 2 Ave. R.O.W.	Multipurpose Path
19	NE 26 Ave. Trail	1.5	NE 26 Ave. R.O.W.	Multipurpose Path
20	Intracoastal Waterway	19.7	Water Trail	Water Trail
21	SR A1A Trail	25.7	A1A R.O.W.	M. Path, B. Lnes, Swalks
22	C-13 Canal Trail	8.1	C-13 Canal	Multipurpose Path
23	Sunrise/Plantation Trail	5.0	Canal	Multipurpose Path
24	Middle River Trail	9.2	Water Trail	Water Trail
25	C-12 Canal Trail	6.5	C-12 Canal	Multipurpose Path
26	5th Ave. Trail	2.9	Canal	Multipurpose Path
27	New River Loop	25.0	Water Trail	Water Trail
28	Nob Hill Trail	3.0	Nob Hill R.O.W.	Multipurpose Path
29	Griffin/Orange Dr. Greenway	13.6	C-11 Canal	Multipurpose Path
30	Davie Trails		City-wide	M. Path, B. Lnes, Swalks
31	West Trail FPL R.O.W.	4.0	Power Easement	Multipurpose Path
32	Central Trail FPL R.O.W.	14.3	Power Easement	Multipurpose Path
33	Rock Creek FPL R.O.W.	3.0	Power Easement	Multipurpose Path
34	C-9 Canal Trail	9.6	C-9 Canal	Multipurpose Path
35	C-10 Canal Trail	3.2	C-10 Canal	Multipurpose Path
36	The CSX Trail	5.5	CSX R.O.W.	Multipurpose Path
37	Pembroke Pines / Hollywood Trail	13.6	Pines Blvd. R.O.W.	M. Path, B. Lnes, Swalks
38	172nd Ave. Trail	5.7	172 Ave. R.O.W.	M. Path, B. Lnes, Swalks
39	Miramar Parkway Trail	9.0	Miramar Parkway R.O.W.	M. Path, B. Lnes, Swalks
40	Southwest Ranches Equestrian Trails			Equestrian Trails
41	Parkland Trails		City-wide	M. Path, B. Lnes, Swalks

* Map Index for reference only. Numbers do not indicate priority ranking.
** 10.6 miles are along the C-14 Canal
Phase One Greenway Corridors

Chapter 5. Identification of Projects

The projects identified are based on Complete Streets principles that range from sidewalks, crosswalks and bicycle lanes to complete reconstruction of certain streets following low speed design principles that create safe streets at a human scale.

Complete Streets Identification

From the Transportation Network Analysis, the gap, demand, and equity analysis are objective, data driven processes that led into the identification of projects. Project Bundles shown in **Figure 46** were created based on the higher demand for walking and biking and high concentration of vulnerable populations. Within the Bundle Area, Complete Streets projects were identified to align the analysis with how users walk and bike within a certain distance. **Figure 45** displays the typical walking and biking access shed for pedestrians and bicyclists. To create a more walkable and bikeable community, concentrating transportation investments in Bundle Areas of Complete Streets projects can increase active transportation. Typically, many people do not walk farther than a 1-mile radius or bike farther than a 3-mile radius. It is more impactful to build a dense network of Complete Streets in Bundle Areas to help the community become more walkable and bikeable. **Table 9** shows the municipalities associated with the Bundle Areas.

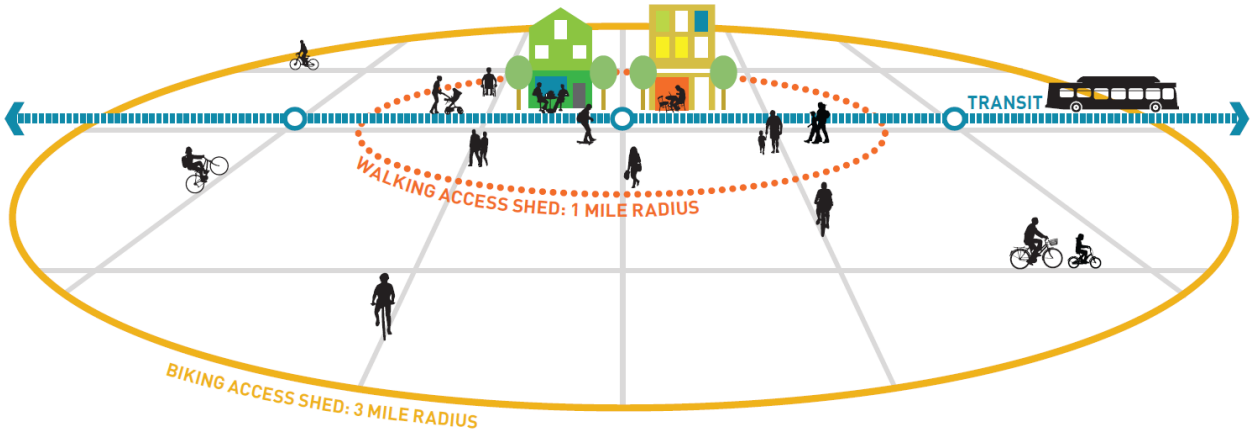


Figure 45. Walking/Biking Access Shed

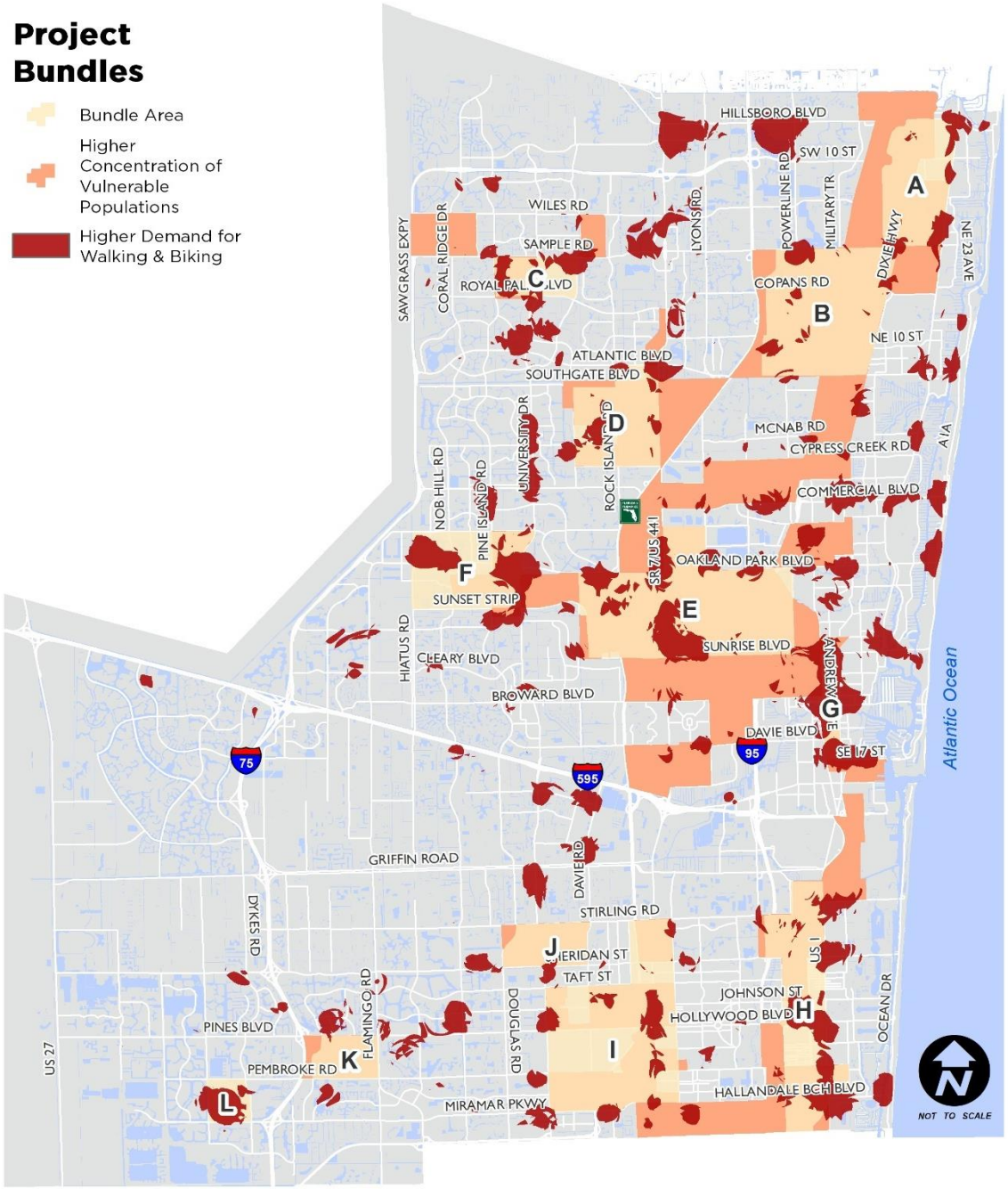


Figure 46. Project Bundles

Table 9. Project Bundles

Bundle Area	Municipalities	Bundle Area	Municipalities
A	Deerfield Beach	G	Fort Lauderdale
	Pompano Beach	H	Dania Beach
B	Pompano Beach		Hollywood
C	Coral Springs		Hallandale Beach
D	North Lauderdale	I	Tribal Land
	Margate		Hollywood
E	Fort Lauderdale		Pembroke Pines
	Lauderdale Lakes		Miramar
	Lauderhill		West Park
	Plantation	J	Davie
	Sunrise		Cooper City
	Oakland Park		Hollywood
	Wilton Manors	K	Pembroke Pines
F	Sunrise	L	Miramar

Super Connectors connect the Bundle Areas and to existing facilities as shown in **Figure 47**. They are strong, well-connected corridors that are accessible to one another. **Figure 47** depicts the Complete Streets projects and Super Connectors as on-and-off-system roads. **Figure 48** depicts the projects by proposed and programmed. Proposed projects are projects not included in the FDOT Five Year Work Program (FY 18-22) and/or projects included in the FDOT Five Year Work Program that do not include the Complete Streets Master Plan scope of work. Programmed projects are projects included in the FDOT Five Year Work Program that correspond with the

Complete Streets Master Plan scope of work. **Appendix B** includes the project recommendations in detail.

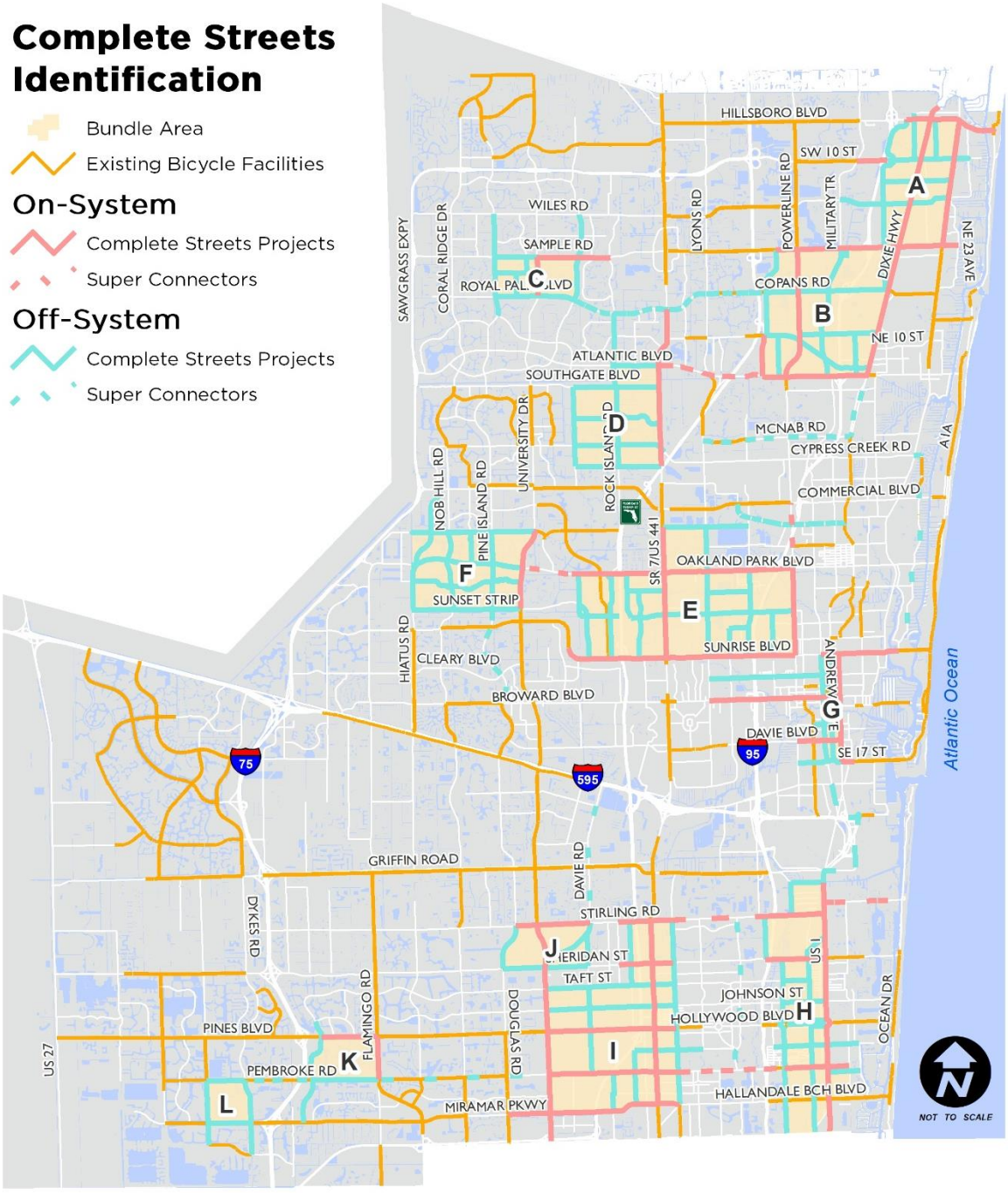


Figure 47. Complete Streets Identification – on-and-off-system roads

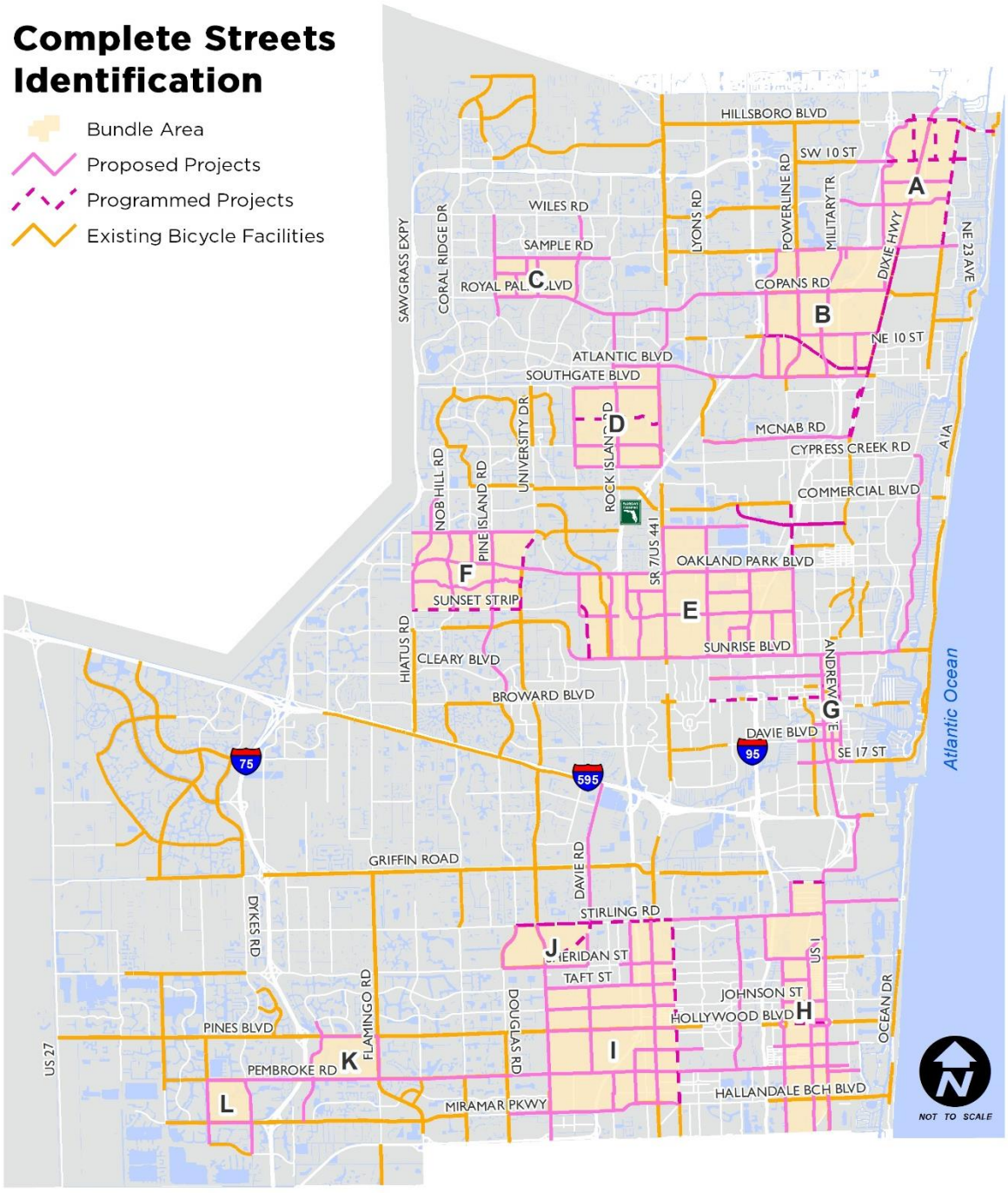


Figure 48. Complete Streets Identification – proposed/programmed

The characteristics of the Complete Streets Projects and Super Connectors will improve access to transit as shown in **Figure 49**. These facilities will provide direct access to transit connections.

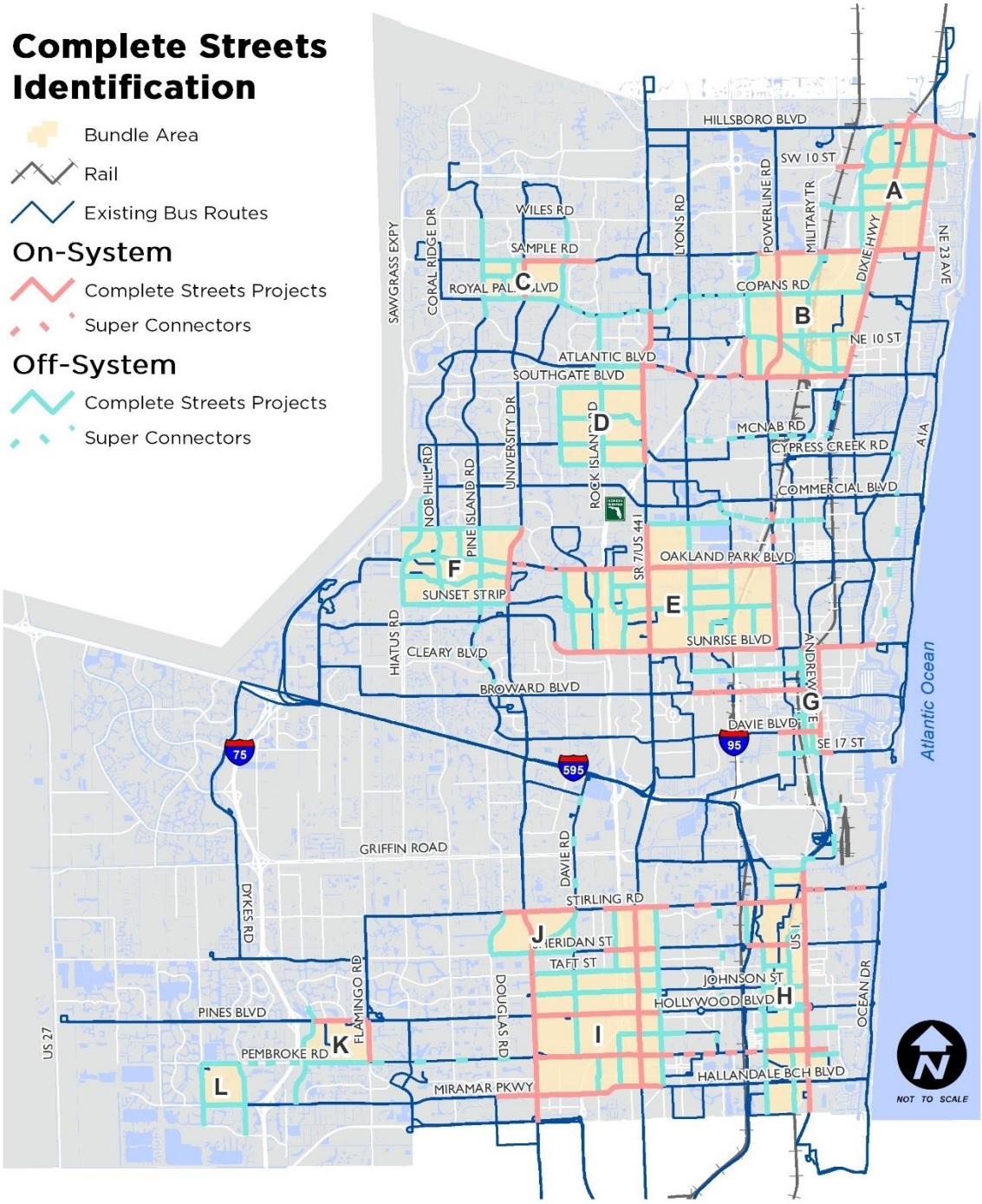


Figure 49. Complete Streets Identification – Transit/Rail

Systemwide Lane Elimination Analysis

A systemwide lane elimination (LE) analysis was conducted to review potential impacts of known lane elimination projects that have been proposed in other planning studies within Broward County. Lane elimination, also referred to as a road diet or lane repurposing, is one of many implementation strategies that communities can use to integrate Complete Streets elements. Implementation of lane elimination projects provide an opportunity to reconfigure the existing typical section of a roadway to repurpose space for other uses, which may include bike lanes, on-street parking, transit lanes, wider sidewalks, and street trees. If coordinated with an existing reconstruction or resurfacing project already in the Work Program, a lane elimination can also provide a low-cost option for implementing a Complete Street.

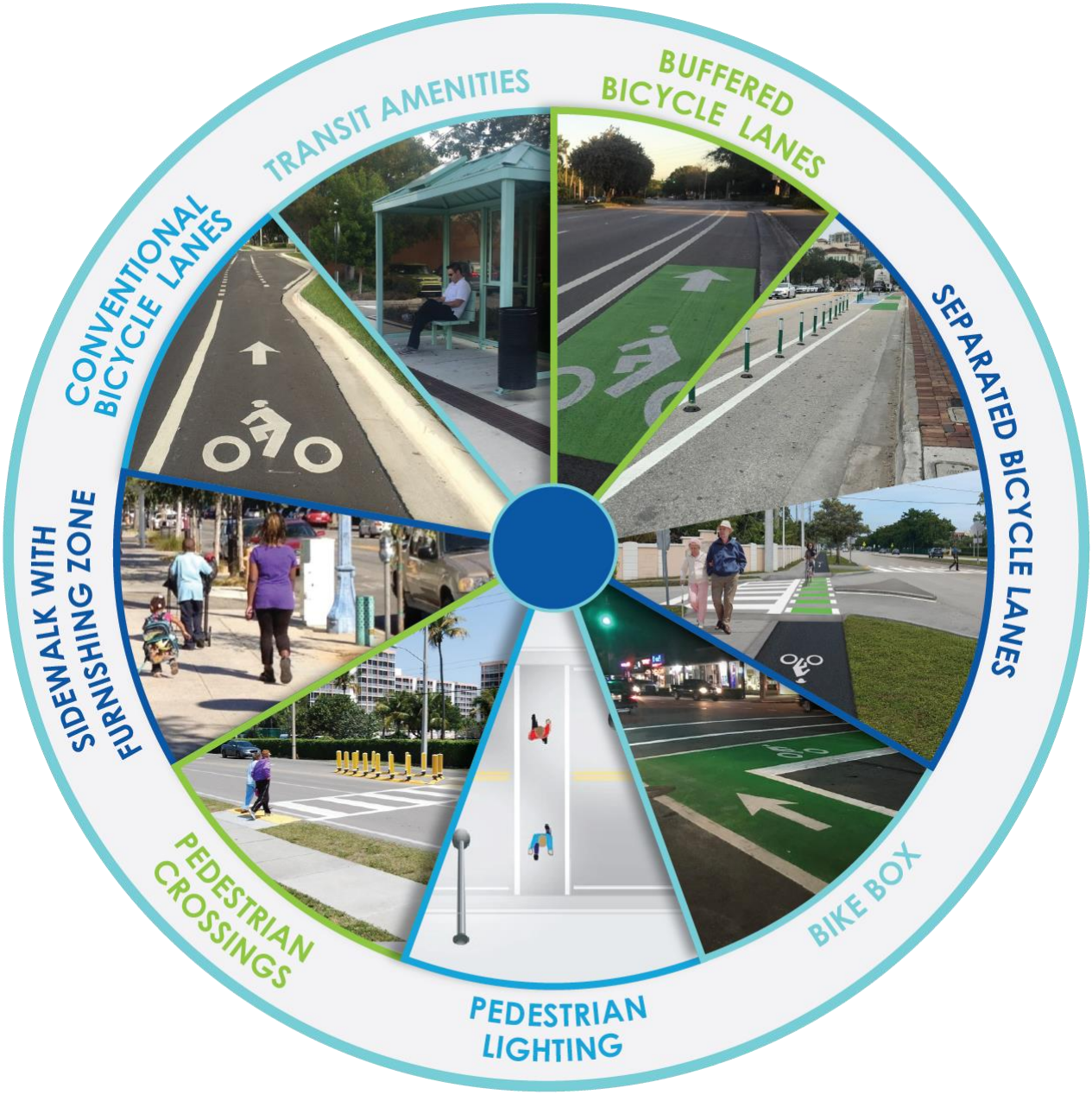
The travel demand modeling results of the systemwide lane elimination analysis show that total crash costs are expected to decrease by approximately -0.4% if all the known proposed lane eliminations are implemented in Broward. The lane eliminations are expected to result in a slight reduction in driving as a mode choice, while total travel time does increase by a marginal amount of approximately 0.5% countywide. This is the equivalent of an extra 6 seconds on an average 20-minute driving trip. **Appendix C** includes the systemwide lane elimination analysis in detail.

METRICS	COST FEASIBLE PLAN 2040	COST FEASIBLE PLAN 2040 + LE	DIFFERENCE
Vehicle Miles Traveled (VMT)	45,014,089	44,899,530	-0.254%
Vehicle Hours Traveled (VHT)	1,258,690	1,265,380	0.532%
Total Accident Costs	$3,699,378.21	$3,683,972.47	-0.416%

Each lane elimination project must undergo a separate traffic study to determine more localized impacts and benefits, which must ultimately be approved by the ownership/maintaining jurisdiction.

Infrastructure ToolKit

The Complete Streets Projects and Super Connectors as shown in **Figure 47**, **Figure 48**, and **Figure 49** identify a variety of infrastructure recommendations. The following section defines the key transportation infrastructure related to the Complete Streets Master Plan.



Conventional Bicycle Lanes

Bicycle lanes are one-way treatments that typically carry bicycle traffic in the same direction as adjacent motor vehicle traffic. Conventional bicycle lanes provide the exclusive or preferential use of bicyclists on a roadway and are either 5-foot or 4-foot.

Buffered Bicycle Lanes

Buffered bicycle lanes include the width of the bicycle lane and a double 6-inch white edge line separating the bike lane and the adjacent travel lane. This buffer enhances safety and encourages greater use of on-street bicycle networks. A buffered bicycle lane should not exceed seven feet in width including the buffer.

Separated Bicycle Lanes

Separated bicycle lanes are located between vehicles and the curb. It is constructed at the roadway level and offers a protected environment from the vehicles. Separated bicycle lanes are usually separated from traffic through various buffers, including parked vehicles, a curb or median and bollards or planters.

Raised Separated Bicycle Lanes

Raised separated bicycle lanes provide an elevated surface for bicycle riders. The elevated surface provides bicycles and their riders more visible to drivers and helps to keep vehicles from driving in the bicycle lane. This protects space for bicyclists in order to improve perceived comfort and safety.

Bike Box

A bicycle box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase. This treatment should be considered on streets where there is a high number of left-turning bicyclists and/or right-turning vehicles.

Pedestrian Lighting

Pedestrian lighting can be used to promote security and encourage use of the area after dark. Pedestrian-scale lighting differs from standard road lighting in a variety of ways because it is closer to the ground. Pedestrian specific lighting includes, but is not limited to, intersection lighting, paseo lighting, and public art lighting.

Pedestrian Crossings

Pedestrian crossings reinforce walkability and have the potential to fuel greater demand. Signalized or stop-controlled pedestrian crossings are recommended to improve the safety and comfort for people walking. The pedestrian crossings need to be based on their surrounding context, speed and overall roadway width.

Sidewalk with Furnishing Zone

Furnishing Zones exist between the Pedestrian Zone (sidewalks) and the Curb Zone. It serves as the primary separation of people on the sidewalk from vehicular traffic. The Furnishing Zone includes, but it is not limited to, landscaping, street trees, furniture, litter and recycling bins, transit shelters, utility equipment, and parking meters where space permits.

Transit Amenities

Transit amenities, including, but not limited to, shelter, seating, lighting, side panels, trash can, bike racks should be considered for enhanced bus corridors and high ridership corridors.

Traffic Calming

Traffic calming measures can help to transform streets and aid in creating a sense of place for communities. The following are tools to encourage motorists to drive at target speeds.

- Median
- Pinchpoint
- Chicane
- Lane Shift
- Speed Hump
- Traffic Circle/Roundabout
- On-Street Parking

Comprehensive 5E Model

Non-engineering recommendations were included in the Master Plan as shown in **Appendix D**.

Conceptual Designs

The Complete Streets Identification Chapter identified 152 Complete Streets Projects and Super Connectors that will promote active transportation in Broward County. Conceptual design graphics provides visual representation of how these projects can be implemented.

Photo Credit: Kimley-Horn, City of Chicago

NW 26th Street from NW 49th Avenue to SR 7/US 441

EXISTING CONDITIONS

Length: 0.87 Miles

Roadway: 2-Lane Undivided & Drainage Swale

Speed Limit: 25 MPH

PROPOSED IMPROVEMENT

A Green Color Bicycle Lanes

B Marked Crosswalk

C Sidewalk Connectivity

NW 64th Avenue/NW 19th Street from Oakland Park Boulevard to NW 52nd Avenue

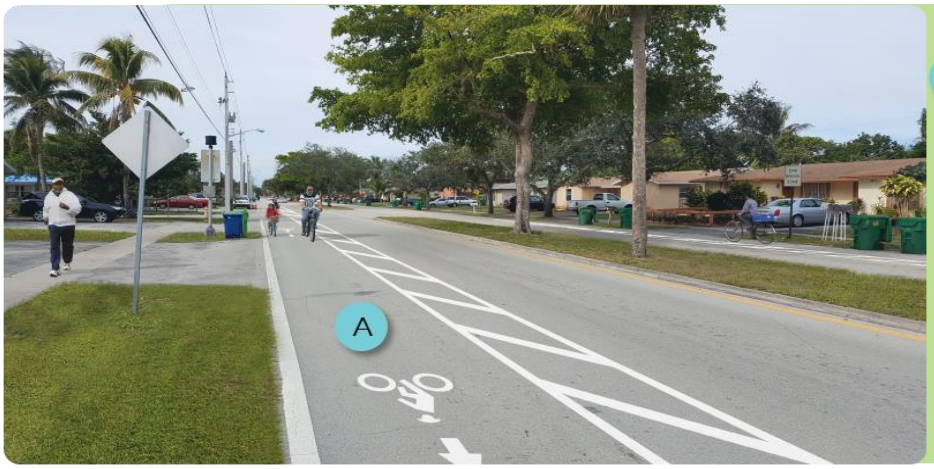
EXISTING CONDITIONS

Length: 1.90 Miles

Roadway: 4-Lane Divided & Drainage Swale

Speed Limit: 30 MPH

PROPOSED IMPROVEMENT OPTION A



A Buffered Bicycle Lanes

PROPOSED IMPROVEMENT OPTION B

A Increased Width of the Pedestrian Zone

B Furnishing Zone

C Buffered Bicycle Lanes

SW 81st Avenue from NW 62nd Street to Southgate Boulevard

EXISTING CONDITIONS

Length: 1.90 Miles

Roadway: 4-Lane Divided & Drainage Swale

Speed Limit: 40 MPH

PROPOSED IMPROVEMENT

- A — Increased Width of the Pedestrian Zone
- B — Raised Separated Bicycle Lane
- C — Forced-Turn Islands also called right-turn islands or pork chops
- D — Continuous Furnishing Zone
- E — Pedestrian Crossing

SW 7th Street from SW 4th Avenue to US 1

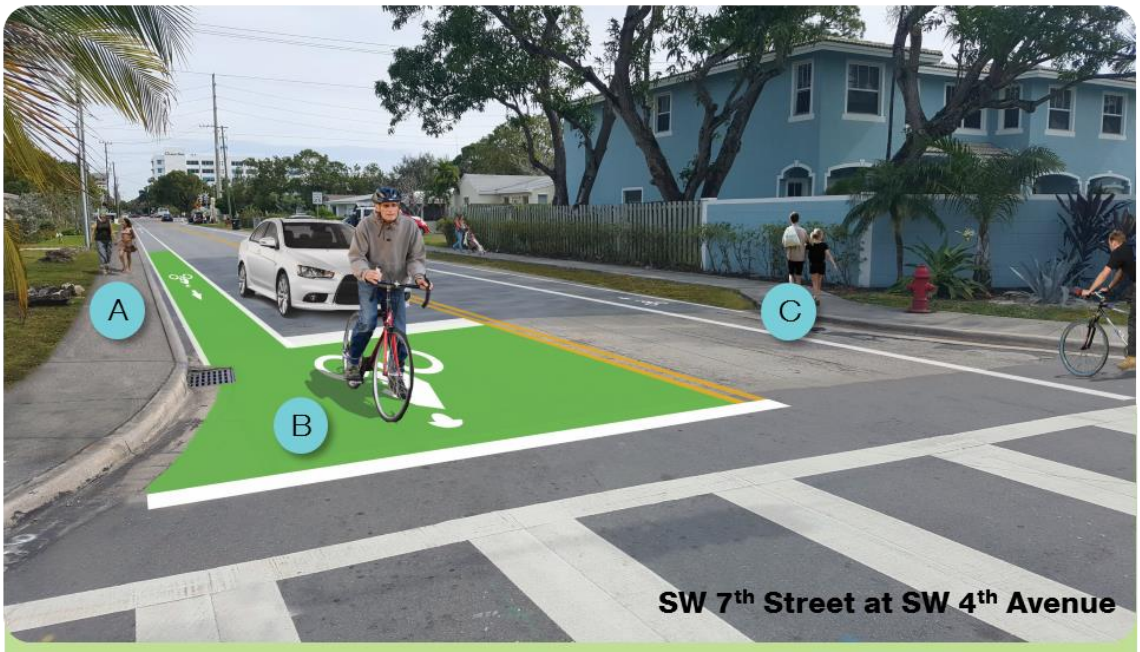
EXISTING CONDITIONS

Length: 0.63 Miles

Roadway: 2-Lane Undivided & Drainage Swale/ Curb & Gutter

Speed Limit: 25 MPH

PROPOSED IMPROVEMENT



A Continuous Sidewalk

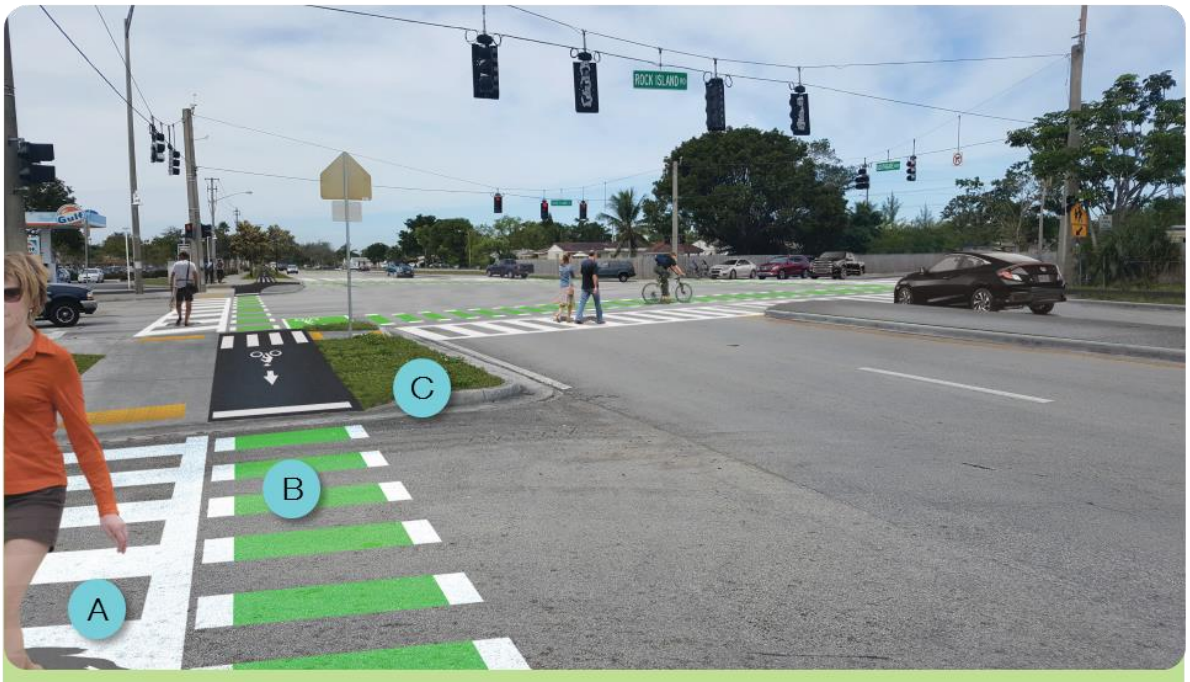
B Bike Box

C Conventional Bicycle Lanes

Rock Island Road at Southgate Boulevard

EXISTING CONDITIONS

PROPOSED IMPROVEMENT



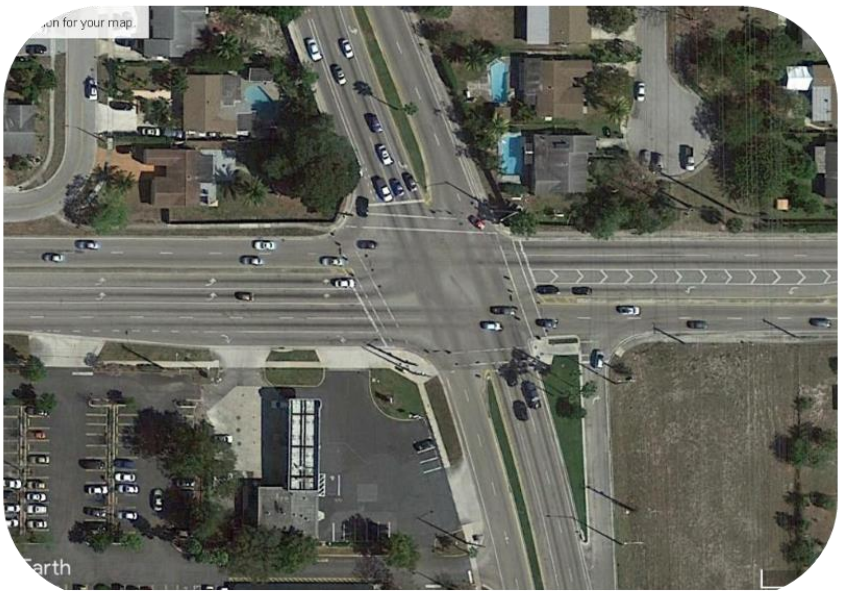
A Marked Crosswalk

B Raised Separated Bicycle Lane

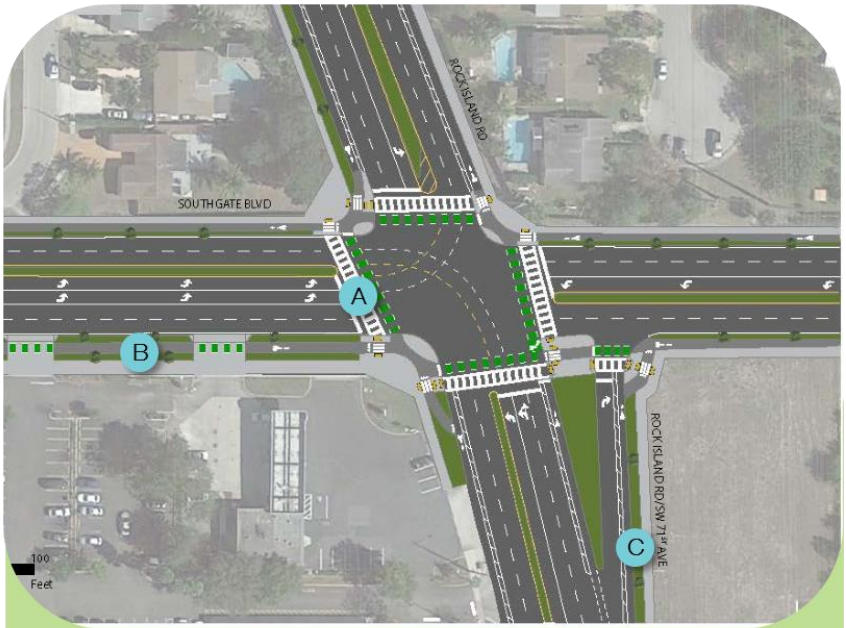
C Furnishing Zone

Rock Island Road at Southgate Boulevard Plan View

EXISTING



PROPOSED



A Marked Crosswalk

B Raised Separated Bicycle Lane

C Furnishing Zone

Greenways

The Broward County Greenways Master Plan contains over 370 miles of regional greenways, bikeways, land trails and water trails. The network of greenways provides a regional backbone which may serve as a foundation for the local trail networks. The Complete Streets Master Plan will complement the Greenways Master Plan by providing connectivity and access improvements. In addition, some unfunded recommendations such as implementing buffered and conventional bicycle lanes that are constrained by available right-of-way may be replaced by adjacent and parallel greenways corridors. Seven (7) proposed greenways or trails were identified as parallel facilities to complement the Master Plan as shown in **Table 10** and **Figure 50**. **Appendix B** includes the project recommendations in detail with the greenways and trails recommendations.

Table 10. Greenways

Name	Approx. Length (Miles)	Location	Type
Dixie Highway/FEC Trail	28.6	Dixie Hwy/FEC R.O.W.	Multipurpose Path; Bicycle Lanes; Sidewalks
Rock Island Road FPL R.O.W. Trail	11.1	Power Easement	Multipurpose Path
Turnpike Greenway	17.1	Turnpike R.O.W.	Multipurpose Path
C-13 Canal Trail	8.1	C-13 Canal	Multipurpose Path
C-12 Canal Trail	6.5	C-12 Canal	Multipurpose Path
C-14 Canal/Cypress Creek Greenway	12.9	C-14 Canal	Multipurpose Path
Pembroke Pines/Hollywood Trail	13.6	Pines Blvd. R.O.W.	Multipurpose Path; Bicycle Lanes; Sidewalks

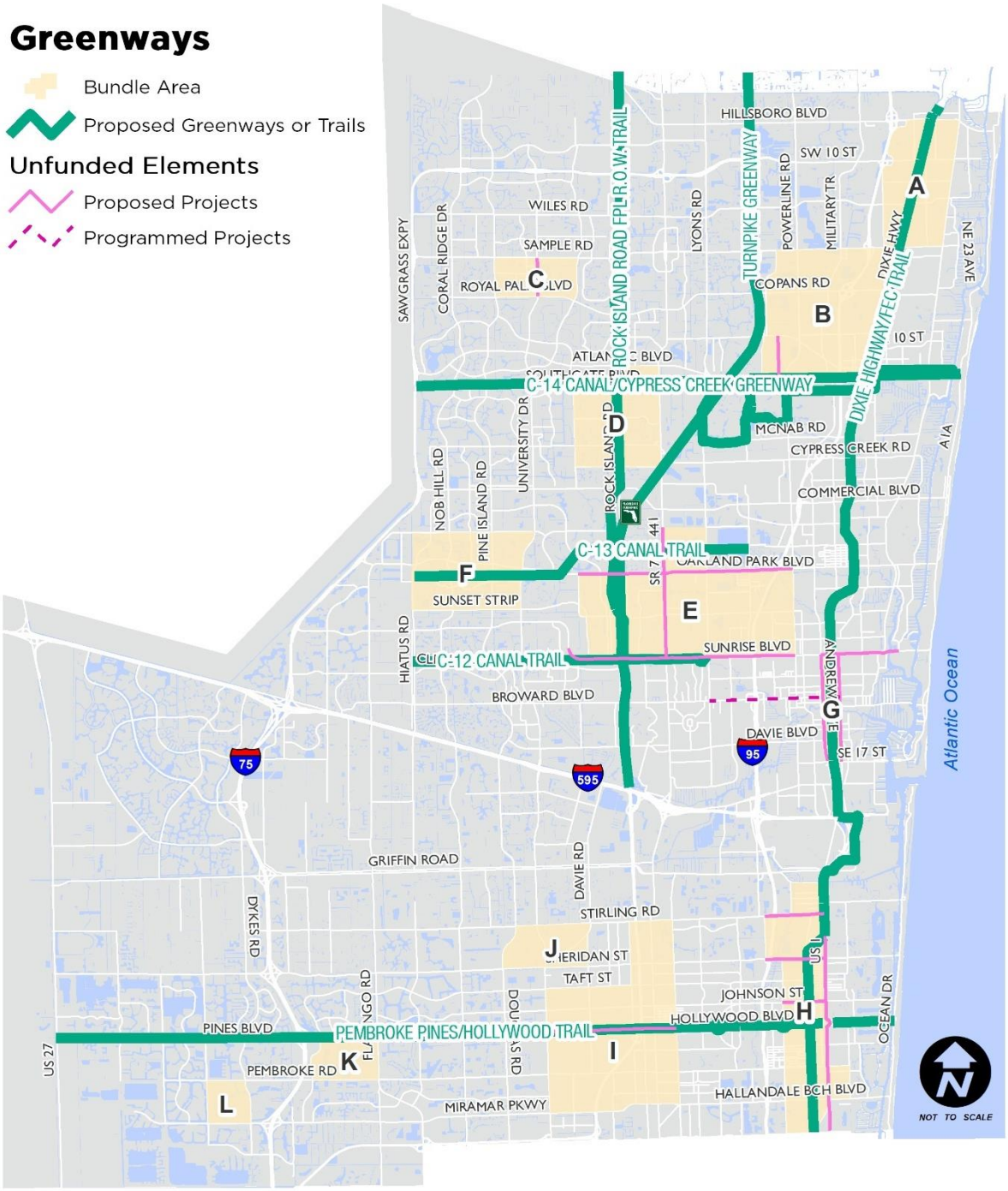


Figure 50. Greenways

Chapter 6. Project Prioritization & Recommendations

Prioritization is the process of scoring and ranking the Complete Streets projects and Super Connectors based on identified criteria or variables. The criteria are consistent with the goals and objectives established in *Commitment 2040 LRTP – Move People, Create Jobs, and Strengthen Communities* and builds upon the format and content of the CSLIP evaluation criteria.

COMMITMENT 2040 move people • create jobs • strengthen communities

COMPLETE STREETS AND OTHER LOCALIZED INITIATIVES PROGRAM EVALUATION CRITERIA

Total points range in value between 80 – 400. Final results can be filtered and/or sorted by sponsor type, agency type, program category, cost, etc.

	CONNECTIVITY		MOBILITY		SAFETY		ECONOMIC DEVELOPMENT	
	Activity Centers (½ mile buffer)	Connection to Existing Facility	Traffic Volume/Lane (200ft buffer)	Transit Boardings (¼ mile buffer)	Non-Vehicular Crashes (200ft buffer)	Vehicular Crashes (200ft buffer)	Low Income Population (½ mile buffer)	Employment-Population Proportion (½ mile buffer)
COMPLETE STREETS (e.g., bike lane, sidewalk, transit shelter, etc.)	Projects analyzed and awarded points based on the total number of activity centers (per Broward County data source) within the buffer.	Projects analyzed and award points based on its termini connection to an existing, like facility. Staff may conduct field reviews to verify connections.	Projects analyzed and awarded points based on traffic volume per lane within the buffer.	Projects analyzed and awarded points based on daily transit boardings occurring within the buffer.	Projects analyzed and awarded points based on total number of **pedestrian** and **bicycle crashes** occurring within the buffer during a five-year period.	Projects analyzed and awarded pointed based on total vehicular crashes occurring within the buffer during a five-year time period.	Projects analyzed and awarded points based on the percentage of the low income population within the buffer.	Projects analyzed and awarded points based on the proportion of the total employment and population within the buffer area.
SAFETY & SECURITY (e.g., traffic calming, intersection reconfig., etc.)								
SUSTAINABILITY INITIATIVES (e.g., Mobility Hub, greenway, etc.)	Scale 3+ 50 points 1-2 30 points 0 10 points	Scale 2 sides 50 points 1 side 30 points 0 sides 10 points	Scale 10 - 50 points Volume/lane 10 30 50 Points	Scale 10 - 50 points Boardings 10 30 50 Points	Scale 10 - 50 points Accidents 10 30 50 Points	Scale 10 - 50 points Accidents 10 30 50 Points	Scale 10 - 50 points Low Income 10 30 50 Points	Scale 100:0 Emp.-Pop. 10 points 90:10 Emp.-Pop. 20 points 80:20 Emp.-Pop. 30 points 70:30 Emp.-Pop. 40 points 60:40 Emp.-Pop. 50 points 50:50 Emp.-Pop. 50 points 40:60 Emp.-Pop. 50 points 30:70 Emp.-Pop. 40 points 20:80 Emp.-Pop. 30 points 10:90 Emp.-Pop. 20 points 0:100 Emp.-Pop. 10 points
TECHNOLOGY ADVANCEMENTS (e.g., ITS, upgraded signalization, etc.)	Data Source Broward County (2013)	Data Source Field Review / Google Earth	Data Source Broward MPO (2013)	Data Source BCT and SFRTA (2014)	Data Source *Signal Four*, University of Florida (2012-2016)	Data Source *Signal Four*, University of Florida (2012-2016)	Data Source: ACS 2012, 5-year average (Census Block Group)	Data Source SERPM 7.0 (2010)
Type of Analysis	Summation Points, 10, 30, and 50, are awarded based on the total number of activity centers observed within the buffer area.	Discrete Points, 10, 30, and 50, are awarded based on the number of connections to existing, like facilities.	Ordinal The observed data within the buffer area are sorted from the highest to lowest value and assigned a rank order from "1" to the maximum number of projects. If projects have the same data value, the same rank is assigned. These ranks are then 'normalized' and points, between 10 and 50, are awarded.					Proportion Points, between 10 and 50, are awarded based on the proportion of employment to population within the buffer area.

Prioritization Criteria

CONNECTIVITY

Activity Centers[1]

	POINTS
Project corridor connects to 3 or more activity centers.	1
Project corridor connects to 1-2 activity centers.	0.5
Project corridor does not connect to an activity center.	0

Data Source
Broward MPO CSLIP & Broward County GIS
http://www.browardmpo.org/index.php/major-functions/complete-streets-localized-initiatives-program

Future Land Use Plan[2]

Project corridor is within an area that will likely generate or attract non-motorized trips.	1
Project corridor is not within an area that will likely generate or attract non-motorized trips.	0

Data Source
Broward County GIS

Walk Score

Walk Score/100	0-1

Data Source
https://www.walkscore.com/

MOBILITY

Transit Ridership[3]

	POINTS
Project corridor's daily boarding and alighting is greater than 600.	1
Project corridor is within the daily boarding and alighting from 475 to 600.	0.75
Project corridor is within the daily boarding and alighting from 350 to 475.	0.5
Project corridor is within the daily boarding and alighting from 125 to 350.	0.25
Project corridor's daily boarding and alighting is less than 125.	0

Data Source
Broward MPO CSLIP
http://www.browardmpo.org/index.php/major-functions/complete-streets-localized-initiatives-program

Total Activity Count

Project corridor AADT is greater than 44,000	1
Project corridor AADT is from 23,501 to 44,000	0.75
Project corridor AADT is from 11,651 to 23,500	0.5
Project corridor AADT is from 5,100 to 11,650	0.25
Project corridor AADT is less than 5,100	0

Data Source
FDOT Average Annual Daily Traffic (AADT) 2016
http://www.fdot.gov/planning/statistics/gis/

[1]Activity Centers includes School, College, Hospital, Library, City Hall, and Parks.
[2]Future Land Use Plan includes Activity Centers, Medium (16) Residential, Medium-High (25) Residential, High (50) Residential, and Commerce.
[3]Transit Ridership is based on the Boarding and Alighting per stop.

SAFETY

POINTS

Pedestrian/Bicycle Crashes

Project corridor is within a Pedestrian and/or Bicycle Hot Spot.	1
Project corridor is not within a Pedestrian and/or Bicycle Hot Spot.	0

Data Source
Bicycle and Pedestrian Safety Action Plan (Crash Data 2010-2014)

Intersection/Crossing Density

Project corridor is within a low density of traffic signals.	1
Project corridor is within a medium density of traffic signals.	0.5
Project corridor is within a high density of traffic signals.	0

Data Source
Broward County GIS

ECONOMIC DEVELOPMENT

POINTS

Equity[4]

Project corridor is within a higher concentration of vulnerable populations.	2
Project corridor is within a medium to high concentration of vulnerable populations.	1.5
Project corridor is within a medium concentration of vulnerable populations.	1
Project corridor is within a low to medium concentration of vulnerable populations.	0.5
Project corridor is within a lower concentration of vulnerable populations.	0

Data Source
American Community Survey (ACS) 5-year estimates (2011-2015)

Equitable Healthography[5]

Project corridor is within both of the areas characterized by health equity deficiencies.	1
Project corridor is within one of the areas characterized by health equity deficiencies.	0.5
Project corridor is not within an area characterized by health equity deficiencies.	0

Data Source
Anthony Olivieri of FHEED, LCC as a partner of TOUCH Broward, supported by Cooperative Agreement Number, 1U58DP005790-02 funded by the Centers for Disease Control and Prevention

[4]Equity analysis includes the composite of Age, Race, Income, Educational Attainment, Limited English Proficiency, and Access to a Vehicle. The ranges of the concentration are based off of the means for each composite.
[5]Equitable healthography includes Diabetes and Unhealthy Food Index.

The Complete Streets Master Plan prioritization criteria build upon the same theme as the CSLIP evaluation criteria. The criteria between the two differ slightly but fit within the same theme and the maximum score for the prioritization criteria is 10.

Prioritization Analysis

Based on the prioritization criteria, **Table 11** and **Figure 51** depicts the bundle area rankings. **Appendix E** includes the ranked projects and pertinent fields such as the project bundle, roadway name, limits, super connectors, length (mile), recommendation, unfunded recommendation, individual prioritization criterion, type, lane elimination, state road and county road. It is noted that the project corridor can cross multiple ownership such as state and county road. **Appendix F** includes the ranked projects similarly to Appendix E without the individual prioritization criterion. Budget estimates have been prepared for each project and are contained in **Appendix G**. These budget estimates are for planning purposes only and do not take into consideration specific construction, maintenance, implementation costs or aesthetics.

Table 11. Bundle Area Rankings

Rank	Bundle Area	Average Score	Rank	Bundle Area	Average Score
1	E	7.07	7	C	6.47
2	D	6.95	8	H	6.44
3	I	6.89	9	F	6.10
4	A	6.82	10	J	6.00
5	G	6.62	11	K	5.60
6	B	6.60	12	L	4.11

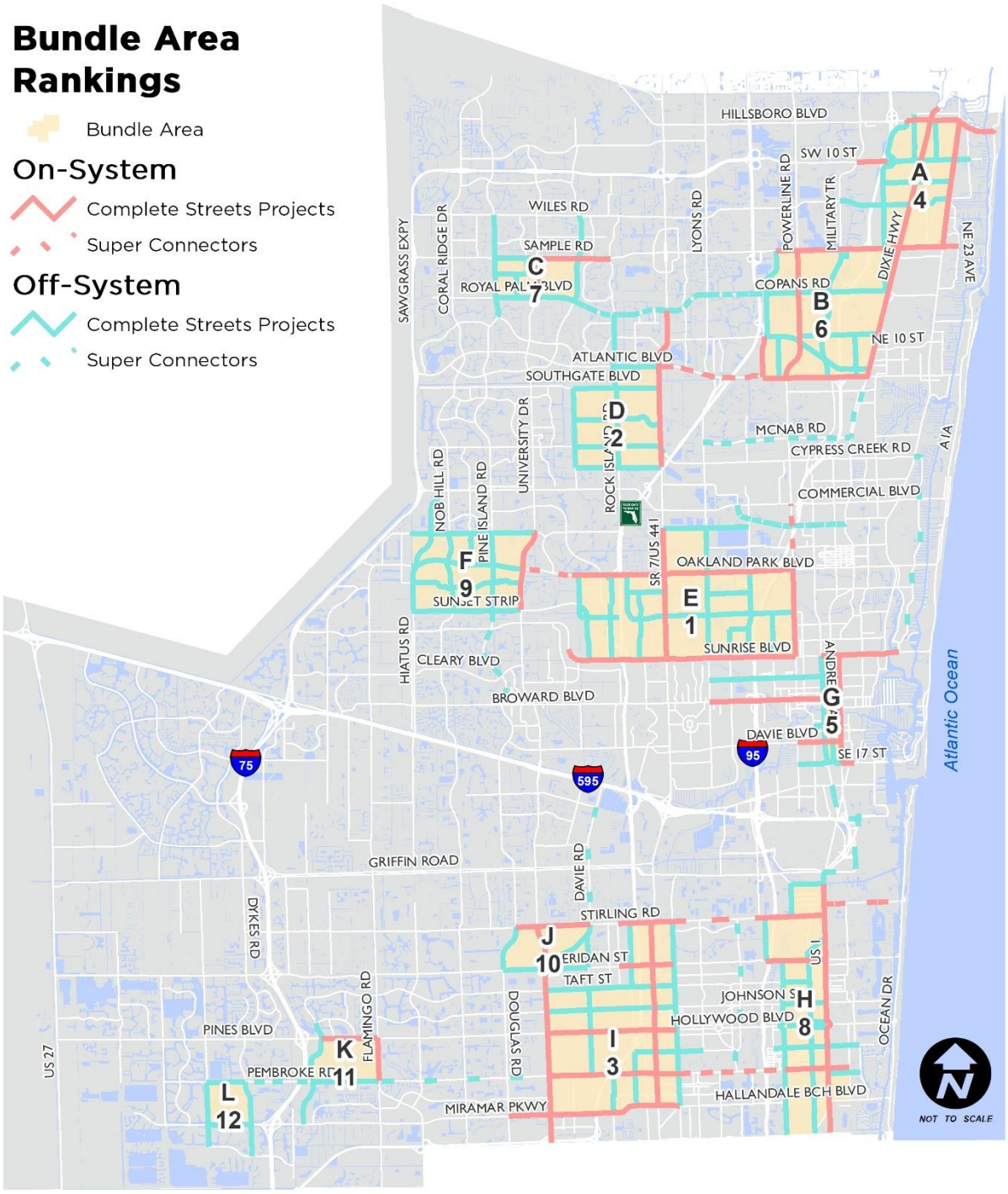


Figure 51. Bundle Area Rankings

Chapter 7. Funding Strategy

A wide range of funding sources and strategies were considered as projects move forward into the implementation phase. Considering that Complete Streets involve various layers of capital and non-capital projects and programs, it was important to research a broad range of funding opportunities including roadway infrastructure, bicycle and pedestrian amenities, landscaping, public art, economic development, education and encouragement programming, among others. Numerous funding sources that capital projects may be eligible for was investigated. Non-capital projects that focused on educational and community programming can be considered for all Complete Streets projects. **Table 12** depicts the comprehensive list of federal to local funding sources. **Appendix H** includes the detailed description of the funding program with weblinks for further information.

Table 12. Funding Sources

Type	Program Name	Funding Type
Federal Capital	Better Utilizing Investments to Leverage Development (BUILD)	Capital/Operations & Maintenance
	National Highway System FAST Act (NHS)	Capital/Operations & Maintenance/Planning & Research
	Surface Transportation Block Grant Program (STBG)	Capital/Operations & Maintenance/Planning & Research
	Recreational Trails Program (23 USC 206)	Capital/Operations & Maintenance/ Programming
	National Scenic Byways Program	Capital/Programming
	Safe Routes to School (SRTS)	Capital/Planning & Research/ Programming
	Highway Bridge Replacement and Rehabilitation (HBRRP)	Capital

Type	Program Name	Funding Type
	Highway Safety Improvement Program (HSIP)	Capital
	Transportation Alternatives	Capital
	Paul S. Sarbanes Transit in the Parks Discretionary Grant Program	Capital/Planning & Research
	Major Capital Investments (New Starts & Small Starts)	Capital
	Bus and Bus Facilities Infrastructure Investment Program	Capital
	New Freedom Program	Capital/Disability Programming
	Broward MPO Complete Streets Localized Initiatives Program (CSLIP)	Capital
Housing and Urban Development (HUD) Capital	Community Development Block Grant (CBDG) Section 108	Capital/Programming
HUD Non-Capital	Sustainable Communities Regional Planning Grant	Planning & Research/ Programming
	Community Challenge Planning Grants	Planning & Research/ Programming
	CDBG – Entitlement Communities Grant & State Administered	Programming
	Brownfields Economic Development Initiative (BEDI)	Planning & Research/Programming
Environmental Protection Agency (EPA) Non-Capital	Brownfields Assessment Grant	Planning & Research/Operations & Maintenance
	Brownfields Cleanup Grant	Operations & Maintenance/Programming

Type	Program Name	Funding Type
	Brownfields Revolving Loan Fund Grants	Operations & Maintenance/Programming
	Brownfields Area-Wide Planning Pilot Program	Planning & Research
Other FED Governmental Institutional Capital	Land and Water Conservation Fund	Capital
Other FED Governmental Institutional Non-Capital	Access to Artistic Excellence, "Our Town" Program	Programming
	America's Historic Places Grants	Programming
State/Florida Capital	Shared-Use Nonmotorized (SUN) Trail	Capital
	Resurfacing Program (3R)	Capital
	Public Transit Service Development Program	Capital/Programming
	Intermodal Development program	Capital
	Park & Ride Lot Program	Capital
	Transit Corridor Program	Capital
State/Florida Non-Capital	High Visibility Enforcement Grant	Programming
Private Foundation/ Organization Capital	Doppelt Family Trail Development Fund	Capital/Programming
	Share the Road Challenge Grant	Capital/Programming
	Major Grants	Capital/Programming
Private Foundation/ Organization Non-Capital	Kodak American Greenways Program	Programming
	Woman Bike Grants	Programming

Chapter 8. Master Plan Implementation

Mobility Program

Projects identified in the CSMP will be delivered through the Broward MPO's Mobility Program, which serves as the implementation arm of the Complete Streets Initiative. This program focuses on implementing projects and improvements identified in Broward MPO's plans, studies and initiatives that provide additional transportation options other than the automobile. Projects under this program include the construction of bicycle and pedestrian facilities and other Complete Streets supportive infrastructure that complement the goals and vision of the Broward MPO's Complete Streets Program to create safer and healthier streets.

This well-established Mobility Program, made possible through the Broward MPO's partnership with FDOT, has been highly praised by member governments, since it allows the local governments to work directly with the Department to implement their vision on corridors located in their respective jurisdictions. To date, approximately $300 million in Complete Streets projects have been programmed in the Broward MPO's Transportation Improvement Program (TIP), adding approximately 180 miles of bicycle facilities and 50 miles of pedestrian facilities to our existing active transportation network.

The Broward MPO works closely with its member governments to implement these projects. Local partners, transit agencies, communities and jurisdictional owners provide valuable input into the final design of all projects. More importantly, local design standards are used on projects located off-system (non-state) to conform to the vision of the MPO's member governments. These partnerships are key to the success of the Mobility program and allows our local partners to use federal funding to construct projects without Local Agency Program (LAP) certification.

Partnership with FDOT

FDOT administers the implementation of mobility projects on behalf of the Broward MPO and its member governments. FDOT has a proven record on delivering quality construction projects using a well-defined and efficient process. Through this partnership, the Broward MPO has committed approximately $300 million in bicycle and pedestrian improvements.

Initial Phase

The initial phase of this implementation program broke ground in February 2015 and will be completed in the first quarter of 2019. Projects in the first phase include buffered bike lanes on Nob Hill Road and Pine Island Road, seven miles of bicycle facilities along NW 31st Ave, multipurpose paths and many sidewalk improvements countywide.

Completed

Nob Hill Road from SR-84 to Broward Boulevard

Length: 1.0 miles

Completed in May 2016

Cost: $813,000

Under Construction

Hollywood Blvd Complete Streets Demonstration Project from N 26th Avenue to Dixie Highway

Length: .5 miles

Expected Date of Completion – Summer 2019

Cost: $ 8.6 M

In Design

Loxahatchee Road – Urban Greenway from Conservation Levee to SR-7

Length: 7.5 miles

Expected Date of Completion –Winter 2022

Cost: $22.7 M

Phase II

Phase II of this implementation program broke ground in June 2017 and includes two Complete Streets demonstration projects (details below).

Demonstration Projects

Two demonstration projects were selected to illustrate Complete Streets principles and measure the benefit of a "Complete Street." These two projects were intentionally selected because of their distinct setting and land use context. The goal was to demonstrate the importance of context in determining the type of facility needed to accommodate all users. Hollywood Boulevard in the City of Hollywood was selected as the urban example while Sunset Strip in the city of Sunrise was selected for its suburban setting.

Hollywood Boulevard Complete Streets

This project located in downtown Hollywood was selected as the "urban" Complete Streets Demonstration project. Destinations along this corridor include retail, office space and various restaurants. The corridor also provides direct access to the City Hall. Project improvements include striping and surface drainage configuration, colored concrete walks, enhanced pedestrian cross walks with center refuge median and center walkway spline, 5-foot wide bike lanes with buffer zone, pedestrian scale lighting, (ADA) parking spaces and accessible ways, safer parking configuration and landscaping.

Figure 52. Complete Street demonstration project Hollywood Boulevard – 26 Avenue to Dixie Hwy (Urban setting)

Sunset Strip Complete Streets

This project located in the city of Sunrise was selected as the "suburban" demonstration project. Destinations along this corridor include parks, a community center, small retail, places of worship, and single-family homes. Project improvements include repurposing a vehicular travel lane to accommodate a buffered bike lane, upgrading crosswalk ramps to meet ADA requirements, adding roadway lighting, upgrading existing drainage structures, two roundabouts, reconstructing sidewalks in various locations, upgrading signs and pavement markings. This demonstration project was completed in July 2018.

Figure 53. Complete Street demonstration project Sunset Strip – NW 72 Ave to NW 19 St (Suburban setting)

Implementation Process

The Complete Streets projects identified in the final list of recommendations will advance toward program funding in the ranked priority established in the Complete Streets Master Plan through the Broward MPO's Mobility Program.

To achieve equitable distribution of funding, the project team recommends selecting one project with the highest rank per bundle area to create the first package (or tier of projects) for funding. As funding becomes available, a second package (or tier of projects) will be implemented following the same criteria. The Broward MPO will work closely with FDOT in the programing of CSMP projects and may consider adding lower-ranking segments near high-ranking projects to increase the cost-effectiveness of construction and ensure timely delivery of projects.

Program Ready

The Broward MPO's vision states, "*Our work will have measurable positive impact by ensuring transportation projects are well selected, funded, and delivered*." To meet the Mission and Vision of the Broward MPO, the project team established requirements to allocate funding and move projects forward to implementation. As a result, the requirements defined below must be met before any project becomes eligible for funding.

Scope of Work

A clearly defined scope of work is crucial to successful implementation of projects. Scope of work should include well-defined limits and identify all elements included as part of the project that can be implemented within the right-of-way (ROW). For the purpose of the CSMP, our implementation partner will ensure and verify project feasibility based on the information received.

- ROW Verification – Federal funds can only be spent in public ROW. It is the responsibility of the jurisdictional owner to provide the necessary documentation demonstrating ownership of the facility. If additional ROW is required, it is the local

government's responsibility to provide funding for ROW acquisition and an additional (ROW) phase to the implementation process will be added to allow the ROW acquisition to take place. Local governments are expected to follow the federal ROW acquisition process.

- Lane Elimination Analysis *(if applicable)* – It is the responsibility of the local government (where the project[s] are located) to obtain the necessary approvals from the jurisdictional owner of the road. If the jurisdictional owner does not have an established approval process, the local government will be required to follow the FDOT lane elimination process. The approval of the lane elimination should be included as part of the resolution of support.

Partner Collaboration

It is expected that local partner governments (where these project[s] are located) will work with the appropriate local agencies in developing realistic project scopes. If a partner does not have jurisdictional ownership of the roadway, they will be expected to coordinate with the roadway owner(s) on the proposed improvements to obtain their support. This includes working closely with proper authorities to maintain adequate access on established evacuation routes and adequate outside lane width along transit routes. For the purpose of the CSMP, Broward MPO will facilitate and coordinate this part of the process.

Cost Estimates

It is important to develop a realistic project cost estimate to ensure funding is programmed accordingly. For the purpose of the CSMP, the implementation partner will develop the cost estimate(s) based on the proposed project scope.

Resolution

Political and community vetting is required to move projects forward and minimize problems/issues during the implementation process.

- Commission Resolution – An executed resolution of support from the Jurisdictional owner is required. This resolution should include the project description, limits,

commitment to maintain the project, and an endorsement for FDOT to deliver the project on the agency's behalf.

- Public/Community support – Well-documented community and stakeholder support for each project is required.

Once all the requirements are met, the project will be forwarded to FDOT District IV office for a feasibility review. It is envisioned that many of the projects identified would require a reconstruction scope to meet the vision of the CSMP. When the project is determined to be feasible, the project will be considered "program ready" and the Broward MPO will facilitate an "initial" scoping meeting to establish clear roles and responsibilities, verify and/or modify project elements, and provide opportunity for additional local partner input including transit agencies. Coordination with emergency services will began at this stage of the process to ensure the proposed improvements do not interfere or delay emergency response.

Following the initial scoping meeting, the project will be incorporated into the FDOT Work Program and the Broward MPO's five-year TIP for funding. Typically, FDOT programs the funding for new projects in the fifth year of the five-year work program since the FDOT Work Program and the TIP are fiscally constrained documents. FDOT will design and construct the project on the local government's behalf.

Figure 54. What Makes a Project "Program Ready?"

Public Outreach

Public outreach is essential to the successful implementation of these type of projects. Early and continuous public engagement is required to ensure public buy-in and support

for these type of improvements. Although well-documented public outreach is a requirement for funding, it is expected that the local governments will continue engaging the public throughout the implementation process. This includes specific public outreach at key milestones during implementation process, such as before the design phase starts and before construction. The Broward MPO and FDOT staff will participate and support the local governments in public outreach efforts. However, it is the responsibility of the local governments to lead the public outreach effort and determine the best method of public outreach for the local community. The goal is to ensure the high participation from the community members near and around these projects.

Broward MPO staff will continue to provide technical assistance, peer review and will provide support with community outreach throughout the entire implementation process.

Additional Implementation Items

Additional Scope – Local Governments' Request

During the initial scoping meeting, local governments will be given the opportunity to request the consideration of additional elements not part of the proposed scope. Local governments will be asked to enter into a Local Funding Agreement (LFA) with FDOT. The LFA will specify the additional local funding required due to the work scope being added by the local government. The Broward MPO will cover the costs associated with design while the local governments will be responsible for the construction funds of these items. One year before the scheduled design phase, the Broward MPO will set up a meeting with the local partners to further verify scope elements. This is the last opportunity to request the consideration of other elements not included in the original scope. Proof of funding will require in the form of a commission resolution, Capital Improvement Plan (CIP) or any other document showing the funding commitment for the added improvements.

Non-Participating items

Funding regulations do not allow the Broward MPO to fund certain items. These items cannot be paid with federal funds and are the responsibility of the local governments.

- Utility Relocation – Local governments will be asked to relocate utilities at their cost. Contingency funds should be established by the local governments to properly address possible utility impacts resulting from the proposed project.
- Drainage – Drainage negatively impacted by the proposed project will be addressed. However, existing drainage issues are a maintenance issue and cannot be paid for with Broward Mobility Program funds.
- Maintenance – Any items related to general maintenance, including but not limited to resurfacing*, replacing light bulbs, drainage**, restriping, or damaged sidewalks are not eligible for federal funding.

**Resurfacing will only be included if lane configurations are impacted due to the project.*

***Drainage negatively impacted by the proposed project will be addressed.*

Landscaping Policy

Landscaping is an important element of a Complete Street. It beautifies the corridor and, if planned correctly, it can provide shade to enhance the user's experience. Local governments typically have their own landscaping policies/standards that identify their preferred type of trees and shrubbery. Recognizing the uniqueness of each individual community, it is recommended that the local governments have the responsibility for installing the landscaping and that they do so immediately after the project is completed.

Projects included in the CSMP and constructed by FDOT will identify and create opportunities for landscaping, such as planter areas, medians, and the infrastructure required to properly maintain the landscaping. Broward MPO and FDOT staff will work closely with each local government to ensure a smooth, seamless transition between the construction and landscaping projects.