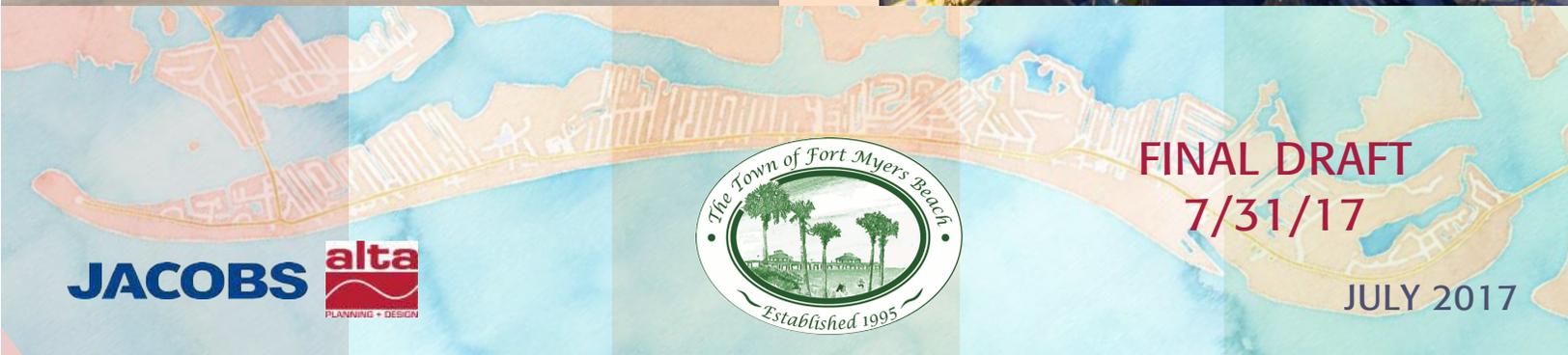


Town of Fort Myers Beach

BICYCLE + PEDESTRIAN MASTER PLAN



FINAL DRAFT
7/31/17

JULY 2017

TABLE OF CONTENTS

Introduction	1
Vision	2
Goals	2
Existing Conditions	3
Infrastructure	3
Public and Stakeholder Engagement	11
Project Advisory Committee	11
Public Workshops	12
Interactive Online Map	15
Recommendations	17
Developing Infrastructure Recommendations	17
Guiding Principles	18
Walkway Recommendations	19
Bikeway Recommendations	24
Design Criteria Recommendations	30
Program Recommendations	37
Policy Recommendations	43
Funding Recommendations	48

TABLES

Table 1. Infrastructure Summary	3
Table 2. Commuting Mode Share	6
Table 3. Similar Beach Communities' Walk Scores	7
Table 4. Related Plans and Initiatives Reviewed	9
Table 5. Recommended Walkway Network Expansion	22
Table 6. Recommended Walkway Facility Improvements	22
Table 7. Recommended Bikeway Network Expansion	28
Table 8. Recommended Bikeway Facility Improvements	28
Table 9. Program Recommendations	37
Table 10. Potential Funding Sources for Bicycle and Pedestrian Projects	50

FIGURES

Figure 1. Location Map	3
Figure 2. Existing Bicycle Facilities	4
Figure 3. Existing Pedestrian Facilities	5
Figure 4. Major Attractions	7
Figure 5. WalkScore.com Screenshot	8
Figure 6. Bicycle and Pedestrian Crashes (2012-2014)	7

Figure 7. Gulf Coast Trail. 9
 Figure 8. Workshop #1 Display Boards 12
 Figure 9. Existing and Proposed Pedestrian Facilities 21
 Figure 10. Existing and Proposed Bicycle Facilities 26
 Figure 11. SUN Trail Regional Priority Trail Connectors. 49

APPENDICES

Appendix A. Existing Conditions Technical Memorandum
 Appendix B. Existing Plans and Initiatives Technical Memorandum
 Appendix C. Estero Boulevard Crosswalks Technical Memorandum
 Appendix D. Public Engagement Technical Memorandum
 Appendix E. Needs & Recommendations Technical Memorandum
 Appendix F. Design Criteria Technical Memorandum
 Appendix G. Policy & Program Recommendations Technical Memorandum
 Appendix H. Funding Recommendations Technical Memorandum

ACKNOWLEDGEMENTS

Town of Fort Myers Beach

Dennis Boback Mayor
 Tracey Gore Vice Mayor
 Anita Cereceda Council Member
 Bruce Butcher Council Member
 Joanne Shamp Council Member

Lee County MPO

Don Scott Executive Director

Consultant

Jacobs Engineering
 Alta Planning + Design

Project Advisory Committee

David Agacinski FDOT District One Bicycle and Pedestrian Coordinator
 David Anderson Fort Myers Beach Chamber of Commerce Chairman
 Dan Andre Fort Myers Beach Town Council Appointee
 Scott Baker Fort Myers Beach Public Works Director
 Bruce Butcher Fort Myers Beach Public Safety Committee / Bike Walk Lee
 Sean DePalma Fort Myers Beach Parks & Recreation Director
 Jeff Dobbins Fort Myers Beach Elementary Principal
 Peter Dolid Fort Myers Beach Town Council Appointee
 Ron Fleming Fort Myers Beach Town Council Appointee
 Ron Gogoi Lee County MPO Transportation Planning Administrator
 Dan Hendrickson Fort Myers Beach Town Council Appointee
 Lt. Tim Lalor Lee County Sheriff’s Office
 Chief Ron Martin Fort Myers Beach Fire Control District
 Patrick McKeown Fort Myers Beach Town Council Appointee
 Brett Messner Fort Myers Beach (Consultant)
 Chelsea O’Riley Fort Myers Beach Administrative Specialist
 Rob Phelan Lee County DOT Estero Blvd. Project Manager



Introduction

This is the Town of Fort Myers Beach's first plan dedicated to defining its vision, goals, needs, and priority projects for bicycling and walking on the island.

This Bicycle and Pedestrian Master Plan will guide decisions and investments about when, where, why, and how to assemble a bicycle and pedestrian network that promotes a healthy, vibrant, and safe Fort Myers Beach community. The Town of Fort Myers Beach worked in partnership with the Lee County Metropolitan Planning Organization (MPO) to develop the Plan.

The goal of this Plan is a strategic and coordinated vision for bicycle and pedestrian investments in Fort Myers Beach. The Plan consists of new bikeways, walkways, trails, and other related biking and walking projects, programs, and policies that will guide decisions and investments in the Fort Myers Beach community.

Projects also include traffic safety and operational improvements at major intersections to help guide the implementation of those facilities. The proposed facilities address gaps in the system, provide access between neighborhoods and attractions, and enhance safety and use of the existing and developing bicycle and pedestrian network.

This plan will be revisited and updated regularly as implementation moves forward and as needs and other conditions change. A living, evolving document will serve the Town, its residents, and its many visitors now and in the future.

The steps taken to draft this Bicycle and Pedestrian Master Plan are described below.

1. Create an inventory and verify through field review existing bicycle and pedestrian facilities, major attractions, high crash locations, land uses, parks, schools,

beach access points, and transit stops throughout the Town.

2. Review existing plans and documents that may impact this Plan.
3. Review the Town's Land Development Code design provisions for bicycle and pedestrian projects.
4. Describe design features and design criteria for bicycle and pedestrian facilities, including crossing treatments.
5. Assess needs and identify gaps in the network.
6. Identify and recommend proposed bicycle and pedestrian projects.
7. Develop costs estimates and prioritize bicycle and pedestrian projects; identify funding opportunities for the projects.
8. Coordinate with Lee County and evaluate existing and proposed crosswalks on Estero Boulevard by reviewing locations and configurations; make recommendations for improvements.

To complement the technical effort, a Project Advisory Committee provided direction and comments at key milestones during development of the plan. To engage the public and ensure the strategy and projects meet the needs and desires of the community, the team facilitated two public workshops, maintained project webpages with the Town of Fort Myers Beach and the Lee County MPO, sent press releases and facts sheets to the media and public, and maintained an online interactive mapping tool to gain comments throughout the process. The Project Advisory Committee and public engagement is discussed in greater detail later in this document.

This plan will create a pedestrian and bike-friendly destination of the Town by improving walking and bicycling conditions for residents and tourists of all ages to Fort Myers Beach. The recommendations in this plan will increase pedestrian and bicycling safety, improve walking access and connectivity to community destinations, and promote education and enforcement programs.

The Town and Lee County MPO, characterize a successful plan as practical and buildable with data-driven recommendations that improve use and safety and consider the unique nature of the community.

A successful plan is also supported by the community.

Vision

A vision statement outlines what the community wants to be. It concentrates on the future and is a source of inspiration. The following vision statement and themes guide the recommendations for the Fort Myers Beach Bicycle and Pedestrian Master Plan:

Walking, riding a bike, and accessing transit in Fort Myers Beach is a comfortable and integral part of daily life for people of all ages and abilities. The improved network for people walking and biking will facilitate connections between neighborhoods, jobs, tourist attractions, shops, schools, the beach, and other daily destinations.

- › “Comfortable” suggests the future network is a safe, convenient, and attractive travel option for a large number of people to walk and bike.
- › “Daily life” means that walking and bicycling are not niche activities, and are desirable for all trip purposes.
- › “All ages and abilities” places the emphasis on planning, designing, and building walking and biking facilities that will be used by people of all ability levels.

Goals

Goals guide the Town towards fulfilling the vision and relate to existing and newly-launched efforts. The following goals, developed through the planning process, will guide implementation of the Fort Myers Beach Bicycle and Pedestrian Master Plan.

- › Reduce the number of bicycle and pedestrian crashes by half within five years by targeting bicycle and pedestrian improvements at high crash locations
- › Double the combined walking, biking, and transit commute mode share to 22 percent within five years (currently 11 percent)
- › Create a 29.0-mile walkway network within 20 years (12.6 miles currently; 16.5 miles proposed)
- › Create a 14.8-mile on-street bikeway network within 20 years (2.2 miles currently; 12.6 miles proposed)
- › Complete planned improvements to the Estero Boulevard corridor
- › Achieve Bicycle Friendly Community designation by the League of American Bicyclists
- › Achieve Walk Friendly Community designation by the Pedestrian and Bicycle Information Center



Existing Conditions

Fort Myers Beach is a barrier island on Florida’s Gulf Coast, just west of Fort Myers and east of Sanibel Island (Figure 1). A small island, it encompasses 2.9 square miles. The Town is home to about 6,300 residents and welcomes about 4,600 seasonal residents each year. Walking and biking needs reflect the current population, employment, demographic, and infrastructure in Fort Myers Beach.

About the Town:

Year Incorporated	1995
Total Area (square miles)	2.9
Jobs	8,220
Permanent Residents	6,275
Permanent Households	3,445
Total Housing Units	9,400
Seasonal Residents	4,620
Miles of Paved Shoulders	5.1
Miles of Bike Lanes	0.2
Miles of Shared Use Paths	0.6
Miles of Sidewalk	8.0

Numbers are representative of the 2010 Census and are rounded

Infrastructure

The Town has 36.5 miles of roads of which nearly 73 percent do not have sidewalks and nearly 94 percent do not have bikeways (Table 1). Figures 2 and 3 show the existing bicycle and pedestrian facilities in Fort Myers Beach, respectively.

Figure 1. Location Map

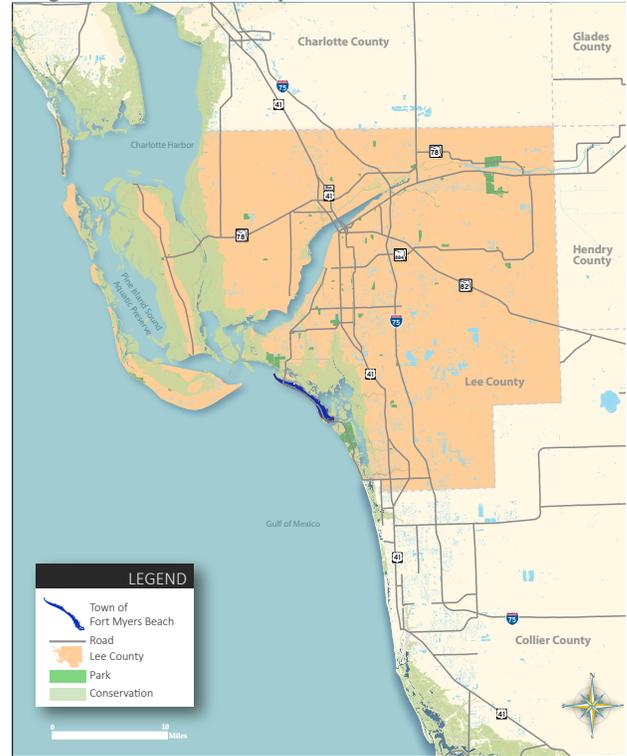


Table 1. Infrastructure Summary

	% of Total Network	% Sidewalk Coverage	% Bike Facility Coverage
Local	79%	24%	0%
Collector	3%	9%	39%
Arterial	18%	67%	61%
All Roads	-	27%	6%

Estero Boulevard

Estero Boulevard is the main road on the island and its only connection to the mainland. It is a county-maintained two-lane arterial with a posted speed limit of 25 mph in the north end of the island and 35 mph in the south end, carrying between 10,300 to 12,500 vehicles on average a day in 2016.

Estero Boulevard is in various stages of reconstruction. The portion of Estero Boulevard north of Times Square was recently reconstructed by the Town to include bicycle lanes and sidewalks on both sides of the road. For the reconstruction effort of the remaining portions of Estero Boulevard, the road was divided into segments, with improvements to be addressed one segment at a time. For the portions already completed or underway, opportunities to include bicycle and pedestrian design strategies beyond what is already planned are limited. However, greater opportunities exist to incorporate recommendations in the southern segments that are yet-to-be designed.

More details about the Estero Boulevard improvements are provided in the Recommendations section and the Estero Boulevard Crosswalks Technical Memorandum.

Figure 2. Existing Bicycle Facilities

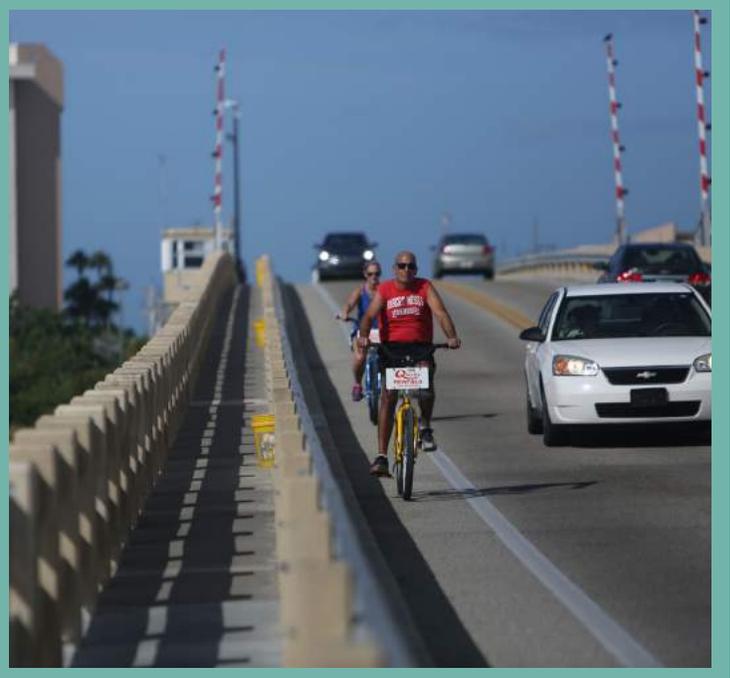
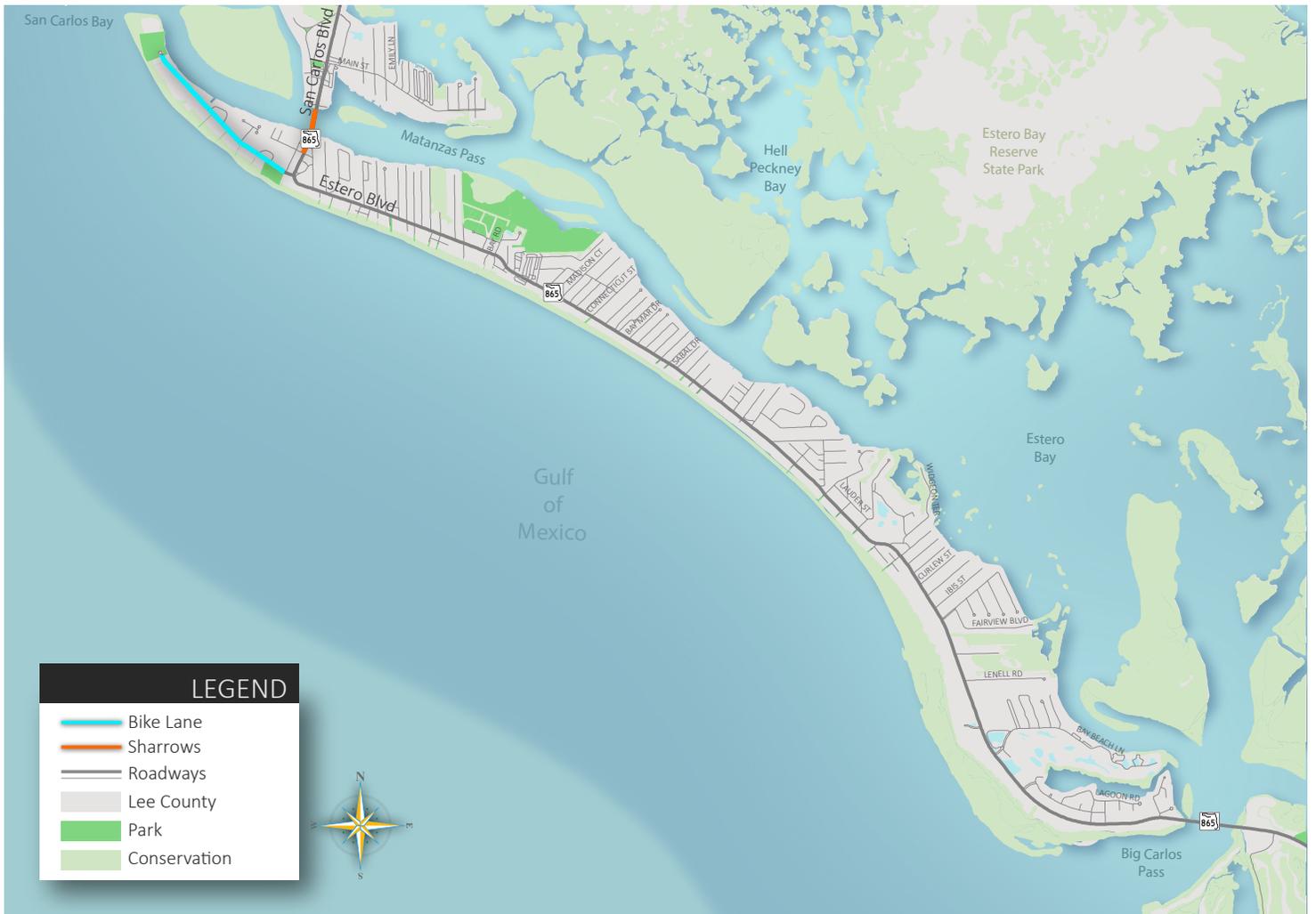
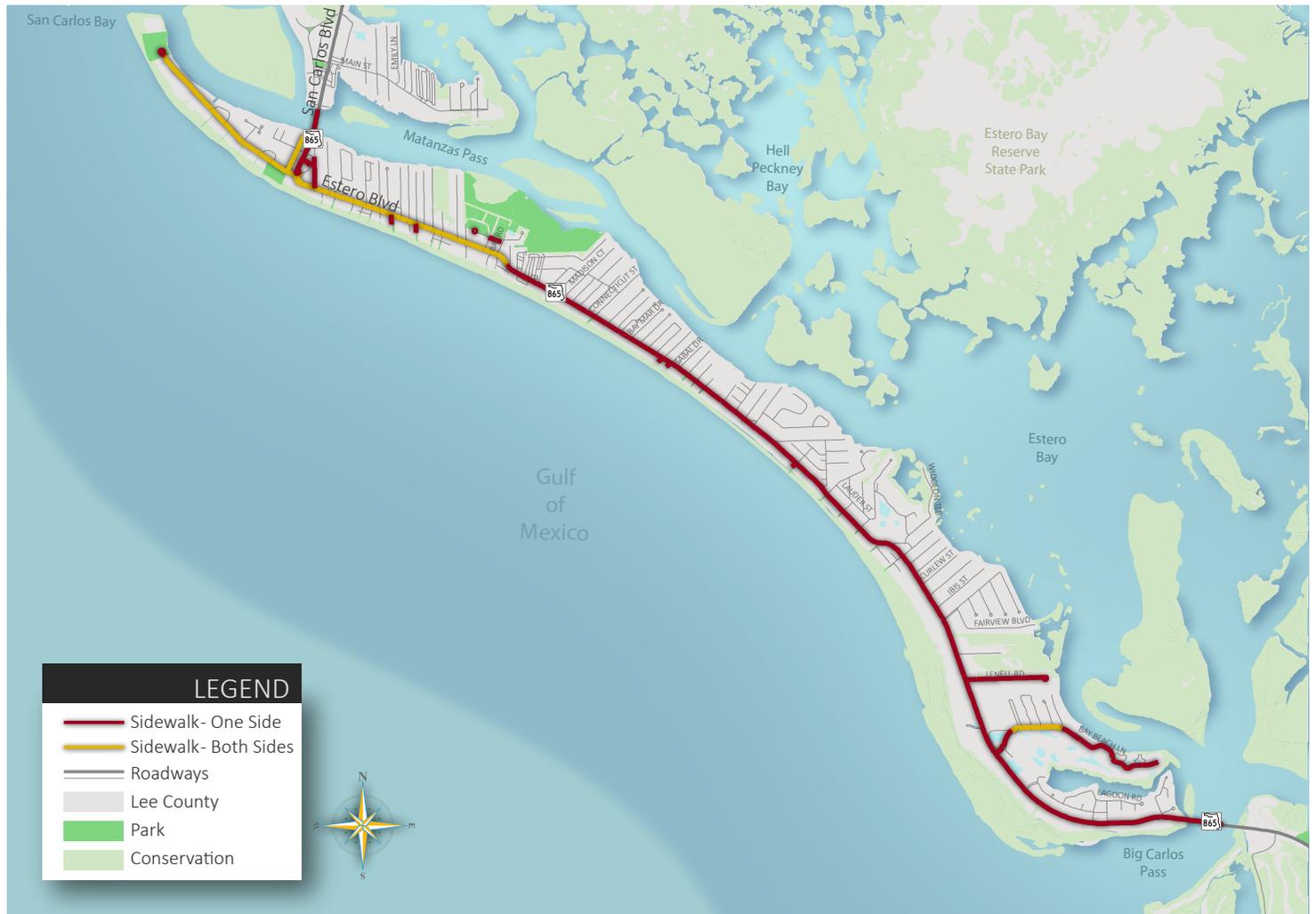


Figure 3. Existing Pedestrian Facilities



Major Attractions

Attractions and destinations in Fort Myers Beach are close enough for many visitors and residents to reach by walking or biking. The attractions include beach access points; public facilities like the library, town hall, and parks; and retail sites like Publix and Times Square. Figure 4 shows the Major Attractions in Fort Myers Beach.

Transit

Lee County Transit (LeeTran) provides transit service to the Town with three trolley bus routes. Route 400 operates from October to January and April to September. During peak visitor season, the route splits and becomes routes 410 and 490; the two seasonal routes provided nearly 200,000 trips in 2016.

Commuting

The small size of Fort Myers Beach lends itself to commuting by alternative modes which is reflected in the relatively high number of employees commuting by foot or by bike. Table 2 shows the breakdown of how people commute.

Table 2. Commuting Mode Share

Road Type	US	Florida	Cape Coral	Fort Myers Beach
Walk	2.8%	1.5%	0.7%	7.0%
Bike	0.6%	0.7%	0.2%	4.0%
Combined	3.4%	2.2%	0.9%	11.0%

Safety

Conversations with residents and data-mining revealed that safety is a concern for those walking and biking along Estero Boulevard. Safety needs influenced the projects selected for this plan. Increasing safety and coverage of existing bicycle and pedestrian facilities will allow more visitors and residents to choose to leave their cars behind and enjoy the culture and lifestyle of Fort Myers Beach. Figure 5 shows the locations of bicycle and pedestrian crashes from 2012 to 2014.

Walk Score

Walk Score (walkscore.com) is dependent on surrounding land uses and if destinations are easily reached on foot. Walk Score analyzes hundreds of walking routes to nearby amenities. Points are awarded based on the distance to amenities in each category. Amenities within a five-minute walk (.25 miles) are given maximum points. Fewer points are given for more distant amenities, and no points are given for a 30-minute walk.

Walk Score also measures pedestrian friendliness by analyzing population density and road metrics such as block length and intersection density. Data sources include Google, Education.com, Open Street Map, the U.S. Census, Localize, and places added by the Walk Score user community. Fort Myers Beach has a relatively high score - residents and visitors have destinations within walking distance, but do they have the facilities that allow them to travel comfortably and safely? Table 3 shows Walk Scores for similar beach communities, as well as Fort Myers Beach, and Figure 6 shows an image from the WalkScore.com website.

Figure 4. Major Attractions

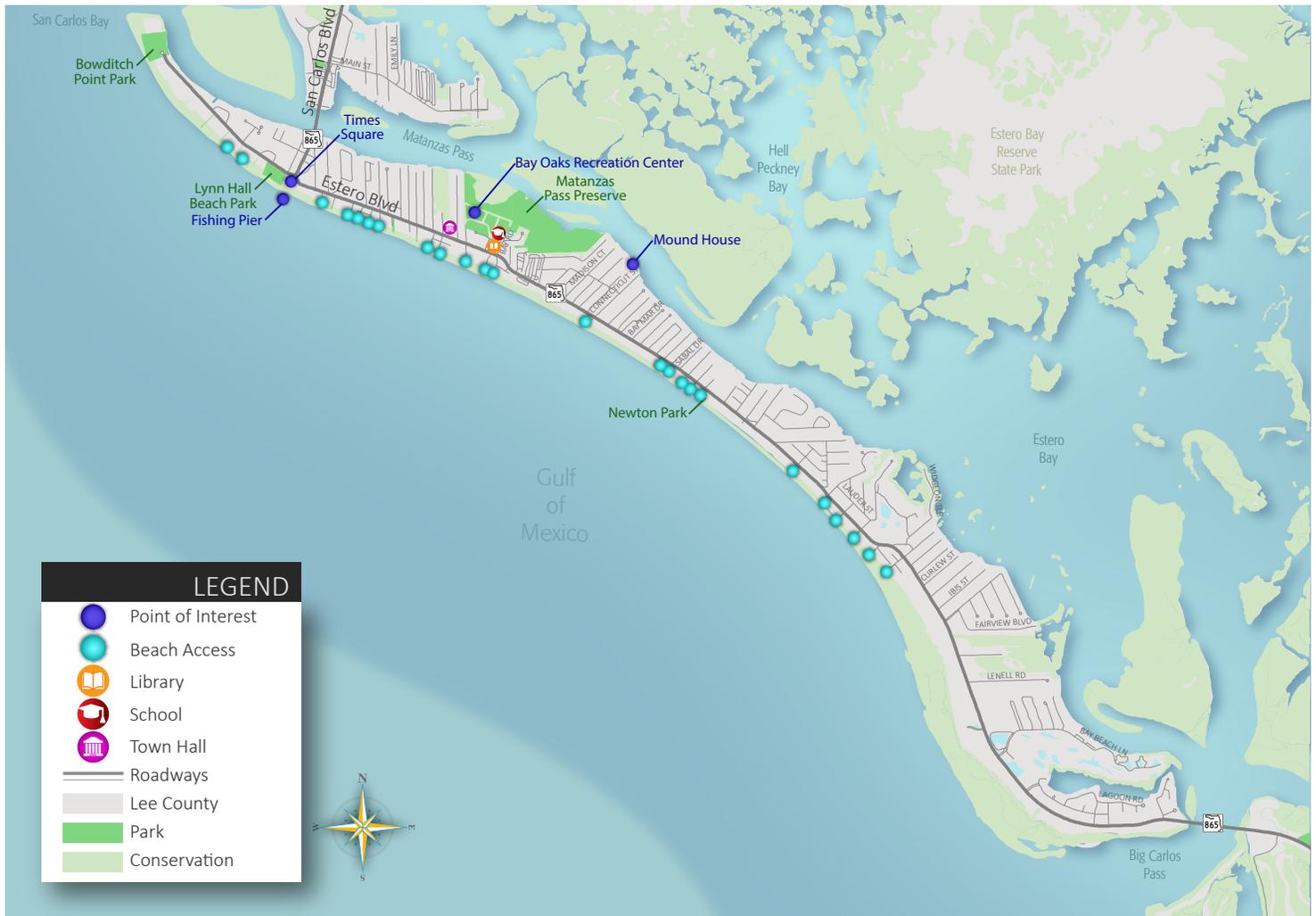


Table 3. Similar Beach Communities' Walk Scores

Location	Walk score	Notes
Treasure Island	55	Somewhat walkable.
Anna Maria Island	55	Some errands can be accomplished on foot
Saint Pete Beach	51	
Fort Myers Beach	48	
Tybee Island, GA	41	
Naples	35	Car-dependent, most errands require a car
Longboat Key	34	
Sanibel Island	27	
Cape Coral	18	
Edisto, SC	15	Car-dependent, almost all errands require a car
Indian River Shores	7	

Figure 6. WalkScore.com Screenshot

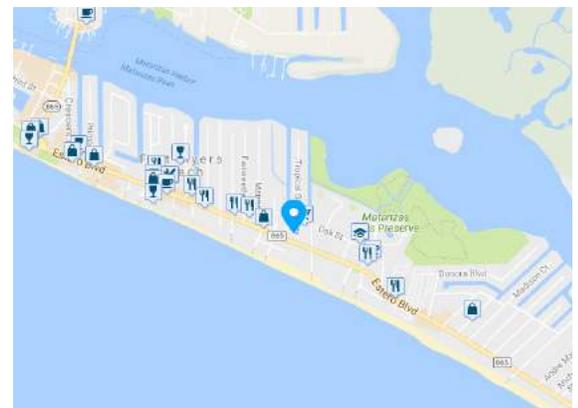
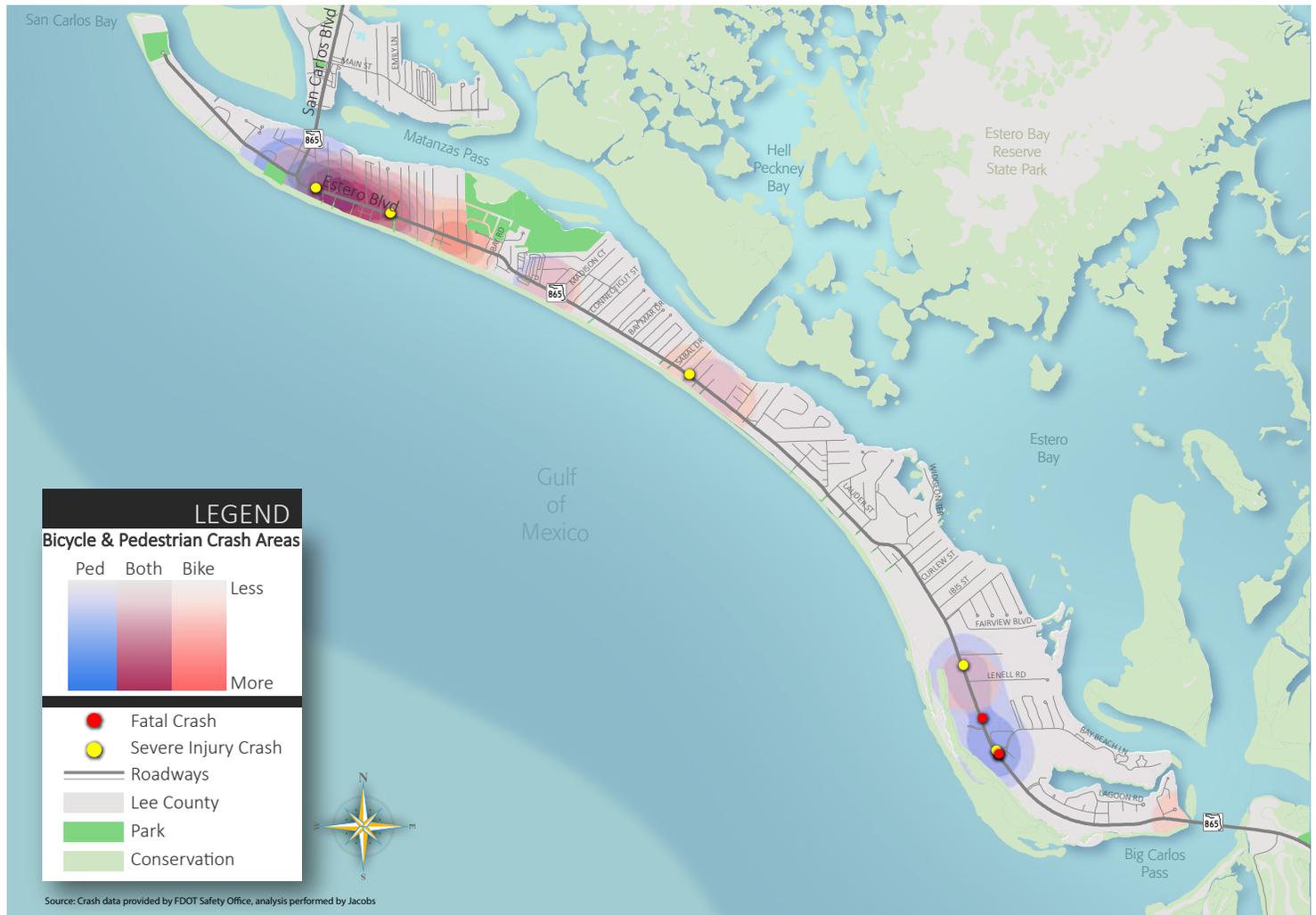


Figure 5. Bicycle and Pedestrian Crashes (2012-2014)



Related Plans and Initiatives

Existing plans, documents, and studies were reviewed for their potential relevance and application to planning bicycle and pedestrian facilities in Fort Myers Beach.

The Old San Carlos Boulevard/Crescent Street Master Plan (Dover, Kohl & Partners, February 1999) and Town of Fort Myers Beach Comprehensive Plan of 1999 are visionary plans whose elements are being implemented today. These plans were reviewed for design concepts (e.g., Hidden Paths Bicycle and Pedestrian Pathway on the Bay Side).

The Town’s Comprehensive Plan guides character through development regulations. It also addresses the desire to create an

interconnected network for safe walking and biking across the island. While its plan of pathways is aspirational, it inspired some recommendations in this plan as initial steps toward a true alternative transportation network.

Section 10-289, Chapter 10 of the Town of Fort Myers Beach Land Development Code outlines the design requirements for pedestrian and bicycle facilities in future development on Fort Myers Beach. These design standards influenced the proposed bicycle and pedestrian facility design criteria and recommendations in this plan and are described in the Design Criteria Technical Memorandum.

All local and regional plans reviewed for their relevance to bicycle and pedestrian planning in Fort Myers Beach are listed in Table 4.

Table 4. Related Plans and Initiatives Reviewed

Document/Plan	Year Completed
Town of Fort Myers Beach Comprehensive Plan	1999 (amend. 2009)
Old San Carlos Boulevard/Crescent Street Master Plan	1999
Land Development Code	2016 (reviewed)
Estero Boulevard Improvements, Lee County DOT	ongoing
2040 Transportation Plan, Lee MPO	2015
San Carlos Boulevard Workshop, Lee MPO	2014
Conceptual plans for future development	2015-2017
FDOT Roadway Design Bulletin 14-17: Urban Arterial Lane Width and Bicycle Lane Options	2014

Coastal Loop

The State of Florida is working towards developing a statewide Shared-Use Non-motorized (SUN) Trail Network. This network currently includes the Southwest Coastal Regional Trail, or Gulf Coast Trail. The Lee MPO proposed an addition to the Gulf Coast Trail (Figure 7), a coastal loop through Fort

Myers Beach along Estero Boulevard. The loop would provide a scenic route and access to destinations like the beach. Sections of the loop already exist, are programmed, or are currently under construction. If the loop is added to the SUN Trail System by the State, funding for the remaining design and construction may become available in the next

few years, requiring continued coordination with Lee County and its Estero Boulevard improvements, some under design and some under construction.

Figure 7. Gulf Coast Trail



Source: Florida Greenways and Trails, March 2017



Town of Fort Myers Beach
Bicycle and Pedestrian Master Plan

Study Area



Public and Stakeholder Engagement

One of the most important aspects of a plan like this is support from the community that the recommendations reflect their desires and needs. The public and stakeholder engagement effort included two public workshops, an online interactive map that allowed the public to enter comments and questions to the team, and three meetings with the Project Advisory Committee.

This section summarizes the outreach efforts and key themes of the comments received from the community. This dialogue helped develop and prioritize recommendations.

Project Advisory Committee

The Committee met three times through the Plan development process. The first meeting, held January 31, 2017, introduced the team and purpose, outlined results of the early needs analysis, and discussed next steps. The second meeting, held March 27, 2017, provided a status update, introduced early draft recommendations, and outlined next steps. The final meeting, held April 26, 2017,

included a status update and an in-depth discussion about the recommendations.

Key questions discussed include:

- › What makes a successful plan?
- › What does it mean to bike and walk in Fort Myers Beach?
- › Who is our user?

Key recommendations from the Project Advisory Committee included:

- › The Plan should identify projects that are buildable and practical.
- › The Plan should include measures to evaluate progress towards the Plan's goals.
- › The Plan should promote a safe and comfortable user experience for all modes.
- › The Plan should support high quality of life that encourages bicycling and walking.
- › The Plan should not include sidewalks on local streets as they are not popular with residents.



Project Advisory Committee Representation

- › Lee County MPO
- › Fort Myers Beach Public Works
- › Fort Myers Beach Parks & Recreation
- › Fort Myers Beach Public Safety Committee
- › BikeWalkLee
- › Fort Myers Beach Town Council Appointed Citizen
- › Fort Myers Beach Chamber of Commerce
- › Fort Myers Beach Elementary School
- › Fort Myers Beach Fire Control District
- › Lee County Sheriff's Office
- › Lee County DOT Estero Boulevard Project
- › Lee County Visitor & Convention Bureau
- › FDOT District 1 Bicycle and Pedestrian Coordinator

Public Workshops

Two public meetings were held at milestone points of developing the plan.

Workshop #1

The first public workshop focused on needs and specific concerns.

- › **When:** Wednesday, February 15, 2017, 5:30 to 7:30 pm
- › **Where:** Town Hall Council Chambers
- › **Attendees:** 12 (logged on sign-in sheet; additional attendees did not sign in)

The workshop included a presentation about the project, interactive exercises to collect ideas for plan recommendations, and time for attendees to talk with Town staff and the project team about interests and ideas to improve biking and walking in Fort Myers Beach. Participants were asked to review the display boards around the room (Figure 8) and participate in a voting exercise.

Attendees used stickers to vote on bicycle and pedestrian programs such as safety campaigns, signage, and biking/walking events; as well as walking infrastructure improvements, such as sidewalks, and biking infrastructure, such as bike lanes and trails. The display boards described each program

Figure 8. Workshop #1 Display Boards

or improvement and included pictures for reference. In addition to the voting exercise and boards, a laptop was available for participants to enter their comments on the interactive online map of the study area.

Workshop #1 Results

The following are results of the voting activity:

- › Programs
 - Interpretive signage (e.g., history and facts about the Town along walkways)
 - Bicycle and pedestrian safety campaign
 - Employer-based encouragement (e.g.,

businesses providing financial incentives or bike parking)

- Guided nature walks
- Senior walk program
- › Pedestrian Infrastructure Projects
 - Pedestrian crossing improvements
 - Shared-use paths
- › Bicycle Infrastructure Projects
 - Bicycle-friendly intersections
 - Buffered bike lanes
 - Protected bike lanes

In addition to the voting exercise and boards, participants could enter their comments on the interactive online map of the study area. The comments submitted on the map included:

- › Provide better bikeways
- › Clear obstructed views at side streets
- › Improve the pedestrian crossing at Albatross
- › Improve bike crossings at bridges
- › Add bike parking at the beach
- › Add trash cans at transit stops
- › Provide a more robust education and enforcement campaign for pedestrians, cyclists, and motorists



Other key themes from the workshop included:

- › Better lighting is needed near crosswalks
- › Residents would like to safely travel the length of the island on foot or bike
- › Separate bicyclists, walkers, and drivers
- › North Estero Boulevard is lovely and safe
- › Safety is a concern for all modes
- › There is a need for marked bike lanes
- › Neighborhood greenways and sidewalks on residential streets are not preferred



Workshop #2

The second public workshop focused on needs and specific concerns.

- › **When:** Wednesday, April 26, 2017, 5:00 to 7:00 pm
- › **Where:** Town Hall Council Chambers
- › **Attendees:** 22 (logged on sign-in sheet; additional attendees did not sign in)

The workshop included a comprehensive presentation about the project followed by a discussion with meeting participants regarding the presentation and the plan recommendations. The public was encouraged to provide ideas and comments to improve walking and biking in Fort Myers Beach.

Workshop #2 Results

Key discussion, recommendations, and themes from the second workshop include:

- › Better lighting and flashing warning beacons are needed near crosswalks
- › There are frequent riding and walking conflicts on sidewalks along Estero Boulevard
- › Consider adding striping and signage

- › Town and law enforcement should develop a Safety Education program targeting motorists, walkers, and bicyclists; the campaign should use brochures, maps, social media, and events and involve bicycle rental shops, hotels, restaurants, and other public gathering places
- › “Advisory shoulders” may not always work; specifically on Avenida Pescadora because it is a narrow one-way street where walking and biking should not be encouraged
- › Adding sidewalks on both sides of Crescent Street may be difficult as there is little right-of-way and potential business impacts
- › Educating bike rental shops about rules should be a top priority
- › Public education is a top priority and should involve schools and law enforcement
- › Several attendees support distributing educational brochures
- › A “crosswalk awareness day” should be organized
- › A “cultural loop” is supported
- › A walking and bicycling network from one end of the island to the other would allow people to safely travel the length of the island on foot or on bike
- › Separate walkers, bicyclists, and drivers
- › Markings should be placed on wide sidewalks on Estero Boulevard separating walkers and bicyclists



Interactive Online Map

The interactive mapping tool for this effort allowed users to note walking or biking issues, to indicate preferred walking and biking routes, and to share comments. The tool was available on the Town's website and the MPO's website from January through May 2017. A link to the website was sent in press releases and emailed to Project Advisory Committee members and advocacy groups, such as BikeWalkLee, for distribution.

Key themes derived from the interactive mapping tool include:

- › San Carlos and Big Carlos Pass Bridge reconstruction should accommodate all modes
- › Motorists and bicyclists need to yield at crossings
- › Improve maintenance of transit stops during construction on Estero Boulevard
- › A designated pedestrian crossing with flashing signal is needed at Albatross Street and Estero Boulevard as well as all crossings
- › Bicycle education and enforcement is needed (e.g., yield to pedestrians on sidewalks, verbal announcement to walkers)
- › Obstructed views of walking paths need to be fixed
- › Bike racks are needed at beach access points

The interactive online map allowed the community to indicate areas of concern and ideal routes, as well as leave comments. All comments and notes were visible, allowing participants to expand on other comments.





Recommendations

Developing the walkway and bikeway network recommendations was an iterative and collaborative process. The safety and comfort of people walking, bicycling, accessing transit, and driving must be balanced with the characteristics and constraints of the roads. The Master Plan's recommendations provide guidance that can be used to move projects towards implementation. Some recommendations are conceptual, and additional coordination will be needed for implementation.

Developing the walkway and bikeway network project recommendations, programs, and policies was an iterative and collaborative process with the Town of Fort Myers Beach, Lee County MPO, Lee County, the Project Advisory Committee, and the public. The needs of all roadway users, including the safety and comfort of people bicycling, walking, accessing transit, and driving, must be balanced with roadway characteristics and corridor constraints. The recommendations provide guidance to progress projects towards implementation. Some recommendations are conceptual and additional coordination will be needed before implementation.

In total, recommendations identified in this Plan include 29.10 miles of projects. Also included are conceptual diagrams for design guidelines and criteria, which can be used to refine these projects for implementation. This section includes both bikeway and walkway infrastructure recommendations, as well as policy and program recommendations that will support the implementation of the physical infrastructure. The end goal is to create a positive and safe culture of biking and walking in Fort Myers Beach.

Developing Infrastructure Recommendations

The following process was used to assess the needs and identify project recommendations:

1. Identify gaps in the existing network and impediments to walking and biking
2. Identify areas with safety concerns
3. Review existing plans and those underway
4. Develop facility recommendations to fill in the gaps and create safety solutions

5. Recommend policies and programs to ensure the culture of walking and biking in Fort Myers Beach is maintained and grows
6. Prioritize projects using public input, local coordination, and evaluation criteria

Evaluation Criteria

The following criteria helped identify the bicycle and pedestrian recommendations:

- › Gaps in the system and system continuity
- › Crash data and safety issues
- › Traffic counts
- › Previously identified needs such as those found in:
 - Hidden Pathways Concept from the Town of Fort Myers Beach Comprehensive Plan
 - Estero Boulevard Streetscape Plan
 - Old San Carlos Boulevard/Crescent Street Master Plan
- › New sidewalks, pathways, boardwalks, and bike lanes planned under the proposed Grand Resort Project
- › Access to Fort Myers Beach Elementary School
- › Access to historical, cultural, and recreational attractions, such as:
 - Mound House
 - Bay Oaks Recreation Center
 - Santini Plaza
 - Fort Myers Beach Public Library
 - Bowditch Point Park
 - Newton Park
- › Connections to other transportation modes
- › Right-of-way availability
- › Access to LeeTran and school bus stops
- › Beach access

Guiding Principles

Complete Streets should be considered when developing recommendations.

Complete Streets are designed to enable safe access for all users - pedestrians, bicyclists, motorists, and transit riders - of all ages and abilities. The recommendations for this Plan support Complete Streets and Lee County's Complete Streets resolution adopted in 2009 as well as the FDOT Complete Streets Handbook (currently under development).

Streets should be comfortable to walk and bike along and serve as connectors to daily destinations.

The level of traffic stress is primarily a function of two conditions - the speed and amount of vehicles. As vehicle speeds and numbers increase, so too should the amount of dedicated space for people to walk and bike and the separation between vehicles and nonmotorized uses. Additionally, major streets should connect neighborhoods and destinations, not separate them because of real or perceived traffic safety issues. The recommendations for this plan are developed with these themes in mind.

Streets should be safe, regardless of context.

A desire for safer streets was a major theme from the community input for this project. Also, the safety data analysis for this project highlighted the need for safety improvements, particularly along Estero Boulevard. The recommendations for this plan were developed to create safer street conditions for everyone in Fort Myers Beach.

The following details the recommended infrastructure improvements to create a safe, accessible, and connected pedestrian and bicycle network in the Town of Fort Myers Beach. A diverse mix of projects are recommended to create this comprehensive network, including sidewalks, crossing improvements, signage, and shared-use paths. Conceptually, the network recommendations and the destinations they connect can be seen as an interconnected network. Estero Boulevard is the primary north-south link with the highest usage of walking and bicycling. Restaurants, shops, beach access points, parks, neighborhoods, and other places people walk to and from are located on or near Estero Boulevard. This Plan of new sidewalks, advisory shoulders, bicycle boulevards, and other projects connect the "links" that provide east-west neighborhood connectivity.



Walkway Recommendations

Walkway recommendations were developed to close sidewalk gaps and create a more comfortable and convenient walkway network through the Town. Improvements include installing sidewalks on one or both sides of Estero Boulevard, enhancing crossing conditions at key intersections, and improving connections to the regional walkway network. Recommendations also include advisory shoulders as presented in FHWA's *Small Town and Rural Multimodal Networks*. Advisory shoulders provide a visually distinct area on the edge of the road for bicyclists and pedestrians.

Creating new walkways entails constructing a sidewalk or dedicated space for people walking along a street. Overall, walkway improvements are concentrated along Estero Boulevard and in higher density residential and commercial areas.

On the north end of the island, sidewalks primarily exist on both sides of Estero Boulevard, and improvements in this area are focused on connections across the road. South of Bay Road, sidewalks exist mainly on the east side of Estero Boulevard. Recommendations on the south end of the island focus on installing sidewalks on the west side of the road consistent with proposed designs for the Estero Boulevard Corridor project. Recommendations also include improving crossing conditions at key locations.

Most neighborhoods are located east of Estero Boulevard creating a significant demand to cross the road to access the beach and other destinations on the west side of the street. Crossing improvements vary by location but overall enhance visibility of pedestrians to make crossing the road safer and more comfortable. Emphasis is placed on providing frequent, safe crossings near transit stops. Other improvement recommendations include sidewalks on both sides of the road where bridges and underpasses exist.

Recommendations also enhance regional walkway connections at the bridges to provide comfortable, safe, and convenient crossings over the waterways. The Big Carlos Pass Bridge at the south end of the island is scheduled for improvements and currently undergoing a Project Development and Environment (PD&E) Study by Lee County. The Matanzas Pass Bridge at the north end of the island is also scheduled for improvements and is undergoing a PD&E Study by FDOT. Continued coordination with local, regional, and state partners is needed to create the community's needed walkway improvements. Figure 9 shows the walkway recommendations. Tables 5 and 6 summarize the recommended walkway projects.

WALKWAY RECOMMENDATION THEMES



Figure 9. Existing and Proposed Pedestrian Facilities



Advisory shoulders create usable space for pedestrians and bicyclists on a road that is otherwise too narrow to accommodate bike lanes. The shoulder is indicated with pavement markings and optional pavement color. Cars can use the shoulder only when no pedestrians or bikes are present and must overtake these users with caution due to potential oncoming traffic.



Image credit: Western Transportation Institute

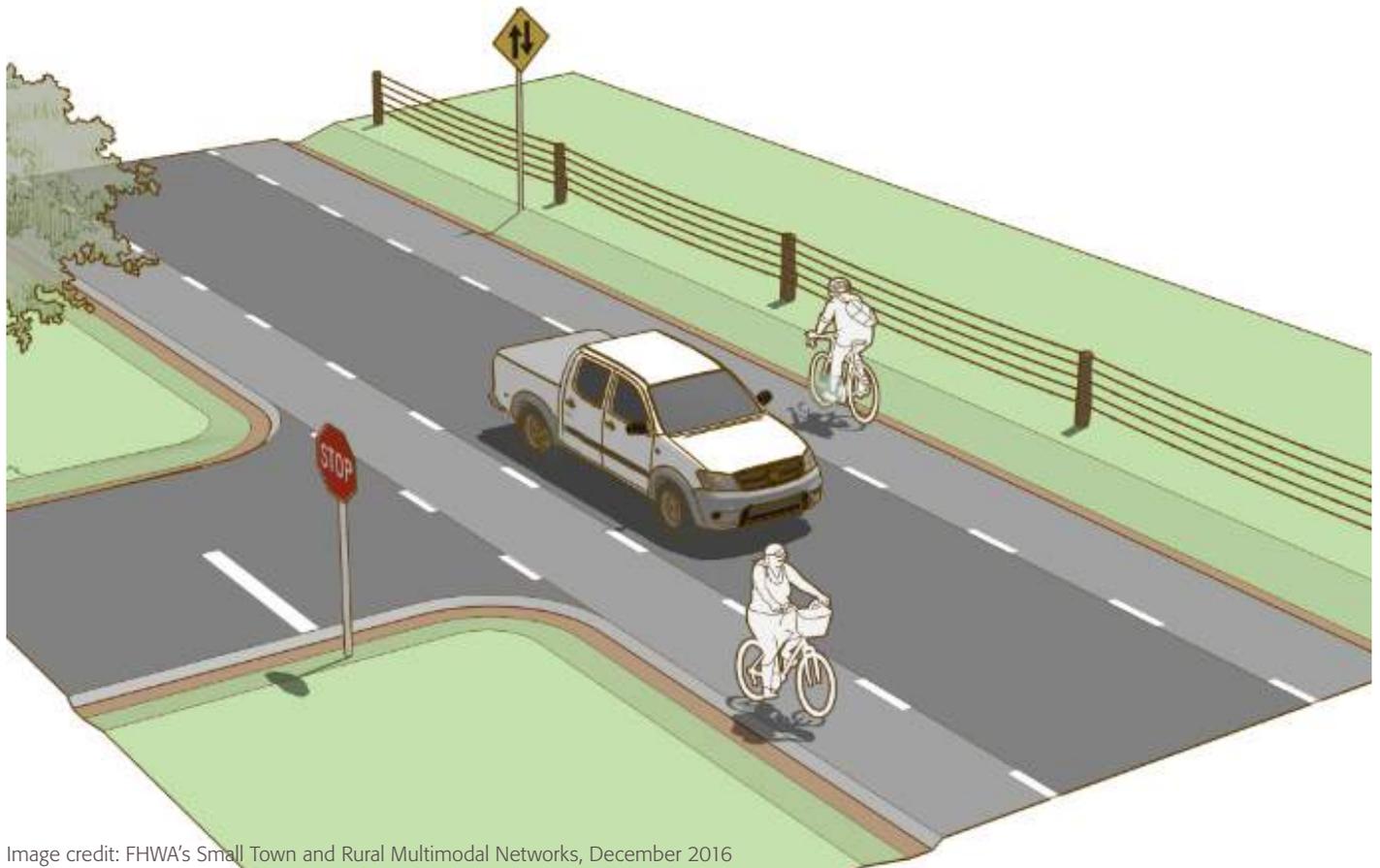


Image credit: FHWA's Small Town and Rural Multimodal Networks, December 2016

Table 5. Recommended Walkway Network Expansion

Facility Type	Existing (miles)	Proposed (miles)	% Increase
Sidewalks on One Side	7.1	0.3	4.4%
Sidewalks on Both Sides	5.4	10.5	194.8%
Advisory Shoulders	0.0	5.6	561.0%
Total	12.6	17.4	138.9%

Table 6. Recommended Walkway Facility Improvements

ID	Facility Type	On Street	From	To	Cost	Funding Source	Priority Year
W-01	Sidewalk Both Sides	First Street	Old San Carlos Boulevard	Crescent Street	\$19,723.01	Lee MPO/State	2023-2027
W-02	Sidewalk Both Sides	Crescent Street	First Street	Estero Boulevard	\$95,951.23	Lee MPO/State	2023-2027
W-03	Sidewalk Both Sides	Third Street	Crescent Street	Old San Carlos Boulevard	\$35,496.19	Lee MPO/State	2023-2027
W-04	Sidewalk Both Sides	Fifth Street	Crescent Street	Estero Boulevard	\$43,150.85	Lee MPO/State	2023-2027
W-05	Sidewalk Both Sides	Estero Boulevard	Lovers Lane	Big Carlos Pass	Included in Estero Boulevard reconstruction	Lee County	2018-2022
W-06	Advisory shoulders	Palermo Circle	Estero Boulevard	Whole loop	Included in Bike Boulevard	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
W-07	Advisory shoulders	Carolina Avenue	Estero Boulevard	Ostego Drive	Included in Bike Boulevard	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
W-08	Advisory shoulders	Ohio/ Bayview/ Virginia	Estero Boulevard	Bayview Drive	Included in Bike Boulevard	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
W-09	Advisory shoulders	Cultural Loop	Town Hall/ Tropical Short Way	Connecticut Street/Mound House/Estero Boulevard	Included in Bike Boulevard	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
W-10	Advisory shoulders	Sanders Drive	Snook Bight Yacht Club and Marina	Estero Boulevard	Included in Bike Boulevard	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
W-11	Advisory shoulders	Avenida Pescadora Loop	Estero Boulevard	Estero Boulevard	Included in Bike Boulevard	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
W-12	Advisory shoulders	Lauder Street/ Bay Village	Estero Boulevard	Estero Boulevard	Included in Bike Boulevard	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
W-13	Advisory shoulders	Lenell Road	Estero Boulevard	Service driveway behind shops	Included in Bike Boulevard	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
W-14	Advisory shoulders	Buccaneer Drive	Estero Boulevard	Estero Boulevard	Included in Bike Boulevard	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037

Table 6. Recommended Walkway Facility Improvements (cont.)

ID	Facility Type	On Street	From	To	Cost	Funding Source	Priority Year
W-15	Crossing Improvement*	Crossing at Estero & 5th			Requires additional study	Lee County/Private Development	2018-2022
W-16	Crossing Improvement*	Crossing at Estero & Crescent Street			Requires additional study	Lee County/Private Development	2018-2022
W-17	Crossing Improvement*	Crossing at Palm Avenue (Beach Access #30)			\$5,000	Lee County/Beach & Shoreline Funding Program**	2018-2022
W-18	Crossing Improvement*	Crossing at Delmar Avenue (Beach Access #28)			\$5,000		2018-2022
W-19	Crossing Improvement (RRFB)	Crossing at School Street (near school, library, and park)			\$10,000 - \$15,000	Lee County	2023-2027
W-20	Crossing Improvement	Crossing at Bay Road (near library and school)			\$5,000	Lee MPO/State	2023-2027
W-21	Crossing Improvement (RRFB)	Crossing at Connecticut Street (Beach Access #22, cultural route to Mound House)			\$10,000 - \$15,000	Lee County MPO/State (design funded)	2018-2022
W-22	Crossing Improvement	Crossing at Coconut Drive (Beach Access #20)			\$5,000	Lee County	2023-2027
W-23	Crossing Improvement	Crossing at Strandview Avenue (Newton Park, Beach Access #17)			\$5,000	Lee County	2023-2027
W-24	Crossing Improvement (RRFB)	Crossing at Publix (west of Sanders Drive)			\$10,000 - \$15,000	Lee County	2023-2027
W-25	Crossing Improvement	Crossing at Dakota Avenue (Beach Access #16)			\$5,000	Lee County/Beach & Shoreline Funding Program**	2023-2027
W-26	Crossing Improvement (RRFB)	Crossing at Lenell Road			\$10,000 - \$15,000	Lee MPO/State	2023-2027
W-27	Crossing Improvement	Crossing at Bay Beach Lane			\$5,000	Lee County	2023-2027
W-28	Bridge Crossing	Matanzas Pass Bridge			TBD/San Carlos PD&E	Federal/State	2018-2022
W-29	Bridge Crossing	Big Carlos Pass Bridge			TBD/Big Carlos Bridge PD&E	Lee County	2018-2022
W-30	Sidewalk One Side	Connecticut Street	Estero Boulevard	Mound House	Construction is funded for FY 2020 with \$446,601 in total federal funds committed		
W-31	Advisory shoulders	Carlos Circle	Estero Boulevard	Estero Boulevard	Included in Bike Boulevard	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
W-32	Advisory shoulders	Matanzas Street	Estero Boulevard	Matanzas Court	Included in Bike Boulevard	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
W-33	Lighting	Pedestrian Scale Lighting			TBD/Lee MPO study	Town of Fort Myers Beach/ Gas Tax or other source	2018-2022

RRFB Rectangular Rapid Flashing Beacon

* Crossings need more detailed study; the Town will work with Lee County DOT to identify the specific enhancements

** TDT funding contingent on approval from Lee County Attorney; eligibility based on State Statute 124.0104 and County Ordinance 16-18

Bikeway Recommendations

The goal of the bikeway recommendations is to enable residents, employees, and visitors to bicycle around Fort Myers Beach safely, comfortably, and conveniently. Key bikeway recommendation themes include implementing a continuous bikeway along Estero Boulevard, enhancing roadway crossings, and improving connections to the regional bikeway network.

For most residential streets, few bikeway improvements are needed, as vehicle speeds and volumes are low allowing people to walk, bike, and drive in the same shared space.

One corridor is recommended to become a bicycle boulevard. The name for the corridor is the “Cultural Loop” because it connects several important civic and cultural destinations including Town Hall, Bay Oaks Recreation Center, Fort Myers Beach Elementary, Fort Myers Beach Public Library,

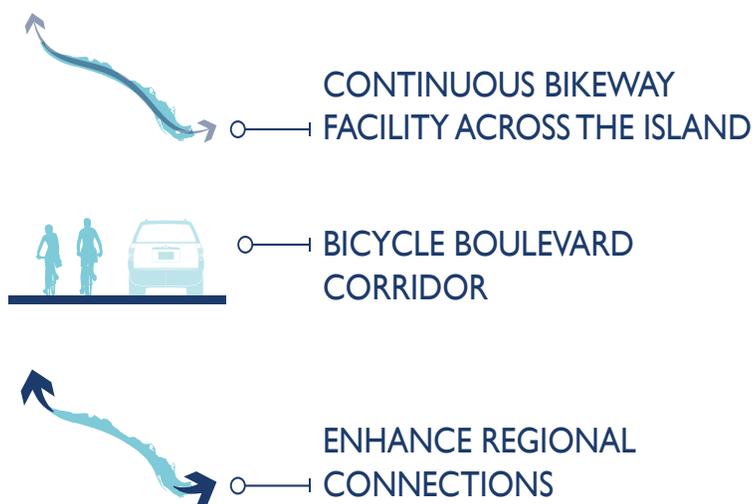
the Matanzas Pass Preserve, and the Mound House. The proposed route creates a loop that can be used by visitors and residents and provides an alternative route to Estero Boulevard. This corridor can be enhanced with pavement markings, traffic calming treatments, and wayfinding signs to develop a bicycle boulevard that functions as a priority bicycle and pedestrian route through the neighborhood.

As people leave their neighborhoods, most must travel along and across Estero Boulevard. On the north end of the island, a bike lane exists. Recommendations are focused on installing a dedicated bike lane on the south end of the island, and shared lane markings between Crescent Street and Lovers Lane where the roadway width is more constrained. A continuous bikeway along this corridor will connect people to parks, the beach, schools, jobs, shopping, and other daily destinations.

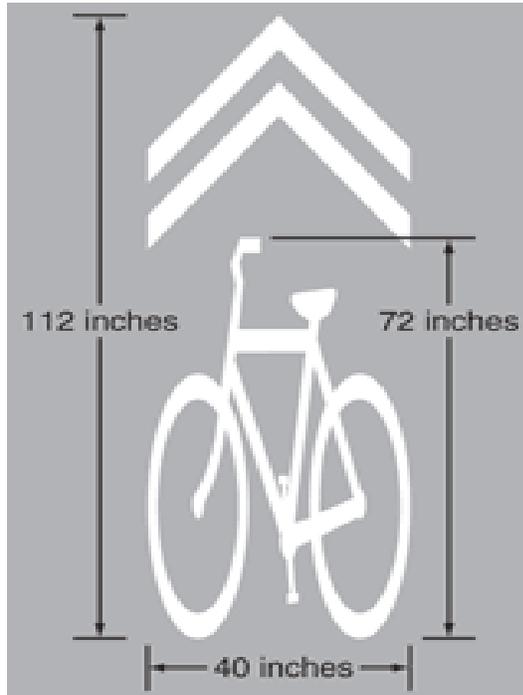
Route 865/San Carlos Boulevard/Estero Boulevard continues north and east from Fort Myers Beach. Recommendations also enhance regional bikeway connections at the bridges to provide comfortable, safe, and convenient crossings over the waterways. As previously stated, the Big Carlos Pass Bridge at the south end of the island is scheduled for improvements and currently undergoing a Project Development and Environment (PD&E) Study by Lee County. The Matanzas Pass Bridge at the north end of the island is also scheduled for improvements and is undergoing a PD&E Study by FDOT. Continued coordination with local, regional, and state partners is needed to create the community's needed bikeway improvements..

Figure 10 shows the bikeway recommendations. Tables 7 and 8 summarize the recommended bikeway projects.

BIKEWAY RECOMMENDATION THEMES



Top: Shared Lane Markings like this one recently installed on Estero Boulevard, show where cyclists are likely to ride and encourage safe passage of vehicles.



Bottom: Clear markings may be placed on sidewalks that can safely accommodate cyclists, especially along roads with higher speeds or more cars. Less confident riders tend to gravitate to riding on sidewalks.





Table 7. Recommended Bikeway Facility Improvement Summary

Facility Type	Projects	Existing (miles)	Proposed (miles)	% Increase
Bike Lane	2	1.7	4.7	270.0%
Shared Lane Marking	1	0.5	1.3	281.3%
Bicycle Boulevard	17	0.0	6.6	640.0%
Total	20	2.2	12.6	580.2%

Table 8. Recommended Bikeway Facility Improvements

ID	Facility Type	On Street	From	To	Cost	Funding Source	Priority Year
B-01	Bicycle Lanes- Both Sides	San Carlos Boulevard	Fisherman's Warf	Estero Boulevard	TBD/San Carlos Boulevard PD&E	State	2018-2022
B-02	Shared Lane Marking- Both Sides	Estero Boulevard- middle section	San Carlos Boulevard	Gulf View Shops	Included in Estero Boulevard reconstruction	Lee County	2018-2022
B-03	Bicycle Lanes- Both Sides	Estero Boulevard	Gulf View Shops	Big Carlos Pass	Included in Estero Boulevard reconstruction	Lee County	2018-2022
B-04	Bike Boulevard	First Street	Old San Carlos Boulevard	Crescent Street	\$1,625.03	Lee MPO/State	2023-2027
B-05	Bike Boulevard	Crescent Street	First Street	Estero Boulevard	\$8,480.96	Lee MPO/State	2023-2027
B-06	Bike Boulevard	Third Street	Crescent Street	Old San Carlos Boulevard	\$3,142.89	Lee MPO/State	2023-2027
B-07	Bike Boulevard	Old San Carlos Boulevard	Estero Boulevard	First Street	\$6,984.62	Lee MPO/State	2023-2027
B-08	Bike Boulevard	Fifth Street	Crescent Street	Estero Boulevard	\$3,829.76	Lee MPO/State	2023-2027
B-09	Bike Boulevard	Palermo Circle	Estero Boulevard	Whole loop	\$17,011.63	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
B-10	Bike Boulevard	Ohio/ Bayview/ Virginia	Estero Boulevard	Bayview Drive	\$5,669.91	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037
B-11	Bike Boulevard	Cultural Loop	Town Hall/ Tropical Short Way	Connecticut Street/ Mound House/ Estero Boulevard	\$55,520.84	Town of Fort Myers Beach/ Gas Tax or other source	2018-2022
B-12	Bike Boulevard	Compass Lane Loop	Estero Boulevard	Estero Boulevard	\$3,516.89	Town of Fort Myers Beach/ Gas Tax or other source	2028-2037

Table 8. Recommended Bikeway Facility Improvements (cont.)

ID	Facility Type	On Street	From	To	Cost	Funding Source	Priority Year
B-13	Bike Boulevard	Avenida Pescadora Loop	Estero Boulevard	Estero Boulevard	\$17,862.07	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-14	Bike Boulevard	Lauder Street/ Bay Village	Estero Boulevard	Estero Boulevard	\$31,894.28	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-15	Bike Boulevard	Lenell Road	Estero Boulevard	Service driveway behind shops	\$15,587.57	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-16	Bike Boulevard	Buccaneer Drive	Estero Boulevard	Estero Boulevard	\$18,146.31	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-17	Bike Boulevard	Matanzas Street	Estero Boulevard	Matanzas Court	\$3,501.29	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-18	Bike Boulevard	Carlos Circle	Estero Boulevard	Estero Boulevard	\$5,493.48	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-19	Bike Boulevard	Carolina Ave	Estero Boulevard	Ostego Drive	\$7,762.79	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-20	Bike Boulevard	Sanders Drive	Estero Boulevard	Northern terminus	\$3,561.53	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-21	Bridge Crossing	Matanzas Pass Bridge			TBD/San Carlos PD&E	Federal/State	2018-2022
B-22	Bridge Crossing	Big Carlos Pass Bridge			TBD/Big Carlos Pass PD&E	Lee County	2018-2022

Design Criteria Recommendations

In Fort Myers Beach, residents, visitors, and employees walk and bicycle to numerous destinations daily. Opportunities exist to improve the pedestrian and bikeway network for those who already use it and for those who would consider walking and bicycling if facilities were more comfortable.

Active Transportation

Prior to developing design criteria specific to Fort Myers Beach, a thorough review was conducted of national and state guidance related to bicycle and pedestrian facility

design. Recent innovation in bikeway and pedestrian facility design has resulted in the publication of new guides at national state, and local levels. A summary of national guides is provided below.

Crossings

The criteria to determine if an intersection is a major or minor intersection as well as improvement options for each type of intersection are shown below. The following design criteria are shown as a series of visuals that can be referenced as a guide to improve the bikeway and pedestrian network for all types of users in the community.

Major Intersection Selection Criteria

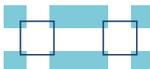
These criteria can be used to determine if an intersection in Fort Myers Beach is a major intersection

-  **Major destinations in close proximity to intersection**
-  **Demonstrated pattern of crashes**
-  **Beach Access**
-  **Transit Access**

-  **Civic, School or Park Destination**
-  **Street intersection with major and minor street**
-  **High vehicle volumes and turning movements**
-  **Can be located mid-block**

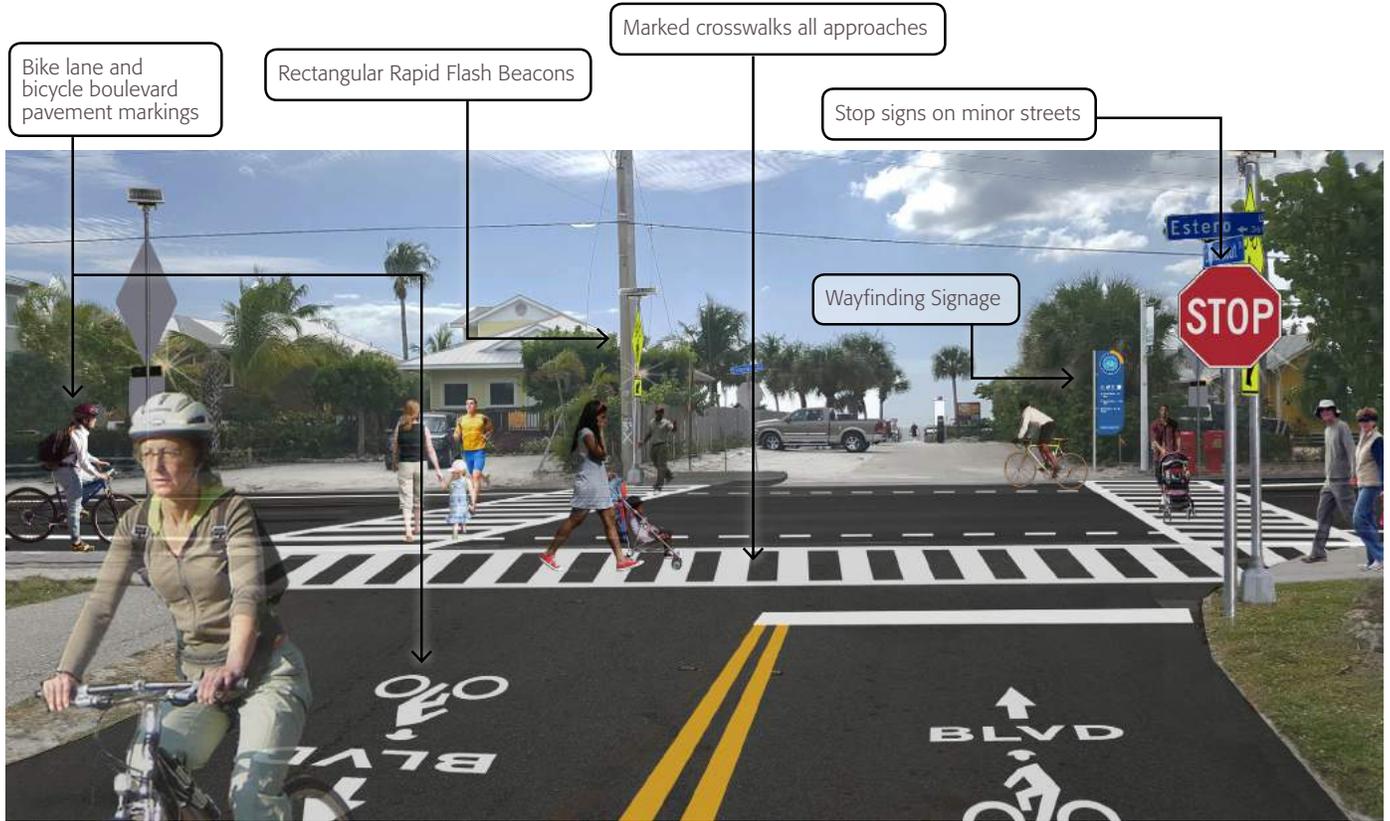
Minor Intersection Selection Criteria

-  **Destinations in close proximity to intersection**
-  **Street intersection with major and minor street**

-  **Can be located mid-block**
-  **Long distance between major intersection crossings**

Anatomy of a Major Intersection

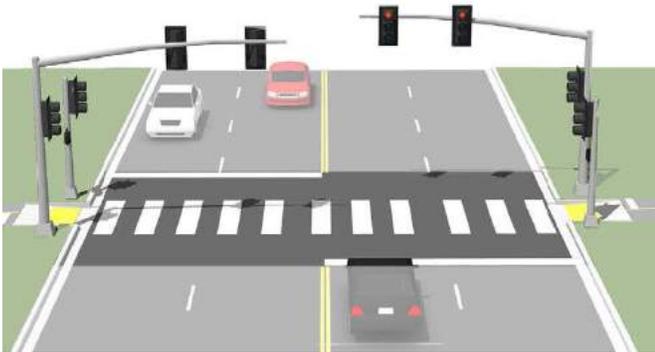
The photo rendering below illustrates treatments that could be installed at major intersections in Fort Myers Beach. This example shows the intersection of Estero Boulevard and Connecticut Street.



Major Crossing Intersection Treatments

The crossing treatments illustrated below can facilitate crossing for pedestrians at major intersections.

Traffic Signal



Pedestrian Hybrid Beacon



Rectangular Rapid Flash Beacon



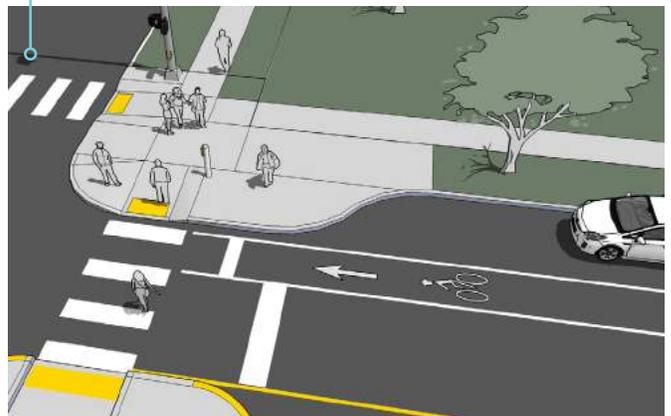
4-Way Marked Crosswalks



Pedestrian Refuge Island

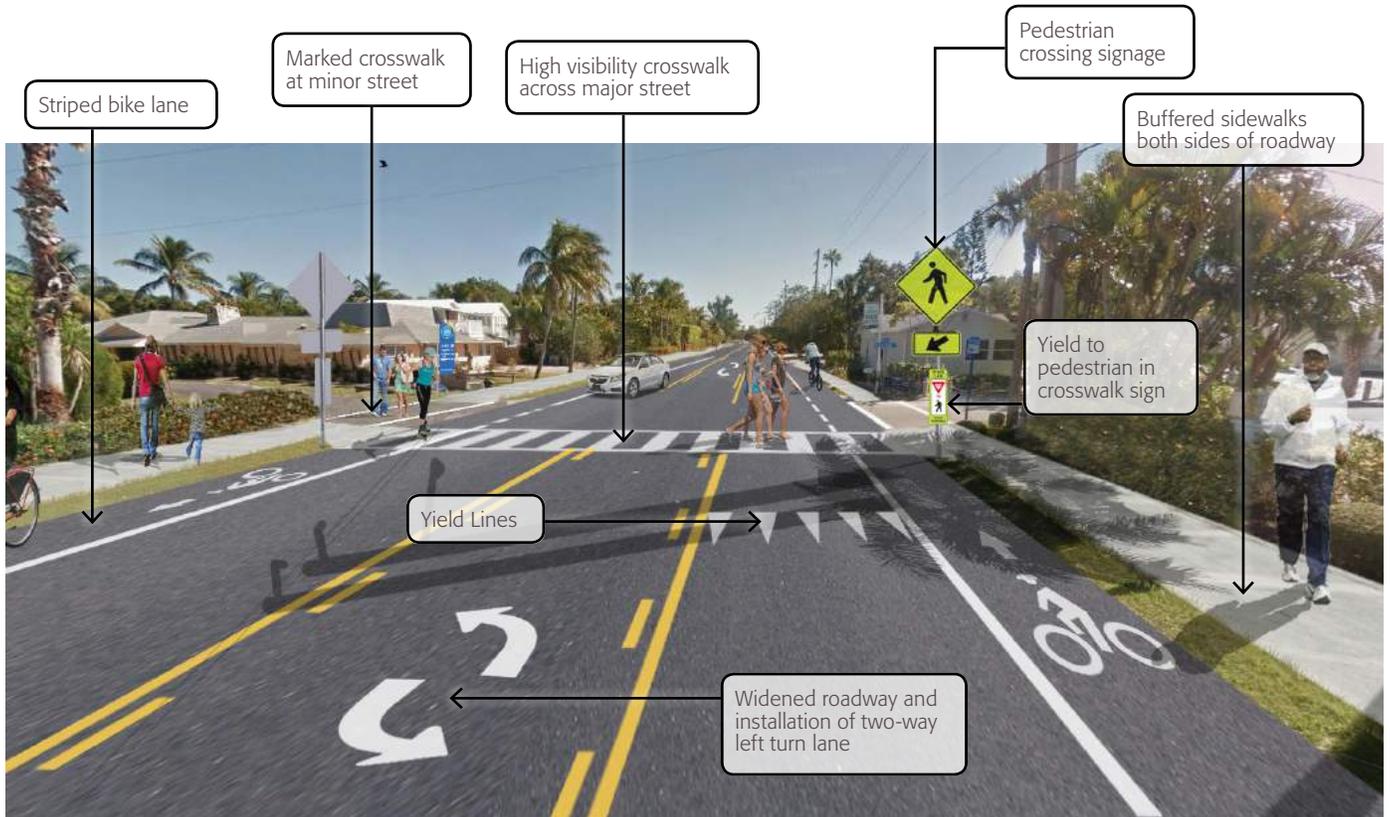


Curb Extensions



Anatomy of a Minor Intersection

The photo rendering below illustrates treatments that could be installed at minor intersections in Fort Myers Beach. This example shows the intersection of Estero Boulevard and Aberdeen Avenue.



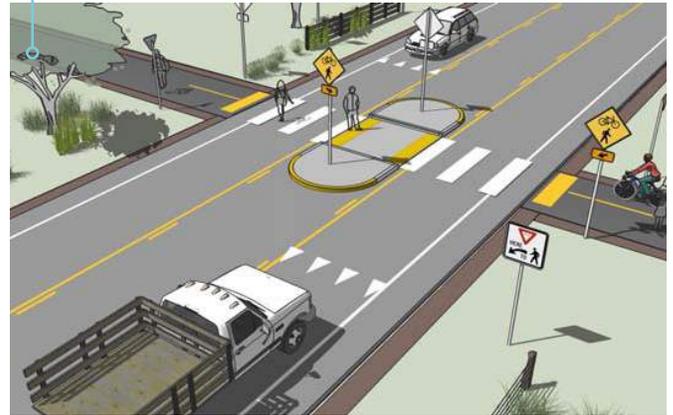
Minor Crossing Intersection Treatments

There are a range of crossing treatments that can facilitate crossing for pedestrians at minor intersections.

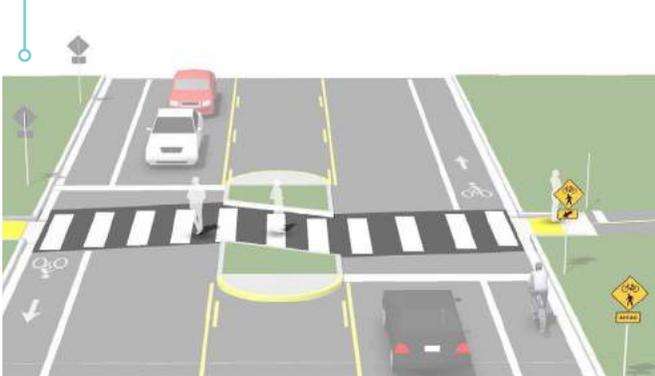
1-Leg Crosswalk



Rectangular Rapid Flash Beacon



Pedestrian Crossing Signage



Yield to Pedestrian in Crosswalk Signage



Pedestrian Refuge Island



Textured Bulb-Outs



Bicycle Boulevard

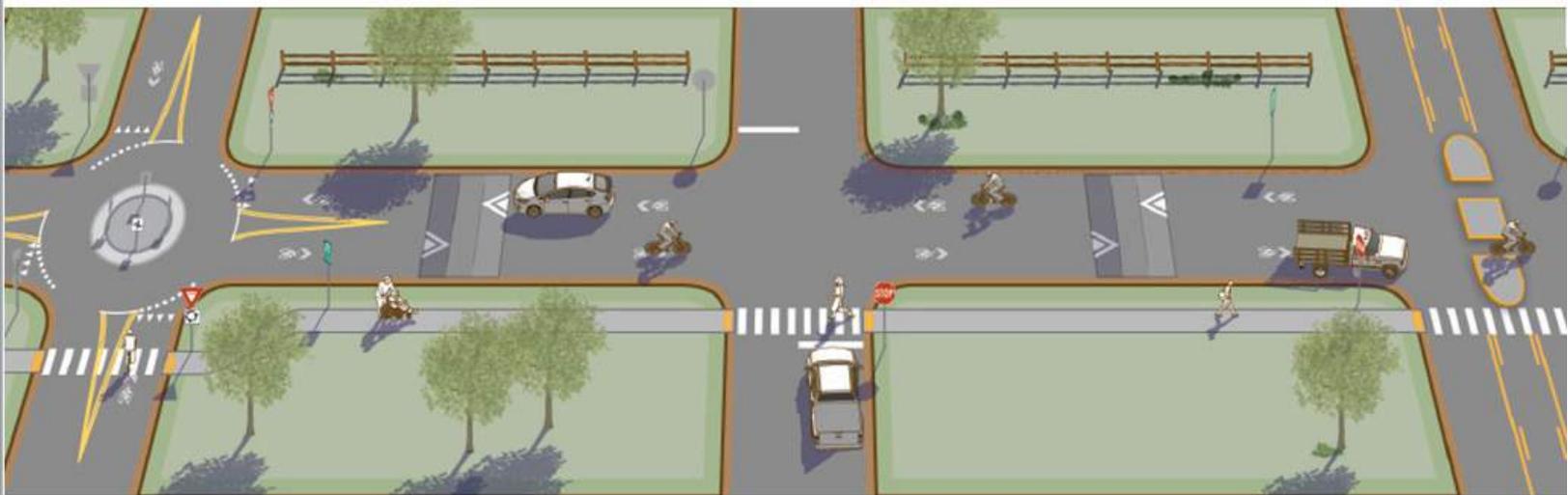
Bicycle boulevards combine road markings, traffic calming measures, and crossing improvements designed to enhance the comfort and priority of bicyclists traveling along the route.



MIXED TRAFFIC

Bicycle Boulevard

A **bicycle boulevard** is a low-stress shared roadway bicycle facility, designed to offer priority for bicyclists operating within a roadway shared with motor vehicle traffic.





Program Recommendations

Programs are an important component of a bicycle and pedestrian master plan, as they provide the framework for education and encouragement to support the safe use of the facilities recommended in the plan. Programs can also be designed to support enforcement of policies and evaluate the impact on safety and traffic in Fort Myers Beach.

Programs will enhance the biking and walking experience in Fort Myers Beach as community members feel safer and more confident in their ability to walk and bicycle around town. These programs, along with the supporting policies described in the last section, will work to institutionalize the principles of bicycling and walking friendliness.

The following section presents recommended programs to support the vision and goals of this Plan. The recommendations can be undertaken by local and regional agencies, community organizations, local businesses, or partnerships among these groups. Table 9 lists the program recommendations.

Transportation Demand Management

Transportation Demand Management (TDM) is a program of coordinating policies, information, and incentives aimed at reducing car traffic by encouraging and facilitating the use of bicycle, pedestrian, transit, and ridesharing options. These programs can take the form of working with employers, hotels, and developers to implement commuter/traveler benefit programs. They can also entail education campaigns to ensure that the public is aware of options for transit, walking, biking, and carpooling in order to decrease single occupancy vehicle trips. TDM programs for tourist communities can include:

- › Transit improvements
- › Shuttle services
- › Taxi service improvements
- › Cycling and walking improvements
- › Public bike systems
- › Bicycle parking
- › Parking management
- › Traffic calming, speed reduction, and streetscape improvements

Table 9. Program Recommendations

Program	Type	Funding Source/Agency	Funding Level
Transportation Demand Management	Education & Encouragement	Fort Myers Beach/Lee MPO	Medium to High
Wayfinding/Bicycle User Map	Education & Encouragement	Fort Myers Beach Community Development	Low to Medium
Bicycle Friendly/Walk Friendly Community Designation	Encouragement	Fort Myers Beach Community Development	Low
Safety Campaign	Education & Enforcement	Lee County Sheriff Department	Medium to High
Bicycle Parking	Encouragement	Fort Myers Beach Public Works	Low
On-Demand Valet Service/Electric Vehicle Shuttles	Encouragement	Fort Myers Beach Community Development	Medium
Bicycle Facility Maintenance	Policy	Fort Myers Beach Public Works	Low

- › Smart Growth, New Urbanism, and access management
- › Car-free planning and vehicle restrictions
- › Marketing to encourage visitors to arrive without a car
- › Commute Trip Reduction programs for staff
- › Freight management to minimize truck traffic
- › Aviation transport management
- › Transportation access guides, which provide concise directions to reach destinations by alternative modes
- › Equipment rentals (bikes, scooters, etc.)

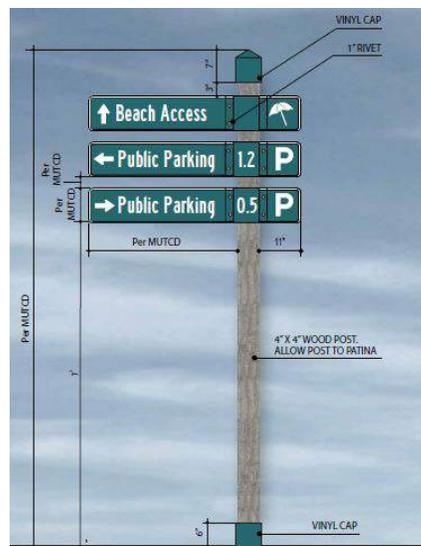
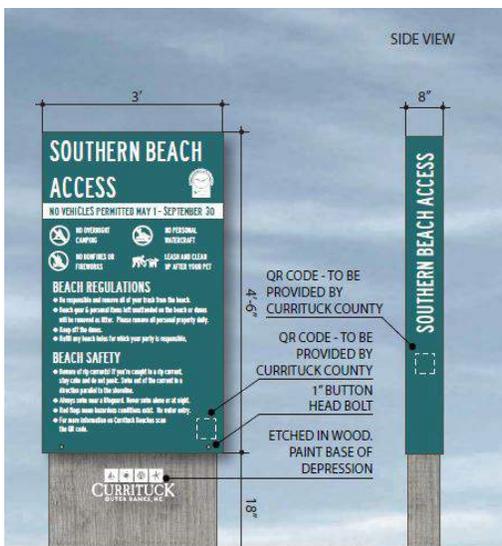
It is recommended that Fort Myers Beach establish a TDM program to manage congestion, encourage and incentivize residents and visitors to use all forms of transportation, and shift single occupancy vehicle trips to non-motorized modes.

Wayfinding signs help bicyclists and pedestrians choose the best route to travel to popular destinations.

Wayfinding

Wayfinding, as part of a sign program that also includes warning and regulatory signs, enhances resident and visitor orientation. A clear wayfinding system should contribute to economic development by pointing visitors to key destinations around the community. Fort Myers Beach should develop a customized wayfinding program that includes directional signs to local destinations with travel times by foot and bike.

Bicycle wayfinding signs also visually cue motorists that they are driving along a bicycle route and should use caution. Signs are typically placed at key locations leading to and along bicycle routes, including at the intersection of multiple routes. Too many road signs tend to clutter the right-of-way, and it is recommended that these signs be posted at a level most visible to bicyclists rather than per vehicle sign standards.



Wayfinding Sign Types and Placement

Signs are typically placed at decision points along bicycle routes - typically at the intersection of two or more bikeways and at other key locations leading to and along bicycle routes.

- › **Confirmation Signs.** Every ¼ to ½ mile along off-street facilities and every 2 to 3 blocks along on-street bicycle facilities, unless another type of sign is used (e.g., within 150 feet of a turn or decision sign). Should be placed soon after turns to confirm destination(s). Pavement markings can also act as confirmation that a bicyclist is on a preferred route.
- › **Turn Signs.** Near-side of intersections where bike routes turn (e.g., where the street ceases to be a bicycle route or does not go through). Pavement markings can also indicate the need to turn to the bicyclist.
- › **Decision Signs.** Near-side of intersections in advance of a junction with another bicycle route or along a route to indicate a nearby destination.

Apply for Bicycle Friendly and Walk Friendly Community Designation

A goal for Fort Myers Beach should be to seek a Walk Friendly Community (WFC) designation from the University of North Carolina Highway Safety Research Center's Pedestrian and Bicycle Information Center and Bicycle Friendly Community (BFC) designation from the League of American Bicyclists. The WFC and BFC campaigns are awards programs that recognize municipalities that actively support pedestrian and bicycle activity and safety. A WFC and BFC provides safe accommodation for walking and biking and encourages its residents to walk and bike for transportation and recreation.

Becoming designated as a WFC and/or a BFC signals to current residents, potential residents, and visitors that the Town is a safe and welcoming place for individuals and families to live and recreate. Developing and implementing this Master Plan are essential first steps toward becoming a WFC or BFC. With ongoing efforts and the short-term work program recommended here, the Town should be in a position to apply for and receive WFC and BFC status within a few years.



Safety Campaign

Educational campaigns that target motorists and those walking, biking, and taking transit create a shared sense of responsibility among all roadway users, rather than singling out one user group. A joint campaign can focus on rights and responsibilities of everyone using the streets and trails of Fort Myers Beach. Information may include important bicycle laws, tips for safe bicycle travel, safe street crossing actions, keys to safe motor vehicle operation, and general facility rules and regulations.

Educational materials are often available for download from national organizations, such as the Pedestrian and Bicycle Information Center, and state or local resources, such as FDOT. This Plan recommends that Fort Myers Beach establish a variety of outreach strategies for educating motorists and those walking and biking about safely sharing the street. Campaign activities can include distributing materials at local events or print advertisements and public service announcements.

The Florida Department of Transportation's "Alert Today, Alive Tomorrow" campaign includes messages for drivers, pedestrians, and bicyclists.



WHEN DRIVING, WALKING, OR BICYCLING... PAY ATTENTION. READ THE SIGNS. LEARN THE RULES.

- AVOID DISTRACTIONS.**
- STOP BEFORE TURNING RIGHT ON RED.**
- USE THE SIDEWALK AND CROSSWALKS.**
- BICYCLE PREDICTABLY, WITH TRAFFIC.**

Funded by the Florida Department of Transportation



  	
BICYCLIST TIPS	PEDESTRIAN TIPS
Ride in the same direction of traffic on the street. Obey all traffic signs, signals, and lane markings.	Obey all traffic laws. If no sidewalks are present, walk against the direction of traffic so you can see oncoming vehicles.
Yield to traffic when appropriate. It's better to yield than "be in the right" and risk injury.	Always use the crosswalk. Push the button to get the walk signal.
Be visible. Position yourself in the lane so others can easily see you. Always use a headlight and taillight at night.	Be visible. Wear bright, reflective colors on your clothes, shoes, belts and wristbands.
Watch for parked cars. Don't ride in the "door zone" of parked cars even when the bike lane is adjacent to them.	Look, then look again. Look left, right, then left again before crossing.
<p align="center">www.AlertTodayFlorida.com</p>	



Bike Parking

Bicyclists expect a safe, convenient place to secure their bicycle when they reach their destination. This may be short-term parking of two hours or less or long-term parking for employees, students, residents, and commuters. The Town of Fort Myers Beach should update its development regulations with enhanced bike parking standards. Bike parking requirements should be explicitly required with commercial, multi-family, and civic developments. The Association of Pedestrian and Bicycle Professionals Bicycle Parking Guidelines has resources on best practices related to site design, construction, and number of bike parking spaces to require.

Bike racks



Bike corrals



Secure bike parking



On-Demand Valet/Electric Vehicle Shuttles

A growing number of resort cities and towns are initiating an electric vehicle shuttle service that transports users on six-seater electric golf-cart-style vehicles. These services are provided free-of-charge and are accessed via an app-based interface as a strategy to relieve congestion, free up parking, and improve accessibility in busy beach-side districts. The services are proving to be good solutions to the first mile/last mile dilemma - how to get to the final destination once someone has taken transit or used a park and ride.

Fort Myers Beach should consider adopting a pilot program for this innovative mobility strategy to assess its feasibility within this community. Success stories from early adopters, such as Tampa and Delray Beach, FL, and Manhattan Beach, CA, can be found at: www.ridedowntown.com.



Policy Recommendations

Policy is what guides government decision-making in Fort Myers Beach. Policies can be adopted and codified in the Town’s ordinances. They can also be procedural in the form of department, committee, or elected official guidelines. Fort Myers Beach already has policies and design standards in place that specifically address walking and biking. The policy recommendations for this plan provide next steps for improving the bicycle- and walk-friendliness of Fort Myers Beach.

Estero Boulevard Coordination

The recommendations in this Plan for walkways, bikeways, crossing/intersection treatments, and walking and biking support infrastructure along Estero Boulevard reflect guidance provided during coordination with Lee County regarding the Estero Boulevard Improvement project.

The portion of Estero Boulevard north of Times Square was recently reconstructed by the Town to include bicycle lanes and

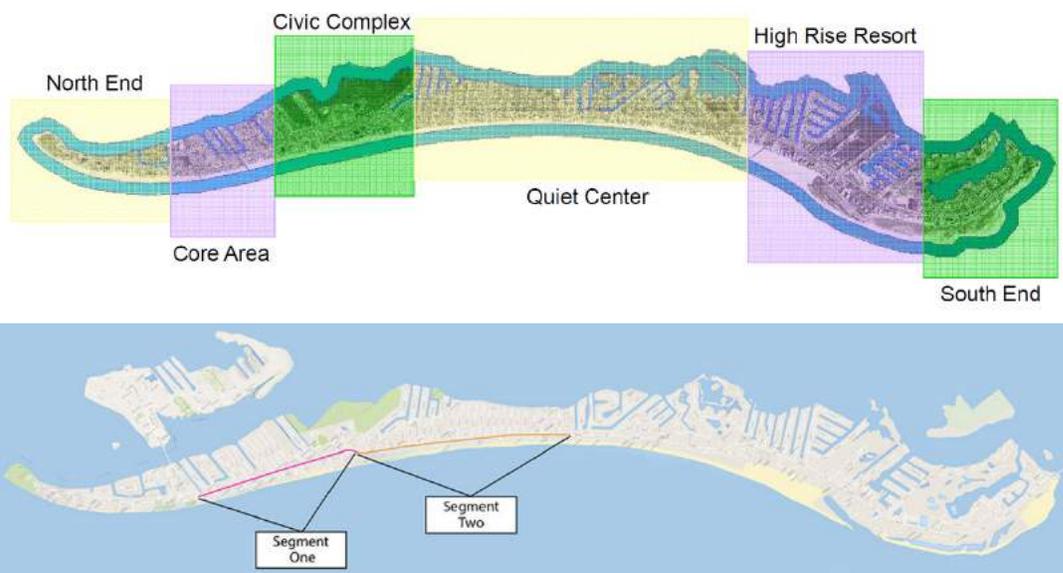
sidewalks on both sides of the road. The reFRESH Fort Myers Beach Master Plan includes plans to reconstruct the portion of Estero Boulevard south of Times Square along the length of the island. For the reconstruction effort, the road was divided into segments from north to south, with improvements to be addressed one segment at a time. The first two segments are under construction as of July 2017, and the remaining segments are being designed.

For the portions already completed or underway, opportunities to include bicycle and pedestrian design strategies beyond what is already planned are limited. However, greater opportunities exist to incorporate recommendations in the southern segments that are yet-to-be designed.

Fort Myers Beach should coordinate with Lee County, the MPO, and FDOT to ensure that these recommendations are included in future roadway projects and residential and commercial development projects along Estero Boulevard as well as any that connect with such recommended facilities.

Top: Fort Myers Beach has six distinct character areas that were used to determine how to address improvements in each of the segments of Estero Boulevard.

Bottom: Segments One and Two are currently under construction. Segments do not line up exactly with the character areas and starting/stopping points continue to be refined.



Regional Trail Connection Coordination

Providing connections to the regional and state trail networks can enhance tourism and recreational opportunities in Lee County. Biking to the beach is a popular activity for many residents and visitors.

Discussions are underway to develop a route and connection to Fort Myers Beach from the Gulf Coast Trail which is part of the statewide SUN Trail Network. In addition to providing a route option off the state trail network, having a state-recognized route could open up opportunities for additional funding of bicycle and pedestrian infrastructure improvements.

Fort Myers Beach, Lee County, and the Lee County MPO should continue to work with state agency partners to develop strategies to connect Fort Myers Beach to the state trail system. Potential strategies include a signed route using on-street bikeways and sidewalks and/or a shared-use path along roadways.

Complete Streets Policy

A Complete Street is a roadway that, in addition to general purpose vehicular travel lanes, includes items such as sidewalks, bike lanes or shoulders, bus lanes, transit stops, crosswalks, median refuges, curb bulb-outs, appropriate landscaping, and other features

that add to the usability and livability of the street as determined by context.

It is recommended that Fort Myers Beach adopt a Complete Streets policy and develop and adopt street design guidelines to support the policy and communicate desired street treatments. The pedestrian and bicycle design criteria in this plan as well as references to state and national design guidance provide a basis for such guidelines.

According to the National Complete Streets Coalition, an ideal Complete Streets Policy should include the following:

- › A vision for how and why the community wants to complete its streets
- › A definition that “all users” includes pedestrians, bicyclists, and transit users of all ages and abilities, as well as trucks, buses, and automobiles
- › Design, planning, maintenance, and operations, for the entire right-of-way of new and retrofit projects
- › Define that any exceptions are specific and set a clear procedure that requires high-level approval of exceptions
- › Encourage street connectivity and aim to create a comprehensive, integrated, and connected network for all modes

New development can often provide an opportunity to enhance street and streetscape infrastructure as well as access to buildings.



- › A universal policy that is adoptable by all agencies or departments to cover all roads
- › Direction to use the latest and best design criteria and design guidelines while recognizing the need for flexibility in balancing user needs
- › Direction that Complete Streets solutions will complement the context of the community

Complete Streets Development Standards

New development can often provide an opportunity to enhance streets as well as improve access to buildings. When re-zoning applications or site plans are submitted to the Town of Fort Myers Beach, they should be reviewed for concurrency with this Plan. The possibility of improvements, such as providing right-of-way for sidewalks, sidewalk lighting, street trees and other streetscape enhancements, bike lanes, trails, or bicycle and pedestrian access to a site, can be assessed. Additionally, site designs for new developments should address bicycle and pedestrian circulation and access to buildings on the site, such as bicycle parking.

Pedestrian-Scale Lighting

Adequate lighting is one of the key elements of Complete Streets and an important aspect of visibility, legibility, safety, and accessibility. Pedestrian-scale lighting improves visibility for both pedestrians and motorists, particularly at intersections. Pedestrian-scale lighting can provide a vertical buffer between the sidewalk and the street, defining pedestrian areas. Pedestrian-scale lighting should be used in areas of high pedestrian activity.

Fort Myers Beach will be conducting a lighting study aimed at enhancing pedestrian safety at crosswalks and retrofitting roadway lighting for sidewalk illumination. The findings of this study should be used to inform the lighting needs and priorities for the Town.

To implement the recommendations from the lighting study, the Town of Fort Myers Beach should adopt design guidelines for pedestrian-scale lighting. Pedestrian-scale lighting is characterized by short light poles (around 15 feet high), close spacing, low levels of illumination (except at crossings), and the use of LED lamps to produce good color rendition, long service life, and high energy efficiency.

Guidance for pedestrian-scale lighting prioritizes the following locations and placement:

- › Pedestrian-oriented areas
- › Street crossings (intersection, mid-block)
- › Entrances and exits of bridges
- › Areas near churches, schools, and community centers with nighttime pedestrian activity
- › Spacing to provide minimum illumination levels while limiting excess light pollution
- › Luminaries should direct light downward
- › Lighting poles should be placed in the furniture zone of the sidewalk and not interfere with pedestrian travel.

Lighting spacing depends on the type and intensity of the lights. 30-50' spacing is common for pedestrian scale lighting.





Pedestrian Facility Maintenance

The goal of the Town's sidewalk repair policy should be to ensure that all sidewalks are safe and accessible for all pedestrians. Currently, there is no set schedule, dedicated funding, or program to ensure proper maintenance or repair. It is recommended that the following policies be considered to address sidewalk maintenance:

- › Set aside dedicated funding for sidewalk maintenance and repair
- › Establish a maintenance schedule for sidewalks and crosswalks

Crosswalk Upgrades and Maintenance

The goal of a crosswalk maintenance policy should be to maintain and upgrade the crosswalks on Estero Boulevard. The following recommendations address which treatments are appropriate:

- › Develop a hierarchy of crosswalk treatments based on the presence of elements such as beach access points, bus stop locations, existing crosswalk locations, and driveway locations among others. The intent of the hierarchy is to summarize the County's process for selecting crosswalk treatments as well as refine crosswalk implementation strategies along Estero Boulevard.
- › Use brick type pavers for some pedestrian crosswalks where determined by hierarchy

Street sweepers specifically designed for bikeway maintenance ensure the facilities are clear of debris.

of crosswalk treatments. This helps distinguish the roadway from the crossing.

- › Continue use of florescent-yellow background pedestrian crossing signs and replace as needed. Use fluorescent yellow-green background signs at locations developed by the hierarchy for crosswalks.
- › Continue use of thermoplastic pavement markings at all crossings.
- › Use LED In-Pavement Warning lights, particularly near school crossing.

Bicycle Facility Maintenance

It is recommended that Fort Myers Beach develops a strategy for bicycle facility maintenance and policies to support it. Key actions include:

- › Setting aside dedicated funding for bikeway maintenance
- › Purchasing appropriate equipment to maintain bikeways such as street sweepers for bike lanes
- › Developing education/enforcement strategies to address parked cars and other obstacles in bicycle lanes



Funding Recommendations

Currently, the Town of Fort Myers Beach does not have any dedicated funding to construct new sidewalks, shared-use paths, or on-street bikeways. It has historically relied on grants to construct sidewalks. The Town has been opportunistic in implementing on-street bikeways as part of re-surfacing projects and the improvement to Estero Boulevard. Limited resources are available for existing walkway and bikeway facilities and vary year-to-year as a result of the Town budgeting process.

The Town of Fort Myers Beach should continue to seek grants to expand the bikeway and walkway network. However, grants only cover a portion of the funds needed to expand the network and maintenance of the infrastructure after it is built.

For planning and implementation purposes, it is recommended that the Town establish an annual set-aside from the Town's general funds to implement this plan. Peer cities' set-asides range from five to 25 percent of their capital funds for transportation projects. This policy can create a dedicated annual funding source to implement this Master Plan. Additionally, the Town should establish a dedicated maintenance funding source to keep the bikeway and walkway network in a state of good repair.

Funding Sources

Estero Boulevard and San Carlos Boulevard

Fort Myers Beach's transportation system is made up primarily of local streets; however, Estero Boulevard functions as the main transportation facility for the Town. Lee County is currently reconstructing the road to include bicycle lanes, new sidewalks, shared use lanes

for bicycles on roads, and shared-use paths. The Matanzas Pass Bridge is a key access point from the mainland to the Town. FDOT is funding a PD&E study between Summerlin Road on the mainland and Estero Boulevard that will emphasize alternative modes, such as bicycle lanes and sidewalks.

Lee County Tourist Development Tax

Lee County collects a five percent Tourist Development Tax (TDT) from rental properties leased for a period of six months or less. Between 2010 and 2016, total countywide revenue from the tax increased by nearly 74 percent from \$22.8 million to \$39.6 million.

A portion of the TDT is allocated by the Lee County Tourist Development Council, which awards grant funding through two programs: 'Attractions Marketing' and 'Beach and Shoreline'. In some instances, funding from the former program has been allocated for bicycle and pedestrian marketing and safety campaigns. For example, the City of Sanibel received \$4,000 to produce a video that featured bicycle safety messaging and promoted the island as a bike-friendly community. The City of Cape Coral received \$4,000 to create a bicycle marketing brochure showcasing the city's 90 miles of bike routes.

The Beach and Shoreline Program generally funds beach maintenance, renourishment, and beach park facility development and improvements, such as boardwalks. For example, in FY 2016 and FY 2017 Lee County received an allocation of \$185,000 for boardwalks at Matanzas Pass Preserve.

Florida Department of Transportation Safety Sub-Grants

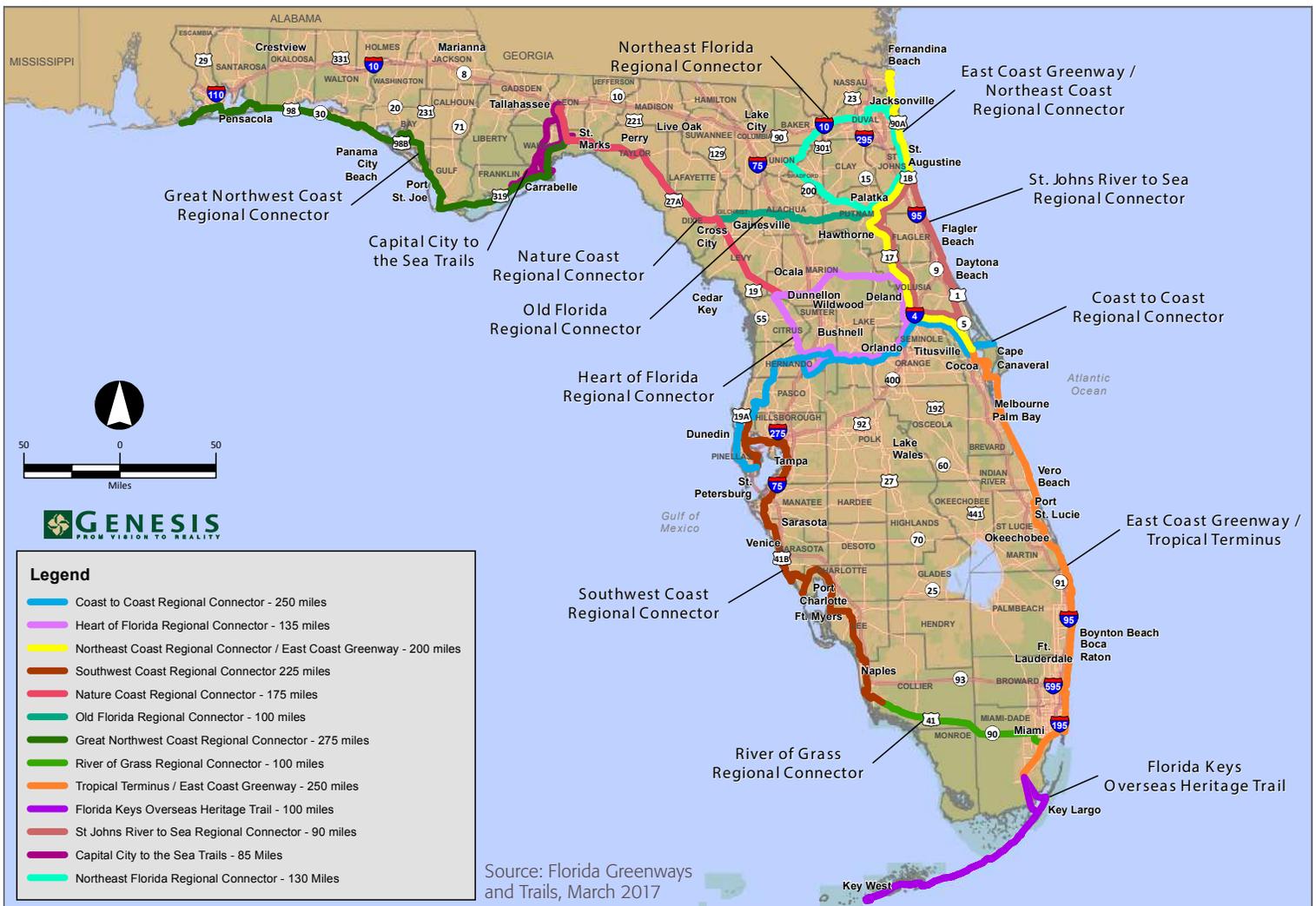
The FDOT Safety Office awards start-up sub-grants to programs that address traffic safety

in the priority areas from the 2012 Strategic Highway Safety Plan and Pedestrian and Bicycle Strategic Safety Plan. Countermeasures are eligible for sub-grant funding and generally target prevention through education and enforcement programs, not capital infrastructure and maintenance projects. Countermeasures might include education programs for children, community outreach about pedestrian safety, clinics on bicycle and pedestrian safety, and driver training.

SUN Trail

Passed into law in 2015, 339.81, F.S. created the SUN Trail program with dedicated annual funding. FDOT will include SUN Trail projects in its work program, spending approximately \$25 million annually from the redistribution of new motor vehicle tag revenues to build a statewide multi-use trail system that will ultimately run through the Gulf Coast, Central Florida, and the East Coast (Figure 11). SUN Trail is a potential new funding opportunity for Lee County working with the Town of Fort Myers Beach and the Lee County MPO.

Figure 11. SUN Trail Regional Priority Trail Connectors



An off-road, shared-use path on Estero Boulevard is being considered by the MPO to connect the beach to the southwest portion of the SUN Trail Network and loop through the Town of Fort Myers Beach to Bonita Springs.

Lee County MPO Funds

As a metropolitan area with a population over 200,000, the Lee County MPO receives two types of federal funds - Surface Transportation Program Urban Area (SU) funds and Transportation Alternative (TA) funds. The MPO uses both to fund bicycle and pedestrian projects.

The MPO receives \$700,000 in TA funds and \$7.15 million in SU funds that it re-allocates to Lee County and its municipalities. Of that funding, approximately \$1.5 million is allocated to transit projects, \$1.1 million to congestion management, and \$2.4 million to bicycle and pedestrian related projects. In addition, the MPO has access to the state portion of TA funds which FDOT traditionally uses to supplement MPO TA funds when programming bicycle and pedestrian projects.

Table 10 outlines the potential funding sources for the recommended projects.

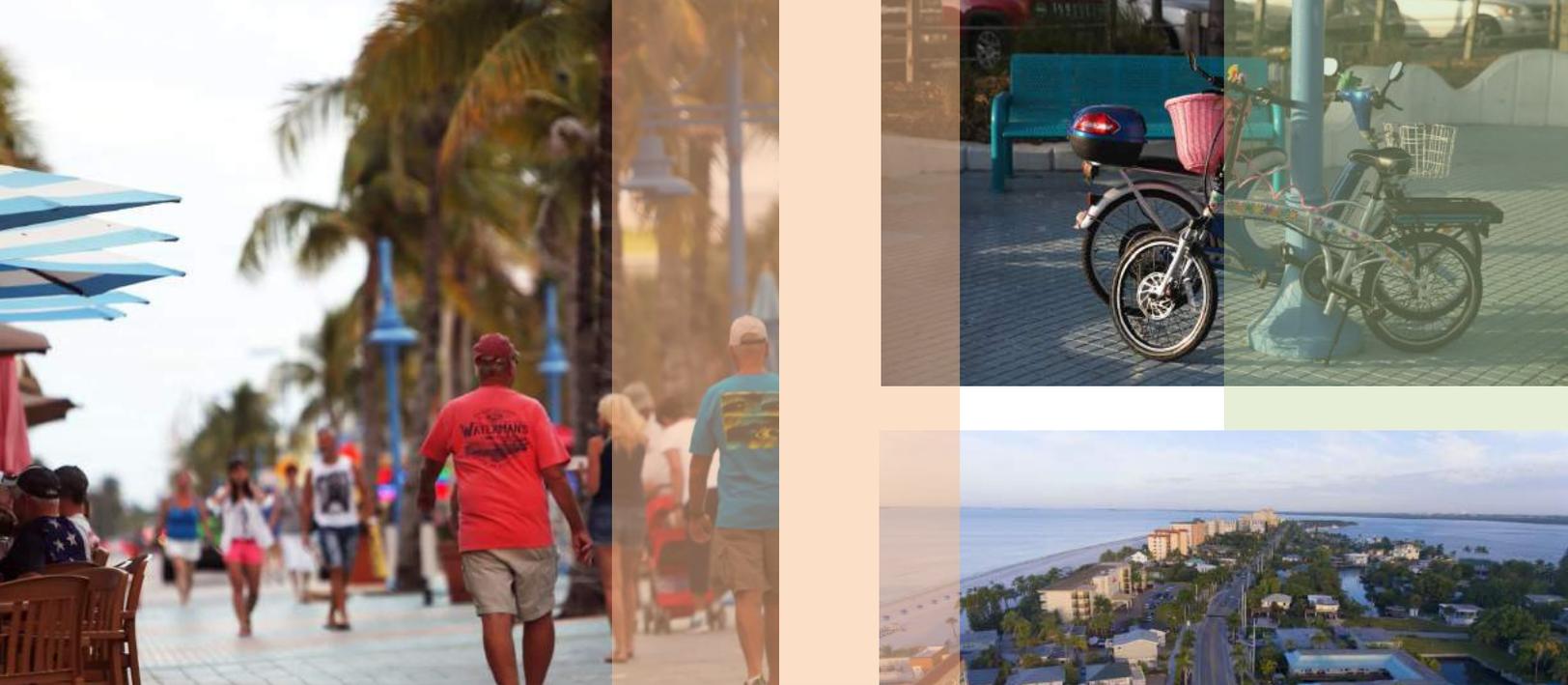
Table 10. Potential Funding Sources for Bicycle and Pedestrian Projects

Funding	Source	Description	Eligible Projects
Shared-Use, Nonmotorized Trails (SUN Trail)	State	State law requires that \$25 million is budgeted annually from the motor vehicle tax to build a statewide shared-use trail system that will ultimately run through Florida’s Gulf Coast, Central Florida, and the East Coast.	Projects identified on the SUN Trail Network
Florida Department of Transportation Safety Office Sub-Grants	State	The sub-grants are awarded to state and local safety-related agencies to help develop and implement the programs.	Safety campaigns and programs
MPO Allocated Funds	Lee MPO	The MPO allocates \$7.7 million in Surface Transportation Program, Urban Areas, and Transportation Alternatives funds, of which \$2.4 million funds bicycle and pedestrian projects.	Capital projects, master plans
Tourism Development Tax	Lee County	Lee County collects a five percent tourist development tax for rental properties leased for a period of six months or less, raising more than \$39 million annually. Some of the money has paid for beach access projects, boardwalks, and marketing campaigns for bicycle and pedestrian projects.	Bicycle and pedestrian marketing campaigns, capital projects that improve beach access
Beach Parking	Town of Fort Myers Beach	The Town charges parking at its ten beach access points, raising \$187K in fiscal years 2015 and 2016.	To be determined by Town
Gas Tax	Lee County	Gas taxes are levied on each gallon of gas sold in the county limits and allocated to the cities. The gas tax generates an average of \$415K per year for Fort Myers Beach.	Maintenance and resurfacing projects

**APPENDIX A
EXISTING
CONDITIONS
TECHNICAL
MEMORANDUM**

**FORT MYERS BEACH
BICYCLE + PEDESTRIAN
MASTER PLAN**

THIS PAGE INTENTIONALLY LEFT BLANK



Town of Fort Myers Beach BICYCLE + PEDESTRIAN MASTER PLAN

Existing Conditions Technical Memorandum

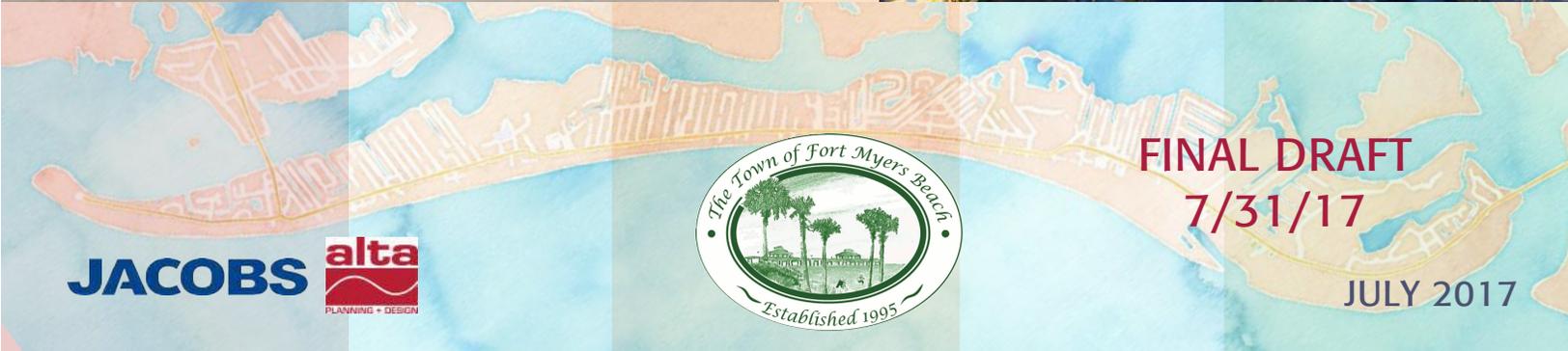


Table of Contents

Introduction 1

 Population..... 1

 Seasonal Population..... 1

 Employment..... 2

 Demographics 2

Infrastructure 2

 Bikeways and Walkways 2

 Transit Service..... 3

 Estero Boulevard..... 6

 Walk Score 7

 Crashes..... 7

 Major Attractions..... 7

Tables

Table 1: Population since 1960 1

Table 2: Pedestrian and Bicycle Network 3

Table 3: Percent of Bicycle and Pedestrian Coverage by Facility Type 3

Table 4: Unlinked Passenger Trips by Route and Fiscal Year 3

Table 5: Walk Score..... 7

Figures

Figure 1: Existing Pedestrian Facilities 4

Figure 2: Existing Bicycle Facilities 5

Figure 3: Fort Myers Beach Character Areas 6

Figure 4: Estero Boulevard Improvement Segments 1 and 2 6

Figure 5: Bicycle and Pedestrian Crashes (2012-2014)..... 8

Figure 6: Major Attractions..... 9

Introduction

An important early step in developing the Town of Fort Myers Beach Bicycle and Pedestrian Master Plan is to identify existing conditions. This technical memorandum describes the existing conditions for Town's demographics and infrastructure, as well as safety issues. The Town of Fort Myers Beach is a barrier island off of Florida's Gulf Coast, just west of Fort Myers and east of Sanibel Island. It is a small island, encompassing 2.9 square miles, that welcomes approximately 4,620 seasonal residents each year and an estimated permanent population of approximately 6,985. The Town was incorporated in late 1995.

The existing conditions reflect the current population, employment, demographic, and infrastructure in Fort Myers Beach.

Population

As of the 2010 census, there were 6,277 people in 3,444 households living in the Town. The population density was 2,262.8 people per square mile. There were 9,402 housing units at an average density of 3,248.3 per square mile.

Table 1: Population since 1960

Census year	Population	% change
1960	2,463	-
1970	4,305	74.8%
1980	5,753	33.6%
1990	9,284	61.4%
2000	6,561	-29.6%
2010	6,277	-4.3%
Est. 2015	6,983	11.2%

Seasonal Population

In 2010, the estimated seasonal population was 4,622. Seasonal residents, also called snowbirds in Florida, are temporary residents of the Town who generally spend several months in Florida to escape harsher winters where they have permanent homes. The estimate for seasonal residents is based on adopted population data for Lee County that was used to develop the land use scenario for the 2040 Long Range Transportation Plan. The number of seasonal residents was estimated by:

- Calculating the seasonal population living in vacant single family and multi-family dwelling units during peak season
- Adding that total to the estimated seasonal population staying in hotels during the peak season, assuming that the hotels have an 90% occupancy rate

The total does not count day-trippers, or those who visit the Town's beaches for the day but do not spend the night.

Employment

In 2010, there were an estimated 8,223 jobs within the Town. The median income for a household in the Town was \$55,213, and the median income for a family was \$79,292.

Demographics

In 2010, the racial makeup of the Town was:

- 97.7% White
- 0.3% African American
- 2.8% Hispanic or Latino
- 0.6% Asian
- 0.2% Native American
- 0.02% Pacific Islander
- 0.7% Two or More Races
- 0.5% Some Other Race

The average household size was 1.81 and the average family size was 2.23. Of the 3,444 households:

- 7.9% had children under the age of 18 living with them
- 50.4% were married couples living together
- 4.0% had a female householder with no husband present
- 43.4% were non-families. 35.6% of all households were made up of individuals
- 17.7% had someone living alone who was 65 years of age or older

The age of the population was made up of the following:

- 5.4% under the age of 18
- 3.2% from 18 to 24
- 11.6% from 25 to 44
- 34.9% from 45 to 64
- 45.4% 65 years of age or older

The median age was 63.2 years; for every 100 females there were 97.9 males.

Infrastructure

Bikeways and Walkways

The Town has 36.5 miles of roads. The majority of the roads, or 72.8%, do not have a sidewalk, and 93.9% of the roads do not have a bikeway. Approximately 39% of the Town's collector roads have bikeways, and 9% have sidewalks on at least one side. Approximately 61% of the Town's arterial roads have bikeways, and 67% have sidewalks on at least one side. Tables 2 and 3 summarize the network and coverage. Figures 1 and 2 illustrate the existing facilities and major attractions.

Table 2: Pedestrian and Bicycle Network

	Roadway Miles	% of Network
Sidewalks		
None	26.6	72.8%
One Side	7.2	19.6%
Both Sides	2.8	7.6%
All Roads	36.5	100%
Bikeways		
None	34.3	93.9%
Sharrows	1.4	3.8%
Bike Lane	0.9	2.4%
All Roads	36.5	100%

Table 3: Percent of Bicycle and Pedestrian Coverage by Facility Type

	% of Total Network	Sidewalk Coverage (one or both sides)	Bike Facility Coverage
Local	79	24	0
Collector	3	9	39
Arterial	18	67	61
All Roadways	100	27	6

Transit Service

Lee County Transit (LeeTran) is the transit service provider for the Town, which is served by three trolley bus routes. Route 400 is a non-seasonal route that operates from October to January and April to September. During peak visitor season, the route splits and becomes routes 410 and 490.

Table 4: Unlinked Passenger Trips by Route and Fiscal Year

Route	FY 2016	FY 2017*
400	134,981	57,575
410	119,542	97,541
490	74,886	70,936

*Through March 2017

Figure 1: Existing Pedestrian Facilities

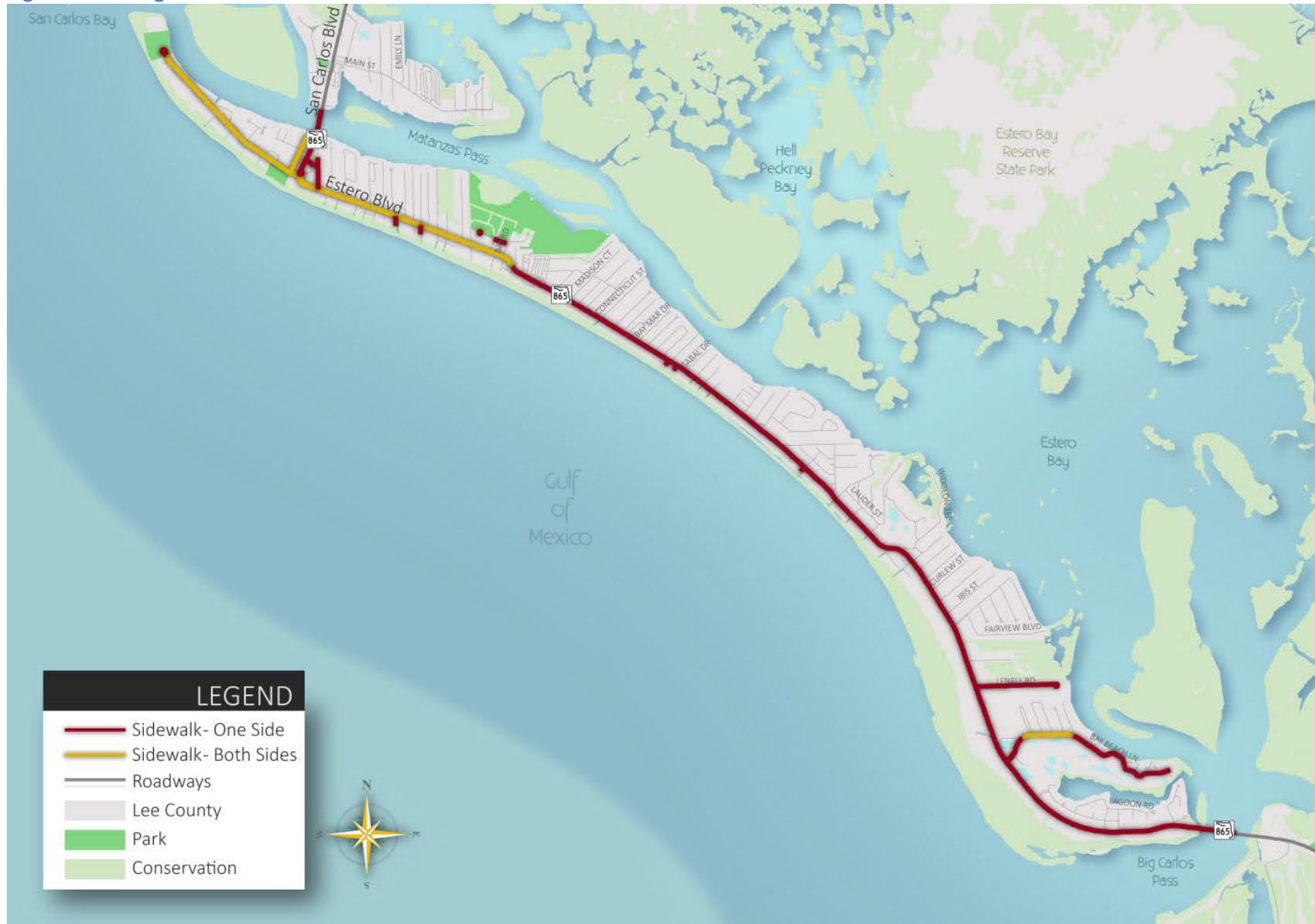
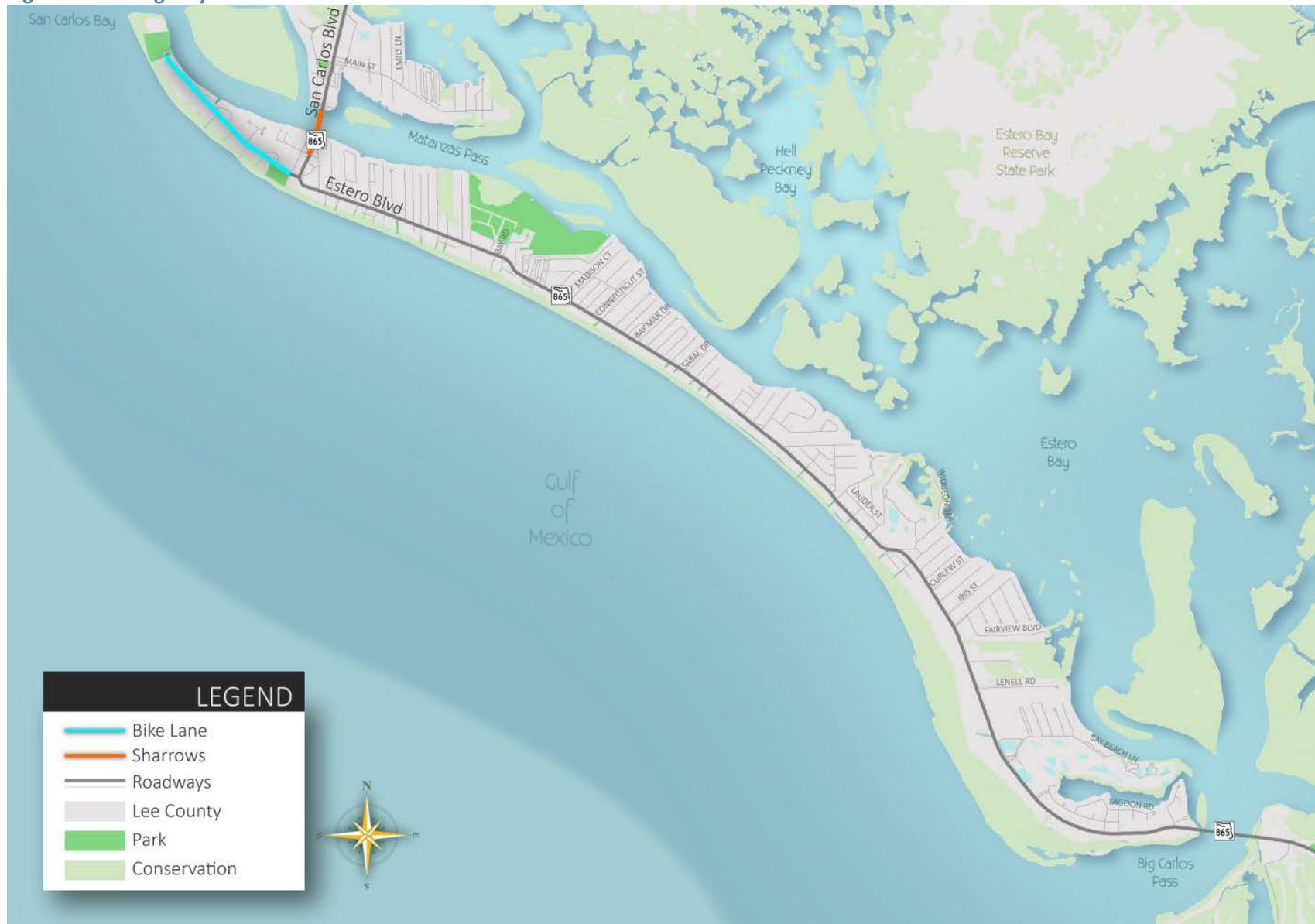


Figure 2: Existing Bicycle Facilities

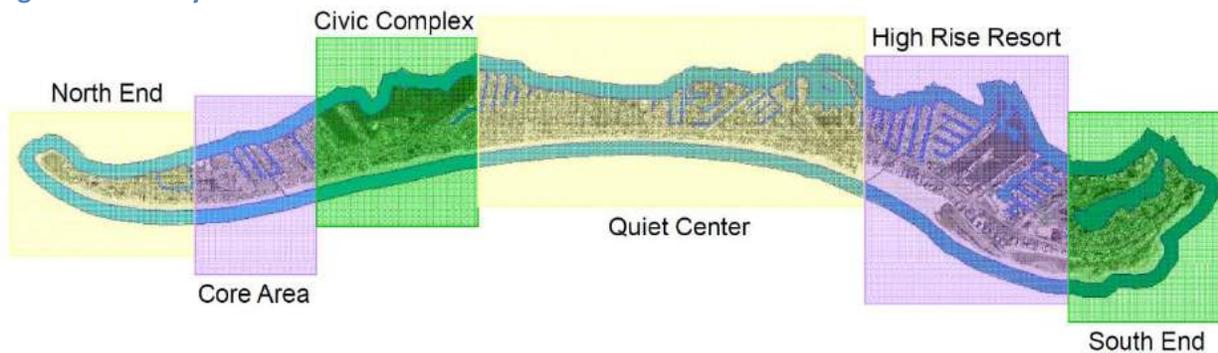


Estero Boulevard

Estero Boulevard is the main road on the island and its only connection to the mainland. It is a county-maintained two-lane arterial with a posted speed limit of 25 mph in the north end of the island and 35 mph in the south end, carrying between 10,300 to 12,500 vehicles on average a day in 2016. Average daily truck traffic was between 258 and 349 in 2016.

The portion of Estero Boulevard north of Times Square was recently reconstructed by the Town to include bicycle lanes and sidewalks on both sides of the road. The reFRESH Fort Myers Beach Master Plan includes plans to reconstruct the portion of Estero Boulevard south of Times Square along the length of the island. For the reconstruction effort, the road was divided into segments from north to south, with improvements to be addressed one segment at a time. Fort Myers Beach has six distinct character areas that were used to determine how to address improvements in each of the segments of Estero Boulevard (Figure 3). The first two segments are under construction as of July 2017, and the remaining segments are being designed (Figure 4).

Figure 3: Fort Myers Beach Character Areas



Source: <http://refreshfmbeach.com/index.html>

Figure 4: Estero Boulevard Improvement Segments 1 and 2



Source: <http://refreshfmbeach.com/index.html>

For the portions of the roadway where improvements have been completed, opportunities to include bicycle and pedestrian design strategies are limited. However, greater opportunities exist to incorporate recommendations in the southern segments that are yet-to-be designed. All recommendations will be coordinated with Lee County and the project manager.

Walk Score

Walk Score (walkscore.com) is an online metric that measures the walkability of any address using a patented system. For each address, Walk Score analyzes hundreds of walking routes to nearby amenities. Points are awarded based on the distance to amenities in each category. Amenities within a five-minute walk (.25 miles) are given maximum points. A decay function is used to give points to more distant amenities, with no points given after a 30-minute walk.

Walk Score also measures pedestrian friendliness by analyzing population density and road metrics such as block length and intersection density. Data sources include Google, Education.com, Open Street Map, the U.S. Census, Localize, and places added by the Walk Score user community.

Table 5: Walk Score

Location	Walk score	Notes
Fort Myers Beach	48	Car-dependent, most errands require a car
Sanibel Island	27	Car-dependent, most errands require a car
Cape Coral	18	Car-dependent, almost all errands require a car.
St Pete Beach	51	Somewhat walkable. Some errands can be accomplished on foot.
Treasure Island	55	Somewhat walkable. Some errands can be accomplished on foot.
Longboat Key	34	Car-dependent, most errands require a car
Naples	35	Car-dependent, most errands require a car
Edisto, SC	15	Car-dependent, almost all errands require a car.
Tybee Island, GA	41	Car-dependent, most errands require a car.
Anna Maria Island	55	Somewhat walkable. Some errands can be accomplished on foot.
Indian River Shores	7	Car-dependent, almost all errands require a car.

Crashes

Between 2012 and 2014, high crash locations were primarily located on Estero Boulevard. The largest concentrations of severe injuries were where Estero Boulevard intersects Crescent Street, Ohio Avenue, Bayview Avenue, north Lenell Road, and Bay Beach Lane. The largest concentrations of fatalities were south of Lenell Road and Bay Beach Lane. Figure 5 displays the locations.

Major Attractions

The following key destinations, or major attractions, for residents and visitors are displayed on Figure 6:

- Three local parks (Lynn Hall Beach Park, Crescent Beach Family Park, and Newton Park)
- Matanzas Pass Preserve
- Times Square, the Town center with retail, restaurants, and hotels
- 24 Beach Access Points
- Fort Myers Beach Public Library
- Fort Myers Beach Elementary School, on the U.S. National Register of Historic Places
- Bay Oaks Recreation Center
- Town Hall

Figure 5: Bicycle and Pedestrian Crashes (2012-2014)

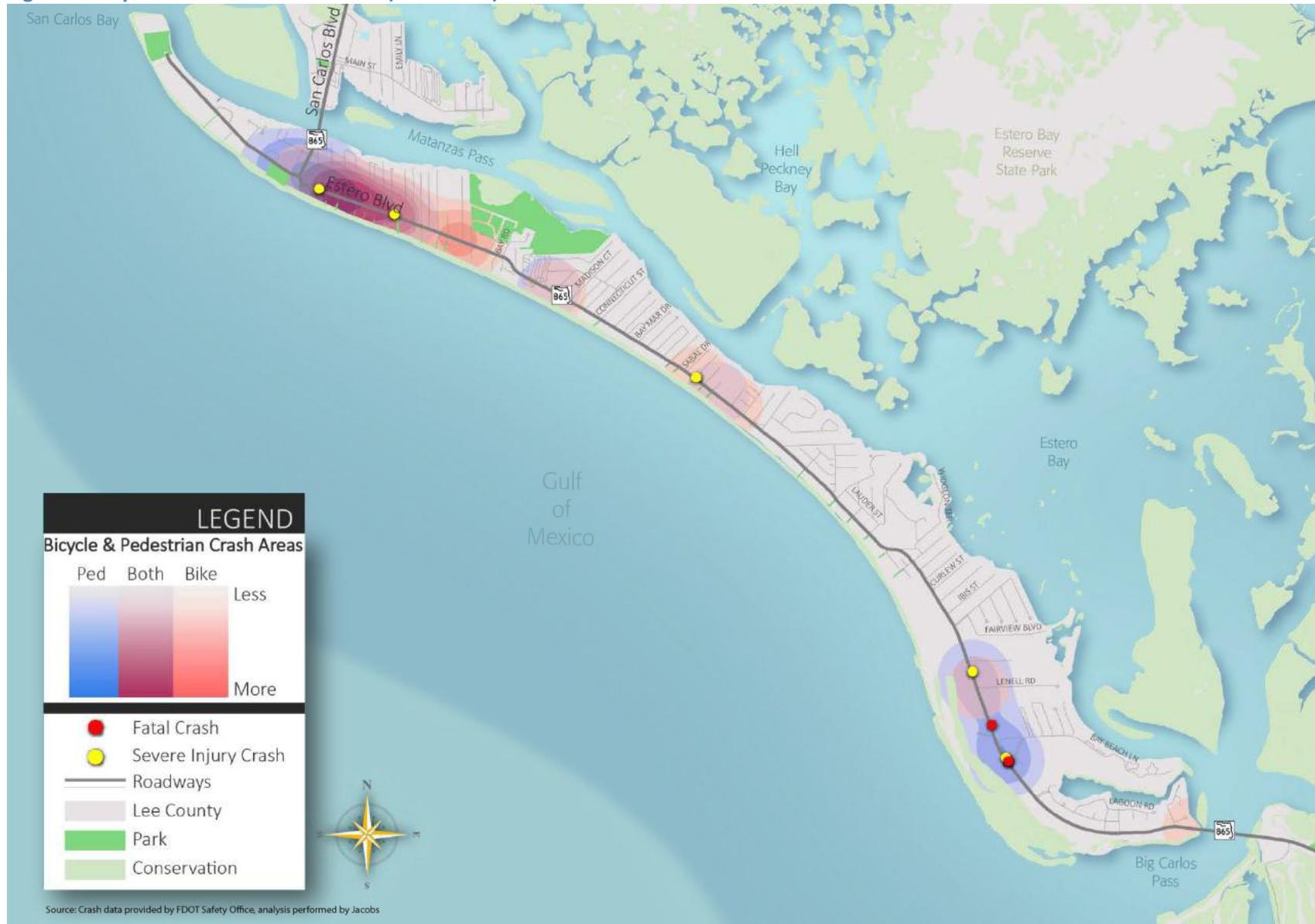
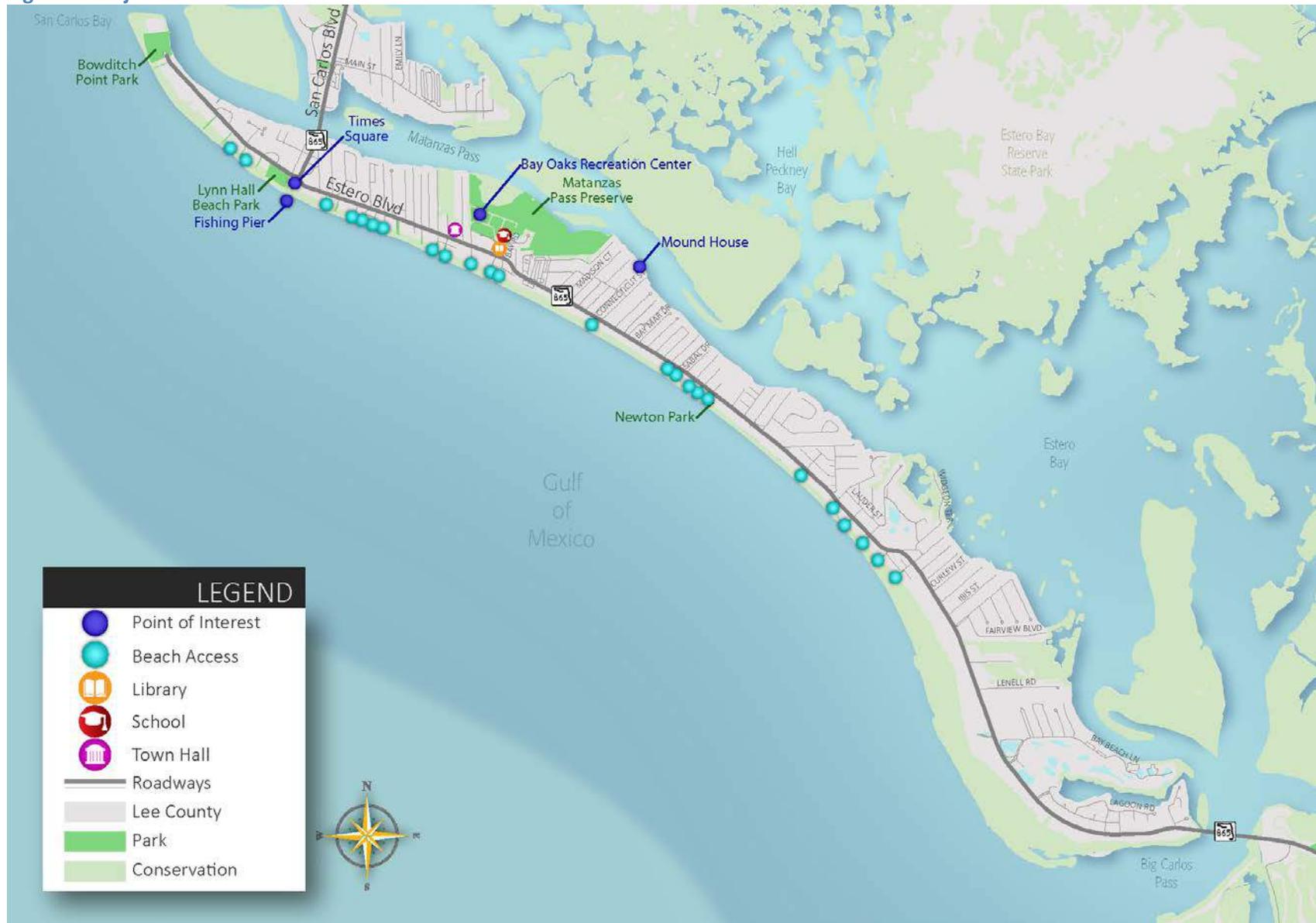


Figure 6: Major Attractions

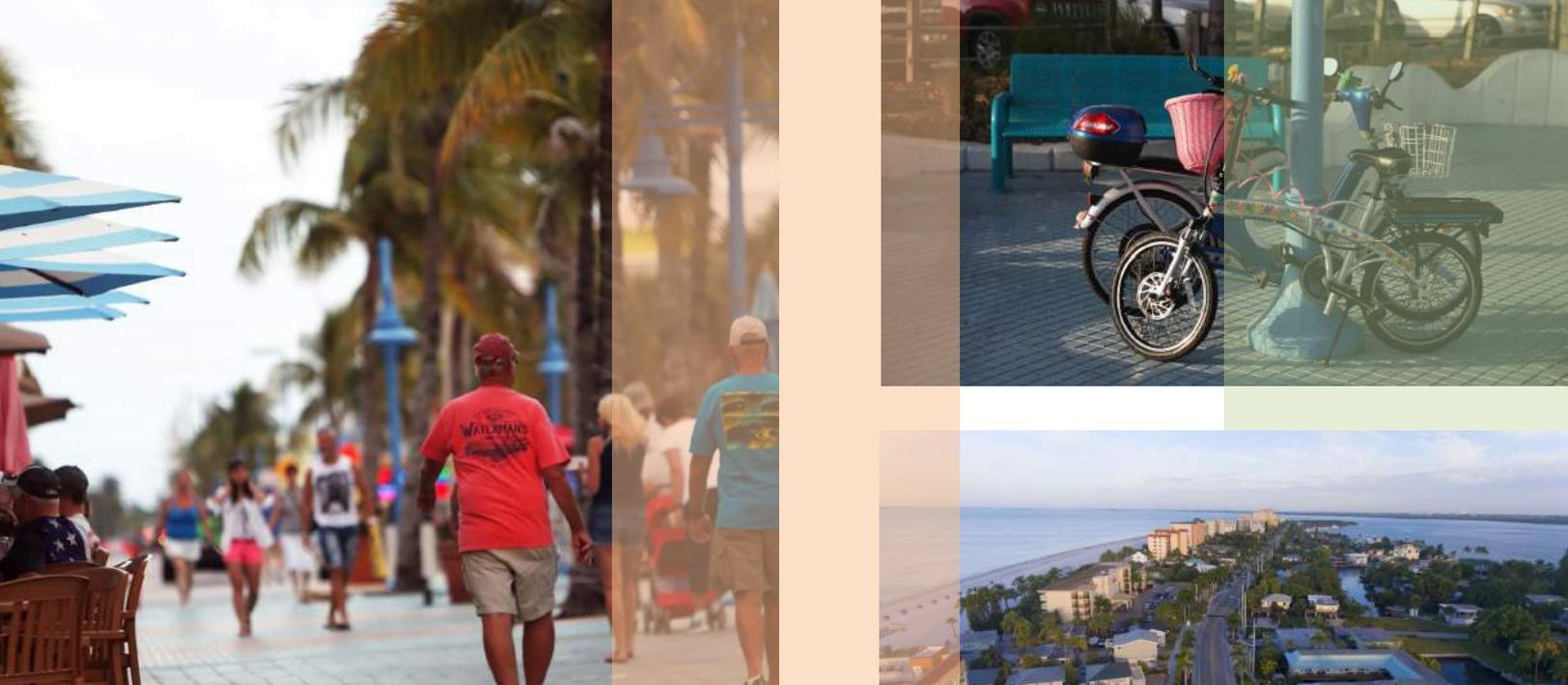


THIS PAGE INTENTIONALLY LEFT BLANK

**APPENDIX B
EXISTING PLANS
& INITIATIVES
TECHNICAL
MEMORANDUM**

**FORT MYERS BEACH
BICYCLE + PEDESTRIAN
MASTER PLAN**

THIS PAGE INTENTIONALLY LEFT BLANK



Town of Fort Myers Beach BICYCLE + PEDESTRIAN MASTER PLAN

Existing Plans & Initiatives Technical Memorandum

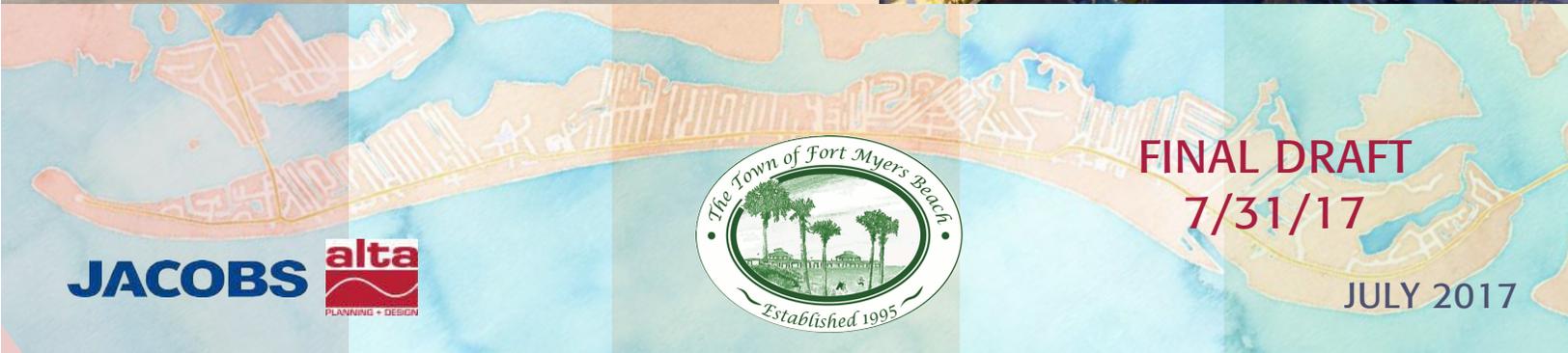


Table of Contents

Town of Fort Myers Beach Comprehensive Plan (1999, Amended 2009)..... 1

Old San Carlos Boulevard/Crescent Street Master Plan (1999)..... 4

San Carlos Boulevard Workshop, Lee County MPO (2014) 6

FDOT Roadway Design Bulletin 14-17: Urban Arterial Lane Width and Bicycle Lane Options (2014) 8

Grand Resort Project Conceptual Plans (2015)..... 9

Estero Boulevard Improvements (reFRESH Estero Boulevard), Lee County DOT (Ongoing)..... 11

Land Development Code Review, Chapter 10 (2016)..... 13

Tables

Table 1: Results of Voting Exercise 6

Table 2: Illumination Level Standards..... 15

Figures

Figure 1: Character Segments of Fort Myers Beach (1997)..... 1

Figure 2: Hidden Pathways Network 2

Figure 3: Pedestrian Crossing Concept at Estero Boulevard and Times Square..... 4

Figure 4: New Hotel Conceptual Drawing (2015) 9

Figure 5: Segments One and Two of reFRESH Estero Boulevard 11

Figure 6: Estero Boulevard Conceptual Drawing 11

Town of Fort Myers Beach Comprehensive Plan (1999, Amended 2009)

Purpose: This document, designed to guide future actions of the community, outlines a vision, objectives, and policies for development, land use, and transportation among other topics.

Relevant recommendations: Districts developed through a Dover Kohl and Partners workshop in 1997 were included in the Comprehensive Plan. Each district has identified characteristics and opportunities. Although the visioning was conducted a number of years ago, the concepts are still valid.

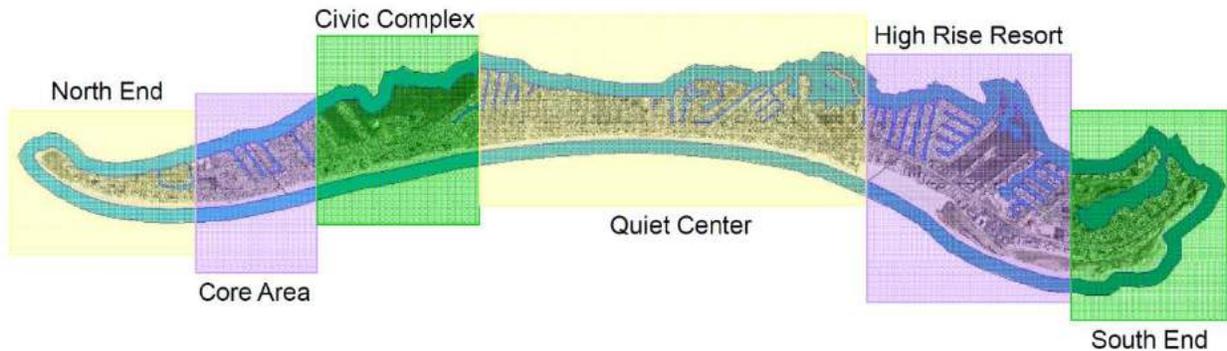


Figure 1: Character Segments of Fort Myers Beach (1997)

Vision for Estero Boulevard. Estero Boulevard has become the premier public space on the island, with a strong sense of place, shaped as a memorable “Avenue of Palms” linking the revitalized downtown to the civic center, the new “heart of the island.” The Boulevard is lined with new and refurbished structures that frame the street and contribute to the pedestrian scale and casual ambience. The sidewalk and streetscape system has been continued beyond its 1997 terminus at the Lani Kai to the civic center and areas beyond. Motorists on Estero Boulevard during the peak tourist season move slowly but enjoy the beauty and interest of the public space, having learned to relax during the unavoidable season of the “beach crawl.” Bicyclists and pedestrians share the public space but can also find quieter alternate routes off of the boulevard to get to their shopping or recreational destinations. Traffic calming measures have been introduced in areas of the boulevard that used to invite speeding whenever congestion lessened. Pedestrians now cross safely, and many people use the expanded fleet of trolleys to move around the island.

Pedestrian and Bicycle Connections. Although the preceding discussion divided Estero Island into six distinct planning areas, the town is more than the sum of its parts. Estero Boulevard and the water bodies that surround Fort Myers Beach integrate this seven-mile-long island. Both provide opportunities for people to move from place to place by car or boat. The missing element is a way for pedestrians and bicyclists to circulate safely and comfortably throughout the entire island. During the “Designing Our Town” workshop, participants identified some pedestrian and bicyclist pathways that do exist parallel to Estero Boulevard, at least for short distances. Participants illustrated how pedestrian paths could be created to bridge the gaps and ultimately create an interconnected network. This plan’s vision for the future includes this system of “hidden paths” off Estero Boulevard, meandering through the island, interconnected where possible. A local foundation or a community land trust working patiently over

time could, as opportunities arise, acquire existing vacant lots, rights of way, or easements to gradually compile the network. The town could assist this process by removing regulatory barriers that would inhibit the assembling of the path system, for example by changing the land development code to avoid penalizing lot owners who donate or sell a strip of land for one of these paths. The town could also provide some funding for this effort. An initial idea for this network is depicted on Figure 2.

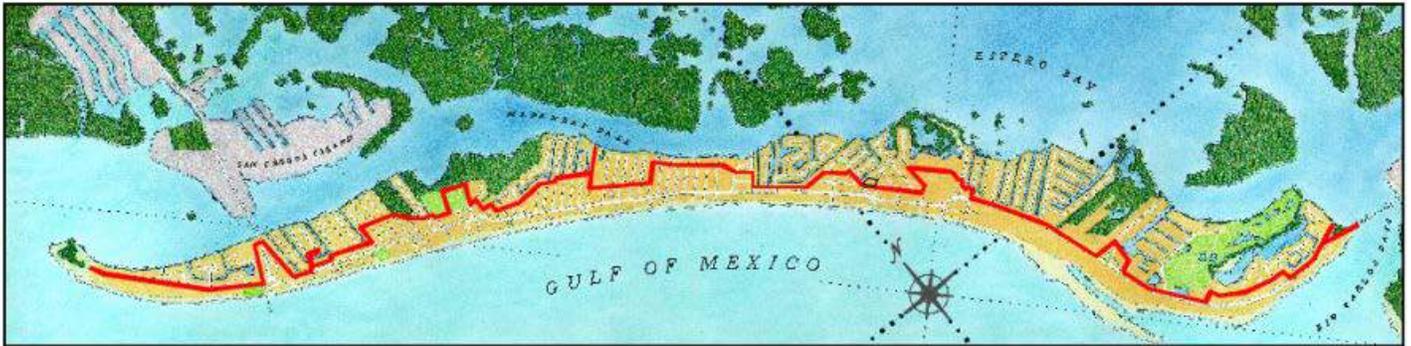


Figure 2: Hidden Pathways Network

Estero Boulevard in the Comprehensive Plan

GOAL 1 To continually improve the appearance and functioning of transportation corridors, commercial areas, and links to natural and recreational areas.

OBJECTIVE 1-A ESTERO BOULEVARD. Improve the functioning and appearance of Estero Boulevard as the premier public space and primary circulation route of Fort Myers Beach.

- POLICY 1-A-1 Changes along Estero Boulevard should improve on the characteristics that make it a boulevard in character and not just in name: safe and interesting to walk along, impressive landscaping, and scaled to people rather than high-speed traffic.
- POLICY 1-A-2 The town should develop a sidewalk and streetscape plan for all of Estero Boulevard that builds on the design theme of the 1997 improvements from Times Square and to the Lani Kai. This plan should recreate the historic “Avenue of Palms” concept by adding appropriate palm trees such as coconuts on both sides between the sidewalk and new curbs. This plan should also address related needs such as parking and trolley pull-offs, and should be sufficiently detailed to estimate costs and suggest potential phases of construction. Priorities should include positive impacts on:
 - Stimulating revitalization consistent with the town’s overall vision in this comprehensive plan
 - Completing pedestrian and bike path linkages from one end of the island to the other
 - Managing traffic flow
 - Improving pedestrian crossings; including push button lights; textured materials to emphasize crossings to drivers; and covered seating areas and other “oasis” amenities at trolley stops and beach accesses; v. lowering construction and maintenance costs from the original design
 - Correcting drainage problems
 - Coordinating with utility undergrounding; and
 - Working within new and available sources of funds.

After completing that plan, the town shall establish a phased schedule of capital improvements to complete this network.

Neighborhood Connections in the Comprehensive Plan

GOAL 2 To upgrade residential neighborhoods throughout Estero Island.

OBJECTIVE 2-A HIDDEN PATHS. Create an additional interconnected system of pedestrian and bicycle pathways throughout the island to improve mobility and promote community interaction.

- POLICY 2-A-1 The town should encourage a community sponsored program to identify and build a system of existing and potential “hidden paths” parallel to but behind Estero Boulevard. A local foundation or community land trust could identify and acquire existing vacant lots or easements to gradually complete the network. These parcels could be transferred back to the town for long-term maintenance.
- POLICY 2-A-2 The town shall adopt changes to the land development regulations to allow small portions of existing lots to become a part of the hidden-path network without diminishing future uses of those lots.
- POLICY 2-A-3 The town shall ensure coordination between efforts to develop this hidden-path network and its new streetscape plan for Estero Boulevard.

Old San Carlos Boulevard/Crescent Street Master Plan (1999)

Purpose: This design study was commissioned by the Town of Fort Myers Beach to begin implementing its new comprehensive plan in the downtown area near Times Square. The comprehensive plan was organized around a community design theme that calls for specific physical improvements to the town, including buildings, streets, and other public places. Together these pieces can create a coherent whole that reinforces the small-town character of Fort Myers Beach while continuing its comfortable coexistence with tourism.

Relevant recommendations: The comprehensive plan promotes the revitalization of the downtown core, centered around Old San Carlos Boulevard and Crescent Street, as the nucleus of commercial and tourist activities through a variety of concepts and treatments.

Estero Boulevard Pedestrian Crossing. A traffic signal was installed for pedestrian use on Estero Boulevard at Times Square in 1997. The observed disruptions to traffic flow prompted considerations of a pedestrian overpass with corresponding pedestrian barriers along the road. Instead, this plan recommended the existing signal be converted to a flashing yellow caution, and a trained sheriff's deputy be stationed at the location for peak season and during special events. It also recommended wider sidewalks near this crossing and enhanced pedestrian refuge medians (Figure 3).



Figure 3: Pedestrian Crossing Concept at Estero Boulevard and Times Square

The extra space required by the refuge islands would come from slightly narrower vehicle lanes. Wider sidewalks could be accommodated if sidewalk easements were granted by the owners of Seafarer's Village and Helmerich Plaza. Further enhancements to this concept would include a different surface in the travel lanes that would provide an additional signal to drivers that they are passing through a pedestrian zone. Asphalt paver blocks, conventional asphalt with a textured surface, or an imprinted surface would all create audible and tactile cues. The goal of the improvements was to create a more comfortable pedestrian environment at a key location while avoiding the unnecessary interruptions to traffic being caused by the traffic signal.

Sidewalks. Sidewalks should be 12 to 15 feet to allow pedestrians to feel safe and comfortable and to allow outdoor dining, both ways of contributing to a lively street presence.

Trees. Street trees help establish the defined sense of space when buildings are not there, provide shade and visual relief, and clean the air.

Parking. On-street parking provides much-needed parking while also acting as traffic calming and providing a more comfortable walking environment.

Travel Lanes. As part of the traffic calming efforts, the travel lanes should be right-sized to about 10 feet wide. This width is proven safe but is narrow enough to promote alertness and discourage speeding. Wider travel lanes invite higher speeds.

San Carlos Boulevard Workshop, Lee County MPO (2014)

Purpose: Identify priorities and new improvements through stakeholder feedback and interaction.

Relevant recommendations: See table below.

Workshop participants were asked to select preferences in two rounds of voting. In the first round, those participants who were involved in stakeholder interviews and were seated at the table in the workshop were given eight blue dots. They were asked to select eight items that they would like addressed in the PD&E Study and they would like to eventually see as future road improvements. Their priorities were to be based on the criteria information provided in the meeting and on their own personal experience and preferences.

For the second round of voting, the meeting facilitator asked participants to only vote for those improvements that received at least four votes in the first round. This allowed participants to focus on those improvements that were the most popular among the group as a whole. Participants not seated at the table were also given an opportunity to make selections in the second round. They were given four yellow dots and were asked to put them on the flip charts on the wall next to their top four priority improvements. Results of the voting are shown in the Table 1.

Table 1: Results of Voting Exercise

Suggested Improvement	Round 1 (# of dots)	Round 2 (# of dots)
Landscaping Gateway	4	0
Sidewalks	2	0
Bike Lanes	7	6
Pedestrian Crossings	5	6
Landscaped Median with Turning Pods	4	3
Parking Lot Information System	2	0
Two Lanes in Each Direction and Center Turn Lane	2	0
Increase Trolley Peak Season Service/Amenities	5	5
Retain Center Turn Lane	1	0
Trolley Option 1: Dedicated Lane from Pine Ridge	0	0
Trolley Option 2: Dedicated Lane from Siesta Road	0	0
Trolley Option 3: Dedicated Lane from S.C. Park and Ride	0	0
Mixed Use Trolley Lane on Bridge	1	1
No Dedication Trolley Lane	1	0
Alternating Peak Direction Lanes (and Replace bridge)	2	0
Improved Street Lighting	1	0
Toll Booth	4	0
Bridge Replacement – Both Bridges	2	0
Times Square Intersection	6	12
Roundabout	7	5
Main Street Intersection	4	2
Buttonwood Intersection	2	0
Siesta Drive Intersection	0	0
Pine Ridge Intersection	6	5
Move Sidewalk on Bridge (Opposite Side), Sidewalks on Both Sides, Hanging Ped/Bike Bridge Adjacent	5	10
Dedicated Trolley Lane with Acquired Right of Way	4	4
Dedicated Trolley Lane without Right of Way	5	7

Priorities after Voting

1. Times Square
2. Sidewalks (both sides of the road and bridge)
3. Dedicated Trolley Lane (no acquired right of way)
4. Bike Lane/Pedestrian Crossing
5. More Trolley Service
6. Roundabout
7. Pine Ridge Intersection (right turn onto San Carlos, left turn onto Pine Ridge)

New Issues

- Parking lot
- Sidewalks on both sides of the bridge
- The bridge will be there for 15 years
- Drainage issues
- Move sidewalk to other side of Matanzas Bridge

Surprises

- More people did not support the roundabout
- More pedestrian paths needed on the bridge
- No landscaping – visitor experience is from the airport to the beach
- If there was a fifth vote what would it be? More landscaping.

FDOT Roadway Design Bulletin 14-17: Urban Arterial Lane Width and Bicycle Lane Options (2014)

Purpose: This bulletin modifies the criteria for Urban Arterial Travel Lane Width, Bicycle Lane Facilities and related Bicycle Lane Markings. Specifically, this bulletin establishes eleven foot travel lanes for roadways with a divided typical section in or within one mile of an urban area and with a Design Speed of 45 mph or less. This bulletin also establishes seven foot Buffered Bicycle Lanes as the standard for marked bike lanes.

Relevant recommendations: Establishes and revises design standards for arterial lanes and bicycle lane options. Recommends 11-foot travel lanes, and states that research addressing bicycle lane widths on roadways other than very low speed roadways is limited.

Current AASHTO guidance notes the following:

1. The current bicycle lane standard of four feet is the AASHTO minimum operating width for cyclists.
2. AASHTO recommends wider bicycle lanes for roadways with operating speeds and traffic volumes such as exists on the State Highway System.

The limited width of a four-foot bicycle lane tends to lead the cyclist to ride close to the curb to maintain a safe offset distance from passing vehicles, reducing maneuverability and visibility at intersections and driveways.

A seven-foot bicycle lane provides the legal passing offset distance of three feet and adequate distance from the curb for the cyclist to avoid debris and be more visible to motorists at side streets and driveways.

Grand Resort Project Conceptual Plans (2015)

Purpose: Coordinate recommendations with private development.

Relevant recommendations: From a November 2015 news article¹: Under the project name Grand Resorts-Fort Myers Beach, Torgerson acquired strategic beachfront and downtown properties, packaging them with county lands and county and town rights of way in a proposal to create a public-private partnership that redevelops roughly a half-mile of downtown Fort Myers Beach.

In the concept drawings, four hotels range from west to east along the beach side of Estero Boulevard:

- A five-story, 200-unit Holiday Inn aimed at families
- A six-story, 100-unit AC Marriott targeting younger vacationers
- A seven-story, 176-unit Hilton that contains within it an 86-unit Hampton Inn



Image Source: Torgerson Properties

Figure 4: New Hotel Conceptual Drawing (2015)

Publicly owned Crescent Beach Family Park and a vacated Canal Street are factored in to make the development possible. A promenade of shops and eateries—nine food and beverage joints in all -- parallels the hotel strip, offering "signature" brands, not franchises, the developers said. Other public amenities include a 30,000-square-foot conference center and 10,000-square-foot spa and fitness center. The linchpin properties on this side of the street are the county's Seafarer's Mall parcel and Grand Resorts-owned Helmerich Mall.

¹ www.news-press.com/story/news/2015/11/30/fort-myers-beach-plan-revealed/76555380/

From Sky Bridge, the traffic light at the base goes away, and a rotary such as officials contemplated for years moves cars onto a rerouted Estero Boulevard that eliminates pedestrian crosswalks. Traffic coming from down-island also enters the resort district on a pedestrian-free road. From whichever direction you come, the key to beach access and parking is a quick turn-off ramp – aka "fast ramp" -- that developers said would keep traffic from bottlenecking as people come and go from the garage. The garage's 11 elevators to an overhead pedestrian walkway would ease the trek to the beach side with your beach chairs and boogie boards.

The developer's preliminary study by David Plummer and Associates claims the hotels generate 33 percent fewer trips per day than the sites' previous uses because of "onsite capture" – people staying within the resort complex to beach, eat, and shop. The total traffic impact is "only 73 percent of the trips per day allowed for the area," the development team said. But could the funnel to and fro the garage create its own bottleneck for pedestrians and bikes as well as cars? That question can only be answered with further traffic studies.

Estero Boulevard Improvements (reFRESH Estero Boulevard), Lee County DOT (Ongoing)

Purpose: Improving safety for all users (motorists, bicyclists, and pedestrians), improving drainage on Estero Boulevard, and upgrading utilities.

Relevant recommendations: Segments of Estero Boulevard are being redesigned and reconstructed to improve safety as well as upgrade the waterlines that are under the roadway. Right of way in the segments varies and constrains the recommended improvements. Right of way in Segment 1 is very limited, generally no more than 50 feet wide and the improvements will require the use of the entire right of way.



Figure 5: Segments One and Two of reFRESH Estero Boulevard

Figure 6 shows the concept drawing of a reconstructed Estero Boulevard.



Figure 6: Estero Boulevard Conceptual Drawing

reFRESH Estero Boulevard crews began construction in November 2015 to improve Estero Boulevard from Crescent Street south to near Lovers Lane. Lee County improvements include sidewalks on both sides of the road, trolley stops, drainage improvements on Estero Boulevard and connection to Town drainage projects, and relocation of existing utilities including FPL power poles, telephone and cable lines, and sewer force mains.

Lee County DOT worked with LeeTran to improve trolley stop and crosswalk locations. At some trolley stops, design plans incorporate travel lane shifts that allow vehicles to continue past stopped trolleys. Street lighting at crosswalks will be improved. Landscaping opportunities in the first segment are limited due to the narrow right of way, but will be included where space allows.

FPL's Strengthening Project will improve reliability and relocate utility poles and overhead power lines to the edge of the right of way. This is part of an ongoing planned project that will maximize the sidewalk width available for pedestrians and for bicyclists that choose not to ride in the roadway.

Land Development Code Review, Chapter 10 (2016)

Purpose: Document the bicycle and pedestrian requirements in development and engineering design.

Relevant recommendations:

Sec. 10-289. Sidewalks

Pedestrian and bicycle facilities. The Town of Fort Myers Beach has committed to dramatically improving its facilities for pedestrians and bicyclists. The goals are to construct a quiet network of “hidden paths” on the bay side of Estero Island; to construct bicycle facilities where space is available; and to have a complete system of sidewalks on both sides of all major streets. Preliminary designs for many of the bicycle facilities and sidewalks are contained in the Estero Boulevard Streetscape Plan (WilsonMiller, June 2000) and the Old San Carlos Boulevard / Crescent Street Master Plan (Dover, Kohl & Partners, February 1999).

Sidewalks required. Development that abuts a major street (as defined in this chapter) shall construct a sidewalk for the entire length of the property’s frontage on the major street, unless a sidewalk has already been built at that location and remains in good physical condition.

- This requirement applies to all new buildings and also to “substantial improvements” to such buildings as defined in § 6-405.
- A sidewalk meeting all requirements of this section must be shown on the development order plans.
- The sidewalk must be completed prior to issuance of a certificate of compliance unless the developer posts a bond or other surety acceptable to the town as assurance of its completion.
- The sidewalks required by this section are site-related improvements.

Location of sidewalk. This sidewalk may be constructed in the public right of way or the developer may choose to construct it outside the public road right of way on his own property.

- If the developer opts to construct the facility across his property in this manner, a perpetual sidewalk easement must be granted to the town for the full width and length of the sidewalk.
- The exact placement of all sidewalks, including location and elevation, is subject to approval:
 - By the town manager, and
 - For sidewalks on county rights of way, also by Lee County DOT.

Width of sidewalk. Minimum sidewalk widths are determined by a property’s category on the Future Land Use Map and the exact location of the sidewalk, as follows:

- Pedestrian Commercial category:
 - 8 feet for sidewalks that are separated from the travel lane, parking lane, or paved shoulder by a planting strip at least 5 feet wide.
 - 10 feet for sidewalks that immediately abut a travel lane, parking lane, or paved shoulder.
 - 2 additional feet of width is required wherever this sidewalk immediately abuts a building.
- All other categories:
 - 6 feet for sidewalks that are separated from the travel lane, parking lane, or paved shoulder by a planting strip at least 5 feet wide.
 - 8 feet for sidewalks that immediately abut a travel lane, parking lane, or paved shoulder.
 - 2 additional feet of width is required wherever this sidewalk immediately abuts a building.

- Exceptions: If consistent with the provisions of § 10-104, the director may permit minor administrative deviations where physical constraints preclude these minimum sidewalk widths. However, in no case shall an administrative deviation permit a sidewalk that is less than 5 feet wide.

Construction specifications. The standard specifications for sidewalks are as follows:

- When plans have been prepared by the town for a specific area, the sidewalk shall be designed and built in accordance with those plans.
- In the absence of such plans, standard sidewalks shall be built as follows:
 - Material: 4" Portland cement concrete (6" for driveway crossings)
 - Base: 4" limerock base
 - Subgrade: 6" type B subgrade
- The applicant may submit an alternate design, subject to the approval of the director, provided it is structurally equal to or better than the standard in subsection (e)(2).
- There may be no sudden elevation changes that would present a hazard to pedestrians.

Maintenance. Sidewalks constructed in accordance with this section will be publicly maintained if constructed in the right of way, and may also be publicly maintained if constructed on a perpetual sidewalk easement that is accepted by the town council.

Right of way or easement width. All local streets to be established and constructed in accordance with this chapter shall have right of way or roadway easement widths selected in accordance with the design criteria in Traditional Neighborhood Development Street Design Guidelines or Neighborhood Street Design Guidelines (or successor recommended practices) published by the Institute of Transportation Engineers.

Street design and construction standards. All street improvements shall comply with the standards and specifications listed in Table 10-2 for the applicable development category. Reference here: <http://www.fortmyersbeachfl.gov/DocumentCenter/Home/View/320>.

Miscellaneous. Landowners may not plant any tree or shrub closer than 3 feet to any sidewalk or bike path or to the right of way of Estero Boulevard. Trees or shrubs may be planted within a right of way only with permission of the town.

Use of buffer areas. Required buffers may be used for passive recreation such as pedestrian or bike paths, provided that:

- No required trees or shrubs are eliminated;
- Not more than 20 percent of the width of the buffer is impervious surface;
- The total width of the buffer area is maintained; and
- All other requirements of this chapter are met.

Technical standards for lighting. This section contains minimum and maximum standards that apply whenever outdoor lighting is provided.

- In addition to the standards and criteria in this section, there are standards for artificial lighting near sea turtle nesting habitat in chapter 14, article II of this code.

- When specific standards are not addressed in these sources, the standards of the Illuminating Engineering Society of North America (IESNA) will apply.
- Specific standards for illuminance. The Table 2 indicates minimum and maximum illumination levels. These levels are specified for general use categories and are measured in footcandles on the task surface (for example, the lighted parking lot or walkway) with a light meter held parallel to the ground, facing up, unless otherwise specifically stated.

Table 2: Illumination Level Standards

Use/Task	Minimum	Maximum (average)
Parking Lots - Multifamily		
Medium vehicular/pedestrian activity	0.8	3.2
Low vehicular/pedestrian activity	0.3	1.2
Parking lots - Commercial, Institutional, Municipal		
Medium vehicular/pedestrian activity	0.8	3.2
Medium vehicular/pedestrian activity	0.3	1.2
Non-residential walkways and bikeways	0.3	1.5

THIS PAGE INTENTIONALLY LEFT BLANK

**APPENDIX C
ESTERO BOULEVARD
CROSSWALKS
TECHNICAL
MEMORANDUM**

**FORT MYERS BEACH
BICYCLE + PEDESTRIAN
MASTER PLAN**

THIS PAGE INTENTIONALLY LEFT BLANK



Town of Fort Myers Beach BICYCLE + PEDESTRIAN MASTER PLAN

Estero Boulevard Crosswalks Technical Memorandum

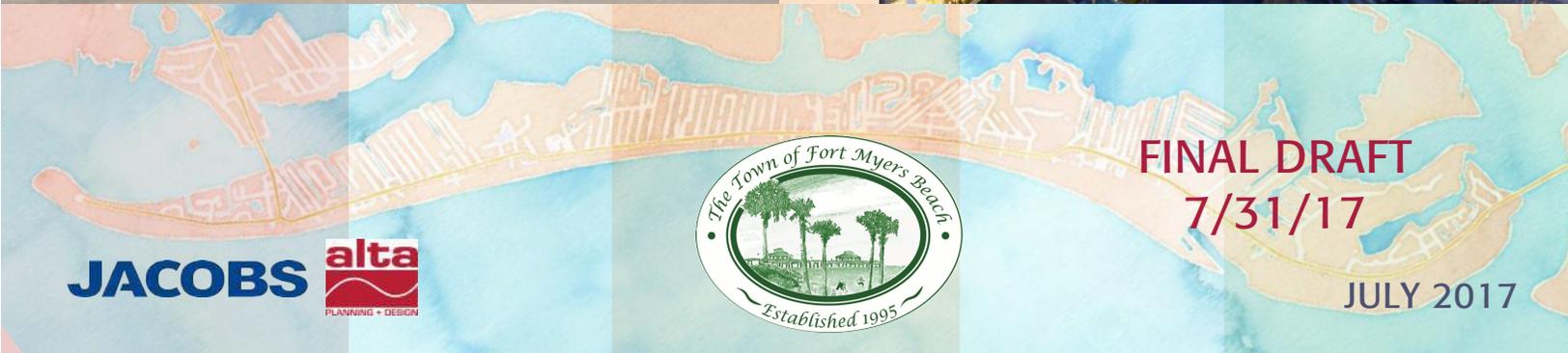


Table of Contents

Introduction 1
 reFRESH Estero Boulevard 1
Recommendations 3

Figures

Figure 1: Fort Myers Beach Character Areas 2
Figure 2: Estero Boulevard Improvement Segments 1 and 2 2
Figure 3: Estero Boulevard and Connecticut Street Option A 4

Introduction

An analysis was conducted of existing and proposed pedestrian and bicycle crosswalks on Estero Boulevard from Times Square to Big Carlos Pass Bridge, a distance of approximately 6 miles. The crosswalks were analyzed using existing and proposed roadway improvement plans, Google Street view, field visits, and drone imagery. Locations of proposed crosswalks are based on pedestrian traffic, access to businesses and beaches, and connectivity throughout the corridor.

Estero Boulevard is the main road on the island and its only connection to the mainland. It is a county-maintained two-lane arterial with a posted speed limit of 25 mph in the north end of the island and 35 mph in the south end, carrying between 10,300 to 12,500 vehicles on average a day in 2016. Average daily truck traffic was between 258 and 349 in 2016.

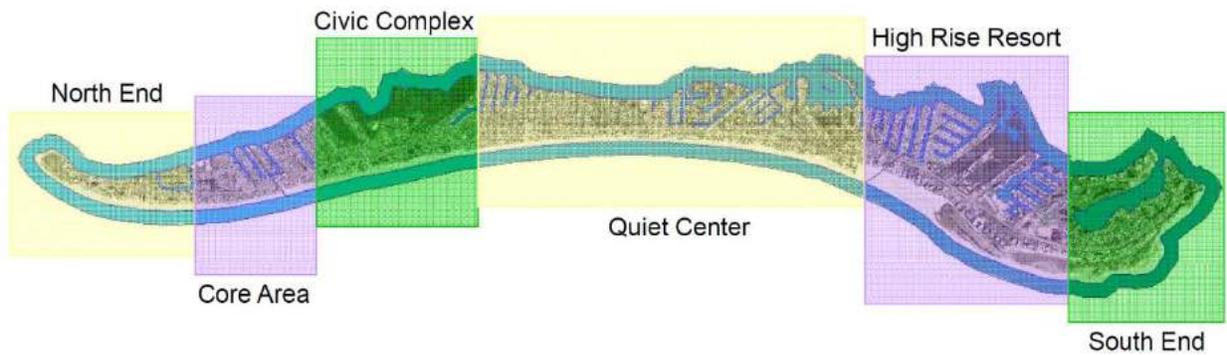
reFRESH Estero Boulevard

The portion of Estero Boulevard north of Times Square was recently reconstructed by the Town to include bicycle lanes and sidewalks on both sides of the road. The reFRESH Fort Myers Beach Master Plan includes plans to reconstruct the portion of Estero Boulevard south of Times Square along the length of the island. For the reconstruction effort, the road was divided into segments from north to south, with improvements to be addressed one segment at a time. Fort Myers Beach has six distinct character areas that were used to determine how to address improvements in each of the segments of Estero Boulevard (Figure 1). The character areas consist of five section area types within the analysis corridor:

- The **Core Area** is comprised mainly of tourist shops, restaurants, some hotels and beach rentals, and residential neighborhood
- The **Civic Complex Area** comprises the Fort Myers Beach Public Library, Fort Myers Beach Elementary School, Chapel by the Sea Presbyterian Church, residential neighborhoods, beach rentals, and hotels
- The **Quiet Center Area** consists largely of residential neighborhoods, shopping centers, beach rentals, the Snook Bight Marina and Yacht Club, St. Peter Lutheran Church, First Baptist Church of Fort Myers, condominiums, and hotels
- The **High Rise Resort Area** comprises of several high rise hotels and condominiums, shopping centers, residential neighborhoods, Church of the Ascension, and the Fort Myers Beach Golf Course (now abandoned)
- The **South End Area** consists mainly of residential neighborhoods, high rise condominium, beach and vacation rentals, and the Marina Towers and Yacht Club

The first two segments are under construction as of July 2017, and the remaining segments are being designed (Figure 2).

Figure 1: Fort Myers Beach Character Areas



Source: <http://refreshfmbeach.com/index.html>

Figure 2: Estero Boulevard Improvement Segments 1 and 2



Source: <http://refreshfmbeach.com/index.html>

Based on previous studies conducted on the Estero Boulevard corridor, roadway, utility, pedestrian safety, and bicycle improvements were identified within six one-mile segments beginning at Times Square and concluding at the Big Carlos Pass Bridge.

Segment One, from Crescent Street to Lovers Lane, is currently under construction. Due to its limited right-of-way (50 feet), improvements include 10-foot single through lanes with curb and gutter, 10-foot median shared left turn lane, 9-foot sidewalks, bus-only stop area, relocation of several crosswalks, and new signage.

Segment Two, from Lovers Lane to Strandview Drive, is currently under construction. Existing right-of-way transitions for 50 feet near to Lovers Lane to 65 feet just south of Lovers Lane. Improvements include 10-foot single through lanes with 5-foot bike lanes and curb and gutter, 10-foot median shared left turn lane, 6-foot sidewalks with 3-foot grass strip, bus only stop area, relocation of several crosswalks and new signage.

Segments Three through Six received funding approval from Lee County Board of County Commissioners in late 2016 to begin the design phase of the remaining Estero Boulevard improvements.

For the portions of the roadway where improvements have been completed, opportunities to include bicycle and pedestrian design strategies are limited. However, greater opportunities exist to incorporate

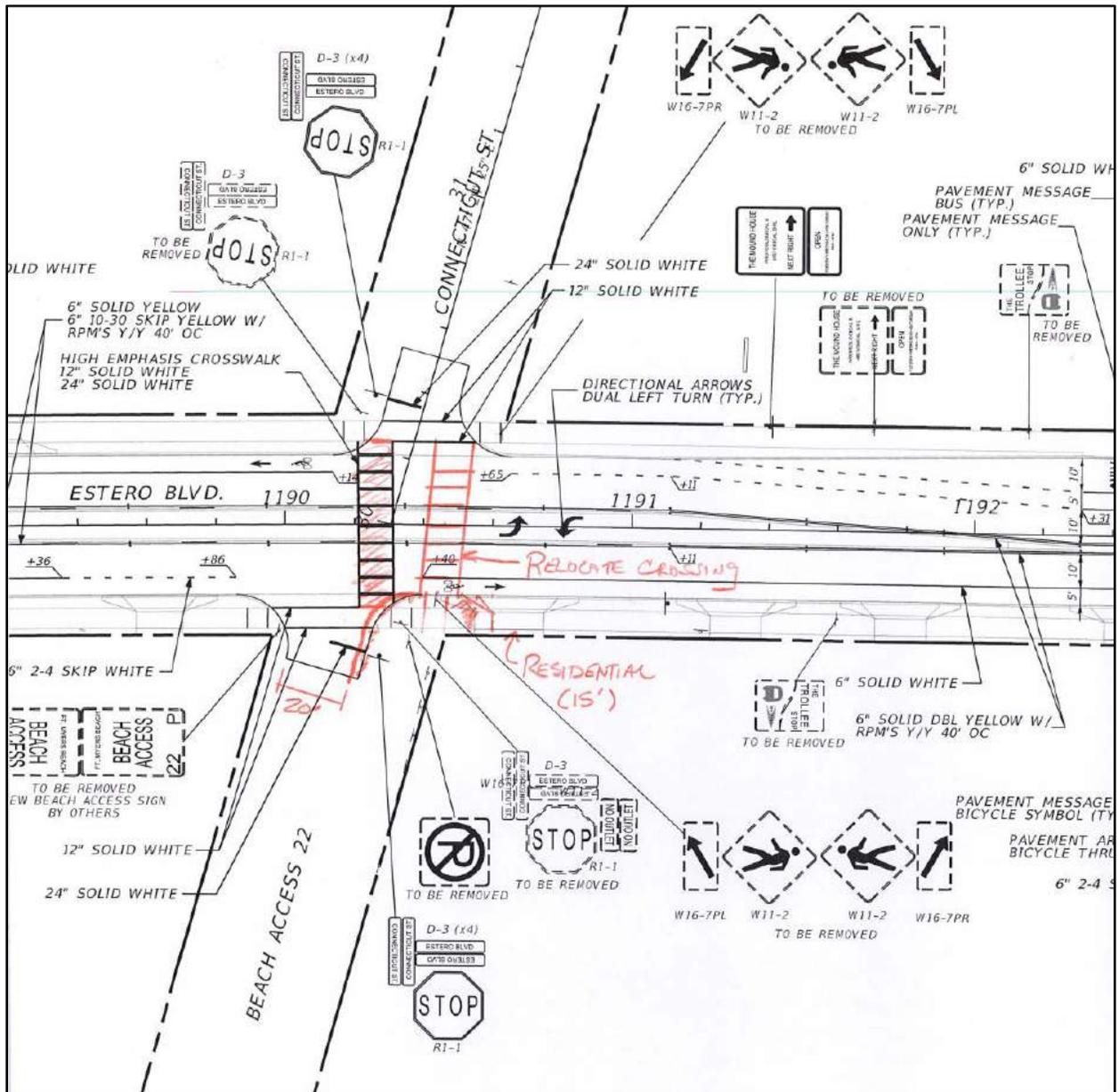
recommendations in the southern segments that are yet-to-be designed. All recommendations will be coordinated with Lee County and the project manager.

Recommendations

The signing and pavement marking plans for Segments One and Two was reviewed. Then, existing and proposed plans, a Google Street view of similar roadways near other beach communities, and on-the-ground conditions on North Estero Boulevard, informed the following recommendations:

- Develop a hierarchy of crosswalk treatments based on the presence of elements such as beach access points, bus stop locations, existing crosswalk locations, and driveway locations among others. The intent with the hierarchy is to summarize the County's process for selecting crosswalk treatments as well as refine crosswalk implementation strategies along Estero Boulevard. For example, at the intersection of Estero Boulevard and Connecticut Street, the crossing may include crosswalks applied on each leg of the intersection in order to enhance visibility of pedestrians at a location with higher crossing volumes or crossing importance. The crosswalk hierarchy and treatments will be developed in coordination with the County, the on-going Estero Boulevard projects, and input collected as a part of this planning process.
- Use brick type pavers for pedestrian crosswalks where determined by hierarchy of crosswalk treatments. This helps distinguish the roadway from the crossing.
- Continued use of florescent-yellow background pedestrian crossing signs and replace as needed. Use fluorescent yellow-green background signs at locations developed by the hierarchy for crosswalks.
- Use special emphasis thermoplastic pavement markings at all pedestrian crossings. Use LED In-Pavement Warning Lights. This is being used at school crossings and other pedestrian crossings.
- Consider changing the location of the proposed crosswalk on Estero Boulevard at Connecticut Street as shown in Figure 3. Changes include narrowing the proposed driveway entrance from 20 feet to 15 feet and narrowing Beach Access #22 from 22 feet to 20 feet. Option A includes a crosswalk on the south side of the intersection.

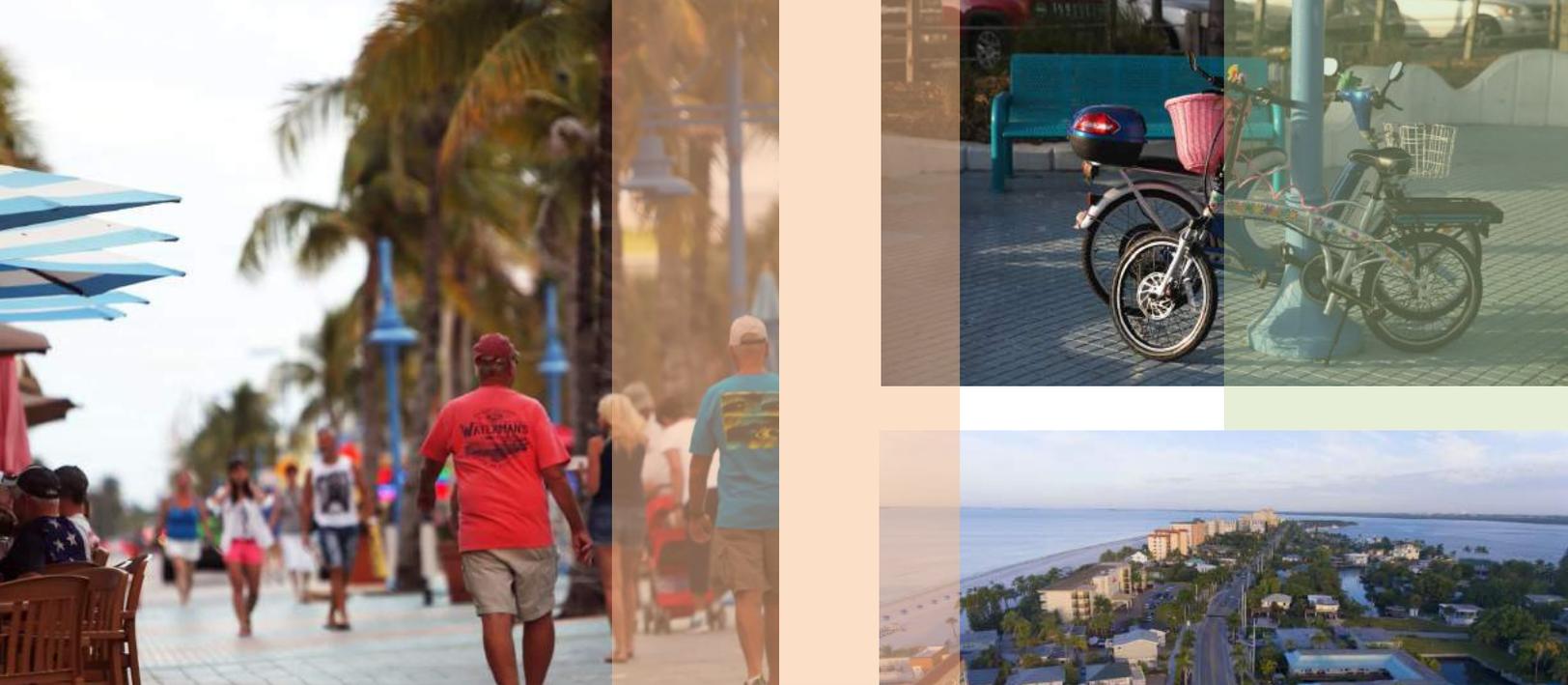
Figure 3: Estero Boulevard and Connecticut Street Option A



**APPENDIX D
PUBLIC
ENGAGEMENT
TECHNICAL
MEMORANDUM**

**FORT MYERS BEACH
BICYCLE + PEDESTRIAN
MASTER PLAN**

THIS PAGE INTENTIONALLY LEFT BLANK



Town of Fort Myers Beach BICYCLE + PEDESTRIAN MASTER PLAN

Public Involvement Technical Memorandum

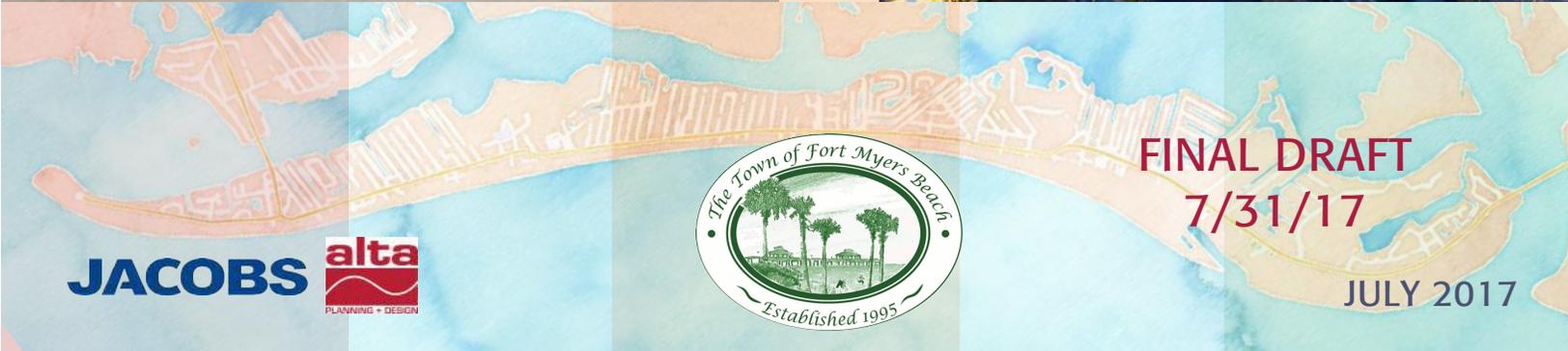


Table of Contents

Introduction 1

Public Workshops..... 1

 Workshop #1..... 1

 Results..... 2

 Workshop #2..... 3

 Results..... 3

Project Advisory Committee 4

 Members..... 4

Online Outreach..... 5

 Website 5

 Wikimap 5

Figures

Figure 1: Town of Fort Myers Beach website homepage 5

Figure 2: Wikimap Results..... 6

Introduction

The public involvement efforts included two public workshops, three project advisory committee (PAC) meetings, press release and FACT sheets, an interactive on-line engagement map, and two comprehensive project web-sites located on the Town's and Lee County MPO web-site. Community members were asked to share where improvements are needed and what projects should be a priority.

Public Workshops

Two public meetings were held:

- **Wednesday, February 15, 2017**, at the Town Hall from 5:30 to 7:30 pm in the Council Chambers, and 12 people attended
- **Wednesday, April 26, 2017**, at the Town Hall from 5:00 to 7:00 pm in the Council Chambers, and 40 people signed the sign-in sheet and attended (including staff)

Key themes from the workshops include:

- Better lighting and flashers near crosswalks
- Access to safely travel the length of the island on foot or on bike
- Support for separate lanes on wide sidewalks for people on bikes and people walking
- North Estero Boulevard is lovely and feels safe and is a proto-type for all of Estero Boulevard
- Safety for all modes is a concern
- Need for marked bike lanes
- Strong support for pedestrian and biking safety and education programs
- Limit new sidewalks to commercial districts and not in residential neighborhoods
- Support for advisory shoulders to include stripping and signage to improve safety and connectivity for walkers and bikers in residential areas

Workshop #1

Following the presentation, attendees were asked to study the display boards and maps around the room and provide comments including voting for preferences. Each person had 6 stickers and could vote from a list (including pictures) of bicycle and pedestrian programs such as safety campaigns, signage, and walking biking events. Next, participants had an additional 6 stickers and could vote for walking infrastructure improvements such as sidewalks or biking infrastructure such as bike lanes and trails. The display boards described each program or infrastructure improvement and pictures. Mr. Baier showed the committee members the boards.

The top three program voting results were interpretive signage such as describing history and facts about FMB along walkways, a bicycle and pedestrian safety campaign, and employer-based encouragement such as businesses providing financial incentives or bike parking for employees to bike and walk. Guided nature walks and a senior's walk program were also well-liked.

The top three infrastructures voting results were pedestrian crossing improvements, bike lanes, and protected bike lanes. The most popular walking infrastructure improvements were shared-use paths

along roadways, pedestrian crossing improvements, and shared-use paths. Sidewalks on residential roads were the least popular type of infrastructure improvement. The top three biking infrastructures were bicycle-friendly intersections, protected bike lanes, and buffered bike lanes. Neighborhood greenways were the least supported infrastructure improvement for bicyclists.

Results

The following outlines the results of the voting activity:

- Programs
 - Interpretive signage (e.g., history and facts about the Town along walkways)
 - Bicycle and pedestrian safety campaign
 - Employer-based encouragement (e.g., businesses providing financial incentives or bike parking)
 - Guided nature walks
 - Senior walk program
- Pedestrian Infrastructure Projects
 - Pedestrian crossing improvements
 - Shared-use paths
- Bicycle Infrastructure Projects
 - Bicycle-friendly intersections
 - Buffered bike lanes
 - Protected bike lanes

In addition to the voting exercise and boards, a laptop was available for participants to enter their comments on the interactive online map of the study area. The Wikimap comments addressed:

- Providing better bikeways
- Clearing obstructed views at side streets
- Improving the pedestrian crossing at Albatross
- Improving bike crossings at bridges
- Adding bike parking at the beach
- Adding trash cans at transit stops
- Providing a more robust education and enforcement campaign for pedestrians, cyclists, and motorists
- Other key themes that came to light during the workshop include:
 - Better lighting is needed near crosswalks
 - Residents would like to be able to safely travel the length of the island on foot or on bike
 - Separate people on bikes, people walking, and people driving
 - North Estero Boulevard is lovely and feels safe
 - Safety is a concern for all modes
 - There is a need for marked bike lanes
 - Neighborhood greenways and sidewalks on residential streets are not preferred

Workshop #2

The two-hour long workshop included the consultant project manager introducing the consultant team and staff from the Town and MPO. This was followed by a comprehensive 30-minute presentation about the project. The consultant project manager led a discussion with meeting participants and asked for reaction to the presentation and the plans recommendations. Several display boards and maps were set-up for display in the meeting room. The public was encouraged to talk with the consultant team and Town staff about participants' interests and ideas to improve walking and biking in Fort Myers Beach.

Following a presentation, people attending the April 26 workshop strongly supported that pedestrian safety and education programs be implemented. There was also support voiced for the idea of an island long walking and biking signed pathway including the cultural loop. There was also support for increased enforcement of motorist's traffic laws that impact and cause danger to walkers and bikers especially at crossings.

Results

The second public workshop focused on needs and specific concerns and is summarized below:

- Better lighting and flashing warning beacons are needed near crosswalks
- There are frequent riding and walking conflicts on sidewalks on Estero Boulevard and measures such as striping and signage should be considered
- Town and law enforcement should develop a Safety Education program targeting motorists, walkers, and bicyclists; the campaign should use brochures, maps, social media, and events and involve bicycle rental shops, hotels, restaurants, and other public gathering places
- A question was asked how do the paved "advisory shoulders" work and concern that the concept will not always work. The citizen said that the advisory shoulder will not be safe on Avenida Pescador because it is a narrow one-way street and walking and biking should not be encouraged
- A question was asked about how sidewalks on both sides are possible on Crescent Street as there is little right-of-way and there would be business impacts
- Concerns about how bike rental shops are telling people to ride against traffic and ride at night without proper lights or helmets. Educating bike rental shops about rules should be a top priority.
- Public education is a top priority and should involve schools and law enforcement (multiple comments of support)
- Support for an educational brochure (supported by several persons attending the meeting)
- A "crosswalk awareness day" should be organized.
- Several attendees support the concept of the "cultural loop" and identifying a walking and bicycling network from one end of the island to the other; some people want to be able to safely travel the length of the island on foot or on bike
- Attendees would like to separate people walking, on bicycles, and people driving
- Markings should be placed on wide sidewalks on Estero Boulevard separating walkers and bicyclists

Project Advisory Committee

The Project Advisory Committee (PAC) was formed by the Town Council of Fort Myers Beach to review and provide input on the development of the plan, to ensure coordination of facilities and that recommended improvements are feasible. Three PAC meetings were held from 10 a.m. to 11:30 a.m. in the Town's Council Chambers:

- January 31, 2017
- March 27, 2017
- April 26, 2017

Members

Town Council members appointed representatives from stakeholder agencies and involved citizens. PAC representation included (listed alphabetically):

- BikeWalkLee
- FDOT District 1 Bike and Pedestrian Coordinator
- Fort Myers Beach Public Works
- Fort Myers Beach Parks & Recreation
- Fort Myers Beach Public Safety Committee
- Fort Myers Beach Town Council Citizen Appointee
- Fort Myers Beach Chamber of Commerce
- Fort Myers Beach Community Development
- Fort Myers Beach Elementary School
- Fort Myers Beach Fire Control District
- Lee County Sheriff's Office
- Lee County DOT – Estero Boulevard Project
- Lee County Visitor and Convention Bureau
- Lee MPO Staff
- LeeTran
- Local Planning Agency for Lee County

Key questions discussed include:

- What makes a successful plan?
- What does it mean to bike and walk in Fort Myers Beach?
- Who is our user?

Key themes discussed include:

- Buildable, practical projects
- Ability to measure progress towards the plans goals
- Safe and comfortable user experience for all modes
- Good quality of life that encourages bicycling and walking
- Sidewalks are not needed on local streets and not popular with residents

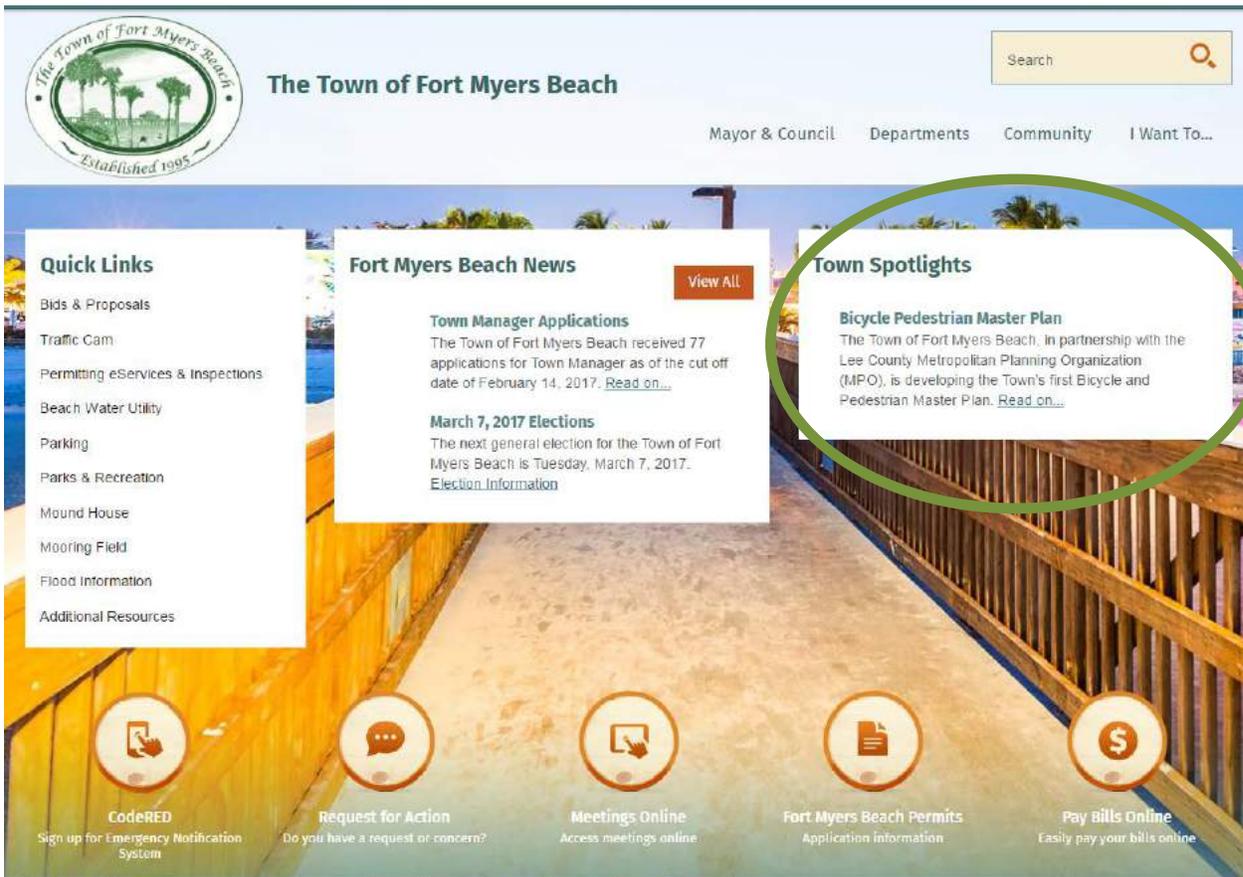
Online Outreach

The Fort Myers Beach Bike and Pedestrian Master Plan used two main online tools to encourage dialogue and opportunities for engagement: the Town’s website and an interactive map.

Website

The plan was featured prominently on the Town’s website, as shown in Figure 1. The website was used to share upcoming meeting dates, summaries of past meetings, other opportunities for engagement, and deliverables including draft and final plans. The website also included a link to the interactive mapping tool.

Figure 1: Town of Fort Myers Beach website homepage



Wikimap

This interactive mapping tool (Figure 2) allowed users to note walking or biking issues and to indicate preferred walking and biking routes and comment on walking and biking issues.

By the numbers:

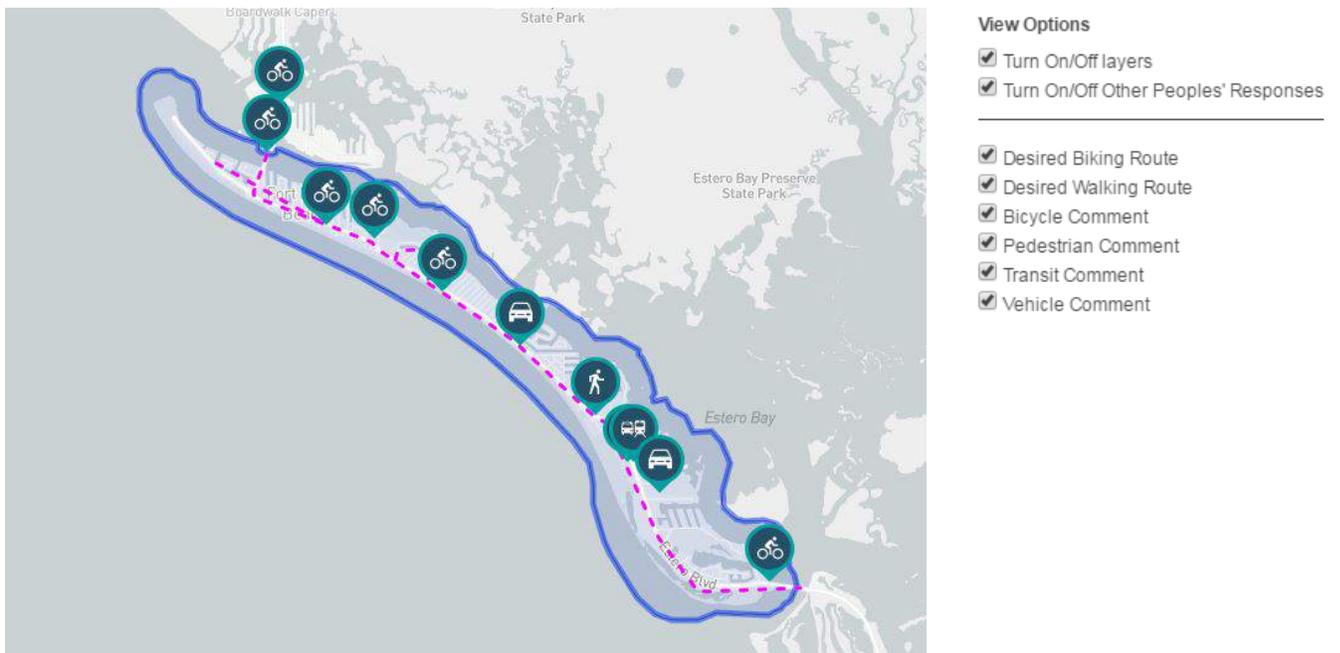
- 11 comments total
- 6 bicycle-related comments
- 2 pedestrian-related comments

- 2 vehicle-related comments
- 1 transit-related comment
- 1 desired biking route drawn

Key Themes:

- San Carlos and Big Bend Bridge reconstruction needs to accommodate all modes
- Motorists and bicyclists need to yield at crossings
- Improve maintenance at transit stops during construction on Estero Boulevard
- Designated pedestrian crossing with flashing signal is needed at Albatross Street and Estero Boulevard as well as all crossings
- Need better bicycle and education enforcement; e.g., yielding to pedestrians on sidewalks, verbal announcement to walkers
- There are too many obstructed views of walking paths and maintenance needs to be improved
- Need more bike racks at beach access points
- Bicycle education and enforcement is needed (e.g., yield to pedestrians on sidewalks, verbal announcement to walkers)

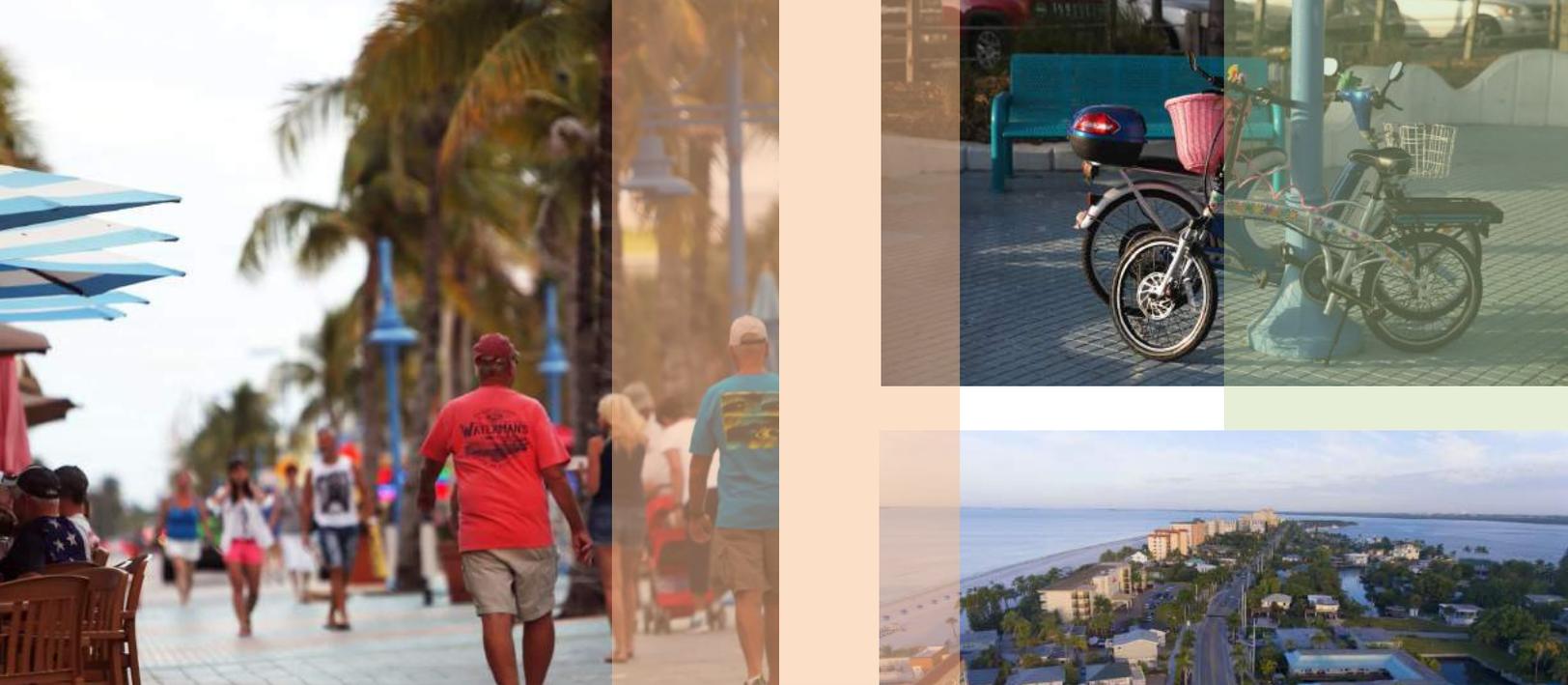
Figure 2: Wikimap Results



**APPENDIX E
NEEDS &
RECOMMENDATIONS
TECHNICAL
MEMORANDUM**

**FORT MYERS BEACH
BICYCLE + PEDESTRIAN
MASTER PLAN**

THIS PAGE INTENTIONALLY LEFT BLANK



Town of Fort Myers Beach BICYCLE + PEDESTRIAN MASTER PLAN

Needs & Recommendations Technical Memorandum

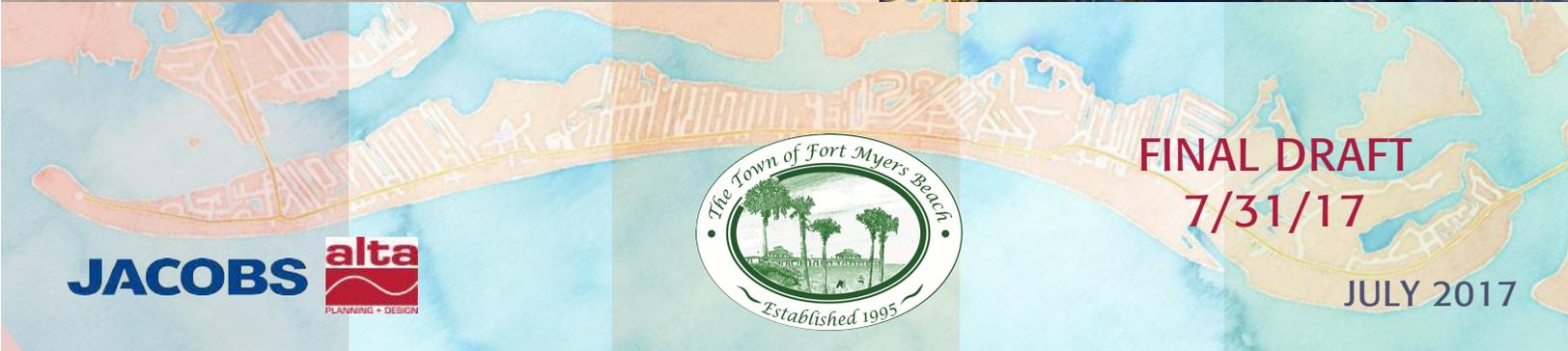


Table of Contents

Introduction 1
 Vision..... 1
 Goals 1
 Developing the Master Plan..... 2
 Identifying Infrastructure Recommendations 2
 Project Advisory Committee Meetings 3
 Public Workshops..... 3
 Workshop #1 Results 4
 Workshop #2 Results 4
 Recommendations 5
 Walkway Recommendations 5
 Bikeway Recommendations..... 12

Tables

Table 1: Recommended Walkway Network Expansion 9
 Table 2: Recommended Walkway Projects..... 8
 Table 3: Recommended Bikeway Network Expansion..... 15
 Table 4: Recommended Bikeway Projects..... 15

Figures

Figure 1: Existing and Proposed Walkway Projects 8
 Figure 2: Existing and Proposed Bikeway Projects..... 14

Introduction

A local, adopted bicycle and pedestrian master plan is necessary to qualify for state and federal funding distributed through the Lee County Metropolitan Planning Organization (MPO). The Town of Fort Myers Beach Bicycle and Pedestrian Master Plan will serve as a guide for local decision makers on where and how to spend limited, local resources on bicycle and pedestrian projects. This technical memorandum describes the methodology for developing recommendations based on a needs assessment for this Plan. *The goal of this Plan is a strategic and coordinated vision for bicycle and pedestrian transportation investment in Fort Myers Beach.* Project recommendations are based on technical steps taken to develop the Plan and input from citizens.

Vision

The Vision guides the development of the recommendations for this plan. Based on the direction of the Town staff, Lee County MPO, and Project Advisory Committee (PAC), a vision statement for the Bicycle & Pedestrian Master Plan was developed. The Vision statement outlines what the community wants to be. It concentrates on the future and is a source of inspiration. The following vision statement guides the Fort Myers Beach Bicycle and Pedestrian Master Plan:

Walking, riding a bike and accessing transit in Fort Myers Beach is a comfortable and integral part of daily life for people of all ages and abilities. The improved network for people walking and biking will facilitate connections between neighborhoods, job, tourist attractions, shops, schools, the beach, and other daily destinations.

Several key themes are embedded in this vision, including comfort, daily life, and all ages and abilities.

- “Comfortable” suggests the future network is a safe, convenient and attractive travel option for a large number of people to walk and bike.
- “Daily life” means that walking and bicycling are not niche activities, and are desirable for all trip purposes.
- “All ages and abilities” means that the emphasis is on planning, designing, and building walking and biking facilities that will be used by people of all ability levels.

Goals

Goals guide the Town towards fulfilling the Vision, and relate to existing and newly-launched efforts. The following goals, developed through the planning process, will serve to guide the implementation of the Fort Myers Beach Bicycle and Pedestrian Master Plan.

- Achieve Bicycle Friendly Community designation by the League of American Bicyclists
- Achieve Walk Friendly Community designation by the Pedestrian and Bicycle Information Center
- Reduce the number of bicycle and pedestrian crashes by half within five years by targeting bicycle and pedestrian improvements at high crash locations
- Double the combined walking, biking and transit commute mode share to 22% within 5 years (Currently 11% for walking, biking and transit in Fort Myers Beach)

- Create 29.03 mile walkway network within 20 years (12.56 miles currently; 16.47 miles proposed)
- Create 14.80 mile on-street bikeway network within 20 years (2.20 miles currently; 12.63 miles proposed)
- Complete the reFRESH Estero Boulevard Project

Developing the Master Plan

The Master Plan was developed by taking the following steps:

1. Created an inventory and verified through field review existing bicycle and pedestrian facilities, major attractions, crash locations, land-uses, parks, schools, beach access points, transit stops throughout the Town.
2. Reviewed and documented existing plans and documents that may impact this plan
3. Reviewed the Town's Land Development Code and recommended enhanced design provisions for improved bicycle and pedestrian facilities
4. Identified and recommended design features and facility design criteria for bicycle and pedestrian facilities and crossing treatments
5. Assessed needs and identify gaps using GIS map overlays and field assessment in the network using the data collected and analysis
6. Identified and recommend proposed walking and bicycling projects
7. Developed cost estimates and prioritize walking and bicycling projects
8. Identified funding opportunities for the proposed projects and programs
9. Met with Lee County staff to evaluate existing and proposed crosswalks on Estero Boulevard by reviewing locations and design configuration, and made recommendations for improvements

Identifying Infrastructure Recommendations

Projects include traffic safety and operational improvements at major intersections to help guide the implementation of those facilities. The proposed facilities address gaps in the system, provide access between neighborhoods and attractions, and enhance safety and use of the existing and developing bicycle/pedestrian network. Programs and policies that help implement projects and help make Fort Myers Beach a safer walking and bicycling environment were also identified through the needs assessment and stakeholder and public involvement process. The policy and program recommendations are described in the *Policies and Programs Technical Memorandum*. The following steps were taken to identify the Plan's needs and develop project, program, policy, and design recommendations:

- Identified gaps in the existing network and impediments to walking and biking through field reviews and using Geographic Information Systems (GIS) to identify facility gaps
- Updated and mapped crash data and identified areas with safety concerns using GIS crash data
- Reviewed existing plans and projects underway with Town staff for impact to the bicycle and pedestrian master plan; plans reviewed include:
 - Hidden Pathways Concept from the adopted Town of Fort Myers Beach Comprehensive Plan
 - Estero Boulevard Streetscape Plan
 - Old San Carlos Boulevard/Crescent Street Master Plan

- Identified project recommendations to fill in the gaps, create safety solutions, and meet the goals for this plan
- Recommended policies and programs to ensure the culture of walking and biking in Fort Myers Beach is maintained and grows
- Identified new sidewalks, pathways, boardwalks, and bike lanes planned under the proposed hotel/commercial project at Times Square
- Considered access to Fort Myers Beach Elementary School, Library and Town hall, beach access points and historical, cultural, and recreational attractions such as: Mound House, Bay Oaks, Santini Plaza, Fort Myers Beach Library, Bowditch Point Park, and Newton Park
- Considered public input and local coordination

To complement the technical work completed, the team worked with the public to identify projects by:

- Establishing a PAC and meeting three times with the committee
- Holding two public workshops
- Maintaining a project webpage on the Town of Fort Myers Beach website; a link to this page was also provided from the Lee County MPO website
- Sending out press releases and facts sheets to media and the public during the study
- Maintaining an interactive online map throughout the process to ensure the strategy and projects meet the needs and desires of the community

Public engagement is discussed in detail in a *Public Participation Technical Memorandum*.

Project Advisory Committee Meetings

PAC members met three times through the plan development process and played a significant role in reviewing projects, policies, and programs identified in the study technical needs assessment. Key questions discussed by PAC include:

- What makes a successful plan?
- What does it mean to bike and walk in Fort Myers Beach?
- Who is our user?

Key recommendations from the PAC regarding the Plan include:

- Identify projects that are buildable and practical
- Include measure to evaluate progress towards the Plan's goals
- Promote safe and comfortable user experience for all modes
- Support high quality of life that encourages bicycling and walking
- Include sidewalks on local streets as they are not popular with residents

Public Workshops

Two public meetings were held at milestone points of developing the plan. At the public workshops, members of the Fort Myers Beach community were asked to share what improvements are needed and which should be priorities.

Workshop #1 Results

The following outlines the results of the voting activity:

- Programs
 - Interpretive signage (e.g., history and facts about the Town along walkways)
 - Bicycle and pedestrian safety campaign
 - Employer-based encouragement (e.g., businesses providing financial incentives or bike parking)
 - Guided nature walks
 - Senior walk program
- Pedestrian Infrastructure Projects
 - Pedestrian crossing improvements
 - Shared-use paths
- Bicycle Infrastructure Projects
 - Bicycle-friendly intersections
 - Buffered bike lanes
 - Protected bike lanes

In addition to the voting exercise and boards, a laptop was available for participants to enter their comments on the interactive online map of the study area. The Wikimap comments addressed:

- Providing better bikeways
- Clearing obstructed views at side streets
- Improving the pedestrian crossing at Albatross
- Improving bike crossings at bridges
- Adding bike parking at the beach
- Adding trash cans at transit stops
- Providing a more robust education and enforcement campaign for pedestrians, cyclists, and motorists
- Other key themes that came to light during the workshop include:
 - Better lighting is needed near crosswalks
 - Residents would like to be able to safely travel the length of the island on foot or on bike
 - Separate people on bikes, people walking, and people driving
 - North Estero Boulevard is lovely and feels safe
 - Safety is a concern for all modes
 - There is a need for marked bike lanes
 - Neighborhood greenways and sidewalks on residential streets are not preferred

Workshop #2 Results

The second public workshop focused on needs and specific concerns and is summarized below:

- Better lighting and flashing warning beacons are needed near crosswalks
- There are frequent riding and walking conflicts on sidewalks on Estero Boulevard and measures such as striping and signage should be considered

- Town and law enforcement should develop a Safety Education program targeting motorists, walkers, and bicyclists; the campaign should use brochures, maps, social media, and events and involve bicycle rental shops, hotels, restaurants, and other public gathering places
- A question was asked how do the paved “advisory shoulders” work and concern that the concept will not always work. The citizen said that the advisory shoulder will not be safe on Avenida Pescadora because it is a narrow one-way street and walking and biking should not be encouraged
- A question about how would sidewalks on both sides is possible on Crescent Street? There is little right-of-way and business impacts.
- Concerns about how bike rental shops are telling people to ride against traffic and ride at night without proper lights or helmets. Educating bike rental shops about rules should be a top priority.
- Public education is a top priority and should involve schools and law enforcement (multiple comments of support)
- Support for an educational brochure (supported by several persons attending the meeting)
- A “crosswalk awareness day” should be organized.
- Several attendees support the concept of the “cultural loop” and identifying a walking and bicycling network from one end of the island to the other; some people want to be able to safely travel the length of the island on foot or on bike
- Attendees would like to separate people walking, on bicycles, and people driving
- Markings should be placed on wide sidewalks on Estero Boulevard separating walkers and bicyclists

Recommendations

The needs of all roadway users, including the safety and comfort of people walking, bicycling, accessing transit, and driving, must be balanced with roadway characteristics and corridor constraints. The Plan’s recommendations provide guidance that can be used to track progress projects towards implementation. Some recommendations are conceptual and additional coordination will be needed for implementation.

In total, 29.10 miles of recommended projects are identified in this Plan. The Plan includes conceptual diagrams for design guidelines and criteria, which can be used to refine these projects for implementation. This section includes both walkway and bikeway infrastructure recommendations. Policy and program recommendations that will support the implementation of the physical infrastructure are discussed in the Policy and Program Recommendations Technical Memorandum. The end goal is to create a positive and safe culture of walking and biking in Fort Myers Beach.

Walkway Recommendations

The walkway recommendations are developed to close sidewalk gaps and create a more comfortable and convenient walkway network throughout the town. Key themes of the improvements to the walkway network include:

- Close sidewalk gaps
- Provide sidewalks along major streets, higher density residential areas
- Provide frequent, safe crossings near transit stops
- Bridges and underpasses should have sidewalks on both sides
- Installing sidewalks on one or both sides of the road
- Enhancing crossing conditions at key intersections
- Improving connections to the regional walkway network

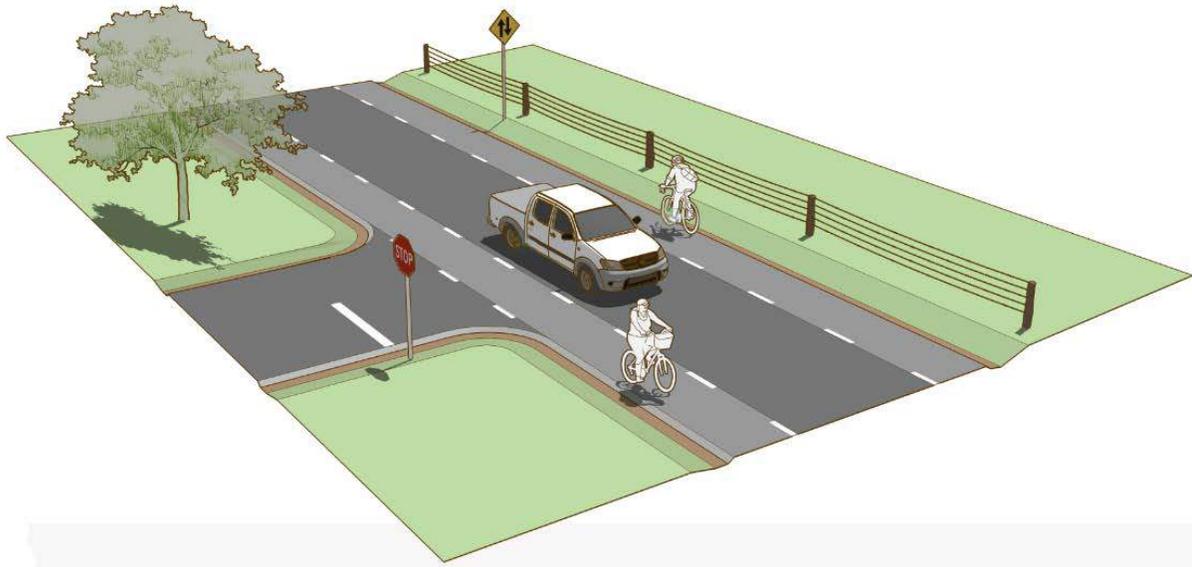
WALKWAY RECOMMENDATION THEMES



Creating new walkways entails constructing a sidewalk or similar dedicated space for people walking along a street. Overall, walkway improvements are concentrated along Estero Boulevard and in higher density residential and commercial areas. The following describes the recommended improvements:

- **Sidewalks.** The Plan calls for sidewalks to be completed on both sides of Estero Boulevard; close sidewalks gaps in the Times Square commercial area; and be constructed on important neighborhood connectors such as the cultural loop that link public facilities, transit stops, and significant attractions.

- Advisory shoulders.** The Plan calls for creating usable shoulders for bicyclists and walkers on a local, low volume residential street roadway that is otherwise too narrow to accommodate them. The shoulder is dedicated by pavement marking and optional pavement color. Signage can be included in this type of project. Motorists may enter the shoulder when no bicyclists or walkers are present and must overtake users with caution. Advisory shoulders are identified for local streets with limited or no right-of-way for sidewalks, bicycle lanes or shoulders. Advisory shoulders can be considered as a low cost element of a Bicycle Boulevard.



On the north end of the island, sidewalks exist on both sides of Estero Boulevard. Improvements in this area are focused on better connections across the roadway. North of Bay Road, sidewalks exist mainly on the east side of Estero Boulevard. On the south end of the island, walkway recommendations are focused on installing sidewalks on the west side of the roadway consistent with proposed designs for the reFRESH Estero Boulevard project, as well as improving pedestrian crossing conditions at key locations. Most neighborhoods are located on north Estero Boulevard, west of San Carlos Boulevard, and there is significant demand to cross the road to access the beach and other destinations on the west side of the street. Crossing improvements vary by location, but overall, they are focused on enhancing the visibility of crossing pedestrians to make crossing the roadway safer and more comfortable. Specific emphasis is placed on providing frequent, safe crossings near transit stops.

Other spot improvements include proposed sidewalks on both sides of the roadway where bridges and underpasses exist. Route 865/San Carlos Boulevard/Estero Boulevard continues north and south from Fort Myers Beach. Recommendations to enhance regional walkway connections at the bridges provide comfortable, safe, and convenient crossings over the waterways. The bridges to the north and south of the island are scheduled for improvements and currently undergoing PD&E studies by FDOT.

Continued coordination with local, regional, and state partners is needed to provide bikeway improvements that meet the needs of the community. More detail on the walkway facility types recommended are provided in the *Design Criteria Technical Memorandum*.

Tables 1 and 2 summarize recommended walkway projects. Figure 1 shows where projects are located.

Figure 1: Existing and Proposed Walkway Projects

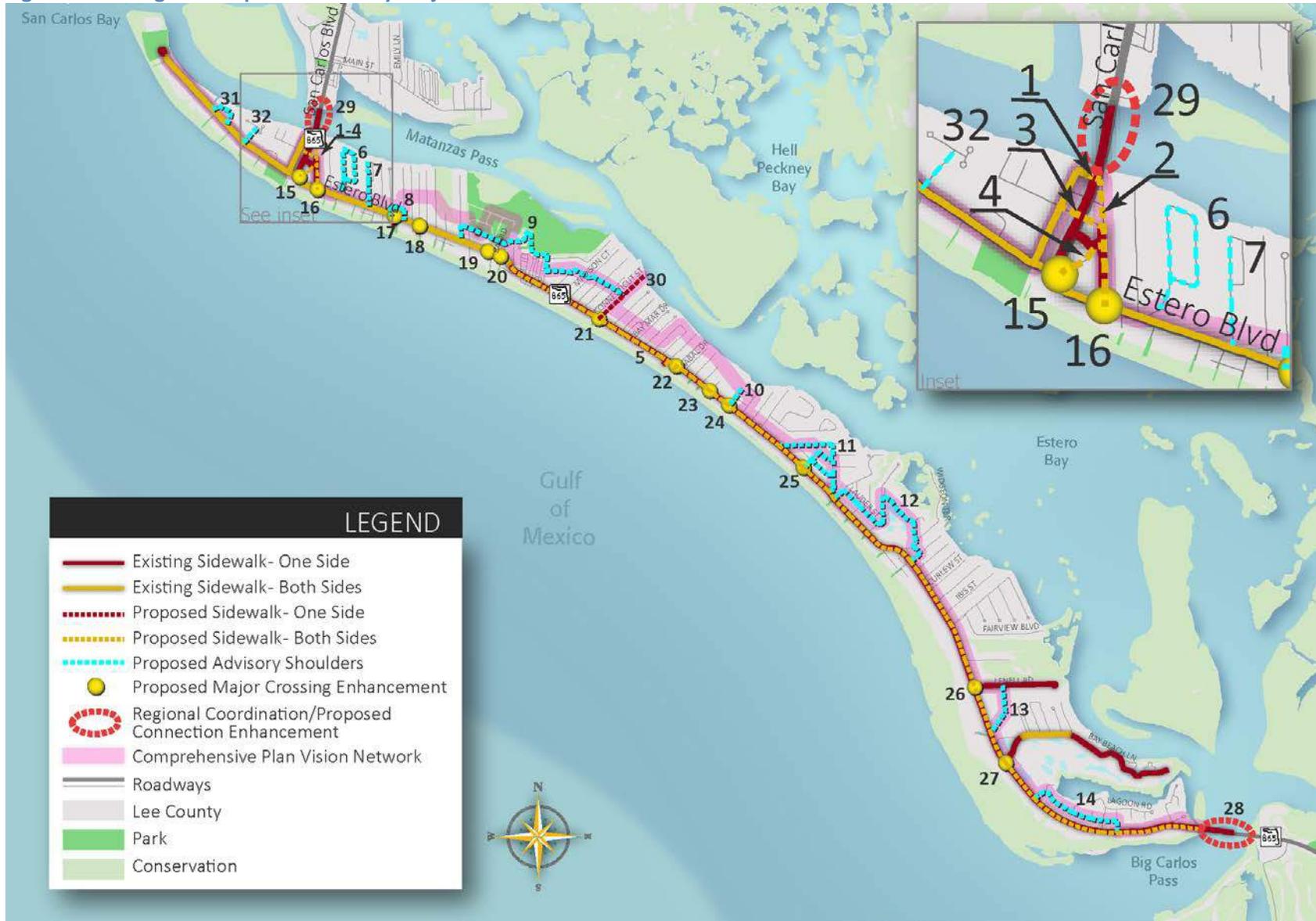


Table 1: Recommended Walkway Network Expansion

Facility Type	Existing (MI)	Proposed (MI)	% Increase
Sidewalks one side	7.14	.31	4.36%
Sidewalks both sides	5.41	10.54	194.78%
Advisory shoulders	0	5.61	561%
Total	12.56	16.47	138.93%

Table 2: Recommended Walkway Projects

Project ID	Facility Type	On Street	From	To	Cost (FY 2016/2017)	Funding Source	Priority Year
W-01	Sidewalk-Both Sides	First Street	Old San Carlos Boulevard	Crescent Street	\$19,723.01	Lee County MPO/State	2023-2027
W-02	Sidewalk-Both Sides	Crescent Street	First Street	Estero Boulevard	\$95,951.23	Lee County MPO/State	2023-2027
W-03	Sidewalk-Both Sides	Third Street	Crescent Street	Old San Carlos Boulevard	\$35,496.19	Lee County MPO/State	2023-2027
W-04	Sidewalk-Both Sides	Fifth Street	Crescent Street	Estero Boulevard	\$43,150.85	Lee County MPO/State	2023-2027
W-05	Sidewalk-Both Sides	Estero Boulevard	Lovers Lane	Big Carlos Pass	Included in Estero Boulevard reconstruction	Lee County	2018-2022
W-06	Advisory shoulders	Palermo Circle	Estero Boulevard	whole loop	Included in Bike Boulevard costs	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
W-07	Advisory shoulders	Carolina Avenue	Estero Boulevard	Ostego Drive	Included in Bike Boulevard costs	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
W-08	Advisory shoulders	Ohio/Bayview/Virginia	Estero Boulevard	Bayview Drive	Included in Bike Boulevard costs	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
W-09	Advisory shoulders	Cultural Loop	Town Hall/Tropical Short Way	Connecticut Street/Mound House/Estero Boulevard	Included in Bike Boulevard costs	Town of Fort Myers Beach/Gas Tax or other source	2028-2037

Project ID	Facility Type	On Street	From	To	Cost (FY 2016/2017)	Funding Source	Priority Year
W-10	Advisory shoulders	Sanders Drive	Snook Bight Yacht Club and Marina	Estero Boulevard	Included in Bike Boulevard costs	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
W-11	Advisory shoulders	Avenida Pescadora Loop	Estero Boulevard	Estero Boulevard	Included in Bike Boulevard costs	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
W-12	Advisory shoulders	Lauder Street/Bay Village	Estero Boulevard	Estero Boulevard	Included in Bike Boulevard costs	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
W-13	Advisory shoulders	Lenell Road	Estero Boulevard	service driveway behind shops	Included in Bike Boulevard costs	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
W-14	Advisory shoulders	Buccaneer Drive	Estero Boulevard	Estero Boulevard	Included in Bike Boulevard costs	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
W-15	Crossing Improvement*	Crossing at Estero & Fifth Street			Requires additional study	Lee County/Private Development	2018-2022
W-16	Crossing Improvement*	Crossing at Estero & Crescent Street			Requires additional study	Lee County/Private Development	2018-2022
W-17	Crossing Improvement*	Crossing at Palm Avenue (Beach Access #30)			\$5,000	Lee County/Beach and Shoreline Funding Program**	2018-2022
W-18	Crossing Improvement*	Crossing at Delmar Avenue (Beach Access #28)			\$5,000	Lee County/Beach and Shoreline Funding Program**	2018-2022
W-19	Crossing Improvement (RRFB)	Crossing at School Street (near school, library, and park)			\$10,000 - \$15,000	Lee County	2023-2027
W-20	Crossing Improvement*	Crossing at Bay Road (near library and school)			\$5,000	Lee County MPO/State	2023-2027
W-21	Crossing Improvement (RRFB)	Crossing at Connecticut Street (Beach Access #22, cultural route to Mound House)			\$10,000 - \$15,000	Lee County MPO/State (design funded)	2018-2022
W-22	Crossing Improvement*	Crossing at Coconut Drive (Beach Access #20)			\$5,000	Lee County	2023-2027

Project ID	Facility Type	On Street	From	To	Cost (FY 2016/2017)	Funding Source	Priority Year
W-23	Crossing Improvement*	Crossing at Strandview Avenue (Newton Park, Beach Access #17)			\$5,000	Lee County	2023-2027
W-24	Crossing Improvement (RRFB)	Crossing at Publix (west of Sanders Drive)			\$10,000 - \$15,000	Lee County	2023-2027
W-25	Crossing Improvement*	Crossing at Dakota Avenue (Beach Access #16)			\$5,000	Lee County/Beach and Shoreline Funding Program**	2023-2027
W-26	Crossing Improvement (RRFB)	Crossing at Lenell Road			\$10,000 - \$15,000	Lee County MPO/State	2023-2027
W-27	Crossing Improvement*	Crossing at Bay Beach Lane			\$5,000	Lee County	2023-2027
W-28	Bridge Crossing-facility type TBD	Matanzas Pass Bridge			TBD/Matanzas Pass PD&E	Lee County	2018-2022
W-29	Bridge Crossing-facility type TBD	Big Carlos Pass Bridge			TBD/Big Carlos Pass PD&E	Lee County	2018-2022
W-30	Sidewalk One Side	Connecticut Street	Estero Boulevard	Mound House	Construction is funded for FY 2020 with \$446,601 in total federal funds committed		
W-31	Advisory shoulders	Carlos Circle	Estero Boulevard	Estero Boulevard	Included in Bike Boulevard costs	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
W-32	Advisory shoulders	Matanzas Street	Estero Boulevard	Matanzas Ct	Included in Bike Boulevard costs	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
W-33	Lighting	Pedestrian Scale Lighting			TBD/Lee MPO study	Town of Fort Myers Beach/Gas Tax or other source	2018-2022

RRFB Rectangular Rapid Flashing Beacon

* Crossings need more detailed study; the Town will work with Lee County DOT to identify the specific enhancements

** TDT funding contingent on approval from Lee County Attorney; project eligibility based on State Statute 124.0104 and County Ordinance 16-18

Bikeway Recommendations

The bikeway recommendations are intended to help residents, employees, and visitors comfortably bike around Fort Myers Beach. Key bikeway recommendation themes include implementing a continuous bikeway along Estero Boulevard, enhancing roadway crossings, and improving connections to the regional bikeway network.

BIKEWAY RECOMMENDATION THEMES



For most residential streets, minimal bikeway improvements are needed, as vehicle speeds and volume are so low that people walking, biking, and driving can share the same roadway space. The following bikeway improvements are recommended:

- **Bicycle Lanes.** Separated bike lanes (SBLs) offer the most protection and separation from adjacent motor vehicle traffic. SBLs are bicycle facilities that are physically separated from motor vehicle traffic by a painted buffer and physical barriers such as flexible delineators, curbs, or planters.
- **Shared Lane Marking.** Shared roadways use pavement markings and signage to communicate to motorists and bicyclists to operate within the same travel lane, either side by side or in a single file, depending on the roadway configuration. Typically, this facility is used to connect other bikeways (usually bike lanes), or designate preferred routes through high-demand corridors
- **Bicycle Boulevard.** Bicycle Boulevards are local streets with low motorized traffic volumes and speeds. They should have a maximum posted speed of 25 mph and target motor vehicle volumes of less than 1,500 vehicles per day. If these targets are already met, the addition of signage and pavement markings can cost-effectively designate corridors as bicycle boulevards. Additionally, traffic calming and traffic diversion can be implemented to achieve target speeds and volumes.

These improvements, combined with modifications at major intersections, make this type of facility intuitive and comfortable for a wide range of people to ride a bicycle or walk.

- **Dedicated Bicycle Lane.** This type of facility provides a dedicated space within the roadway for bicyclists to travel, and uses signage and striping to delineate the right-of-way assigned to bicyclists and motorists. Bike lanes encourage predictable movements by both bicyclists and motorists, and have been found to decrease stress levels for both groups.

As people leave their neighborhoods, most must travel along and across Estero Boulevard. On the north end of the island on Estero Boulevard, bike lanes currently exists and bike lanes, sidewalks, and a side path is included in the design of Estero Boulevard improvements. Recommendations are focused on installing a dedicated bike lane on the south end of the island, and shared lane markings between Crescent Street and Lovers Lane where the roadway width is more constrained. Developing a continuous bikeway along this corridor will connect people to parks, the beach, schools, jobs, shopping and other daily destinations.

Route 865/San Carlos Boulevard/Estero Boulevard continues north and east from Fort Myers Beach. Recommendations are also included to enhance regional bikeway connections at the bridges to provide comfortable, safe, and convenient crossings over the waterways. The San Carlos Boulevard Bridge to the north of the island and the Big Carlos Pass and Matanzas Bridge to the south of the island are scheduled for improvements and are currently undergoing Project Development and Environment (PD&E) studies by FDOT and Lee County, respectively. Continued coordination with local, regional, and state partners is needed to provide bikeway improvements that meet the needs of the community.

Bicycle boulevards are recommended on local streets. One of the primary recommendations for a bicycle boulevard is to create a “cultural Loop” that connects several important civic and cultural destinations including Town Hall, Community Park, Fort Myers Beach Elementary, Fort Myers Beach Public Library, the Matanzas Pass Preserve, and the Mound House. The proposed route creates a loop that can be used by visitors and residents and provides an alternative route to Estero Boulevard. This corridor can be enhanced with pavement markings, traffic calming treatments and wayfinding signage to develop a “bicycle boulevard” that functions as priority bicycle and pedestrian route through the neighborhood.

More detail on the proposed bikeway facility types is provided in the *Design Criteria Technical Memorandum*. Figure 2 shows where the projects are located. Table 3 and 4 summarize recommended bikeway projects.

Figure 2: Existing and Proposed Bikeway Projects

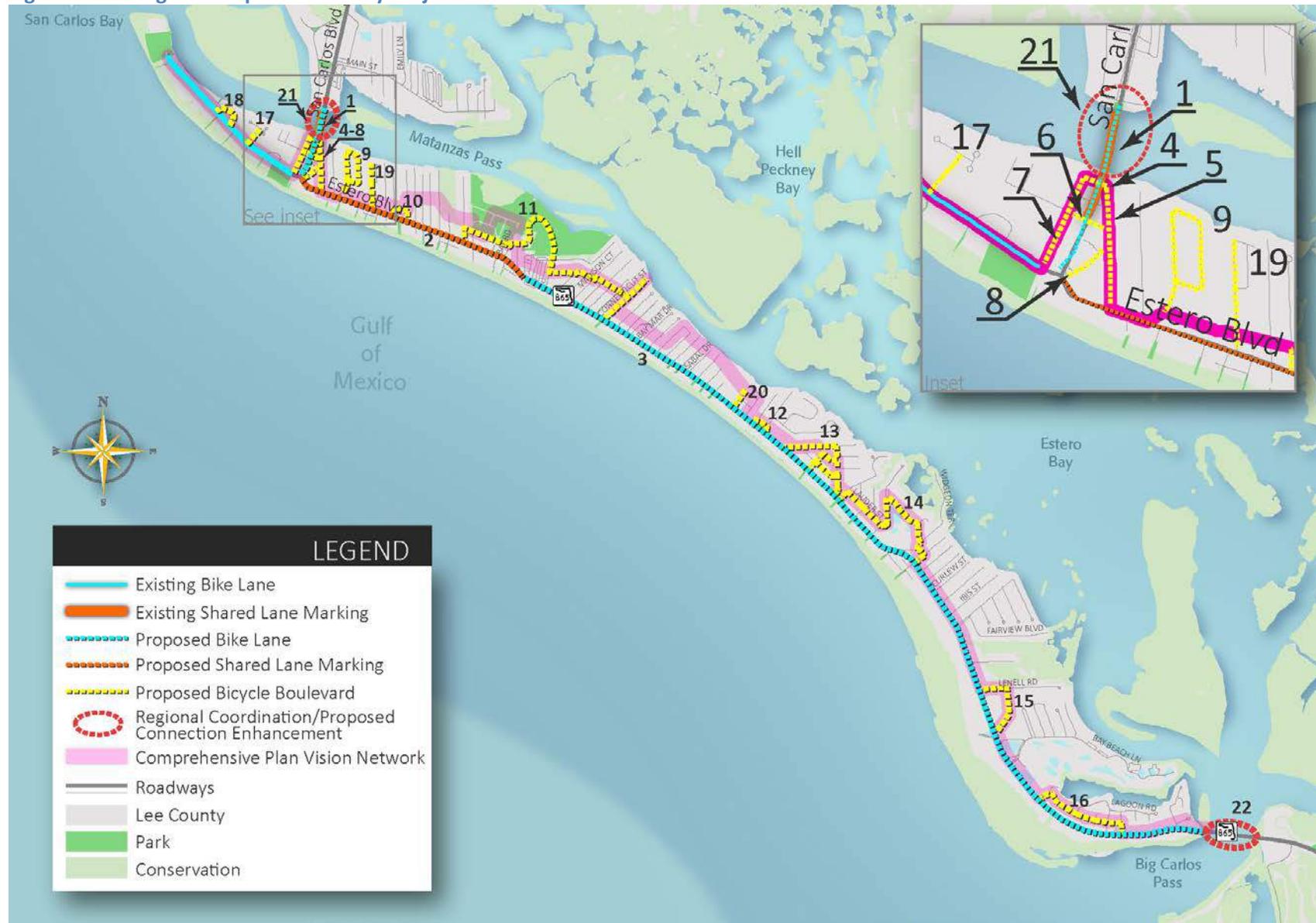


Table 3: Recommended Bikeway Network Expansion

Facility Type	Existing (MI)	Proposed (MI)	% Increase
Bike Lane	1.74	4.71	269.99%
Shared Lane Marking	.46	1.29	281.32%
Bicycle Boulevard	0	6.63	640%
Total	2.2	12.63	580.2%

Table 4: Recommended Bikeway Projects

Project ID	Facility Type	On Street	From	To	Cost (FY 2016/2017)	Funding Source	Priority Year
B-01	Bicycle Lanes- Both Sides	San Carlos Boulevard	Fisherman's Warf	Estero Boulevard	TBD/San Carlos Boulevard PD&E	State	2018-2022
B-02	Shared Lane Marking- Both Sides	Estero Boulevard- middle section	San Carlos Boulevard	Gulf View Shops	Included in Estero Boulevard reconstruction	Lee County	2018-2022
B-03	Bicycle Lanes- Both Sides	Estero Boulevard	Gulf View Shops	Big Carlos Pass	Included in Estero Boulevard reconstruction	Lee County	2018-2022
B-04	Bike Boulevard	First Street	Old San Carlos Boulevard	Crescent Street	\$1,625.03	Lee County MPO/State	2023-2027
B-05	Bike Boulevard	Crescent Street	First Street	Estero Boulevard	\$8,480.96	Lee County MPO/State	2023-2027
B-06	Bike Boulevard	Third Street	Crescent Street	Old San Carlos Boulevard	\$3,142.89	Lee County MPO/State	2023-2027
B-07	Bike Boulevard	Old San Carlos Boulevard	Estero Boulevard	First Street	\$6,984.62	Lee County MPO/State	2023-2027
B-08	Bike Boulevard	Fifth Street	Crescent Street	Estero Boulevard	\$3,829.76	Lee County MPO/State	2023-2027
B-09	Bike Boulevard	Palermo Circle	Estero Boulevard	whole loop	\$17,011.63	Town of Fort Myers Beach/Gas Tax or other source	2028-2037

Project ID	Facility Type	On Street	From	To	Cost (FY 2016/2017)	Funding Source	Priority Year
B-10	Bike Boulevard	Ohio/Bayview/Virginia	Estero Boulevard	Bayview Drive	\$5,669.91	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-11	Bike Boulevard	Cultural Loop	Town Hall/Tropical Short Way	Connecticut Street/Mound House/Estero Boulevard	\$55,520.84	Town of Fort Myers Beach/Gas Tax or other source	2018-2022
B-12	Bike Boulevard	Compass Lane Loop	Estero Boulevard	Estero Boulevard	\$3,516.89	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-13	Bike Boulevard	Avenida Pescadora Loop	Estero Boulevard	Estero Boulevard	\$17,862.07	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-14	Bike Boulevard	Lauder Street/Bay Village	Estero Boulevard	Estero Boulevard	\$31,894.28	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-15	Bike Boulevard	Lenell Road	Estero Boulevard	service driveway behind shops	\$15,587.57	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-16	Bike Boulevard	Buccaneer Drive	Estero Boulevard	Estero Boulevard	\$18,146.31	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-17	Bike Boulevard	Matanzas Street	Estero Boulevard	Matanzas Ct	\$3,501.29	Town of Fort Myers Beach/Gas Tax or other source	2028-2037

Project ID	Facility Type	On Street	From	To	Cost (FY 2016/2017)	Funding Source	Priority Year
B-18	Bike Boulevard	Carlos Circle	Estero Boulevard	Estero Boulevard	\$5,493.48	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-19	Bike Boulevard	Carolina Avenue	Estero Boulevard	Ostego Drive	\$7,762.79	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-20	Bike Boulevard	Sanders Drive	Estero Boulevard	northern terminus	\$3,561.53	Town of Fort Myers Beach/Gas Tax or other source	2028-2037
B-21	Bridge Crossing-facility type TBD	Matanzas Pass Bridge			TBD/Matanzas Pass PD&E	Lee County	2018-2022
B-22	Bridge Crossing-facility type TBD	Big Carlos Pass Bridge			TBD/Big Carlos Pass PD&E	Lee County	2018-2022

THIS PAGE INTENTIONALLY LEFT BLANK

**APPENDIX F
DESIGN
CRITERIA
TECHNICAL
MEMORANDUM**

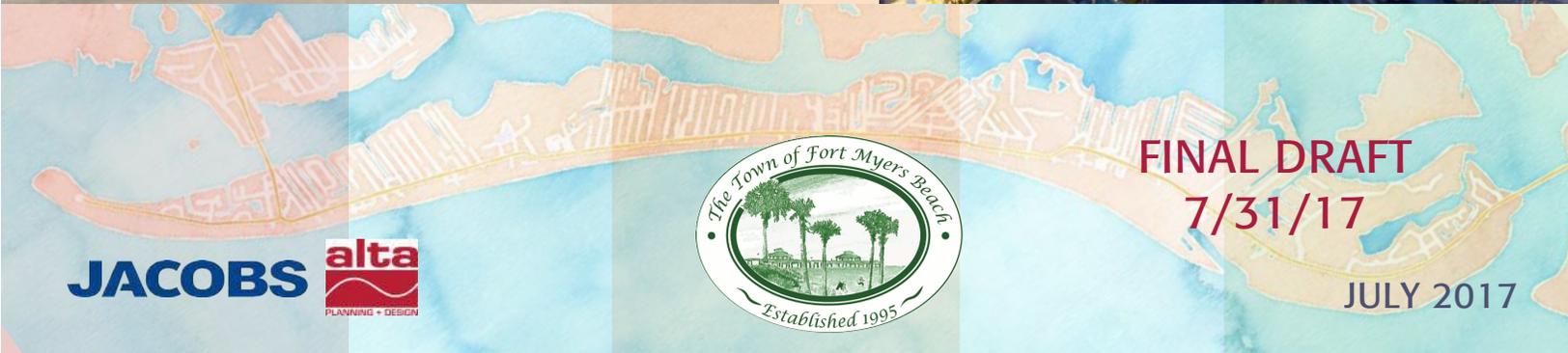
**FORT MYERS BEACH
BICYCLE + PEDESTRIAN
MASTER PLAN**

THIS PAGE INTENTIONALLY LEFT BLANK



Town of Fort Myers Beach BICYCLE + PEDESTRIAN MASTER PLAN

Design Criteria Technical Memorandum



SELECTION CRITERIA



INTERSECTION TREATMENTS



FACILITY TYPES



DESIGN GUIDES



In Fort Myers Beach, residents, visitors and employees walk and bicycle to numerous destinations daily. Opportunities exist to improve the pedestrian and bikeway network for those who already use it, and for those who would consider walking and bicycling if facilities were more comfortable. This memo presents a series of visuals that can be referenced as a guide to improve the bikeway and pedestrian network for all types of users in the community.

The first portion of the technical memorandum presents criteria to determine if an intersection is a major or minor intersection. Improvement options for each type of intersection are then presented. The second portion provides descriptions of pedestrian and bikeway facility types, and the final portion includes a review of national and state guidance related to bicycle and pedestrian facility design.

Major Intersection Selection Criteria

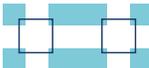
These criteria can be used to determine if an intersection in Fort Myers Beach is a major intersection

-  **Major destinations in close proximity to intersection**
-  **Demonstrated pattern of crashes**
-  **Beach Access**
-  **Transit Access**

-  **Civic, School or Park Destination**
-  **Street intersection with major and minor street**
-  **High vehicle volumes and turning movements**
-  **Can be located mid-block**

Minor Intersection Selection Criteria

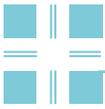
-  **Destinations in close proximity to intersection**
-  **Street intersection with major and minor street**

-  **Can be located mid-block**
-  **Long distance between major intersection crossings**

Anatomy of a Major Intersection

The photo rendering below illustrates treatments that could be installed at major intersections in Fort Myers Beach. This example shows the intersection of Estero Boulevard and Connecticut Street.

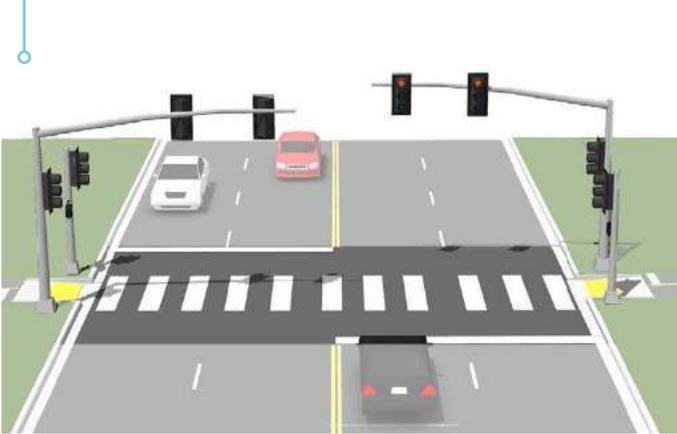




Major Intersection Crossing Treatments

The crossing treatments illustrated below can facilitate crossing for pedestrians at major intersections.

Traffic Signal



Pedestrian Hybrid Beacon



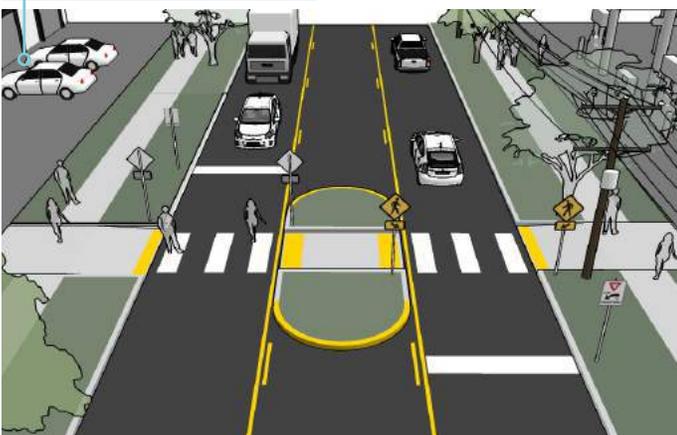
Rectangular Rapid Flash Beacon



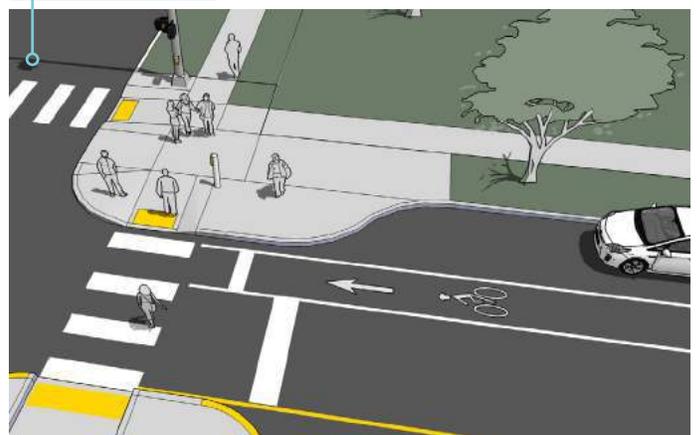
4-Way Marked Crosswalks



Pedestrian Refuge Island

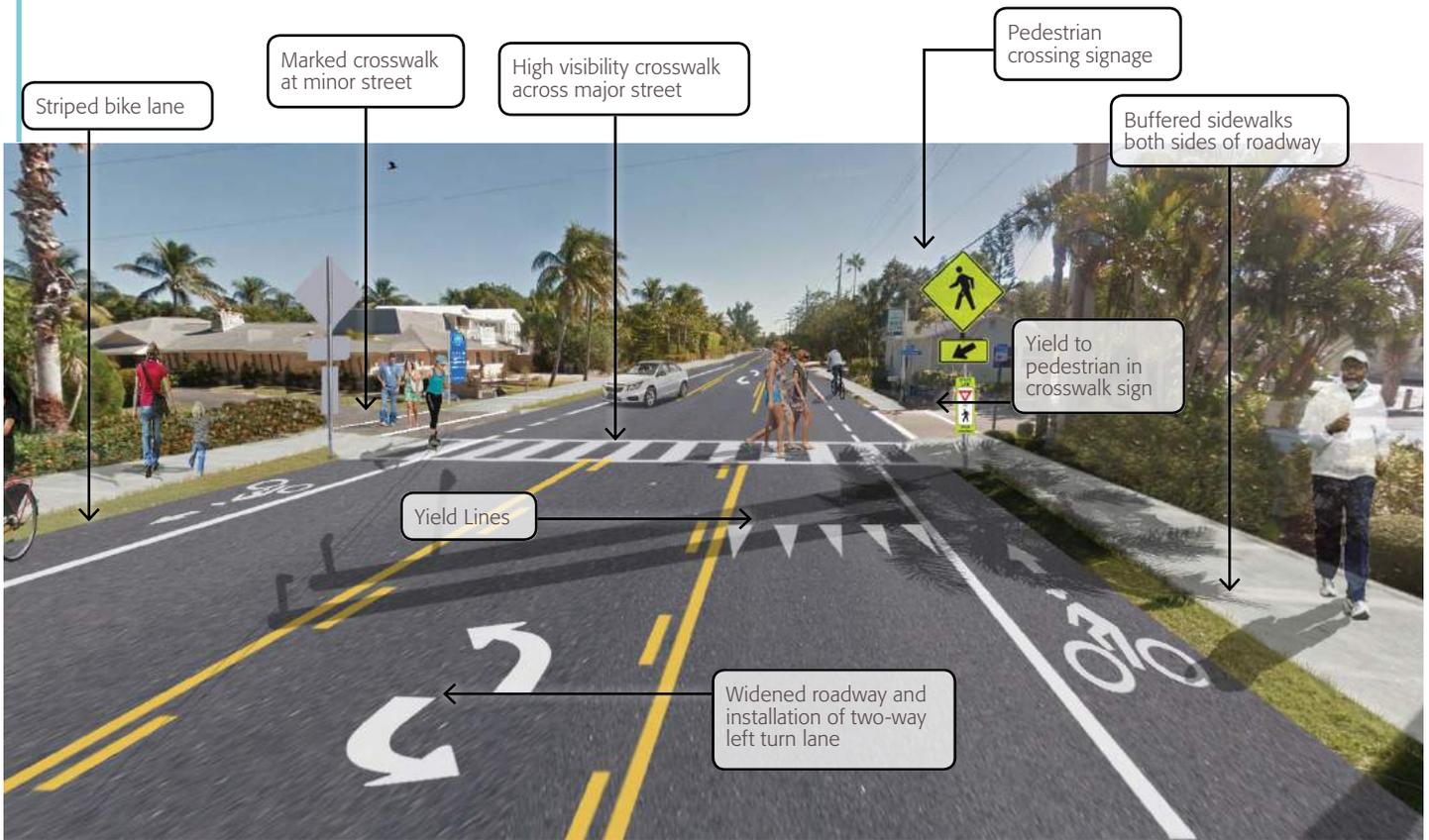


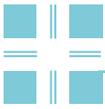
Curb Extensions



Anatomy of a Minor Intersection

The photo rendering below illustrates treatments that could be installed at minor intersections in Fort Myers Beach. This example shows the intersection of Estero Boulevard and Aberdeen Avenue.





Minor Intersection Crossing Treatments

There are a range of crossing treatments that can facilitate crossing for pedestrians at minor intersections.

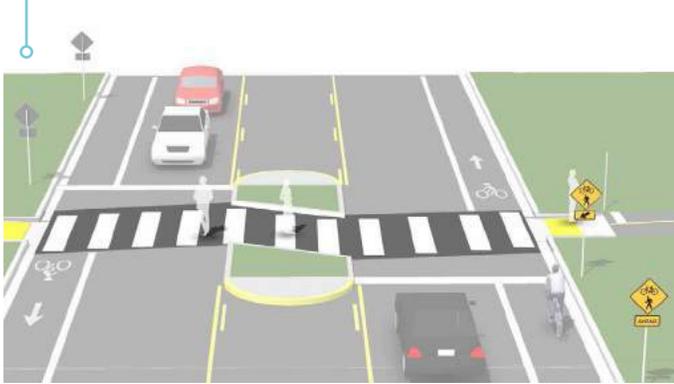
1-Leg Crosswalk



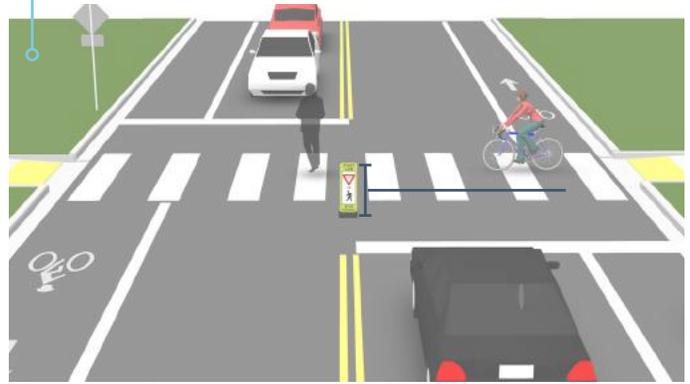
Rectangular Rapid Flash Beacon



Pedestrian Crossing Signage



Yield to Pedestrian in Crosswalk Signage



Pedestrian Refuge Island



Textured Bulb-Outs





PEDESTRIAN FACILITY TYPES

Pedestrian facilities provide a dedicated space for pedestrians to travel.

Attached Sidewalk



Sidewalks form the backbone of the pedestrian transportation network. Attached sidewalks are constructed adjacent to the curb, with no buffer space between the curb and the sidewalk. This type of sidewalk design is most appropriate on lower speed, lower volume roadways. Attached sidewalks must be designed in conformance with American with Disabilities Act (ADA) guidelines.

Buffered Sidewalk



Buffered sidewalks provide a buffer zone between the sidewalk and curb. This zone can be landscaped, and also provides an opportunity to install street trees, furnishings or transit accommodations. Maintaining a buffer between the sidewalk and traveled-way helps to maintain comfort levels for pedestrians walking on the sidewalk, especially along higher speed and volume roadways. Buffered sidewalks must be designed in conformance with American with Disabilities Act (ADA) guidelines.

Shared Use Path/Sidepath



Shared use paths allow for two-way, off-street travel by bicyclists, pedestrians, skaters, wheelchair users, runners, persons with limited mobility, and other non-motorized users. Shared-use paths are wide, hard-surface trails, and typically have few conflicts with motor vehicles. Sidepaths are shared use paths located adjacent to the roadway. Sidepaths must be designed to enhance safety and minimize conflict with motor vehicles, particularly at unsignalized intersections and other motor vehicle crossings.



BIKEWAY FACILITY TYPES

Bikeway facilities can be shared with or separated from motor vehicle traffic

Bicycle Boulevard



Bicycle Boulevards are local streets with low motorized traffic volumes and speeds. They should have a maximum posted speed of 25 mph and target motor vehicle volumes of less than 1,500 vehicles per day. If these targets are already met, the addition of signage and pavement markings can cost-effectively designate corridors as bicycle boulevards. Additionally, Traffic calming and traffic diversion can be implemented to achieve target speeds and volumes. These improvements, combined with modifications at major intersections, make this type of facility intuitive and comfortable for a wide range of people to ride a bicycle or walk.

Shared Roadway



Shared roadways use pavement markings and signage to communicate to motorists and bicyclists to operate within the same travel lane, either side by side or in a single file, depending on the roadway configuration. Typically, this facility is used to connect other bikeways (usually bike lanes), or designate preferred routes through high-demand corridors.

Bike Lane



This type of facility provides a dedicated space within the roadway for bicyclists to travel, and uses signage and striping to delineate the right-of-way assigned to bicyclists and motorists. Bike lanes encourage predictable movements by both bicyclists and motorists, and have been found to decrease stress levels for both groups.

Separated Bike Lane



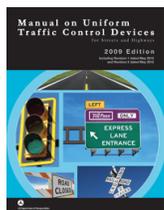
Separated bike lanes (SBLs) offer the most protection and separation from adjacent motor vehicle traffic. SBLs are bicycle facilities that are physically separated from motor vehicle traffic by a painted buffer and physical barriers such as flexible delineators, curbs, or planters. Parking lanes can also be used as a means of separation. Separated bike lanes are ideally placed on streets with few driveways or mid-block access points for motor vehicles.





ACTIVE TRANSPORTATION DESIGN GUIDES

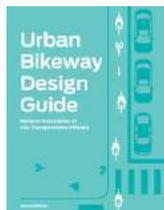
Recent innovation in bikeway and pedestrian facility design has resulted in the publication of new guides at national, state, and local levels. A summary of national guides is provided below.



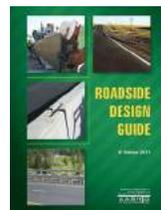
The Federal Highway Administration’s (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic. The MUTCD is the primary source for guidance on lane striping requirements, signal warrants, and recommended signage and pavement markings (<https://mutcd.fhwa.dot.gov/>)



The American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities 2012 provides guidance on dimensions, use, and layout of specific bicycle facilities. The Guide for the Planning, Design, and Operation of Pedestrian Facilities 2004 provides guidance for pedestrian facilities. (https://bookstore.transportation.org/item_details.aspx?ID=1943)



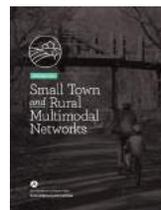
The National Association of City Transportation Officials’ (NACTO) Urban Bikeway Design Guide 2012 offers guidance on the current state of the practice designs for urban bikeway design (<http://nacto.org/>)



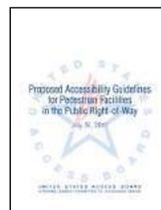
The AASHTO Policy on Geometric Design of Highways and Streets 2011 commonly referred to as the “Green Book,” contains the current design research and practices for highway and street geometric design (https://bookstore.transportation.org/collection_detail.aspx?ID=110)



FHWA’s Separated Bike Lane Planning and Design Guide 2015 offers guidance on separated bike lanes (also known as protected bike lanes, or cycle tracks). The guide includes information on design and implementation of facilities including intersection treatments and interactions with parking, transit and loading (https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/separated_bikelane_pdg/page00.cfm)



FHWA’s Small Town and Rural Multimodal Networks 2016 document is a design resource and idea book to help small towns and rural communities support safe, accessible, comfortable, and active travel for people of all ages and abilities (https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/fhwahep17024_lg.pdf)



The United State’s Access Board’s Proposed Rights-of-Way Accessibility Guidelines (PROWAG) provides guidelines for the design, construction, and alteration of pedestrian facilities in the public right-of-way. The guidelines ensure that pedestrian facilities are readily accessible to and usable by pedestrians with disabilities (<https://www.access-board.gov/attachments/article/743/>)





ACTIVE TRANSPORTATION DESIGN GUIDES

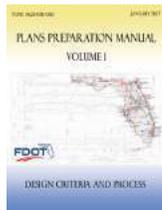
Innovation in bikeway and pedestrian facility design has resulted in the publication of new guides at national, state, and local levels. A summary of state guides is provided below.



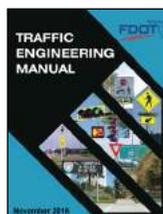
Provides specific drawings and standards for various elements that contribute to pedestrian as well as bicycle design (<http://www.fdot.gov/roadway/DS/18/IDx/FY2017-18-DESIGN-STANDARDS.pdf>)



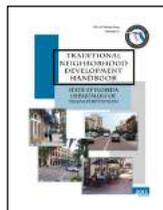
The Florida Greenbook (officially, the Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways) is provided for local government use in the design of local streets and roads. Chapter 9 describes bicycle and pedestrian facilities; Chapter 19 describes standards for traditional neighborhood design (TND) communities that are inherently walk-able and bike-able (<http://www.fdot.gov/roadway/FloridaGreenbook/FGB.shtm>)



The Plans Preparation Manual (PPM) details how FDOT will plan and provide for pedestrian and bicycle facilities (see Chapter 8 - "Pedestrian, Bicycle and Public Transit Facilities") (<http://www.fdot.gov/roadway/PPMManual/PPM.shtm>)



Provides traffic engineering standards and guidelines to be used on the State Highway System. The manual covers the process whereby standards and guidelines are adopted, as well as chapters devoted to highway signs and markings, traffic signals, traffic optimization through the use of computer models (<http://www.fdot.gov/traffic/TrafficServices/Studies/TEM/TEM.shtm>)

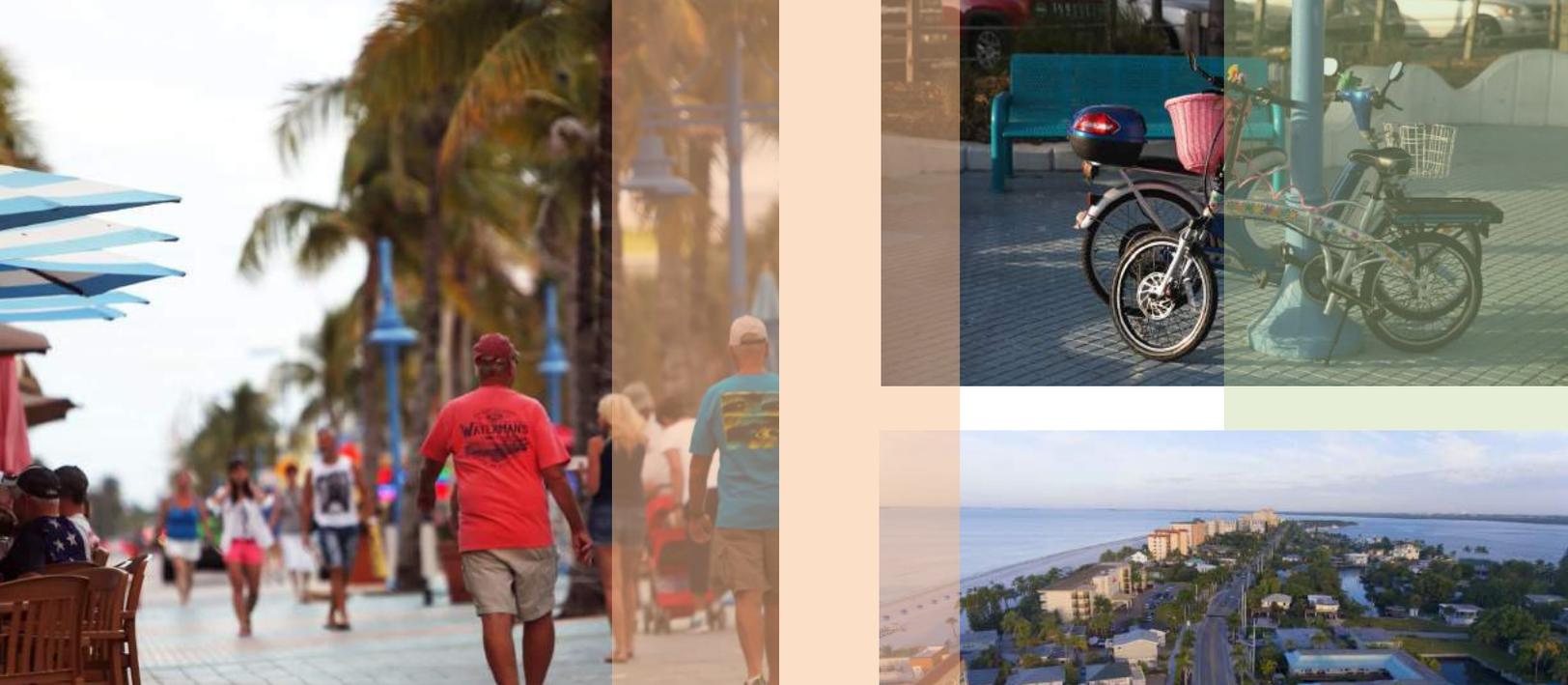


The Traditional Neighborhood Communities handbook (TND) provides planning-level guidance for the design of Traditional Neighborhood communities that are inherently walk-able and bike-able (<http://www.fdot.gov/roadway/floridagreenbook/TND-Handbook.pdf>)

**APPENDIX G
POLICY & PROGRAM
RECOMMENDATIONS
TECHNICAL
MEMORANDUM**

**FORT MYERS BEACH
BICYCLE + PEDESTRIAN
MASTER PLAN**

THIS PAGE INTENTIONALLY LEFT BLANK



Town of Fort Myers Beach BICYCLE + PEDESTRIAN MASTER PLAN

Policy & Program Recommendations Technical Memorandum

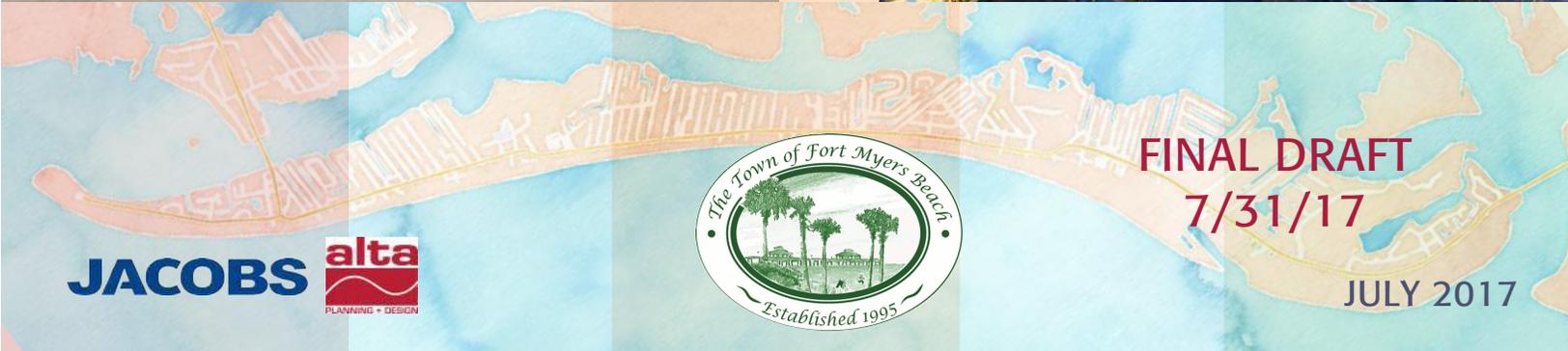


Table of Contents

Introduction 1

Policy Recommendations..... 1

 Estero Boulevard Coordination..... 1

 Regional Trail Connection Coordination 1

 Complete Streets Policy 1

 Pedestrian-Scale Lighting..... 2

 Pedestrian Facility Maintenance..... 3

 Bicycle Facility Maintenance..... 3

 Funding Policy 4

Program Recommendations 5

 Transportation Demand Management 5

 On-demand Valet/Electric Vehicle Shuttles..... 6

 Wayfinding 6

 Safety Campaign 8

 Bike Parking..... 9

 Apply to be Designated a Bicycle Friendly and Walk Friendly Community 10

Figures

Figure 1: Recommended Regional Trail Connection..... 1

Introduction

This technical memorandum describes the policy and program recommendations for the Town of Fort Myers Beach Bicycle and Pedestrian Master Plan.

Policy Recommendations

Policy is what guides government decision making in the Town of Fort Myers Beach. Policies can be adopted and codified in the Town's code of ordinances. They can also be procedural in the form of department, committee, or elected official guidelines. Fort Myers Beach already has policies and design standards in place that specifically address walking and biking. The policy recommendations for the Plan provide next steps for improving the bicycle-and-walk-friendliness of Fort Myers Beach.

Estero Boulevard Coordination

The recommendations in this Plan for walkways, bikeways, crossing/intersection treatments, and walking and biking support infrastructure along Estero Boulevard have been developed to reflect the guidance provided in the Estero Boulevard Improvement project, coordination with Lee County, and in anticipation of the upcoming Estero Boulevard lighting study. The lighting study will focus on enhancing pedestrian safety at crosswalks, among other elements of the study. The Town of Fort Myers Beach should coordinate with Lee County, the MPO, and FDOT to ensure that these recommendations are included in future roadway projects and residential and commercial developments along Estero Boulevard and any that connect with such recommended facilities. More information regarding the reFRESH Estero project is provided in the Estero Boulevard Crosswalks Technical Memorandum.

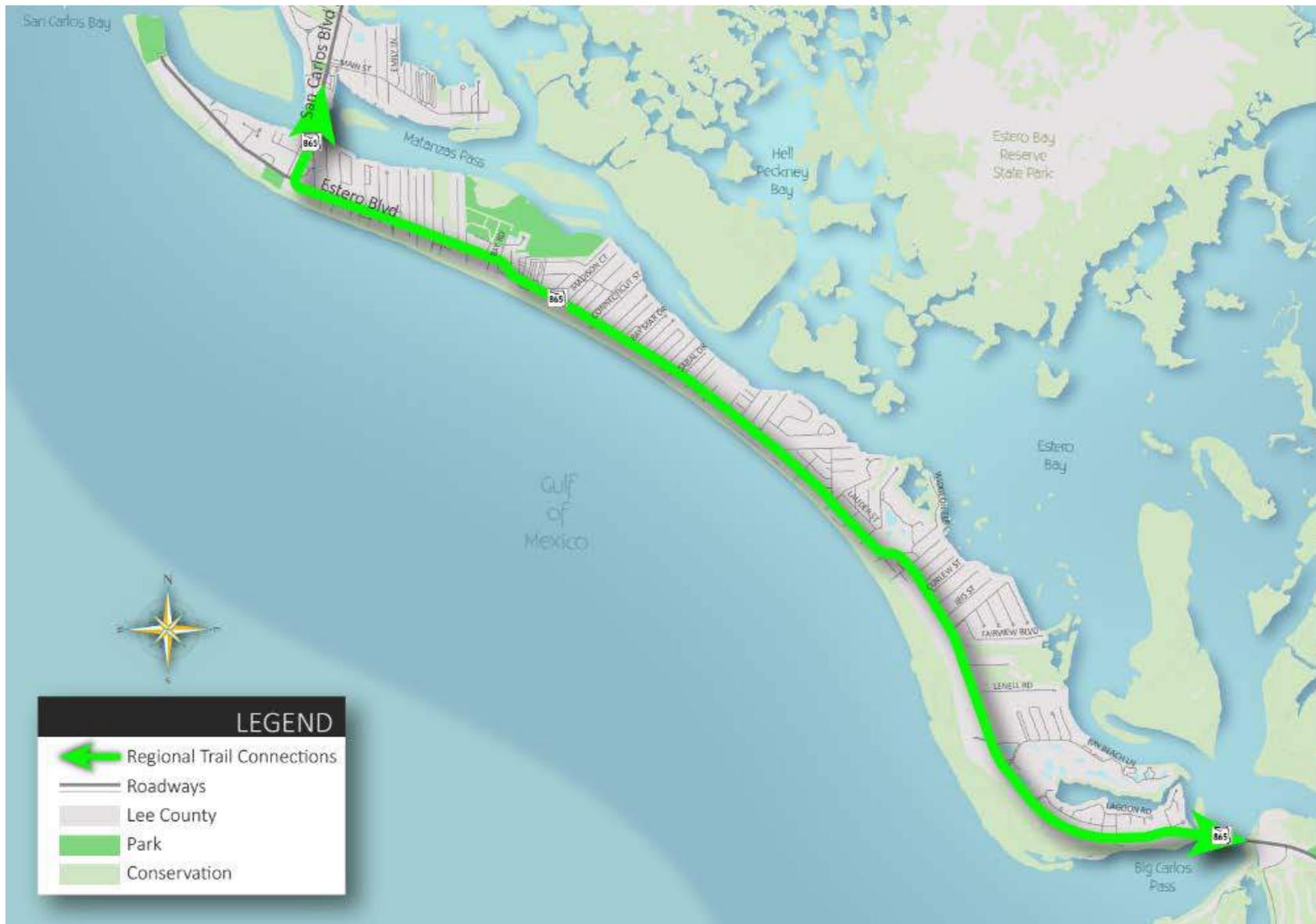
Regional Trail Connection Coordination

Providing connections to the regional and state trail networks can enhance tourism and recreational opportunities in Lee County. Biking to the beach is a popular activity for many residents and visitors. Currently, there are discussions to develop a route and connection to Ft. Myers Beach from the state trail network (Figure 1). In addition to providing a route option off the state trail network, having a state recognized route could open up opportunities for additional funding for infrastructure improvements for people walking and biking. Ft. Myers Beach, Lee County, and the Lee County MPO should continue to work with state agency partners to develop strategies to connect Ft. Myers Beach to the state trail system. Potential strategies include a signed route using on-street bikeways and sidewalks and/or a multi-use path along roadways.

Complete Streets Policy

A Complete Street is a roadway that, in addition to general purpose vehicular travel lanes, includes items such as sidewalks, bike lanes or shoulders, bus lanes, transit stops, crosswalks, median refuges, curb bulb-outs, appropriate landscaping, and other features that add to the usability and livability of the street as determined by context.

Figure 1: Recommended Regional Trail Connection



This Plan recommends that the Town of Fort Myers Beach adopts a Complete Streets policy. In addition to adopting a Complete Streets policy, the Town should develop and adopt street design guidelines to support the policy and communicate desired street treatments. The pedestrian and bicycle design criteria that are included as part of this plan as well as references to state and national design guidance provide a basis for such guidelines. According to the National Complete Streets Coalition, an ideal Complete Streets Policy should:

- Include a vision for how and why the community wants to complete its streets
- Specify that “all users” includes pedestrians, bicyclists, and transit users of all ages and abilities, as well as trucks, buses, and automobiles
- Apply to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right-of-way
- Make any exceptions specific and sets a clear procedure that requires high-level approval of exceptions
- Encourage street connectivity and aims to create a comprehensive, integrated, and connected network for all modes
- Be adoptable by all agencies or departments to cover all roads
- Direct the use of the latest and best design criteria and design guidelines while recognizing the need for flexibility in balancing user needs
- Direct that complete streets solutions will complement the context of the community.

Additional Resources:

- FDOT Complete Streets Policy: www.fdot.gov/roadway/csi/default.shtm
- National Complete Streets Coalition: www.smartgrowthamerica.org/complete-streets/changing-policy

Complete Street Development Standards

New development provides opportunity to enhance streets and access to buildings. When rezoning applications or site plans are submitted to the Town of Fort Myers Beach, they should be reviewed for concurrency with this Plan. Street improvements, such as providing right-of-way for sidewalks, sidewalk lighting, street trees and other streetscape enhancements, bike lanes, or trails or bicycle and pedestrian access to a site, should be assessed. Additionally, site designs for new developments should address bicycle and pedestrian circulation and access to buildings on the site, such as bicycle parking.

- Use the Association of Pedestrian and Bicycle Professionals [Bicycle Parking Guidelines](#) for resources on best practices related to site design, construction, and number of bike parking spaces to require.
- Review and update land use and development regulations to require adequate infrastructure for people walking and biking.



New development provides opportunity to enhance street and streetscape infrastructure and access to buildings.

Pedestrian-Scale Lighting

Adequate lighting is an important aspect of visibility, legibility, safety, and accessibility and one of the key elements of complete streets. Pedestrian-scale lighting improves visibility for both pedestrians and motorists, particularly at intersections. Pedestrian-scale lighting can provide a vertical buffer between the sidewalk and the street, defining pedestrian areas. Pedestrian-scale lighting should be used in areas of high pedestrian activity.

The Town of Fort Myers Beach will be conducting a lighting study aimed at enhancing pedestrian safety at crosswalks. The findings of this study should be used to inform the lighting needs and priorities for the town. To support the implementation of the recommendations from the lighting study, the Town of Fort Myers Beach should adopt design guidelines for pedestrian-scale lighting. Pedestrian scale lighting is characterized by short light poles (around 15 feet high), close spacing, low levels of illumination (except at crossings), and the use of LED lamps to produce good color rendition, long service life and high energy efficiency. General guidance for pedestrian-scale lighting prioritizes the following locations and placement:

- Pedestrian-oriented areas
- Street crossings (intersection and mid-block)
- Entrances and exits of bridges
- Areas near churches, schools, and community centers with nighttime pedestrian activity.
- Spacing should be provided for minimum illumination levels while limiting excess light pollution
- Luminaries should direct light downward
- Lighting poles should be placed in the furniture zone of the sidewalk and not interfere with pedestrian travel



Lighting spacing depends on the type and intensity of lights; 30-50-foot spacing is common for pedestrian-scale lighting.

Pedestrian Facility Maintenance

Damaged sidewalks can pose a hazard to pedestrians and a maintenance or repair program can help reduce the likelihood of someone getting injured. Even slight defects in sidewalks can cause pedestrian injuries or cause the sidewalk to be out of compliance with the Americans with Disabilities Act (ADA). Pedestrian facility maintenance in Fort Myers Beach is currently the responsibility of the Town, according to Sec. 10-289 of the municipal code:

(f) Maintenance. Sidewalks constructed in accordance with this section will be publicly maintained if constructed in the right-of-way and may also be publicly maintained if constructed on a perpetual sidewalk easement that is accepted by the town council.

However, there is no set schedule, dedicated funding, or program to ensure proper maintenance or repair. Similar to the recommended policies for bicycle facility maintenance described below, it is recommended that the following policies be considered to address sidewalk maintenance:

- Setting aside dedicated funding for sidewalk maintenance and repair
- Establishing a maintenance schedule for sidewalks and crosswalks

The goal of the Town's sidewalk repair program should be to ensure that all sidewalks are safe and accessible for all pedestrians.

Bicycle Facility Maintenance

Bicycle facilities require regular maintenance in order to keep them free of debris and structural deterioration. On-road bikeways are especially vulnerable to the accumulation of leaves and gravel as they are blown off the travel lane by automobile traffic. Such accumulation, as well as potholes, cracks, and joints, create serious obstacles and hazards to cyclists. A good maintenance program is necessary to protect the public investment in bikeways and keep them safe for their users.

Currently, there are no specific policies addressing the maintenance of on-road bicycle facilities in Fort Myers Beach. The American Association of State Highway and Transportation Officials (AASHTO) have provided some model maintenance policy language in its *Guide for the Development of Bicycle Facilities*. Below are some examples of recommended maintenance policies regarding roadway sweeping, specifically. The AASHTO Guide also has policy recommendations for the following areas: surface repairs, pavement overlays, vegetation, traffic signal detectors, signs and markings, drainage improvements, chip sealing, patching activities, utility cuts, and operating bikeways in work zones.

It is recommended that Fort Myers Beach develops a strategy for bicycle facility maintenance and policies to support it. Key actions include:

- Setting aside dedicated funding for bikeway maintenance
- Purchasing appropriate equipment to maintain bikeways such as street sweepers for bike lanes
- Developing education/enforcement strategies to address parked cars and other obstacles in bicycle lanes



Street sweepers are specifically for bikeway maintenance to ensure the facilities are clear of debris.

Funding Policy

Currently, the Town of Fort Myers Beach does not have any dedicated funding from Town funds for the construction of new sidewalks, multi-use paths, and on-street bikeways. It has relied on grants for sidewalk construction. The Town has been opportunistic with the implementation of on-street bikeways as part of re-surfacing projects and the Estero Boulevard project. The Town has had limited maintenance resources for existing walkway and bikeway facilities that vary from year-to-year as a result of the Town budgeting process.

The Town of Fort Myers Beach should continue to use these grant sources of funding and implementation to expand the bikeway and walkway network. However, they only cover a small portion of the funding needed to expand the bikeway and walkway network as well as maintain the infrastructure after it is built.

For planning and implementation purposes, it is recommended that the Town establish an annual set aside for Town funds to implement this plan. Peer cities have established ranges from 5-25% set asides of their capital funds for transportation projects. This set-aside policy can create a dedicated annual funding source for the implementation of this plan. Additionally, the Town should establish a dedicated maintenance funding source to keep the bikeway and walkway network in a state of good repair.

Program Recommendations

Programs are an important component of a bicycle and pedestrian master plan, as they provide the framework for education and encouragement to support the safe use of the facilities recommended in the plan. Programs can also be designed to support the enforcement of policies and the evaluation of the impact on safety and traffic in Fort Myers Beach.

Programs will enhance the biking and walking experience in Fort Myers Beach as community members will feel safer and more confident in their ability to walk and bicycle around town. These programs, along with the supporting policies described in the last section, will work to institutionalize the principles of bicycling and walking friendliness.

The following section presents recommended programs to support the vision and goals of this Plan. The recommendations can be undertaken by local and regional agencies, community organizations, local businesses, or partnerships among these groups.

Transportation Demand Management

Transportation Demand Management (TDM) is a program of coordinating policies, information, and incentives aimed at relieving travel demand by encouraging and facilitating the use of bicycle, pedestrian, transit, and ridesharing options. These programs can take the form of working with employers, hotels, and developers to implement commuter/traveler benefit programs. They can also entail education campaigns to ensure that the public is aware of options for transit, walking, biking, and carpooling in order to decrease single occupancy vehicle trips.

TDM programs for tourist communities can include a variety of specific strategies to improve transport options, integrate alternative transportation into tourist activities, provide disincentives to drive, and promote alternative modes. These can include:

- Transit Improvements
- Shuttle Services
- Taxi Service Improvements
- Cycling and Walking Improvements
- Public Bike Systems
- Bicycle Parking
- Parking Management
- Traffic Calming, Speed Reductions and Streetscape Improvements.
- Smart Growth, New Urbanism and Access Management
- Car-Free Planning and Vehicle Restrictions.
- Marketing to encourage visitors to arrive without a car
- Commute Trip Reduction programs for staff
- Freight Management to minimize truck traffic
- Aviation Transport Management
- Transportation Access Guides (provide directions to reach destinations by alternative modes)
- Equipment Rentals (bikes, scooters, etc.) (Source: <http://www.vtpi.org/tdm/tdm46.htm>)

It is recommended that Fort Myers Beach establish a Transportation Demand Management (TDM) program to manage congestion encourage and incentivize residents and visitors to use all forms of transportation, and shift single occupancy vehicle trips to non-motorized modes.

Case Study: South Beach, Florida

South Beach comprises the southern third of the city of Miami Beach, located on an Atlantic barrier island separated from the mainland by Biscayne Bay. In order to deal with growing traffic congestion and parking problems the community established the SoBe TMA to coordinate transportation management activities.

Specific projects include:

- Establish a shuttle bus system with 5-10 minute headways to link fringe parking with the Historic District.
- Implement parking management, such as park-and-ride lots, improved signage, and pricing.
- Develop a marketing and promotion program, including a Miami Beach Mobility Map that will show municipal parking areas, bikeways, water taxis, and transit routes between common destinations in the region
- Pedestrian and bicycle facility improvements (Source: <http://www.vtpi.org/tdm/tdm46.htm>)

On-demand Valet/Electric Vehicle Shuttles

A growing number of resort cities and towns are initiating an electric vehicle shuttle service that transports users around on six-seater electric golf-cart-style vehicles. These services are provided free-of-charge and are accessed via an app-based interface as a strategy to relieve congestion, free up parking, and improve accessibility in busy beach-side districts. Fort Myers Beach should consider adopting a pilot program for this innovative mobility strategy to assess its feasibility within this community. Success stories from early adopters, such as Tampa and Delray Beach, FL, and Manhattan Beach, CA, can be found at: www.ridedowntown.com



Wayfinding

Wayfinding signage, as part of a signage program that also includes warning and regulatory signage, enhances resident and visitor orientation. A clear wayfinding system should contribute to economic

development by pointing visitors to key destinations around the community. Fort Myers Beach should develop a customized wayfinding program that includes directional signage to local destinations. Bicycle and pedestrian travel times to popular destinations could also be included on directional signage.

Bicycle wayfinding signs also visually cue motorists that they are driving along a bicycle route and should use caution. Signs are typically placed at key locations leading to and along bicycle routes, including at the intersection of multiple routes. Too many road signs tend to clutter the right-of-way, and it is recommended that these signs be posted at a level most visible to bicyclists rather than per vehicle signage standards.

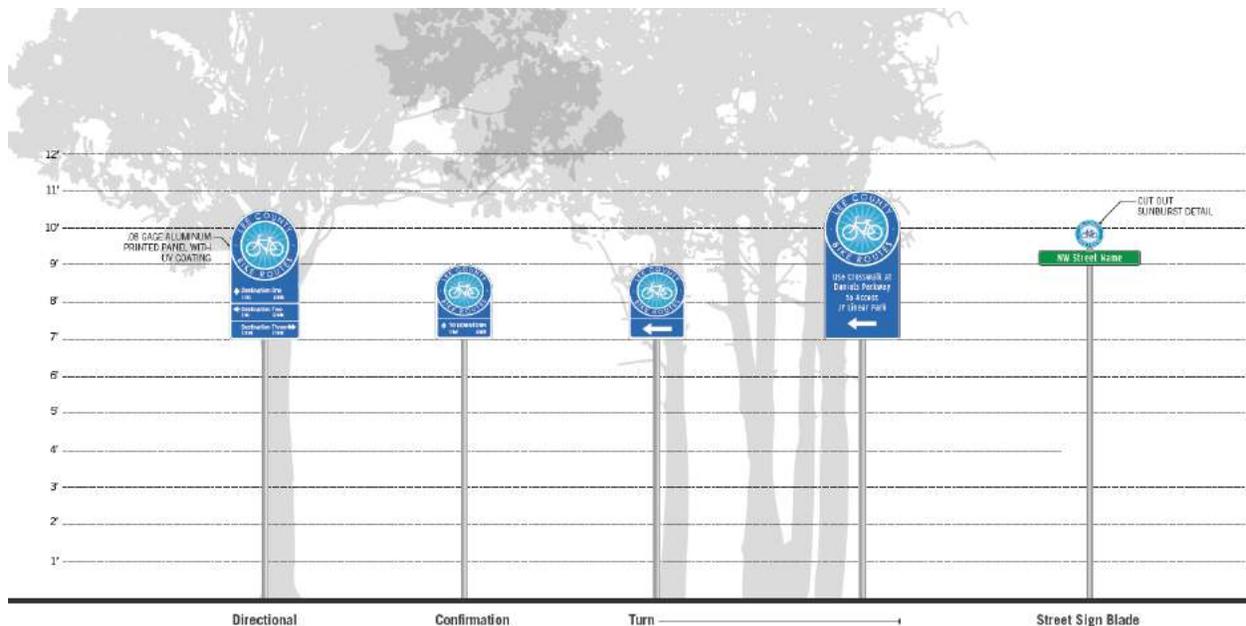
Wayfinding Sign Types and Placement

Signs are typically placed at decision points along bicycle routes – typically at the intersection of two or more bikeways and at other key locations leading to and along bicycle routes.

- **Confirmation Signs:** Every ¼ to ½ mile along off-street facilities and every 2 to 3 blocks along on-street bicycle facilities, unless another type of sign is used (e.g., within 150 ft. of a turn or decision sign). Should be placed soon after turns to confirm destination(s). Pavement markings can also act as confirmation that a bicyclist is on a preferred route.
- **Turn Signs:** Near-side of intersections where bike routes turn (e.g., where the street ceases to be a bicycle route or does not go through). Pavement markings can also indicate the need to turn to the bicyclist.
- **Decision Signs:** Near-side of intersections in advance of a junction with another bicycle route. Along a route to indicate a nearby destination.

Sample wayfinding signage programs:

- Oakland, CA: <http://www2.oaklandnet.com/oakca/groups/pwa/documents/report/oak025118.pdf>
- 2014 Croatan Regional Bicycle + Trails Plan; Signage Appendix (NCDOT)



Wayfinding signs help bicyclists choose the best streets for biking to popular destinations.

Safety Campaign

Educational campaigns that target motorists and those walking, biking, and taking transit create a shared sense of responsibility among all roadway users, rather than singling out one user group. A joint campaign can focus on rights and responsibilities of everyone using the streets and trails of Fort Myers Beach. Information may include important bicycle laws, tips for safe bicycle travel, safe-street crossing actions, keys to safe motor vehicle operation, and general facility rules and regulations.

Educational materials are often available for download from national organizations, such as the Pedestrian and Bicycle Information Center, and state or local resources, such as FDOT. This Plan recommends that Fort Myers Beach establish a variety of outreach strategies for educating motorists and those walking and biking about safely sharing the street. Campaign activities can include distributing materials at local events or print advertisements and public service announcements.

Additional Resources:

- Pedestrian and Bicycle Information Center – Programs and Campaigns:
- <http://www.pedbikeinfo.org/programs/index.cfm>
- Florida’s Alert Today, Alive Tomorrow Safety Campaign <http://www.alerttodayflorida.com/>

SAFETY DOESN'T HAPPEN BY ACCIDENT.

www.AlertTodayFlorida.com

WHEN DRIVING, WALKING, OR BICYCLING... PAY ATTENTION. READ THE SIGNS. LEARN THE RULES.

AVOID DISTRACTIONS.

STOP BEFORE TURNING RIGHT ON RED.

USE THE SIDEWALK AND CROSSWALKS.

BICYCLE PREDICTABLY, WITH TRAFFIC.

Funded by the Florida Department of Transportation

FDOT **CUTR**

ALERT TODAY
ALIVE TOMORROW

BICYCLIST TIPS

- Ride in the same direction of traffic on the street. Obey all traffic signs, signals, and lane markings.
- Yield to traffic when appropriate. It's better to yield than "be in the right" and risk injury.
- Be visible. Position yourself in the lane so others can easily see you. Always use a headlight and taillight at night.
- Watch for parked cars. Don't ride in the "door zone" of parked cars even when the bike lane is adjacent to them.

PEDESTRIAN TIPS

- Obey all traffic laws. If no sidewalks are present, walk against the direction of traffic so you can see oncoming vehicles.
- Always use the crosswalk. Push the button to get the walk signal.
- Be visible. Wear bright, reflective colors on your clothes, shoes, belts and wristbands.
- Look, then look again. Look left, right, then left again before crossing.

www.AlertTodayFlorida.com

The Florida Department of Transportation’s “Alert Today, Alive Tomorrow” campaign includes messages for drivers, pedestrians, and bicyclists.

Bike Parking

Bicyclists expect a safe, convenient place to secure their bicycle when they reach their destination. This may be short-term parking of two hours or less or long-term parking for employees, students, residents, and commuters. The Town of Fort Myers Beach should update its development regulations with enhanced bike parking standards. Bike parking requirements should be explicitly required with commercial, multi-family, and civic developments. Use the Association of Pedestrian and Bicycle Professionals Bicycle Parking Guidelines for resources on best practices related to site design, construction, and number of bike parking spaces to require.

Examples of different types of bike parking that should be considered for development standards are described below.

Bike Racks

Short-term bicycle parking is meant to accommodate visitors, customers, and others expected to depart within two hours. It should have an approved standard rack, appropriate location and placement, and weather protection. The Association for Pedestrian and Bicycle Professionals (APBP) recommends selecting a bicycle rack that:

- Supports the bicycle in at least two places, preventing it from falling over
- Allows locking of the frame and one or both wheels with a U-lock
- Is securely anchored to ground
- Resists cutting, rusting, and bending or deformation



Bike Corrals

Bike corrals (also known as on-street bicycle parking) consist of bicycle racks grouped together in a common area within the street or in a parking lot traditionally used for automobile parking. Bike corrals are reserved exclusively for bicycle parking and provide a relatively inexpensive solution to providing high-volume bicycle parking. Bike corrals can be implemented by converting one or two motor vehicle parking spaces into on-street bicycle parking. Each motor vehicle parking space can be replaced with approximately 6-10 bicycle parking spaces.



Secure Bike Parking

A Secure Parking Area for bicycles, also known as a Bike SPA or Bike & Ride (when located at transit stations), is a semi-enclosed space that offers a higher level of security than ordinary bike racks. Accessible via key-card, combination locks, or keys, Bike SPAs provide high-capacity parking for 10 to 100 or more bicycles. Increased security measures create an additional transportation option for those whose biggest concern is theft and vulnerability. Bike SPAs can be standalone structures or occupy space within a building.



Apply to be Designated a Bicycle Friendly and Walk Friendly Community

A goal for Fort Myers Beach should be to seek a Walk Friendly Community (WFC) designation from the UNC Highway Safety Research Center's Pedestrian and Bicycle Information Center and Bicycle Friendly Community (BFC) designation from the League of American Bicyclists. The WFC and BFC campaigns are awards programs that recognize municipalities that actively support pedestrian and bicycle activity and safety. A WFC and BFC provides safe accommodation for walking and biking and encourages its residents to walk and bike for transportation and recreation.

Becoming designated as a WFC and/or a BFC signals to current residents, potential residents, and visitors that the town is a safe and welcoming place for individuals and families to live and recreate. The development and implementation of this Plan is an essential first step toward becoming a WFC or BFC. With ongoing efforts and the short-term work program recommended here, the Town should be in a position to apply for and receive WFC and BFC status within a few years.



Designation as a Bicycle Friendly and/or Walk Friendly Community signals to the community and visitors that the town is a safe and welcoming place for individuals and families to live and recreate.

**APPENDIX H
FUNDING
RECOMMENDATIONS
TECHNICAL
MEMORANDUM**

**FORT MYERS BEACH
BICYCLE + PEDESTRIAN
MASTER PLAN**

THIS PAGE INTENTIONALLY LEFT BLANK



Town of Fort Myers Beach BICYCLE + PEDESTRIAN MASTER PLAN

Funding Recommendations Technical Memorandum

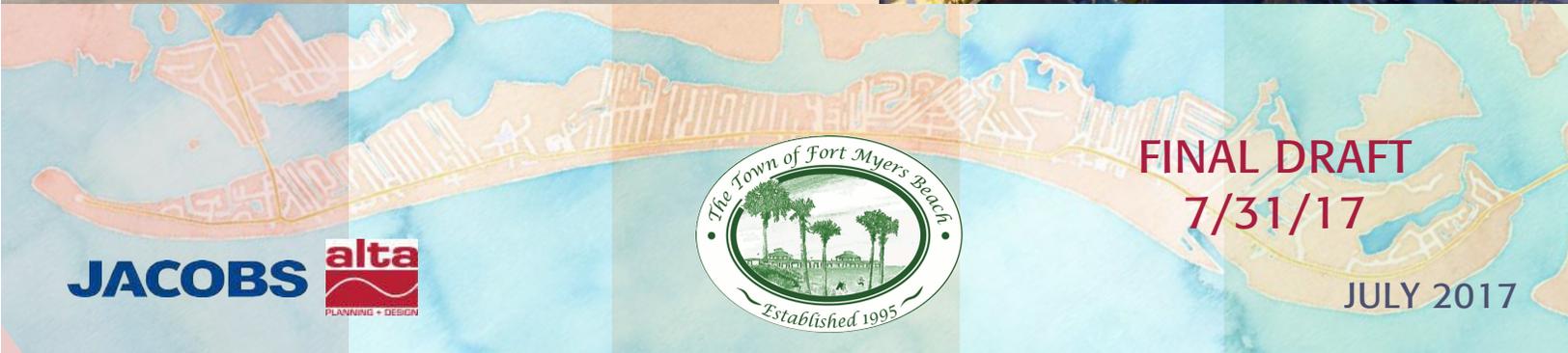


Table of Contents

Introduction 1

State Grants 2

 SUN Trail..... 2

 Florida Department of Transportation Safety Sub-Grants 3

Lee County Grants..... 3

 Tourist Development Tax..... 3

Local Funding 5

 Beach Parking Revenue..... 5

 Gas Taxes 5

 Estero Boulevard and San Carlos Boulevard..... 6

 Lee County Metropolitan Planning Organization Funds..... 6

 Other Federal Grant Opportunities 6

Tables

Table 1: Potential Funding Sources for Bicycle and Pedestrian Projects..... 1

Table 2: Tourist Development Tax Revenue 4

Table 3: Beach Parking Revenue, FY 2015-2016 5

Attachment

Attachment A: Sample Pedestrian Bicycle Safety Concept Paper

Introduction

The Town of Fort Myers Beach does not have a dedicated local funding source to pay exclusively for bicycle and pedestrian capital projects. The Town relies mostly on other sources for capital projects. Lee County is currently paying for the Estero Boulevard reconstruction project, and the Florida Department of Transportation is funding a project development and environment (PD&E) study for portions of San Carlos Boulevard including the bridge crossing and the intersection of Estero Boulevard at the Times Square neighborhood.

As the Town moves forward with implementing its bicycle and pedestrian master plan, there are funding opportunities to pay for bicycle and pedestrian projects identified within the plan. Those opportunities include a mix of federal, state, county, and local sources, which are summarized in Table 1. The sources are competitive and require careful consideration from the community on how to apply towards bicycle and pedestrian projects within Town limits. Those sources are summarized in the following sections.

Table 1: Potential Funding Sources for Bicycle and Pedestrian Projects

Funding	Source	Description	Eligible Projects
Shared-Use, Nonmotorized Trails (SUN Trails)	State	State law requires that \$25 million is budgeted annually from the motor vehicle tax to build a statewide multi-use trail system that will ultimately run through Florida's Gulf Coast, Central Florida, and the East Coast.	Projects identified on the SUN Trails Network
FDOT Safety Office Sub-Grants	State	The sub-grants are awarded to state and local safety-related agencies to help develop and implement the programs.	Safety campaigns and programs
MPO Allocated Federal Funds	Lee County MPO	FHWA allocates the Lee MPO with \$7.7 million in Surface Transportation Program, Urban Areas (SU) and Transportation Alternatives (TA) funds, of which the MPO sets aside \$2.4 million in bicycle and pedestrian projects.	Capital projects, master plans
Tourism Development Tax	Lee County	Lee County collects a five (5) percent tourist development tax (TDT) for rental properties leased for a period of six months or less, raising more than \$39 million annually. Some of the money has paid for beach access projects, boardwalks, and marketing campaigns for bicycle and pedestrian projects.	Bicycle and pedestrian marketing campaigns, capital projects that improve beach access
Beach Parking	Town of Fort Myers Beach	The Town charges parking at its ten beach access points, raising \$186,957.80 in fiscal year 2015 and 2016.	To be determined by Town
Gas Tax	Lee County	Gas taxes are levied on each gallon of gas sold in the county limits and allocated to the cities. The gas tax generates an average of \$414,346.75 per year for the Town of Fort Myers Beach.	Maintenance and resurfacing projects

State Grants

SUN Trail

Passed into law in 2015, 339.81, F.S. created the SUN Trail network with dedicated annual funding. It requires the Florida Department of Transportation (FDOT) to include SUN Trail projects in its work program, spending approximately \$25 million annually from the motor vehicle tax to build a statewide multi-use trail system that will ultimately run through the Gulf Coast, Central Florida, and the East Coast. Florida Greenways and Trails Council (FGTC) makes a recommendation on which eligible projects receive priority for funding based on selection criteria. SUN Trail funding will not pay for trail amenities, such as benches, bicycle racks, restrooms, landscaping, parking areas, artwork, and water fountains. The process for funding includes project identification, project prioritization, and project selection.

To be eligible for SUN Trail funding, projects must meet the following four criteria:

1. Be a part of the SUN Trail Network; this is the portion of the FGTS Priority Land Trails Network planned as paved trails
2. Be a Metropolitan Planning Organization (MPO) priority, if the project is located inside the MPO boundary; **or** be a county and where applicable city, tribal government, or federal state managing agency priority, if the project is located outside the MPO boundary
3. Have a formal commitment from a entity to maintain the project
4. Be consistent with the applicable comprehensive or long-term management plan

Individual projects that are eligible and compete for SUN Trail funding are *ranked* based on the following criteria:

- Enhances safety for bicyclists, pedestrians, and motorists
- Is recognized as having regional significance
- Will receive additional, committed funding from another source
- Improves mobility by completing, improving, or enhancing existing facilities
- Is shovel-ready
- Is supported by the public
- Improves economic opportunities and serves key destinations
- Enhances or preserves environmental resources
- Closes a gap in the SUN Trail Network
- Includes cost-saving elements

SUN Trail is a potential new funding opportunity for Lee County working with the Town of Fort Myers Beach and the Lee County Metropolitan Planning Organization (MPO). The State of Florida is considering adding Estero Boulevard through Fort Myers Beach and Bonita Springs to the Priority Land Trails Network. If that happens, it will be an extension to the Gulf Coast Trail and will form part of the SUN Trail Network.

Florida Department of Transportation Safety Sub-Grants

The FDOT Safety Office awards start-up sub-grants to programs that address traffic safety in the following priority areas from the 2012 Strategic Highway Safety Plan and Pedestrian and Bicycle Strategic Safety Plan:

- Aging Road Users
- Community Traffic Safety
- Impaired Driving
- Motorcycle Safety
- Occupant Protection and Child Passenger Safety
- Pedestrian and Bicycle Safety
- Police Traffic Services
- Speed and Aggressive Driving
- Teen Driver Safety
- Traffic Records
- Traffic Record Coordinating Committee

Countermeasures, which are outlined in the Countermeasures that Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices (Eighth Edition, 2015), are eligible for sub-grant funding. Those countermeasures generally target prevention through education and enforcement programs, not capital infrastructure and maintenance projects. For example, countermeasures education programs to children, outreach to the community about pedestrian safety, clinics on bicycle and pedestrian safety, and driver training. Different types of organizations can apply for funding, including state, county, and city governments; law enforcement agencies; state colleges and universities; schools; fire departments; and non-profits.

Organizations seeking project funding are required to turn in a concept paper that describes the project between January 1 and the last day of February for the next fiscal year beginning October 1st. Sub-grants are not guaranteed to continue beyond the first year, and they are generally limited to three consecutive years. The concept papers are evaluated on how well a project will target safety issues in areas with a high number of crashes, fatalities, and injuries; therefore, applicants need to provide data on a minimum three year history for crashes, fatalities, injuries, and police citations to demonstrate need. Funding comes from the National Highway Traffic Safety Administration (NHTSA) and is allocated to states annually based on the state population and the state's road miles.

A sample concept paper seeking funding for a Pedestrian and Bicycle Pedestrian priority area is provided in the Attachment A of this document.

Lee County Grants

Tourist Development Tax

Lee County collects a five percent tourist development tax (TDT) for rental properties leased for a period of six months or less. Taxed properties include apartments, hotels, beach homes, condominiums, hotels,

mobile homes, resorts, houses, trailers, campsites, vacant land for temporary living quarters, or any other property covered under the Florida Administrative Code 12A-1.061. Between 2010 and 2016, total countywide revenue from the tax has steadily increased by approximately 74 percent from \$22.8 million to \$39.6 million (Table 2).

Local governmental agencies may request funding each year through the Tourism Development Council (TDC). The TDC awards grant funding to countywide projects for two programs: Attractions Marketing and Beach and Shoreline Funding Programs. Between 2010 and 2016, approximately 26.4% of the five-cent bed tax, more than \$115 million, has funded a variety of countywide projects related to beach maintenance, beach nourishment, and beach park facility development through the TDC. TDC members review the requests and evaluate each project on criteria to determine if they are eligible for funding. Once the projects receive TDC approval, they are forwarded to the Lee County Board of County Commissioners for inclusion in their annual capital improvement budget (CIP) process.

Table 2: Tourist Development Tax Revenue

Fiscal Year	Revenue Total
FY 2010	\$22,782,079.91
FY 2011	\$23,980,741.42
FY 2012	\$26,671,549.39
FY 2013	\$28,535,423.73
FY 2014	\$33,197,943.01
FY 2015	\$37,559,026.25
FY 2016	\$39,644,805.58

Beach and Shoreline funding cycle opens again next February. More information is here:

<https://www.leevcb.com/funding-programs/beach-and-shoreline>

A portion of the TDT is allocated by the Lee County Tourist Development Council, which awards grant funding through two programs: 'Attractions Marketing' and 'Beach and Shoreline'. In some instances, funding from the former program has been allocated for bicycle and pedestrian marketing and safety campaigns. For example, the City of Sanibel received \$4,000 to produce a video that featured bicycle safety messaging and promoted the island as a bike-friendly community. The City of Cape Coral received \$4,000 to create a bicycle marketing brochure showcasing the city's 90 miles of bike routes.

The Beach and Shoreline Program generally funds beach maintenance, renourishment, and beach park facility development and improvements, such as boardwalks. For example, in FY 2016 and FY 2017 Lee County received an allocation of \$185,000 for boardwalks at Matanzas Pass Preserve.

Projects that receive TDT funding are eligible under the Florida State Statute and county ordinance that governs how the TDT is spent. TDT funding is contingent upon approval from the Lee County Attorney's office. Eligibility is based on State Statute 124.0104 and County Ordinance 16-18.

The TDC's recommendations for FY 2016-17 funds 25 projects valued at more than \$9 million. Some projects include:

- \$2.2 million addition to the beach nourishment fund
- Beach and shoreline facility maintenance at Cape Coral, Captiva, Fort Myers Beach, and Sanibel Island
- Boardwalks for shoreline access on Sanibel, Fort Myers Beach & Pine Island.
- Pathways and signage at Gasparilla Island Lighthouse

The application period for fiscal year 2017-18 funding opened with a workshop on April 25, 2017. (The workshop discussion video can be found [here](#)). The new application cycle is open May 1 to June 27, 2017, and deadline to submit requests is June 27, 2017.

Local Funding

Beach Parking Revenue

There are ten beach access points off of Estero Boulevard with 83 parking spaces and pay-by-space stations at each location, and the cost to park is \$2 per hour. Between October 2015 and September 2016, the revenue from the locations totaled approximately \$16,957.80. Parking revenue is generally used for transportation maintenance projects.

Table 3 summarizes the revenue received from each location.

Table 3: Beach Parking Revenue, FY 2015-2016

Access Location	Spaces	Revenue Collected
Aberdeen	5	\$9,183.70
Bayview	5	\$8,046.50
Coconut	8	\$16,574.65
Dakota	8	\$16,915.60
Flamingo	5	\$12,435.55
Gulf	3	\$6,669.90
Hercules	8	\$17,531.25
Lanark	2	\$4,133.65
Connecticut	12	\$40,425.00
Newton	27	\$55,042.00
Total	83	\$186,957.80

Gas Taxes

Florida law authorizes county governments to levy up to 12 cents per gallon fuel through three local option gas taxes: the ninth cent gas tax (1 cent per gallon of fuel), first local option gas tax (up to 6 cents per gallon of fuel), and the second local option gas tax (up to 5 cents per gallon of fuel). Lee County imposes all three gas taxes at their maximum allowable rate. The gas tax generates an average of \$414,346.75 per year for the Town of Fort Myers Beach, where it has paid for maintenance projects for roads, bridges, street lighting, sidewalks, stormwater, traffic lights; trolley service; traffic control; resurfacing projects; and stormwater capital projects.

Estero Boulevard and San Carlos Boulevard

Its transportation system is made up of primarily local streets; however, as the main transportation facility for the Town Estero Boulevard functions as a minor urban arterial south of San Carlos Boulevard and local urban road north of San Carlos Boulevard. Lee County is currently reconstructing the road to include bicycle lanes, new sidewalks, shared use lanes for bicycles to operate on roads, and side paths. The section north of Old San Carlos Boulevard is complete. San Carlos Boulevard and bridge is a key access point from the mainland to the Town. The road is a minor urban arterial, and FDOT is funding a PD&E study between Summerline Road on the mainland to Estero Boulevard that emphasizes alternative modes, such as bicycle lanes and sidewalks.

Lee County Metropolitan Planning Organization Funds

As a metropolitan area with a population over 200,000, the Lee County MPO receives two types of federal funds - Surface Transportation Program Urban Area (SU) funds and Transportation Alternative (TA) funds. The MPO uses both to fund bicycle and pedestrian projects. In addition, the MPO has access to the state portion of TA funds which FDOT traditionally uses to supplement MPO TA funds when programming bicycle and pedestrian projects.

Other Federal Grant Opportunities

- Americans with Disabilities Act/Section 504 of the Rehabilitation act of 1973
- Associated Transit Improvement
- Congestion Mitigation and Air Quality Improvement Program
- Federal Lands and Tribal Transportation Programs
- Federal Transit Administration Capital Funds
- Highway Safety Improvement Program
- National Highway Performance Program
- National Priority Safety Programs (Non-motorized)
- Recreational Trails Program
- Safe Routes to Schools Program
- State and Community Highway Safety Grant Program
- Statewide Planning and Research or Metropolitan Planning funds
- Transportation Investment Generating Economic Recovery Discretionary Grant program
- Transportation Infrastructure Finance and Innovation Act

Attachment A: Sample Pedestrian Bicycle Safety Concept Paper

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
HIGHWAY SAFETY CONCEPT PAPER

500-065-17
SAFETY
12/14

Applicant Agency: Tampa Police Department
Implementing Agency: Tampa Police Department
Concept Paper Title: Keeping Pedestrians and Bicyclists Safe in Tampa
Amount Requested: \$180,000.00

Priority Area for Concept Paper (Select Only One):

- | | |
|---|--|
| <input type="checkbox"/> Aging Road Users | <input checked="" type="checkbox"/> Pedestrian and Bicycle Safety |
| <input type="checkbox"/> Community Traffic Safety Outreach | <input type="checkbox"/> Planning and Administration (FDOT Only) |
| <input type="checkbox"/> Distracted Driving | <input type="checkbox"/> Police Traffic Services |
| <input type="checkbox"/> Impaired Driving | <input type="checkbox"/> Public Traffic Safety Professionals Training |
| <input type="checkbox"/> Motorcycle Safety | <input type="checkbox"/> Speed/Aggressive Driving |
| <input type="checkbox"/> Occupant Protection and Child Passenger Safety | <input type="checkbox"/> Teen Driver Safety |
| <input type="checkbox"/> Paid Media (FDOT Only) | <input type="checkbox"/> Traffic Records |
| | <input type="checkbox"/> Traffic Records Coordinating Committee (TRCC) |

Type of Project (Select Only One):

- Local Statewide

Type of Request (Select Only One):

- Initial Continuation – Year 2013

Previous Year's Project Number (if Continuation):

Ranking (if Local Project):

- City - 1 of 29 County - _____ of _____

OR Identified Need (Data outside of Fatalities and Injuries)

Head of Agency:

Name: Eric Ward
Title: Chief of Police
Address: 411 Franklin Street N.
Tampa, Florida 33602
Phone: (813) 276-3799 Extension: _____ E-Mail: eric.ward@tampagov.net

2018 FEB 25 AM 9:17
SAFETY
BPP

Project Contact:

Name: James Reiser
Title: Sergeant
Address: 411 Franklin Street N.
Tampa, Florida 33602
Phone: (813) 276-3716 Extension: _____ E-Mail: james.reiser@tampagov.net

FDOT USE ONLY:

Concept Paper Number: SS

Assigned Priority Area: _____

Postmark Date: _____

Planner Assigned: _____

Date Received: _____

Date Assigned: _____

Entered Into Database: _____

Planner Received: _____

Statement of the Problem: (Provide details about the traffic safety problem that you want to address.)

The City of Tampa is a dynamic and growing community of 358,000+ people that serves as the central point for the Tampa Bay Region and is the third largest city in the State of Florida. Even in the face of an uncertain economy, the city and surrounding area is experiencing a consistent growth phase with focus in the downtown core and the rehabilitation of already established urban areas. According to U.S. Census Bureau statistics, the City of Tampa Experienced a +6.8% population increase between the year 2010-2014 and this trend is likely to continue. During the daytime business hours, the City of Tampa experiences a 48% increase in population by those who are employed or are visiting within the city limits. The city also offers several different entertainment and social options, varying from professional sports teams to cultural events that attract people into the city during non-business hours.

In the year 2015, The City of Tampa experienced a dramatic rise in fatal traffic crashes occurring within the city limits with 57 reported traffic fatalities. This was an increase of over 100% from 2014 and represented a higher number than the last highest year of 2013, which had 54 fatalities. An analysis of the traffic fatalities investigated by Tampa Police Department in 2015 showed that 21 of the 57 fatality cases involved a pedestrian or bicyclist. This number represents an over 100% increase from 10 pedestrian/bicycle fatalities in 2014. After a review of the pedestrian/bicycle fatalities that occurred in the year 2015, the Tampa Police Department found that in 17 of the 21 fatalities, the pedestrian/bicyclist played a direct role in the cause of the crash ultimately leading to their own deaths. In at least 8 of the pedestrian/bicycle fatality cases investigated by the Tampa Police Traffic Homicide Squad, alcohol and/or drug impairment of the pedestrian/bicyclist was a contributing factor in the crash. The other cases involve human factors ranging from distractions to failing to obey traffic laws that govern the safe movement of pedestrians along streets and sidewalks. As a result of factors mentioned, The City of Tampa has catapulted to the top of FDOT's Highway Safety Matrix. The FY2017 Florida Highway Safety Matrix designates the City of Tampa as first overall for pedestrian or bicyclist related traffic fatalities and serious injuries among cities with a population of 75,000 and above. The City also ranks in the highest 20% of all categories ranked on the FY2017 Highway Safety Matrix.

The Tampa Police Department Maintains a full-time traffic squad of 15 Officers. During FY2015, The department's Traffic Squad was able to address pedestrian traffic safety issues by working an overtime pedestrian grant provided by The Center for Urban Transportation Research (C.U.T.R.) The grant cycle ended in May 2015 and due to budget constraints The Tampa Police Department was not able to continue overtime funding for additional pedestrian/bicycle enforcement. After the Grant ended, the Tampa Police Department investigated another 12 pedestrian/bicycle fatalities through the end of 2015, eventually ending the year with 21 pedestrian/bicycle fatalities. The Tampa Police Department continues to identify pedestrian and bicycle safety as one of its top public safety priorities. The Tampa Police Department did apply for a renewal of the pedestrian grant, but the department was not selected as a grant recipient for the next phase that commenced during the second half of 2015. The Tampa Police Department feels that if the department had received additional grant funding to continue the pedestrian and bicycle enforcement started during the first half of the year, the department could have possibly had a positive effect on the number of pedestrian/bicycle fatalities through the end of 2015.

In the past, the Tampa police department has been a recipient of the Pedestrian/Bicycle Safety Grant and would like to be considered for funding in FY2017. The Tampa Police Department would use the grant funding to promote roadway safety and education for pedestrian and bicyclists, along with enforcing the applicable traffic laws in the interest of public safety. This request also supports the "Vision Zero" program that is currently being evaluated by the City of Tampa and is supported by the Florida Department of Transportation.

Supporting Data: (Include at least three years of crash, injury, fatality, and citation data, to show the extent of the problem. If outside the top 20% for your city or county, provide further details to support your identified need.)

1) Traffic Crash data for Bicyclists and Pedestrians:

	2013	2014	2015
Total Crash reports	6,520	7,384	8,400
Pedestrian Crashes	234	159	141
Pedestrian Injuries	206	141	121
Pedestrian Fatalities	11	8	19
Bicycle Crashes	160	96	65
Bicycle Injuries	134	88	59
Bicycle Fatalities	5	2	2

Source: Signal 4 Analytics, University of Florida

2) Pedestrian and Bicycle Citations:

	2013	2014	2015
Bicycle Citations	1,109	537	277
Pedestrian Citations	1,260	295	194

Source: Tampa Police Records

The Florida Highway Safety Matrix lists the City of Tampa as 1st overall in pedestrian and bicycle related incidents compared to 29 cities with a population over 75,000. The city is also listed in the Highest 20% of the affected category over the past three year period. Analysis shows a decrease in the number of pedestrian citations issued in 2015, which correlates to the loss of grant funding in that year. The alarming increase in pedestrian fatalities shows additional safety education and enforcement is needed.

Proposed Solution: (Provide the specific countermeasure(s), chapter, and section you plan on implementing from the NHTSA Countermeasures That Work guide, found at: <http://www.ghsa.org/html/publications/countermeasures.html>. Explain how the countermeasure(s) that you plan to implement will address the problem and how the funding that you have requested will support those countermeasure(s). If no NHTSA countermeasure(s) exist, explain the basis of your selected strategy and how it will be effective.)

The Tampa Police Department would like to implement specific NHTSA countermeasures outlined for pedestrian related crashes in Chapter 8, sections 4.1 to 4.7 - concerning all pedestrian regulations and Chapter 8, sections 3.1 and 3.2 - Impaired pedestrians. In addition to Pedestrian related crashes, the Tampa Police Department will implement Bicycle Countermeasures outlined in Chapter 9, sections 3.1 to 3.4 - concerning all bicycle regulations and Chapter 9, sections 4.1 and 4.2 - relating to vehicle drivers and bicyclists. The steps utilized to implement these countermeasure will consist of the following activities:

With funding provided from this grant, we propose to decrease pedestrian/bicycle involved crashes by increasing the number of traffic officers on patrol through grant funded overtime. Following an analysis of areas having higher numbers of pedestrian/bicycle involved incidents, grant funded traffic officers will be directed to target those areas for pedestrian/bicycle safety education and enforcement. Officers will have the advantage of using directed patrol by utilizing grant funding to concentrate solely on pedestrian/bicycle safety and enforcement. Pedestrians and bicyclists will be educated on the traffic laws and the proper use of the sidewalks, roadways and safety zones. Pedestrians and bicyclists will also receive education on how to make themselves conspicuous to traffic and limit their exposure to a potential crash involving a motor vehicle. Using the invaluable resources of our local Florida Department of Transportation offices, we will distribute already existing pedestrian/bicycle safety handouts, which clearly outline the rights and responsibilities in an easily understood fashion. These handouts are also available in Spanish, enabling officers to reach out to our large Hispanic population as well.

In addition, officers will educate vehicle drivers in regards to pedestrian/bicycle safety, traffic law and vehicle driver responsibilities when it comes to rules regarding pedestrian and bicycle interactions on the roadway. Grant funded officers have the opportunity to verbally educate and inform, in direct face-to-face encounters with drivers, when the officer observes an actual violation occur. Any grant funded officers working during the sub-grant period will be deployed in the areas of highest concern and those locations will be evaluated and adjusted as needed.

Our local FDOT offices also keep in stock a variety of printed materials, as well as items such as lights, whistles and reflective armbands/backpack tags. We intend to include all these resources in our campaign and use them in educational efforts at local schools and youth organizations when officers are asked to appear at these venues for career days or demonstrations, especially our Motorcycle Traffic Officers. Members of the Tampa Police Department will conduct educational outreach programs focusing specifically on pedestrian safety and usage of crosswalks at 40 elementary, middle and high schools located within the city limits. In addition, the Tampa Police Department will conduct a minimum of 40 large scale group enforcement operations at high-volume crosswalks and areas with a higher number of pedestrian/bicycle involved crashes.

Sustainability: (If local project, provide details about how you plan to continue the safety efforts after the initial funding period has ended. If you cannot continue the safety efforts, provide details about what will prevent you from continuing. Does not apply to statewide projects.)

At the conclusion of the initial grant funding period, Tampa Police Department will continue its enforcement and education efforts with the officers assigned to the Traffic Unit. However, the Tampa Police Department will not be able to fund overtime officers for any special enforcement efforts or increased patrols.

The Tampa Police Department Traffic Unit will also maintain its education commitment and although the number may be reduced, Officers will continue to reach out to schools with the use of the Power Point presentations as well as the Florida Department of Transportation pedestrian and traffic safety education materials. The Tampa Police Traffic Unit frequently uses its motorcycle officers for public presentations and events. These frequent events present a unique opportunity to continue with public outreach and education efforts, even after the sub-grant period has ended.

Project Objectives: (List the short term objectives that you have for the project. All objectives must be quantifiable, such as, "To reduce the number of crashes by 5% compared to the 3 year average of the most recent data by conducting 12 sobriety checkpoints during the sub-grant period; Providing 12 public education outreach events in the community during the sub-grant period.")

Our objectives for this grant include, but will not be limited to:

- 1) Decrease pedestrian involved crashes by 10% compared to 2015 statistics.
- 2) Decrease pedestrain injuries by 15% compared with 2015 statistics.
- 3) Educate at least 200 students in pedestrian safety and responsibilities before the end of the sub-grant period.
- 4) Perform outreach educational programs in a minimum of 40 schools located in Tampa before the end of the sub-grant period.
- 5) Conduct a minimum of 40 large-scale group enforcement operations at high-volume crosswalks and areas with a higher volume of pedestrian crashes.

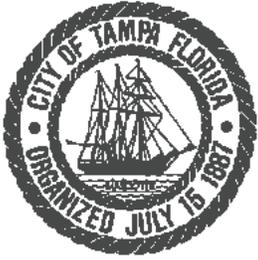
Evaluation: (Explain how you will determine each project objective has been met by using one or more of the following methods: Formative, Process/Administrative, Impact, and Outcome. Details about the four methods of evaluation can be found at <http://www.dot.state.fl.us/safety/3-Grants/Grants-Home.shtm>)

An **Outcome** evaluation of the overtime education and enforcement activities initiated under the terms of the grant will be conducted at the conclusion of the sub-grant period. The evaluation will be performed to determine:

- The percentage of reduction of fatal pedestrian/bicycle crashes.
- The percentage of reduction of serious injury pedestrian/bicycle crashes.
- Examination of the causes of both fatal and serious injury pedestrian/bicycle crashes. (Impairment, Distractions, Traffic Law Violations)
- The number of citations and warnings issued during the sub-grant period.
- The effectiveness of targeted enforcement and its effect on pedestrian and bicyclist behavior.

An **Impact** evaluation method will also be used to monitor the success of the grant program. Enforcement locations will be evaluated on a monthly basis and citizen input/complaints will be considered and evaluated throughout the funding period. Reported traffic crashes and citation data relating to the funded enforcement activities will be monitored to ensure the selected enforcement areas are being affectively addressed and if revisions to those areas are needed. Activity by officers working the enforcement detail will be captured on activity sheets and data from prior years will be used to determine the effectiveness of the enforcement activities. Most importantly public perceptions, attitudes and behaviors about the program will be considered to determine if the programs are successful and if the desired goals are being attained.

The Traffic Squad Sergeant and/or Corporal will be responsible for the direction of enforcement activities and the deployment of officers into areas experiencing a high number pedestrian injuries and fatalities. Data will be monitored to ensure the problem areas/locations are being addressed and adjusted if needed. The use of federal grant funds will be continuously evaluated to ensure the funds are spent in a prudent manner and are available for use throughout the funding period.



CITY OF TAMPA

Bob Buckhorn, Mayor

POLICE DEPARTMENT

Eric B. Ward
Chief of Police

February 24, 2016

Mr. Chris Craig, Traffic Safety Administrator
Florida Department of Transportation
605 Suwannee Street
Tallahassee, FL 32399-0450

Dear Mr. Craig:

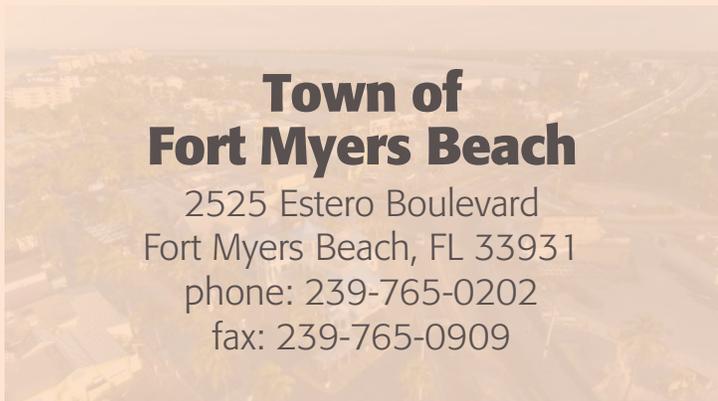
I am writing this letter in full support of the Tampa Police Department's application for Federal Highway Safety Funds entitled "**Keeping Pedestrians and Bicyclists Safe in Tampa.**" Our goal is to reverse the 100% increase in traffic fatalities involving pedestrians or bicyclist that we experienced within the last year. Because of this frightening trend, the City of Tampa now ranks first in the FDOT's Highway Safety Matrix for pedestrian or bicyclist related traffic fatalities and serious injuries among cities with a population of 75,000 and above. Grant funding is critical for our success and will assist us with promoting roadway safety through education and enforcing applicable traffic laws through additional patrols.

Sincerely,

Eric B. Ward
Chief of Police

RECEIVED
DOT
SAFETY OFFICE
2016 FEB 26 AM 9:17

THIS PAGE INTENTIONALLY LEFT BLANK



Town of Fort Myers Beach

BICYCLE + PEDESTRIAN MASTER PLAN

Town of Fort Myers Beach

2525 Estero Boulevard
Fort Myers Beach, FL 33931
phone: 239-765-0202
fax: 239-765-0909

