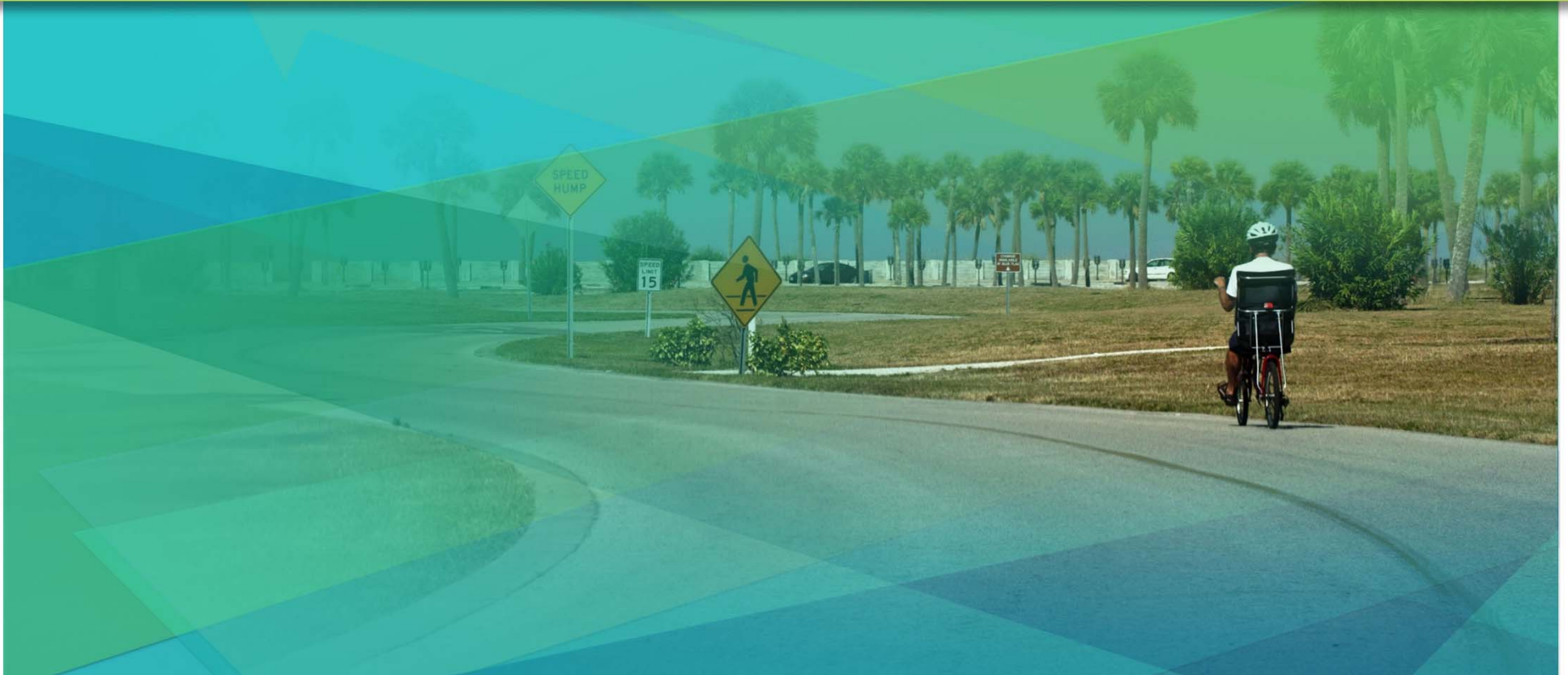


# GREENWAYS AND TRAILS PLAN UPDATE

Adopted August 2016





## TABLE OF CONTENTS

<b>Executive Summary .....</b>	<b>1</b>
<b>Chapter 1: Introduction.....</b>	<b>10</b>
<b>Chapter 2: Greenway and Trail Facility Toolbox.....</b>	<b>20</b>
1. Elements.....	21
2. Wayfinding.....	24
<b>Chapter 3: Key Regional Trail Concepts .....</b>	<b>33</b>
1. I-275 Bikeway.....	35
2. Selmon Greenway Connector .....	37
3a. South County Greenway (Palm River to Symmes Rd) .....	39
3b. South County Greenway Connector (I-75 Rest Area to Manatee County) .....	41
4. Kirby Canal Trail.....	43
5. Northwest Hillsborough/Tri-County Connector .....	45
6. Temple Terrace Trails .....	47
7. Memorial Bikeway .....	50
8. Old Fort King Trail Extension (US301 to Pasco County).....	52
9. Plant City Trails .....	54
10. Perimeter Trail.....	56
<b>Chapter 4: Implementation and Advocacy.....</b>	<b>59</b>

## FIGURES

Figure 1: Trail facilities by category.....	3
Figures 2: Hillsborough County and City of Tampa Greenways and Trails Plan map .....	6
Figure 1-1: Courtney Campbell Trail.....	11
Figure 1-2: Town N’ Country Trail .....	13
Figure 1-3: Greenways and Trails Committee priority trails.....	17
Figure 1-4: The nine trail alignments studied in this plan update.....	18
Figure 2-1: Shared-use Path .....	21
Figure 2-2: Side Path .....	21
Figure 2-3: Cycle Track/Separate Lane .....	22
Figure 2-4: Pedestrian Bridge.....	22
Figure 2-5: Bicycle Priority Street/Bicycle Boulevard.....	22
Figure 2-6: Rectangular rapid Flashing Beacon (RRFB).....	23
Figure 2-7: High-Intensity Activated Crosswalk Beacon (HAWK).....	23
Figure 2-8: Protected Intersection.....	24
Figure 2-9: Bicycle Boulevard Marking .....	26
Figure 2-10: Bicycle Route Sign, Gresham, OR .....	26
Figure 2-11: Bicycle Route Sign, Tucson, AZ .....	26
Figure 2-12: Street Sign, Washington D.C.....	26
Figure 2-13 Street Sign, Vancouver, B.C.....	27

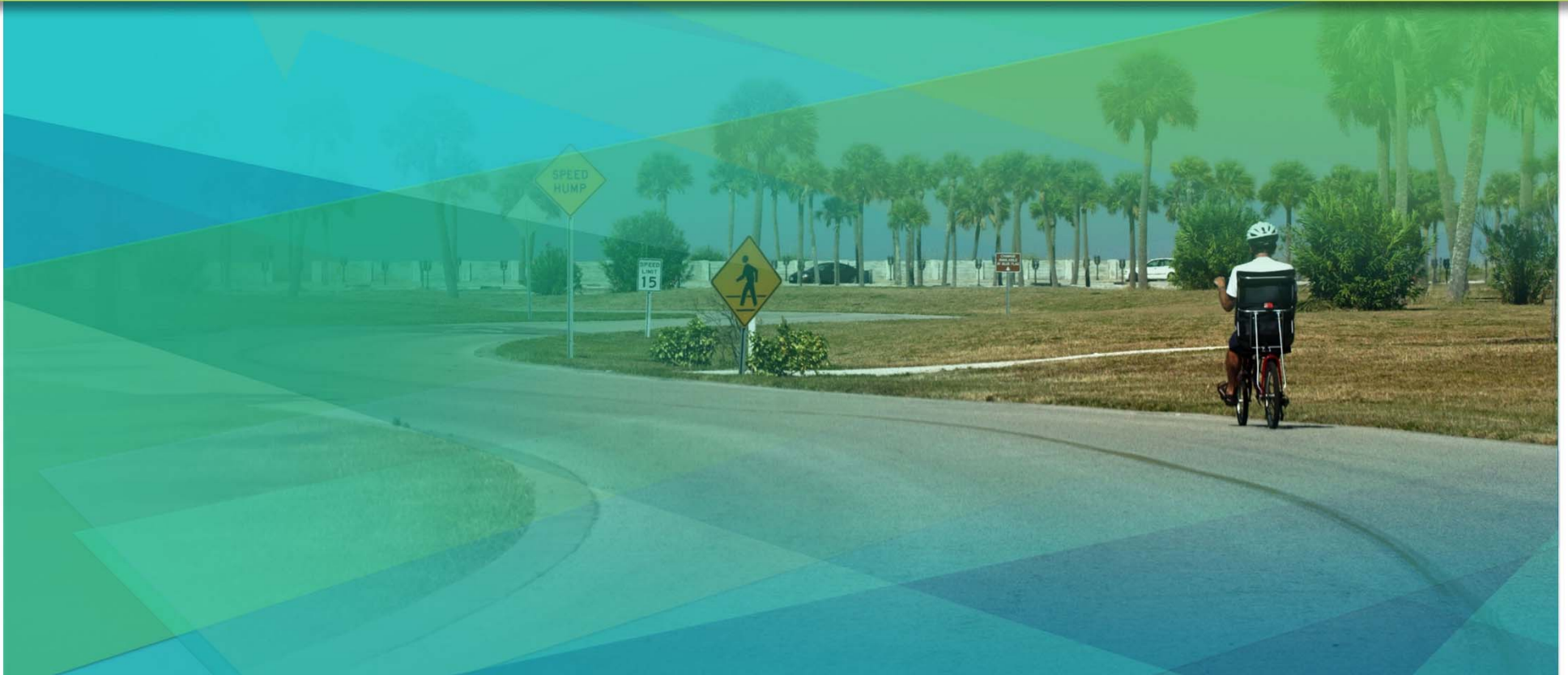
Figure 2-14: Bicycle Route Sign, Boulder, CO .....	27
Figure 2-14: Bicycle Boulevard Sign, Berkeley, CA.....	27
Figure 2-16 Sign location diagram.....	28
Figure 3-1 Key Map showing studied trails .....	34
Figure 4-1: SUNTrail funding eligible trail projects in Hillsborough County.....	61
Figure 4-2: The Greenways and Trails Plan .....	62
Figure 4-3: TBARTA Regional Trails Master Plan (2015).....	66

## TABLES

Table 1-1: Goals and Policies .....	12
Table 4-1: Trail Concepts.....	63
Table 4-2: Funding Sources.....	64



# EXECUTIVE SUMMARY







## PURPOSE AND PROJECT OVERVIEW

The purpose of this study is to update the City and County trails plan while codifying the spirit of jurisdictional cooperation that is required to develop a successful greenways and trails system.

The Hillsborough County Greenways Master Plan (1995) and the City of Tampa's Greenways and Trails Master Plan (2000) have been the guiding documents for greenway and trail planning in Hillsborough County and the City of Tampa for two decades. This project unifies those planning documents and refines some of the opportunities defined in the earlier plans. It also acknowledges a jurisdictional as well as regional approach to trail and greenway planning, with alignments identified connecting Tampa to Temple Terrace and Plant City and Hillsborough County with Pasco, Polk, Pinellas and Manatee counties. There are myriad opportunities to build the systems at a local level as well as to think regionally. Ultimately, the plan focuses on connecting past and programmed trail investments in Hillsborough County and its cities to activate longer, more contiguous routes for recreational and non-recreational trip making.

Although a traditional greenway running along a dedicated right-of-way is considered the preferred trail facility type where feasible, the level of development in urban environments and corresponding lack of right-of-way means that making the connections and developing a true network would require other facilities. Because this update is about making connections, both within Hillsborough County and connecting to adjacent counties, alignments identified in this study include a combination of trails, shared-use paths, side-paths, and on-road bikeways.

A description of the various facility types included in this plan is found later in this Executive Summary. In addition to these facility types, a few "complete streets" projects along major roadways are necessary to complete critical gaps. These employ a combination of traffic calming features and on-road bike lanes to link greenway or road-side trail facilities.

The trails in the County system have been broken down into three categories described below. These categories are not meant to imply a priority. Rather, they reflect different levels of connectivity and as such will be studied and funded as sources are identified.

- Key Intra-County Connections – include projects identified in this study as well as several existing city and county priorities. Defined by prior planning studies or this study with the potential to contribute to the system or complete key regional connections including:
  - South County Greenway, Upper Tampa Bay Trail phase VI, and the Bypass Canal Trail
- SunTrail eligible – trail projects that are identified on the Greenways and Trails Council Priority Trails map are eligible for a specific state fund that has been created to help develop the statewide trail system.

- I-275 Corridor Trail, Palm River/Selmon Expressway Trail, South County Trail extension, South Tampa Greenway
- Other Project Concepts – additional trail concepts that require further study to vet for feasibility and/or important to completing local network connectivity.
  - South Spruce Street, the West River Trail, the Perimeter Trail











All trails will be prioritized based on input, need, and available funding.

The map on page 4 illustrates the alignments that are SUNTrail priority trails. As mentioned, these trails are eligible for state funding through FDOT. The map on page 6 illustrates the updated Greenways and Trails plan. The table on page 5 lists the trails studied for this plan update, or those previously studied.

SUNTrail eligible trail facilities in Hillsborough County

Hillsborough County Trails

SUN Trail Eligible

-  SUN Trail Eligible
-  Existing
-  Planned - Funded
-  Planned - Studied
-  Conceptual
-  Side Path - Existing
-  Side Path - Studied
-  Green Spine
-  Complete Street
-  Proposed Complete Street

Notes and Definitions:

Side Path - Typically a sidewalk, 6 or more feet wide

Complete Street - 100% Sidewalk and Bike Lanes/Sharrows on both Sides of the street. Speed Limit of 45 mph or less

Trail - Separated pathway, typically 8 or more feet wide

The following have been revisited studied:  
 -Tampa ByPass Canal  
 -Green ARtery  
 -George Rd

Planned (Funded) - To be built within 5 years  
 Planned (Studied) - Studied, not yet funded

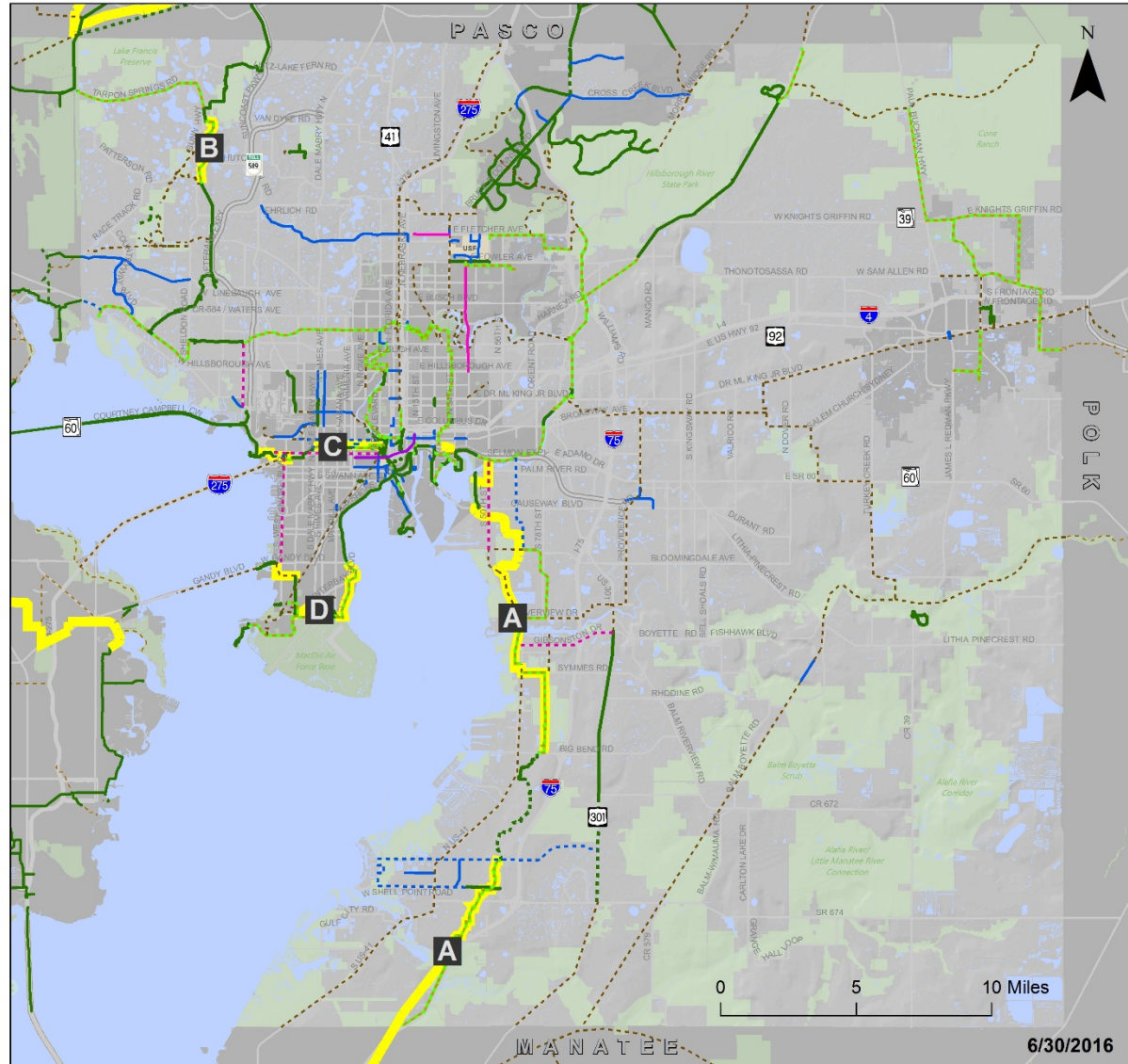
Conceptual - Neither studied nor funded  
 Green Spine - Buffered Bike Lane

Trails

Trails	
ID #	Name
A	South Coast Greenway
B	Upper Tampa Bay Trail Phase VI
C	I-275 Bikeway
D	South Tampa Greenway

Sources : Hillsborough County GIS, Polk County GIS, Pinellas County MPO, TBARTA, Florida Department of Transportation and the Florida Geographic Data Library

\*Some trail categories have been altered to fit within the current Hillsborough County category symbology.



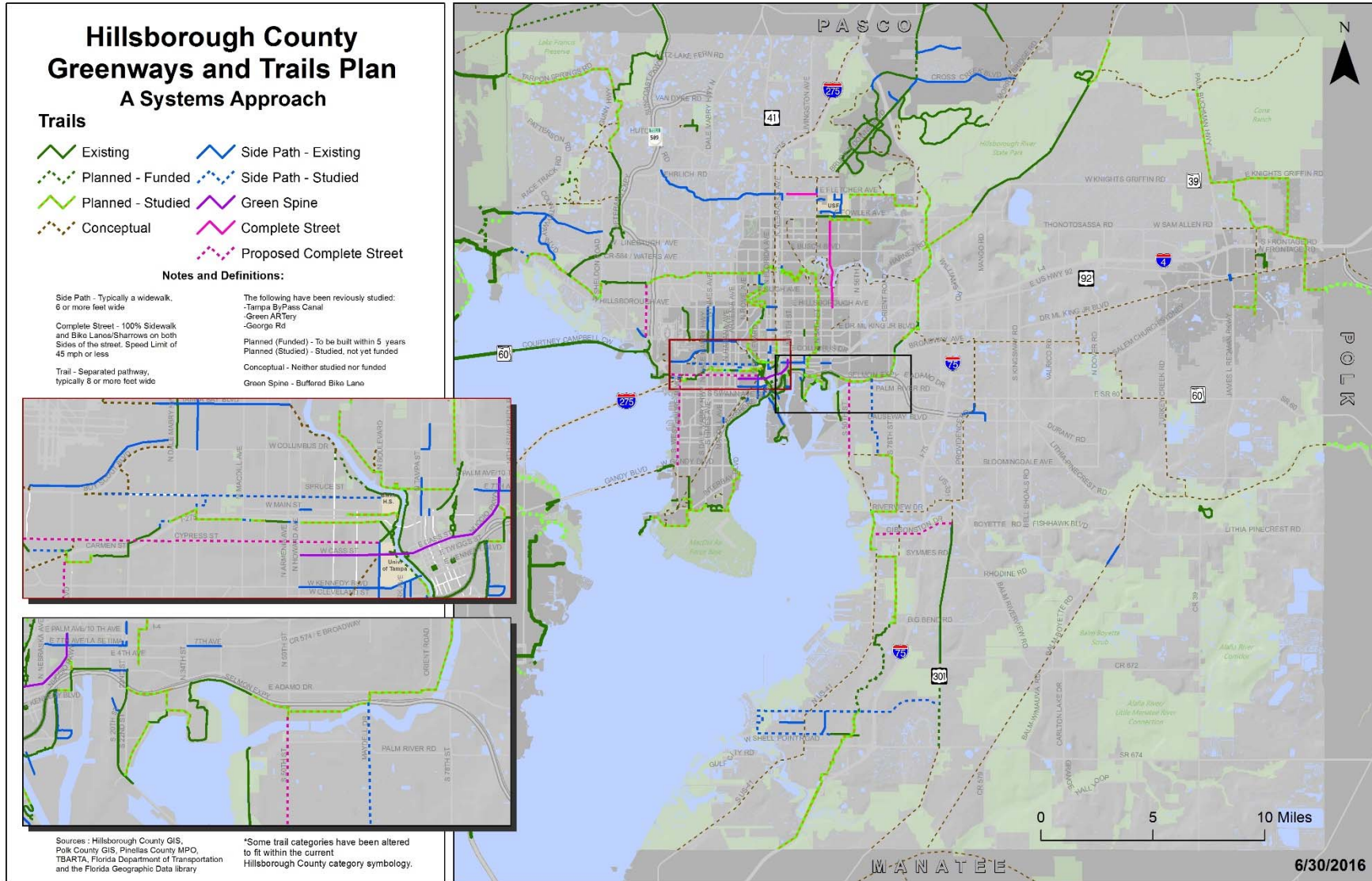
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## TRAIL CONCEPTS

Name	Description	Cost Estimate	SUNTrail funding eligible
South County Greenway	Greenway Alafia River and Little Manatee River and between US 41 and I-75	\$12.6m	x
Upper Tampa Bay Trail, Ph. IV	Greenway facility completing Upper Tampa Bay Trail and connecting to Suncoast Trail	\$ 5.0m	
South Tampa Greenway	Connects the trail along Bayshore Boulevard with the proposed Gandy Bridge Trail	TBD	x
Bypass Canal Trail	Greenway along Hillsborough River Bypass Canal from SR 60 north to Flatwoods Park	\$24.3m	
I-275 Bikeway	Mix of greenway and sidepath facilities to close connection between completed I-275 trail running from Cypress Point Park to Julian B. Lane Park and the Downtown Riverwalk	\$ 8.5m	x
Selmon Greenway Connector	Mix of greenway and side-path facilities to close connection between completed and funded trail sections into Downtown Tampa and Tampa Bypass Canal Trail and South County Connector (A)	\$ 1.1m	x
South County Connector	Mix of greenway, complete street, and side-path facilities to link Palm River/Selmon Connector to South County Greenway via Maydell Drive, US 41, and other local roads	\$ 8.1m	x
South County Connector	Connection from planned South County Greenway across Little Manatee River into Manatee County along either US 41, I-275, or US 301 corridors	TBD	x
Kirby Canal Trail	Extension of Town 'N Country Greenway connecting back into Tampa and tying into Perimeter Trail plan	\$ 5.1m	
NW Hillsborough Tri-County Connector	Shared-use path along Gunn Highway and Tarpon Springs Road connecting Upper Tampa Bay Trail, Phase VI and Suncoast Trail to planned Tri-County Trail	\$ 2.6m	

Name	Description	Cost Estimate	SUNTrail funding eligible
Temple Terrace Trails	Trail connections along Fletcher Avenue and a TECO easement connecting Temple Terrace to project and USF to planned Bypass Canal Trail	\$ 1.6m	
Memorial Bikeway	Connection from Town 'N Country Greenway to Upper Tampa Bay Trail and Oldsmar Trail System using mix of shared-use paths and on-road bikeways	\$ 1.8m	
US 301/Pasco Connector	Shared-use path along US 301 currently being planned as part of FDOT-led PD&E study along US 301	\$ 1.6m	
Plant City Connector	25-mile system of shared-use paths identified for further project development effort by City of Plant City	\$ 9.0m	
Perimeter Trail	Connect neighborhood assets, the Hillsborough River, Tampa's green spaces and the Greenways and Trails systems	\$ 6.8m	

## Hillsborough County and City of Tampa updated Greenways and Trails Plan



## TRAIL FACILITY TYPE DEFINITIONS

Trails are referred to in many ways—shared-use paths, multi-use trails, separated paths—and often are used differently by different agencies. To create a standard lexicon and understanding, the terms used in this report are defined below. These definitions come from the Florida Greenways and Trails Act and the AASHTO *Guide for the Development of Bicycle Facilities*, (2012, 4th ed.).

- “**Greenway**” refers to a linear open space established along either a natural corridor such as a riverfront, stream valley, or ridgeline or over land along a railroad right-of-way converted to recreational use, a canal, a scenic road, or other route; any natural or landscaped course for pedestrian or bicycle passage; an open space connector linking parks, nature reserves, cultural features, or historic sites with each other and populated areas; or a local strip or linear park designated as a parkway or greenbelt.
- “**Shared-Use Path**” refers to a bikeway that is physically-separated from motor vehicle traffic by an open space or barrier within the highway right-of-way or within and independent right-of-way. They are indented for use by non-motorized users and typically are designed for two-way travel; also called **multi-use trail**.
- “**Side path**” refers to a shared-use path located immediately adjacent and parallel to a roadway; also called a **separated trail**.

- “**Trails**” refer to linear corridors and any adjacent support parcels on land or water providing public access for recreation or authorized alternative modes of transportation. Hillsborough County standard trail width is 12’.
- “**Bikeway**” refers to any road, street, or path or which in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

## SUNTRAIL, FUNDING AND MAINTENANCE

The Florida Greenways and Trails System Plan, developed by the Florida Greenways and Trails Council, establishes Florida’s vision for a statewide trail network. As shown on the table on page 4 and the map on page 4, Hillsborough County has a number of trails on both the Priority and the Opportunity network. These trails are eligible SUNTrail funding. This funding mechanism was created to facilitate the development of a statewide, paved, multi-use trail network for bicyclists and pedestrians. In order to qualify for funding, the Florida Department of Transportation requires a number of commitments, including one to operate and maintain the facility once it is constructed. This requirement, while unique in that it is part of the funding process, is not a new one. Operations and maintenance are ongoing needs for all trails built in the Cities and County and as such must be incorporated into budgets and staffing plans.

A maintenance plan for trails should be developed as part of the implementation of this plan. Maintenance typically includes completing trail inspections, maintaining drainage, restoration of the

tread, removal of debris, controlling vegetation and the repair of facilities.

A plan for closure, temporary and permanently, should be considered within a maintenance plan. The consideration of an alternative route for use before a trail section is closed is recommended. The use of trail information to educate users about the reason for the closure, the location of the alternate route and any change to trail use should be

included.

## LIABILITY

Liability issues are covered under section 375.251. F.S., as adopted by the Florida Legislature. This statute limits the liability of owners or lessees who make their land available to the public for recreational use.



# INTRODUCTION

# 01



## INTRODUCTION

The purpose of this study is to update the Cities - Tampa, Temple Terrace and Plant City County trails plan while codifying the spirit of jurisdictional cooperation that is required to develop a successful greenways and trails system.

The Hillsborough County Greenways Master Plan (1995) and the City of Tampa's Greenways and Trails Master Plan (2000) have been the guiding documents for greenway and trail planning in Hillsborough County and the City of Tampa for two decades. This project unifies those planning documents and refines some of the opportunities defined in the earlier plans. It also acknowledges a jurisdictional as well as regional approach to greenway planning, with alignments identified connecting Tampa to Temple Terrace and Plant City and Hillsborough County with Pasco, Polk, Pinellas and Manatee counties. There are myriad opportunities to build the systems at a local level as well as to think regionally with SUNTrail. Ultimately, the plan focuses on connecting past and programmed trail investments in Hillsborough County and its cities to activate longer, more contiguous routes for recreational and non-recreational trip making.

Chapter Two describes the various project inputs, including document review, committee briefings and guidance from the Greenways and Trails Committee. In addition to review to make sure proposed trail alignments are in keeping with the Livable Community Elements of the County Comprehensive Plan and the various transportation plans for the City and County, extensive work was done with the Greenways and Trails Committee to develop the new direction for the plan.

While intended to primarily guide the design and construction of greenways and Trails—shared use facilities along dedicated rights-of-way—it is acknowledged that additional facility types are needed to help 'complete' the system. Chapter Three describes a toolbox of both linear facility types and strategies for crossing major roadways that have been employed to plan for a contiguous trail system where dedicated rights-of-way are not available and/or are cost prohibitive to acquire or utilize.

One of the tasks of this project was to review some of the concepts on the original Greenways and Trails plan map for feasibility and to refine them, taking into account, land use changes, changes in community needs or opportunities for collaboration. Chapter Four describes and illustrates nine trail concepts that were studied in detail as part of this project. These nine do not include the previously studied Upper Tampa Bay Trail, phase IV, the Bypass Canal Trail or the South Coast or Cross County Greenways.

Chapter Five describes the collaborate nature of developing the Greenways and Trails Vision.

Hillsborough County and the City of Tampa both have extensive Greenway and Trail networks. Each agency has also been building on-road infrastructure, including bicycle lanes, buffered bicycle lanes and separated facilities. While the intent is to make connections and develop the network to facilitate seamless non-motorized travel, the current state of disconnected trails and on-road facilities can be challenging for the cyclist to navigate. Accordingly, Chapter Six

describes some wayfinding tools and strategies that could be used around the County to help connect the existing trail facilities until such time as the projects identified in this update to the City and County plans can be implemented.

Chapter Seven lays out recommendations for on-going advocacy and collaboration, acknowledging that building an extensive and connected greenways and trails system requires time and the coordination of a variety of agencies and partners.

## GOALS, OBJECTIVES AND POLICIES

The goals, policies and strategies found on the following pages have been identified to guide the implementation of the plan. These guiding principles are aligned with the Livable Community Elements of the Hillsborough County and City of Tampa comprehensive plans.

***Figure 1-1: The trail along the Courtney Campbell causeway is of the many trails in Hillsborough County that takes advantage of the area's natural beauty***



**Table 1-1: Goals and policies**

The following are goals and policies that have been identified to guide the implementation of this plan.

**GOAL 1    Develop a comprehensive, interconnected system of off-street shared-use trails that will serve as a vital component of our region’s transportation and recreation network.**

Policy 1.1    Provide linkages from the regional trail system to public transit, schools, parks and community gathering spaces, neighborhoods, employment centers and open spaces.

Policy 1.2    Identify and prioritize future improvements to the local and regional trail system to ensure that new trail improvements will best benefit the public.

**GOAL 2    Ensure adequate maintenance of the regional trail system.**

Policy 2.1    Jurisdictions should consider provisions for trail maintenance when planning for new trail development, including the inspection and maintenance of all paved facilities, storm water structures, overpasses and underpasses by the appropriate agency.

Policy 2.2    All provisions for trail maintenance should be planned and implemented during trail development

Policy 2.3    Design trails and trail facilities for sustainability, and long-term low maintenance needs (e.g., landscaping with native and xeric plant species, using durable materials for structures and minimizing the opportunities for vandalism).

Policy 2.4    Encourage a regular maintenance schedule of mowing and blowing of bike paths so debris do not interfere with rider safety.

Policy 2.5    Consider design elements that will encourage trail use when building or renovating sections of trail (e.g. shade availability, grade, water, restroom facilities).

Policy 2.6    Encourage, develop and support a citizen/staff committee to support trail maintenance and funding.

Policy 2.7    Consider 911 stations/ emergency addressing on all greenway

## TRAIL STRATEGIES

The following strategies have been identified to encourage the implementing agencies to continue to work together to achieve the common goal of a well connected system of bikeways, trails and sidewalks to support increasing demand for non-motorized transportation and recreational facilities.

- **Strategy 1:** Continue to coordinate with the City of Tampa, Temple Terrace and Plant City to facilitate the review of connections of trails and priorities.
- **Strategy 2:** Coordinate with the Florida Department of Transportation (FDOT) in accordance with the Florida Greenways and Trails Act (FS Ch. 260).
- **Strategy 3:** Coordinate with Hillsborough County to complete the Upper Tampa Bay Trail.
- **Strategy 4:** Coordinate with Hillsborough County to construct

the trails and connections between trails identified as priority.

- **Strategy 5:** Coordinate with the City of Tampa to construct urban connections, both on an off-road, thus increasing the opportunities for comfortable travel by bicycle and on foot.
- **Strategy 6:** Develop a plan to connect communities and parks via a system on and off-road facilities.

## LIABILITY

Liability issues are covered under section 375.251, F.S., as adopted by the Florida Legislature. This statute limits the liability of owners or lessees who make their land available to the public for recreational use.

*Figure 1-2: The Town N' Country trail allows users to travel east-west through the Town N' Country neighborhood*



## PROJECT INPUTS

A variety of inputs, including review of the following plans and studies, GIS files from the City of Tampa and Hillsborough County, and feedback from the Bicycle Pedestrian Action (BPAC), Citizens Advisory Committee (CAC), Technical Advisory Committee (TAC), Greenways and Trails Committee, and Project Team were incorporated into this plan update.

### Selected Plans and Studies

City of Tampa Plans, including the Greenways and Trails Master Plan (2000), the InVision Plans (2012), the Comprehensive Plan, and Walk/Bike Plan Phases I, II and III were reviewed to identify bicycle and pedestrian facility needs and to identify opportunities for connections, thus building on prior work.

Hillsborough County Greenways Master Plan (1995) – provided guidance for the building of trails throughout Hillsborough County for 20 years; providing the foundation for the identification of alignments to be reviewed for this study.

Comprehensive Plan for Unincorporated Hillsborough County Florida – Livable Communities Element (Lutz, Keystone-Odessa, Northwest Area, Citrus Park Village, Brandon, Palm River) – reviewed to understand the needs and opportunities identified by the community; in every case, the communities stated their support for multi-use trails; some chapters identified specific locations. This plan update has been coordinated with these elements.

- Past MPO work products, including the George Road Connector Trail Study, the 2040 LRTP and the 2040 LRTP Needs Assessment: “Real Choices When Not Driving,” and the Tampa Bypass Canal Trail Feasibility Study – reviewed to identify opportunities for connections, thus building on priorities already identified.
- Adjacent County plans (Pinellas, Pasco, Polk, Manatee) – reviewed to identify opportunities for multi-use trail connections and to enable the enhancement of the regional trail network.
- Current Transportation Alternative Candidate (TA) Projects (TIP 2016/2017) and CIP projects – reviewed to identify projects planned in the next five years or projects for which funding is being sought.
- Florida Greenways and Trails System Plan (2013–2017) – outlines the vision for the Florida Greenways and Trails System, which is made up of existing, planned, and conceptual trails and greenways that connect the state. A series of maps identify the opportunities, priorities, and gaps, including the connection to the Courtney Campbell Causeway Trail and the proposed South County Greenway/Southwest Coast Connection to Manatee County.
- Selmon Greenway Final Plan (2010) – identified the alignment for the Selmon Greenway Trail and opportunities for connection, including along Adamo Drive to South County and to the Green Spine in Ybor City.

- TBARTA Master Plan (2015) – updated master plan (May 2015) that identifies regional priorities for multi-modal connections in the six-county planning area; also identified priority trails – Upper Tampa Bay Trail, South Tampa Greenway, and Bypass Canal Trail.
- Temple Terrace Comprehensive Plan – Mobility Element – adopted in 2009, highlights interconnectedness of city’s transportation system and identifies needs for all modes; Hollow Stump Road identified as an opportunity to connect proposed Tampa Bypass Canal Trail with University of South Florida campus.
- Plant City Comprehensive Plan – identifies several needs and, because it was based on the 2025 LRTP, projects that were cost affordable by 2025; does not identify trail opportunities. Multi-use trail plan focused on connecting parks and open spaces in Plant City planned for 2016.

## Committees

The draft plan was presented to the Citizen Advisory Committee, Technical Advisory Committee, Livable Roadways Committee, and the Bicycle/Pedestrian Advisory Committee for feedback. These presentations were for informational purposes, but each committee voiced support for the update and for the building of multi-use trails throughout the county.

The Greenways and Trails Committee was engaged on two occasions. During the first work session, it identified the trails it considered to be

the priority trails for further study. A map showing their priorities is shown in Figure 3-1. This input was used as the basis for the later fieldwork. At the second meeting, the Project Team presented the studied alignments for feedback. Discussion focused on both the individual routes and the plan as a whole with the increased emphasis on regional connections.

## Project Team Meetings

Project Team meetings through the project were critical for reviewing deliverables and project progress. Team members included representatives from the City of Tampa, Hillsborough County, Plant City, and Temple Terrace.

## Jurisdictions

Temple Terrace, Plant City the City of Tampa and Hillsborough County each envision a robust trail system within their boundaries. Input from them was critical to developing the plan at both the local scale and also at the regional scale where the jurisdictions’ trails are integrated into the larger system.

Each representative took part in reviews of field work and proposed changes to the plan. As a result, refinements were made to the route in Temple Terrace, and Plant City conceptual trail alignments were added. This feedback was critical to the development of the final plan and the long-term vision.

With the City of Tampa Greenways and Trails Master Plan as the guide, the City of Tampa has been developing their trails as opportunities

arise. Continued opportunities include the West River Greenway, the Perimeter Trail and the I-275 Bikeway. Plant City envisions a trail system that connects its parks and Temple Terrace envisions east-west routes that connect to USF, the Bypass Canal Trail and New Tampa.

### **GIS Analysis**

Staff collaborated on updating the GIS files from both the City of Tampa and Hillsborough County. Part of this project was ensure that these files were updated to reflect both what has been constructed and what is planned. Efforts were made to unify the definitions and

the symbology used to illustrate facilities in both the city and county.

### **Field Review and Coordination**

After review with the Greenways and Trails Committee, the Project Team field-reviewed the alignments identified in Figure 3-2. This review was integral in determining additional variations for the alignments and to identify, at a conceptual level, any fatal flaws that might preclude the alignment being categorized into a tier for next steps of additional study or design. Examples include lack of right-of-way, potential impacts to low-density neighborhoods, or potential natural or manmade barriers.



Figure 1-3 Greenways and Trails Committee trails identified as priorities in the County-wide network

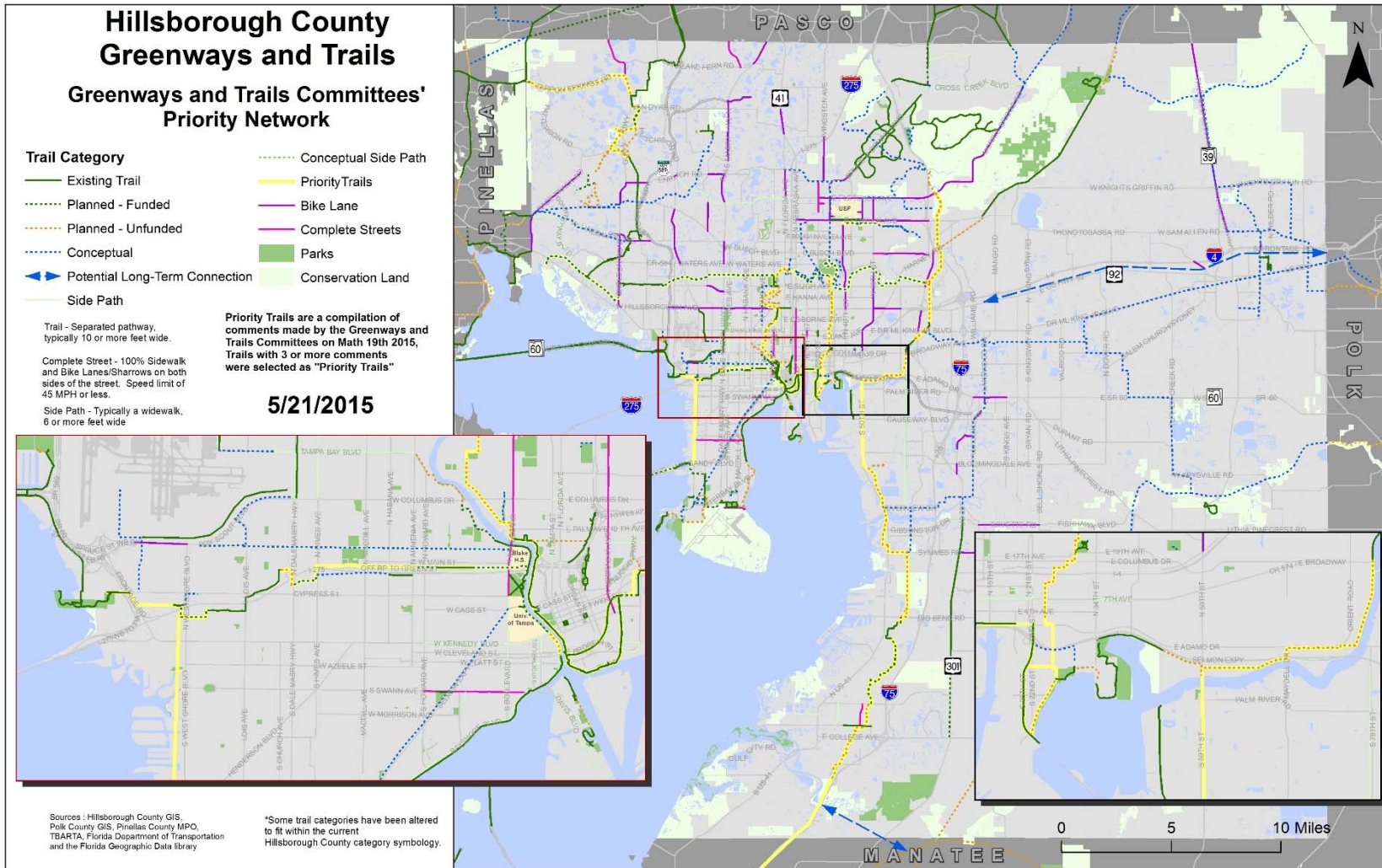
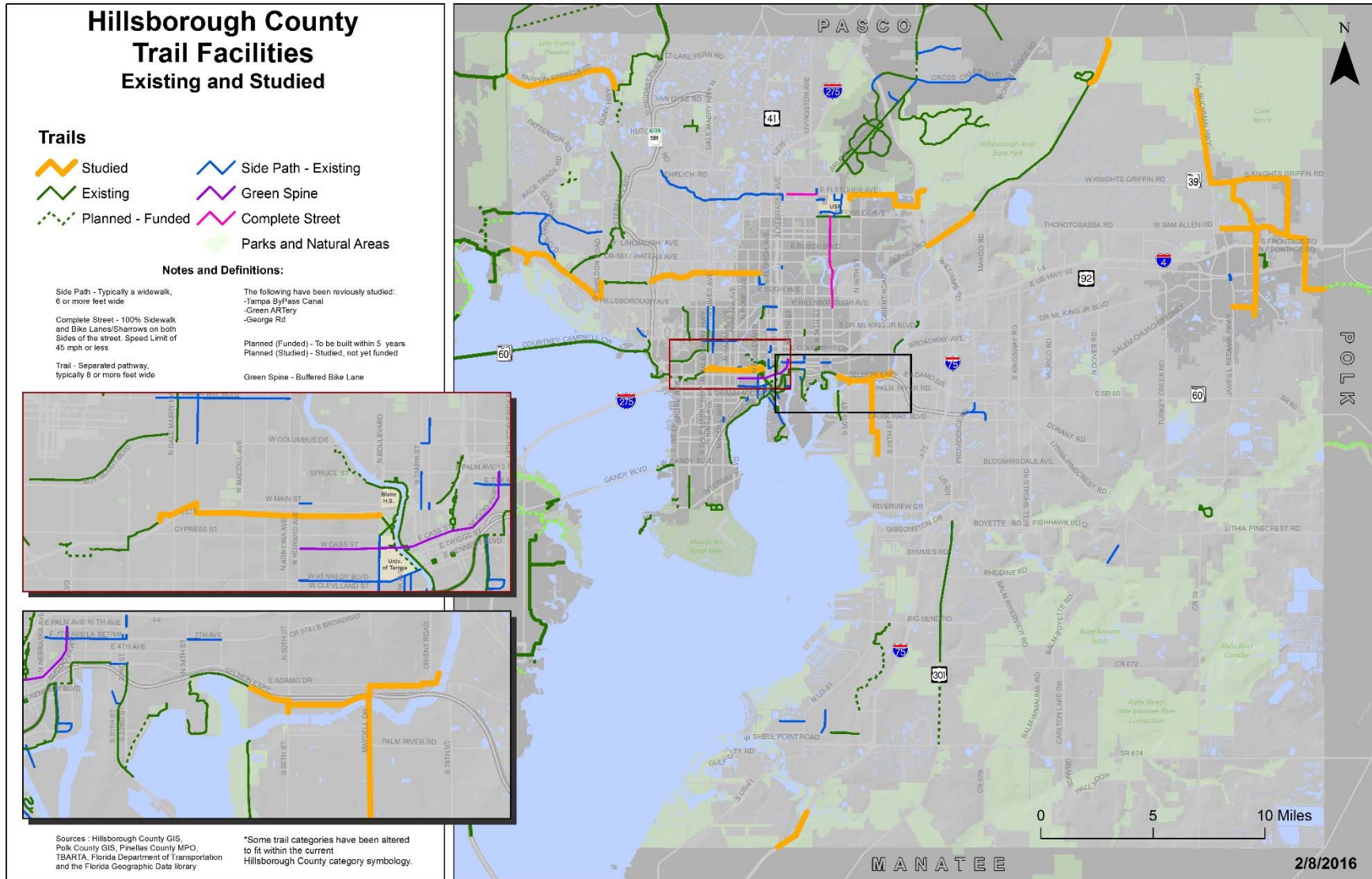
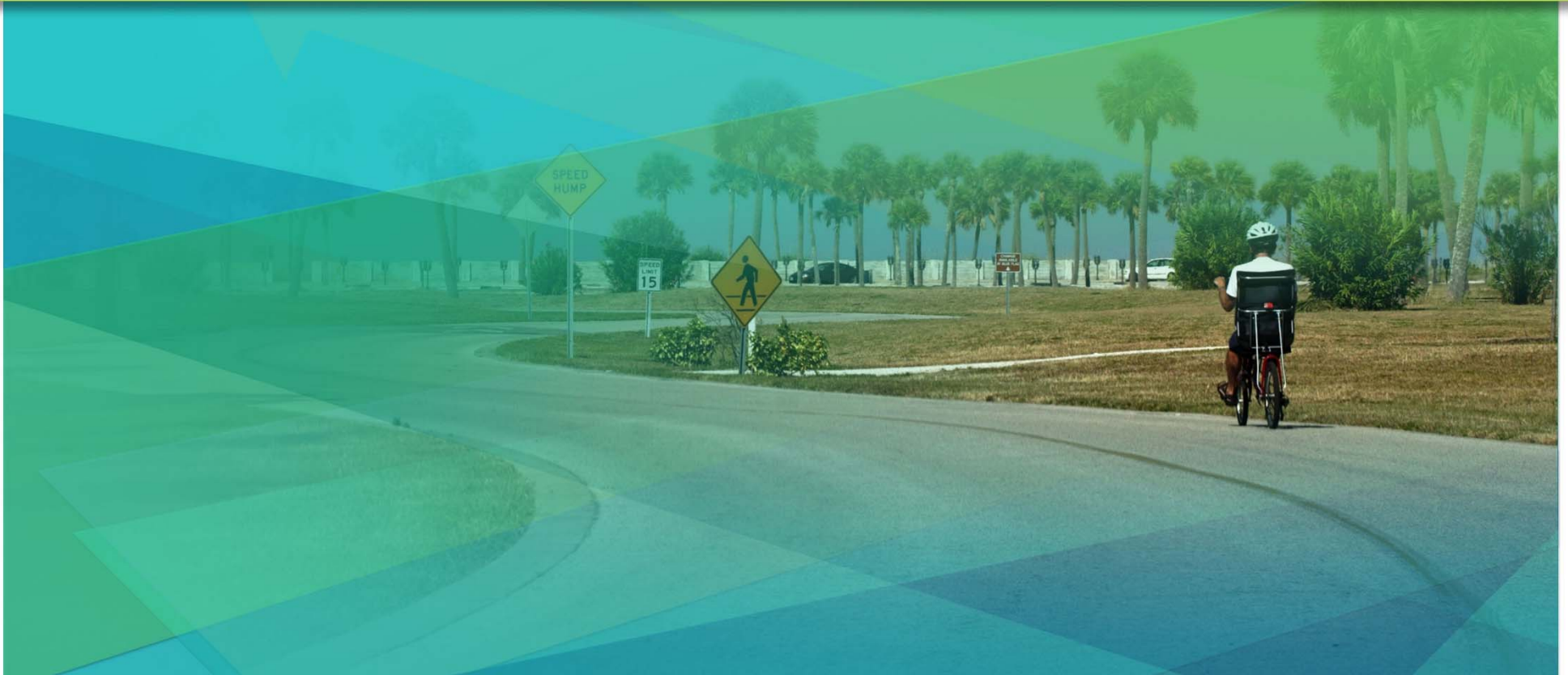


Figure 1-4: Nine trail alignments studied for this plan update



# GREENWAY AND TRAIL FACILITY TOOLBOX

# 02



## INTRODUCTION

As the county has become more and more developed, true greenways are increasingly challenging to build. As discussed, this Plan identifies opportunities to develop greenways but also incorporates other facility types to make the connections. Since the plan was developed, bicycling infrastructure has undergone major changes, with the introduction of the NACTO Urban Bikeway Design Guide and innovative Federal Highway Administration (FHWA) guidance. This section briefly describes and illustrates some of those facility types and crossing infrastructure that are recommended to be incorporated when designing and building these trails.

Additional information about the treatments discussed in this section can be found in “Case Studies in Delivering Safe, Comfortable, and Connected Pedestrian and Bicycle Networks” (FHWA, December 2015) and the NACTO Urban Bikeway Design Guide (2014, 2nd ed.). The definitions are from the Florida Greenways and Trails Act and the AASHTO *Guide for the Development of Bicycle Facilities* (2012, 4th ed.).

Because wayfinding is also a critical component of a successful bicycle facility network, this chapter also includes a section on wayfinding tools and strategies.

## ELEMENTS

**Greenway** – linear open space established along either a natural corridor, such as a riverfront, stream valley, or ridgeline, or over land along a railroad right-of-way converted to recreational use, a canal, a scenic road, or other route; any natural or landscaped course for pedestrian or bicycle passage; an open space connector linking parks, nature reserves, cultural features, or historic sites with each other and populated areas; or a local strip or linear park designated as a parkway or greenbelt.

**Trails** – linear corridors and any adjacent support parcels on land or water providing public access for recreation or authorized alternative modes of transportation. AASHTO and County standard width is 10-12’.

**Shared-use path** – a bikeway that is physically-separated from motor vehicle traffic by an open space or barrier within the highway right-of-way or within and independent right-of-way. Intended for use by non-motorized users and typically designed for two-way travel. Also called multi-use trails or side paths. (Figure 2-1)



**Side path** – shared use path located immediately adjacent and parallel to a roadway. Also **called a separated trail**. The City of Tampa has designated side paths or wide sidewalks in locations where a shared-use path may not be possible. (Figure 2-2)



**Cycle track/separated lane** – cycle tracks (or protected bicycle facilities) use a physical barrier between the motor vehicle lane and the bicycle lane. Barriers include concrete traffic separators, planters, on-street parking lanes, or bollards. Separate lanes are an increasingly popular, with numerous studies confirming both an increase in safety and in bicycle ridership after installation. (Figure 2-3)



**Pedestrian bridge**— Typically used when crossing multiple-lane arterials or highways, provide uninterrupted crossing of the roadway for bicyclists. Work best when providing a direct line of travel and do not require user to go out of his/her way to use the crossing. (Figure 2-4)



**Bikeway** – any road, street, or path, or something specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes. May be a bicycle boulevard.

**Bicycle Priority Streets/Bicycle Boulevards** – Streets with low auto volumes and speeds and designated as bicycle boulevards. Signage, pavement markings, and other features identify the road as a primary bicycle route, which typically reduce car trips and facilitate convenient crossings at arterial streets. These are widely used in Europe and increasingly in cities such as Seattle, Portland (OR), and Tucson to complement the separated facility and trail network. bicycle. (Figure 2-5)

*Figure 2-5: A street that includes a variety of elements specifically giving bicycle travel the priority*



**Rectangular Rapid Flashing Beacon (RRFB)** – rectangular-shaped high-intensity LED-based flashing indicators typically attached to a standard pedestrian crossing sign at non-signalized crossing locations (Figure 2-6). The flashing lights supplement the crosswalk markings and are used to warn drivers that a bicycle or pedestrian is about to enter into a crosswalk.



### **High-Intensity Activated Crosswalk Beacon (HAWK)**

Also called pedestrian hybrid beacons, HAWKs are activated warning devices either located on mast arms over mid-block crosswalks or alongside the roadway. They are one of FHWA’s Proven Countermeasures and are being installed in cities around the U.S on local and state roads.

Typically used as an intermediate option between an RRFB and a full traffic signal, they provide pedestrians and bicyclists with a full stop-

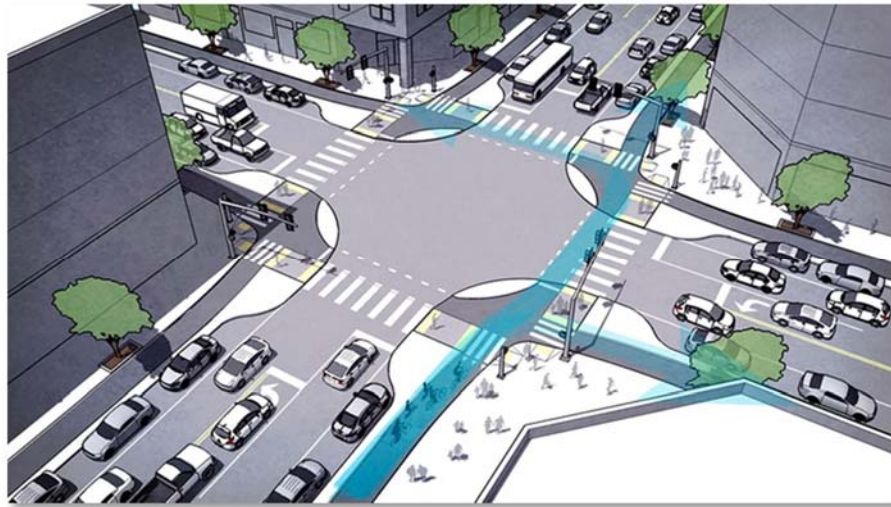
controlled crossing but without the usual traffic delay associated with a full traffic signal. HAWKs are unfamiliar traffic control device to many people, particularly in Florida, so public outreach should be conducted to educate both drivers and pedestrians/bicyclists on how they operate and what they should do when they encounter one. (Figure 2-7)



**Trail Crossings** – handled a number of ways, often not stop-controlled because of warrant requirements. Updates to the FDOT *Traffic Engineering Manual*, Section 3.8 removed the need for minimum trail crossing thresholds, thus making an RRFB or HAWK easier to include in these projects moving forward.

**Leading Pedestrian Interval** – gives pedestrians a few-second head-start, allowing them to be mid-crosswalk and in a driver’s line of sight before beginning their right turn.

**Protected Intersections** – relatively new intersection treatment, allows bicyclists to travel within an area protected by islands, protecting bicyclists from a 'right-hook' crash danger. (Figure 2-8)



## WHAT IS WAYFINDING?

Wayfinding is spatial problem-solving—knowing where you are in a building or an environment, where your desired location is, and how to get there from your current location.<sup>1</sup>

Wayfinding systems are in place all around us to facilitate vehicle travel and allow us to find places and judge distance. Tampa has a wayfinding signage system for downtown that facilitates pedestrian movement, the Tampa Expressway Authority has identification signage for the Selmon Greenway, Coast Bike Share has maps showing bicycle facilities and locations of bike rental stations, and Friends of the Riverwalk has a wayfinding system along the Riverwalk. However,

no bicycle wayfinding system is in place in Tampa or Hillsborough County. With the expansion in greenways and trails facilities and corresponding growth in ridership in the area, there is a growing need to develop a unified system of identification and wayfinding to allow for more informed and easier travel by bicycle.

Typically, wayfinding signage programs have a number of goals, some of which may change as the system evolves and grows. These goals may include connecting places, providing visibility to bicyclists, encouraging bicyclist and driver awareness, and acknowledging bicyclists as priority.

In addition to geographic information, wayfinding presents an opportunity for branding and marketing the Tampa Bay region as a bicycle-friendly location. The *Manual of Uniform Traffic Control* (MUTCD) devices regulate certain aspects of signage design and placement, but cities around the country have been developing signs that reflect their communities.

A cohesive wayfinding signage program for our greenway system will create awareness, make it more accessible, increase its use, and give users the confidence to bicycle more frequently.

## NATIONAL GUIDANCE

Signage used on roadways is regulated by the *Manual on Uniform Traffic Control Devices* (MUTCD), and the National Association of City Transportation Officials (NACTO) has developed a reference guide that is specific to the needs of urban areas and can be used to help developed a wayfinding signage plan.



## MUTCD

Chapter 9 of the MUTCD addresses aspects of bicycle signage and placement. Section **9B.20, Bicycle Guide Signs** identifies standard sign color, but there is no specification for bike boulevard or bikeway signage. Chicago, Berkeley (CA), and Tucson have developed their own bicycle wayfinding signage designs. **Section 2D.50, Community Wayfinding Signs** outlines guidance for this type of signage and allows for color variation, as long as the colors used are not those used in regulatory or warning signage (such as STOP, YIELD, or WORK ZONE signs).

## NACTO

The *Urban Bikeway Design Guide*, developed by NACTO, has been endorsed by FHWA for reference in designing urban bicycle infrastructure. The goal of the guide is to provide cities with state-of-the-art solutions that can help create complete streets that are safe and enjoyable for cyclists.<sup>2</sup>The guide's chapter titled "Bike Route Wayfinding Signage and Markings System" defines a wayfinding system as "comprehensive signing and/or pavement markings" and identifies three types of signs that should be used when developing a bicycle wayfinding signage system:

- *Confirmation signs* help bicyclists know they are on a bike route and let motorists know they are on a road that may have higher bicycle traffic. Placement should be every 2–3 blocks and used in conjunction with turn or decision signs. Pavement markings also can be used as confirmation.
- *Turn signs* indicate when the bikeway/bike boulevard is shifting to another street. It is recommended that the destination and distance be listed on the sign. Pavement

signage can be used.

- *Decision signs* mark the intersection of routes and access to destinations and typically include arrows, named destinations, and distances. Pavement signage can be used.

## BEST PRACTICES

### Wayfinding Signs

A number of communities have developed bicycle wayfinding signage programs that can be models for a program in Hillsborough County, such as Portland (OR), Vancouver (BC), and Calgary. Signage examples from around the U.S. are provided on the next page.

### Pavement Markings

MUTCD-approved shared lane markings are used in several cities on their designated bike boulevards, and several, including Tacoma (WA) and Columbia (MO), have designed their own. Columbia is working with FHWA on a Request to Experiment on an Alternative Pavement Markings for Bicycle Route Wayfinding). Portland (OR) uses a modified shared lane marking that it funds with both federal and local funding. This pavement marking can be a useful supplement to a vertical wayfinding signage program.

**Figure 2-9: An example of Bicycle Boulevard Pavement Marking from Minneapolis**



Source: [www.ci.minneapolis.mn.us](http://www.ci.minneapolis.mn.us)

**Figure 2-10: An example of a bicycle route sign used in Gresham, OR that includes distances to destinations and identifies to roadway as a bicycle boulevard**



**Figure 2.11: An example of bicycle boulevard signage used in Tucson, AZ that includes distances to destinations and identifies to roadway as a bicycle boulevard. Signage also lets riders know when the route deviates.**



Source: [www.tucsonaz.gov](http://www.tucsonaz.gov)

**Figure 2.12 An example of a street sign in Washington, DC that incorporates bicycle boulevard signage**



Source: [www.greatergreaterwashington.org](http://www.greatergreaterwashington.org)

*Figure 2.13 : An example of a street sign in Vancouver, BC that integrates a bicycle symbol too identify the street as a bicycle friendly route.*



*Figure 2.14: An example of a bicycle route sign used in Boulder, CO that incorporates bicycle boulevard signage. The complementary sign also specifies the type of facility: bike route, multi-use path, etc.*



Source: [www.bikeportland.org](http://www.bikeportland.org)

*Figure 2-15: An example of a bicycle boulevard sign that includes distances to destinations and identifies to roadway as a bicycle boulevard*



Source: [www.streetfilms.org/berkeley-bike-boulevards](http://www.streetfilms.org/berkeley-bike-boulevards)

## OPPORTUNITIES AROUND TAMPA BAY

The City and County bicycle network is evolving at a rapid rate. One of the primary goals of this project is to identify the connections that need to be made to “complete” the network over time. Because the identification, design, and construction of bicycle trails and facilities is a complicated and lengthy process, a wayfinding system is recommended to help users find the connections and use the network as it evolves.

Field review identified a number of existing facilities in Hillsborough County that appear to be isolated from each other, but actually are easy to move between. This section identifies some of the opportunities for wayfinding signage in Hillsborough County.

Figure 7-8 illustrates an approach to laying out signage, with specific signs at the decision points and providing information about destinations.

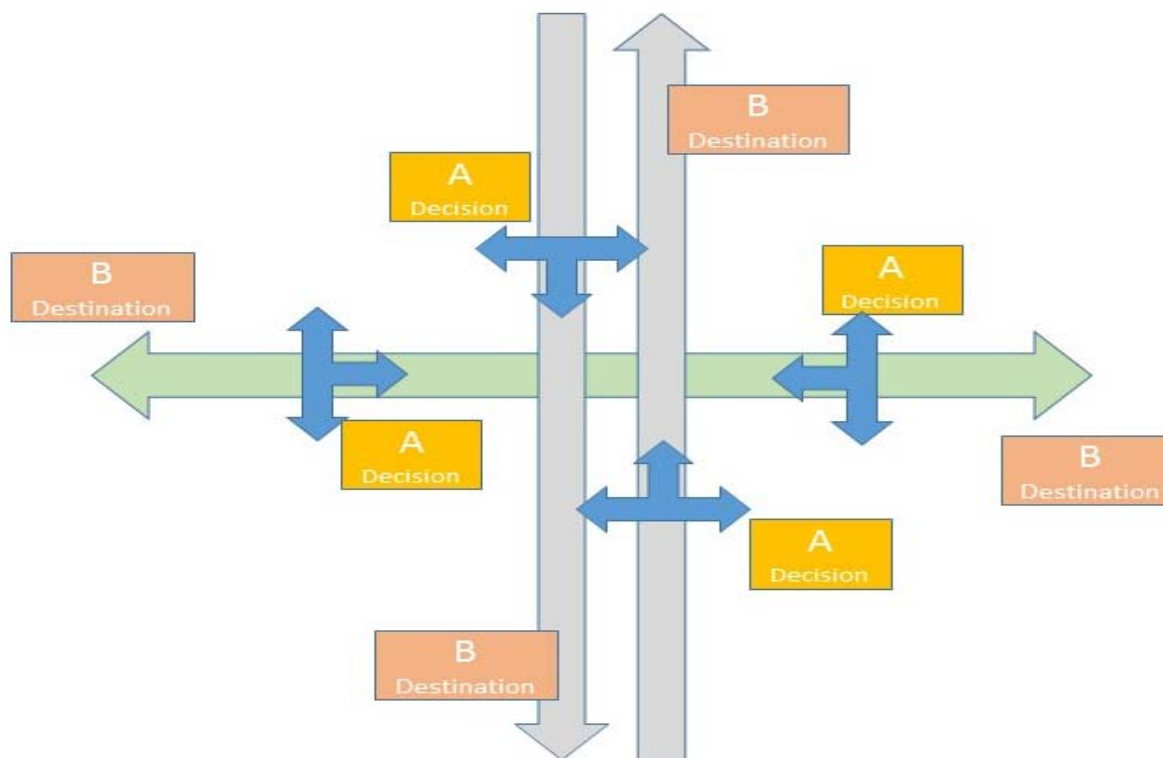


Figure 2-16 Example of potential signage locations

## Wayfinding Signage Opportunities—Three Examples

### Town N'County Trail and Upper Tampa Bay Trail

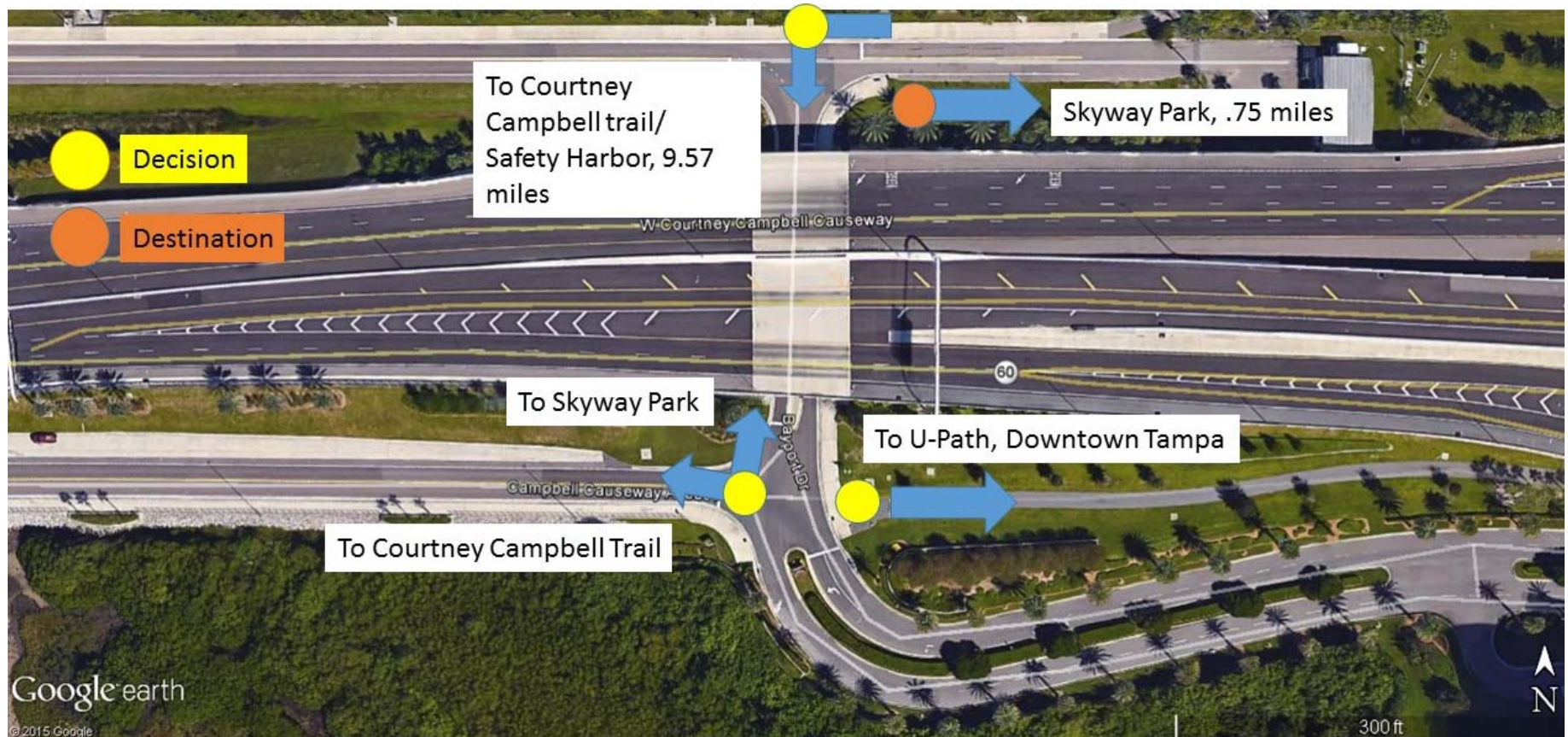
These two very popular trails are within 3/4 mile of each other but at present, there is no signage to help users navigate between them. To facilitate movement between the two trails, it is recommended that signage be placed at the Sheldon end of the Town N'Country Trail and at the Waters end of Upper Tampa Bay Trail. The proposed signs would communicate the distance between the trails and provide wayfinding at decision points along the way.



## Courtney Campbell Trail/Cypress Street

### Courtney Campbell Trail

The Courtney Campbell trail is one of the jewels in the Hillsborough County Trail system, acting as a magnificent gateway to Tampa. Once riders are on the eastern land side, however, they are not given much information about destinations, distances, or connections. Adding wayfinding signage that identifies the distances and directions to Skyway Park and downtown Tampa would enhance the user experience.

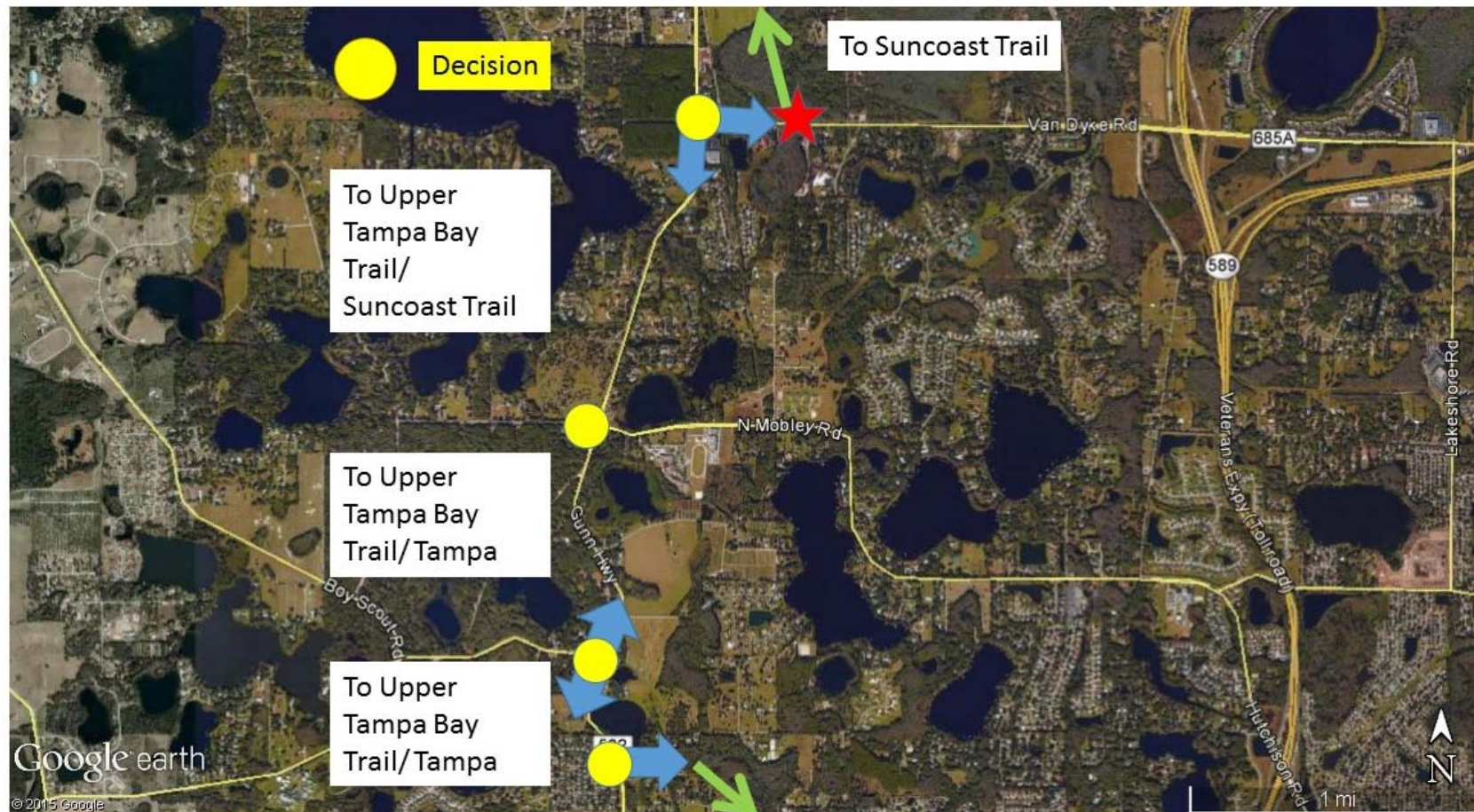


## UPPER TAMPA BAY TRAIL, Van Dyke RD to UPPER TAMPA BAY TRAIL Citrus Park

### Upper Tampa Bay Trail

The Upper Tampa Bay Trail, a paved north-south multi-use trail County provides the only mostly-uninterrupted trail experience in Hillsborough County. However, the final phase of the trail has not been funded. Until the segment is complete, providing trail users with information about how to navigate the remaining gap could increase trail use and allow users to more easily experience the trail segments that do exist.

Figure 7-12: Map showing decision points between the two trail segments where signage could be useful for users



# KEY REGIONAL TRAIL CONCEPTS

# 03





## TRAIL CONCEPTS

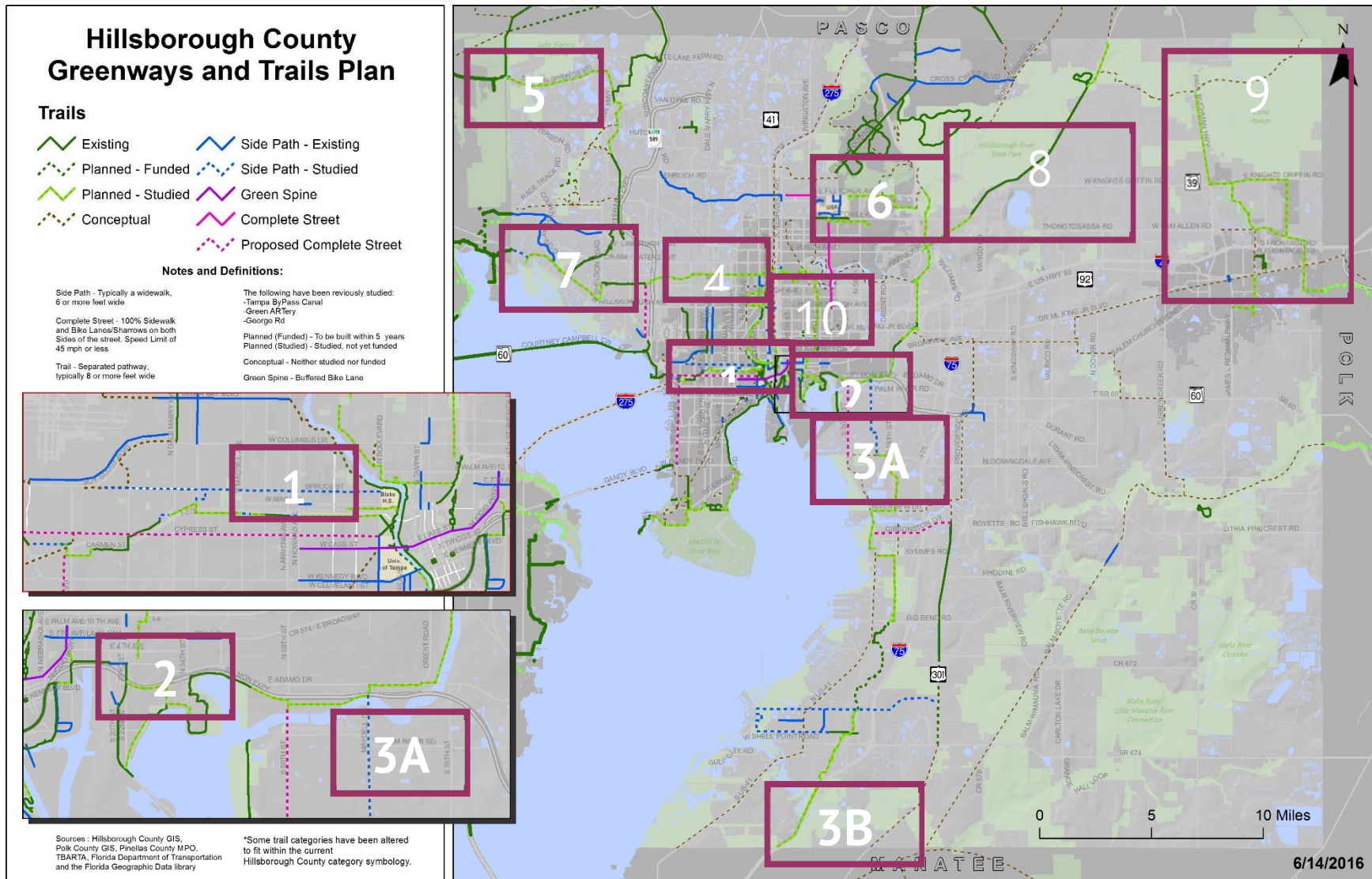
This section includes an overview map and brief description of the proposed alignment. Additional segment-by-segment detail can be found in Technical Appendix A.

Ten trails and 10– Central Tampa Perimeter Trail alignments were reviewed in detail for this plan update. They are listed below, shown on the map on the following page, and are described throughout the remainder of this chapter.

- I-275 Bikeway
- Selmon Greenway Connector
- South County Greenway Connector
- Kirby Canal Trail
- NW Hillsborough Trail
- Temple Terrace
- Memorial Bikeway
- US 301 to Pasco County
- Plant City
- Perimeter Trail

Previously-studied trails, including the Upper Tampa Bay Trail, Phase IV, the Tampa Bypass Canal Trail, and the South Coast Greenway, are included in the Priority List of trails and have had been identified in the TBARTA Long Range Transportation Plan and the Hillsborough 2040 Long Range Transportation Plans as priority trails.

Figure 3-1: Studied trails Key map



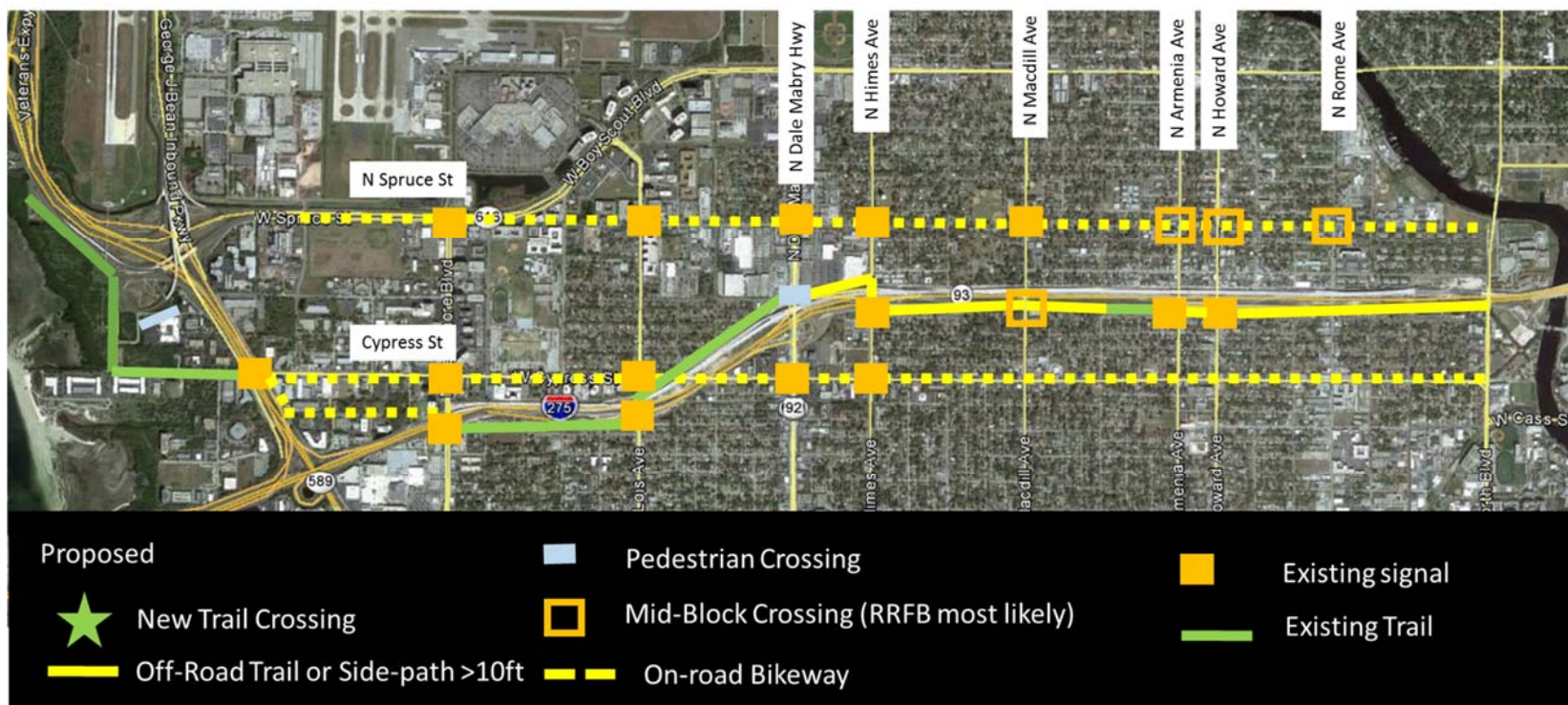
## 1. I-275 Bikeway, Cypress Point Park to Julian B. Lane Park/Downtown Riverwalk

**Jurisdiction:** City of Tampa, FDOT, Hillsborough County

The I-275 Greenway connects Cypress Point Park and the Courtney Campbell Trail (and Pinellas County) to Robles Park north of Downtown Tampa. From Cypress Point Park to Downtown Tampa, this trail would serve as a component part of the SUNTrail Southwest Coast Connector project. From the beauty of Tampa Bay and the developing Westshore district to the history of West Tampa, the energy of the parks along the way, into Downtown Tampa to Tampa

Heights, this trail has the potential to connect visitors and local residents with all that Tampa has to offer.

The primary trail alignment extends the existing/under construction trail segments along I-275 from Westshore to Church Street and from Habana Avenue to N. Armenia Avenue. In segments where I-275 right-of-way is constrained, a side-path along parallel W. LaSalle Street is recommended. Intersections with signals are recommend to be enhanced and timed to prioritize trail users when activated.



After accessing Downtown via the West River Greenway and Laurel Street Bridge, this route continues to the north at Water Works Park using FDOT right-of-way and on-street facilities to connect to Robles Park in the Tampa Heights neighborhood.

In addition to the primary trail alignment along I-275, a complementary route on Spruce Street has been identified as part of this plan. This alignment connects Westshore neighborhoods to Downtown through the community of West Tampa and through the West Tampa community redevelopment area and is proposed as either an 8-foot sidewalk, where there is space available, or as an on-road bikeway. The proposed alignment would connect to a separated bike facility east of Main Street which is included in the Housing Authority's redevelopment plan for West Tampa. The route also includes signage and enhanced signalization at key intersections.

Both options rely on a proposed trail bridge over N. Dale Mabry Highway, adjacent to I-275 which will provide an uninterrupted crossing of this busy and complex interchange area.

**Planning Cost Estimate:**

1. I-275 Greenway, Cypress Point Park to West River Greenway				
Item	Unit Cost		Quantity	Cost
Side-Path (8' Width)	\$291,000	Mile	0.52	\$151,320
Multi-Use Trail (12' Width)	\$356,000	Mile	1.2	\$427,200
Bikeway	\$240,000	Mile	0	\$0
RRFB Crossing	\$22,000	Each	4	\$88,000
PHB Crossing	\$58,000	Each	0	\$0
Ped Signal/Signal Mod	\$125,000	Each	2	\$250,000
Pedestrian Overpass	\$355	Sqft	16000	\$5,680,000
<b>Subtotal:</b>				<b>\$6,596,520</b>

This cost estimate does not include existing sections of trail or sections expected to be completed as part of currently programmed projects or reconstruction of I-275.

**Next Steps**

*I-275 Greenway*

- Coordinate with FDOT to identify state funding sources, including SUNTrail and Surface Transportation Block Grant set-aside funds.
- Coordinate with FDOT for right-of-way agreements for use of right-of-way. Also for construction of trail through SR 60 interchange project.
- Coordinate with City of Tampa to plan trail crossings at intersections.
- Conduct feasibility study for Dale Mabry trail bridge

*Spruce Street Bikeway/other alternatives*

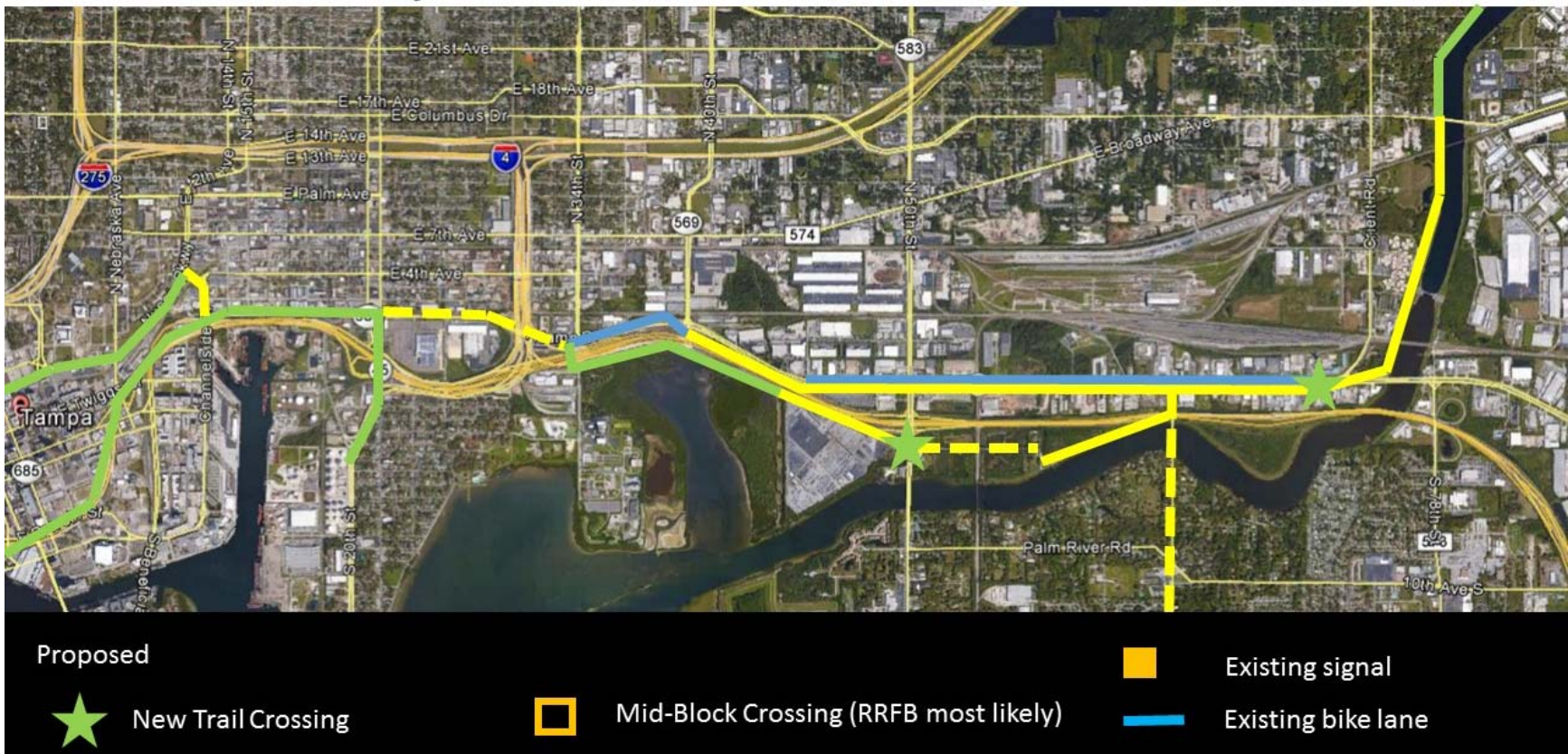
- Coordinate with City of Tampa to develop plan for marked bikeway, with transportation priority given to bike travel.
- Coordinate with City of Tampa to plan trail crossings at intersections.
- Coordinate with Housing Authority on design for Spruce Street.
- Review Cypress Street and Grey Street plans to identify other opportunities for east-west connections through from West Shore to Downtown Tampa.

## 2. Selmon Greenway Connector

### Jurisdiction: City of Tampa, Hillsborough County

Connecting the existing Selmon Greenway to the Green Spine at E. 3<sup>rd</sup> Avenue provides a connection from the West Tampa neighborhood through Downtown Tampa into Ybor City and points south. This route allows bicyclists and walkers to experience rapidly-developing Channelside, historic Ybor City, and the bustling activity of active Port Tampa and is also a component part of the SUNTrail Southwest Coast Connector project.

The multi-use trail picks up at the end of the Selmon Greenway and travels east via the existing McKay Bay Greenway south of the Selmon Expressway. The primary alignment continues as a multi-use trail to S. 50th Street and then transitions to an on-road bikeway along E. Washington Street and a small segment of S. 56th Street. Continuing as a multi-use path along the Palm River, the trail provides users the opportunity to experience the beauty of the waterway.



The Maydell Drive Bridge over the Palm River has been identified as a primary passage south. This bridge has been closed because of structural issues but will either be rehabilitated or reconstructed by Hillsborough County. It is recommended that any new bridge design incorporate a shared-use path for cyclists and pedestrians to complete the Southwest Coast Connector trail from downtown across the Palm River.

At the Maydell Bridge, the path also continues north along Maydell Drive to Adamo Drive where a multi-use trail has been proposed as part of the Tampa Bypass Canal Trail Feasibility Study. This multi-use trail uses existing right-of-way and crosses Adamo at Orient Drive, where it connects to the Bypass Canal Trail along the Tampa Bypass Canal.

**Planning Cost Estimate:**

2. Selmon Greenway, Channelside Drive to Maydel Drive				
Item	Unit Cost	Quantity		Cost
Side-Path (8' Width)	\$291,000	Mile	0.75	\$218,250
Multi-Use Trail (12' Width)	\$356,000	Mile	1.35	\$480,600
Bikeway	\$240,000	Mile	0.5	\$120,000
RRFB Crossing	\$22,000	Each	1	\$22,000
PHB Crossing	\$58,000	Each	0	\$0
Ped Signal/Signal Mod	\$125,000	Each	1	\$125,000
Pedestrian Overpass	\$355	Sqft	0	\$0
<b>Subtotal:</b>				<b>\$965,850</b>

This cost estimate does not include existing sections of trail or costs to rehab the Maydell Drive Bridge. Reconstruction of the sidewalk between 22nd Street and 34th Street as a side-path is included.

**Next Steps**

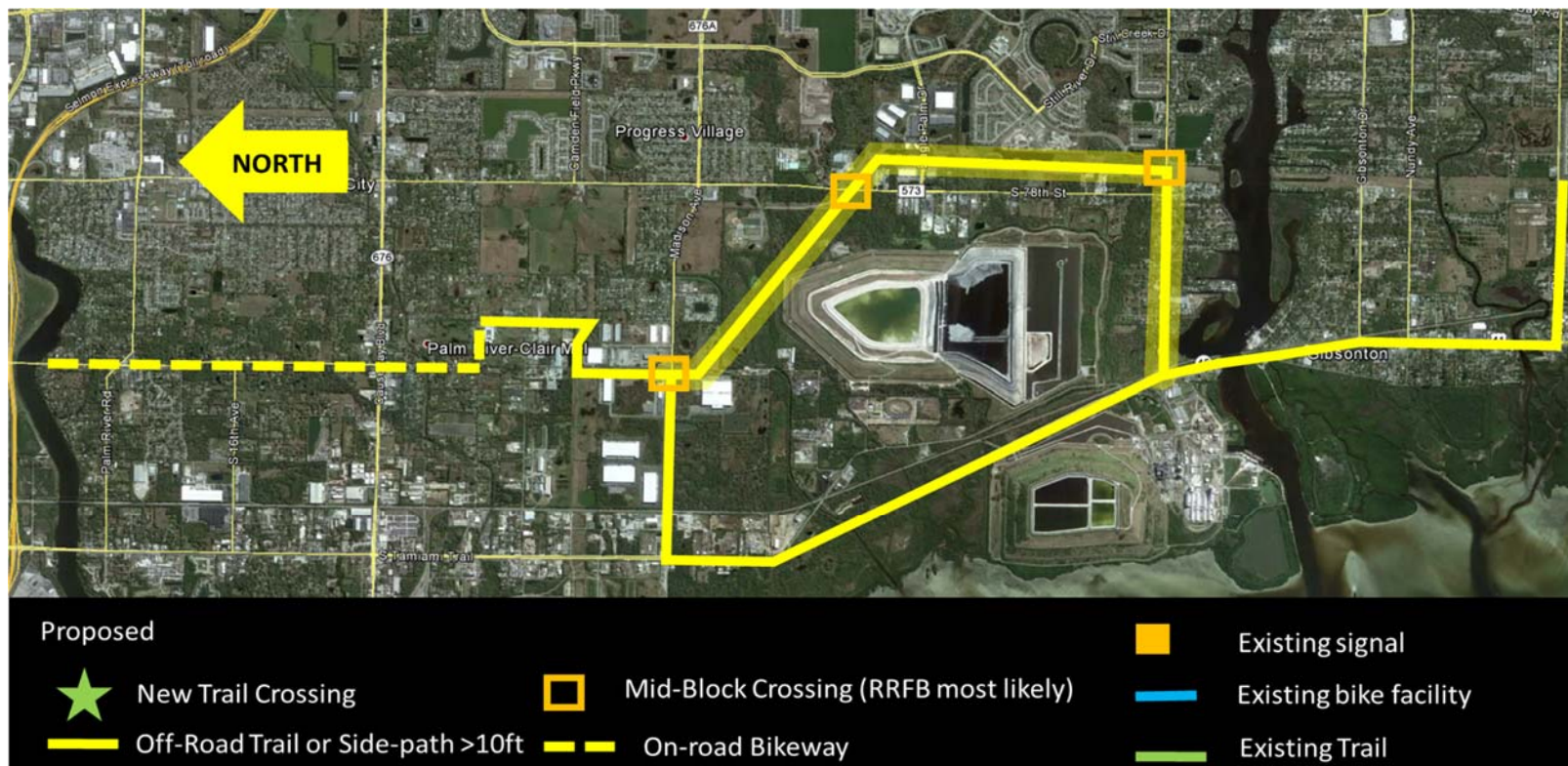
- Coordinate with FDOT to identify state funding sources, including SUNTrail and Surface Transportation Block Grant set-aside funds.
- Coordinate with FDOT and Tampa Hillsborough Expressway Authority for right-of-way agreements for use of right-of-way.
- Coordinate with City of Tampa, and FDOT to plan trail crossings at intersections.
- Coordinate with Hillsborough County for inclusion of shared-use path in rehabilitated or reconstructed Maydell Drive Bridge

### 3a. South County Greenway Connector (Palm River to Symmes Rd)

#### Jurisdiction: Hillsborough County

This proposed trail, in conjunction with the Selmon Greenway Connector, provides for a missing link in the SUNTrail Southwest Coast Connector by completing the link between Downtown Tampa and the planned South County Greenway. This project, in conjunction with the South County Greenway has the potential to connect seven communities within Hillsborough County and south to Manatee County.

The proposed trail continues from the Maydell Drive bridge as a bikeway along Maydell Drive, 36th Avenue South, and S. 66th Street with a short segment of greenway along the S. 66th Street right-of-way between 36th Avenue South and Hartford Street. An off-road trail is proposed from S. 66th Street along the TECO easement to Riverview Drive with a shared use path connecting to US 41 along the south side of Riverview Drive then along the west side of US 41 to Symmes Road and back to the TECO Easement to connect to the beginning of the South County Greenway.



## Planning Cost Estimate

3a. South County Greenway Connector (Palm River to Symmes Rd)				
Item	Unit Cost		Quantity	Cost
Side-Path (8' Width)	\$291,000	Mile	4.3	\$1,251,300
Multi-Use Trail (12' Width)	\$356,000	Mile	4.05	\$1,441,800
Bikeway	\$240,000	Mile	3.25	\$780,000
RRFB Crossing	\$22,000	Each	3	\$66,000
PHB Crossing	\$58,000	Each	0	\$0
Ped Signal/Signal Mod	\$125,000	Each	0	\$0
Pedestrian Overpass	\$355	Sqft	0	\$0
<b>Subtotal:</b>				<b>\$3,539,100</b>

Actual costs may be lower since this does not include a credit for the marginal cost of providing a standard sidewalk as part of the US-41 widening project.

### Next Steps

- Coordinate with FDOT to identify state funding sources, including SUNTrail and Surface Transportation Block Grant set-aside funds.
- Coordinate with FDOT to include consideration of a shared-use pathway along US 41 as part of the District's PD&E Study. This study already contemplates a 12 foot sidepath on the bridges over the Alafia River and Bullfrog Creek.
- Coordinate with Hillsborough County for preliminary engineering of county road trail and bikeway segments

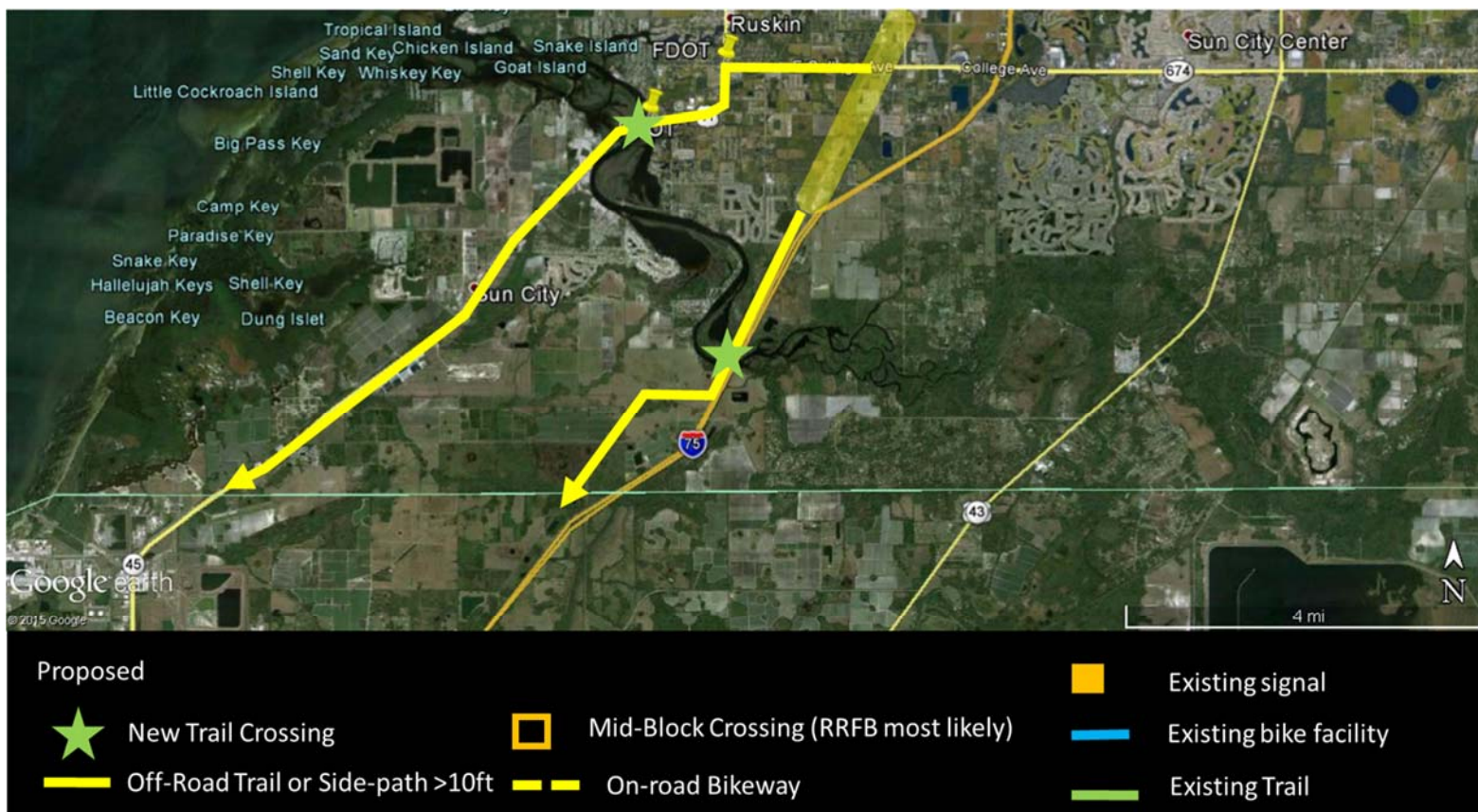


### 3b. South County Greenway Connector (I-75 Rest Area to Manatee County)

#### Jurisdiction: Hillsborough County, FDOT

The South Coast Greenway was the subject of previous study and is a high priority for the County. As studied, its terminus is the rest stop at I-75 just north of the Little Manatee River. Options to complete the connection to Manatee County as part of the SUNTrail Southwest Coast Connector project include:

- 1) A greenway along I-75 in the TECO easement including a new trail bridge over the Little Manatee River adjacent and west of I-75.
- 2) Construction of a shared use path from the South Coast Greenway along either College Avenue or 14th Avenue South to US 41 and Construction of a shared use path along US 41 into Manatee County including bridge improvements or a new bridge across the Little Manatee River.



## Planning Cost Estimate

<b>3b. South County Greenway Connector (I-75 Rest Area to Manatee County)</b>				
<b>Item</b>	<b>Unit Cost</b>		<b>Quantity</b>	<b>Cost</b>
Side-Path (8' Width)	\$291,000	Mile	0	\$0
Multi-Use Trail (12' Width)	\$356,000	Mile	4.2	\$1,495,200
Bikeway	\$240,000	Mile	0	\$0
RRFB Crossing	\$22,000	Each	0	\$0
PHB Crossing	\$58,000	Each	0	\$0
Ped Signal/Signal Mod	\$125,000	Each	0	\$0
Pedestrian Overpass	\$355	Sqft	22400	\$7,952,000
			<b>Subtotal:</b>	<b>\$9,447,200</b>

This estimate is for the primary alignment with a new bridge across the Little Manatee River just west of I-75.

### Next Steps

- Coordinate with FDOT to include consideration of a shared-use pathway along US 41 as part of the District's planned PD&E Study. and/or initiate a new PD&E study to determine a trail alignment across the Little Manatee River into Manatee County
- Coordinate accordingly with Manatee County

## 4. Kirby Canal Trail

**Jurisdiction:** City of Tampa, Hillsborough County, SWFWMD

The Kirby Canal Trail connects the Town 'N Country neighborhood to the neighborhoods and employment opportunities in the Carrollwood area in northwest Tampa. This trail is primarily along the Kirby Canal (Canal G) and, much like the Town N' County Trail to the west, travels through both developed and natural areas. The creek provides a respite from the surrounding development.

This connection will provide a safe, off-street route and improve overall citizen mobility and connectivity to the greater greenway system including the proposed Perimeter Trail in Central Tampa via a bikeway along Kirby Street to the Lowry Park Zoo.



## Planning Cost Estimate

4. Kirby Canal Trail			
Item	Unit Cost	Quantity	Cost
Side-Path (8' Width)	\$291,000 Mile	0	\$0
Multi-Use Trail (12' Width)	\$356,000 Mile	3.00	\$1,068,000
Bikeway	\$240,000 Mile	0.25	\$60,000
RRFB Crossing	\$22,000 Each	4	\$88,000
PHB Crossing	\$58,000 Each	0	\$0
Ped Signal/Signal Mod	\$125,000 Each	2	\$250,000
Pedestrian Overpass	\$355 Sqft	0	\$0
<b>Subtotal:</b>			<b>\$1,466,000</b>

This estimate is for the primary alignment and does not include costs to cross under the Veterans Expressway or over the CSX tracks.

## Next Steps

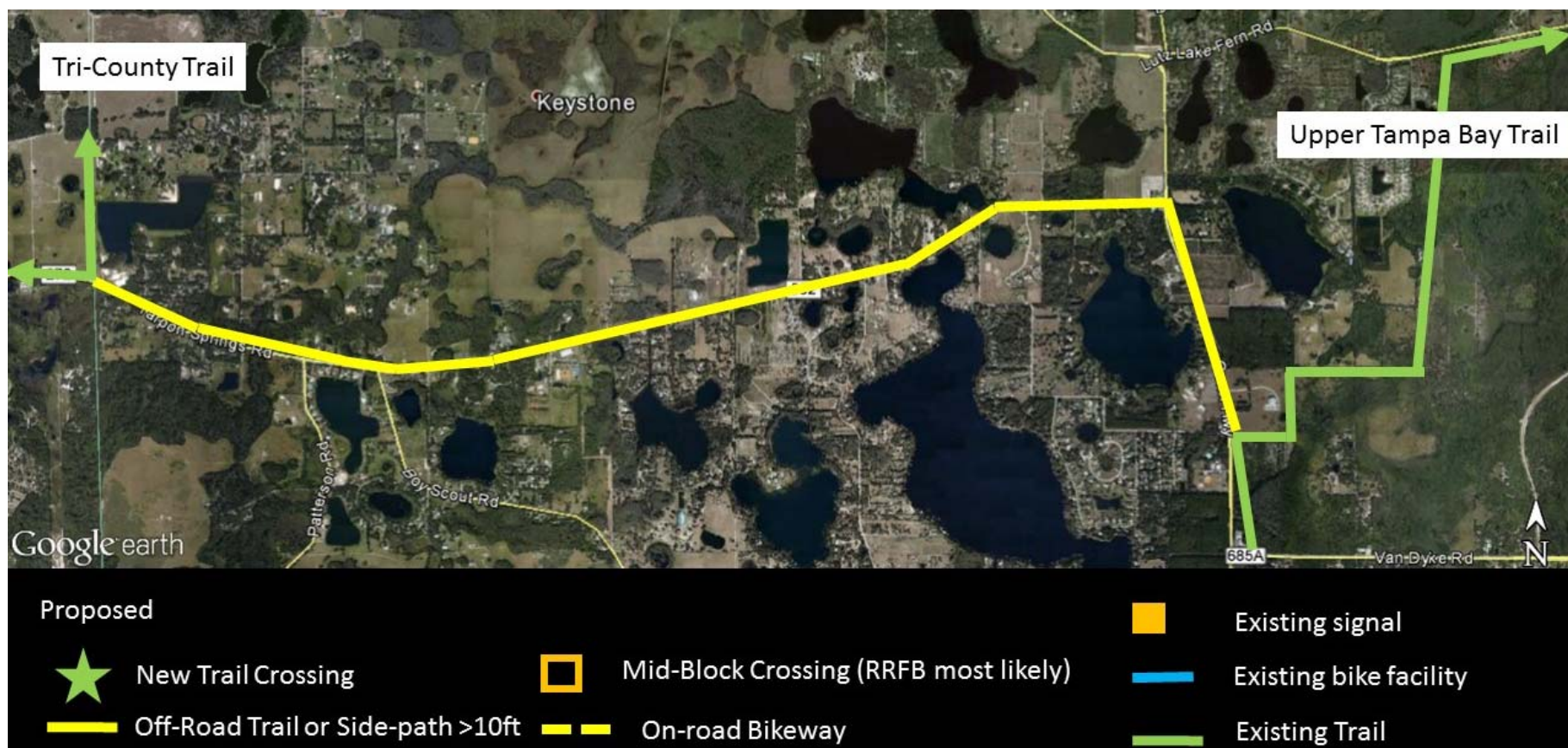
- Coordinate with Hillsborough County, the Turnpike Authority, and CSX to determine feasibility of trail crossings under the Veterans Expressway and across the CSX tracks.
- Program a PD&E study to address environmental and neighborhood impacts of the proposed trail alignment along the creek.

## 5. Northwest Hillsborough/Tri-County Connector

### Jurisdiction: Hillsborough County

Connecting the northwest region of Hillsborough County provides opportunities for the Keystone/Odessa community to realize its livable communities plan. The proposed trail along Tarpon Springs Road provides a connection from the Upper Tampa Bay Trail to the Tri-County Trail in Pinellas and Pasco counties.

This connection fills an important and long-identified gap in the county trail network and capitalizes on existing trail infrastructure. Most important to the Keystone/Odessa community is keeping its rural character and capitalizing on the available greenspace along the routes identified 2015 Scenic Corridor Map in the Future Land Use Element.



## Planning Cost Estimate

5. Northwest Hillsborough/Tri-County Connector			
Item	Unit Cost	Quantity	Cost
Side-Path (8' Width)	\$291,000 Mile	0	\$0
Multi-Use Trail (12' Width)	\$356,000 Mile	6.00	\$2,136,000
Bikeway	\$240,000 Mile	0	\$0
RRFB Crossing	\$22,000 Each	0	\$0
PHB Crossing	\$58,000 Each	0	\$0
Ped Signal/Signal Mod	\$125,000 Each	0	\$0
Pedestrian Overpass	\$355 Sqft	0	\$0
<b>Subtotal:</b>			<b>\$2,136,000</b>

## Next Steps

- Coordinate with Hillsborough County for preliminary engineering and to verify right-of-way availability.

## 6. Temple Terrace Trails

### Jurisdiction: City of Tampa, Temple Terrace

The University Area Community is located adjacent to the University of South Florida and its 40,000+ students, as well as Temple Terrace's roughly 25,000 residents. This trail along Fletcher Avenue provides a trail connection to the proposed Tampa Bypass Canal Trail and the recreational opportunities in Flatwoods Park, as well as a connection to southeast Tampa, Ybor City, Channelside, and points south.

Strategies in the Livable Communities Element for the USF area

include the facilitation of non-motorized travel by creating pedestrian links (sidewalks/trails) and safe crossings.

The USF trail illustrated below was studied during this project. The Temple Terrace trail project identified on page 51 was identified for future study by the City of Temple Terrace and endorsed by the MPOs' BPAC to be included in the plan and represent additional opportunities for great connectivity within the City.



A complete street project is also proposed for Temple Terrace. This project, along Temple Terrace Highway, from Glen Arven Avenue to 78th Street, shown in the map on the right, will provide connectivity across the Hillsborough River.



### Next Steps

- Coordinate with Hillsborough County for preliminary engineering and to verify right-of-way availability.

### Planning Cost Estimate

6. USF Trail/ByPass Canal Trail Connector				
Item	Unit Cost		Quantity	Cost
Side-Path (8' Width)	\$291,000	Mile	2.2	\$640,200
Multi-Use Trail (12' Width)	\$356,000	Mile	0.50	\$178,000
Bikeway	\$240,000	Mile	0.8	\$192,000
RRFB Crossing	\$22,000	Each	0	\$0
PHB Crossing	\$58,000	Each	2	\$116,000
Ped Signal/Signal Mod	\$125,000	Each	0	\$0
Pedestrian Overpass	\$355	Sqft	0	\$0
<b>Subtotal:</b>				<b>\$1,126,200</b>

This estimate does not include costs to reconfigure the cross section of the Fletcher Avenue Hillsborough River Bridge or for the complete street project along Temple Terrace Highway.



During the course of the study, this conceptual trail was identified by Temple Terrace. It is proposed using land owned by Hillsborough County, CSX and TECO.








### Planning Cost Estimate

A planning cost estimate will be developed at a later stage of project development.

### Next Steps

- Continue to coordinate with the City of Temple Terrace to identify funding sources
- Coordinate with Hillsborough County, TECO and CSX on the availability of the land for use as a trail.



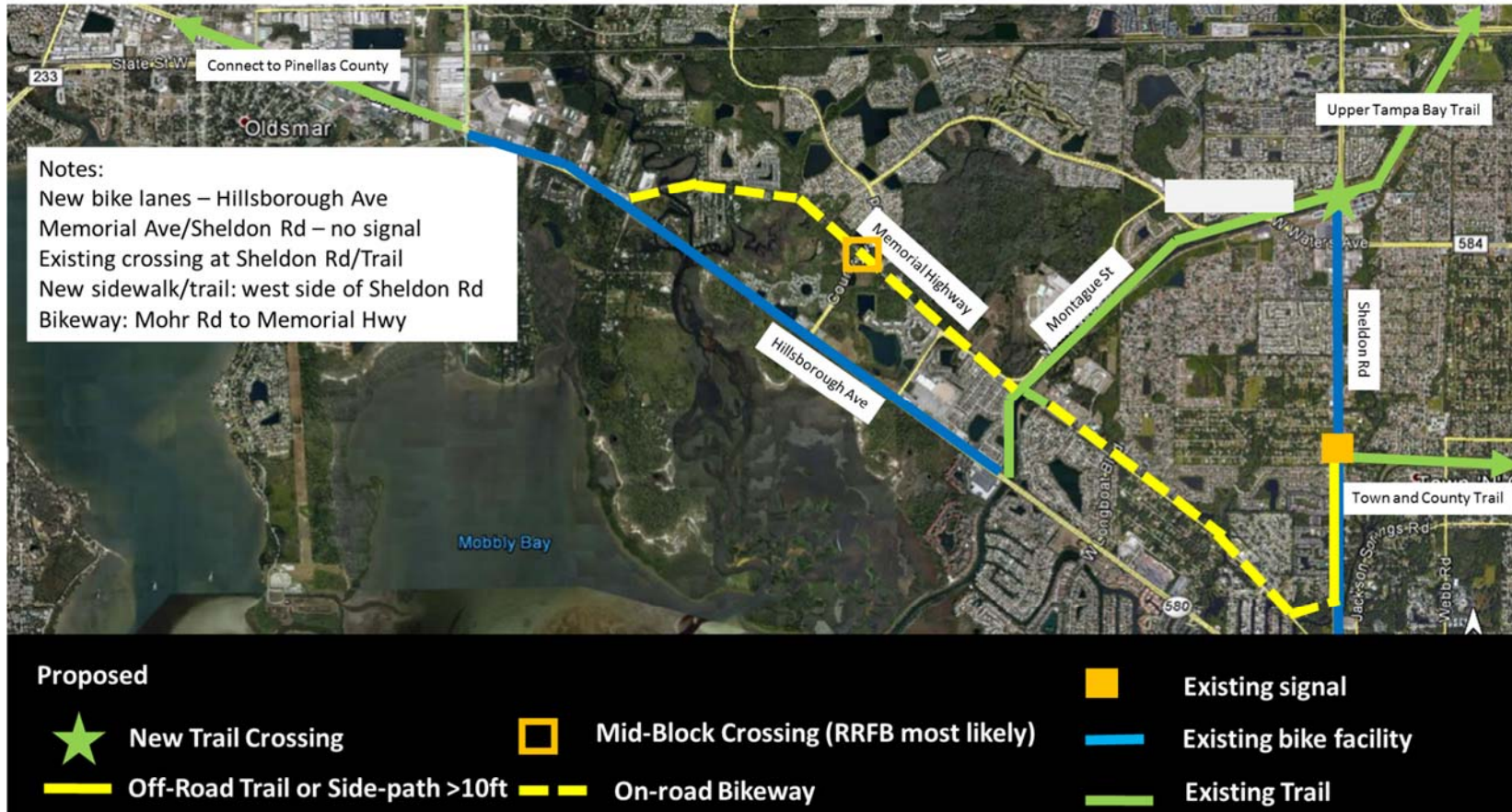
<b>Proposed</b>			Existing signal	
 New Trail Crossing		Mid-Block Crossing (RRFB most likely)		Existing bike lane/shared lane marking
 Proposed Off-Road Trail or Side-path >8ft		Proposed On-road Bikeway		Existing trail

## 7. Memorial Bikeway

### Jurisdiction: City of Tampa, Hillsborough County

To fill existing gaps between the Pinellas County, the Upper Tampa Bay Trail, and the Town 'N Country Trail, a bikeway and additional bike and pedestrian connections are recommended. The proposed alignment includes a proposed trail allowing north/south travel along Sheldon Road and uses the existing signal at the Town N' Country Trail and Sheldon Road. A bikeway along Old Memorial Highway

provides a better bicyclist alternative than the bike lanes on Hillsborough Avenue, and an 8-foot side path is recommended along Hillsborough Avenue to connect to the trails in Oldsmar. A connection along both Memorial Highway and Sheldon Road provides connectivity, safety, and recreation opportunities. The Livability Element for Town 'N Country in the Hillsborough County Comprehensive Plan outlines these three values in the vision statement as well as in goals and strategies of the community.



## Planning Cost Estimate

7. Memorial Bikeway			
Item	Unit Cost	Quantity	Cost
Side-Path (8' Width)	\$291,000 Mile	1.25	\$363,750
Multi-Use Trail (12' Width)	\$356,000 Mile	0.00	\$0
Bikeway	\$240,000 Mile	3.9	\$936,000
RRFB Crossing	\$22,000 Each	1	\$22,000
PHB Crossing	\$58,000 Each	0	\$0
Ped Signal/Signal Mod	\$125,000 Each	0	\$0
Pedestrian Overpass	\$355 Sqft	0	\$0
<b>Subtotal:</b>			<b>\$1,321,750</b>

## Next Steps

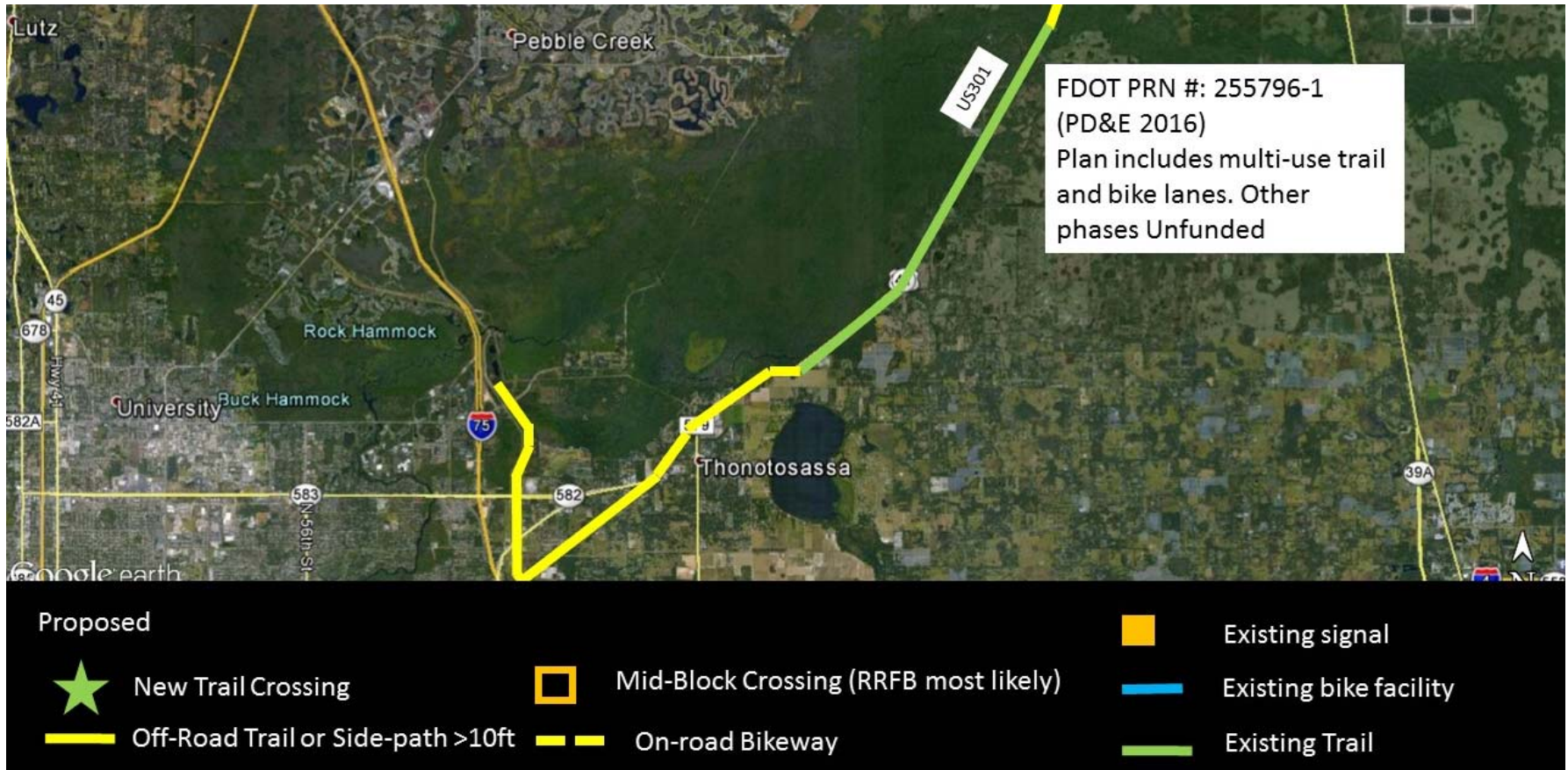
- Coordinate with Hillsborough County for preliminary engineering and to verify right-of-way availability.

## 8. US 301 to Pasco County

### Jurisdiction: Hillsborough County

The Old Fort King Trail extension, both south and north on US 301, provides the community of Thonotosassa and unincorporated portions of the county access to potential Pasco County connections and to the greater Hillsborough greenway system. Recreational opportunities

that have been identified in the Livable Communities Element such as biking, running, and horseback-riding would be fulfilled with a trail connection and would offer a place for community activities and events to build a sense of community. A trail that traverses the rural country characteristic of Thonotosassa and surrounding areas will preserve and showcase this unique sense of place.



## Planning Cost Estimate

8. US 301 Trail to Pasco County				
Item	Unit Cost	Quantity	Cost	
Side-Path (8' Width)	\$291,000	Mile	0	\$0
Multi-Use Trail (12' Width)	\$356,000	Mile	12.75	\$4,539,000
Bikeway	\$240,000	Mile	0	\$0
RRFB Crossing	\$22,000	Each	0	\$0
PHB Crossing	\$58,000	Each	0	\$0
Ped Signal/Signal Mod	\$125,000	Each	0	\$0
Pedestrian Overpass	\$355	Sqft	0	\$0
<b>Subtotal:</b>			<b>\$4,539,000</b>	

This estimate includes both segments within and on either end of the FDOT PD&E study.

## Next Steps

- Planning for this trail is incorporated in FDOT's PD&E Study for the US 301 Corridor
- Continue to coordinate with FDOT as project progresses

## 9. Plant City Trails

### Jurisdiction: Hillsborough County, Plant City

Plant City is a growing community that affords its residents a high quality of life and seeks to provide residents and visitors with transportation options. The proposed trails connect Plant City to the trail systems in Polk and Pasco counties and create connections within the city. Directly addressing issues raised in the 2009 Comprehensive Plan of Plant City, a trail network in the city promotes child-friendly

environments, increases safety and mobility of those dependent on non-automotive forms of transportation, and fills the future needs identified in the Transportation Element. With increased interest in the environment, health, and economy, cycling and walking are becoming more attractive to Plant City residents and those looking to visit its burgeoning downtown. This proposed trail system is recommended for further study and represents an opportunity for the MPO and the City of Plant City to collaborate.



## Planning Cost Estimate

9. Plant City Trails				
Item	Unit Cost	Quantity	Cost	
Side-Path (8' Width)	\$291,000	Mile	0	\$0
Multi-Use Trail (12' Width)	\$356,000	Mile	16.00	\$5,696,000
Bikeway	\$240,000	Mile	0	\$0
RRFB Crossing	\$22,000	Each	0	\$0
PHB Crossing	\$58,000	Each	0	\$0
Ped Signal/Signal Mod	\$125,000	Each	0	\$0
Pedestrian Overpass	\$355	Sqft	0	\$0
<b>Subtotal:</b>				<b>\$5,696,000</b>

This estimate needs to be refined as specific trail alignments and major roadway crossing needs are defined.

## Next Steps

- Coordinate with the City of Plant City, Hillsborough County, and neighboring counties to develop specific trail alignments and conduct preliminary engineering studies.

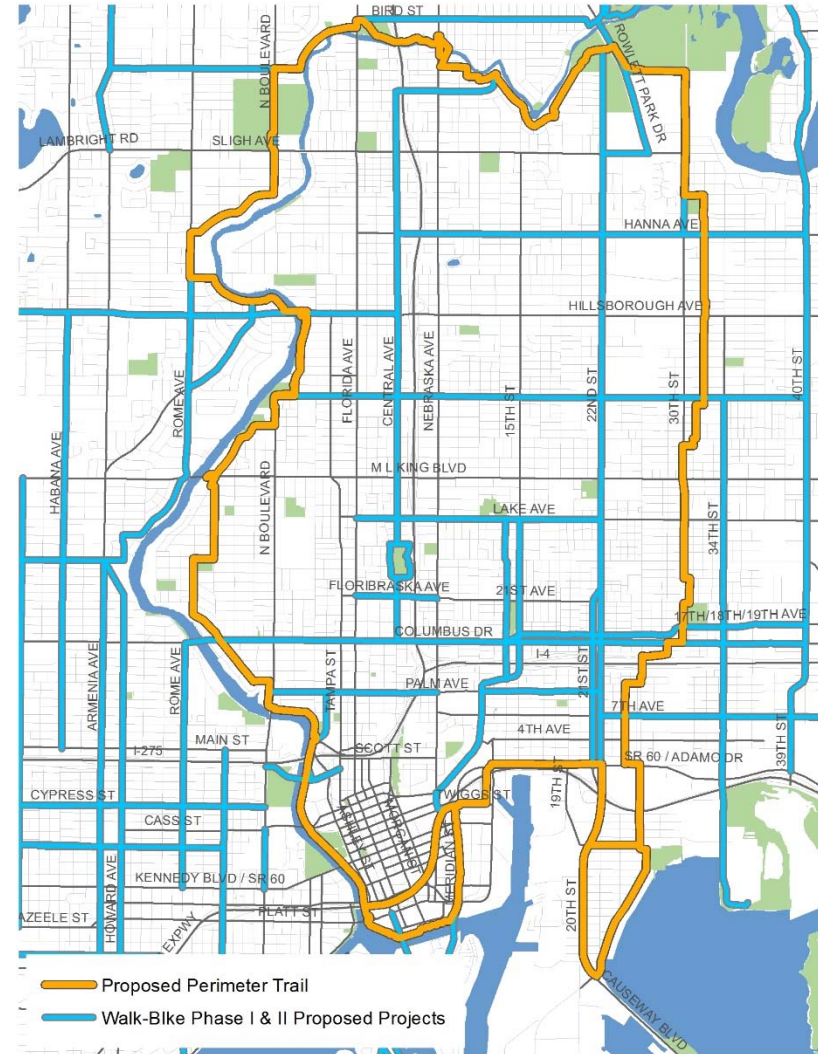
## 10. Perimeter Trail

### Jurisdiction: City of Tampa

The concept for the Perimeter Trail was born from a Central Tampa, neighborhood-based effort to identify and connect neighborhood assets, the Hillsborough River, Tampa's green spaces and the Greenways and Trails systems with better pedestrian and cycling facilities. The Hillsborough County Metropolitan Planning Organization (MPO) in conjunction with the City of Tampa has identified an alignment of on- and off-street facilities to complete a loop of bicycle and pedestrian facilities around Central Tampa.

The identification of the Perimeter Trail, along with the identification of possible bicycle and pedestrian connections in the New Tampa area, form the third phase of the City of Tampa's Walk-Bike Plan. The previous two phases of the Walk-Bike Plan looked at the City of Tampa, south of Fletcher Avenue, and identified over 100 cost-feasible bicycle and pedestrian infrastructure projects. These projects were designed to provide people with enhanced mobility options so they can move throughout the city without relying exclusively on automobiles.

The Perimeter Trail represents an attempt to bring neighborhoods together to provide a safe and comfortable transportation option between many of the city's notable neighborhoods and parks for families, walkers, joggers, and cyclists of all levels of experience





Perimeter Trail Segments									
Cost Element	A	B	C	D	E	F	G	H	All Segments
<b>Construction</b>	\$164,700	\$276,100	\$342,400	\$8,500	\$612,200	\$213,100	\$293,900	\$57,900	\$1,968,800
<b>Signing, Marking, &amp; Signalization</b>	\$21,900	\$10,900	\$8,200	\$12,700	\$13,200	\$21,500	\$18,200	\$248,800	\$355,400
<b>Utility Pole Relocation</b>	\$45,000	\$185,000	\$50,000	\$0	\$10,000	\$105,000	\$10,000	\$55,000	\$460,000
<b>Subtotal</b>	\$231,600	\$472,000	\$400,600	\$21,200	\$635,400	\$339,600	\$322,100	\$361,700	\$2,784,200
<b>Contingency &amp; Other</b>	\$104,600	\$213,400	\$181,100	\$9,600	\$287,200	\$153,500	\$145,600	\$163,500	\$1,258,500
<b>Design</b>	\$50,400	\$102,800	\$87,300	\$4,600	\$138,400	\$73,900	\$70,200	\$78,800	\$606,400
<b>CEI</b>	\$67,200	\$137,000	\$116,300	\$6,200	\$184,500	\$98,600	\$93,500	\$105,000	\$808,300
<b>Total</b>	\$453,800	\$925,200	\$785,300	\$41,600	\$1,245,500	\$665,600	\$631,400	\$709,000	\$5,457,400
<b>Wayfinding</b>									\$300,000
<b>Lighting</b>									\$600,000
<b>Drainage</b>									\$400,000
<b>Grand Total</b>									\$6,757,400

# IMPLEMENTATION AND ADVOCACY

# 04



## IMPLEMENTATION AND ADVOCACY

This plan update builds on the foundational work done in previous plans and serves as a guide for the development of the Greenway and Trail Network in Hillsborough County. The challenge for any plan is implementation, and this section outlines the context and some strategies for achieving the vision of a coordinated and connected greenways and trails and bicycle network.

Successful implementation will require the continued coordination by the Tampa and Hillsborough Greenways and Trails Committees, the cities of Temple Terrace and Plant City, the MPO as well as THE Tampa Bay Area Regional Transit Agency (TBARTA).

The map and plan have been refined to reflect the increased interest in local and regional connectivity and in building a true network of accessible bicycle and pedestrian facilities that reflect a commitment to provide transportation choices and access to employment opportunities.

Funding eases implementation and in 2015 a new opportunity for trail funding became available. The Florida Legislature approved legislation to develop the Florida Shared- Use Non-motorized Trail Network (SUNTrail). SUNTrail projects will be included in the annual FDOT work program and will be selected by competitive application. Office of Greenways and Trails will continue to identify regional trails for priority SUNTrail funding. Individual trails on the Priority Network can also be submitted by individual application for some of the available funding.

In 2015 a new opportunity for trail funding became available. The Florida Legislature approved legislation to develop the Florida Shared-Use Non-motorized Trail Network (SUNTrail). SUNTrail projects will be included in the annual FDOT work program and will be selected by competitive application. Office of Greenways and Trails will continue to identify regional trails for priority SUNTrail funding. Individual trails on the Priority Network can also be submitted by individual application for some of the available funding.

Projects have been identified that will help organize the process of getting these trails built. As mentioned in Chapter 3, the following categories are proposed.

- **Key Intra-County Connections** – include projects identified in this study as well as several existing city and county priorities defined by prior planning studies or this study with the potential to contribute to the system or complete key regional connections including:
  - South County Greenway, Upper Tampa Bay Trail phase VI, and the Bypass Canal Trail
- **SunTrail eligible** – trail projects that are identified on the Greenways and Trails Council Priority Trails map are eligible for a specific state fund that has been created to help develop the statewide trail system.
  - I-275 Corridor Trail, Palm River/Selmon Expressway Trail, South County Trail extension, South Tampa Greenway

- **Other Project Concepts** – additional trail concepts that require further study to vet for feasibility and/or important to completing local network connectivity.
  - South Spruce Street, the West River Trail, the Perimeter Trail

All trails will be prioritized based on input, need, and available funding.

The maps included on the following pages serve to illustrate the overall plan, the opportunities where the trail system aligns with the trails eligible for the SUNTrail funding source and the regional perspective. The map on page 64 illustrates the alignments that are SUNTrail priority trails. As mentioned, these trails are eligible for state funding through FDOT. The map on page 65 illustrates the updated Greenways and Trails plan. The table on page 66 lists the trails studied for this plan update, or those previously studied and the map on page 67 illustrates the 2015 regional priorities.

Figure 4-1: SUNTrail funding eligible trail projects in Hillsborough County

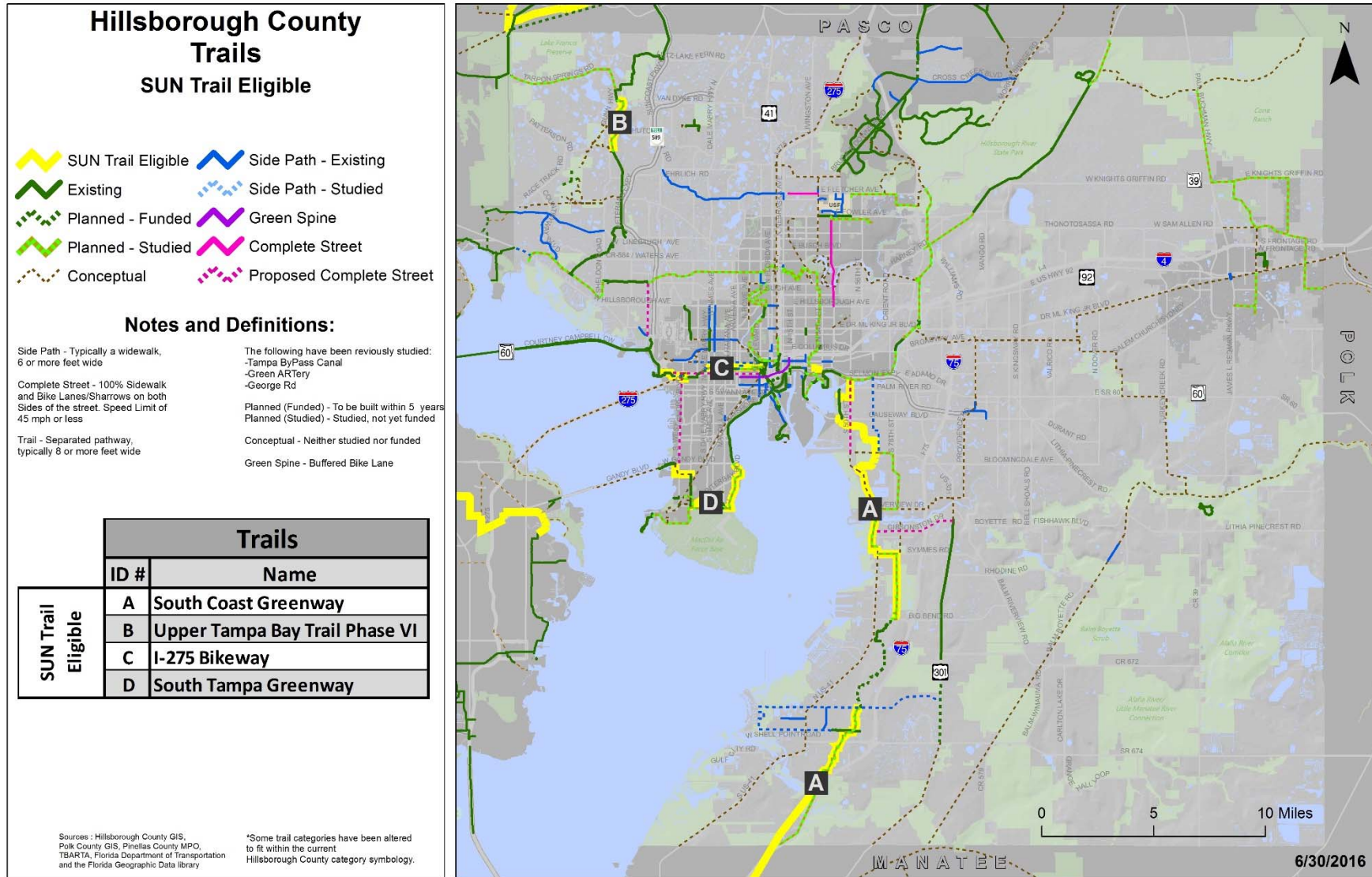
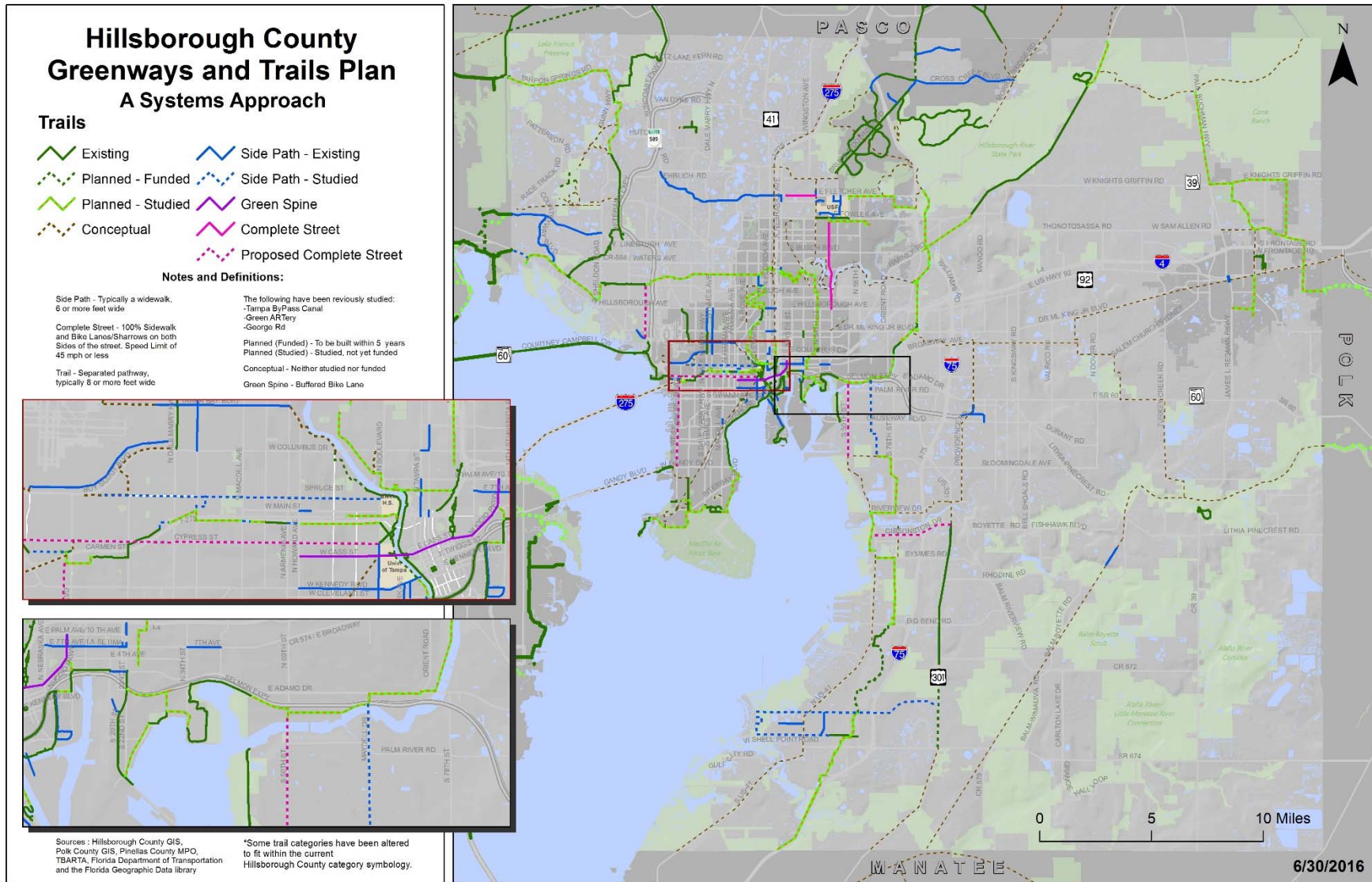


Figure 4-2: The Greenways and Trails plan



**Table 4-1: Trail concepts**

<b>Name</b>	<b>Description</b>	<b>Cost Estimate</b>	<b>SUNTrail funding eligible</b>
South County Greenway	Greenway Alafia River and Little Manatee River and between US 41 and I-75	\$12.6m	x
Upper Tampa Bay Trail, Ph. IV	Greenway facility completing Upper Tampa Bay Trail and connecting to Suncoast Trail	\$ 5.0m	
South Tampa Greenway	Connects the trail along Bayshore Boulevard with the proposed Gandy Bridge Trail	TBD	x
Bypass Canal Trail	Greenway along Hillsborough River Bypass Canal from SR 60 north to Flatwoods Park	\$24.3m	
I-275 Bikeway	Mix of greenway and sidepath facilities to close connection between completed I-275 trail running from Cypress Point Park to Julian B. Lane Park and the Downtown Riverwalk	\$ 8.5m	x
Selmon Greenway Connector	Mix of greenway and side-path facilities to close connection between completed and funded trail sections into Downtown Tampa and Tampa Bypass Canal Trail and South County Connector (A)	\$ 1.1m	x
South County Connector	Mix of greenway, complete street, and side-path facilities to link Palm River/Selmon Connector to South County Greenway via Maydell Drive, US 41, and other local roads	\$ 8.1m	x
South County Connector	Connection from planned South County Greenway across Little Manatee River into Manatee County along either US 41, I-275, or US 301 corridors	TBD	x
Kirby Canal Trail	Extension of Town 'N Country Greenway connecting back into Tampa and tying into Perimeter Trail plan	\$ 5.1m	
NW Hillsborough Tri-County Connector	Shared-use path along Gunn Highway and Tarpon Springs Road connecting Upper Tampa Bay Trail, Phase VI and Suncoast Trail to planned Tri-County Trail	\$ 2.6m	
Temple Terrace Trails	Trail connections along Fletcher Avenue and a TECO easement connecting Temple Terrace to project and USF to planned Bypass Canal Trail	\$ 1.6m	
Memorial Bikeway	Connection from Town 'N Country Greenway to Upper Tampa Bay Trail and Oldsmar Trail System using mix of shared-use paths and on-road bikeways	\$ 1.8m	

Name	Description	Cost Estimate	SUNTrail funding eligible
US 301/Pasco Connector	Shared-use path along US 301 currently being planned as part of FDOT-led PD&E study along US 301	\$ 1.6m	
Plant City Connector	25-mile system of shared-use paths identified for further project development effort by City of Plant City	\$ 9.0m	
Perimeter Trail	Connect neighborhood assets, the Hillsborough River, Tampa's green spaces and the Greenways and Trails systems	\$ 6.8m	

**Table 4-2: Funding Sources**

The following chart lists funding sources and their possible application.

Agency Type	Agency Name	Program Name	Eligible Activities	Statewide Funding	Maximum Grant	Category	Local Match
Federal	FHWA	Surface Transportation Block Grant Program	Development of bicycle and pedestrian facilities				0-10%
Federal	FHWA	Recreational Trails Program (RTP)	Development of trails			Recreational Trails	20%
Federal	National Park Service	Land and Water Conservation Find (LWCF)	Development of land for outdoor recreation				50%
Federal	FHWA	Surface Transportation Block Grant	Bicycle and pedestrian facilities, trails	Varies by year		Greenways and Trails	



Agency Type	Agency Name	Program Name	Eligible Activities	Statewide Funding	Maximum Grant	Category	Local Match
State	FDEP	Florida Greenways and Trails Acquisition Program – Florida Forever	Acquisition of land for Florida’s Priority Trails Network			Greenways and Trails	0%
State	FDOT	SUNTrail	Development of bicycle and pedestrian facilities	\$25 million annually	By competitive grant	Greenways and Trails	
State	DCA – Division of Housing and Community Development	Florida Community Trust’s Forever Grant Program				Recreation	25%
State	FDEP – Division of Recreation and Parks	Florida Recreation Development Assistance					0-50%
Public/Private Partnerships			Development of trails	n/a	n/a	n/a	tbd

**Figure 4-3: TBARTA Regional Trails Plan from the 201 Regional Transportation master Plan**



## ADVOCACY

Hillsborough County and the City of Tampa have made progress in constructing a greenways and trails network by taking advantage of opportunities to design outstanding facilities, but there is much left to do. A number of true greenways have been identified in this plan update or were identified previously, and these add to the opportunities users currently have to experience a wide variety of our extraordinary natural landscapes and urban environments. However, identification of opportunities in a plan must lead to actions and commitment to implement. The City of Tampa and the Hillsborough Greenways and Trails Committees, along with the Hillsborough MPO partnered to develop this plan update, and the Committees will continue to be its advocate and a resource for the development of projects, acting as stewards of the next phase of greenway development in Tampa and Hillsborough County.

To this end, it is recommended that the Greenways and Trails Committees proceed as follows:

- Review the plan with MPO staff on a quarterly basis.
- Assist with the identification of projects that need additional and advocate for their study.
- Affirm priorities so the MPO can use that input when coordinating on a regional level.
- Work with the MPO to maximize funding available to greenways projects.
- Coordinate with the Hillsborough County Parks and Recreation Board to align priorities for the plan.
- Continue to coordinate with the FDOT to maximize opportunities for greenways and trails.
- Hold public workshops and events to educate the community and develop interest in the County's trails plans.