

Regional Trails Facilities Plan

A guide for connections and facility improvements in Marion County



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Executive Summary

In recent years, Marion County has made paved multi-use trails a priority because of the positive correlation to recreation, transportation, health, and economic development opportunities. In working steadily to provide these facilities, the County now has one of the most extensive and well-known continuous trails in Florida, known as the Cross Florida Greenway paved trail. The Greenway alone has attracted well over three million visitors a year for the last four years, many of which take advantage of the trail¹. This trail has effectively begun to bring these opportunities to the residents of Marion County, and has the potential to be a major asset in providing economic opportunities through continued development and coordination. Long-term, continued coordination among stakeholders including the Florida Department of Environmental Protection (FDEP), Florida Department of Transportation (FDOT), Marion County, local municipalities, and the Ocala-Marion County Transportation Planning Organization (TPO), has allowed trail efforts to mature quickly in a short period of time. As the paved trail is extended, and eventually incorporated into regional trail systems such as the Heart of Florida Loop, these benefits associated with multi-use trails could have a significant impact in Marion County.



As existing projects are implemented, and new projects are planned for the future extension of the trail, a strong focus on **safety and connectivity** will be imperative to maintaining a successful trail system that accommodates different types of users from all over Florida, the United States, and other countries. This Regional Trails Facilities Plan (Plan) makes recommendations based on these two essential elements to ensure the quality of the Cross Florida Greenway paved trail as a piece of the larger regional trails system. These recommendations are made up of specific suggestions, including:



- ♦ **Make key connections between populated areas and the regional trail system**
- ♦ **Provide safety and facility recommendations as more facilities are constructed and user numbers increase**
- ♦ **Provide appropriate information and amenities to trail users**

¹ Total Attendance Data for Marjorie Harris Carr Cross Florida Greenways State Recreation and Conservation Area. Florida Department of Environmental Protection, 2019

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The Cross Florida Greenway paved trail and other planned multi-use trails in the County have the potential to improve the quality of life for Marion County residents and the quality of the experience that it offers its visitors. Application of the recommendations outlined in this Plan to ensure safe, well-maintained connections will ease the burden of accessing the trails and will encourage users of all different skill levels to experience the network and get a better sense of everything Marion County has to offer.

What's going on in Marion County?

Existing Conditions

Outdoor recreation is highly popular in Marion County due to its favorable climate, flat terrain, and abundant conservation lands. Although Marion County has the title of the horse capital of the world, cycling has become an increasingly popular activity and key stakeholders such as the Ocala Marion County TPO and FDEP have taken note. The County has been fortunate to have highly involved, collaborative stakeholders champion projects that focus heavily on cycling, which has led to a significant County-wide network. Projects are steadily being planned, funded,



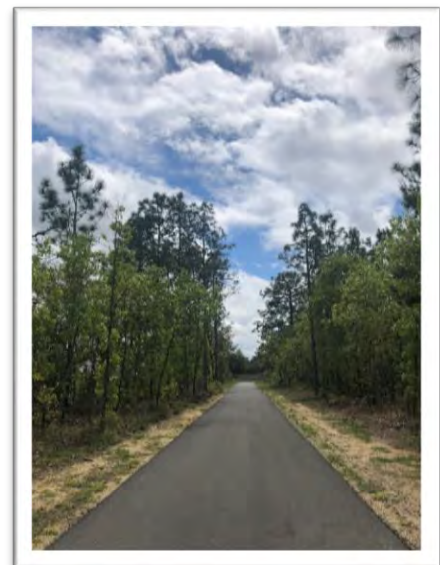
and implemented to continue adding to the network and increase the overall connectivity within Marion County between notable cities such as Belleview, Dunnellon, and Ocala. These cities have also made cycling and other multi-modal transportation options a priority by including them in their planning efforts to ensure a focused, effective approach in line with that of the County's when implementing multi-modal projects.

Improvements to the bicycling network in the County include on-street facilities for bicyclists, and notably, a paved multi-use trail that has been constructed on the Cross

Florida Greenway, which traverses a large portion of the County. These facilities, along with other multi-modal and safety improvements play a huge role in the viability of a strong and reliable bicycle network in the County, and the Cross Florida Greenway serves as the foundation of it. As coordination and projects continue to be planned and funded, it is important to recognize the significance of the Greenway to the network as well as the potential of smaller roadway projects that will connect people to the trail via safe and accessible routes. Existing paved trails and bicycle facilities in Marion County are shown in **Figure 1**.

CROSS FLORIDA GREENWAY

The Cross Florida Greenway was originally intended to be a sea-level ship canal in the 1930s, then the Cross Florida Barge Canal in the 1960s, which would have been a commercial shipping channel that cut through the state of



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Florida. Support for the canal was based on avoiding dangerous travel around the cape of Florida and providing a shorter route for trade between port cities in the Gulf of Mexico and the East Coast of the United States. Public and political support for the canal varied over hundreds of years, and supporters throughout the time cited the importance of the canal as an economic resource, a national security asset, and even a New Deal Project². On the other hand, critics highlighted that the canal would disrupt the aquifers and waterways in Florida, and damage to local natural environments would be irreversible. While significant funding and efforts went into design and engineering during several different iterations of the canal throughout the 20th century, the canal would never be completed, as the environmental costs of the project would be too far-reaching and unpredictable.

Beginning in the 1960s, famed naturalist Marjorie Harris Carr Cross made the canal a center issue for her environmentalism and worked tirelessly to kill the barge canal project. While significant funding and efforts went into design and engineering to make the canal a reality, it was eventually halted by President Richard Nixon in the 1971, and officially deauthorized and

transferred to the State of Florida in 1990 by the U.S. Army Corps of Engineers. In 1998, the Cross Florida Greenway was named in honor of Mrs. Carr, providing recreational opportunities for the public on virtually unchanged environmental lands. Today, the Cross Florida Greenway is a state park made up of roughly 70,000 acres and offers a wide variety of recreational activities while also continuing to conserve ecologically significant and diverse lands.

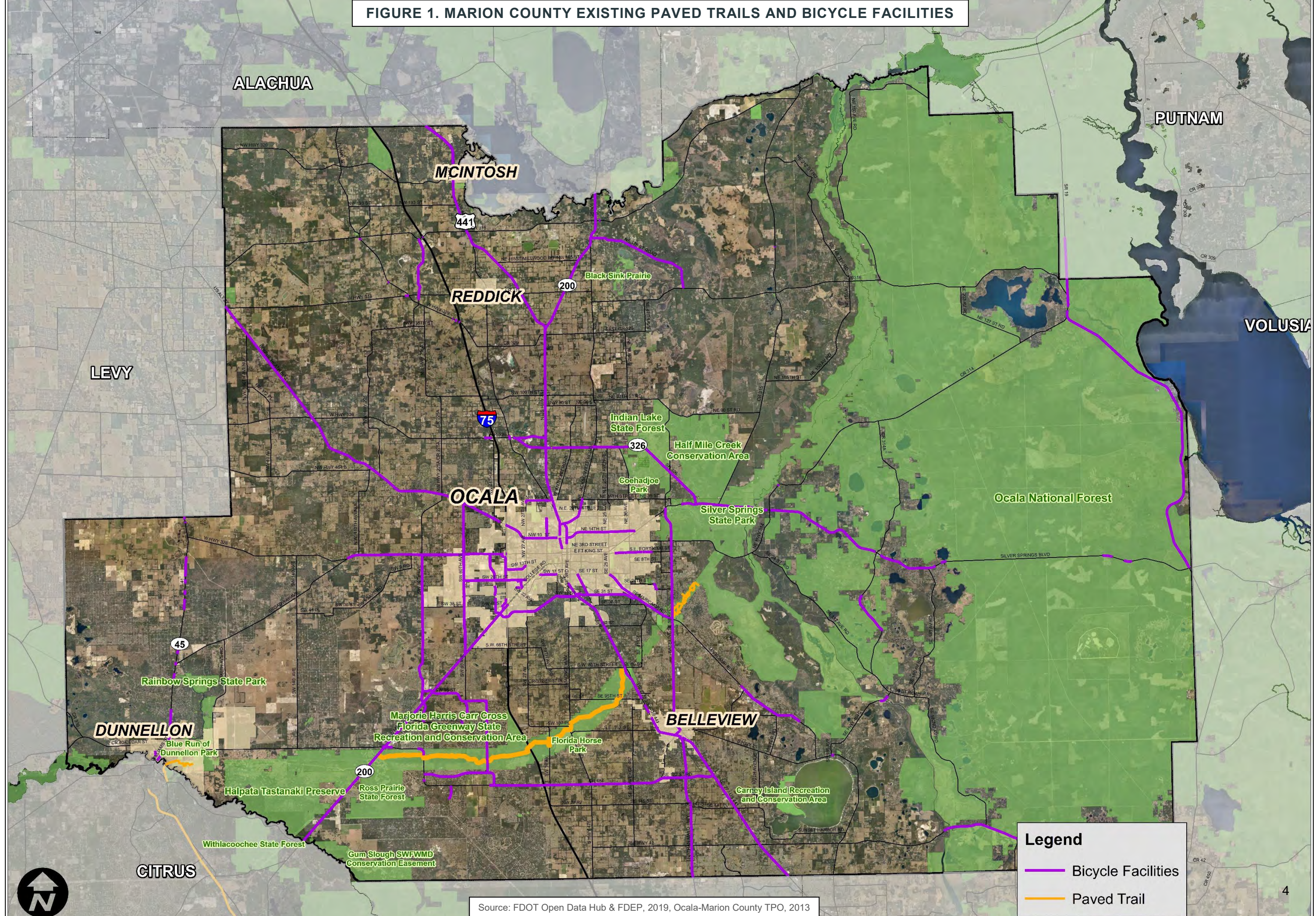


Interestingly enough, the Cross Florida Barge Canal was originally intended as an investment to foster economic growth in the central region of Florida, improving

maritime trade efficiency and bringing traffic that would pay a hefty fee for using the canal. While the Cross Florida Greenway certainly serves a different purpose now than originally intended, the economic development opportunity associated with this land remains. The Cross Florida Greenway offers more recreational activities than any other park or conservation area in the State, drawing millions of visitors every year to the park and Marion County. With the addition of the multi-use trail to certain sections of the Greenway in recent years, the park has become the foundation of a dynamic bicycle network in Marion County as well as the region. Although parts of the Cross Florida Greenway trail are in various stages of completion (built, planned, designed), the trail currently offers several miles of paved trail through the greenway. Projects are being considered that would bring the Cross Florida Greenway paved trail more solidly into the regional trail network by connecting to other trail systems in the area such as the Withlacoochee State Trail, the Withlacoochee Bay Trail, the Coast-to-Coast Trail, and the East Coast Greenway. Through these connections, Marion County would be solidly integrated into the cross-county Heart of Florida Loop. These trails are shown in **Figure 2**.

² <https://www.floridastateparks.org/learn/history-cross-florida-greenway>

FIGURE 1. MARION COUNTY EXISTING PAVED TRAILS AND BICYCLE FACILITIES

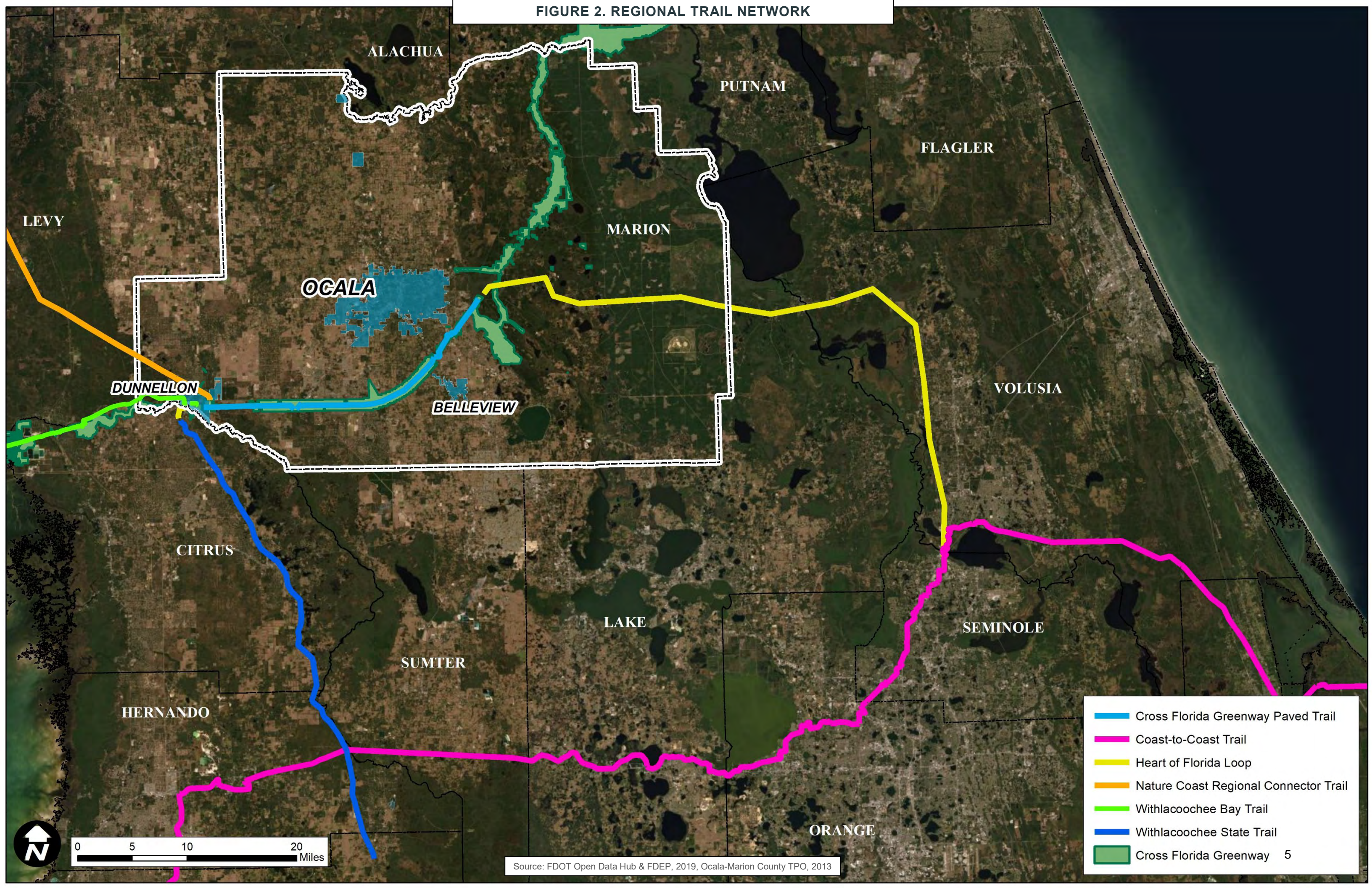


Source: FDOT Open Data Hub & FDEP, 2019, Ocala-Marion County TPO, 2013

Legend

- Bicycle Facilities
- Paved Trail

FIGURE 2. REGIONAL TRAIL NETWORK





PLANNED AND COMMITTED PROJECTS

The success of the Cross Florida Greenway paved trail and a well-connected system made up of bicycle facilities and multi-use trails has led to the pursuit of several key projects throughout the County. The undertaking of these projects is significant as it continues adding to the network at a quick pace and has kept the community excited and motivated about cycling opportunities. There are several projects that are in various stages of planning, design and funding within Marion County and are being led by different agencies and organizations, such as FDOT and Marion County. These projects will contribute significantly to a regional trail network made up of the Coast to Coast Trail, the Nature Coast Trail, the Withlacoochee State Trail, and the Heart of Florida Loop, which are shown in **Figure 2**. While several of these projects are primarily related to roadway improvements and addressing increasing capacity, they are significant because bicycle facilities are being included to supplement the growing bicycle network. Additional multi-use paved trails through natural areas in Marion County such as Indian Lake State Park and Silver Springs State Park that will connect to the Cross Florida Greenway and other existing facilities are also planned. Projects that are already underway or are planned, funded, or committed are described in more detail in **Figure 3**.



FIGURE 3. PLANNED AND COMMITTED PROJECTS SIGNIFICANT TO NETWORK

Project	Type	Description	Committed?	Phase
SW 49 th Avenue	Multi-phase roadway improvements	12-foot multi-use path	Yes	Portions under construction, other in design with construction funded in next couple of years
Marion Oaks Manor Extension	Multi-phase roadway improvements	On-street bicycle lanes or 12-foot multi-use path	Yes	Preliminary Engineering
NW/SW 80 th Avenue	Multi-phase roadway improvements	12-foot multi-use path	Yes	Funded for Design FY 2020, portions funded for construction
SR 326 (From .03 miles of NW 11 th Avenue to SR 40)	Resurfacing – FDOT	7-foot on-street bike lane		
SR 200 (CR 484 to SW 38 th Ct.)	Resurfacing – FDOT	7-foot on-street bike lane	Yes	In Construction
Osceola Linear Park	Multi-modal improvements	Addition of multi-modal facilities and recreational space along Osceola Avenue	Yes	Portions in Construction
CR 484 Pennsylvania Avenue	Multi-modal Improvements	Multi-use trail to connect Dunnellon to Cross Florida Greenway and eventually, the Heart of Florida Loop		
SR 40 Black Bear Trail Gap	Trail Project	Multi-use trail that will run parallel to SR 40 to connect Silver Springs State Park to the Black Bear Trail		
Black Bear Trail	Trail Project	Multi-use trail to connect Silver Spring State Park to Ocala National Forest through a 27-mile trail	Yes	Funded for PD&E FY 2020
Indian Lake Trail from Silver Springs State Park to Indian Lakes Trailhead	Trail Project	Multi-use trail to connect these two parks	Yes	Funded for Design FY 2021
“Cannon-Dunnellon” Segment	Trail Project	Multi-use trail from east end of Withlacoochee Trail at Bridges Road to Pruitt Trailhead		
Nature Coast Trail Connector	Trail Project	Future regional trail system to connect City of Tallahassee to the City of Dunnellon		
Silver Springs Bikeway	Trail Project	Multi-phase project to connect Ocala to levee system near Lake County		
Silver Springs to Hawthorne Trail	Trail Project	Multi-use trail to connect Silver Springs Bikeway to Gainesville Hawthorn State Trail in Alachua County		
Silver Springs Bikeway to Downtown Connector	Trail Project	Multi-use trail to connect Downtown Ocala to Silver Springs Bikeway	Yes	Funded for Design FY 2020
Silver Springs State Park to SE 64 th Avenue Road Trailhead	Trail Project	Multi-use Trail from Silver Springs State Park Entrance to the SE 64 th Avenue Road Trailhead		
Pruitt Trail	Trail Project	Multi-use trail to connect Dunnellon and the existing Cross Florida Greenway paved trail	Yes	Funded for Construction FY 2021
Bellevue to Greenway Connector	Trail Project	Multi-use trail to connect Bellevue to Cross Florida Greenway along US 441	Yes	Included in FDOT resurfacing project FY 2020
Watula Avenue and NE 8 th Road Trail	Trail Project	Multi-use trail connecting the Osceola Trail and Tuscawilla Park to bike lanes along CR 200A		
Santos to Baseline Trail	Trail Project	Multi-use trail to connect the Cross Florida Greenway paved trail.		SunTrail Application by FDEP



What does Marion County want to achieve?

Marion County is growing and is expected to see higher populations and development in the next several years, with a projected growth rate of 24.4% by the year 2030³. Because of this expected growth, harnessing the unique assets associated with trails as a means to increased revenue and earning potential for residents is critical. Safe connections to and from the trails was also highlighted as an important element in spurring economic development and as a



means for providing safe opportunities for residents to get outside, exercise and enjoy the trail. In creating this trail system and joining the regional network, stakeholders and the public were interested in providing facilities that encourage residents to use them, as well as attract visitors to Marion County for extended, overnight trips. There is also significant potential to improve the overall health of Marion County residents through further trail development, which not only promotes healthy communities but piques the interest of health organizations and agencies as potential partners.

Input was gathered from stakeholders through one-on-one meetings and discussions in order to get a better understanding of the current conditions of the trail and what would be feasible for the future. Stakeholders included local municipalities, trail enthusiasts including bike shop owners, equestrian representatives and state agencies. Public outreach was gathered through a public workshop on April 25, 2019 at the Ocala Police Department. The purpose was to gather thoughts and opinions on potential projects, present signage opportunities, address safety concerns with residents, and interact with the public. There were opportunities for participants to express their interest in specific projects through a dot-voting system, which influenced project prioritization in this Plan. This feedback from the public is further discussed in **Appendix A**.

Achieving common goals through this plan

The purpose of this plan is to consider current conditions related to a regional trail network in Marion County and make recommendations to continue to improve these conditions. Marion County's developing trail network is largely either constructed or committed, marking a significant achievement in providing outdoor recreation and gaining momentum in creating economic opportunities. As the trail is extended, it is critical that stakeholders pay particular attention to the following goals that were highlighted during public and stakeholder outreach:

- ♦ **Make key connections between populated areas and the regional trail system**
- ♦ **Provide safety and facility recommendations as more facilities are constructed and user numbers increase**
- ♦ **Provide appropriate information and amenities to trail users**

Using these goals, recommendations were formulated to provide guidance through specific actionable items related to **connections, safety, and trail design** in Marion County. These recommendations are outlined in further detail below.

³ <https://www.lawnstarter.com/blog/infographics/what-will-floridas-ocala-and-the-villages-look-like-in-2030-infographic/>



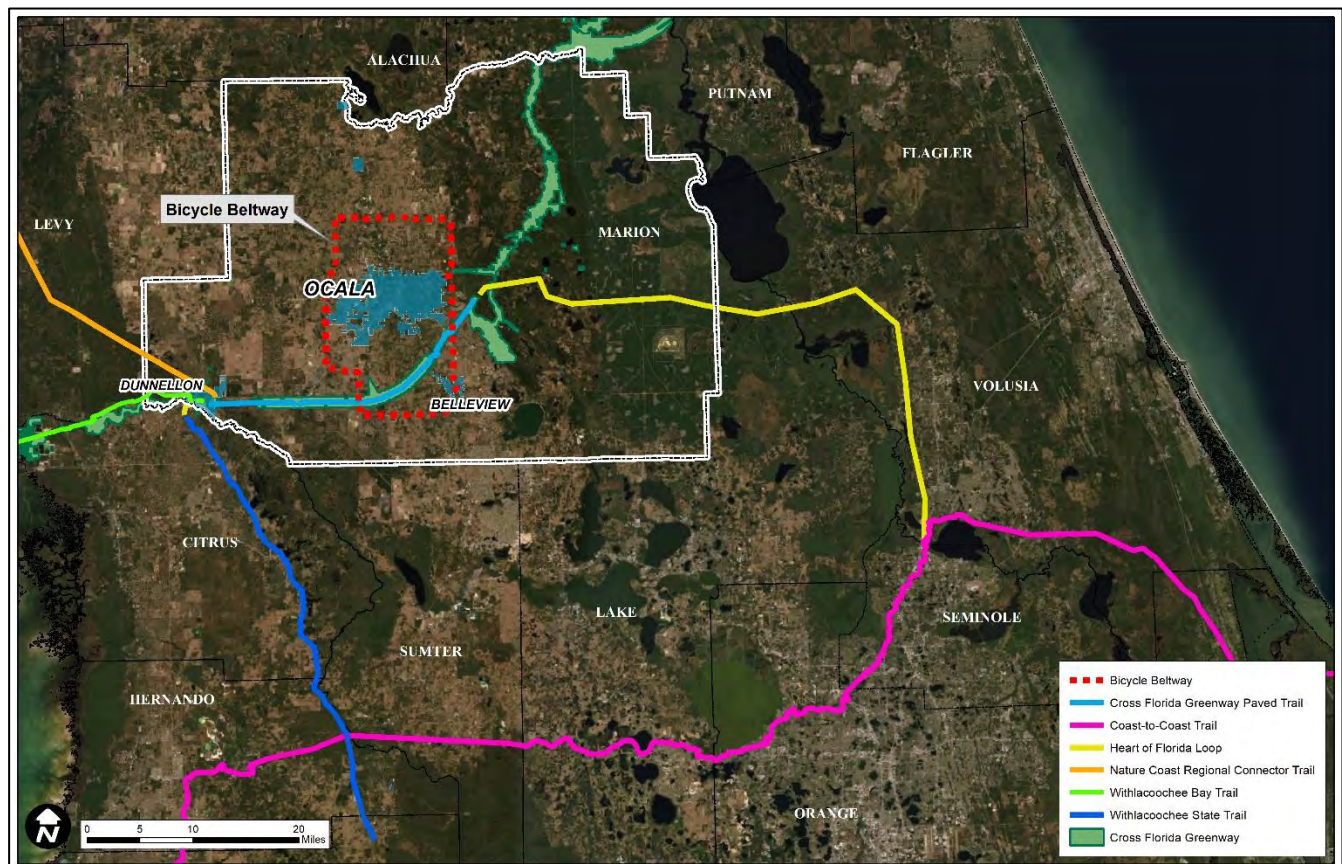
Project Vision

Regional Connectivity: The Bicycle Beltway

In making recommendations that will improve bicycling conditions and facilities related to trails in Marion County, a project vision was developed that included elements such as connectivity, safety, and quality. Recommendations should be focused on connecting communities and the existing Cross Florida Greenway, and making the trail and other facilities within the County easily accessible to as many people as possible. The Bicycle Beltway, originally proposed in the 2035 Bicycle and Pedestrian Master Plan for Ocala-Marion County, exemplifies the kind of connectivity that this Plan seeks to promote and create in areas throughout the County. The Bicycle Bikeway is a proposed loop of designated bicycle facilities around the city of Ocala and Marion County. This Beltway is significant to the Regional Trail conversation because it offers connectivity opportunities to many of the developed areas of Marion County, and offers several opportunities for extended trips within and outside of the County, as shown in **Figure 4**. It also offers a range of facilities for every skill level of cyclist, from multi-use trails to on-street bicycle lanes.

Because the Bicycle Beltway is such a significant asset to the region, all projects proposed in this plan either connect directly to the beltway or connect to a facility that will provide a safe route to it. Currently, several roadways that connect to the Bicycle Beltway already provide bicycle facilities.

FIGURE 4. THE BICYCLE BELTWAY IN THE REGIONAL CONTEXT



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The following roadways associated with the Bicycle Beltway already have bicycle facilities, or facilities are planned:

- ♦ Baseline/SE 58th Avenue – Bicycle Lanes from Maricamp Road to SE 92nd Place Road, and an 8' multi-use path from SE 66th St. to the Greenway underpass exist along this stretch.
- ♦ NW/SW 80th Avenue – Planned to construct a 12' multi-use trail
- ♦ SW 95th Street – Bicycle Lanes
- ♦ SW 49th Avenue - Planned to construct a 12' multi-use trail
- ♦ NE 58th Avenue – Partially made up of the future Silver Springs to Indian Lake Forest Trail

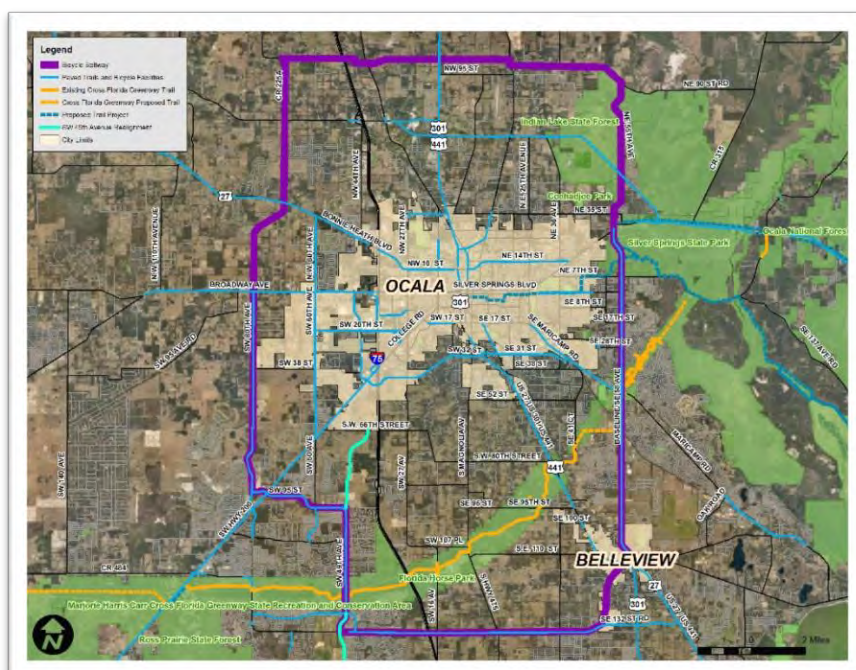
The following roadways do not currently have facilities, nor projects planned, and would be suitable for future projects that encourage connectivity:

- ♦ NE 97th Street Road
- ♦ NE Jacksonville Road
- ♦ NW 100th Street
- ♦ CR 225A
- ♦ CR 484
- ♦ SE Hames Road

Facilities on these corridors will vary. However, it is recommended that off-street facilities such as a multi-use path are considered initially, and if there are any constraints, a 7' buffered bike lane should be pursued. The minimum recommended facility for roadways included in the Bicycle Beltway are on-street 6' bike lanes.

In implementing this, Marion County should coordinate with FDOT to ensure that facilities are included on future resurfacing and repairment of any of these roadways. Completion of the Bicycle Beltway will occur incrementally, and the addition of each segment should be justified using the criteria outlined in this plan, especially connectivity.

As the recommendations in this Plan are considered and implemented, keeping the vision associated with the Bicycle Beltway in mind will be crucial in continuing to provide excellent trails and bicycle facilities throughout the County. Providing the Beltway in addition to the Cross Florida Greenway Trail as a central facility that connects to other projects, such as those outlined in this plan, will give cyclists countless opportunities to connect to areas around the County and beyond.





Recommendations

The following recommendations are broken down into three categories:



- ◆ **Projects**
- ◆ **Safety**
- ◆ **Trail Design Standards**

Each set of recommendations addresses a specific issue related to the theme, and gives the County and stakeholders actionable, specific suggestions to continue providing high-quality facilities and amenities that will encourage more residents and visitors to use them. Recommendations are designed to be incorporated and adopted into future iterations of bicycle-related plans and documents, and to encourage uniformity in what Marion County provides.

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Projects

As the Cross Florida Greenway paved trail continues to be constructed and becomes part of the regional trail network throughout central Florida, safe connections that provide access to the trail for higher numbers of people will be needed throughout the County. Currently, the bicycle network that connects the trail to high population areas is fragmented. According to American Community Survey 5-year estimates, Silver Springs Shores, Marion Oaks, Summerfield and Reddick are the most populated areas within Marion County. Census tracts ranging from 10 – 50% of the population below the poverty line are also located within these populated areas and near the existing trail and the Greenway. Household vehicle availability was also evaluated; however, most areas in the county have low levels of households lacking vehicles. This is indicative of a lack of alternative transportation opportunities in these areas such as bicycle facilities and routes that provide connections to points of interest. These Projects are intended to improve existing conditions, offer alternative transportation opportunities to the public, and determine how best to connect high density areas and ensure equitable access of the trail facilities.

The Projects laid out in this plan are new and unique unless otherwise stated in the following project pages and should be considered for inclusion in future updates to plans regarding the development of trails and bicycle facilities in Ocala, Dunnellon, Belleview, McIntosh, and other areas in Marion County. They were identified using the following criteria:

- Demographic data– routes that serve areas of high poverty, elderly populations and low vehicle ownership were identified. Routes that specifically serve areas of high population density were prioritized.
- Public and Stakeholder input – if a route or project came from discussions or comments during the public and stakeholder outreach process, then the project is considered “supported by public and stakeholders”
- Existing facilities – if bicycle facilities, such a designated bike lane or a paved trail are located near the proposed project, then the project is considered to “provide connectivity to existing trails or bicycle facilities”

Based on this information, the projects were then prioritized into “low”, “medium”, and “high” categories depending on their ability to connect high density areas and ensure equitable access of the trail facilities. They then were ordered numerically for ease of implementation, with “1” being the most significant and high priority project, and “6” being important but of lower priority.

In addition to prioritization based on the criteria, planning level cost estimates were developed to give a general idea of costs associated with each of the proposed projects in this plan. Using trail length in miles and the following costs based on FDOT’s Long Rang Estimates (FDOT LRE), approximate project cost was calculated, and is included on the following project pages. Approximate costs with a 30% contingency were also included to account for unforeseen costs associated with the design and construction of bicycle facilities.

Trail Type Costs per Mile	
Type	Cost per mile
Multi-use Trail*	\$287,000.00
Shared-Lane Markings	\$30,000.00

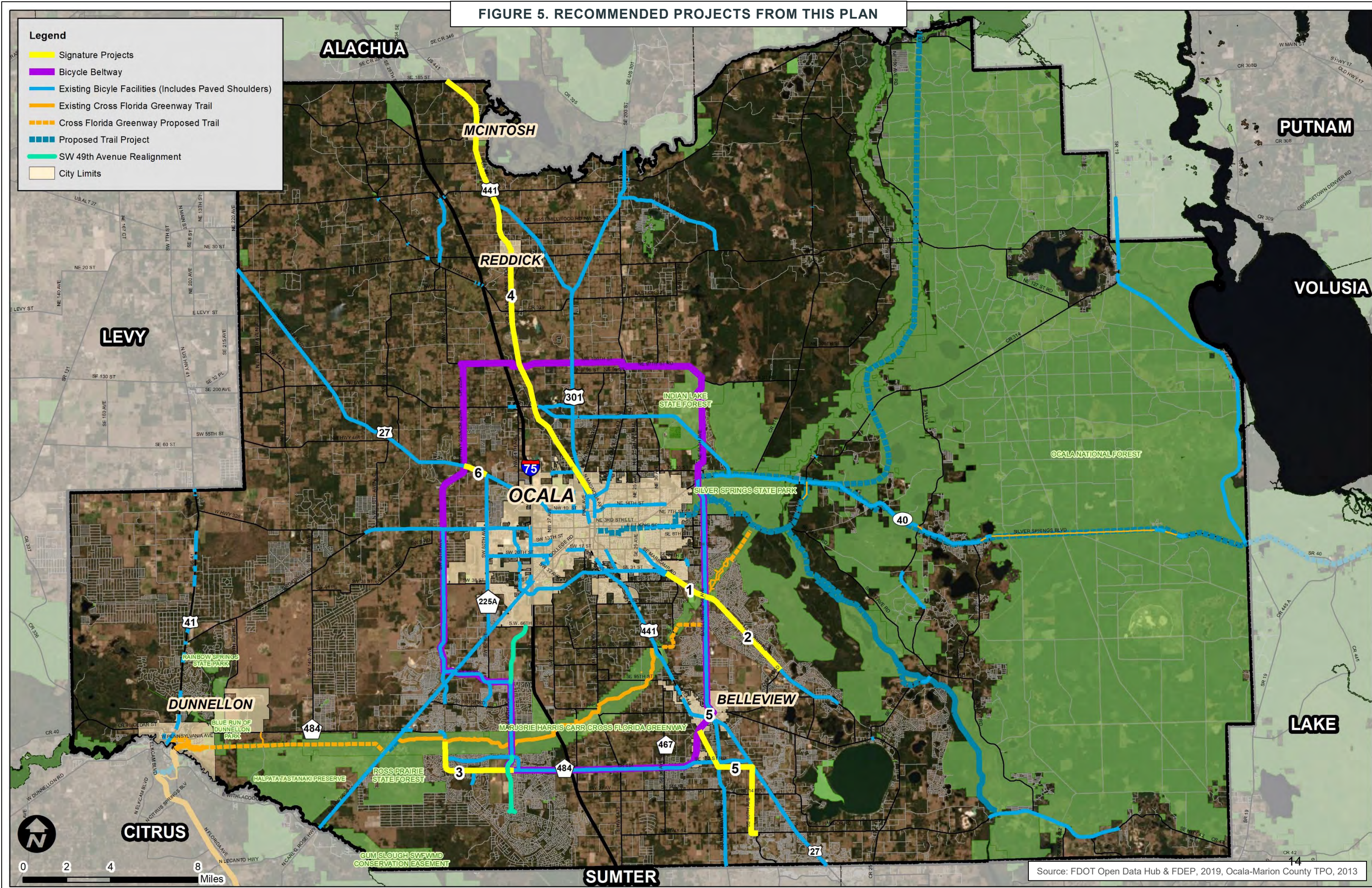
*These costs are based on FDOT Long Range Estimates for 2 Directional 12’ shared use path, updated in July 2019.

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The following projects will provide significant opportunities for a well-connected Cross Florida Greenway paved trail that provides opportunities to all members of the public. According to the population data in **Appendix B**, if all of these projects are completed, approximately 60,000 residents in Marion County will be within $\frac{1}{4}$ mile of a bicycle facility that connects them to a paved trail. Residents and visitors will be able to access the trail as well as economic centers like Ocala, Dunnellon, and Belleview exclusively via alternative transportation methods. These projects also contribute to extended trips that provide recreational opportunities and health benefits for trail users. In supporting and implementing these projects, Marion County can economically benefit in sectors such as property value and revenue, as described earlier in this plan. With further-reaching connections, the trail will serve as a strong segment for future regional trail connections in Central Florida. Entities responsible for these projects will vary, but FDOT, FDEP, Marion County, Ocala-Marion County TPO, and local municipal governments are examples of potential funders. All Recommended Projects are shown in **Figure 5** and are shown in more detail in specific project maps in this section.

FIGURE 5. RECOMMENDED PROJECTS FROM THIS PLAN





PROJECT #1
SE Maricamp Road (From SE 31st St. to Baseline/SE 58th Ave.)

PROJECT DESCRIPTION

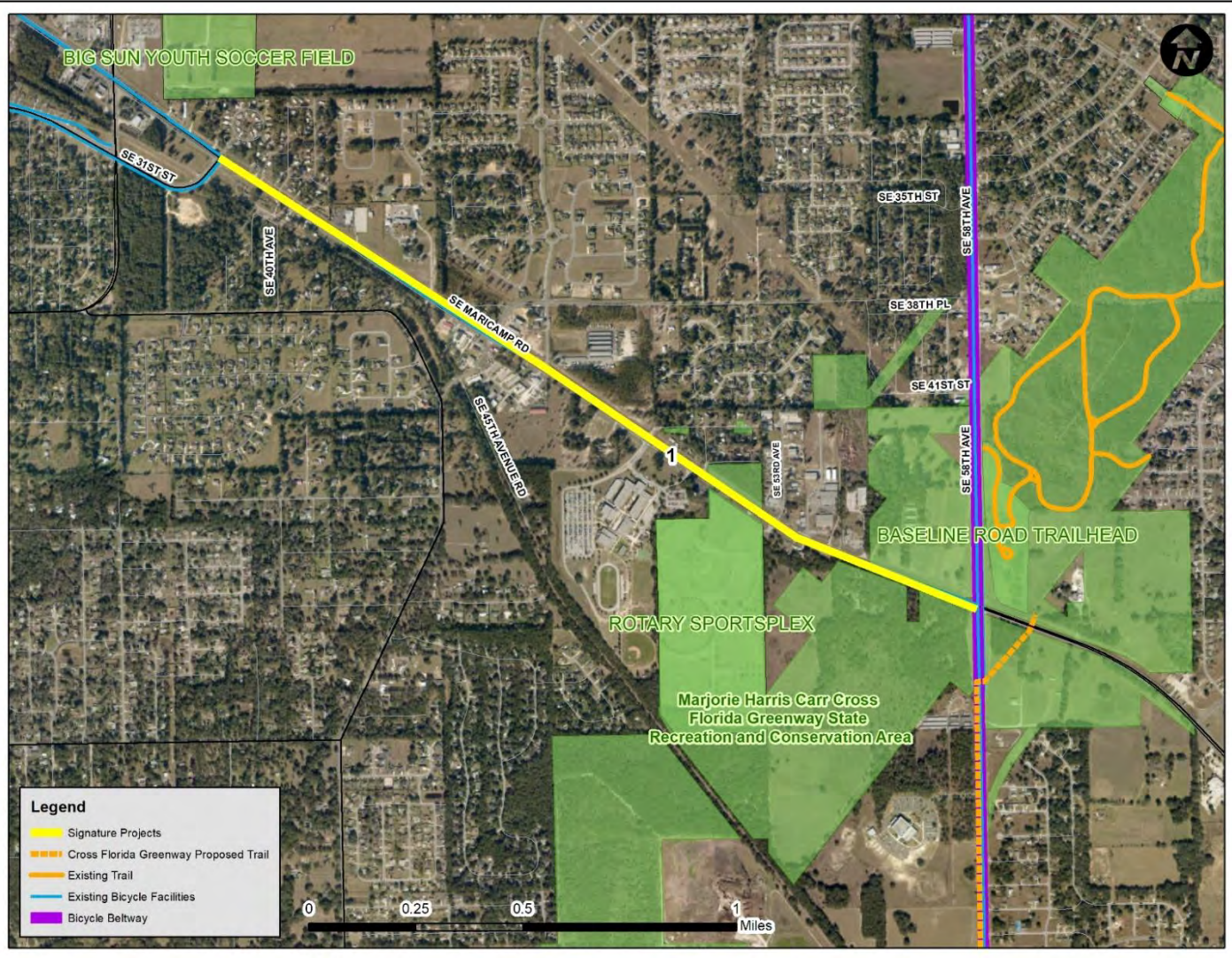
This project includes a 12’ multi-use trail on the southwest side of SE Maricamp Road. This corridor is a significant and busy roadway in Marion County that currently carries approximately 30,427 cars daily (FDOT Daily Traffic Info: AADT, 2019). With current levels of vehicular traffic, the existing paved shoulders aren’t sufficient, and an off-road facility should be constructed which would allow for a connection to the Baseline Road Trailhead, the Cross Florida Greenway and existing bicycle lanes in Ocala on SE 31st St. Once the Cross Florida Greenway gap located south of the Baseline Road Trailhead is complete, this addition will provide significant connectivity for residents to connect to the city of Ocala. There is right of way available along this corridor for additional facilities. Marion County is currently working with FDEP to make improvements and connect the Baseline Road Trailhead to the Rotary Sportsplex, which are located at the Southeast end of this proposed project.

PROPOSED FACILITIES

PRIORITY

12’ multi-use trail

High



CRITERIA

Criteria	Does project meet criteria?
Serves an area of high population density?	✓
Provides connectivity to existing trails or bicycle facilities?	✓
Supported by public and stakeholders?	✓

This project will give access to highly populated residential areas surrounding this section of Maricamp Road and will provide connectivity to existing facilities at Baseline Road Trailhead as well as Rotary Sportsplex. This will also offer an opportunity to connect to future trail additions to the Cross Florida Greenway, and facilities in downtown Ocala. This project was generally supported by the public and stakeholders and was discussed at the public workshop. Because each of this criterion was met, this project is prioritized as high.

ADDITIONAL INFORMATION

Project Considerations	SE Maricamp Road is a state road, which would require coordination with FDOT. It may be possible to include this project in a future roadway project. Ditches and drainage swales may limit the constructability within the available right-of-way. Drainage modifications along the corridor are likely for the trail construction.
Maintenance Responsibility?	FDOT
Next Steps	Feasibility / Planning
Potential LAP Project?	Yes

PLANNING LEVEL COST ESTIMATE

Project	Trail Type	Approximate Distance	Approximate Cost*	Approximate Cost with 30% Contingency**
SE Maricamp Road	12’ Multi-use trail	2.10 miles	\$602,700.00	\$783,510.00

*Approximate costs from FDOT LRE July 2019 update.
**The approximate cost with a 30% contingency is intended to provide a realistic idea of what the cost will look like if there are additional needs such as further design, utility relocation, right-of-way issues, drainage needs, etc. More refined cost estimates will be necessary at future stages. Planning level costs do not include potential right-of-way acquisition.



PROJECT #2

Maricamp Road (From Baseline/SE 58th Ave. to Designated Bike Lane east of Oak Road)

PROJECT DESCRIPTION

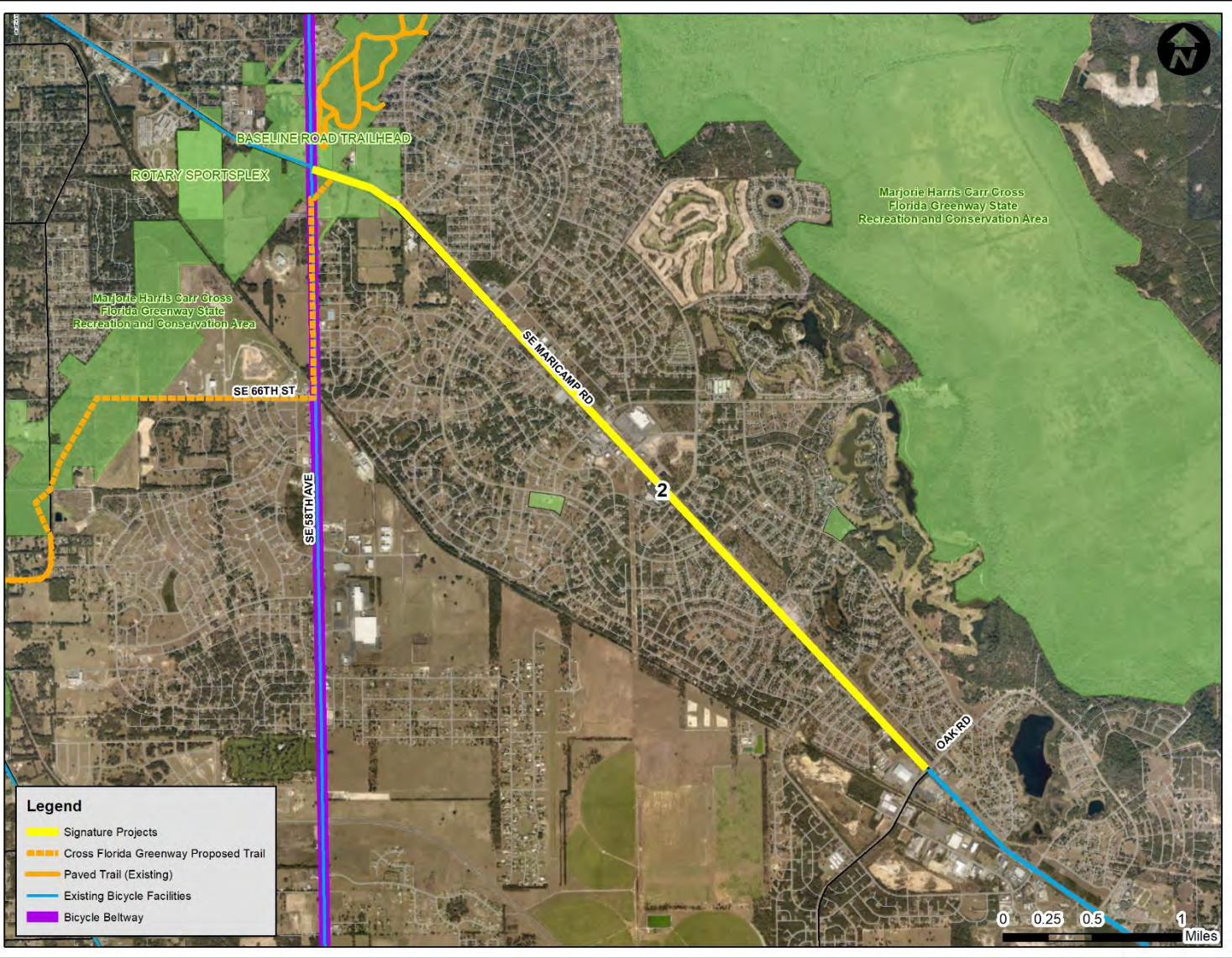
This 12’ multi-use trail on the southwest side of the corridor from the Baseline Trailhead is an expansion on Project #1 on SE Maricamp Road and connects to nearby neighborhoods that have concentrated population density. This improvement would provide safe options for accessing the Baseline Trailhead along Maricamp Road from residential areas south. No bicycle facilities exist along this section of Maricamp Road. An underpass does currently exist southeast of the Baseline Road Intersection, which would provide a safe crossing for users trying to access the Cross Florida Greenway and the Baseline Road Trailhead.

PROPOSED FACILITIES

12’ multi-use trail

PRIORITY

High



CRITERIA

Criteria	Does project meet criteria?
Serves an area of high population density?	✓
Provides connectivity to existing trails or bicycle facilities?	✓
Supported by public and stakeholders?	✓

This project will give access to highly populated residential areas surrounding this section of Maricamp Road and will provide connectivity to existing facilities at Baseline Road Trailhead and the multi-use trail proposed on SE Maricamp Rd. for Project #1. This will also offer an opportunity to connect to future trail additions to the Cross Florida Greenway and facilities in downtown Ocala. This project was generally supported by the public and stakeholders and was discussed at the public workshop. Because each of this criterion was met, this project is prioritized as high.

ADDITIONAL INFORMATION

Project Considerations	Maricamp Road is a state road, which would require coordination with FDOT. It may be possible to include this project in a future roadway project. Ditches and drainage swales may limit the constructability within the available right-of-way. Drainage modifications along the corridor are likely for the trail construction. Portions of the roadway have an existing sidewalk. Right-of-way appears limited on the southwest side of the roadway in some sections.
Maintenance Responsibility?	Marion County
Next Steps	Feasibility / Planning
Potential LAP Project?	Yes

PLANNING LEVEL COST ESTIMATE

Project	Trail Type	Approximate Distance	Approximate Cost*	Approximate Cost with 30% Contingency**
Maricamp Road	12’ Multi-use trail	4.85 miles	\$1,391,950.00	\$1,809,535.00

*Approximate costs were obtained from FDOT LRE July 2019 update.
**The approximate cost with a 30% contingency is intended to provide a realistic idea of what the cost will look like if there are additional needs such as further design, utility relocation, right-of-way issues, drainage needs, etc. More refined cost estimates will be necessary at future stages. Planning level costs do not include potential right-of-way acquisition.



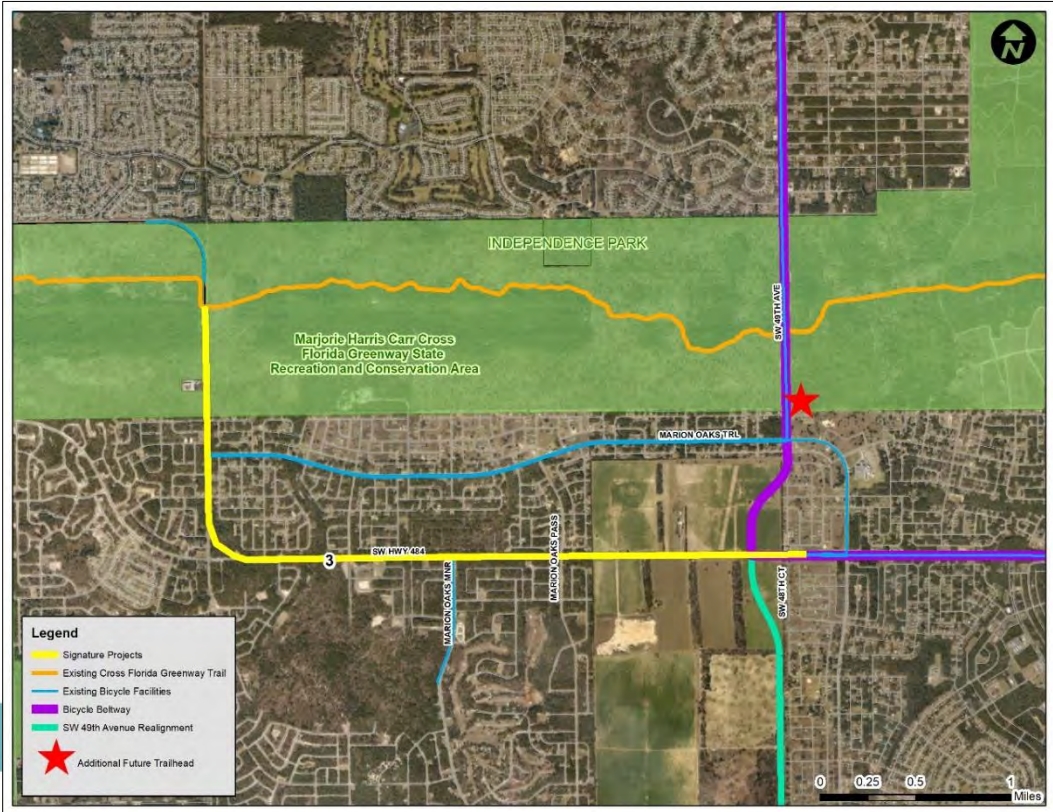
PROJECT #3
CR 484 (Cross Florida Greenway to Designated Bike Lane on CR 484)

PROJECT DESCRIPTION

The proposed 12' multi-use trail along this corridor would give bicyclists an alternative option to connect the Marion Oaks neighborhood along the CR 484 corridor. Within the community, bike lanes are located on main roads including Marion Oaks Course and Marion Oaks Lane, but lack connectivity to areas of interest outside of the community, such as the Cross Florida Greenway paved trail. Currently, bicyclists do not have any continuous facilities to connect safely to the Cross Florida Greenway paved trail on SW 49th Avenue nor from CR 484. Providing bicycle facilities along CR 484 offers the opportunity to travel safely along the roadway to the entry point for the Cross Florida Greenway Trail on CR 484 north of the underpass. This project would also connect to existing bicycle facilities to the east on CR 484, providing opportunities for connections to other locations and neighborhoods. It also has the potential to tie into roadway improvements in the Marion Oaks area.

Because of bicycle facilities on Marion Oaks Trail, this project could be less extensive and cover just the northern section of CR 484 between the Cross Florida Greenway Paved Trail and Marion Oaks Trail because of existing facilities on the latter. This variation of the project would include the improvement of the existing bicycle lanes on Marion Oaks Trail with additional markings, signage, and buffering the bicycle lanes with either physical delineators or additional lines on the pavement to create more space between the traffic and the cyclists. This project will rely heavily on future widening projects to determine its feasibility and can tie into the SW 49th Avenue realignment project, which will include bicycle facilities. There are also plans to include an additional trailhead on the east side SW 49th Avenue on the southern edge of the greenway, indicated below by a red star, through a land swap between Marion County Parks and Recreation and FDEP.

PROPOSED FACILITIES	PRIORITY
12' multi-use trail	High



CRITERIA

Criteria	Does project meet criteria?
Serves an area of high population density?	✓
Provides connectivity to existing trails or bicycle facilities?	✓
Supported by public and stakeholders?	✓

This project will give access to highly populated residential areas surrounding CR 484 such as Marion Oaks and will provide connectivity to existing facilities on the Cross Florida Greenway. This will also offer an opportunity for an alternative, safe connection to the Cross Florida Greenway via CR 484. This project was generally supported by the public and stakeholders and was discussed at the public workshop. Because each of this criterion was met, this project is prioritized as high.

ADDITIONAL INFORMATION

Project Considerations	There are potential right-of-way constraints along the route, limiting multi-use trail width and feasibility. Drainage ditches and swales may limit construction within existing right-of-way. This project should be considered with future widening / capacity projects.
Maintenance Responsibility?	Marion County
Next Steps	Design (included within roadway capacity projects)
Potential LAP Project?	Yes

PLANNING LEVEL COST ESTIMATE

Project	Trail Type	Approximate Distance	Approximate Cost*	Approximate Cost with 30% Contingency**
CR 484	12' Multi-use trail	4.4 miles	\$1,262,800.00	\$1,641,640.00

*Approximate costs were obtained from FDOT LRE July 2019 update.
**The approximate cost with a 30% contingency is intended to provide a realistic idea of what the cost will look like if there are additional needs such as further design, utility relocation, right-of-way issues, drainage needs, etc. More refined cost estimates will be necessary at future stages. Planning level costs do not include potential right-of-way acquisition.



PROJECT #4
McIntosh to Ocala Connector

PROJECT DESCRIPTION

A connector between the town of McIntosh in northern Marion County and the City of Ocala via multi-use trail would provide a significant transportation connection as well as give recreational bicyclists a long, scenic route through the County. This project has the potential to also connect to the Hawthorne Trail, an existing trail in Alachua County, which would provide the opportunity for an extensive north-south trail network between the two counties, creating economic opportunities and attracting overnight trail users. This connector would run along US 441 and 25A (NW Gainesville Road), as indicated by the map. 25A offers a lower capacity road with shade and right-of-way to accommodate a multi-use path.

This project will provide access to the town of McIntosh, and a trailhead should be considered near this location to provide important facilities to bicyclists accessing long-range bicycling opportunities through this trail. Because of limited right-of-way within the town of McIntosh, a series of neighborhood roads with sharrows and signage could be included to allow access to a trailhead within the town. Sharrows and signage along W. 10th St., between Avenue H and Avenue B could serve this neighborhood network purpose to connect the trail and a trailhead within McIntosh. Another option is to use NW 8th Avenue up until Avenue C. A neighborhood network system on the east side could allow for a trailhead to be added to the McIntosh Civic Center. Alternatively, a trailhead could be included at the overlook area outside of McIntosh along US 441 that allows excellent views of Orange Lake.

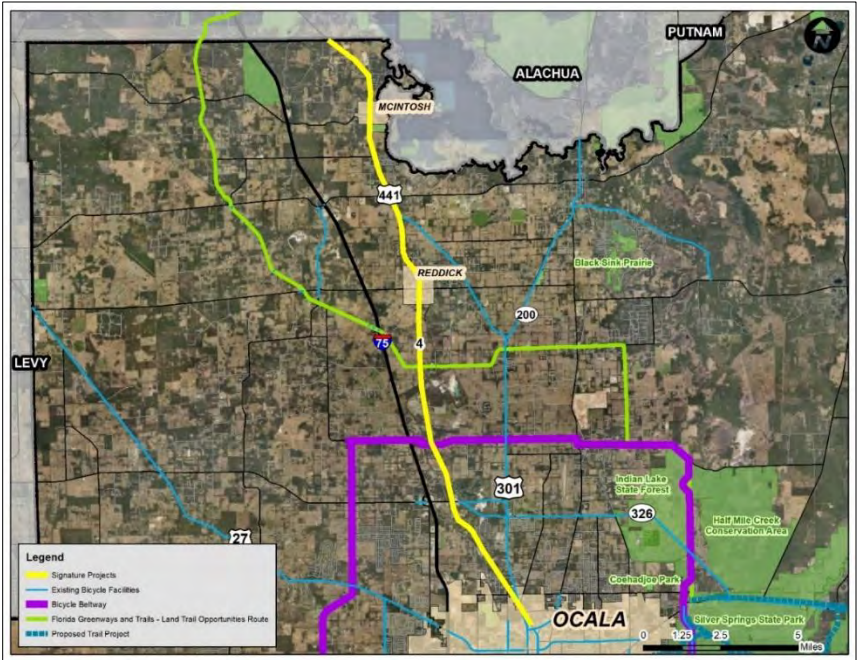
This project will be part of a future regional network that will connect the cities of Gainesville and Ocala. FDEP’s Office of Greenways and Trails has also identified a similar connection as a Land Trail Opportunity that would connect Ocala to trails in Alachua County, which is shown in the map below. Both routes would provide beneficial transportation opportunities and connect McIntosh to other trails in Marion County and Alachua County.

PROPOSED FACILITIES

12’ multi-use trail

PRIORITY

High



CRITERIA

Criteria	Does project meet criteria?
Serves an area of high population density?	✓
Provides connectivity to existing trails or bicycle facilities?	✓
Supported by public and stakeholders?	✓

This project will provide connectivity between communities within Marion County such as Ocala and McIntosh, as well as trails in Alachua County. This will also offer an opportunity for safe connections to anywhere along this route. This project was generally supported by the public and stakeholders and was discussed at the public workshop. Because each of this criterion was met, this project is prioritized as high.

ADDITIONAL INFORMATION

Project Considerations	US 441 and 25A are state roads, which would require coordination with FDOT. It may be possible to include this project in a future roadway project. This is a long stretch of facilities; there would be a high cost for entire project. Project could be phased. There are potential right-of-way constraints along the route, limiting multi-use trail width and feasibility – specifically through McIntosh.
Maintenance Responsibility?	FDOT
Next Steps	Feasibility / Planning
Potential LAP Project?	Yes, as a stand-alone project. Alternately could be included in design of roadway resurfacing.

PLANNING LEVEL COST ESTIMATE

Project	Trail Type	Approximate Distance	Approximate Cost*	Approximate Cost with 30% Contingency**
McIntosh/Ocala Connector	12’ Multi-use trail	21 miles	\$6,027,000.00	\$7,835,100.00

*Approximate costs were obtained from FDOT LRE July 2019 update.
**The approximate cost with a 30% contingency is intended to provide a realistic idea of what the cost will look like if there are additional needs such as further design, utility relocation, right-of-way issues, drainage needs, etc. More refined cost estimates will be necessary at future stages. Planning level costs do not include potential right-of-way acquisition.



PROJECT #5
Old Ocala-Summerfield Rd./135th St./SE 80th Ave.

PROJECT DESCRIPTION

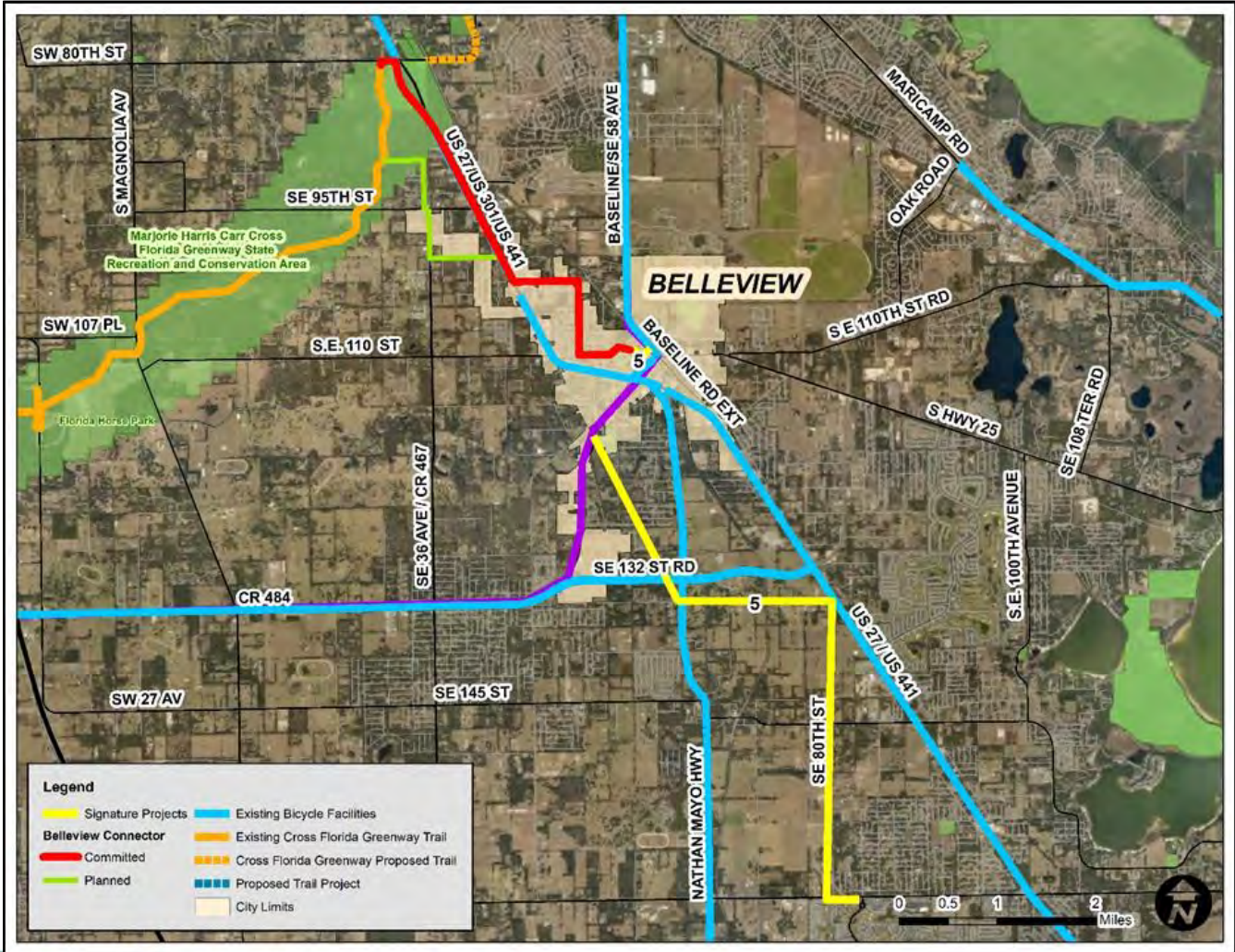
This project would connect areas of Marion County such as Summerfield and Belleview to the Cross Florida Greenway and other facilities, giving access to County-wide facilities and outdoor recreation. Facilities along these roadways would include a mix of sharrows and enhanced crossings depending on traffic and safety on the roadways identified. This project begins on CR 42, which has a low AADT of 18,900 (FDOT Daily Traffic Info: AADT, 2019) and a speed limit of 45 mph, and will mainly serve residents of The Villages because neighborhoods north of the corridor can access SE 80th St. through safe, neighborhood streets. Because bicyclists will only be on CR 42 for such a short period of time, a multi-use trail is not necessary to make this connection. This potential project would immediately connect to the Bicycle Beltway, which would yield further connections through the Belleview Greenway Connectors and the Ocala Downtown area, and further trail systems such as the Silver Springs Bikeway. In order to maintain connectivity, a small piece of Project #6 connecting the Bicycle Beltway to the Belleview Connector will need to be completed first. This project will give users opportunities for longer trips and higher connectivity to points of interest.

PROPOSED FACILITIES

Varies

PRIORITY

Medium



CRITERIA

Criteria	Does project meet criteria?
Serves an area of high population density?	✓
Provides connectivity to existing trails or bicycle facilities?	✓
Supported by public and stakeholders?	

This project will give access to highly populated residential areas in Belleview and Summerfield and will provide connectivity to existing facilities on the Cross Florida Greenway. This area of Marion County will serve as an important location for the growing bicycle network. Support for this project was not expressed by stakeholders or the public when presented for voting. Because only some of this criterion was met, this project is prioritized as medium.

ADDITIONAL INFORMATION

Project Considerations	There are potential right-of-way constraints along the route, limiting multi-use trail width and feasibility. Private driveways along route could affect treatment. Vertical curvature could affect treatment.
Maintenance Responsibility?	Marion County
Next Steps	Feasibility / Design / Construction – initial implementation (sharrows/signage) could be implemented as a stand-alone construction project or with roadway resurfacing, feasibility would be necessary for multi-use trail section.
Potential LAP Project?	Yes

PLANNING LEVEL COST ESTIMATE

Project	Trail Type	Approximate Distance	Approximate Cost*	Approximate Cost with 30% Contingency**
Old Ocala-Summerfield Rd./135 th St./SE 80 th Ave.	Sharrows Signage Traffic Calming	7 miles	\$210,000.00	\$273,000.00

*Approximate costs were obtained from FDOT LRE July 2019 update.
**The approximate cost with a 30% contingency is intended to provide a realistic idea of what the cost will look like if there are additional needs such as further design, utility relocation, right-of-way issues, drainage needs, etc. More refined cost estimates will be necessary at future stages. Planning level costs do not include potential right-of-way acquisition.



PROJECT #6

US 27/Bonnie Heath Blvd. (NW 60th Ave. to CR 225A)

PROJECT DESCRIPTION

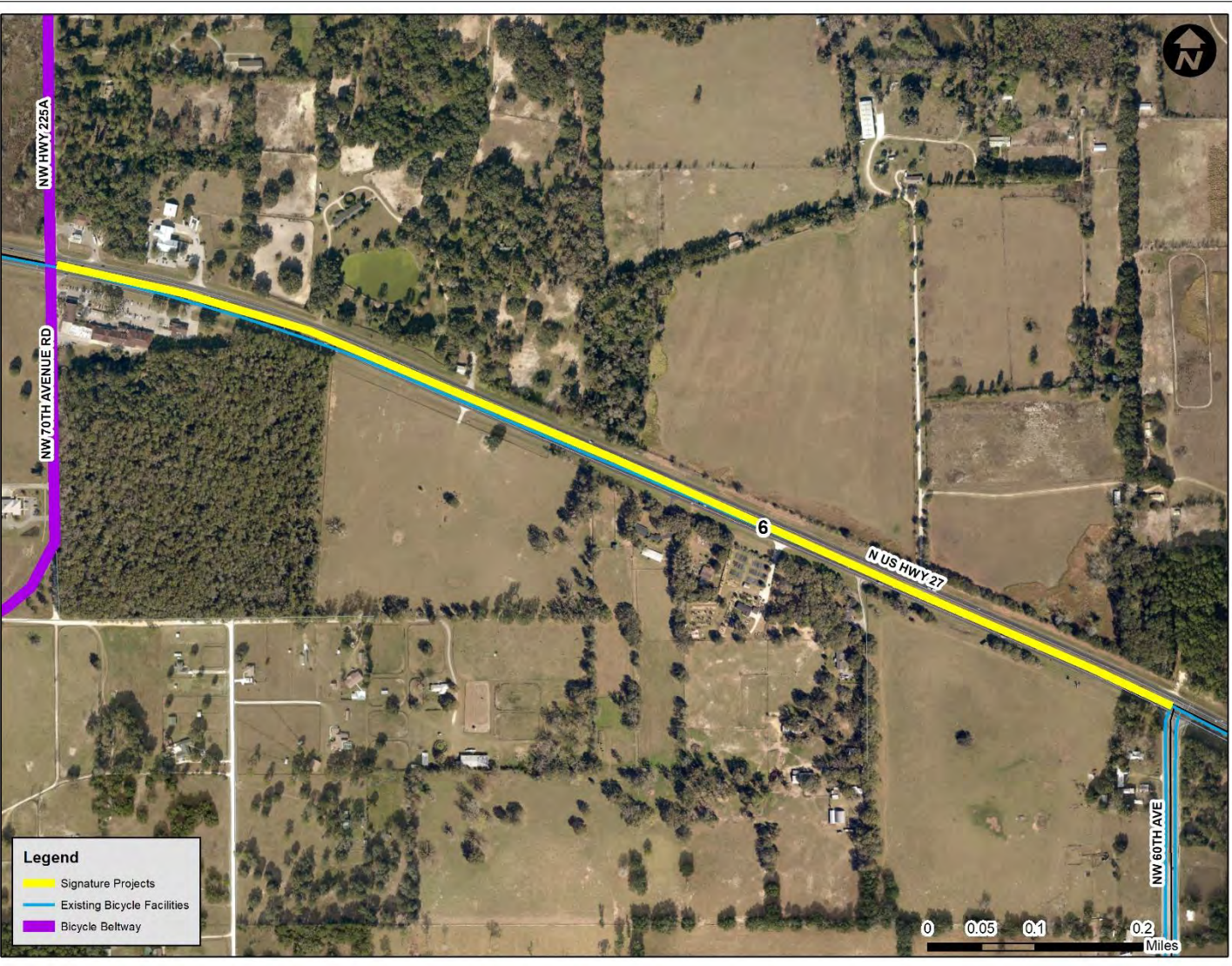
This would serve as a connection between existing bicycle facilities on SW 60th Avenue to the proposed Bicycle Beltway. This is a high-speed road (55 mph) that would benefit from off-street facilities to accommodate bicyclists trying to make connections to existing facilities. If off-street facilities such as a multi-use trail are not feasible, then the minimum acceptable facilities on Bonnie Heath Blvd. are a separated 7-foot cycle track. However, plenty of right-of-way appears to exist along the corridor.

PROPOSED FACILITIES

12' multi-use trail

PRIORITY

Low



CRITERIA

Criteria	Does project meet criteria?
Serves an area of high population density?	
Provides connectivity to existing trails or bicycle facilities?	✓
Supported by public and stakeholders?	

This project will connect existing facilities on NW 60th Avenue to the Bicycle Beltway. This short stretch will facilitate an easy connection for bicyclists looking to access various locations throughout the County. Support for this project was not expressed by stakeholders or the public when presented for voting. Because this criterion was only met in a limited capacity, this project is prioritized as low.

ADDITIONAL INFORMATION

Project Considerations	US 27/Bonnie Heath Boulevard is a state road, which would require coordination with FDOT. It may be possible to include this project in a future roadway project. Drainage swales and grading of adjacent properties will require additional design and potential drainage swale modification for construction.
Maintenance Responsibility?	FDOT
Next Steps	Feasibility / Planning
Potential LAP Project?	Yes, as a standalone project, or could be included within future resurfacing project.

PLANNING LEVEL COST ESTIMATE

Project	Trail Type	Approximate Distance	Approximate Cost*	Approximate Cost with 30% Contingency**
US 27/Bonnie Heath Blvd.	12' Multi-use trail	1.15 miles	\$330,050.00	\$429,065.00

*Approximate costs from FDOT LRE July 2019 update.
**The approximate cost with a 30% contingency is intended to provide a realistic idea of what the cost will look like if there are additional needs such as further design, utility relocation, right-of-way issues, drainage needs, etc. More refined cost estimates will be necessary at future stages. Planning level costs do not include potential right-of-way acquisition.



Safety

The safety of all users on multi-use trails in Marion County is a top priority, as indicated by both stakeholders and the public. Trail users typically encounter safety conflicts related to intersections with other user types, roads, and vehicular traffic. Each of these conflicts presents their own unique challenges for recreational trail users and should be addressed individually to promote safety for each type.

CONFLICT WITH OTHER USER TYPES



Existing signage along the Cross Florida Greenway

Trail user types include bicyclists (both mountain and road), hikers, and equestrians; trails for these user types frequently converge and intersect on the Cross Florida Greenway. These intersections can become dangerous and may impact the quality of the user experience if not addressed. Cross Florida Greenway intersection areas also include trailheads, tunnels and land bridges. The convergence of these diverse types of trail traffic can cause issues that impact each user group differently. Because bicyclists may travel at high, sustained speeds along the paved section of the trail, they typically do not anticipate cross traffic from hikers or equestrian users. Equestrian users travel at slower speeds, but horses may become spooked by bicycles traveling at high speeds through intersections, which can be hazardous for each group of users involved. Additionally, hikers, who travel at slower speeds, may not be able to avoid the high speeds of bicyclists or the unpredictable nature of the horses' reaction when not anticipating or looking out for traffic of this type. Issues with visibility have been reported on the Cross Florida Greenway at

intersections between mountain biking trails and the paved trail. There is also concern about conflicts between cyclists and tubers and the general public near the Rainbow River in Dunnellon, which will eventually be connected to the Cross Florida Greenway. While conflict related to collisions is not common, conflict can simply be a contentious encounter between two different types of user on the trail. This type of conflict is common because each user type has different needs and interests associated with multi-use trail usage and does not typically account for interaction. For this reason, recommendations must be specifically tailored to address each user type without giving higher importance to a certain type of user group over another.

As a major concern for trail users and governing bodies such as American Trails, user conflict is usually addressed through the promotion of trail etiquette and the minimization of conflict areas. When users are well-educated on their role in maintaining a safe and efficient



Example of signage to address conflict on the trail

Regional Trails Facilities Plan



trail system, trails typically function more smoothly and provide added safety in preventing avoidable conflict⁴. Trail etiquette promotion does not require huge investments nor significant additional infrastructure and can improve the atmosphere of the trail, which may encourage less confident users to take advantage of outdoor recreation opportunities. FDEP has done an excellent job in providing signage, mirrors and other markings at approach locations for different user types along the Cross Florida Greenway Paved Trail in an effort to address conflict issues between paved trail users and equestrians in order to “improve situational awareness”⁵. FDEP is also working with Marion County on additional opportunities for connectivity features under county roads during widening projects, such as SW 49th Avenue. These projects are important because they install crossing facilities that separate equestrians, bicyclists, and hikers, and minimize conflicts and potential hazards. These initiatives combined with an emphasis on proper trail etiquette can significantly reduce conflict

situations between trail users. The following recommendations will enhance the improvements already made by FDEP in addressing this.

Recommendation: Trail Etiquette Signage

Trail etiquette signage should be located at specific locations along the Cross Florida Greenway to promote safe travel and awareness of the potential encounters with other user types. Trail etiquette signage locations are detailed in **Figure 6** through 8. Because trails are a shared public space, this signage would include information, rules, laws, and suggestions for maintaining trail etiquette and co-existing with other user types, especially at areas of conflict such as trailheads, tunnels, land bridges, and trail intersections. In the state of Florida, bicycles are legally defined as a vehicle, and the bicyclist as a driver, which is significant in determining trail etiquette and indicates that bicyclists yield to all other trail user types, especially pedestrians. This was considered when determining what signage and etiquette information is recommended. Trail etiquette signage should be implemented by Marion County in coordination with FDEP at appropriate locations along the trail suggested by the trail design standards section of this Plan. Trail etiquette signage information and suggestions include:



Example of trail etiquette signage in Miami-Dade County

⁴ <https://www.americantrails.org/resources/conflicts-on-multiple-use-trails>

⁵ <https://www.floridastateparks.org/parks-and-trails/marjorie-harris-carr-cross-florida-greenway>

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- Bicyclists yield to all other user types at crossings
- Follow all trail safety signage
- Communicate effectively with other trail users, making obstacles that may be ahead known, and let others know about your needs (or your horses) as a specific type of user
 - Bells on bicycles
 - Announce when passing
- Be courteous and respectful
- Anticipate encounters with other user types and be prepared to respond appropriately



Example of trail signage to reduce conflict

Optional Recommendation: Pavement paint markings on paved trail where it intersects with equestrian trails



Example of Emergency Service Markings on the Cross Florida Greenway Paved Trail

Pavement paint has been used in a number of locations in Marion County and on the Cross Florida Greenway Paved Trail to give users warning, directional indications, and provide EMS markings and reference points for emergency service response. Pavement paint and stencils should be used to create additional markings on the paved trail in advance of an intersection with an equestrian trail. It is recommended that these pavement markings be placed 100 to 150 feet in advance of all known and marked trail intersections involving bicyclists and equestrian to ensure that fast-moving cyclists have sufficient time to be made aware of the intersection. Thermoplastic pavement markers/markings are not recommended, as they become slick when wet or damp and can lead to safety issues for trail users. It is also recommended that these pavement markings be redone periodically when paint begins to fade due to natural wear and tear.

FIGURE 6. SAFETY RECOMMENDATION FOR MULTIPLE USER TYPES #1

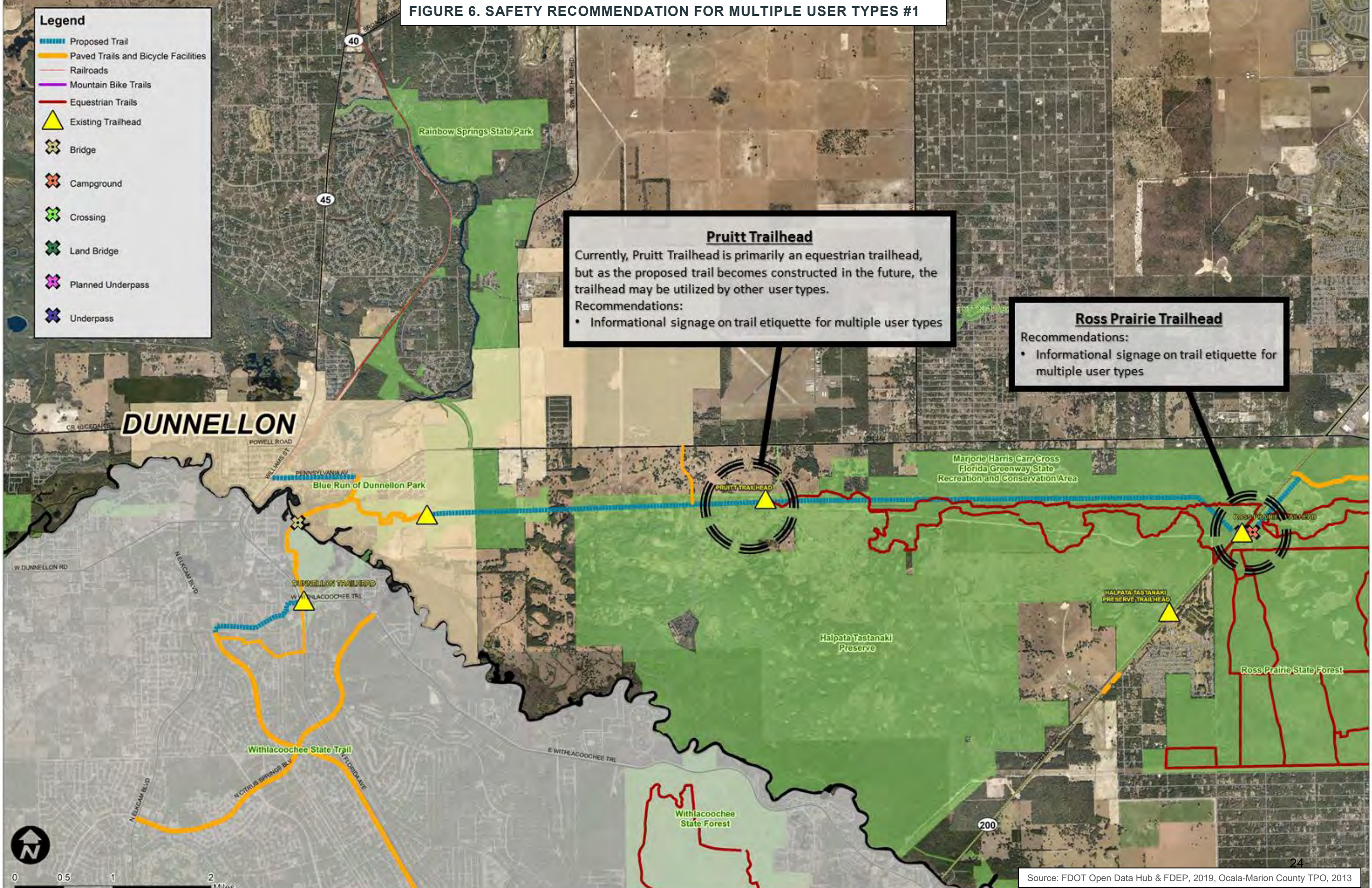


FIGURE 7. SAFETY RECOMMENDATION FOR MULTIPLE USER TYPES #2

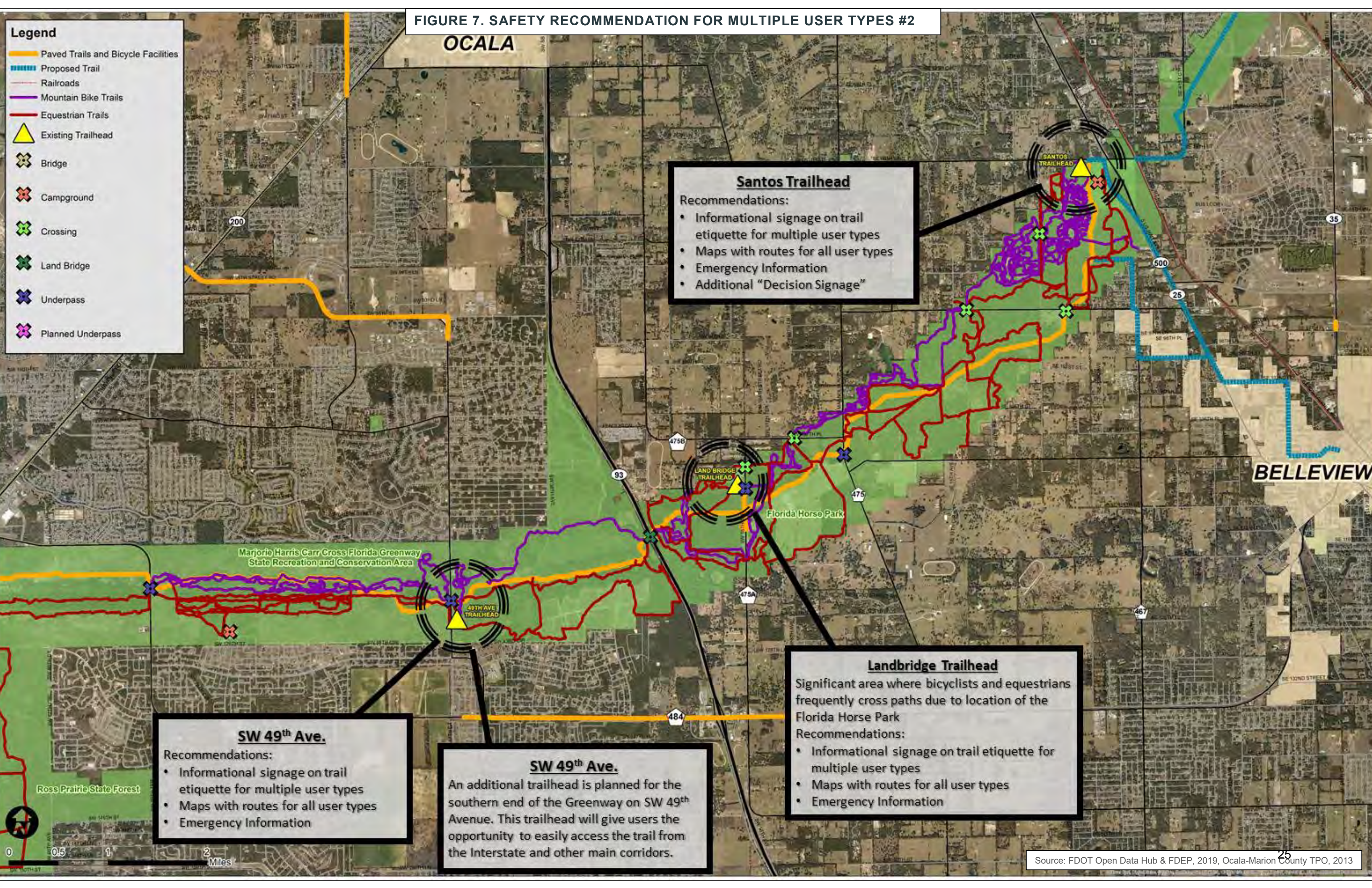
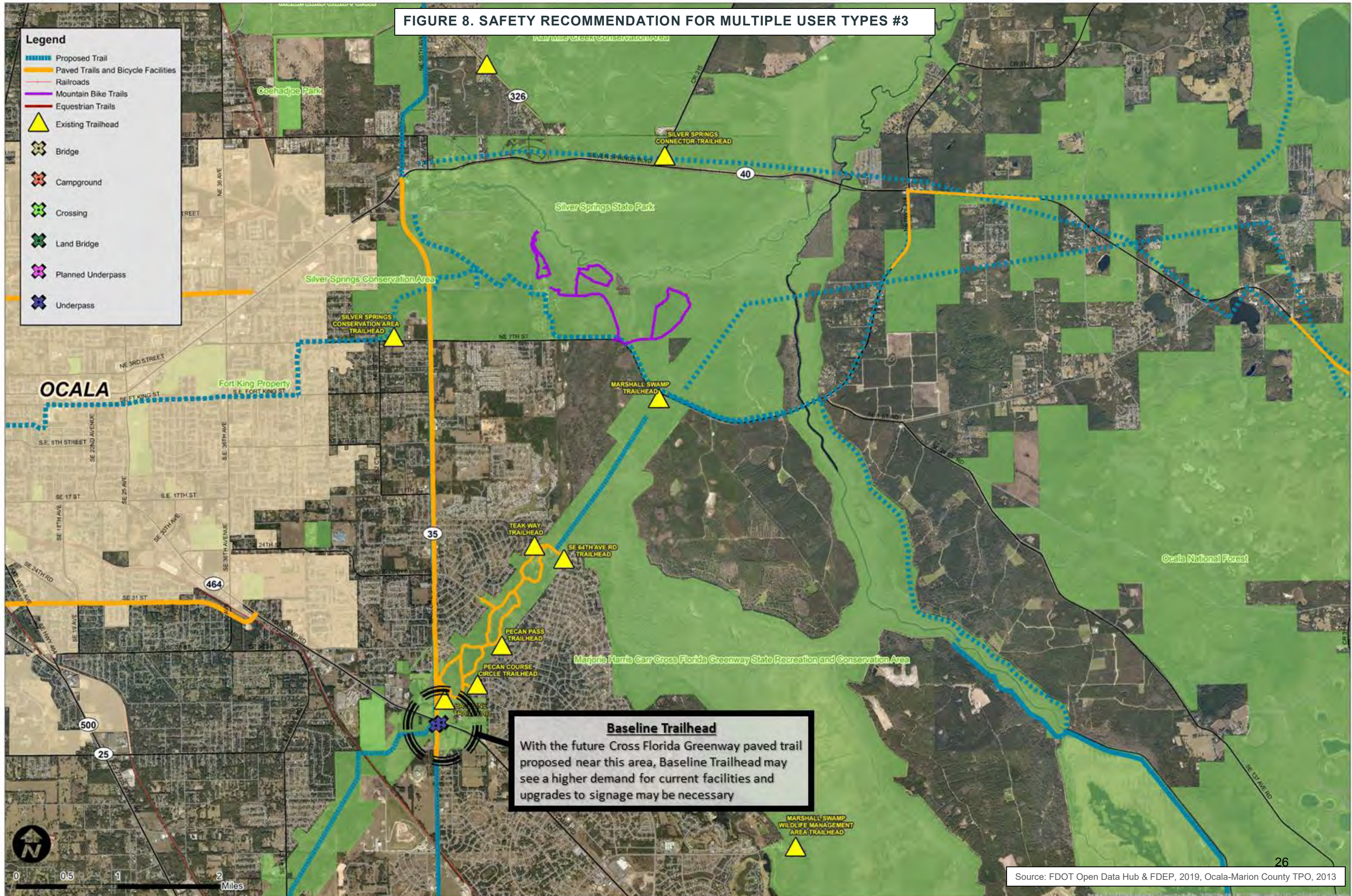


FIGURE 8. SAFETY RECOMMENDATION FOR MULTIPLE USER TYPES #3

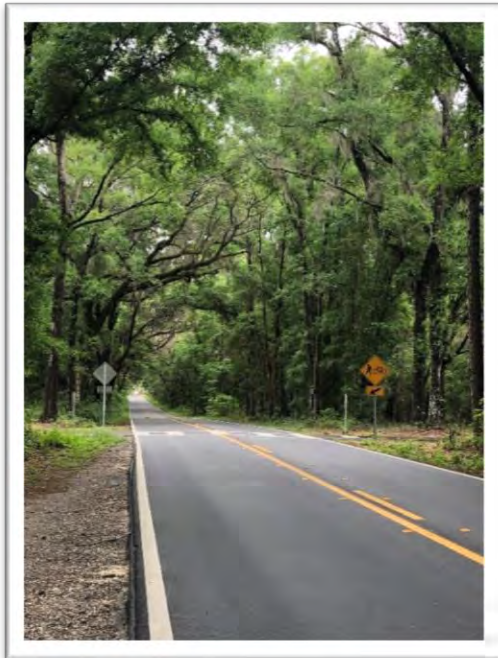




ROADWAY INTERSECTION CONFLICT

Because of the expansive nature of the existing and planned trail system within Marion County, there are locations where it intersects with roadways, creating several potential conflict areas. Stakeholders in Marion County have been committed to providing safe alternatives for crossings through underpasses, land-bridges, crosswalks, and installed signage at several locations along the trail. These locations include

- ♦ **SR 200 South of CR 484 (Ross Prairie Trailhead)**
- ♦ **CR 484**
- ♦ **SW 49th Avenue (SW 49th Avenue Trailhead)**
- ♦ **CR 475A (Land bridge Trailhead)**
- ♦ **CR 475, and the SR 464 (Baseline Trailhead).**



As the trail continues, it is imperative that all crossings have the same signage and that improved infrastructure is incorporated to facilitate safe crossings and foster connectivity along the trail. When a trail is perceived as safe and protected from vehicular traffic, more users of varying skill level will feel more comfortable using the trail. Trail and Road conflict locations are detailed in **Figures 10** through **12**.

Recommendation: Provide pedestrian crossings at locations along the trail that currently lack signage or markings

Using site visits, stakeholder and public feedback, and GIS analysis, it was determined that a pedestrian crosswalk is needed from Santos Trailhead to the north side of SE 80th St. This will accommodate bicyclists and pedestrians crossing the road to the north side of SE 80th Street and will likely benefit the future paved trail extension that is proposed along

this roadway to reconnect the trail with the disconnected section of the Cross Florida Greenway that is just northeast of Santos Trailhead. This project should be implemented by Marion County in coordination with FDEP. The proposed crosswalk location is shown in **Figure 9**.

FIGURE 9. PROPOSED CROSSWALK FROM SANTOS TRAILHEAD



Regional Trails Facilities Plan



Recommendation: As the proposed sections of the trail continue be designed and constructed, adequate crossings in line with past improvements on the trail should be placed at intersections and roadways



High emphasis crosswalk markings on the Cross Florida Greenway

The Cross Florida Greenway Trail is proposed to continue northeast along the Cross Florida Greenway and should continue to include crossings and trailheads to accommodate user types and keep those users safe from roadways and vehicular traffic. Marion County has been proactive in addressing these intersections and should continue to do so using the following where appropriate and feasible:

- Trail warning/yield signs and high emphasis crosswalk markings for lower speed/lower volume roadways
- Underpasses or additional emphasis on roads with speeds of 50 mph with moderate to high traffic volumes
- Rectangular Rapid Flashing Beacons (RRFBs) or signalized crossings at intersections along highly trafficked and high-speed roadways where an underpass is infeasible or interaction with the roadway is desired (i.e. bike lane)
- Approach signage for trail users in all cases where the paved trail intersects with the roadway



Underpass and trail etiquette signage on the Cross Florida Greenway

FIGURE 10. SAFETY RECOMMENDATIONS FOR PAVED AND PROPOSED TRAIL ROAD CROSSINGS

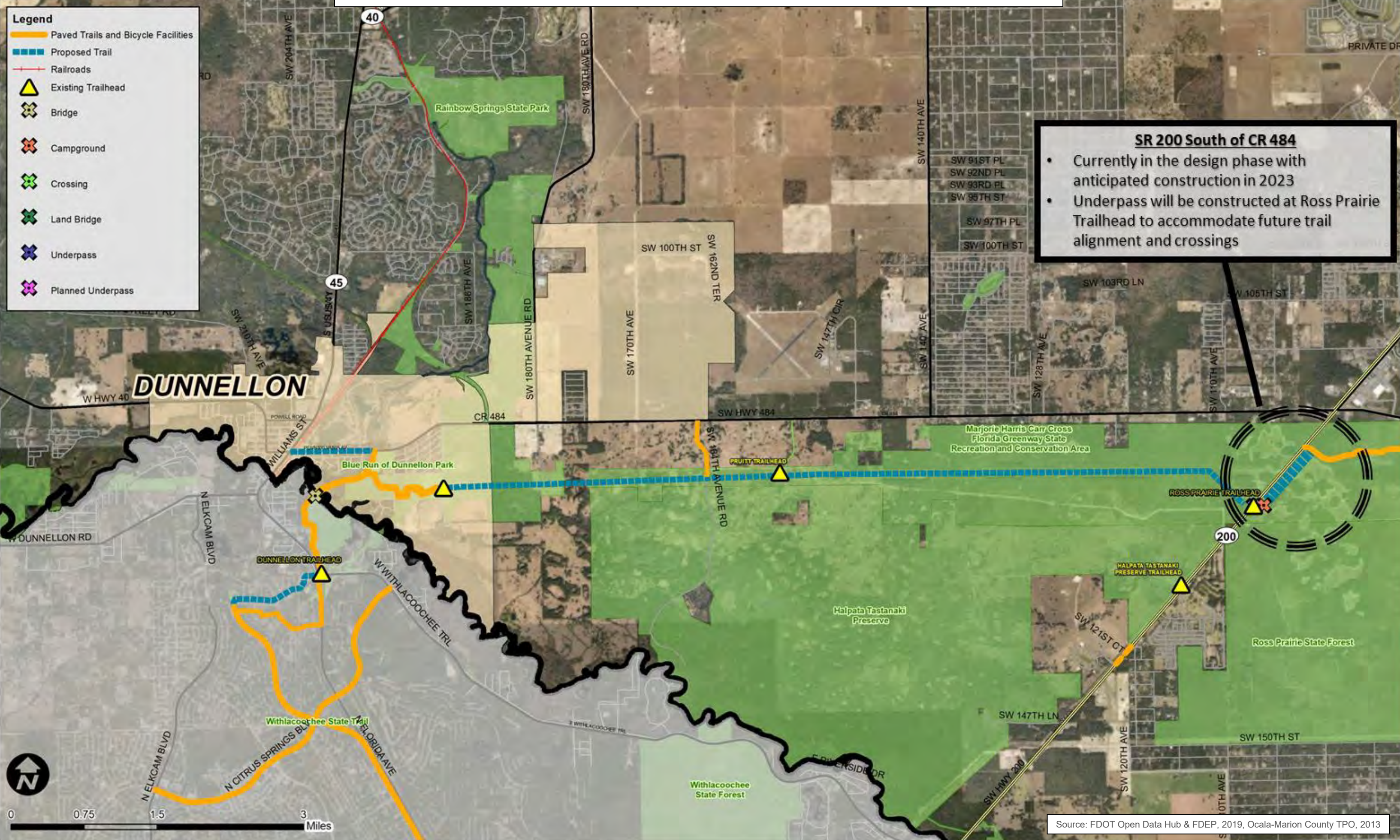


FIGURE 11. SAFETY RECOMMENDATIONS FOR PAVED AND PROPOSED TRAIL ROAD CROSSINGS

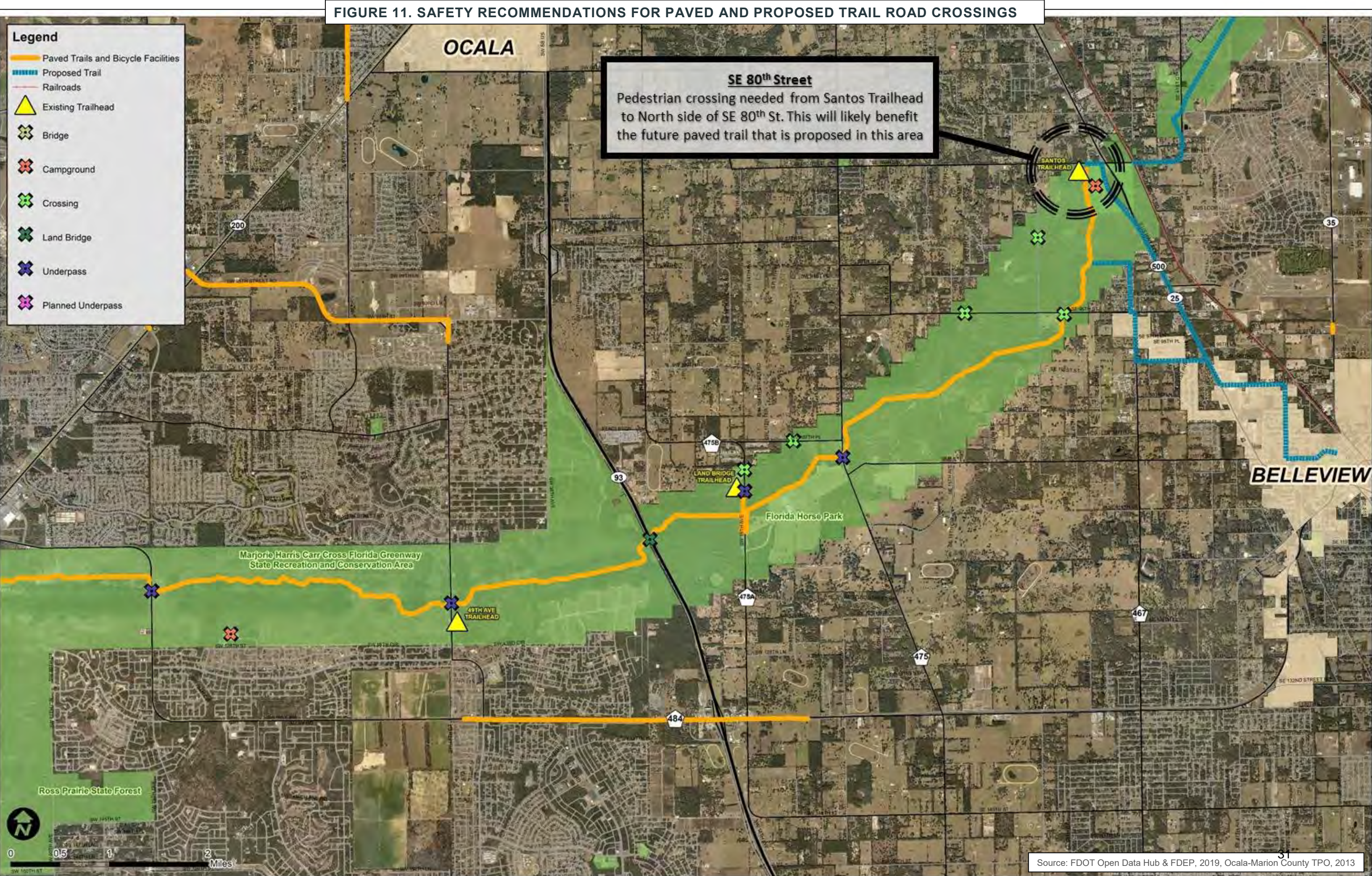
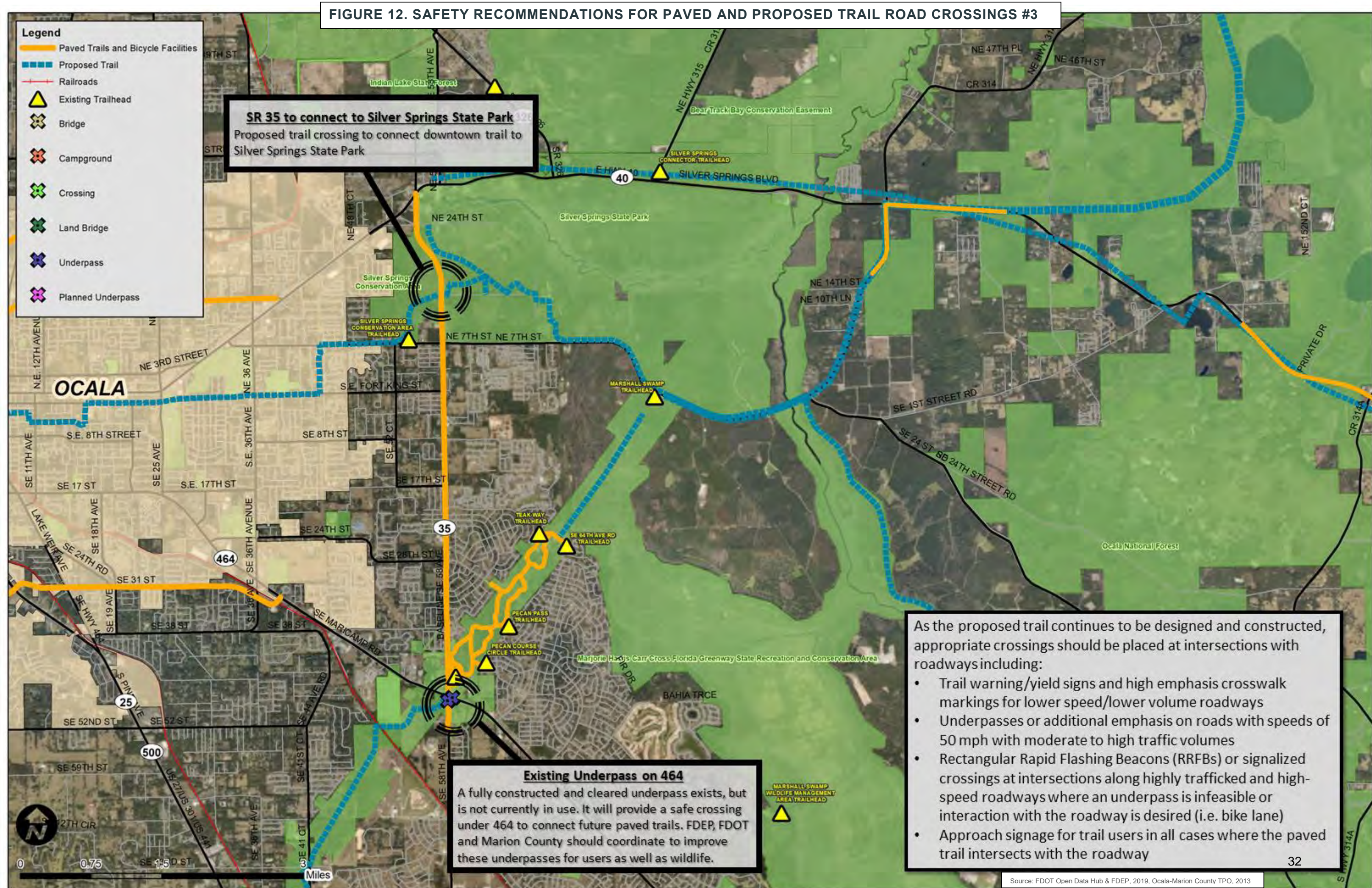


FIGURE 12. SAFETY RECOMMENDATIONS FOR PAVED AND PROPOSED TRAIL ROAD CROSSINGS #3





Trail Design Standards

Trail design standards typically guide the construction of a trail and provide guidance for certain aspects such as facilities and signage. They can also provide a level of safety in ensuring that certain requirements are met when providing a trail for recreational uses. For the purposes of this Plan, trail design standards that will be suggested regarding the Cross Florida Greenway Trail include trailheads, shelters, and signage.

TRAILHEADS & SHELTERS

Trailheads are significant features of a trail because this is the starting point for most users on their experience. Trailheads provide users with amenities such as parking, restrooms, seating, and shelter. As discussed previously, the ability and interest of trail users varies, and providing specific amenities that can accommodate a range of needs is critical. Trailheads can range in size and purpose, from a major access point with ample parking, to a refuge shelter designed to protect trail users from fast moving summer storms.

Along the Cross Florida Greenway, several trailheads already exist. These include

- ♦ **Ross Prairie Trailhead**
- ♦ **49th Avenue Trailhead**
- ♦ **Land Bridge Trailhead**
- ♦ **Santos Trailhead.**

Several others exist along areas of the Cross Florida Greenway where the multi-use trail is not yet paved. Refuge shelters are also located sporadically along the existing

network. These trailheads are of varying size and offer a range of different amenities and are not currently located at fixed intervals to ensure accessibility from specific locations along the trail. As the trail is extended and gaps are filled, it is important that more trailheads are located along the trail to accommodate high numbers of users, and their specific and different needs.



Small shelter along the Cross Florida Greenway

Recommendation: Adopt a hierarchy of trailhead classes based on varying locations along the trail system.

Trailhead classes can promote safety by providing different types of services and amenities at trailheads based on their size and classification. Trailhead classes are elements of trail design standards, and are categories based on intensity of the amenities available and how often they should be located along a network.



49th Avenue Trailhead is a Class I Trailhead on the Cross Florida Greenway

Because so many trailheads exist along the current and proposed trail, it is important that existing trailheads be designated into appropriate trailhead class categories to ensure that appropriate amenities are provided at reasonable distances for trail users. These classes will also help determine what additions, if any, should be made to include sufficient access to amenities. Where no trailhead currently exists, trail design standards recommended in this section should be used to provide these amenities and services. The trailhead

classifications recommended in this Plan have been implemented along other trail systems. Marion County, in coordination with FDEP and the TPO, should take the lead on adoption of this recommendation. The following trailhead classes should be adopted in an effort to provide these amenities and services.

<i>Class</i>	<i>Description</i>	<i>Location Recommendation</i>
Class I	Major access points for trails. Class I Trailheads will include parking for all user types including designated parking for persons with disabilities and equestrian vehicles, loading and unloading areas, restrooms, water, shelter areas, signage, trashcans, motorized wheelchair recharge stations, bicycle repair stations, trail etiquette signage and maps	Every 10 miles along a trail system or at logical termini.
Class II	Minor access points for trails. Class II Trailheads will include minor parking areas, designated parking for persons with disabilities, restrooms, trashcans, water, minimal signage, motorized wheelchair stations	Every 5 to 10 miles along the trail system
Class III	Rest area/weather refuge. Class III Trailheads include stand-alone rest area/shelter, trashcan, water, and benches.	Every 1 to 3 miles along a trail system

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Using these Trailhead Classes, trailheads currently located along the paved Cross Florida Greenway or on future sections of the trail or other projects are classified as follows:

CLASS I

Pruitt Trailhead
Ross Prairie Trailhead
49th Avenue Trailhead
Land Bridge Trailhead
Santos Trailhead
Baseline Trailhead

CLASS II

Marshall Swamp Trailhead
Centennial Trailhead
Silver Springs Connector Trailhead
Bear-N-Oak Trailhead

CLASS III

Teak Way Trailhead
Pecan Pass Trailhead
Pecan Course Circle Trailhead
SE 64th Avenue Road Trailhead



Santos Trailhead is a Class I Trailhead on the Cross Florida Greenway



SIGNAGE

Trail signage is important because it ensures safety of the trail users by directing them and keeping them on the trail system, and serves as a means of providing connectivity through coordinated, universal messaging. Uniform signage is also helpful in pointing out significant features along the trail and can make the experience more enjoyable and informative for the user. Furthermore, signage can encourage users to access local communities by providing detailed information about mileage, attractions, and businesses surrounding the trail that might otherwise be unknown to the user.⁶ As noted previously, signage additions are relatively inexpensive compared to other costs associated with trail development but can improve the overall user experience by providing significant information.



Trailhead Signage at the Santos Trailhead on the Cross Florida Greenway (bikeflorida.net)

Recommendation: Implement a standardized hierarchy of trail signage to mark locations along the trail and promote wayfinding.

Different types of signage should be provided along the Cross Florida Greenway Paved Trail in an effort to better inform users about their location, and distance proximity to notable destinations along the trail, such as trailheads, parks, or cities. This signage would ideally be glommed onto signage throughout the County to supplement existing designs and serve as an added feature for identifying the network. The following trail signage types should be adopted in an effort to provide relevant information and simple wayfinding along the Cross Florida Greenway Paved Trail. Marion County and FDEP should coordinate to implement these signage strategies along the trail. Potential locations along the Cross Florida Greenway for each type of signage are shown below and in **Figure 13**. Some examples of signage design options are shown in **Figures 14, 15** and **16**.

<i>Signage Type</i>	<i>Location</i>
Decision Signage	Located at popular starting locations along the trail to educate users on how far other destinations are from their location, as well as on designated bicycle facilities and streets in Marion County to promote awareness of connectivity among users
Directional Signage	Located within each destination area to direct users a more specific location
Marker Post	Located periodically along the trail system to inform users how far the next major destination is while using the trail

⁶ <https://www.railstotrails.org/build-trails/trail-building-toolbox/design/signage-and-surface-markings/>

Regional Trails Facilities Plan



Recommendation: Develop specific branding for trail signage and glomming that is universally recognizable and coordinated with signage throughout Marion County.



Example of branding for the Florida Trail (floridahikes.com)

Recommendation: Develop a Signage Master Plan to determine specific requirements and locations for specific types of signage.

In order to tie the hierarchy of trail signage and the branding components together, a Marion County specific Master Plan related to signage and wayfinding is recommended. This Master Plan will help determine the design for a number of tools that will improve wayfinding in the County, including signage, maps, brochures, gateways, and websites. These materials will enhance public awareness about the trail and other amenities that the County has to offer. The Master Plan should be pursued in coordination with Marion County, the Ocala-Marion County TPO and the Visitors and Convention Bureau. A Signage Master Plan also offers the opportunity for local storytelling through interpretation. This provides visitors with a better understanding of the local flavor of the different communities throughout Marion County, and can offer a valuable resource for providing information to both local school groups and the general public. This type of signage would include wayside exhibits and interpretive panels.

In providing signage along the Cross Florida Greenway Paved Trail, it is recommended that the County work with key stakeholders to decide upon a universal color scheme and brand for this signage. All recommended signage in this plan should be created using this agreed upon branding and should incorporate input from cities including Dunnellon, Belleview, and Ocala. This is critical in representing a united, connected trail system throughout Marion County. This recommendation should be completed by Marion County to ensure a uniform system that is used throughout the region.

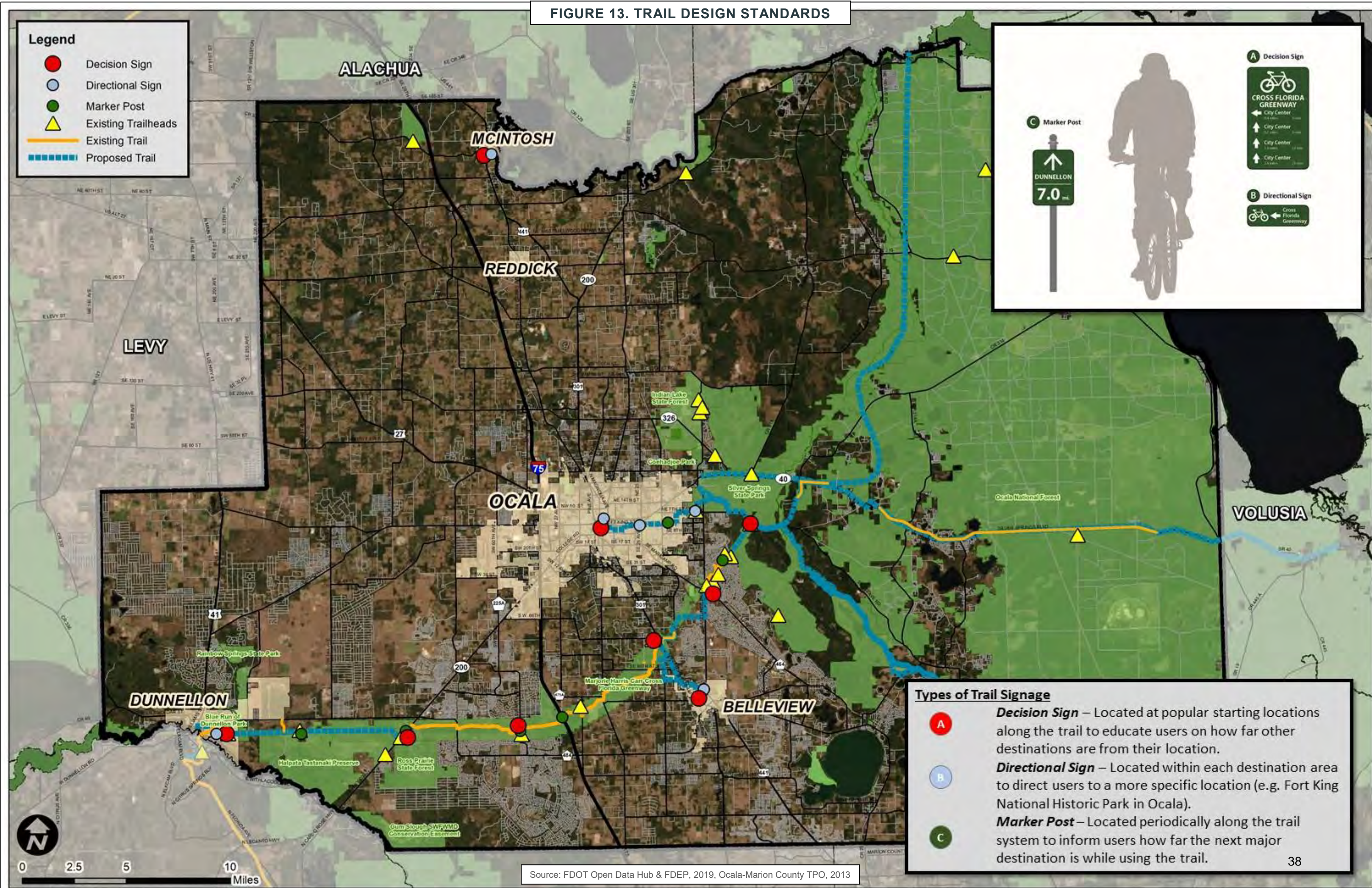


Example of cohesive signage on the Withlacoochee State Trail



Example of interpretive signage at Fort Cooper State Park (trailsoffloridaindianheritage.org)

FIGURE 13. TRAIL DESIGN STANDARDS





Mileage Marker Sign

Signs placed along trail to indicate location and progress along trail

Figure 14. Mileage Marker Sign



Trail Directional Sign

Guides cyclist along trail through more developed areas



Combined Trail Directional Sign

Sign is attached to existing sign to reduce signage clutter

Figure 15. Directional Signs



Trailhead Decision Sign

Placed at the trailhead or major trail intersections

Figure 16. Decision Sign



Next Steps

Marion County has made significant progress in recent years including multi-modal facilities and creating paved multi-use paths for the public to enjoy as well as boost ecotourism opportunities. The Cross Florida Greenway currently offers trail users several opportunities related to recreation, exercise and alternative travel modes. It also has facilitated the conversation regarding the economic benefits of multi-use trails and how best to connect economic centers within the county to offer people access to businesses, restaurants and lodging. As Marion County and the Cross Florida Greenway become more popular due to these facilities, it is imperative that the momentum continue.

Projects

The recommendations made in this plan regarding projects should be considered for inclusion and adoption by the County and the cities of Dunnellon, Belleview, McIntosh, and Ocala in all future iterations of multi-modal focused plans, including the Bicycle and Pedestrian Master Plan, relevant sections of Comprehensive Plans and the 2045 Long Range Transportation Plan (LRTP). They should also be considered in the project design phase for currently committed and planned projects as a means of uniting existing facilities and continuing to provide a connected and cohesive trail system within Marion County.

Safety

The recommendations in this plan related to safety should be considered and implemented wherever appropriate. Addressing conflict points and providing well-thought out and thorough information on signage is critical in improving user experience and accommodating different user types. FDEP has already done an excellent job providing safety amenities such as mirrors and appropriate signage for crossings, and should continue to provide this as the trail continues to be expanded.

Trail Design Standards

Signage opportunities, facility improvements and trailhead and shelter classification provide opportunities that will improve user experience. Adopting trailhead classes and continuing to designate trailheads and shelters by what amenities they provide will ensure that users have access to those amenities regardless of where they are located on the trail. Providing cohesive signage that can be seen throughout the County will also improve wayfinding and offers an element of economic development in letting trail users know where businesses are located. These classifications can also aid in public awareness through mapping, informational brochures, and informational websites which can be outlined more thoroughly in a signage and wayfinding master plan for the County.

In moving forward with these recommendations, Marion County will continue to provide more bicycle facilities and ensure the benefits associated with the Cross Florida Greenway paved trail as the foundation of the Heart of Florida Loop.



Appendix A:

Public Involvement

The following stakeholders were interviewed for the development of this plan:

Name	Agency	Date
Sandi McKamey and Bruce Phillips	City of Belleview	11/8/18
Doug and Michelle Shearer	Shady Greenway Society/Equestrian Rep.	11/8/18
Mickey Thomason	FDEP	11/8/18
Jim Couillard	Marion County Parks & Recreation Dept.	11/8/18
Loretta Shaffer	Visitors & Convention Bureau	11/8/18
Julie Johnson	City of Ocala Parks & Recreation Dept.	11/8/18
Beth Nelson	Town of McIntosh	11/12/18
County Growth Services	TDC Visioning Meeting	

Bike Shops	Date
Brick City Bicycles	11/7/18
Blue Run Bike & Kayak	11/7/18
Santos Trailhead Bike Shop	11/7/18
Greenway Bicycles	11/7/18
Ocala Bike Center (Trek)	11/7/18
Top Gear Bicycles	11/7/18

The following individuals reviewed the draft plan and were consulted on project consistency:

Name	Agency	Date
Elton Holland	Marion County Design Engineer	8/16/19
Ken Odom	Marion County Growth Management	8/16/19
Mickey Thomason	FDEP	8/16/19
Jim Couillard	Marion County Parks & Recreation Dept.	8/16/19
Pete Lee	City of Ocala Growth Management	8/16/19

Multi-Use Bike Trails in Ocala & Marion County

PUBLIC WORKSHOP

Come out and provide input on the future of this unique trail system!

Date: Thursday, April 25th, 2019

Location: Ocala Police Department
402 South Pine Avenue Ocala
Ocala, Florida 34471

Time: 5:30 p.m. to 7:00 p.m.



Project Purpose

The Ocala/Marion County TPO is developing a world class multi-use trail system for its citizens that will provide transportation options, recreational opportunities, and economic development for generations to come. This project will result in guidance that will clearly establish how all subsequent multi-use trails will be built and implemented in the future.

Contact Information: Please contact either Kate Widness (Katelyn.Widness@Kimley-Horn.com) or Derrick Harris (DHarris@OcalaFL.org) with any questions.

Public participation is solicited without regard to race, color, national origin, age, sex, religion, disability, income, or family status.





The Ocala/Marion County
Transportation Planning Organization
Complies with Various

Non-Discrimination Laws and Regulations
including
Title VI of the Civil Rights Act of 1964

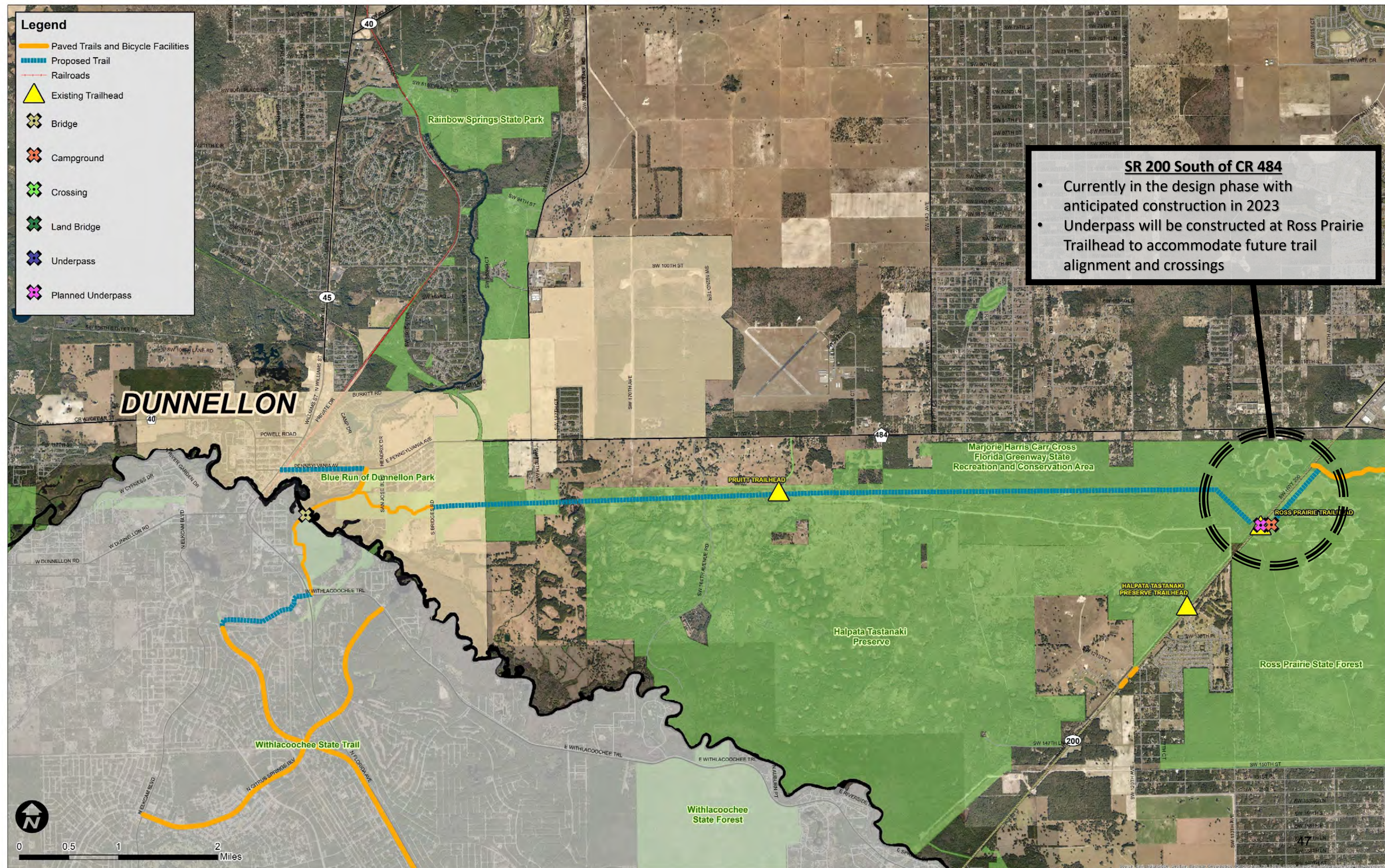
Public Participation is solicited without regard to
race, color, national origin, age, sex, religion,
disability, income, or family status.

Persons wishing to express concerns about
Title VI may do so by contacting:

Ocala/Marion TPO

201 SE 3rd St. | Ocala, Florida 34471
352 629 8297 | tpo@ocalamariontpo.org

Safety Recommendations for Paved & Proposed Trail Road Crossings



Safety Recommendations for Multiple User Type Crossings

Legend

- Paved Trails and Bicycle Facilities
- Proposed Trail
- Railroads
- Mountain Bike Trails
- Equestrian Trails
- Existing Trailhead
- Bridge
- Campground
- Crossing
- Land Bridge
- Underpass
- Planned Underpass

Pruitt Trailhead

Currently, Pruitt Trailhead is primarily an equestrian trailhead, but as the proposed trail becomes constructed in the future, the trailhead may be utilized by other user types.

Recommendations:

- Informational signage on trail etiquette for multiple user types

Ross Prairie Trailhead

Recommendations:

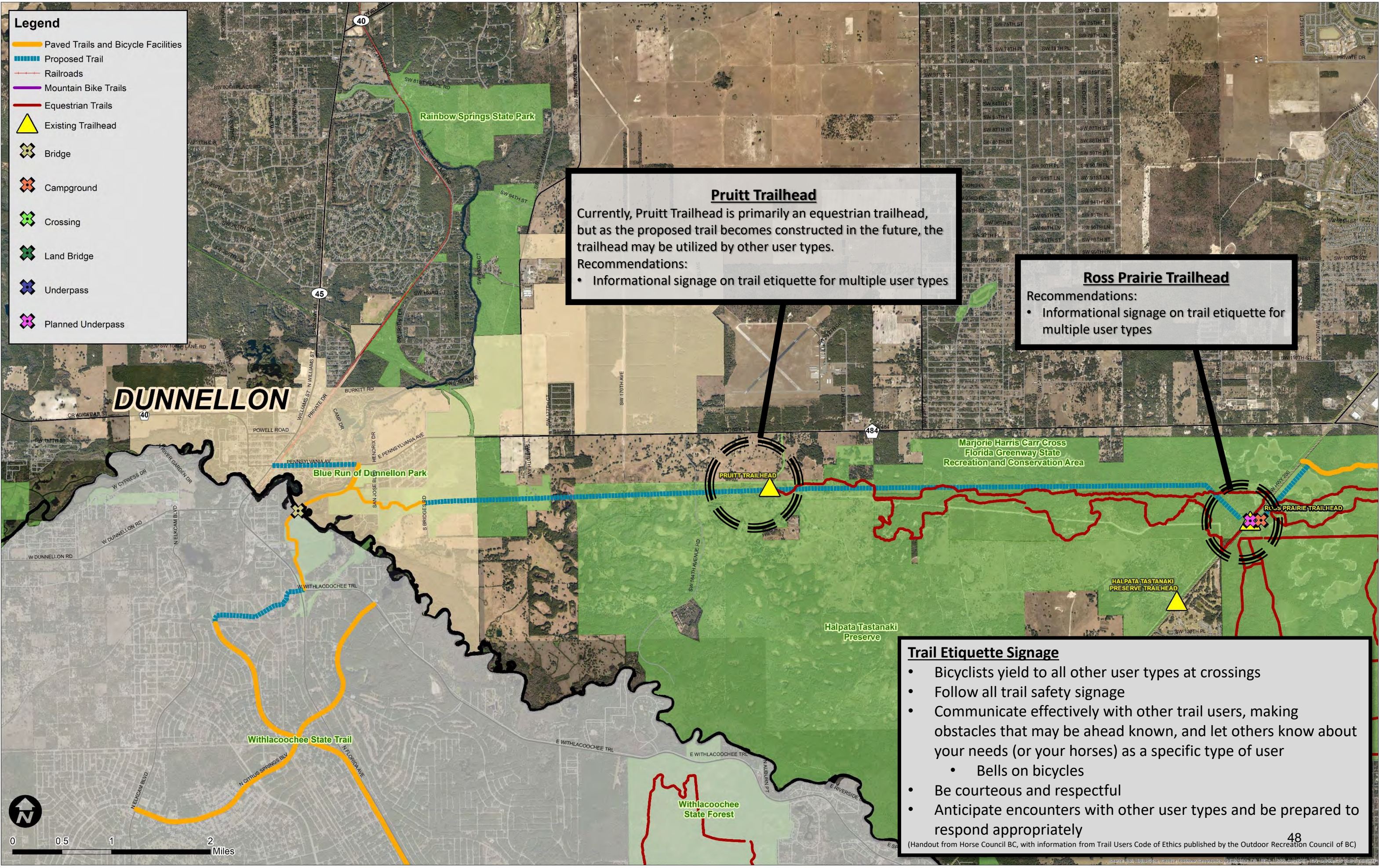
- Informational signage on trail etiquette for multiple user types

Trail Etiquette Signage

- Bicyclists yield to all other user types at crossings
- Follow all trail safety signage
- Communicate effectively with other trail users, making obstacles that may be ahead known, and let others know about your needs (or your horses) as a specific type of user
 - Bells on bicycles
- Be courteous and respectful
- Anticipate encounters with other user types and be prepared to respond appropriately

(Handout from Horse Council BC, with information from Trail Users Code of Ethics published by the Outdoor Recreation Council of BC)





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(Handout from Horse Council BC, with information from Trail Users Code of Ethics published by the Outdoor Recreation Council of BC)

Santos Trailhead

Recommendations:

- Informational signage on trail etiquette for multiple user types
- Maps with routes for all user types
- Emergency Information
- Additional "Decision Signage"

Landbridge Trailhead

Significant area where bicyclists and equestrians frequently cross paths due to location of the Florida Horse Park

Recommendations:

- Informational signage on trail etiquette for multiple user types
- Maps with routes for all user types
- Emergency Information

SW 49th Ave.

Recommendations:

- Informational signage on trail etiquette for multiple user types
- Maps with routes for all user types
- Emergency Information



0 0.5 1 2 Miles

BELLEVUE

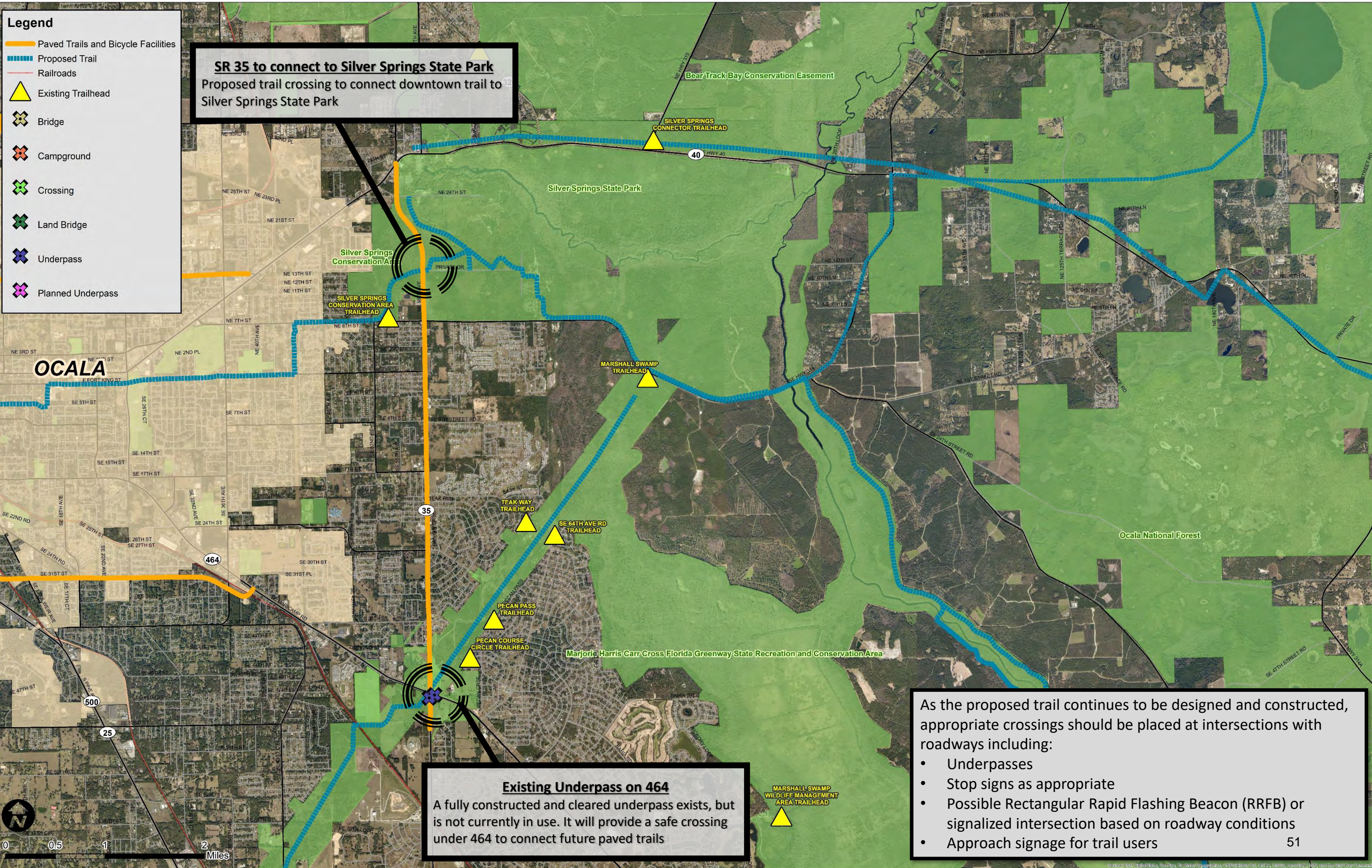
50

Safety Recommendations for Paved & Proposed Trail Road Crossings

Legend

- Paved Trails and Bicycle Facilities
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SR 35 to connect to Silver Springs State Park
Proposed trail crossing to connect downtown trail to Silver Springs State Park



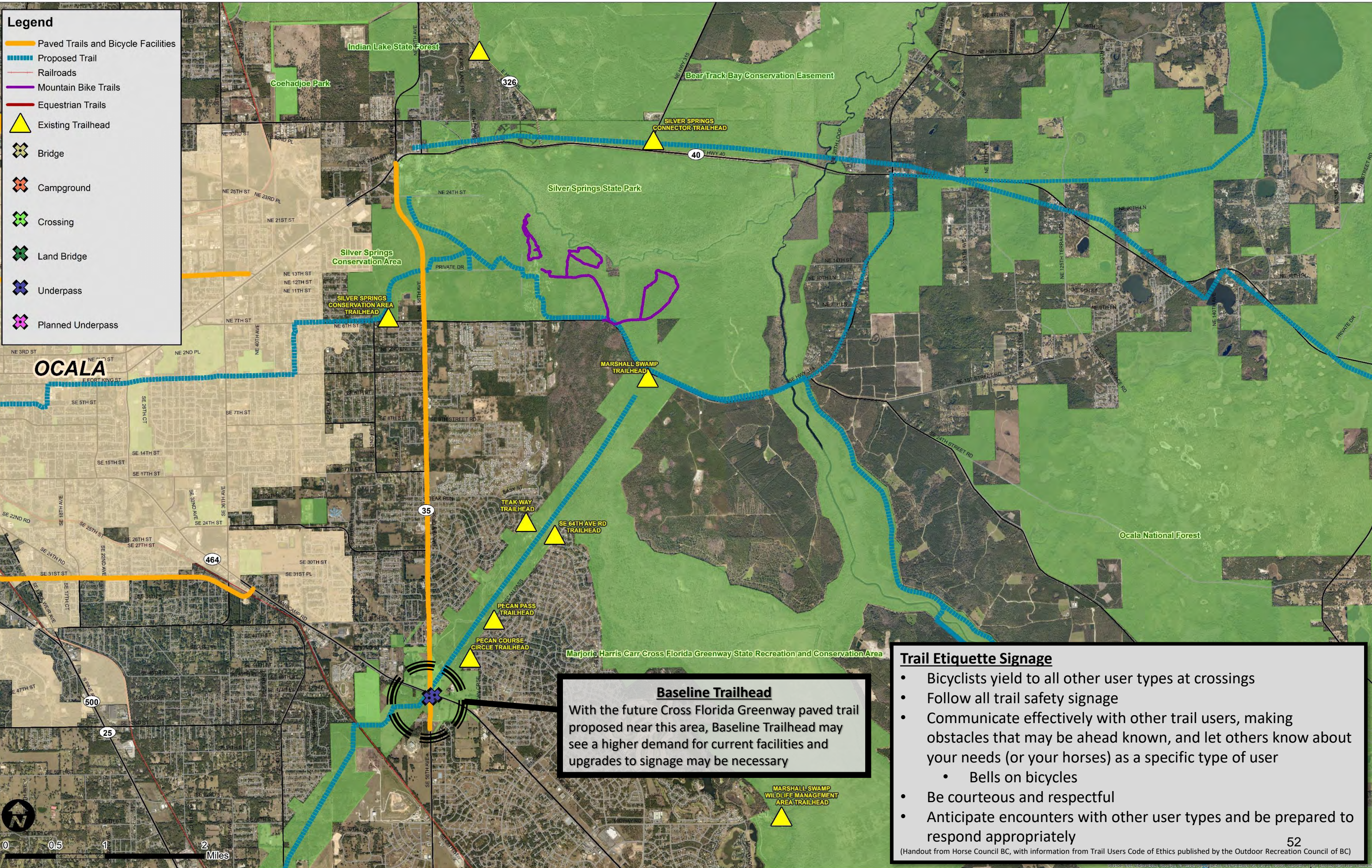
Existing Underpass on 464
A fully constructed and cleared underpass exists, but is not currently in use. It will provide a safe crossing under 464 to connect future paved trails

As the proposed trail continues to be designed and constructed, appropriate crossings should be placed at intersections with roadways including:

- Underpasses
- Stop signs as appropriate
- Possible Rectangular Rapid Flashing Beacon (RRFB) or signalized intersection based on roadway conditions
- Approach signage for trail users

51

Safety Recommendations for Multiple User Type Crossings



Trail Design Standards

Legend

Decision Sign

Directional Sign

Marker Post

Existing Trailhead

Existing Trail

Proposed Trail

Decision Sign

CROSS FLORIDA GREENWAY

← City Center 1.4 miles 2 min

↑ City Center 0.7 miles 5 min

↑ City Center 1.5 miles 12 min

↑ City Center 2.5 miles 21 min


Directional Sign

Cross Florida Greenway

Marker Post

DUNNELLON

7.0 mi.



Trailhead Classes		Class 1	Class 2	Class 3
Characteristics	Role	Major access points for trails	Minor access points for trails	Rest area/weather refuge
	Amenities Considered	Parking for all user types including designated parking for persons with disabilities and equestrian vehicles, loading and unloading areas, restrooms, water, shelter areas, signage, trashcans, motorized wheelchair recharge stations, bicycle repair stations, trail etiquette signage, maps	Minor parking areas, designated parking for persons with disabilities, restrooms, trashcans, water, minimal signage, motorized wheelchair recharge stations	Stand-alone rest area/shelter, trashcan, water, bench
	Approximate Distance	Located approximately every 10 miles along a trail system or at logical termini	Located approximately every 5 to 10 miles along a trail system	Located approximately every 1 to 3 miles along a trail system

*All facilities will be developed according to current applicable standards with the goal of providing universal accessibility

Types of Trail Signage

A

Decision Sign – Located at popular starting locations along the trail to educate users on how far other destinations are from their location.

B

Directional Sign – Located within each destination area to direct users to a more specific location (e.g. Fort King National Historic Park in Ocala).

C

Marker Post – Located periodically along the trail system to inform users how far the next major destination is while using the trail.

53

Cross Florida Greenway Connector Projects

Legend

Existing Cross Florida Greenway Trail

Cross Florida Greenway Proposed Trail

Bike Lanes

Paved Shoulders

CFG Connections

Committed Projects

Planned Projects

Proposed Projects

	Projects I want completed first	Name (Project Limits)	Committed	Planned	Proposed
A		SW 60 th /SW 95 th /SW 49 th Ave. (From I-75 to CFG)			X
B		Bonnie Heath Blvd. (SW 60 th Ave. to CR 225A)			X
C		CR 484 (CFG to Designated Bike Lane on CR 484)			X
D		Marion Oaks Course (49th Ave Trailhead to CR 484)			X
F		Nature Coast Trail		X	
G		Old Ocala-Summerfield Rd./SE 135 th St./SE 80 th Ave.			X
H		US 441 from 135 th St./SE 147 th Place/SE Sunset Harbor Rd.			X
I		SE Maricamp Rd. (From SE 31 st St. to Baseline/SE 58th Ave.)			X
J		Maricamp Rd. (From Baseline/SE 58 th Ave. to Designated Bike Lanes North of Oak Road)			X
K		SR 200 (From 12 th Ave. to Sumter County Line)	X		
L		SR 326 (From .03 miles east of NW 1th Ave. to SR 40)	X		
M		US 441 Mcintosh to Ocala Connector			X
N		Bicycle Beltway (NW 100 th St./NW 9 th St./Baseline/SE Hames Rd./CR 484/SW 80 th Ave./CR 225A)			X
O		Bellevue Trail Connector (US 27)	X		
P		Bellevue Trail Connector (SE 35 th Court/SE 95 th St./SE 36 th Ave/SE 100 th St.)		X	
Q		Silver Springs Bikeway – Downtown Connector		X	

N

0

2.5

5

10

Miles

Cross Florida Greenway Connector Projects

Legend

Existing Cross Florida Greenway Trail

Cross Florida Greenway Proposed Trail

Bike Lanes

CFG Connections

Committed Projects

Planned Projects

Proposed Projects

	Projects I want completed first	Name (Project Limits)	Committed	Planned	Proposed
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F		Nature Coast Trail		X	
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O		Bellevue Trail Connector (US 27)	X		
P		Bellevue Trail Connector (SE 35 th Court/SE 95 th St./SE 36 th Ave/SE 100 th St.)		X	
Q		Silver Springs Bikeway – Downtown Connector		X	

N

0

2.5

5

10

Miles

Directional Signage Locations

Recommended Destination	Comments

Let us know which
projects should
get completed
first!



Kimley»Horn

Regional Trail Corridor and Supportive Facilities Plan

April 25, 2019 – Public Workshop

Ocala Police Department

NAME	AGENCY/CITIZEN	EMAIL	PHONE	HOME ZIP CODE
Doug Shearer	Greenway Equestrians	dcshearer29@gmail.com	352-816-2353	34480
Ken Weyrauch	Marion County Growth Services	Kenneth.Weyrauch@marioncountyfl.org	352-438-2671	34470
Donald R Morgan	FL DEP, OGT	donald.morgan@floridadep.gov	850 245 3126	32312
Ken Odom	Marion County Growth Serv.	KENNETH.ODOM@MARIONCOUNTYFL.ORG	352-438-2620	34471
Tracy Straub	MCBCE	tracy.straub@marioncountyfl.org	352-671-8686	34471
Michelle Shearer	GREENWAY EQUESTRIANS	SEA HORSE 22222@gmail.com	352-817-0180	34480



Regional Trail Corridor and Supportive Facilities Plan

Public Comment Form

Please take a moment to provide your thoughts:

#1 EQUESTRIAN TRAIL TRAILER TO PAVED TRAILS
GOING TO BASELINE TH FROM SANTOS
! ALL ALONG CROSS FLORIDA GREENWAY
PALATKA ~~TO~~ INCHES

#2 SIGNAGE, ON PAVEMENT FOR
HORSE KING AHEAD

Public participation is solicited without regard to race, color, national origin, age, sex, religion, disability, income, or family status.

The following optional questions are only used for informational purposes to determine who our public involvement activities are reaching and appealing to.

Your answers are confidential and will not be used for any other reasons.

Are you a trail user? ☒ Yes ☐ No

What user type best describes you?

☒ Bicyclist

☐ Equestrian

☐ Hiker

☐ Mountain Biker

Other _____

Any safety concerns, amenity needs, or other desires along the trail system?

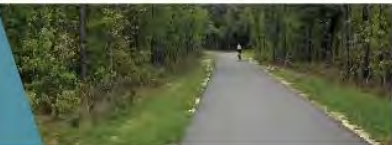
SEPARATE TRAIL HEADS FOR EQUESTRIANS
NO PARKING IN PARKING LOT
BATHROOMS w/ Easy Access From

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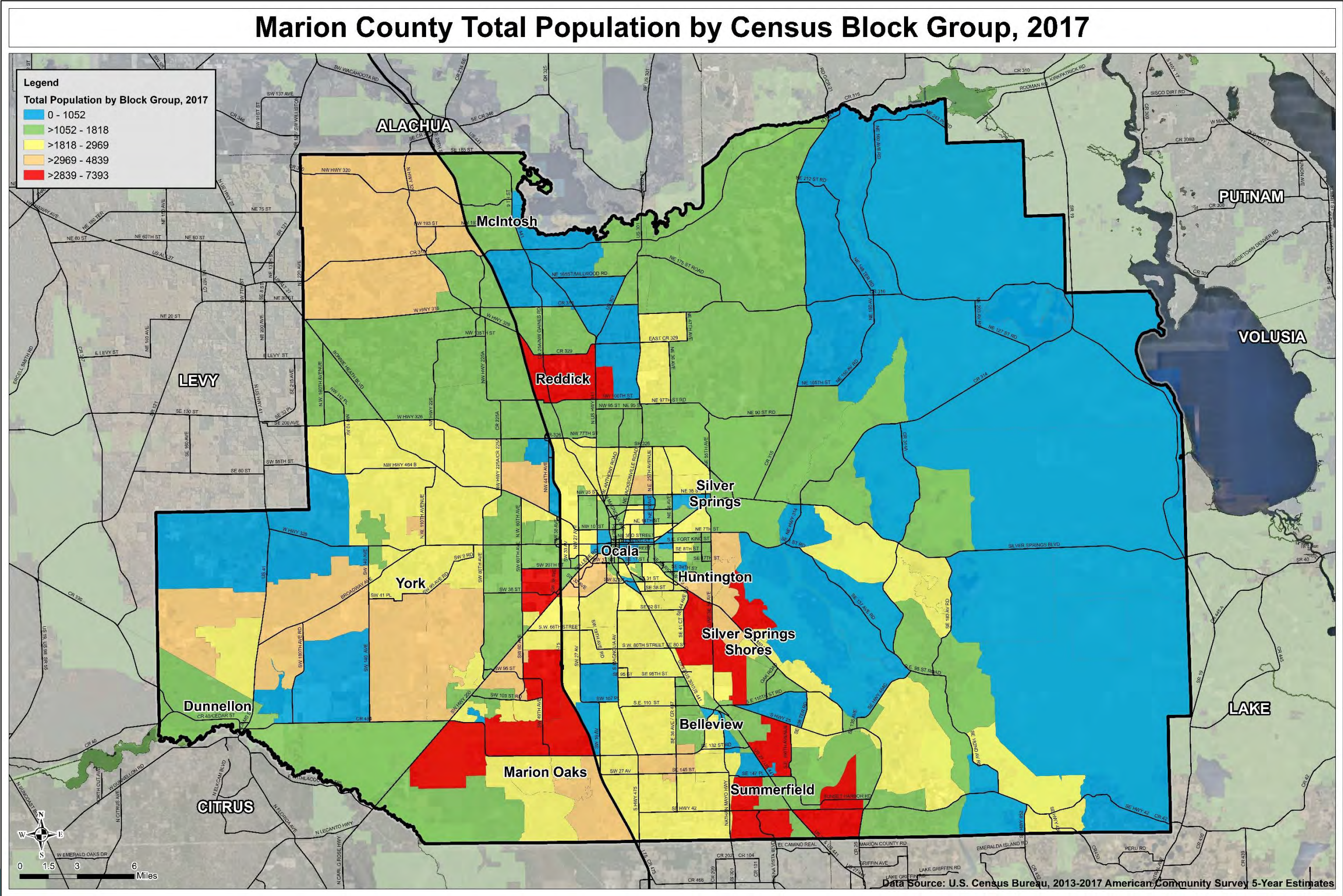


Appendix B:

Census Data

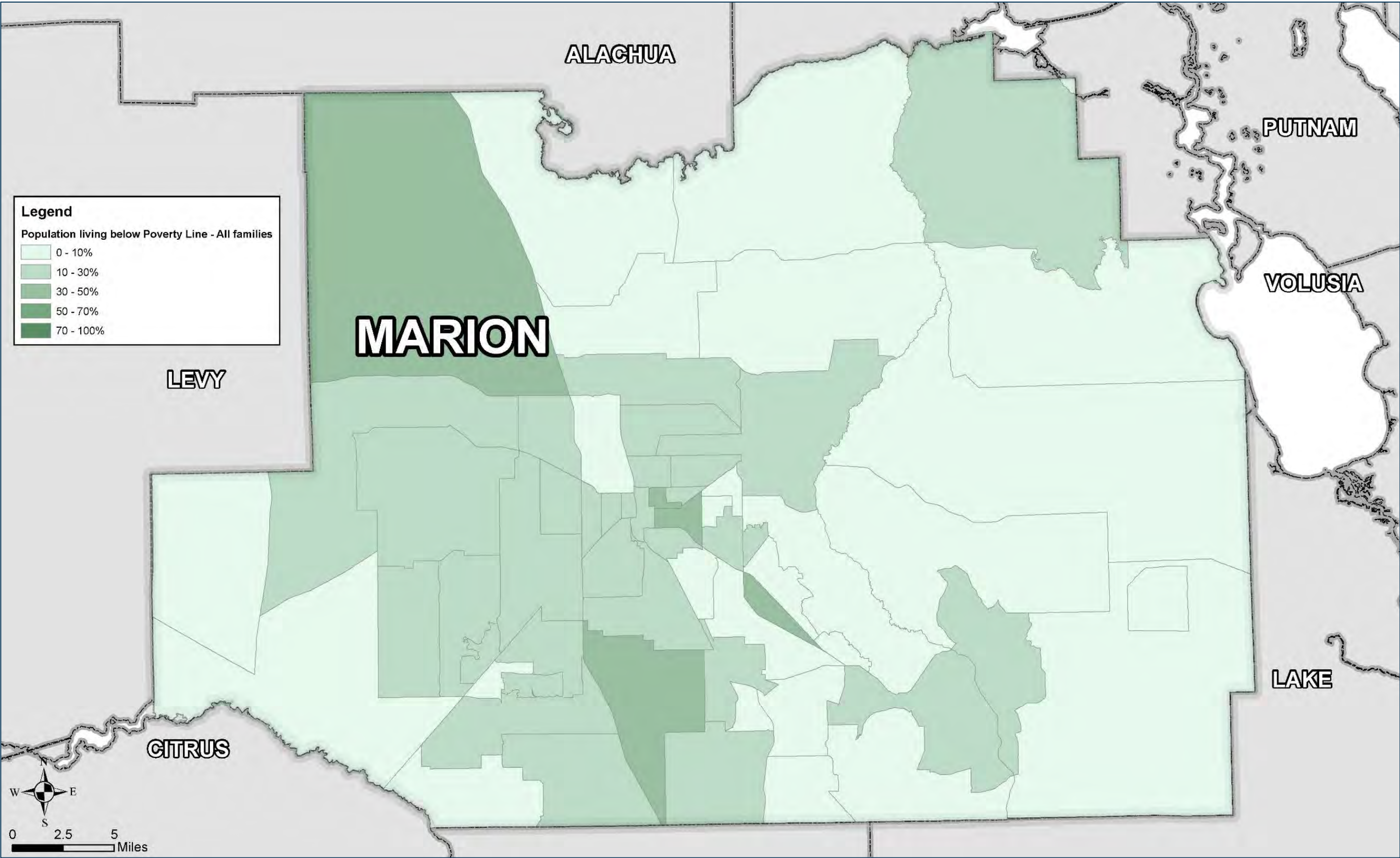


APPENDIX FIGURE 1. TOTAL POPULATION BY CENSUS BLOCK GROUP, 2017



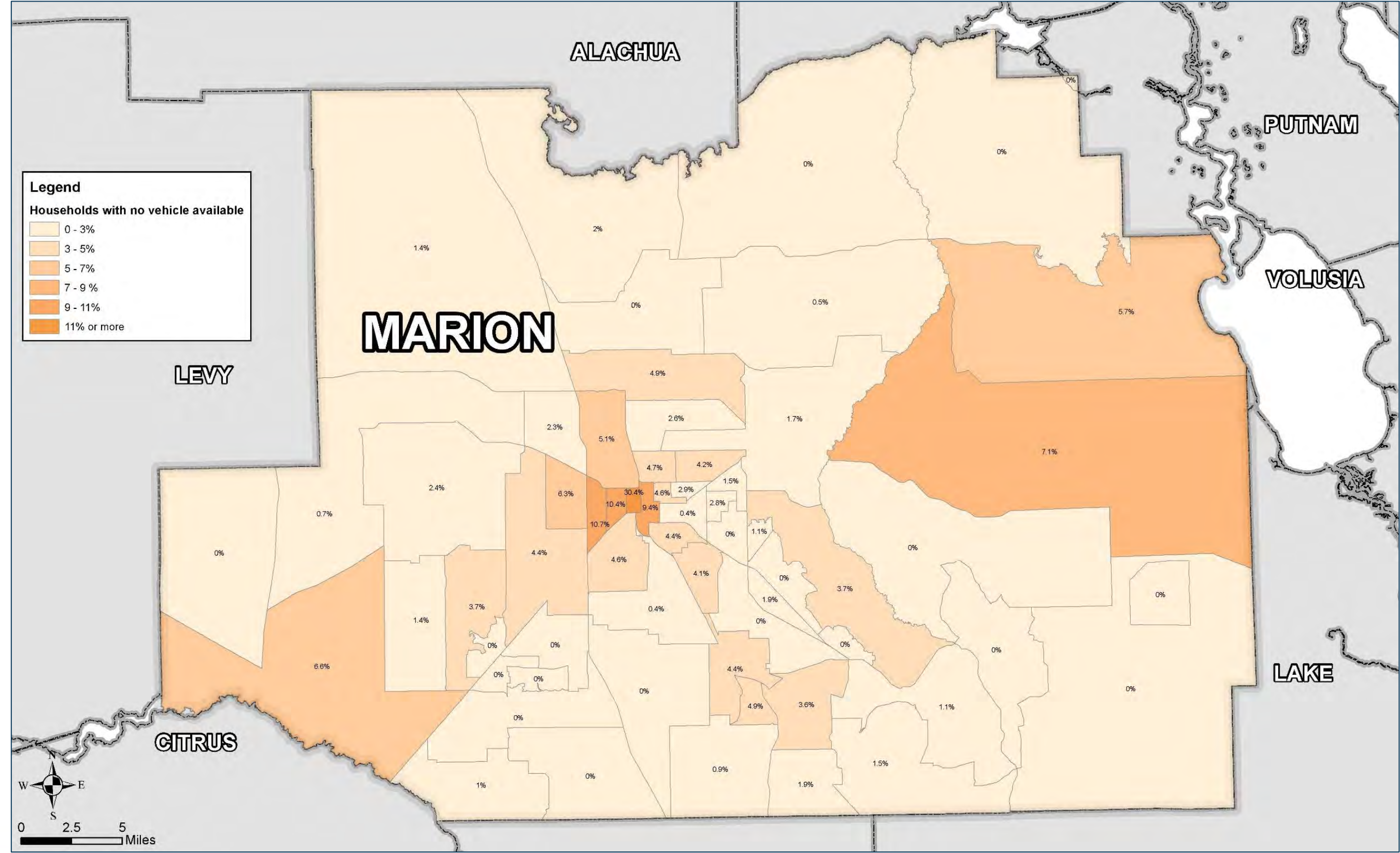


APPENDIX FIGURE 2. POPULATION LIVING BELOW POVERY LINE – ALL FAMILIES BY CENSUS TRACT (AMERICAN COMMUNITY SURVEY 5 YEAR ESTIMATES, 2017)





APPENDIX FIGURE 3. HOUSEHOLDS WITH NO VEHICLE AVAILABLE BY CENSUS TRACT (AMERICAN COMMUNITY SURVEY 5 YEAR ESTIMATES, 2017)





APPENDIX FIGURE 4. PERCENT OF POPULATION OVER 65 YEARS OLD BY CENSUS TRACT (AMERICAN COMMUNITY SURVEY 5 YEAR ESTIMATES, 2017)

