



River to Sea TPO May 27, 2015



Final Report Regional Trail Corridor Assessment

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Executive Summary

The River to Sea Transportation Planning Organization (R2CTPO) has undertaken an assessment of the gaps within the regional trail network through the completion of this Regional Trails Connectivity Assessment (RTCA). Through the course of this study, the R2CTPO worked with the citizens, advocacy groups, governmental agencies, and municipalities within the R2TCPO's planning area, as well as those adjacent to the R2CTPO planning area. This process was quantitative as well as qualitative, utilizing existing data gathered from regional studies conducted before, Geographic Information Systems (GIS) data, and information provided by the many stakeholders that informed this project.

The purpose of this study is to provide the R2CTPO and its stakeholders with the following:

- Provide a comprehensive understanding of the overall status of regional trails in the R2CTPO planning area;
- Identify gaps in the system and begin the discussion on how to close those gaps;
- Prepare for the update of the Florida Department of Environmental Protection's Office of Greenways and Trails opportunities map and ensure the R2CTPO is ready to add needed segments;
- Identify trails segments potentially ready for various phases of funding and to seek out those funding and partnering opportunities, including grants as well as state funding (i.e. Transportation Alternatives Program funding).

The RTCA study assesses 195.0 miles of trails. Through the study, 74.8 miles were identified with existing bicycle and pedestrian facilities. The analysis revealed that, of those trails with facilities, 24.2 miles meet the preferred width for regional trails of 12 feet or wider. The RTCA Study also identified 27.9 miles of trail gaps. To ensure that the R2CTPO has the necessary information to find the appropriate approach to closing these trail gaps, concept designs and cost estimates were developed for 20.7 miles of those segments. To highlight the successes within the RTCA study area, the study also contains 18.6 miles of trails funded for construction and an additional 40.3 miles of new trails funded for either study or design.



1.0 Introduction

The River to Sea Transportation Planning Organization (R2CTPO) has completed a Regional Trails Corridor Assessment (RTCA) for the R2CTPO planning area, which includes Volusia County and a portion of Flagler County. The purpose of the RTCA is to develop a complete inventory of the existing regional trail network, identify existing gaps in the regional trail network, and develop concepts and/or recommendations to advance future regional trail projects to complete the regional trail system.

The R2CTPO has a long standing commitment to bicycle and pedestrian planning and project implementation, and works closely with local, regional, and state stakeholders. Over the last several years, the R2CTPO has completed numerous bicycle and pedestrian feasibility studies and plans focused on school safety, as well as regional and local comprehensive and multimodal transportation plans. The R2CTPO is committed to the development of regional trail facilities that provide vital connections within the state and national trail and greenway network.

The goals for the RTCA study were defined by the R2CTPO in the project scope of work and are listed below.

- Complete the **regional trails** network in the R2CTPO planning area and advance the Florida Greenways and Trails System Plan by developing/finalizing alignments and connections
- To identify trail connections that should be added to the "Priority and Opportunity Land Trails" listing during the next update
- Understand/inventory where there are existing **trail gaps** (defined below) and determine the feasibility of alignments
- Complete assessments and develop conceptual plans and cost estimates for all trail gap segments in order to compete for funding

For the purposes of the RTCA study, a **trail gap** is defined as the unknown alignment connection inbetween the end points of two existing trails, or the future endpoints of trails whose location is universally known by stakeholders and/or is included in an approved plan.

This study assesses 195.0 miles of regional trails identified within the R2CTPO planning boundary and includes those from the Priority and Opportunity Land Trails of the Florida Greenways and Trails System, as well as other regional trails being pursued by local governments and trail organizations. The regional trails included within the RTCA study are depicted in **Figure 1**.

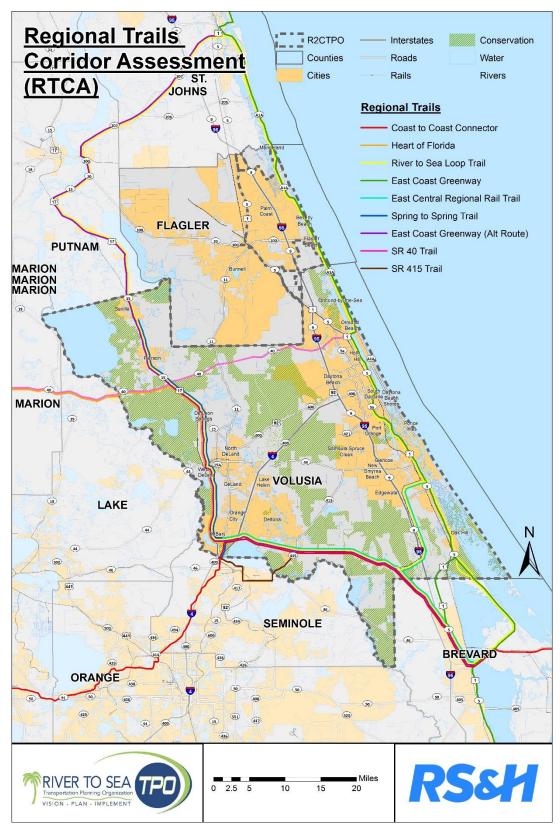


Figure 1. Regional Trails Included in the RTCA Study

Section 2 – Study Area Overview, discusses these nine trails listed below in more detail.

- 1. Coast to Coast Connector (and Northern Extension)
- 2. Heart of Florida Loop
- 3. (St. Johns) River to Sea Loop (includes Titusville to Edgewater Loop)
- 4. East Coast Greenway
- 5. East Central Regional Rail Trail (ECRRT)
- 6. Spring to Spring Trail
- 7. East Coast Greenway (Alternate Route)
- 8. SR 40 Trail / Florida Black Bear Scenic Trail
- 9. SR 415 Trail

The study assesses the trails by category, which includes existing facilities, planned/funded trails and gap segments. Additional input was also received regarding other regional trails not included as part of the nine identified for the RTCA study, which were coded into the study GIS and matrices as connectors. The connector trails are shown on the individual grid maps within the Map Book in **Appendix B**.

Section 3 - Statewide and Local Guidance, discusses how a "regional trail" is defined in the context of this study and for future trail development within the R2CTPO area.

Section 4 – Study Methodology, presents the detailed planning process utilized for the RTCA study, which includes the following key aspects:

• Outreach and coordination

Outreach and coordination efforts were extensive and of critical importance for the development of the RTCA study. An extensive database of stakeholders, interested parties, and planning partners was developed early in the planning process as part of the development of the Stakeholder Committee to ensure comprehensive regional coordination throughout the study. The RTCA study included

- Stakeholder workshops
- Small group meetings
- Telephone conference calls
- Field visits
- R2CTPO committee briefings

Copies of the detailed meeting notes as well as the master stakeholder list for the study are provided in **Appendix C**.

• Data collection

An extensive data collection and analysis effort was undertaken using Geographic Information Systems (GIS) to ensure that any pertinent community resources and potential impacts to or by future trail development were considered. Examples of community resources GIS data sets include schools, recreational features and transit system routes. Examples of GIS data sets used to minimize potential impacts include locations of cultural, historic and environmental resources.

• Review of existing plans and project programs

Many documents were reviewed as part of the study, including existing local and regional trail plans, R2CTPO and FDOT programs, trail resolutions, local master plans, and R2CTPO feasibility studies. The review provided a foundation for this assessment and ensured a full understanding of regional priorities and previous efforts. Further, state, R2CTPO, county, and city plans and studies were consulted throughout the course of this study.

• Data assessment and analysis

Utilizing the data collected through GIS analysis, maps and a trail segment matrix were developed to display and present corridor features and segment status relevant to this study, as well as administrative elements such as jurisdiction and funding status. The GIS data review was concurrently supplemented with direct stakeholder input received throughout the study.

• Identification of trail gaps

The preceding steps led to the identification of trail gaps, as defined by this study (see Section 1, Introduction), where clear alignments have not yet been identified.

• Field reviews

Field reviews were conducted to provide visual confirmation and "ground-truthing" of data collected. Utilizing input received after the first Stakeholder meeting in September 2014 and the small group workshops conducted in late October 2014, the information was incorporated into the GIS data sets utilized in the study. This critical step provided hands-on information to confirm the preliminary list of trail gap segments and/or make adjustments to findings.

• Trail gap concept development

Subsequent to the final Stakeholder meeting in December 2014, design concepts were developed for the trail gaps identified through GIS analysis and field assessments and were combined with information collected through previous stakeholder outreach sessions.

• Development of trail gap cost estimates

To provide the implementation agencies with the financial information needed for project programming, detailed engineering and construction cost estimates were also developed for the same trail gaps for which concepts were developed.

2.0 Study Area Overview

The following section provides an overview of the nine (9) regional trails that are included as part of the RTCA. It should be noted that there are many overlaps in the regional trail system, the nine (9) regional trails noted below are the only trails studied under the RTCA.

2.1 Coast to Coast Connector (and Northern Connection)

The Coast to Coast Connector Trail is a 250-mile network of local trails connecting the Gulf Coast to the Atlantic Ocean and the East Coast Greenway through Central Florida. The Coast to Coast Trail is envisioned as a fully separated off-road, paved trail and is included in the Florida Greenway and Trails System as part of the statewide trail network. The trail begins in Titusville and travels west through Volusia County before traveling south into Seminole County. The Coast to Coast Connector Trail comprises the Spring to Spring Trail as well as the East Central Regional Rail Trail (ECRRT). A northern extension of the Coast to Coast Connector Trail to New Smyrna Beach is currently being pursued by local advocates.

2.2 Heart of Florida Loop

The Heart of Florida Loop is part of the Coast to Coast Connector, providing the connections with several trails in Marion and Lake Counties with the Spring to Spring Trail in Volusia County, and other trail facilities in Seminole and Orange Counties. The SR 40 Florida Black Bear Trail is also part of the Heart of Florida Loop. With the completion of these connections, the various trail facilities located in Central Florida would complete the Heart of Florida Loop.

2.3 (St. Johns) River to Sea Loop Trail

The St. Johns River to the Sea Loop is a 300 mile loop trail that connects the more rural communities located along the St. Johns River to the Atlantic coast, covering five (5) different counties. The easternmost portion of trail has been incorporated as part of the East Coast Greenway, with portions currently under development. Volusia County has responsibility for the largest portion of the trail, which includes the East Central regional Rail Trail and the Spring to Spring Trail. This trail also includes the Titusville to Edgewater Loop that is currently being studied.

2.4 East Coast Greenway

The East Coast Greenway is a conceptual network of urban trails that runs between the major cities along the eastern coastline from Maine to Key West. The East Coast Greenway connects a network of existing and planned trails to form the continuous 2,900-mile long trail. In addition to long-distance users, the greenway plays an important role for local trail users throughout its length with its incorporation of local and regional existing/planned trail facilities. The trail primarily follows route A1A and currently is complete within Flagler County with the exception of an approximately four (4) mile segment in Flagler Beach, with intermittent missing segments in Volusia County, primarily within the urban areas.

2.5 East Central Regional Rail Trail (ECRRT)

The East Central Regional Rail Trail is a 50+ mile-long rails-to-trail facility located in northern Brevard County and southern Volusia County. The goal is to link to the trail network in Seminole County utilizing a connection along the Spring to Spring Trail and along SR 415. With the connection to the Spring to Spring

Trail, the East Central Regional Rail Trail is a significant component of the St. Johns River to the Sea Loop and the Coast to Coast Trail.

2.6 Spring to Spring Trail

The Spring to Spring Trail, currently under development, is envisioned to connect Gemini Springs Park with DeLeon Springs Park. To date, approximately 15 miles of the total 26-mile trail length, and five (5) trailheads, have been completed to extend the Spring to Spring Trail from Gemini Springs Park to Green Springs Park.

2.7 East Coast Greenway (Alternative Route)

An alternative route for the East Coast Greenway within the R2CTPO planning area is a large loop that deviates from the route running along US 1. This is the same route alignment for the St. Johns River to Sea Loop Trail. The exact alignment begins in St. Johns County following SR 207 towards the southwest crossing into Putnam County. Continuing along Routes 100/20/15 in Putnam, the route intersects with US 17 where it travels to the south into Volusia County to SR 40. The remaining route follows the same alignment as the Spring to Spring Trail connecting to the East Central Regional Rail Trail (ECRRT).

2.8 SR 40/Florida Black Bear Scenic Trail

SR 40, which runs through Central Florida and the Ocala National Forest from Silver Springs to Ormond Beach is nationally designated as the Florida Black Bear Scenic Byway. The trail, from Silver Springs to US 17 in Volusia County, is identified as a priority corridor in the Florida Greenways and Trails System Plan.

2.9 SR 415 Trail

This trail along SR 415 is a separate FDOT project connecting to the East Central Regional Rail Trail (ECRRT). The SR 415 Trail also connects to the Lake Monroe Loop from Seminole County into southern Volusia County.

3.0 Statewide and Local Guidance

As part of the RTCA, national and state trail guidance documents were reviewed in an attempt to develop a standard recommended minimum width for the R2CTPO regional trail system. **Tables 1 and 2** presents the findings, which are not completely similar in comparison, but overall recommend a trail width of 12 feet.

FDOT Plans Preparation Manual, 2012 (Design Guidance for Shared Use Paths) 8.6.2 Widths	FDOT Manual on Uniform Traffic Control Devices (MUTCD) (known as the Florida Greenbook) 2011 (Shared Use Path)	FHWA, Manual on Uniform Traffic Control Devices Source: Best Practices Design Guide	American Association of State Highway and Transportation Officials (AASHTO), Guide for the Development of Bicycle Facilities, 2012 4 th edition (Shared Use Paths)
 Typically, widths range from 10-14 feet The minimum width for a two- directional shared use path is 10 feet. 	The minimum recommended width for a paved two-way path is 10 feet . In many cases, it is desirable to increase the minimum width to 12 feet . In limited cases, 8 feet may be acceptable.	 The tread of a shared-use path should be at least 10 ft. wide. A minimum of 8 ft may be used on shared-use paths that will have limited use. On shared-use paths with heavy volumes of users, tread width should be increased to a range from 12 to 14 ft. 	 The minimum paved width for a two-directional shared use path is 10 ft Typically, widths range from 10 to 14 ft. A path width of 8 ft may be used for a short distance Eleven (11) foot pathways are needed to enable a bicyclist to pass another path user going the same direction.

Table 1- Excerpts fron	n National	and State	Trail Guidelines
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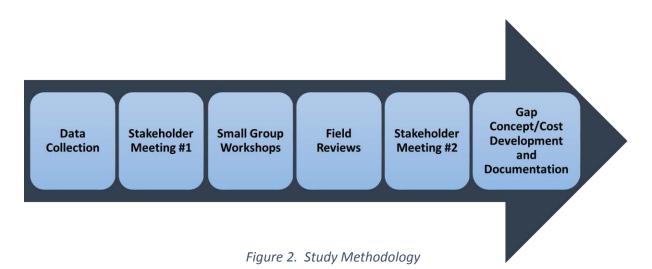
Table 2- Minimum Identified Widths for Florida Regional Trails

Coast to Coast (C2C)	East Coast Greenway (ECG)	East Central Rail Trail (ECRT)	Black Bear Scenic Trail	Volusia County "Showcase" Trails	Flagler County Trails	R2CTPO
No adopted data found but 12' minimum width is anticipated	No minimum width adopted. The route can include a trail, sidewalk or Sharrows. Each corridor is designated and adopted by the local community.	FDOT typically constructs a minimum 12' wide trail.	FDOT is planning to construct a minimum 12' wide trail when widening SR 40. Due to right of way restrictions, some portions of this trail will be less than 10' wide east of 1-95.	Volusia County defines their "Showcase" Trails with a minimum width of 12'	Flagler County uses 10' and 12' minimum width requirements based upon use/location	12' wide minimum with 10' exception

Based upon review of the national, state, and regional trail guidelines, requirements, and trends, a minimum regional trail width of 12 feet will be used in this study, with exceptions for ten (10) feet when space is constrained or wider if required to accommodate more users.

4.0 Study Methodology

Any proper planning study must begin with collecting and assessing data relative to the subject matter. For the RTCA, data collection was undertaken utilizing a technical methodology as well as through extensive stakeholder outreach. The sections below describe the data collection tasks under which the study was conducted. The following section discusses both the technical and stakeholder coordination components of the study, also presented in **Figure 2**.



4.1 RTCA Study Methodology

4.1.1 Data Collection

Data Collection The RTCA was informed by an extensive collection of data and technical field assessments with regional trail stakeholders and R2CTPO planning partners. Data collection efforts included desktop analyses of existing data sets as well as collection of new data to be utilized in the course of the RTCA.

4.1.2 Stakeholder Identification

The first step in the outreach and coordination effort was to work with the R2CTPO to identify the various stakeholders for the RTCA study. A Stakeholder committee for the RTCA was developed at the onset of the study to ensure that state, regional and local entities involved in the development of the regional trail system within the R2CTPO were included on an ongoing basis throughout the length of the planning process. A summary of the agencies, groups and interested parties is provided below, while a full list of stakeholders with contact information is included in **Appendix C**.

Statewide/Regional

The involvement of state and regional planning partners was crucial to the study by providing input in regards to state and regional trail initiatives that will impact the R2CTPO Regional Trail Network and adjacent jurisdictional connections. These state and regional agencies included those specifically focused on trails, as well as the Central and District Offices of FDOT as listed below. Further, two (2) regional planning commissions, the St. Johns River Water Management District, and the Rails to Trails Conservancy were also included.

- Office of Greenways and Trails
- FDOT District 5
- FDOT District 2
- FDOT District 2
- FDOT Central Office
- St. John's Water Management District (WMD)
- East Central Florida Regional Planning Council (ECFRPC)
- Northeast Florida Regional Planning Council (NEFRPC)
- Rails to Trails Conservancy

County

The R2CTPO planning boundaries include all of Volusia County and an unincorporated portion of Flagler County. Stakeholders included representatives from the following:

• Volusia County

Flagler County

Cities

The municipalities located within the planning area have localized trail planning efforts, as well as significant commitment to the completion of the regional trail network. The municipalities identified as stakeholders for the RTCA study include:

- Beverly Beach
- Bunnell
- Daytona Beach
- Daytona Beach Shores
- DeBary
- DeLand
- Deltona
- Edgewater
- Flagler Beach
- Holly Hill

- Lake Helen
- New Smyrna Beach
- Oak Hill
- Orange City
- Ormond Beach
- Palm Coast
- Pierson
- Ponce Inlet
- Port Orange
- South Daytona

Adjoining Jurisdictions

As with any transportation project, use and implementation do not recognize political boundaries or jurisdictions. With the goal of addressing gaps to complete the regional network, which is a vital component of the state and national network, adjoining jurisdictions were identified as stakeholders.

The jurisdictions adjoining the RTCA study area and included in the data collection process include:

- Lake-Sumter MPO
- MetroPlan Orlando
- Space Coast TPO
- Seminole County
- Brevard County

Advocacy Groups

Trails and greenways typically have significant advocacy group interest and participation. These advocacy groups provide important feedback and work with the planning and implementation agencies in the partnership to move projects forward. The advocacy groups identified for this effort include:

- East Coast Greenway Alliance
- Florida Greenways and Trails Foundation (FGTF)
- Florida Bicycle Association (FBA)
- St. Johns River Alliance

Lake County

Sumter County

St. Johns County

Putnam County

Other Interested Agencies/Parties

Additional agencies, organizations, and private parties expressed interest in the study and/or participating in the study. This group included a wide array of interested parties, from local government councils to private sector firms. The other interested agencies and partners included in the RTCA study are:

- Votran
- Volusia County Schools
- Flagler County Schools
- Putnam County Public Works

- Zev Cohen & Associates
- Lassiter Transportation Group
- Bike Florida Board
- Planning Solutions/Daytona Beach

4.1.2.1 Data Requests, Review and Compilation

The first step of the technical component of the study was to request, compile and review a comprehensive set of data regarding both existing and planned and programmed trails within the TPO's jurisdiction. From project initiation in August 2014 through November 2014, data in the form of both printed reports and maps, as well as GIS data were continuously updated from the study's stakeholders. This Information provided the RTCA study team with a comprehensive picture of existing regional trails as well as those planned and/or programmed for future implementation.

Specific data types obtained and reviewed included the following:

- Area Plans
 - Comprehensive Plans
 - Small Area / Sector Plans
- Regional Trail Plans
 - City / County Resolutions
 - o Trail Master Plans
 - Capital Program Lists
 - R2CTPO Project Lists
 - Trail Summit Information
 - R2CTPO Feasibility Studies
- GIS Data
- FDOT Work Program

- Trail Concept Designs
 - Trail alignments (existing and proposed)
 - Trail widths, lengths, construction materials
 - Jurisdiction limits
 - Parcel and Right of way boundaries
 - Environmental and cultural information
 - o Aerial photography
- PD&E studies

The data obtained were compiled to develop a preliminary trail inventory matrix that included information by segment, such as regional trail name(s), trail status, construction materials, width, length, jurisdiction, and other relevant details. GIS maps as well as an interactive ".KMZ" file using Google Earth[®] were developed for use during and after the study. All trail segment information (matrices, GIS data, and .KMZ files) was continuously updated throughout the study as new information was received from stakeholders and planning partners. A full list of the data collected is included in **Appendix A**.

4.1.3 Stakeholder Meeting #1

Stakeholder Meeting #1 The RTCA study benefited from the participation and insight offered by the RTCA study stakeholders. The R2CTPO committee meetings provided an opportunity for stakeholders and members of the general public to participate in the RTCA study. Prior to Stakeholder Meeting #1 the Small Group Workshops, the RTCA study team presented at the R2CTPO Citizens Advisory Committee, Bicycle/Pedestrian Advisory Committee, Technical

Coordinating Committee, and R2CTPO Board meetings in September 2014. The September briefings introduced the study and provided a summary of data collection and outreach efforts to date.

The first stakeholder meeting was conducted on September 29, 2014 with 21 attendees present and was organized in a workshop format. Those that attended represented areas throughout the R2CTPO planning area, as well as adjoining counties, advocacy groups, and state agencies. The purpose of this meeting was to introduce the study and the overall study goals. The data collection methodology and efforts to date were also reviewed by workshop participants. Project boards and plots were available and split into five (5) breakout areas, each representing a specific portion of the R2CTPO jurisdiction. Attendees were invited to sketch information on the plotted maps, as well as given the opportunity to provide verbal and written feedback to the RTCA study team. This first stakeholder meeting was instrumental in obtaining specific information used to update the trail segment matrices, GIS maps and interactive .KMZ files.

4.1.4 Small Group Workshops



The next major milestone for the RTCA study was a series of four (4) interactive small group workshops conducted over the span of October 29-30, 2014. The meetings were organized by R2CTPO planning area in an effort to focus on specific segments with the stakeholders and planning partners present. The October 29th workshops were held at the Volusia County offices in DeLand, while the October 30th workshops were held at the R2CTPO offices in

Daytona Beach.

Each of the four (4) workshops included reviewing individual segments of the corridors using GIS information saved as .KMZ files and Google Earth[®] via the Internet. Participants had the opportunity to review the segments and provide comments, as well as ask questions of the RTCA study team. Comments received during the small group workshops were incorporated into the RTCA study GIS and trail segment matrices. Detailed meeting notes for these small group workshops are included in **Appendix C**.

4.1.4.1 Trail Segment Inventory

As discussed previously, the RTCA study included completion of a comprehensive data inventory of trail segments using data collected and input received from study stakeholders. The information was developed early in the study and refined subsequent to the Small Group Workshops in advance of the field reviews. The study team utilized this information to identify a preliminary list of gaps, which ultimately was refined to become the study recommendations.

As stated previously, the trail segment data was continuously updated throughout the study including the trail segment matrices, GIS data, and an interactive .KMZ file. Facilities along the existing regional trail system were mapped based upon their widths. Planned and funded regional trails were organized and mapped by their funding status: construction, design, or Preliminary Engineering (PE)/Study. Proposed alignments were divided and mapped by whether the alignment source was an adopted document or from stakeholder input. Finally, the remaining segments were identified as trail gaps. **Table 3** presents an overview of the hierarchy and legend used to map the regional trail system. Based upon **Table 3**, a total of 195.0 miles were assessed as part of the RTCA study. **Figure 3** presents an overview of the trail segment inventory and identified gaps for the regional trail network within the R2CTPO. Appendix A contains a "Map Book" of 38 individual "grid" maps showing the same area at an enlarged view. The Map Book is included in **Appendix B**.

Trail Segment Category	Length (miles)	Map Color
Existing Facilities	74.78	
- 12 feet or greater	24.18	
- 10 feet to less than 12 feet	5.32	
- 8 feet to less than 10 feet	23.34	
- Less than 8 feet	21.94	
Planned/Funded	58.92	

Table 3 - Regional Trail System Hierarchy and Segment Lengths

Total Miles	195.0	
Gap Segments	27.9	
- Stakeholder Input	27.33	
- Per Adopted Document	6.06	
Proposed Alignments	33.39	
- Funded for PE/Study	7.86	
- Funded for Design (D)	32.48	
- Funded for Construction (C)	18.58	

Connector trails were also noted when identified and/or recommended by stakeholders, which included 43.67 miles of existing connector trails and 33.62 miles of recommended/proposed connector trails. The connectors are presented on the individual grid maps in the Map Book included in **Appendix B**.



Figure 3. RTCA Trail Segment Inventory Results

4.1.5 Field Reviews



The next phase of the study included field reviews that focused upon the preliminary list of identified trail gaps developed through the previous study activities. The field reviews were completed on November 19-20, 2014 and were structured such that appropriate jurisdictional representatives for each of the identified gaps would be present, thus serving as another level of stakeholder coordination. **Table 5** presents a summary of the location

and attendees at each of the field review meetings.

At each meeting, the identified gaps were reviewed in conjunction with representatives from each jurisdiction. The gaps, issues, challenges and opportunities were reviewed and discussed. Through this collaborative process, recommendations for addressing the gaps were identified. Detailed field review meeting notes are included in **Appendix C**.

Date	Time	Location Discussed / Jurisdiction	Stakeholder(s) Present		
	10:00 am	Lemon St. & Grand Avenue / Volusia County	Jim White, Volusia County Elizabeth Lendian, R2CTPO CAC		
November 19, 2014	1:00 pm	Beresford Park / Volusia County	Jim White, Volusia County Mike Holmes, City of DeLand		
	3:00 pm	Shell Road and Benson Junction Road Intersection / Volusia County	Jim White, Volusia County John Fletcher, City of DeBary, Alan Williamson, City of DeBary		
	8:30 am	SR 40 / City of Ormond Beach	Ric Goss, City of Ormond Beach		
November 20, 2014	10:00 am	Beach Street / City of Daytona Beach	Rick Rice, City of Daytona Beach Commissioner Kelly White, City of Daytona Beach		
November 20, 2014	1:00 pm	City of South Daytona / City of Port Orange	Patty Rippey, City of South Daytona Kent Donahue, City of Port Orange		
	3:00 pm	City of Edgewater	Jack Corder, City of Edgewater		

Table 4 - Field Review Schedule and Jurisdictional Participants

4.1.6 Stakeholder Meeting #2



The second stakeholder meeting was conducted on December 17, 2014 with 26 attendees present. The purpose of this meeting was to present the draft study findings including the preliminary list of regional trail segment gaps. Stakeholder participants had the opportunity to review the identified gaps and provide feedback regarding specific segments and approaches. Subsequent to addressing stakeholder comments and

questions, the final phases of the study were completed. This included the development of design concepts and cost estimates. A detailed summary of Stakeholder Meeting #2 is included in **Appendix C**.

4.1.7 Development of Design Concepts & Cost Estimates



Upon verification of the existing regional trail inventory data and trail gap sections, the final technical elements included development of design concepts and cost estimates for the gap segments whose location had not yet been determined either through stakeholder input or included in an approved plan. Cost estimates were then developed for each of these identified gaps based upon the specifics of the concept designs. The

concepts and cost estimates are discussed in more detail in Section 5 – Identification of Trail Gaps.

In February 2015, the study team presented to the R2CTPO the findings of the study, as well as a summary of regional trail gaps. On February 25, 2015, a separate briefing was given to the Bicycle/Pedestrian Advisory Committee (BPAC) that was formed specifically for the RTCA. The charge of the BPAC Regional Trails Corridor Subcommittee is to review the draft concept designs and provide feedback to the study team.

Figure 4 presents an overall summary of the major study milestones. **Figure 5** presents photos from the November 19-20, 2014 field review meetings.

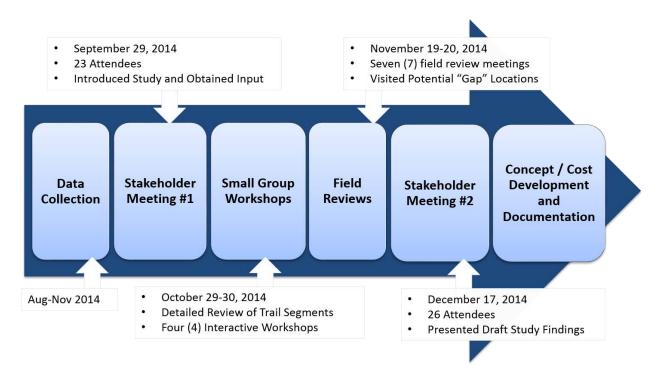


Figure 4. RTCA Study Major Milestones



Figure 5. Field Review Meeting

5.0 Summary of Trail Gaps and Recommendations

Table 5 includes a matrix summarizing potential trail gaps on the regional scale, along with location information, length, recommendations and action steps. Trail gaps, as previously defined, were identified through the RTCA study for which concept designs and cost estimates were developed. Detailed descriptions for each of the identified gap segments, along with recommendations, are found following **Table 5**.

The recommendations for the RTCA study have been developed through an extensive data collection and analysis process, field reviews, and intensive stakeholder coordination. As a result of this planning effort, an initial blueprint and framework has been developed for advancing trails within the R2CTPO area. The results of this study combined with the strong and long-standing regional and local commitment to trail development, have positioned the R2CTPO and its local planning partners a foundation from which to achieve their goal of a connected trail and greenway network. Further, the specific data and recommendations presented in this study will assist with future trail segment prioritization, funding and project development (PE/Study, design and/or construction) by specific segment.

Trail Segment ID	Jurisdiction	Road Name(s)	Regional Trail(s)*	Segment Start	Segment End	Length (miles)	Recommended Next Steps	Action
А	City of Flagler Beach	A1A	ECG, R2C	N. 9 th Street	S 26 th Street	2.9	Conduct feasibility study subsequent to completion of City's parking study	Feasibility study to be completed
В	City of Ormond Beach	A1A	ECG, R2C	Standish Drive	East Granada Boulevard	1.5	Conduct feasibility study for bike lanes along Halifax Drive and Standish Drive	Feasibility study to be completed
С	City of Daytona Beach	Beach Street	ECG, R2C	Marina Point Drive	Bellevue Avenue and Lighthouse Rd	0.7	Complete concept design for gap	Concept design completed
D	City of South Daytona	Carmen Drive and Reed Canal Road	ECG, R2C	Ridge Boulevard at Carmen Drive	Reed Canal Road at US 1	1.2	Complete concept design for gap	Concept design completed
E	Edgewater/New Smyrna Beach	10 th Street	ECG, R2C	Daytona State College Entrance at 10 th Street	East Coast Greenway along South Riverside Drive or City's Alternate Connector Route	1.0	Complete feasibility through New Smyrna Beach to connect future trail terminus at Daytona State College with the East Coast Greenway east of the railroad	Feasibility study to be completed
F	Volusia County (West of DeLand)	W. Minnesota Ave, S. Grand Ave, S. Beresford	S2S, R2C, ECG- A, HoF	W. Beresford Rd to terminus of Alexander Dr.	Beresford Park	2.9	Complete concept design for gap	Concept design completed
G	Volusia County (West of DeLand)	Grand Avenue	S2S, R2C, ECG- A, HoF	Lemon Street	King Street	1.7	Subsequent to County's construction of five foot bike lanes and five foot sidewalks in both directions, continue to monitor community support for potential construction of a regional trail with a standard width	Monitor community support for potential construction of a regional trail of standard width
н	Volusia County (DeLeon Springs)	US 17 / Baxter Street	S2S, R2C, ECG- A, HoF	McInnis Elementary School	Baxter Street at Grand Avenue	0.1	Complete feasibility study for crossings at Baxter Street and US 17 and trail connecting from McInnis Elementary School to Grand Ave	Feasibility study to be completed
I	Volusia County	SR 17	R2C, ECG-A	SR 40	Putnam County Line	13.7	Complete concept design for gap	Concept design completed
J	Volusia County (West of Ormond Beach)	SR 40	Florida Black Bear Scenic Trail	Cone Road	Airport Road	2.2	Complete concept design for gap	Concept design completed

* ECG = East Coast Greenway, R2C = St. Johns River to Sea Loop, S2S = Spring to Spring Trail, ECG-A = East Coast Greenway (Alternate), HoF = Heart of Florida Loop

A. Flagler County

Gap Description:

This is a 2.9 mile segment within the City of Flagler Beach, where the East Coast Greenway Trail narrows to less than eight (8) feet. Specifically throughout the city, existing bike/pedestrian facilities include a sidewalk on the west side of A1A that intersects with commercial parking lots and periodic parking along the shoulders of A1A. The roadway shoulders within the city have been reported to be used by cyclists, but they are not marked as official bike lanes and do not meet the minimum acceptable standards.

During the course of this study, the City of Flagler Beach was conducting a parking study to evaluate the potential for metered parking on both side sides of A1A. Bicyclists reported a frequent problem with sand encroaching along the sidewalk and roadway shoulders within the city.

An alternative alignment through the City of Flagler Beach using an unpaved alley way was reviewed, but deemed to be less feasible than widening the existing sidewalk facilities, where public right-of-way is available.

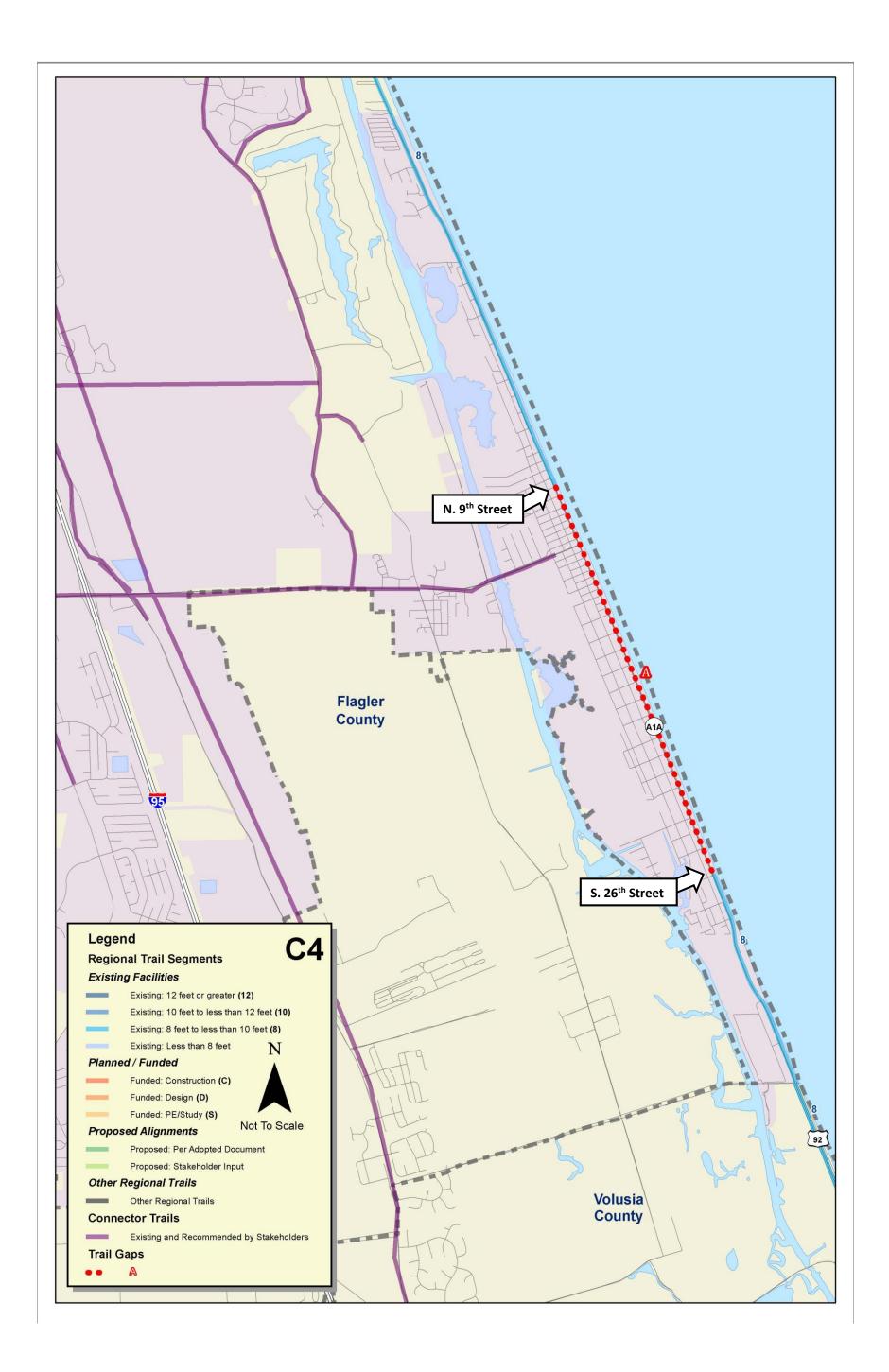
Gap A is shown on **Grid Map C4** on the next page.

Recommendations:

- Continue to coordinate with the ongoing efforts to address traffic calming, including the R2CTPO Mobility & Safety study for SR A1A and the Flagler Parking study
- Perform a bicycle and pedestrian safety review
- Improve bicycle and pedestrian facility maintenance, specifically clearing sand Conduct future feasibility study to determine best location of future trail whether within the rightof-way of A1A or along a parallel street



A1A through Flagler Beach



B. Route A1A/Ormond Beach

Gap Description:

There are right of way constraints along a 1.5-mile sgement of A1A south of Standish Drive to East Granada Boulevard. According to stakeholder input, the widening of the existing sidewalk to the trail along A1A adjacent to the Oceanside Country Club golf course would not be embraced by the community.

An existing eight (8) foot trail extends from south of Flagler Beach to just north of Kingston Shores. South of Kingston Shores approximately six (6) miles to Standish Drive, the trail narrows to a fivefoot sidewalk. SR A1A has a paved shoulder on the west side of the road and a posted speed limit of 45 mph, reducing to 35 mph near Bicentennial Park. There is adequate right-of-way within portions of this six (6) mile segment to widen the existing sidewalk to a standard regional trail width in the future.

The City of Ormond Beach presented an alternative of utilizing Halifax Drive and Standish Drive to connect A1A to East Granada Boulevard. This alternative provides an opportunity to bypass A1A with the construction of bicycle lanes along Standish Drive. Sidewalks currently exist along both roadways and Halifax Drive currently has bike lanes. East Granada Boulevard currently has bike lanes and sidewalks on both sides from A1A to the bridge.

According to stakeholder input, many cyclists currently utilize Halifax Drive and Standish Drive over A1A since these two (2) roads have lower automobile volumes. The existing right-of-way along Halifax Drive and Standish Drive are approximately 42 feet and 30 feet, respectively.

Gap B is shown on Grid Map **D5** on the next page.

Recommendation:

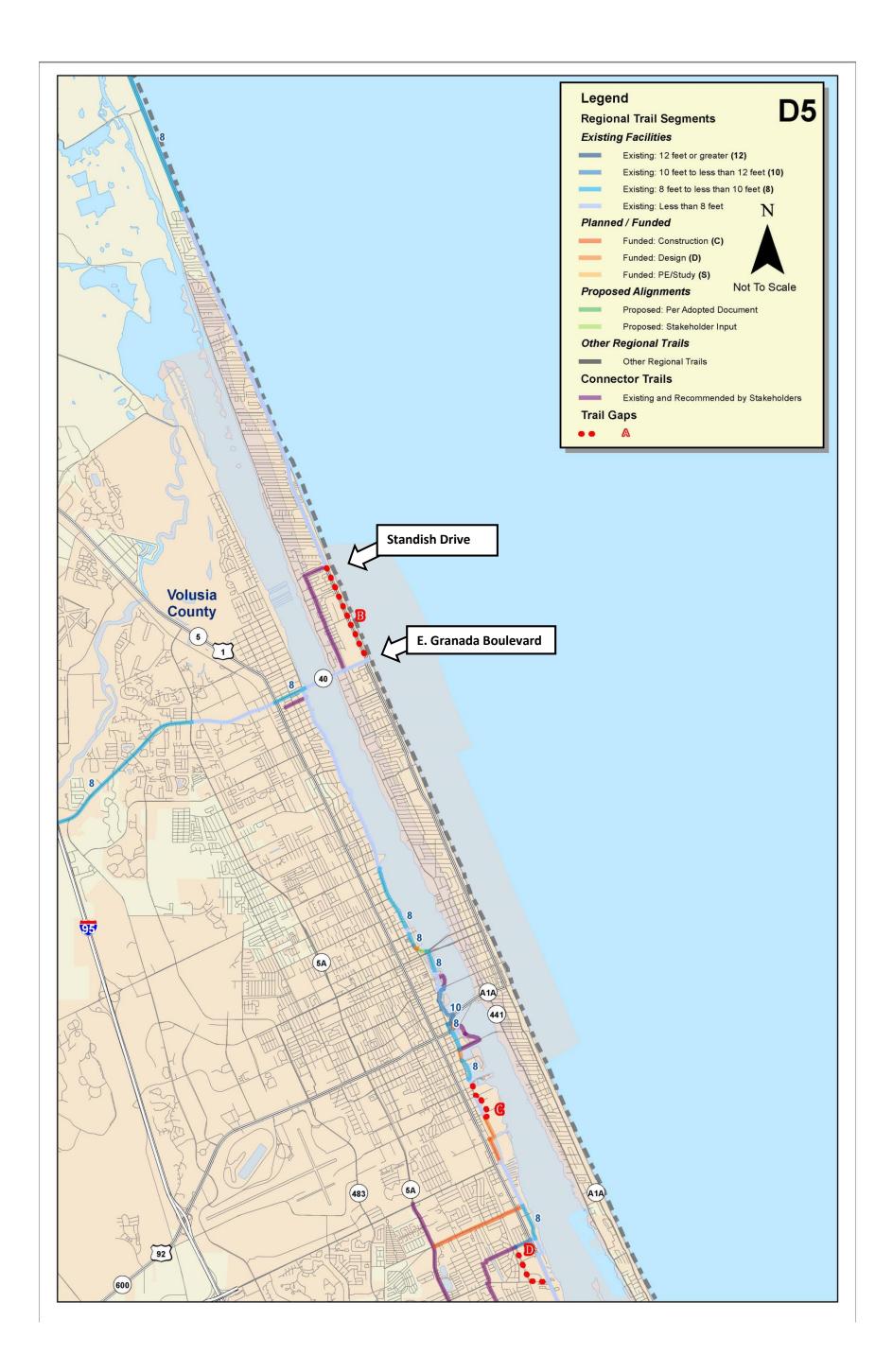
• Conduct future feasibility study to examine potential for constructing bike lanes along Standish Drive connecting to existing bicycle lanes along Halifax Drive.





A1A

Halifax Drive



C. City of Daytona Beach

Gap Description:

During the course of the RTCA study, a 0.7-mile trail gap was identified adjacent to Beach Street, between just south of Marina Point Drive to Bellevue Avenue. The segment continues to Lighthouse Road adjacent to the city-owned water treatment plant. Several alternative alignments were presented at the Small Group Meetings with follow-up field visits. Commissioner Kelly White from the City of Daytona Beach recommended an alignment that connects with a preferred alternative project currently in design that connects to the ball fields at Bethune Point and other city owned property. The majority of the alternative alignments are recommended as connectors.

Gap C is shown on Grid Map **D6** on the next page.

Recommendation:

• The concept design displaying the recommendations for this gap has been completed and is shown on the pages following the map of Gap C shown on Grid Map **D6 Inset** on the next page.

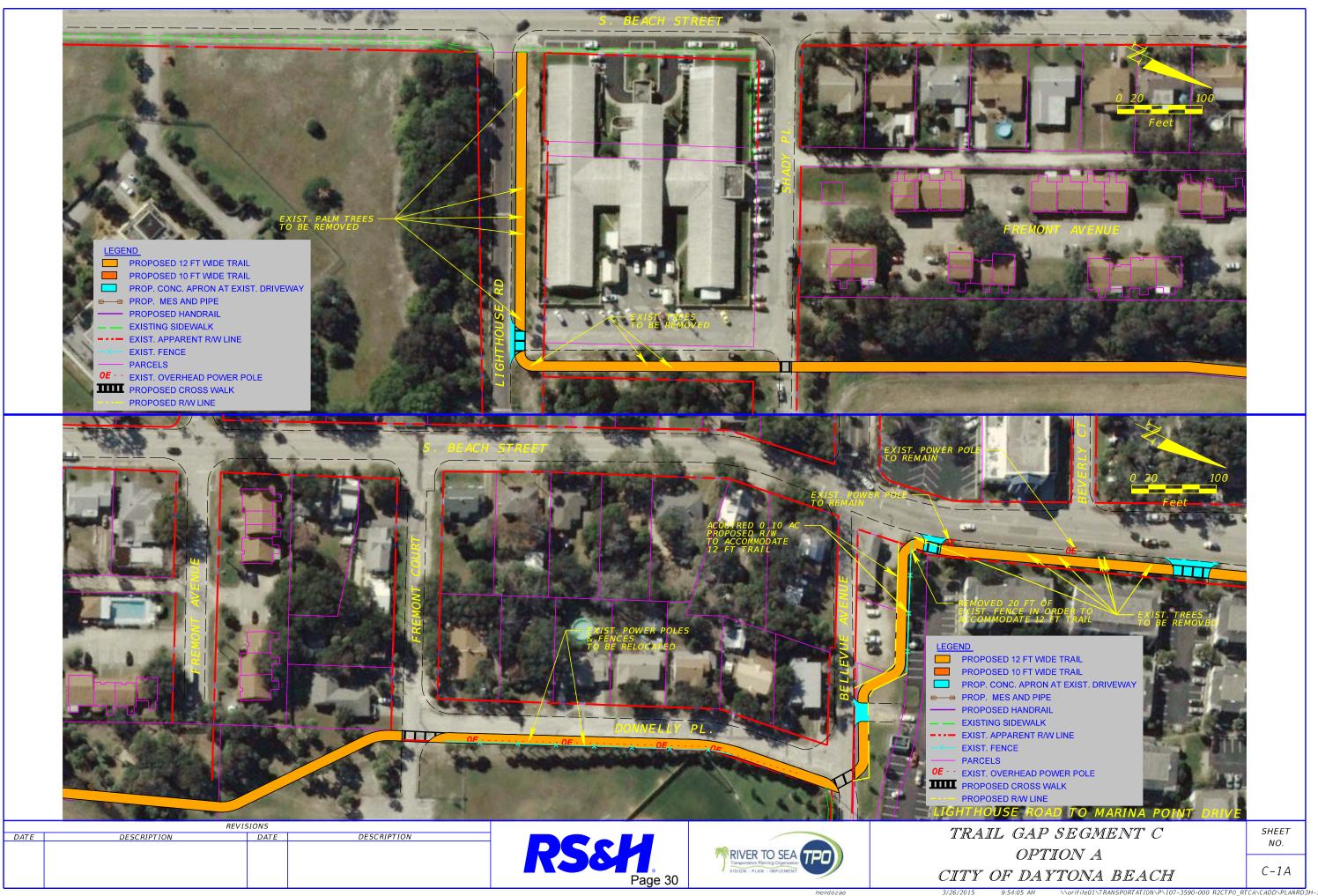


South Beach Street



Bethune Point Park





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DESCRIPTION

DATE

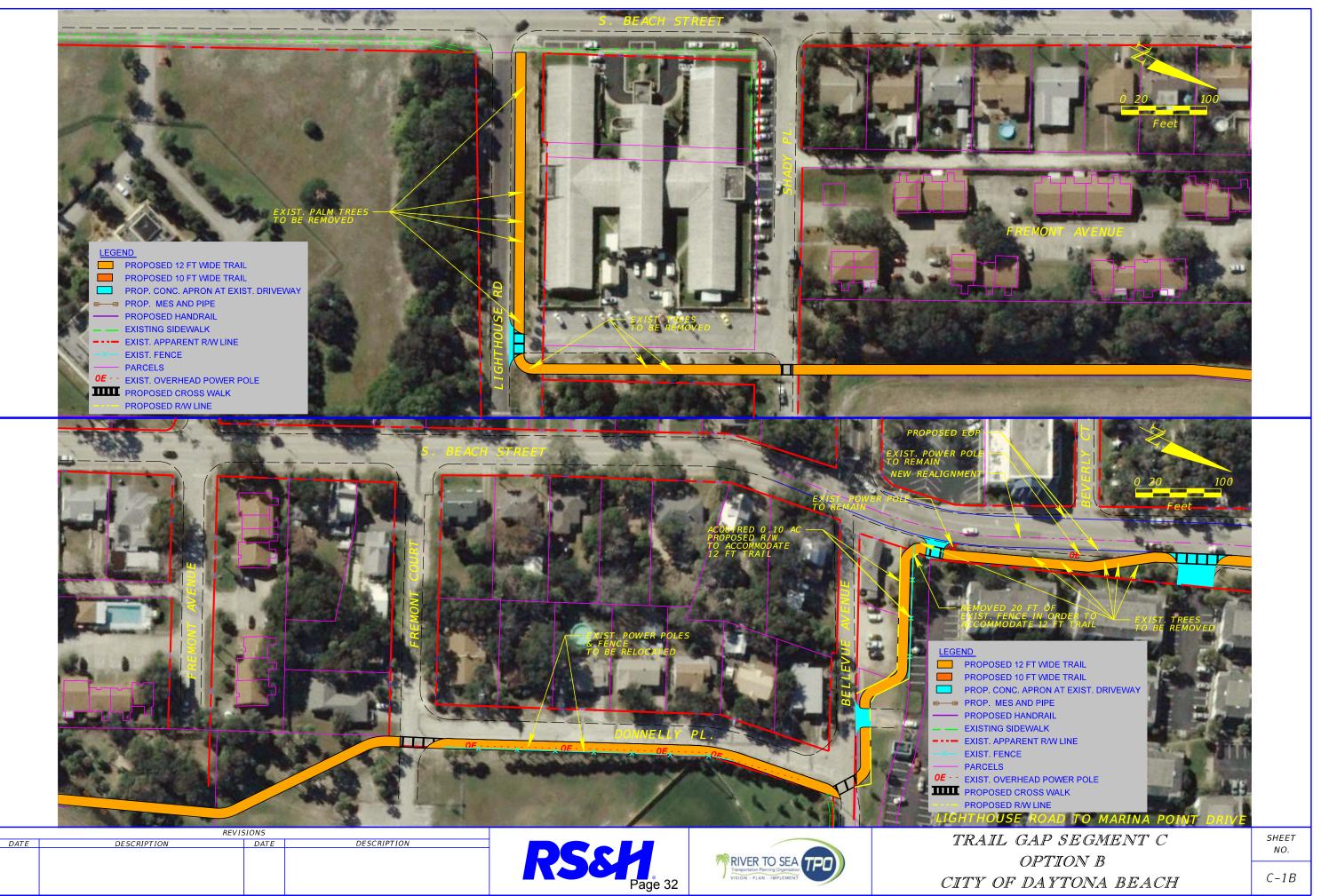
ROAD TO MARINA POINT DRIVE TRAIL GAP SEGMENT C OPTION A

CITY OF DAYTONA BEACH

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D. Cities of South Daytona and Port Orange

Gap Description:

There is a 1.2-mile gap between the City of South Daytona and the City of Port Orange that runs along Ridge Boulevard between Bellville Road and Reed Canal Road. The City of South Daytona and the East Coast Greenway Alliance favor an alignment that would extend from S. Palmetto Ave to the existing trail on Ridge Boulevard. The alignment would then travel south behind the Sunshine Park Mall parallel to the Florida East Coast (FEC) Railroad tracks and Carmen Drive. The trail would then travel east along Reed Canal Road and terminate at US 1, where there is an intersection project planned for near term construction. FDOT's US 1 Corridor Improvement Program Phase II Study included recommendations for bike lanes and wide sidewalks connecting to Port Orange.

Right-of-way constraints exist along Carmen Drive due to the adjacent railroad tracks, oak trees planted by the City, as well as large utility poles.

Recommendation:

• The concept design displaying the recommendations for this gap has been completed and is shown on the pages following the map of Gap D, shown on Grid Map **D6 Inset** on the next page.



Carmen Drive near Ridge Boulevard



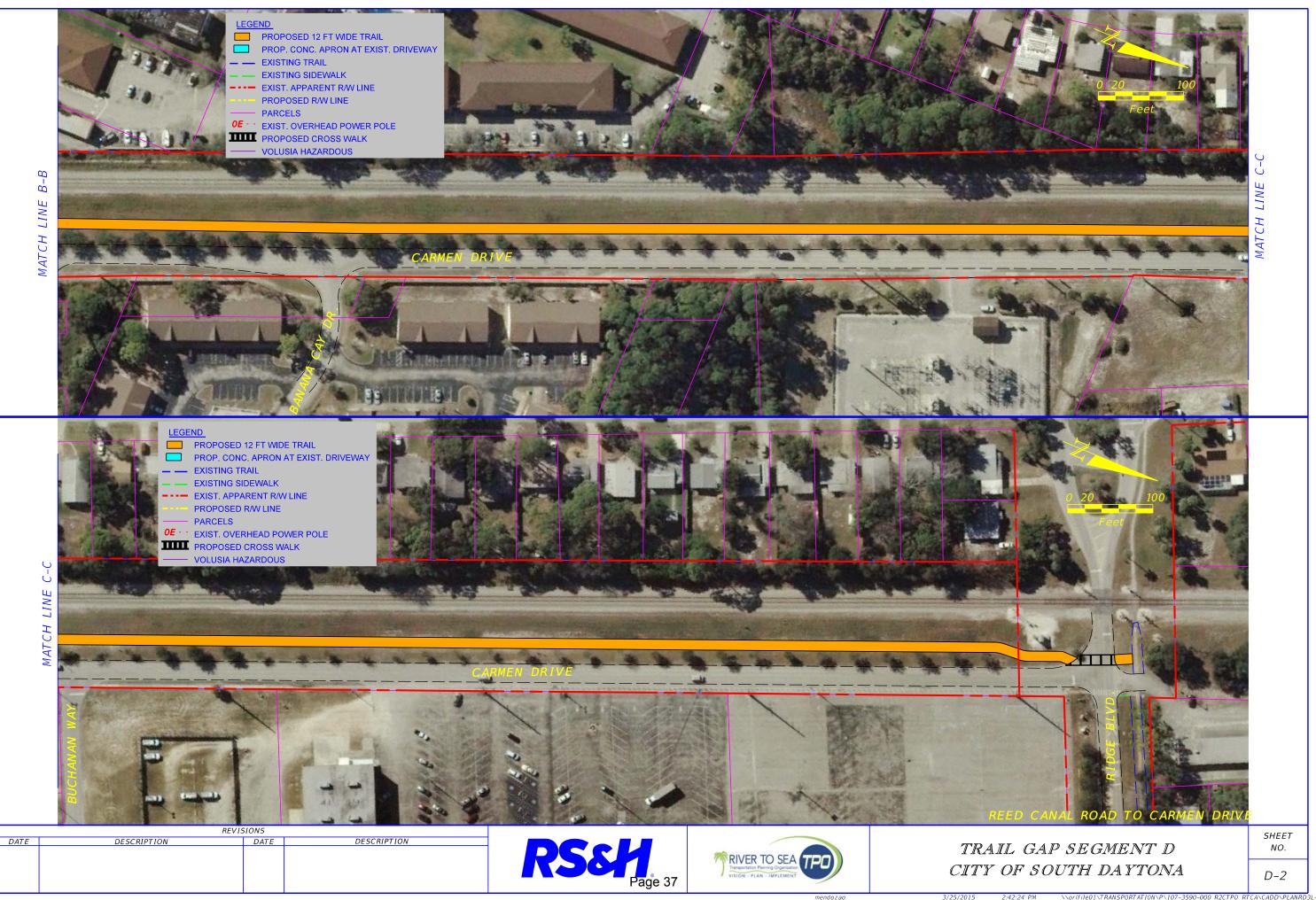
Carmen Drive between Ridge Boulevard and Reed Canal Road





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E. City of Edgewater/New Smyrna Beach

Gap Description:

Through the Titusville to Edgewater Loop PD&E Study, the City of Edgewater determined a locally preferred alternative that will connect to the terminus of the ECRRT. The specific alternative will travel from the terminus of the ECRRT south on Dale Street, east on W. Park Ave, south along Mango Tree Drive to 16th Street, south to Hibiscus Drive then east on Roberts Road to US 1.

The City of Edgewater also has a preferred alignment from ECRRT northbound, which would travel north on Dale Avenue through undeveloped parcels, then continue north through the Daytona State College Campus; the school is in favor a trail through their property according to City of Edgewater staff.

A connection from 10th Street at the Daytona State Campus entrance east towards the East Coast Greenway has not been identified. Issues exist with crossing the railroad at 10th Street where there are plans to widen 10th Street; however, the rail crossing does not include a trail. One alternative proposed to the City of New Smyrna Beach was to utilize South Myrtle Avenue to connect to their downtown; however, the City has expressed concerns with this option if it will require an at-grade crossing across SR 44/Lytle Avenue.

Recommendation:

- Complete future feasibility study within New Smyrna Beach to explore opportunities to continue the Daytona State College trail from 10th street east to connect with the East Coast Greenway.
- Ongoing coordination with Daytona State Campus

A map of Gap E is shown on Grid Map **E8** on the next page.



10th Street Facing East Near Entrance to Daytona State College



F. West Volusia County/Beresford Park

Gap Description and Alternative Alignments:

There is a gap section of the Spring to Spring Trail to the south of the existing 12-foot trail following Grand Avenue (that terminates at the borrow pit) and the existing trails within Beresford Park. Two (2) alignments have been proposed and reviewed as part of the RTCA study to connect this gap. Based upon field reconnaissance with County staff, the most feasible alternative is the most direct alignment along S. Beresford Road to Alexander Drive connecting to existing trails at Beresford Park.

Recommendation:

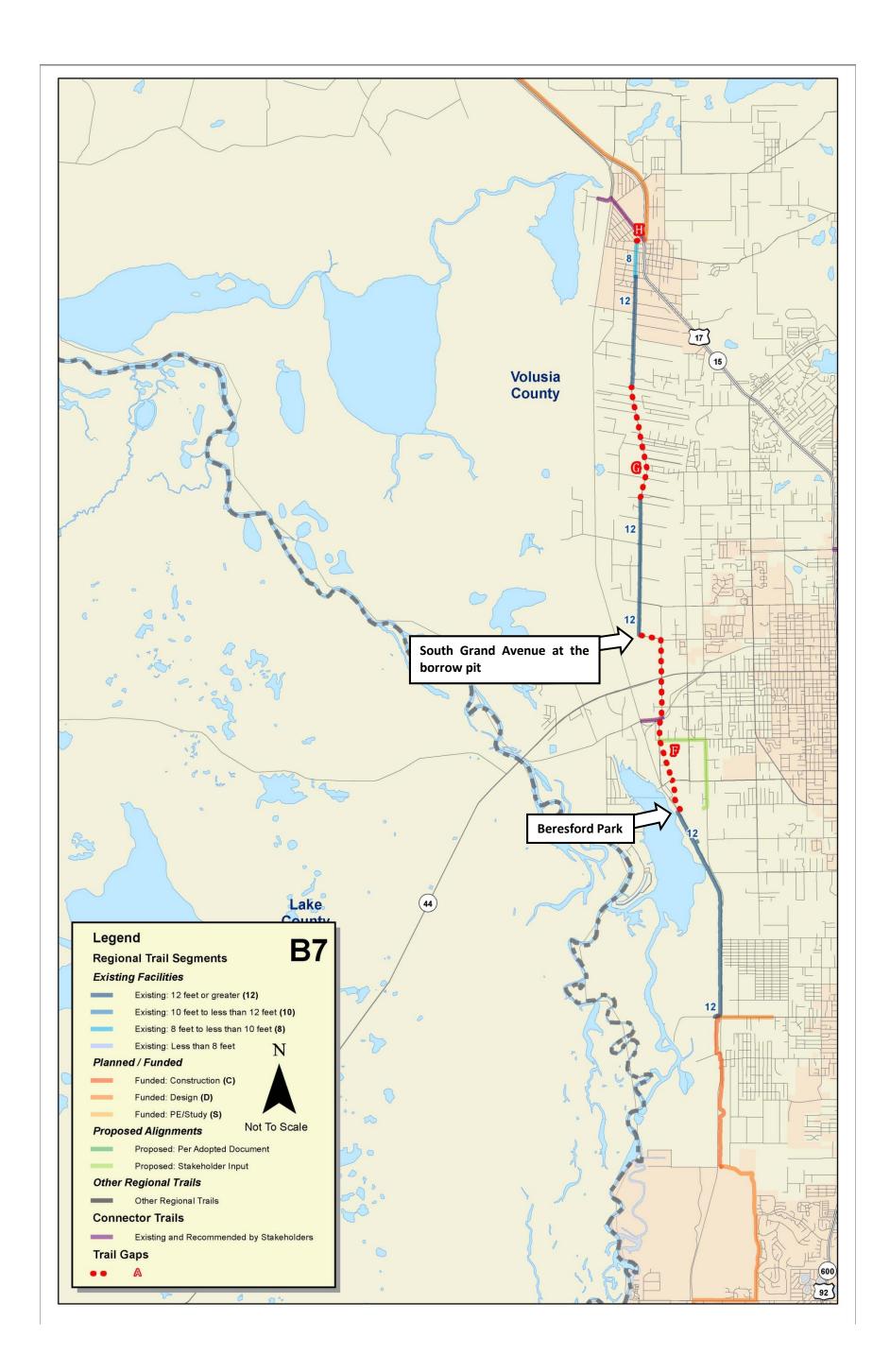
• The concept design displaying the recommendations for this gap has been completed and is shown on the pages following the map of Gap F, shown on Grid Map **B7** on the next page.

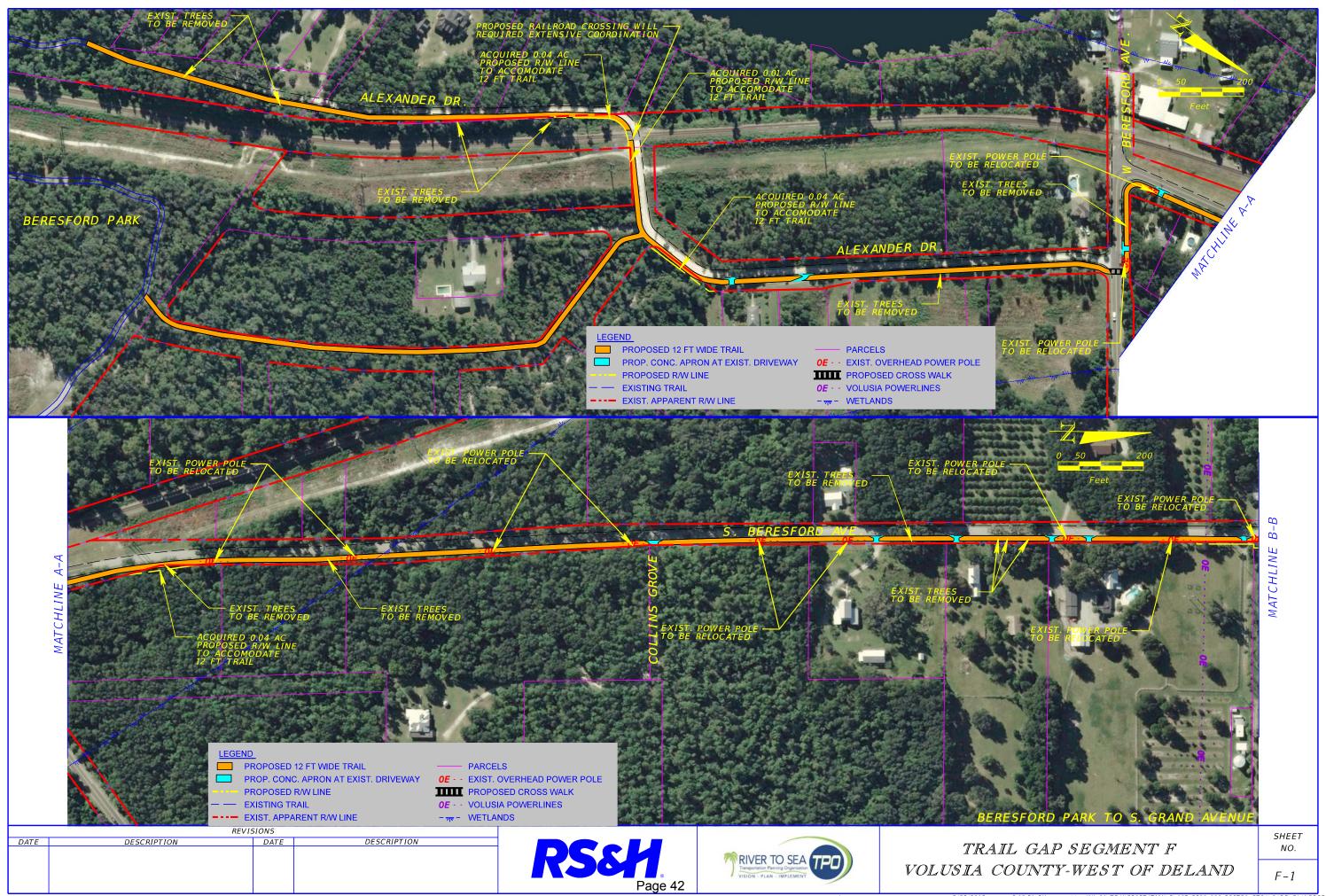


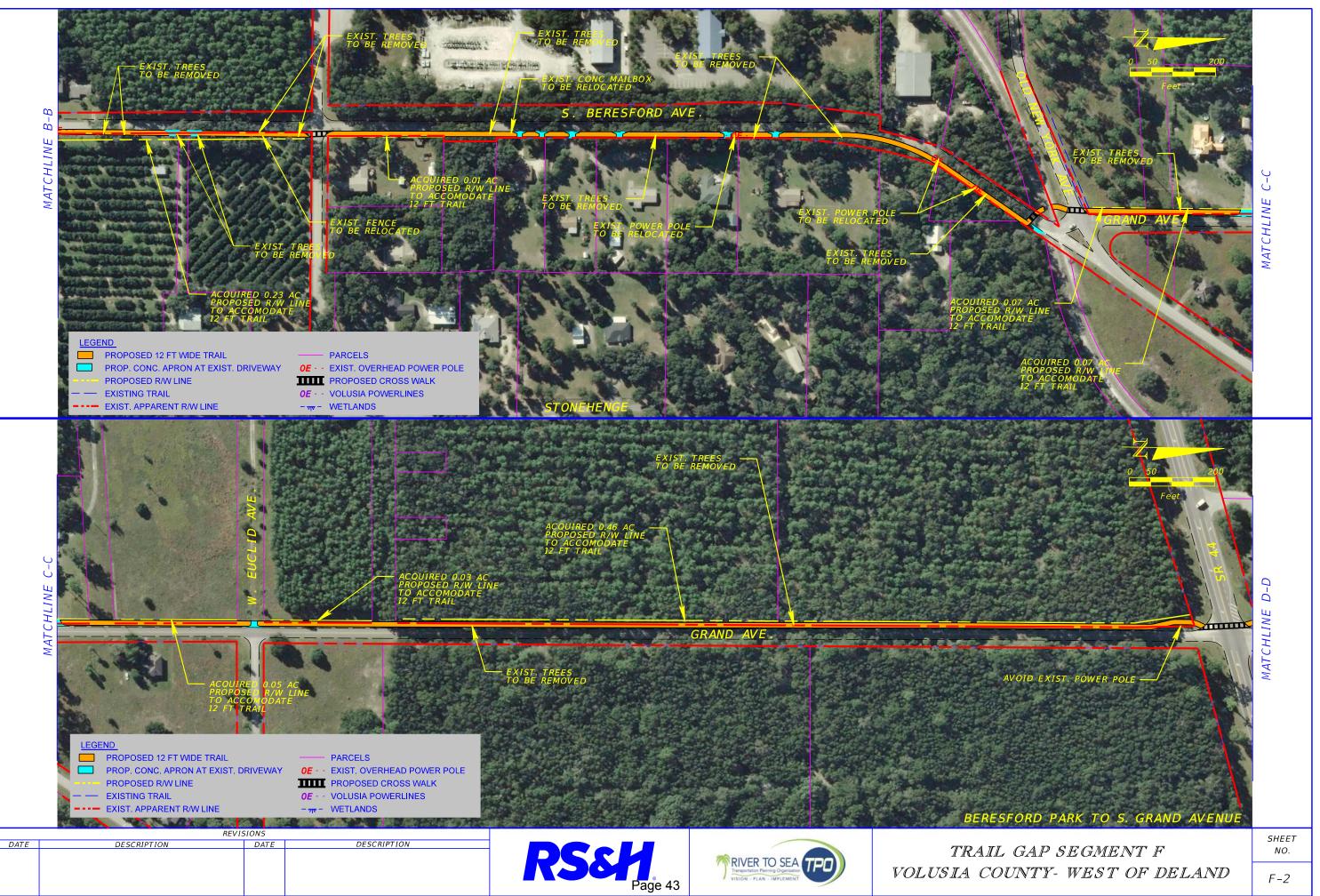
West Beresford Road at railroad crossing



Existing trail within Beresford Park

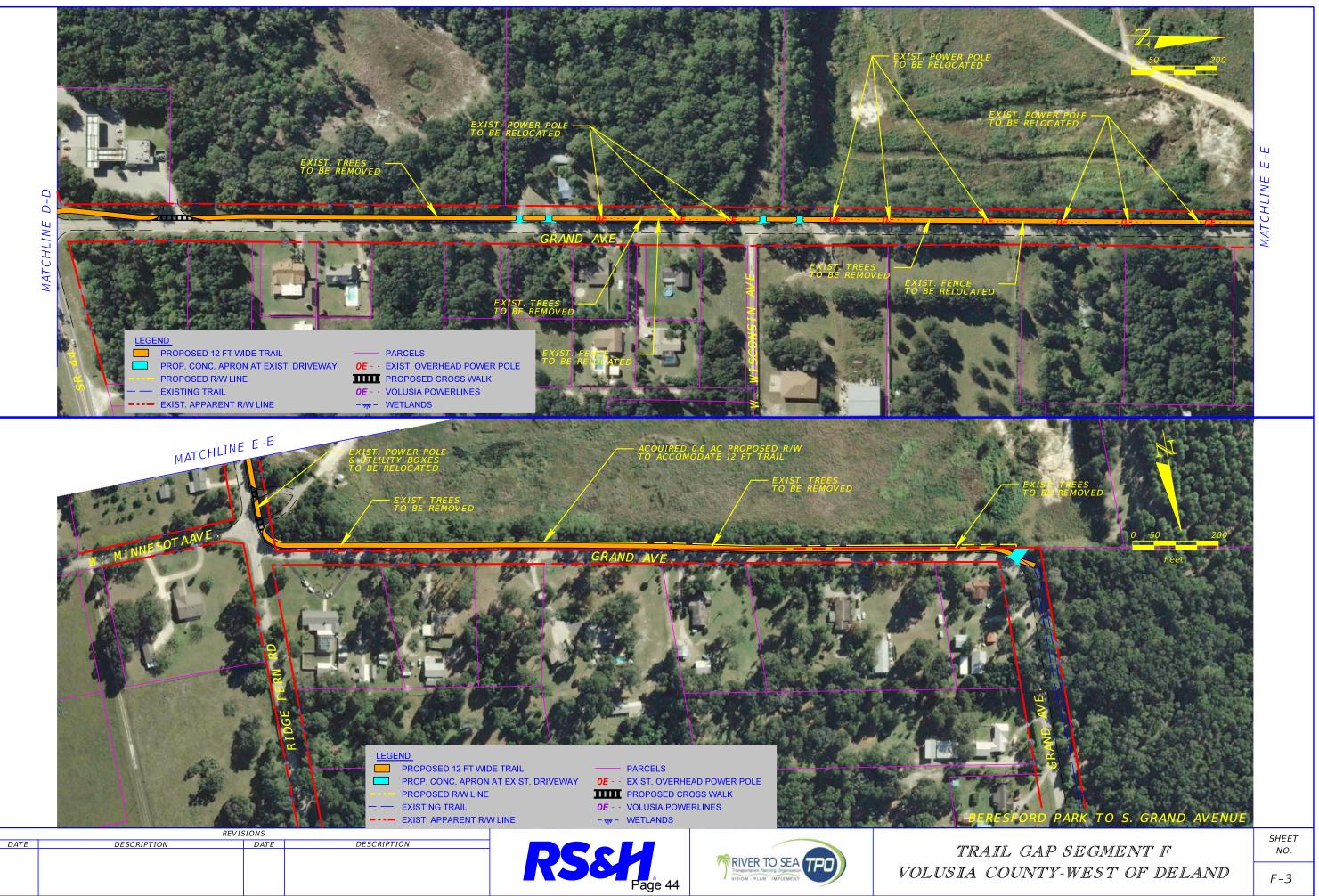






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G. Volusia County/West DeLand

Gap Description:

A trail gap segment was identified along 1.7 miles of Grand Avenue from Lemon Street to King Street. Volusia County originally presented three (3) trail alternatives to the community with only one (1) receiving local support that will minimize impacts to the large trees within the median.

The alternative selected by the County includes slightly reducing the center median, adding 5-foot bike lanes and 5-foot meandering sidewalks along both sides of the roadway. The County has completed the design for this alternative, which is now funded for construction. This design does not meet the regional trail width standard.

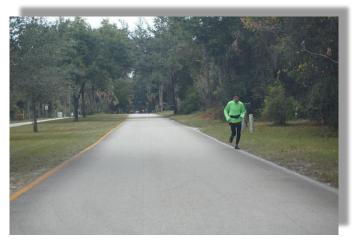
Recommendation:

Continue to monitor community support for potential construction of a regional trail with a standard width.

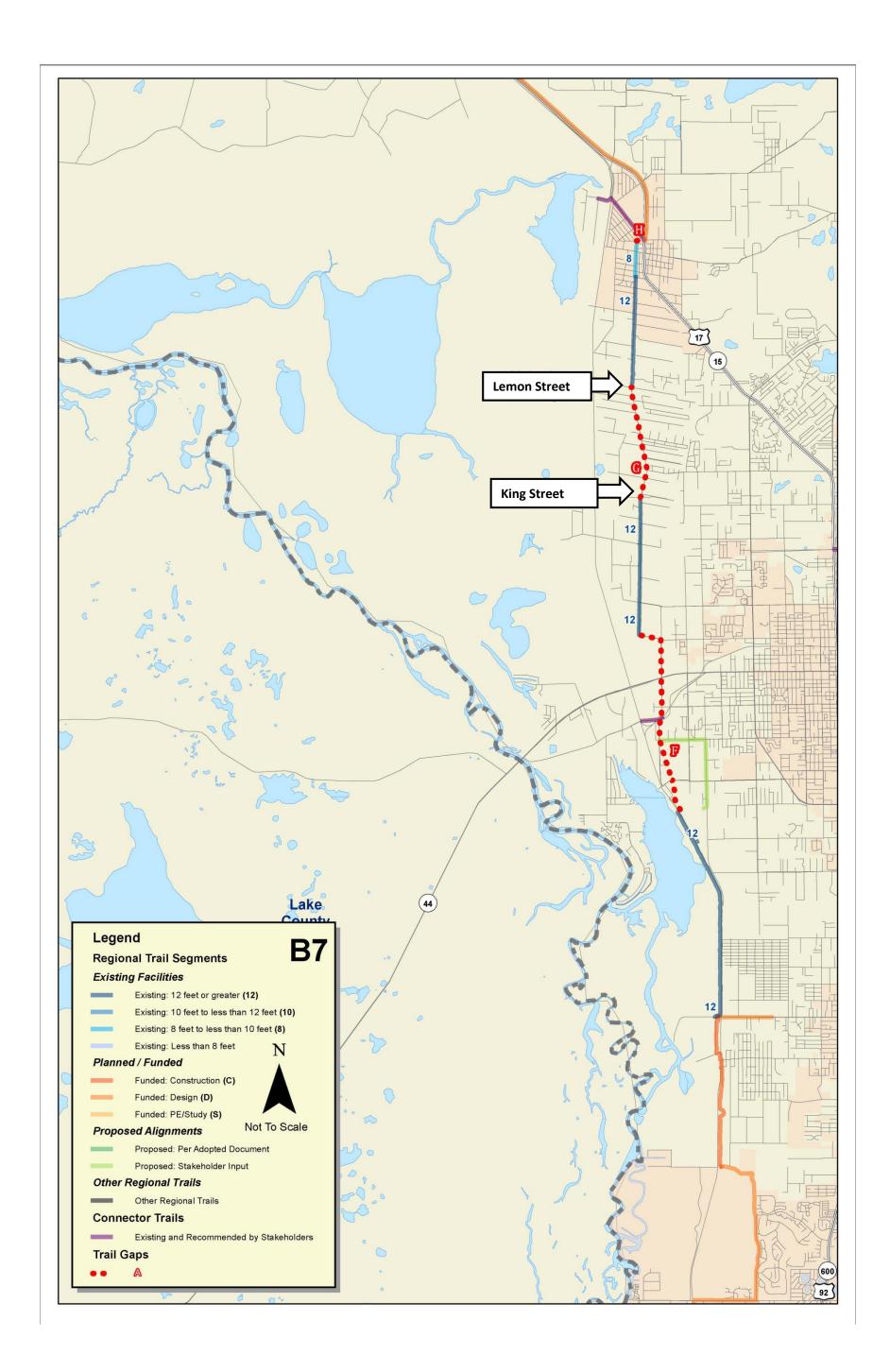
A map of Gap G is shown on Grid Map **E8** on the next page.



Grand Avenue



Grand Avenue



H. Volusia County/DeLeon Springs

Gap Description:

Design of a 12 foot regional trail segment east of US 17 was set to begin in December 2014. The trail segment is planned to be constructed as part of a road widening. Design and right-of-way are funded, but construction is not. Right-of-way includes the trail. The FDOT project currently shows the south terminus just north of McInnis Elementary School. The study team has spoken with FDOT who has agreed to extend the southern project terminus to W. Baxter Street.

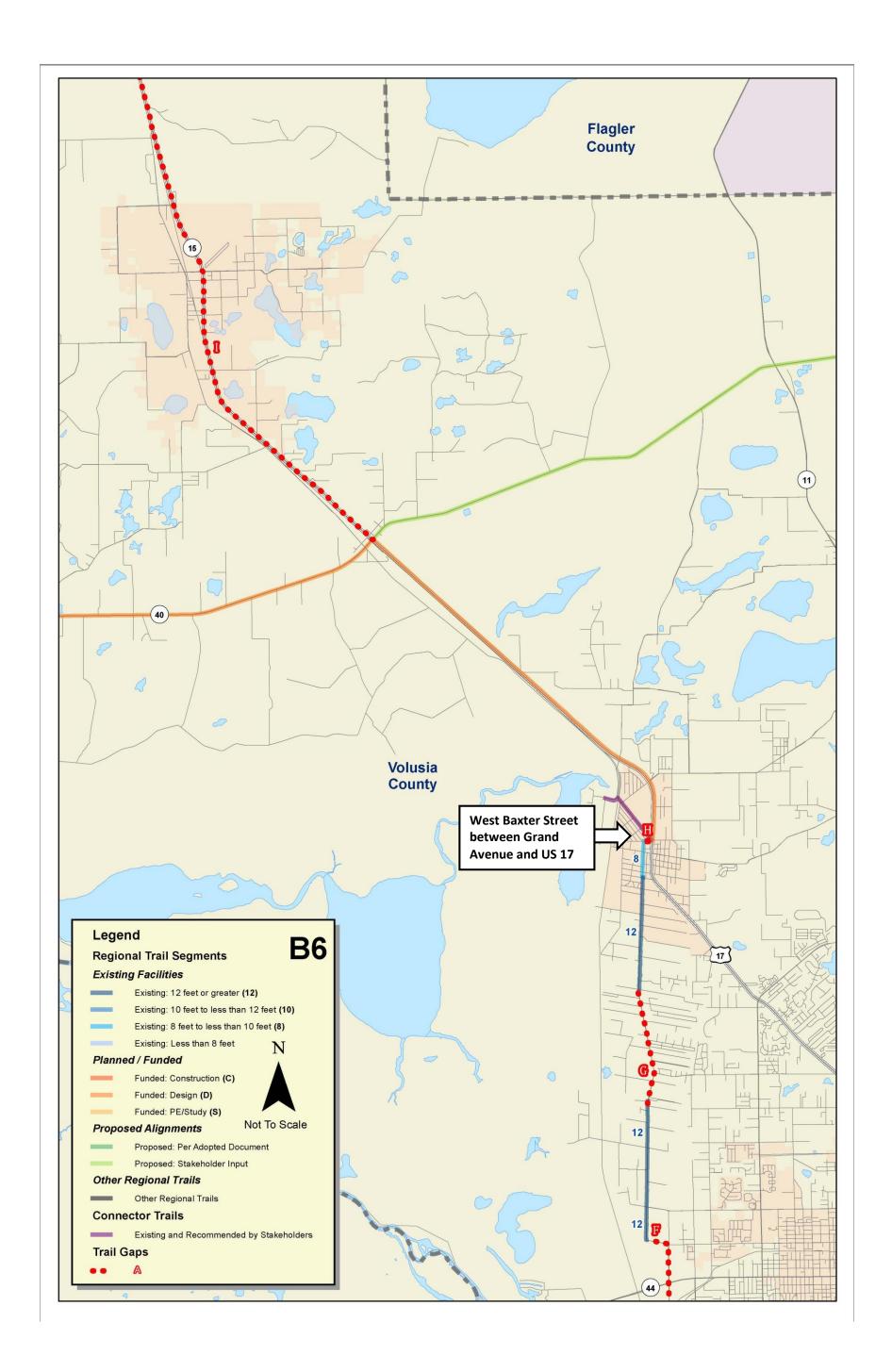
Recommendations:

- Continue to work with the County and FDOT to ensure that the southern project terminus is extended W. Baxter Street.
- Conduct future feasibility study to widen just over 0.1 mile of existing sidewalk along the north side of Baxter Street from US 17 west to Grand Avenue and the start of an eight (8) foot trail running south along Grand Avenue.

A map of Gap H is shown on Grid Map **B6** on the next page.



West Baxter Street



I. Volusia County/Putnam County Line

Gap Description:

There is a gap segment along 13.7 miles of US 17 from SR 40 north to Putnam County. FDOT District 2 has not yet identified a location for the Putnam County alignment. Based upon field reconnaissance and an engineering review, the east side of US 17 appears to best suited for construction of a future regional trail.

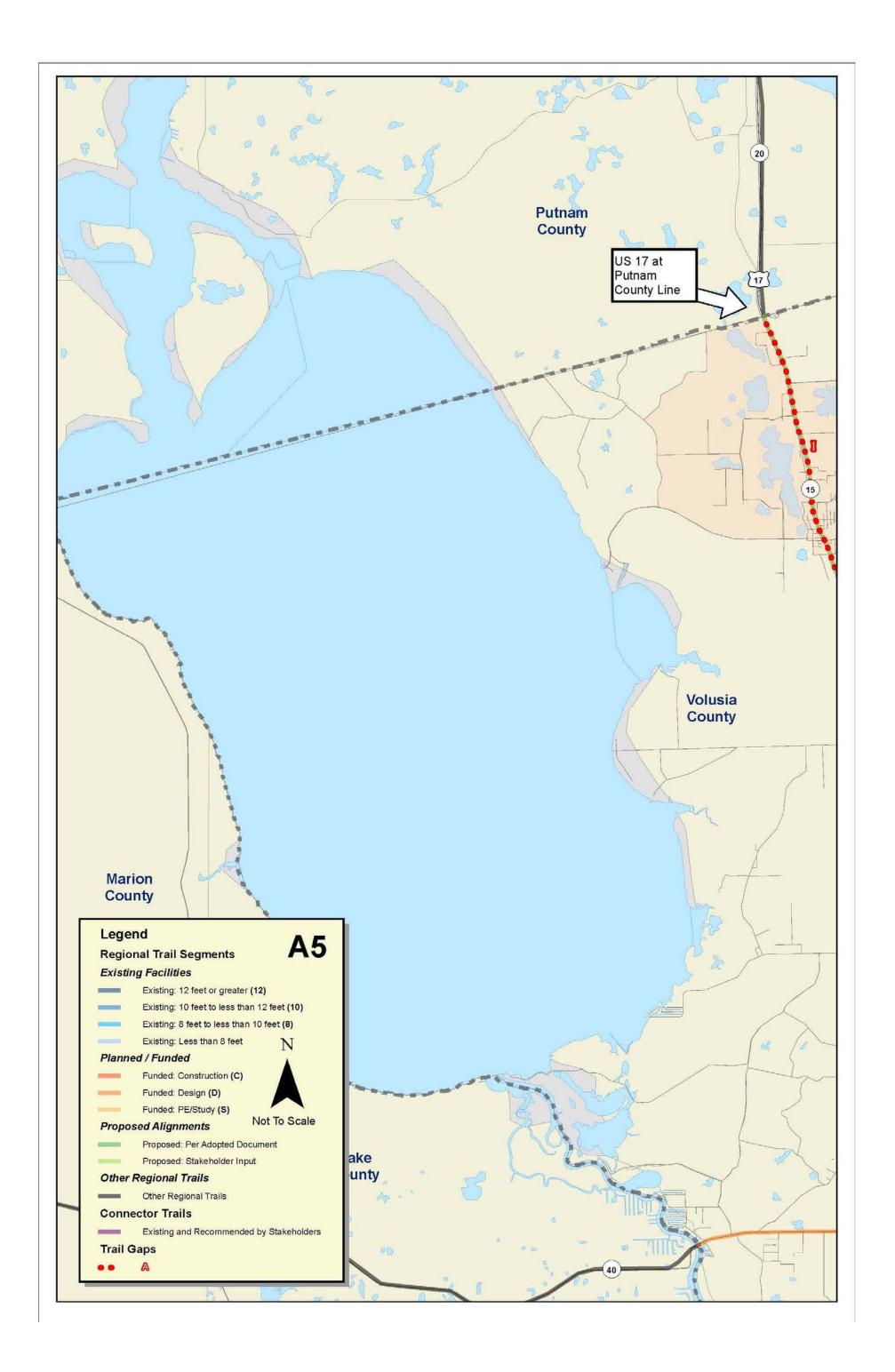
Recommendation:

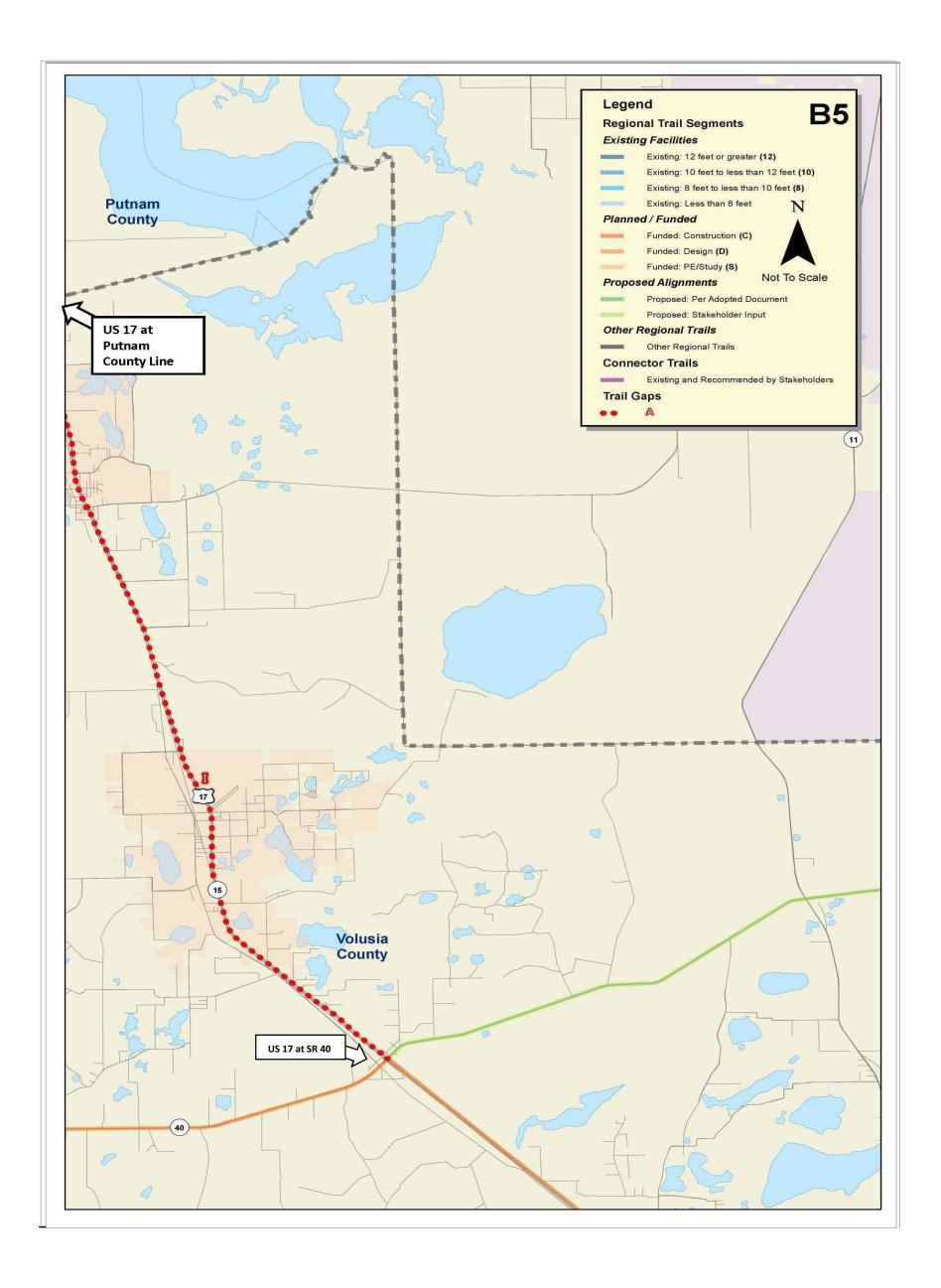
• The concept design displaying the recommendations for this gap has been completed and is shown on the pages following.

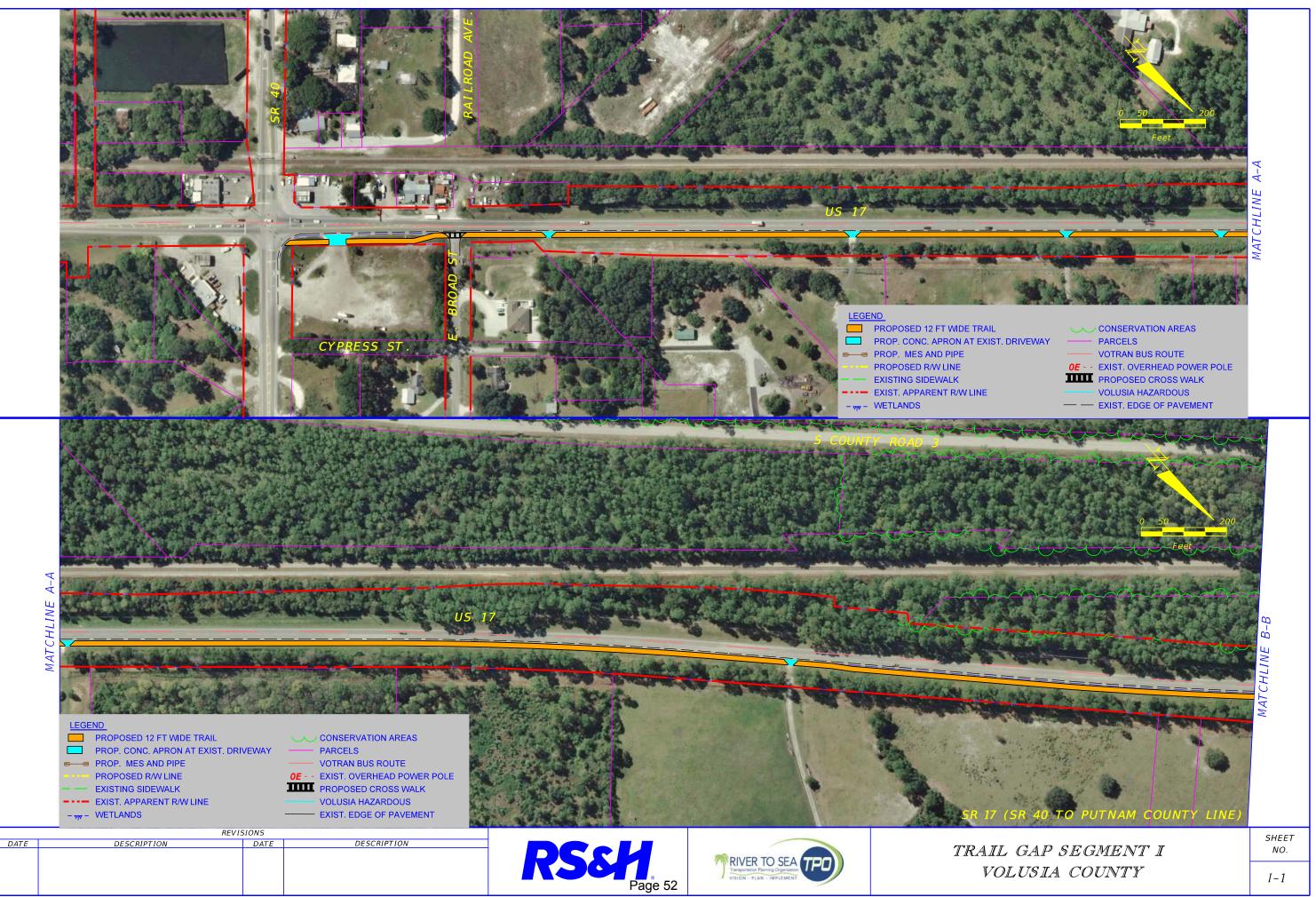
A map of Gap L is shown on Grid Maps A5 and B5 that follow.



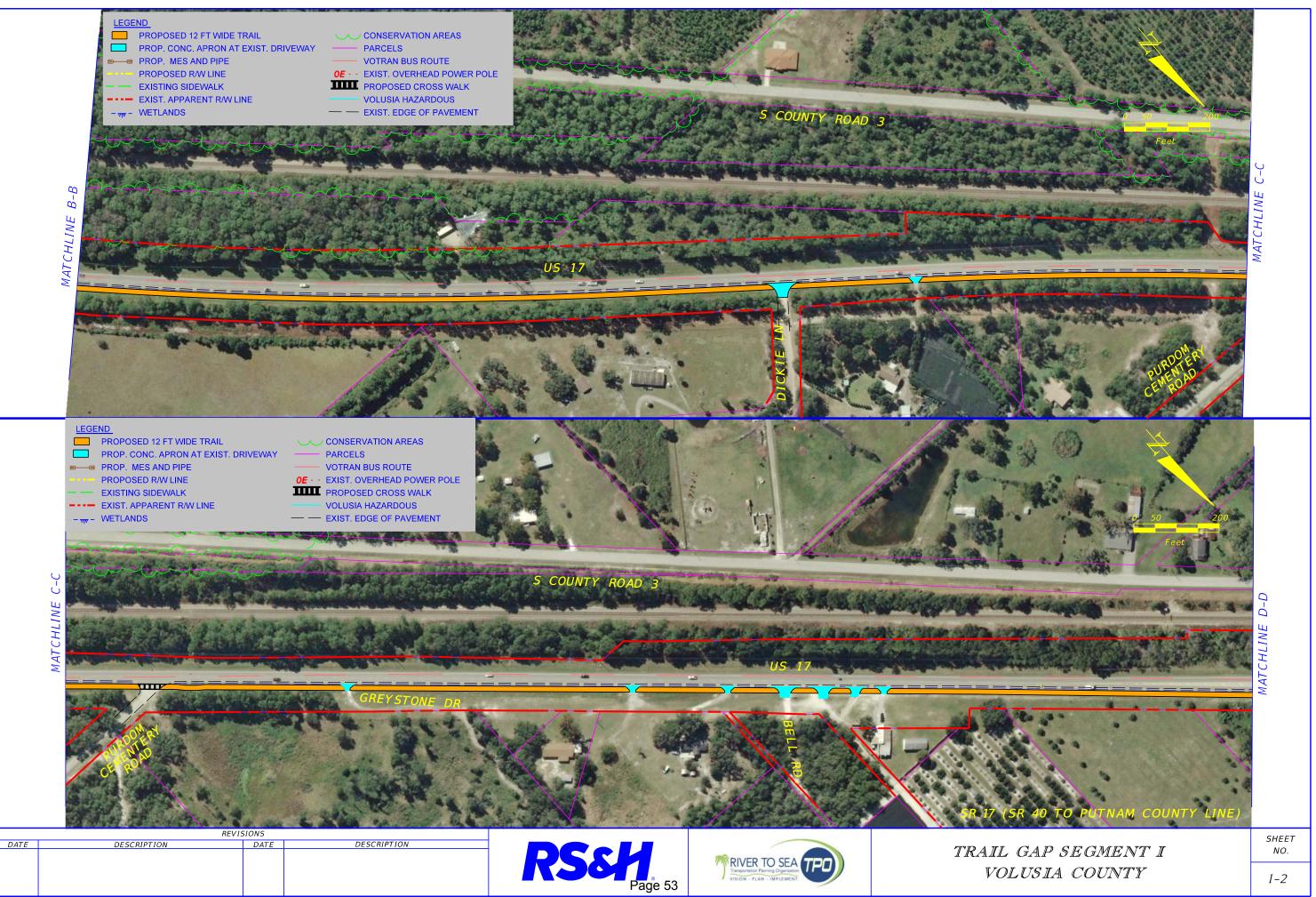
US 17

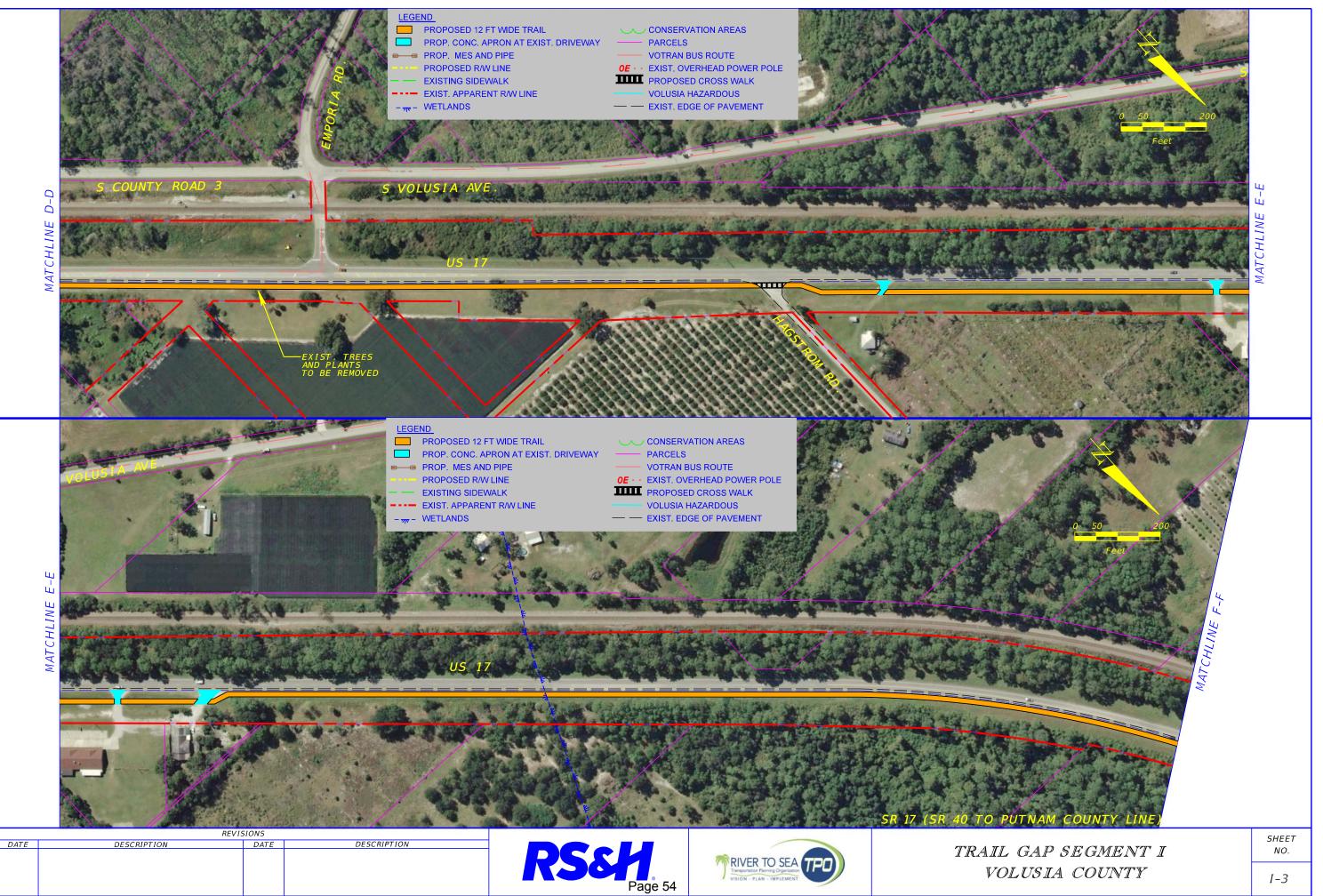




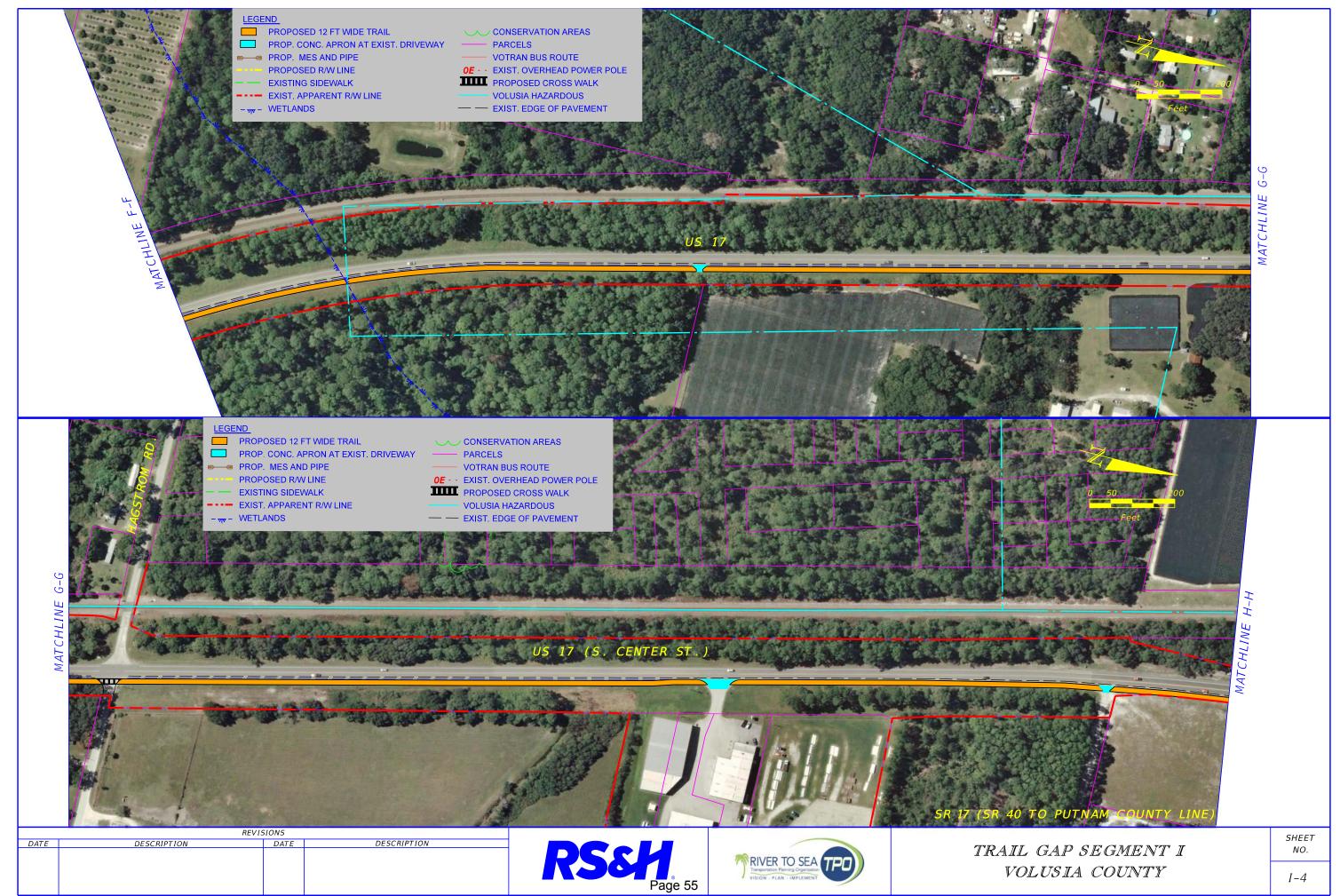


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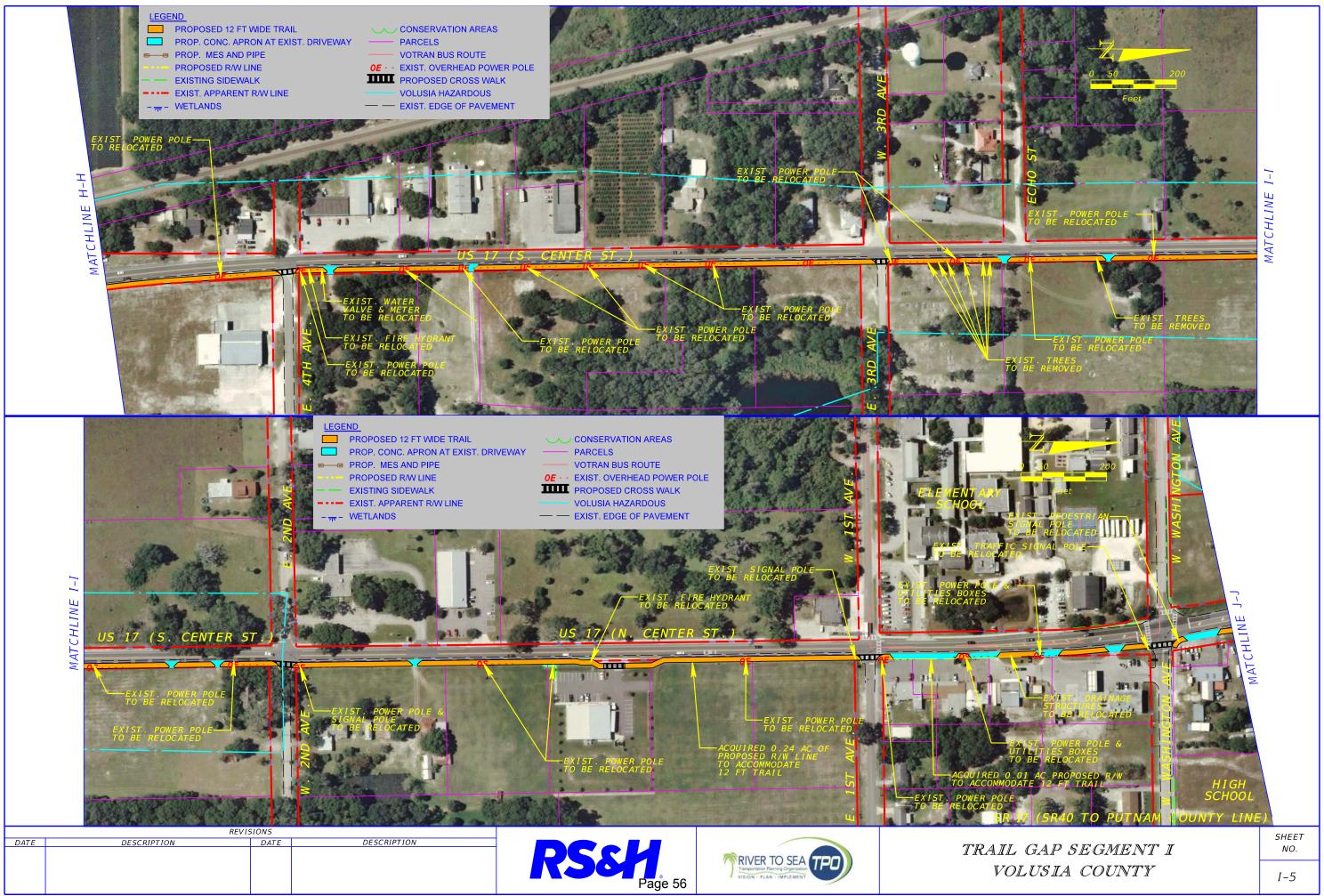


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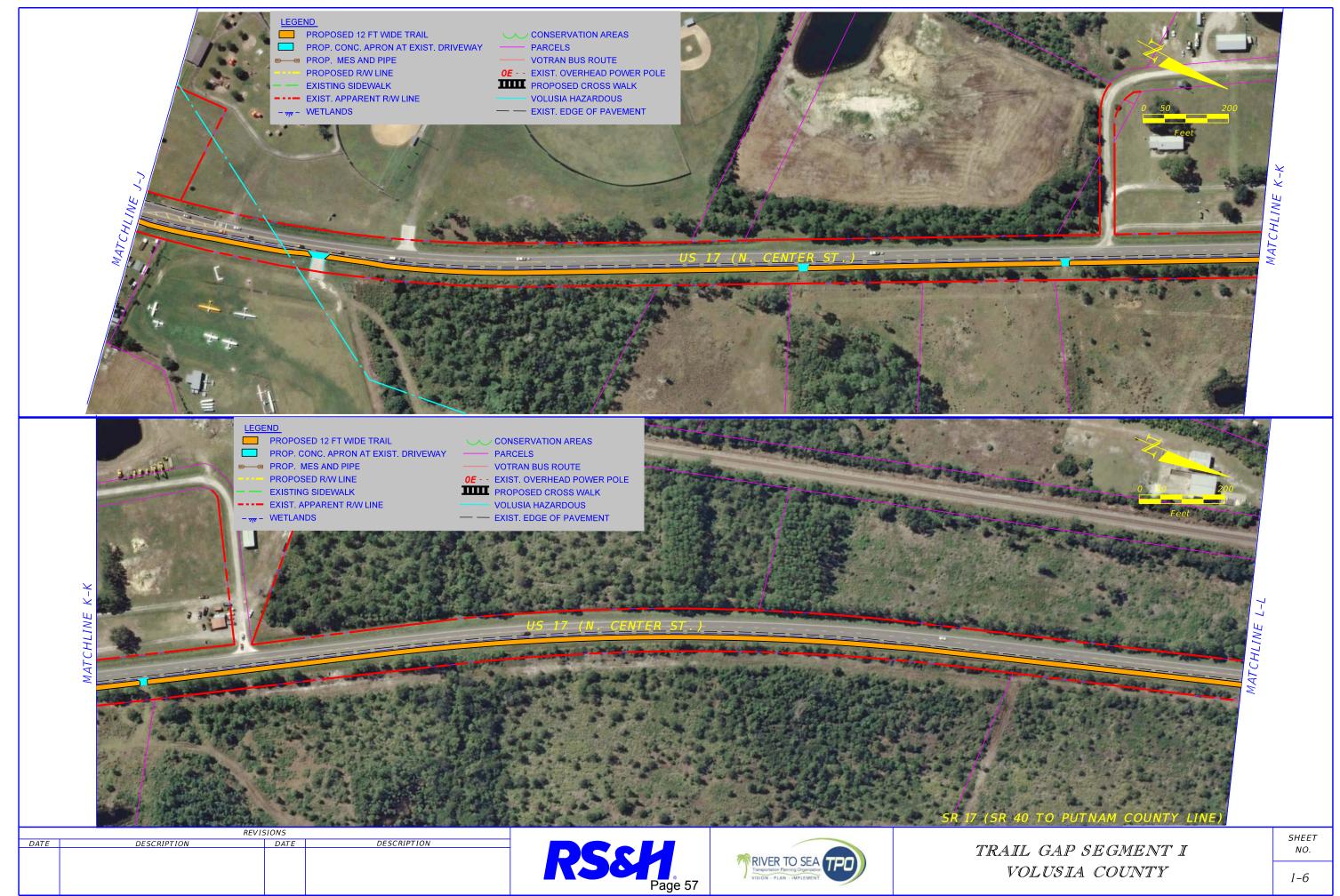


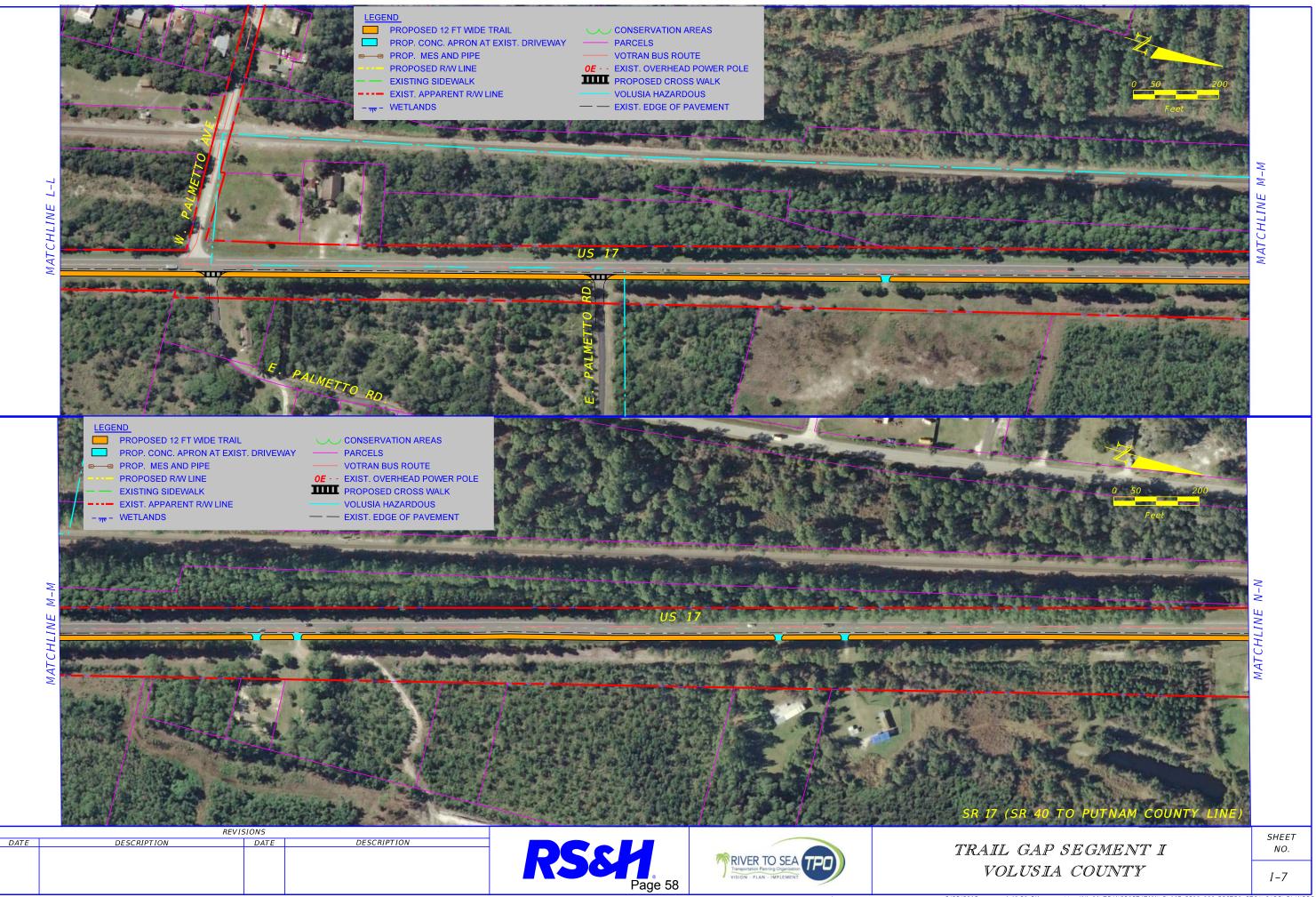
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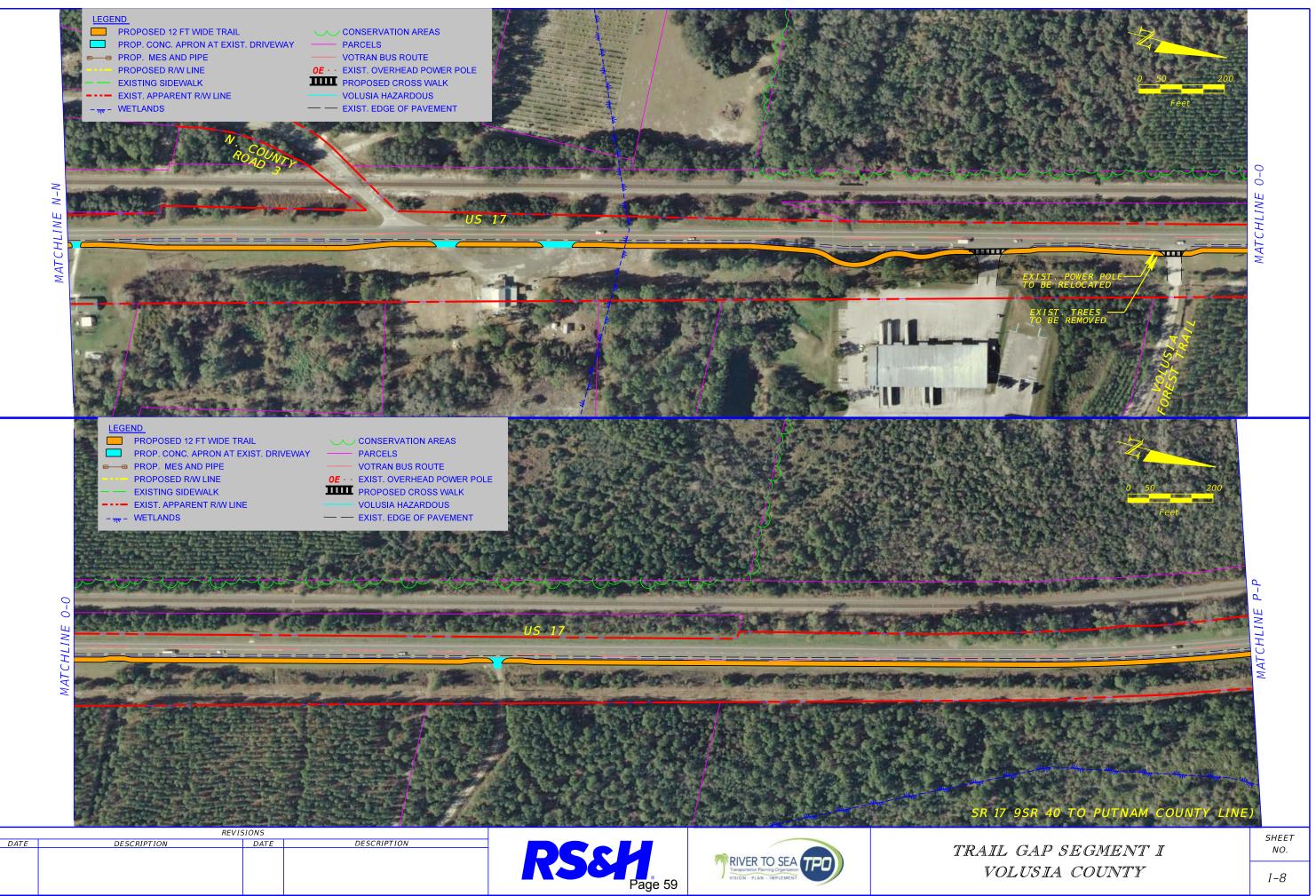
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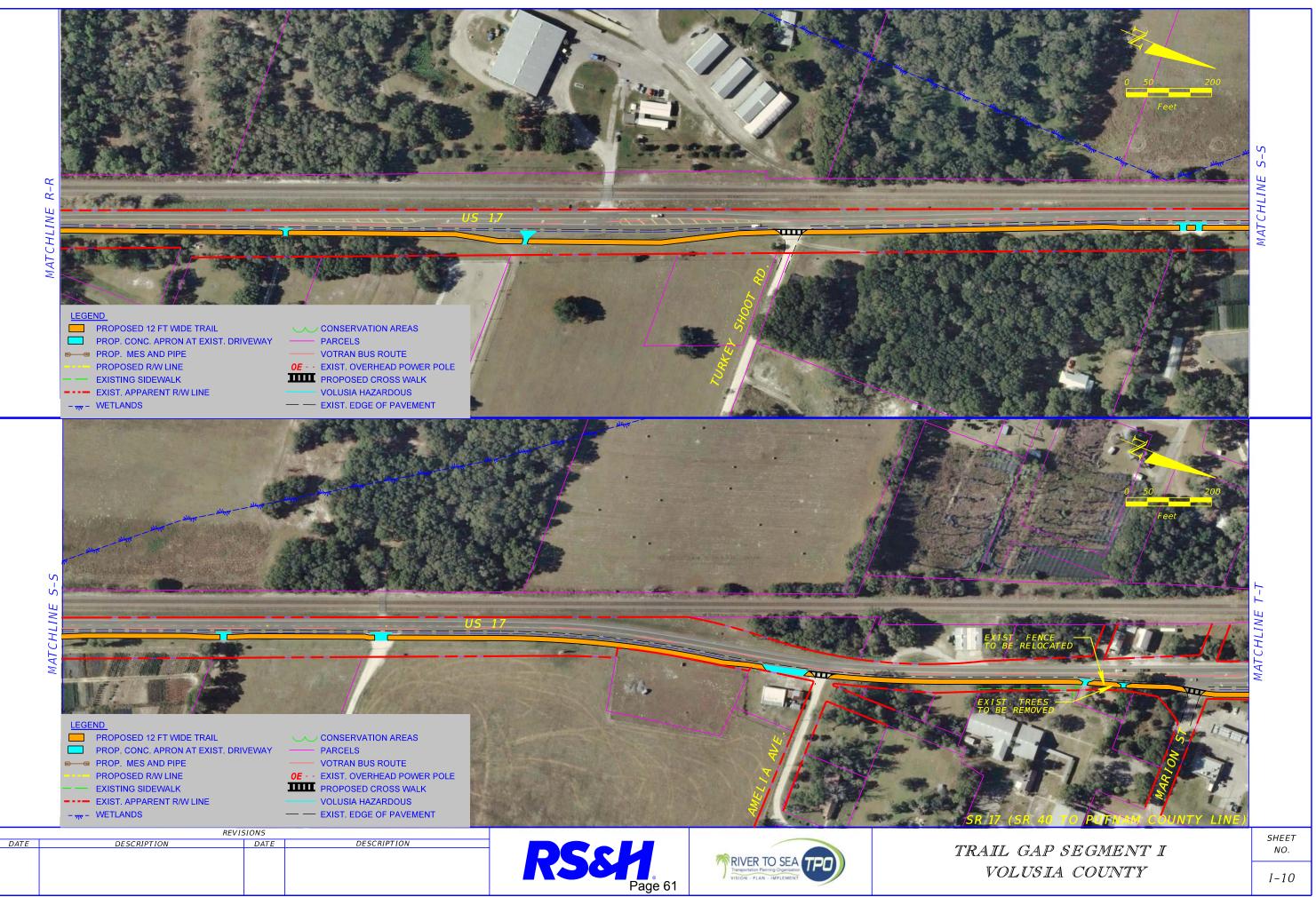






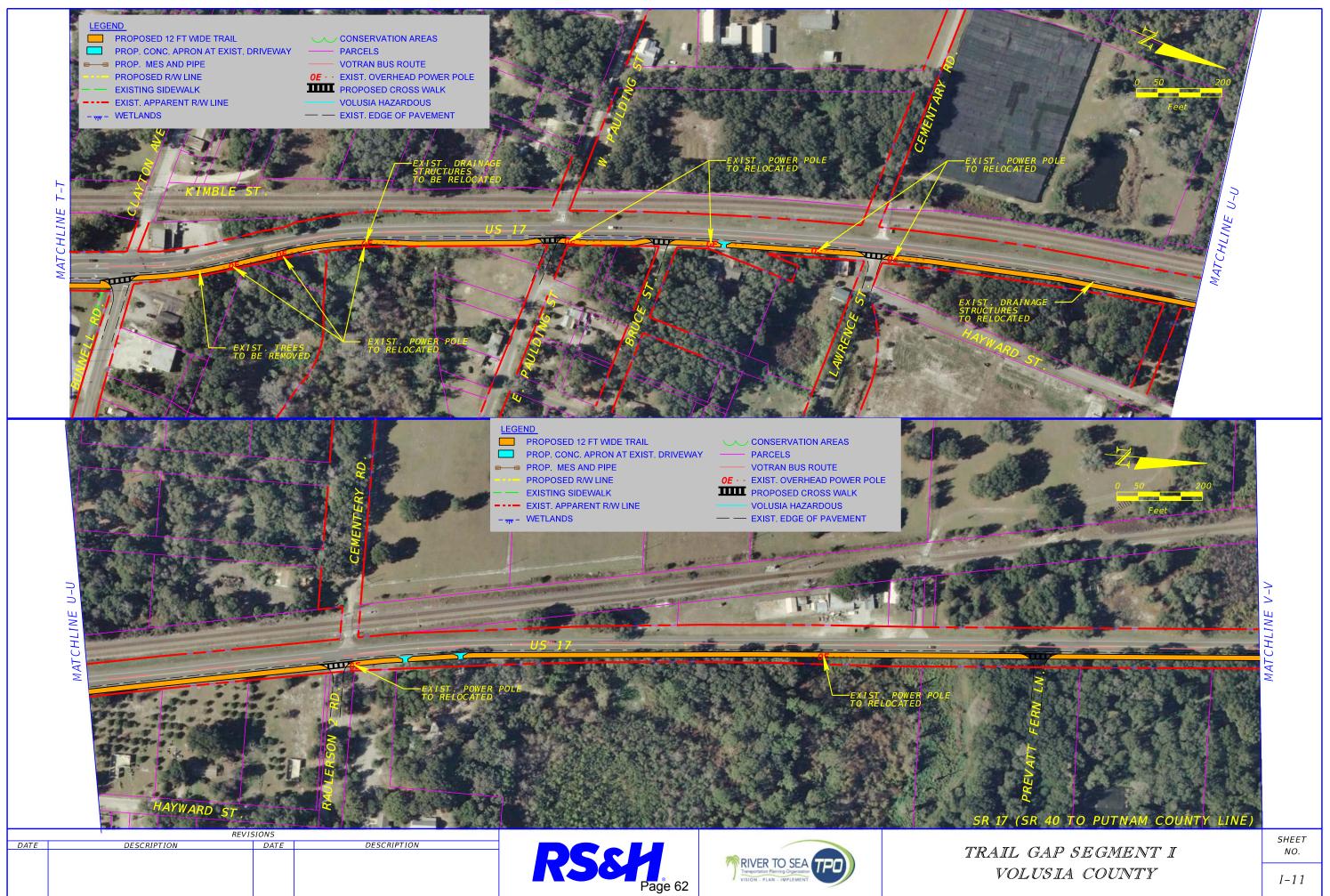


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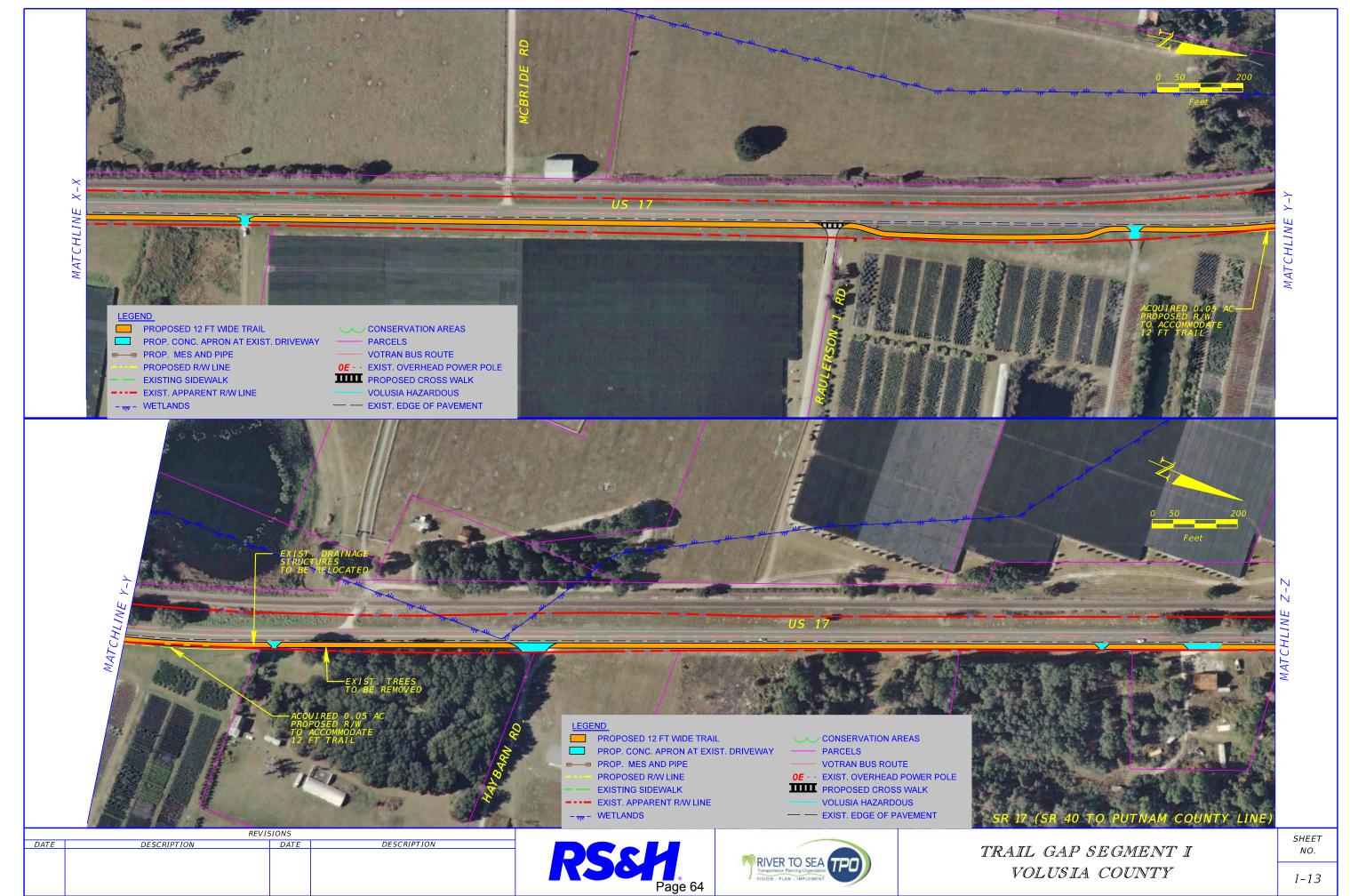
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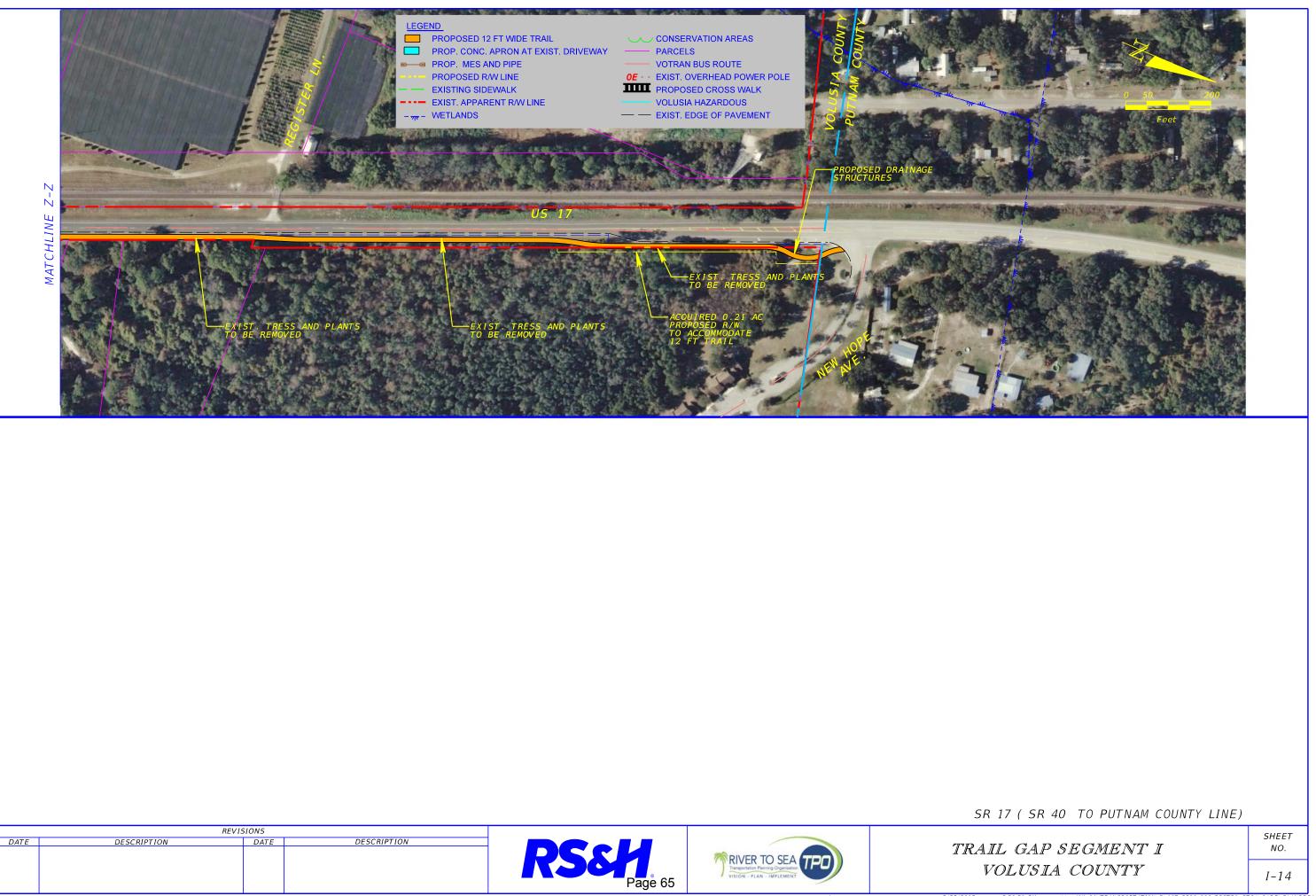


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J. Volusia County/City of Ormond Beach

Gap Description: During the course of the RTCA study, 2.2-mile gap segment was identified along SR 40 from Cone Road to Airport Road. A PD&E study is currently underway for the segment to the west of Cone Road that proposes a 12-foot wide trail along the south side of SR 40. There is an existing eight (8) foot sidewalk to the east of Airport Road along the northern side of SR 40. The County has stated that a crossing with signal installation will likely occur at the intersection of SR 40 and Airport Road; however, a grade separation/trail bridge will be necessary if this signal is not installed.

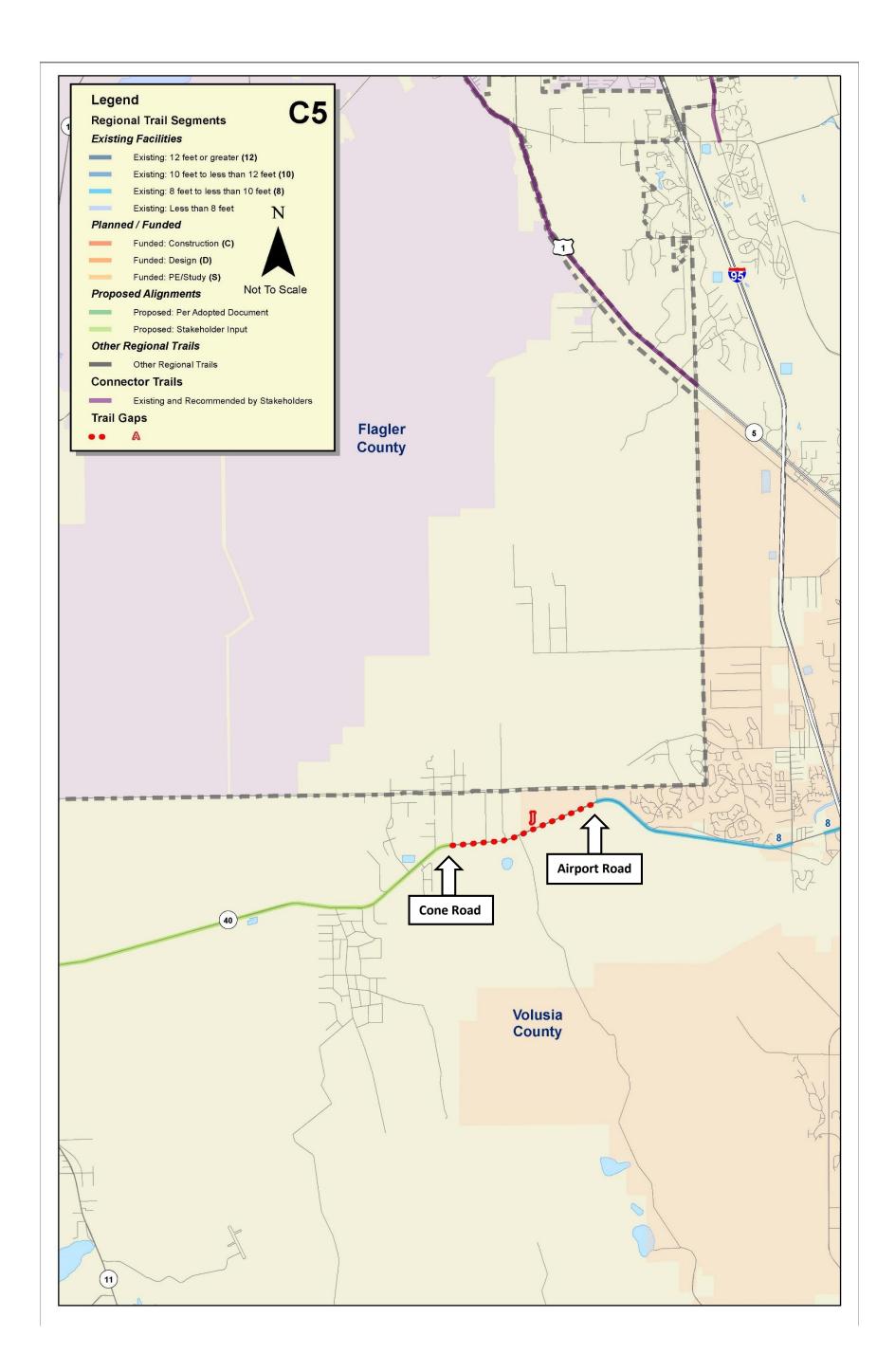
Recommendation:

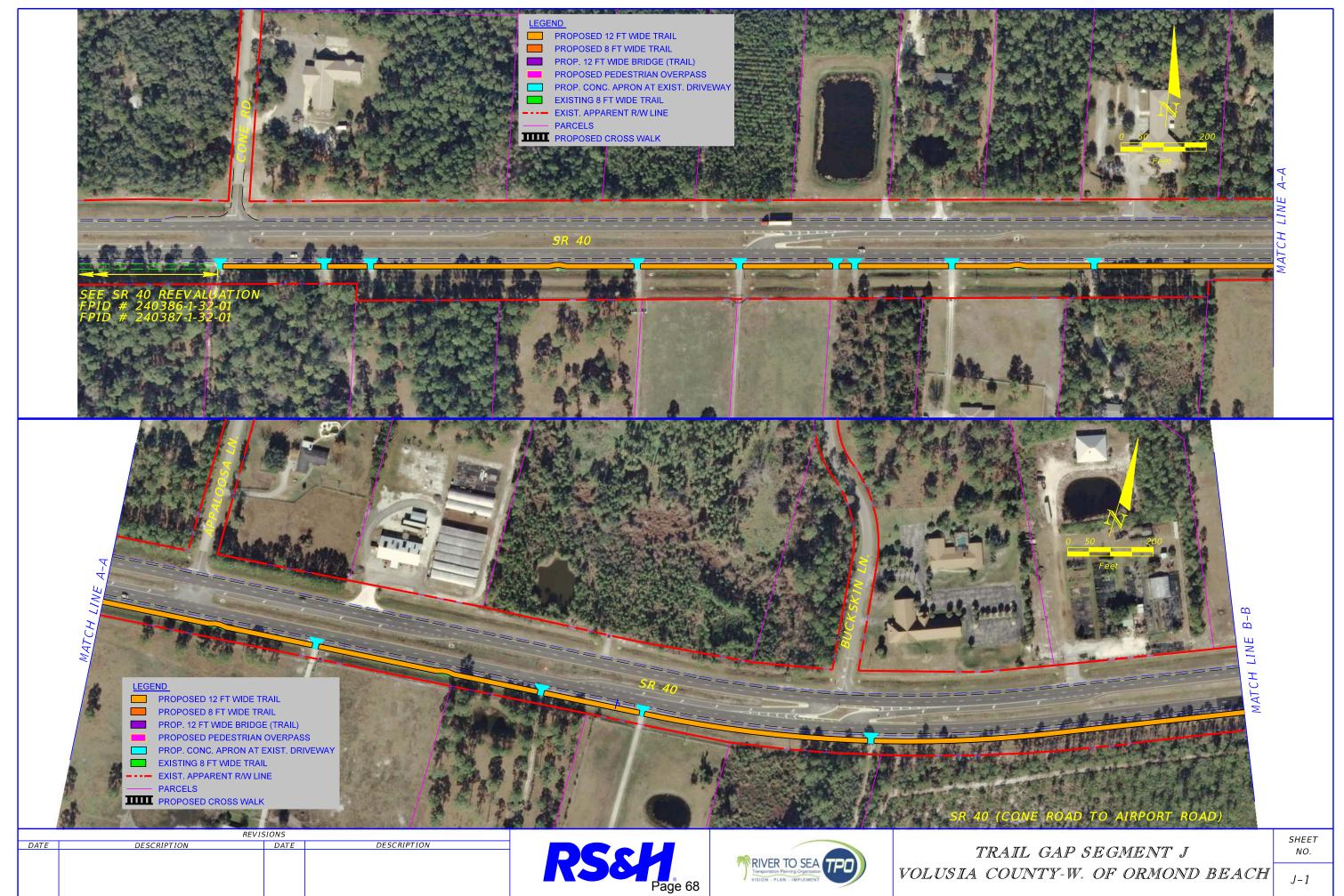
• The concept design displaying the recommendations for this gap has been completed and is shown on the pages that follow.

A map of Gap J shown on Grid Map **C5** on the next page.



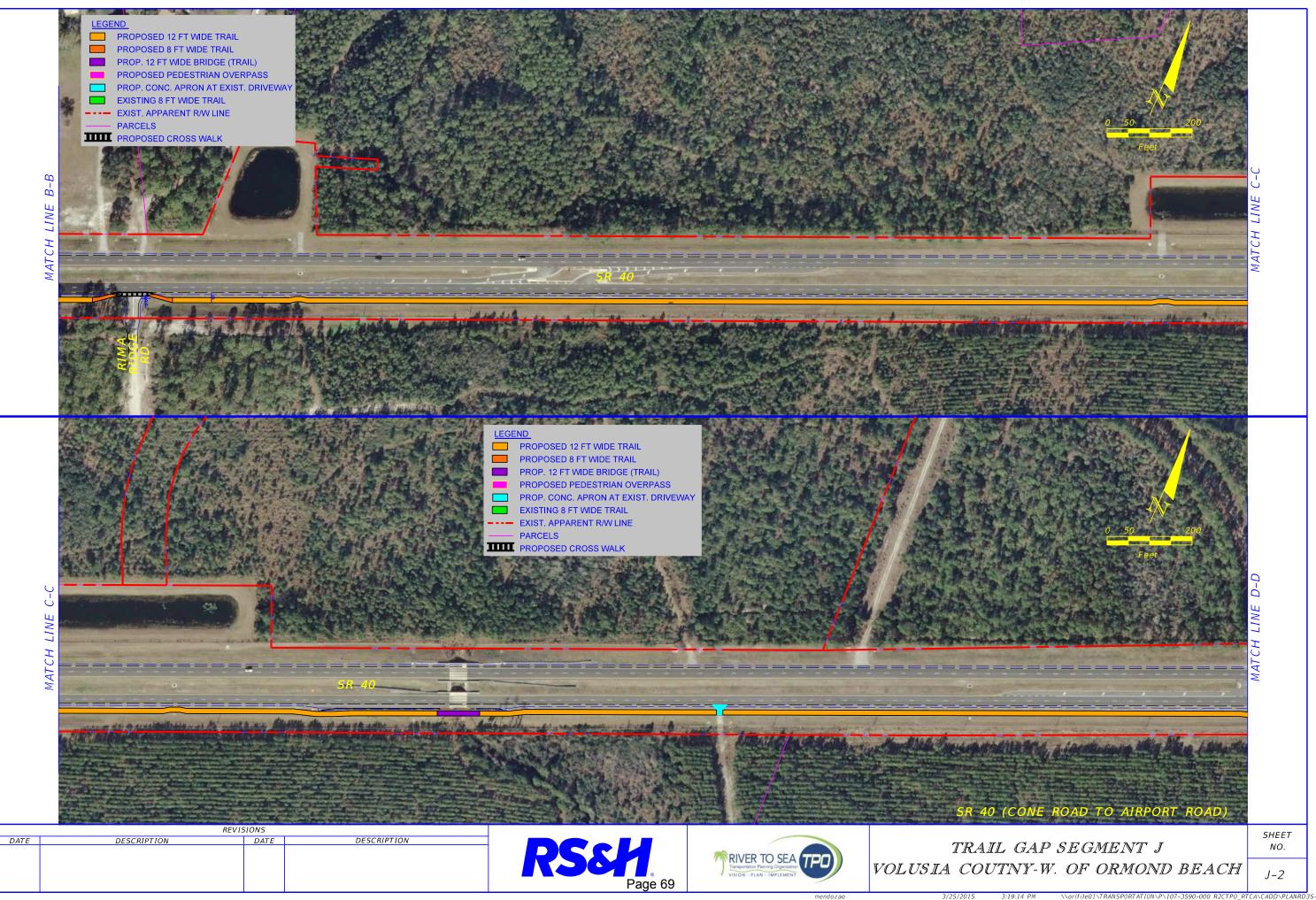
SR 40



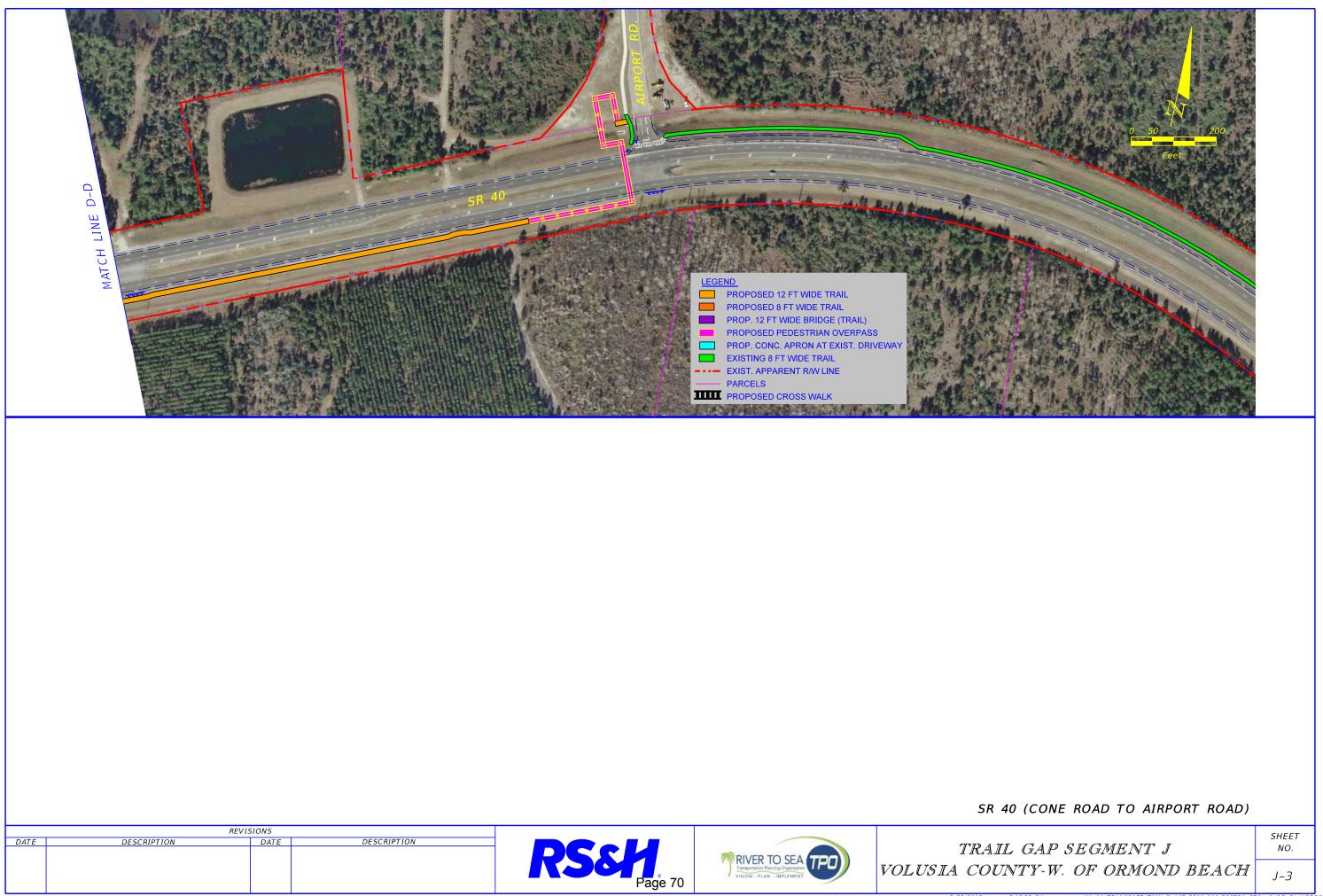


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5.1 Gap Segment Cost Estimates

The implementation of any transportation project is guided by the financial constraints, which have become a significant component of the current funding landscape. Typically, major transportation projects require packages of funding from more than one source.

The key element in implementation is having sound cost estimates developed using standard engineering practices which include all project components. These cost estimates provide the implementation agency with required information for programming and prioritizing projects.

The final step in the RTCA was the development of cost estimates for the concept designs that were developed to close the trail gap segments identified through the RTCA study. Based on the concept design, comprehensive cost estimates were developed that incorporated all of the financial impacts, including elements that are often overlooked in cost estimation such as lighting, utility work, maintenance of traffic, and drainage. The cost estimates developed for those gap segments with a finalized concept design include known elements to ensure accurate cost estimates for the work to be performed. The summary cost estimates for these segments are shown in **Table 6** in 2016 dollars as well as 2017 and 2018 dollars. Detailed cost estimates are found in **Appendix D**. The outer-year estimated costs were adjusted using the standard FDOT inflation factors as listed below.

Trail Gap	Jurisdiction	Road	Segment	Segment	Estimated Costs ¹		
Segment ID		Name	Start	End	2016 ²	2017 ³	2018 ⁴
C (Alt. 1)	City of Daytona Beach	Beach Street	Marina Point Dr.	Bellevue Avenue and Lighthouse Rd	\$356,304	\$365,324	\$374,344
C (Alt. 2 - Realignment)	City of Daytona Beach	Beach Street	Marina Point Dr.	Bellevue Avenue and Lighthouse Rd	\$500,293	\$512,959	\$525,625
D	City of South Daytona	Carmen Dr and Reed Canal Rd	Ridge Blvd	Reed Canal Rd	\$391,401	\$401,310	\$411,219
F	Volusia County/West DeLand	W. Minnesota; S. Grand; S. Beresford	W. Beresford Rd	Beresford Park	\$1,530,855	\$1,569,611	\$1,608,367
I.	Volusia County	SR 17	SR 40	Putnam County Line	\$6,228,457	\$6,386,139	\$6,543,821
J	Volusia County/West of Ormond Beach	SR 40	Cone Rd	Airport Rd	\$1,760,024	\$1,840,582	1,849,139
TOTAL COSTS					\$10,767,334	\$11,075,925	\$11,312,515

Table 6 – Gap Segment Cost Estimates

¹ Inflation factors based on FDOT Work Program Highway Construction Cost Inflation Factors cited in the Transportation Costs Report dated October 27, 2014. Accessed via: http://www.dot.state.fl.us/planning/policy/costs/inflation.pdf

² Inflation Factor = 2.7%, PDC Multiplier = 1.027

³ Inflation Factor = 2.5%, PDC Multiplier = 1.053

⁴ Inflation Factor = 2.5%, PDC Multiplier = 1.079

5.2 Area of Opportunity

During the RTCA study, one area was identified as an area of opportunity for future assessment and near-term improvements. Major improvements in the area are currently being discussed by the Downtown / Ballough Road Redevelopment Board. As such, an interim strategy was discussed during the stakeholder outreach process that is recommended by the RTCA study for future evaluation.

5.2.1 Ballough Road/Daytona Beach

A trail currently exists along Ballough Road which abruptly ends at the "Root Canal" bridge. South of the bridge along Ballough Road, the existing sidewalk on the east side of the road has several obstacles including utility poles constructed in the middle of the facility.

The "Root Canal" bridge, located between Root Street and Lexington Drive, is constructed with a width that could accommodate four (4) lanes of traffic but only currently serves two (2). This bridge is planned for replacement and a full-width trail facility is recommended as part of the bridge re-design. A grant has been applied for by the Downtown / Ballough Road Redevelopment Board to apply toward the planning and engineering for the design of several improvements to the roadway facility which has been matched by the Florida Inland Navigation District.

Making the trail connections south to Anita Avenue and the Main Street Bridge requires more study. A full width trail (or barrier separated cycle track) could be constructed along this stretch; however, right-of-way limitations would result in the loss of on-street parking. According to Commissioner White, many cyclists currently utilize Anita Avenue and Rio Vista Avenue in lieu of Ballough Street. The potential loss of parking, however, creates concern that there may not be community support for a regional trail project along this segment of the corridor. Further,



Ballough Road to the South from the Root Canal



Unprotected Trail Crossing Near Main Street Bridge



On-Street Parking Along Eastern Side of Ballough

Fairview Avenue leading up to the Main Street Bridge is not protected, thus making this crossing a safety concern.

In the interim, there appears to be ample pavement width in the vicinity of the Root Canal Bridge to restripe to install a bike lane (or wider facility) along this segment for a limited stretch without impacting on-street parking.

Further analysis and policy direction is needed from the City of Daytona Beach regarding the balance between the preservation of the on-street parking along Ballough Street and the installation of trail improvements.

6.0 Moving Forward

The Regional Trail Corridor Assessment (RTCA) Study provides the R2CTPO a foundation for completing the Regional Trails Network and advances the Florida Office of Greenways and Trails (OGT) System Plan within the TPO planning area. By assessing past successes and identifying regional trail implementation opportunities and requirements, the R2CTPO is positioned to create a regional trail system that will meet the mobility and recreational needs of current and future generations. The RTCA Study assesses 195.0 miles of trails. Through the study, 74.8 miles (38%) of bicycle and pedestrian facilities were identified within the existing regional trail system. The analysis revealed, however, that only 24.18 miles (12.4%) of these trails meet the preferred width for regional trails of 12 feet or wider. The RTCA Study also identified 27.9 miles (14.3%) of trail gaps.

To ensure that the R2CTPO has the necessary information to close these trail gaps, concept designs and cost estimates were developed for 20.7 miles of those segments. To highlight the successes within the RTCA study area, the study also contains 18.6 miles (10%) of trails funded for construction and an additional 40.3 miles (21%) of new trails funded for either study or design.

The extensive GIS database developed and submitted to the R2CTPO as a complementary deliverable of the RTCA Study is an added benefit of this overall study because it can be easily and continuously referred to and updated. This tool will be a useful resource as the trail network evolves and progresses toward completion and updates are incorporated identifying the elimination of gap segments.

This study also provides the opportunity to continue to educate stakeholders about the general standards for regional trails within the proposed Regional Trail Network. Continued education and outreach will help to foster community support for the implementation of the regional trail network.

One of the best indicators of the success of this study is that the analysis has resulted in recommendations which have been initiated and will be included in future planning efforts as seen in the latest round of trail project applications received by several member jurisdictions of the R2CTPO. With the information and analysis provided by the RTCA, the aspiration is that the Regional Trail System will continue to grow, providing greater mobility and connectivity for current and future generations.

APPENDICES

Appendix A – Data Inventory

Appendix B – Trail Inventory Map Book

Appendix C – Stakeholder Coordination

- Stakeholder List
- Stakeholder Meeting Summaries
- Small Group Workshop Summaries
- Field Review Meeting Notes

Appendix D – Engineers Cost Estimates

Appendix A. Data Inventory

Data Elements

Description	Shapefile Filename			
Address Sites	address			
Advertising	advertising			
Aerials				
Airports (Also See Runways Below)	airports			
Artificial Reef Locations	artificial reeflocations			
Beach Access Points	beachaccess			
Blueways				
Boat Ramps	BoatRamps			
Brownfield Locations	Brownfields_areas			
Cemeteries				
Churches	churches			
Cities (aka Mun400)	cities			
Communities	communities			
COMMUNITY REDEVELOPMENT AREA LOCATIONS	cra			
Comprehensive Planning Regions	cpr			
Congressional District Boundaries 2010	congress			
Conservation Lands				
Contaminated Sites				
Council District Boundaries	council			
County Boundary (aka vcbnd or vcbnd400)	vcbnd			
Crash Data				
Day Care	daycare			
Debary Future Land Use (No longer available)				
Debary Zoning (No longer available)				
Demographic/Environmental Justice				
DEP RangeMonuments	RangeMonuments			
DEP StrategicBeachMgtPlanRegions	StrategicBeachMgtPlanRegions			
Easements				
ECO (AKA MAP A)	есо			
Election City Commission Districts	comm			
Election Polling Places	polls			
Election Precinct Boundaries	precincts			
Election Precinct Split Boundaries	PrecinctSplits			
Emergency Evacuation Routes	evacroutes			
Emergency Operations Centers FOC	EOC FOC			

Emergency Supply Point of Distribution Locations	pods
Employment	
Enterprise Zones	enterprisezones
Exempt Unrecorded Subdivisions	exempt
Facilities	facility
FCC Towers	fcctowers
FEMA LOMC (Letter of Map Change)	LOMC
Fire Hydrants	hydrants
Fire Response Zones (fzones)	fzones
Fire Stations (See Facilities Above)	
Flood Insurance Rate Maps (DFIRM) 2014	firmvc2014
Floodplains	
Food Pantries	foodpantries
Foreign Trade Zones	ftz
Fuel Storage Tanks	tanks
Golf Courses	golf
Highway Exits (Interstate Exits)	HighwayExits
Highway Mile Markers (Interstate Mile Markers)	MileMarkers
Historic and Cultural Resources	
Home Owner Associations	HomeOwnerAssoc
House Districts 2010	house
Hub Zones, Federal Designated	hubzones
Hurricane Storm Surge Lines	StormSurge
Hydrology (AKA Hydrology_2009)	hydrology
Impact Fee Zones	impzone
Land Use 2000 - SJRWMD	landuse2000
Latitude Longitude Reference Grid	latlong
Latitude Longitude Reference Grid (Points)	latlongpoints
Latitude Longitude Grid Clipped by County Boundary	vclatlong
Latitude Longitude Grid Clipped by County Boundary (Points)	vclatlongpoints
Library Locations (See Facilities Above)	
Lodging	lodging
Marina Locations	marinas
Mobile Home Parks	mhparks
Mosquito District Boundary	mosquitodistrict
NGS Benchmarks (Horizontal and Vertical Geodetic Control Data for the Unites States)	NGS_bmarks
Natural Resource Management Areas	
Parcel Basemap Lots	basemap
Parcel Basemap Lot Lines	basemap_line
Park and Recreation Areas	
Plat Index	PlatIndex

Public AttractionsplsPublic Land SurveyplsRights of WayRoad Maintenance Barn LocationsBarnLocationsRoad Maintenance Barn Service AreaBarnServiceAreaRoadwaysRunways (Line)runway_lineRunways (Poly)runway_polySchool Board BoundariesschoolboardSchool LocationsSenate Districts 2010senateSeptic Tanks (Florida Dept of Health)septictanksShelters (Emergency Evacuation)sheltersShelters (American Red Cross)Shelters_ARCSoilsSoilsSoild Waste Collection ZonescollectionStorm Surge ModelstormsurgeTaxing Districts (County)TaxDistrictsThoroughFareThoroughFareTowers (Cell) (See FCC Towers above)Traffic SignalssignalsTrails and Trailheads (Existing, Planned, Programmed)signalsTrains StopsUtility Power Service AreasUtiliserviceareaVegetationvegetationWatersheds	Population	
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	Watersheds	watersheds
WeatherStations weatherstations	WeatherStations	weatherstations
Wetlands	Wetlands	
Wildlife Management Areas	Wildlife Management Areas	
Wind Speed Line windspeed_line	Wind Speed Line	windspeed_line
Wind Speed Poly windspeed_poly	Wind Speed Poly	windspeed_poly
Zip Code Boundaries zipcodes	Zip Code Boundaries	zipcodes

Source: Volusia County GIS

Plans, Studies and Additional Information	Date
US 17-92 TOD Bicycle Pedestrian Trail Feasibility Study	September, 2014
DeLand Greenway Trails Map	March, 2013
New Smyrna Beach, Multi-use Trail Phase 2 Feasibility Study	February, 2013
Orange City Proposed Parks and Trail Master Plan	October, 2013
SR 40 Granada Boulevard Proposed Alternative Bike	
Facilities	April, 2010
Ormond Beach Multimodal Strategy	December, 2010
Tomoka State Park Sidewalk Concept Plan	April, 2014
Palm Coast Bike-Ped Facilities	September, 2014
Port Orange Riverwalk Park Conceptual Master Plan	February, 2014
Bicycle and Pedestrian Feasibility Study - Reed Canal Road	April, 2012
Flagler County Land Use	2010
Space Coast Loop Trail Summary and Map	January, 2013
Space Coast Loop Trail North Connector Summary and Map	October, 2012
Space Coast Future Land Use	Undated
DeBary SunRail Station Area Bicycle and Pedestrian	April 2014
Connectivity Study	April, 2014
R2CTPO Bicycling Route Map (East and West)	July, 2014
R2CTPO 2014/2015 Priority Projects	
US 1 Corridor Improvement Program Phase II	April, 2014
Florida Greenway and Trails System Plan 2013 - 2017	
Central Florida MPO Alliance Regional Trail Network	
Scenic Highways: Halifax Heritage Byway	
Volusia County Master Trails Plan	
Volusia County Comprehensive Plan	
Ormond Scenic Loop and Trail Corridor Management Plan	May, 2007
Titusville to Edgewater Bike Loop PD&E Study	September, 2014
Coast to Coast Connector	
East Central Rail Trail	
Port Orange Pathway Trail Map/East Coast Greenway	
Florida Department of Transportation Complete Streets	
Policy	September, 2014
Regional Trail Studies and All Related Informa	ation
Coast to Coast Connector	
East Central Regional Rail Trail	
East Coast Greenway	
Heart of Florida Loop	
River to Sea Loop	
Spring to Spring Tail	
SR 40 Trail	

Additional Relevant Information

Applications		
Herbert Street Bike-Ped Improvements		
John Anderson Drive Sidewalks		
Port Orange Clyde Morris Boulevard Sidewalks		
Herbert Street Sidewalks		
Reed Canal Road Shared Use Path		
SR 14 - Doris Leeper Preserve Trail		
South Daytona Golfview Boulevard Bike Path		
Volusia County - Hand Avenue		
Providence Boulevard Multi-Purpose Trail		

Relevant Local Government Resolutions				
City of Daytona Beach No. 04-32	Supporting the designation of the East Coast Greenway			
City of Daytona Beach No. 13-15	Supporting the East Coast Greenway and Designated Trail Connections			
City of Daytona Beach No. 13-67	Supporting the Halifax River Trail			
City of Daytona Beach No. 13-100	Endorsing the designation of the Halifax River Trail as part of the East Coast Greenway			
City of Edgewater No. 2005-R-03	Supporting the Designation of the East Coast Greenway			
Volusia Transportation Planning Organization No. 2014-06	Supporting the Designation of the Halifax Heritage Byway as a Florida Scenic Highway			
City of Holly Hill No. 2012 -R-30	Naming the Patricia Northey Holly Hill Greenway Trail			
City of New Smyrna Beach No. 07-14	Supporting a designated trail connecting the City of New Smyrna Beach to trails in the City of Edgewater.			
City of New Smyrna Beach No. 31-13	Supporting the East Coast Greenway and Designated Trail Connections			
City of South Daytona No. 13-15	Supporting the East Coast Greenway and Designated Trail Connections			

Appendix B. Trail Inventory Map Book

Appendix C. Stakeholder Coordination

Stakeholder List

ORGANIZATION	CONTACT NAME	EMAIL ADDRESS
Recreational Trails		
Program Grants	Robin Birdsong	robin.birdsong@dep.state.fl.us
Office of Greenways and	Brian Ruscher,	huing guadhan Qalan stata fluus
Trails	Regional Coordinator	brian.ruscher@dep.state.fl.us
FDOT District 5	Deborah Tyrone	deborah.tyrone@dot.state.fl.us
FDOT District 5	Catalina Cachon	Catalina.cachon@dot.state.fl.us
FDOT District 2	Jordan Greene	jordan.green@dot.state.fl.us
FDOT District 2	Barney Bennett	Barney.bennett@dot.state.fl.us
FDOT	Jim Wood	Jim.m.wood@dot.state.fl.us
St. John's WMD	Paul Haydt or Karen Davis	kdavis@sjrwmd.com
ECFRPC	Tara McCue	tara@ecfrpc.org
NCFRPC	Brian D. Teeple	<u>bteeple@nefrpc.org</u>
Rails to Trails		
Conservancy	Ken Bryan	ken@railstotrails.org
Volusia County	Tim Baylie	tbaylie@volusia.org
Volusia County	Nancy Maddox Cultural, Historical and ECHO PM	nmaddox@volusia.org
Volusia County GIS	Nancy Church	nchurch@volusia.org
Volusia County	Gerald Brinton	gbrinton@volusia.org
Flagler County	Tim Telfer, Land Manager	ttelfer@flaglercounty.org
Flagler County	Faith Alkhatib	falkhatib@flaglercounty.org
Beverly Beach	Mayor Jim Ardell	bbofficemanager@cfl.rr.com obeverlybeacht@cfl.rr.com Clerk)
Bunnell	Fernand (Tib) Tiblier	ftiblier@bunnellcity.us
Daytona Beach	Rick Rice	ricer@codb.us
Daytona Beach Shores	Stewart Cruz	scruz@cityofdbs.org

ORGANIZATION	CONTACT NAME	EMAIL ADDRESS		
DeBary	Matt Boerger	mboerger@debary.org		
DeLand	Mike Holmes	holmesm@deland.org		
Deltona	Scott McGrath	SMcgrath@deltonafl.gov		
Edgewater	Darren Lear	dlear@cityofedgewater.org		
Flagler Beach	Larry Torino	Left message – email not found		
Holly Hill	Tom Harowski	tharowski@hollyhillfl.org		
Lake Helen	Jason Yarborough	Bwitte@lakehelen.com		
New Smyrna Beach	Gail Henrikson	ghenrikson@cityofnsb.com		
Oak Hill	Kohn Evans	evansk@oakhillfl.com		
Orange City	Alison Stettner	astettner@ourorangecity.com		
Ormond Beach	Ric Goss	goss@ormondbeach.org		
Palm Coast	Jose Papa	jpapa@palmcoastgov.com		
Pierson	Jim Smith	flajimster@gmail.com		
Ponce Inlet	Clay Ervin	cervin@lassitertransportation.com		
Port Orange	Tim Burman	tburman@port-orange.org		
Port Orange	Kent Donahue	kdonahue@port-orange.org		
South Daytona	Patty Rippey	prippey@southdaytona.org		
Lake-Sumter MPO	Mike Woods	mwoods@lakesumtermpo.com		
MetroPlan	Mighk Wilson	mwilson@metroplanorlando.com		
Space Coast TPO	Leigh Holt (out until 9-16)	leigh.holt@brevardcounty.us		
Space Coast TPO	Kim Smith	Kim.smith@brevardcounty.us		
Seminole County	David Martin	dmartin02@seminolecountyfl.gov		
Brevard County	Leigh Holt	Leigh.holt@brevardcounty.us		
Lake County	Gallus Quigley Jr.	gquigley@lakecountyfl.gov		
Sumter County	Will work through Mike Woods @ the MPO (Sumter should not be on list)			
St. Johns County	Will Smith	wsmith@sjcfl.us		
Putnam County	Don Jacobovitz	don.jacobovitz@putnam-fl.com		
Putnam County	Kraig McLane	bkmclane@yahoo.com		

ORGANIZATION	CONTACT NAME	EMAIL ADDRESS
East Coast Greenway	Paul Haydt	phaydt@sjrwmd.com
East Coast Greenway	Herb Hiller	herbhiller12@gmail.com
FGTF	Dale Allen	wm.dale.allen@gmail.com
FBA	Ted Wendler	tmwmsw@rocketmail.com
St. Johns River Alliance	Andrea Conover	sjralliance@gmail.com
Votran	Heather Blanck	Hblanck@volusia.org
Volusia County Schools	Greg Akin	gpakin@volusia.k12.fl.us
Volusia County Schools	Saralee Morrissey	smorriss@volusia.k12.fl.us
Flagler County Schools	Chuck Coates	coatesc@flaglerschools.com
Flagler County Schools	Kim Smith	smithki@flaglerschools.com
Volusia County Council	Pat Northey	pnorthey@volusia.org
Volusia County Schools	Jessie Clark	jclark@volusia.k12.fl.us
Putnam County Public Works	Angelo Speno	angelo.speno@putnam-fl.com
Zev Cohen & Associates	Daniel Young	dyoung@zevcohen.com
R2CTPO – CAC	Gilles Blais	
Volusia County	Jim White	jwhite@volusia.org
Lassiter Transportation Group	Matthew West	mwest@lassitertransportation.com
Lassiter Transportation Group; R2CTPO BPAC; Bike Florida Board	Colleen Nicoulin	cnicoulin@lassitertransportation.com
Orange City	Jim Kerr	jkerr@ourorangecity.com
Planning Solutions/Daytona Beach	Beth Lemke	blemke@planningsolutionscorp.com

Stakeholder Meeting Summaries: Meeting 1, September 29, 2014

- Twenty-one attendees signed in at the meeting. There was representation from throughout the TPO planning area and beyond, including Volusia Councilwoman, Patricia Northey, Office of Greenways and Trails Regional Coordinator, Brian Ruscher, and East Coast Greenway Alliance Chair, Herb Hiller, Angelo Speno from Putnam County and Mike Woods from the Florida Greenways and Trails Foundation.
- R2CTPO staff in attendance included Executive Director, Lois Bollenback, Jean Parlow, and Stephan Harris.
- Project boards and roll plots were available at the meeting. The graphics denoted all data collected for each trail segment in the project study area to date (which is comprised of the entire R2CTPO Planning Area).
- The workshop was officially kicked off by R2CTPO Project Manager, Jean Parlow.
- Following the introduction from Ms. Parlow, a 15-minute presentation was given by the Consultant Team PM, Lara Bouck. The presentation included:
 - An overview of the project, including project goals and schedule;
 - A review of data collection efforts to-date; and
 - A review of the goals and format for upcoming small group meetings.
- After the presentation, attendees reviewed the project boards and roll plots and shared any corrections or additional information they had regarding trail status, limits, etc. with members of the study team verbally, by making notes on the roll plots, or by leaving hard copy materials.

Stakeholder Meeting No. 1: One-on-One Conversations

A. Jim White

- 1. FDOT and Volusia County have recently signed two agreements: FDOT to pay for construction of with the County accepting responsibility for maintenance after construction. The agreements are for the following two segments:
 - a. Leon Springs to 40
 - i. FDOT acquiring ROW now.
 - ii. There is a design in place, but the design is currently being revised.
 - iii. Project is 6 years out.
 - iv. Project starts near 17 (about 100 feet away) to SR 40.
 - b. Widening of 40 (parallels 40)
 - i. Detroit Terrace to 1792 in Orange City
 - ii. Not funded for CST, but funded for design

Note: Jim will email Steve presentation/information on proposed alignments.

- 2. 40 to Putnam
 - i. Not funded or designed
 - ii. Will likely need to be all on road
- 3. Lake Beresford North
 - a. Three to four miles in length

- b. Not funded for any phase
- c. All private lands, so likely will need to be all on road

B. Mike Woods

Mike stated that it would be great if we proposed a "minimum standard width" for regional trails of 12-14 feet (depending upon urban versus rural).

C. Volusia County Councilwoman Pat Northey

- 1. She complimented the team for the quality of the maps.
- 2. She has concerns about the trail between Edgewater to New Smyrna:
 - a. Will be part of Coast to Coast.
 - b. They will need this section completed for marketing purposes (to say that Volusia is part of the statewide trail). Titusville to St. Pete section has their section to market.
 - c. She wants to make sure that Edgewater get its voice heard and gets a trail connection that has a sufficient width (not just a small sidewalk).

D. Spring to Spring (Detroit to 72)

- a. She stated that they just had "boots on the ground" and walked trail.
- b. An alignment has now been set for this segment.

Stakeholder Meeting Summaries: Meeting 2, December 17, 2014

Segment-Specific Items Discussed During Presentation

Flagler County

- Herb Hiller asked about the gap in Flagler County area.
- Stephan Harris mentioned that he had received the spreadsheet that Herb emailed the previous day, but had not yet reviewed.

<u>Daytona Beach</u>

- "Sharrows" were discussed for use as possible East Coast Greenway (ECG) alternate routes in Daytona Beach. Stephan mentioned that the purple lines are possible share-the-road facilities where there is not enough room for a separate trail. In these areas, bikes will share neighborhood roads with cars that travel at low speeds.
- Herb Hiller inquired about the gap north of the "root" canal. He stated that the trail width narrows down just before you get to the bridge and remains narrow until south to the Main Street Bridge. Herb wanted to know if the sidewalk in this area could be widened.
- Jim White described the trail alignment near the Courthouse in Daytona Beach and said that there was a 10' wide sidewalk along City Island connecting the boathouse directly to Orange Avenue. This would alleviate the need to go around the north side of the boathouse where there are more limiting space constraints. The study team will review and modify the proposed connector trail proposed by Daytona Beach accordingly.
- Steve Cote discussed the challenge of the trail near the historic firehouse and noted upcoming renovation.

- There is an 8' sidewalk behind the marina parking that could be widened and signed.
- S. Beach Street in this area between Marina Point Drive and Bellevue Avenue is wide and could potentially be reduced.
- The intersection north of 400 will be planned soon.

South Daytona and Port Orange (Steve)

- Discussed the alignment along Ridge Road, Carmen Drive and the north side of Reed Canal.
- The US 1 Study recommends bike lanes and a wide sidewalk for this segment.

Edgewater

- Discussed alignment that crosses at 10th Street and goes along Myrtle as an 8' sidewalk to Canal.
- Jim Smith stated that there is a large gap between Port Orange and New Smyrna Beach.
- Jim Smith stated also that there was a lot of right-of-way along US 1 from New Smyrna Beach to Port Orange to Spruce Creek Park.
- Paul Haydt discussed the GAP in Port Orange.
- Paul Haydt thought it might be easier to construct the segment from Port Orange to New Smyrna Beach.
- Paul Haydt asked about project prioritization and Jean Parlow confirmed that project prioritization was not part of the project scope.

Glenwood Area

- There was discussion about the Glenwood area and the planned sidewalks and bike lanes planned to be constructed in 2015. There are no other options at this time based-upon community input.
- Tim Baylie talked about the construction schedule for the Spring-to-Spring trail.
 - French to Detroit starts construction in 2015; D-B project in DES now.
 - So early 2016, this will all be connected Spring to Spring section two big sections.
 - DeLeon Springs North, trail will be paralleling all the way to 40; N of 40 to Putnam no funding or alignment now.
- Jon Cheney stated that the Astor Bridge will be replaced in 2016. (*This was checked by the study team after the meeting and was found to be incorrect*).

DeLeon Springs

• Volusia County to inquire with FDOT about extending the US 17 project limits to Baxter to eliminate existing gap.

<u>SR 40</u>

• PD&E is for a 12' trail.

Question/Answer and General Discussion Items

- There was a request for the KMZ files from the study team.
- Tim Baylie talked about the trails APP that the County is developing and asked for the updated GIS generated from this project. It was noted that Nancy Church, Volusia County GIS, has been involved with this project.
- Stephan Harris stated that the R2CTPO will prioritize projects using a committee process. There is an existing Regional Trail Priority List that will be refined with the results of this study. This will feed into the Central Florida MPO Alliance Priority List and also the Office of Greenways and Trails 2015 update to the Priority Trails Map.
- There was a question about the criteria that would be used to establish ranking. Stephan Harris stated that the scoring criteria would likely be similar to the criteria for existing applications listed on the R2CTPO website. FDOT has shortened the window and will need this prioritized list by June.
- Herb Hiller stated that the ECG is over 30% complete and that the tourism industry is starting to pay more attention to trails.
- Herb also stated that the Flagler Parking Committee was stopped and restarted and that they have asked for an additional six months. The intent of the parking study is not totally clear, some think it may be get funding. Parking is an issue going through downtown Flagler Beach. There are sidewalks, but difficult to fit in a trail on A1A.
- A meeting attendee requested that we need to make sure that the bike lanes connect to the trails.
- Could possibly use funding from Amendment #1.
- Stephan Harris stated that the call for projects in February will be open for 10-12 weeks.
- Roy Walters requested that 12 feet be used as the minimum width for regional trails and not 10 feet.
- Using Votran to help fill gaps was also recommended.

Supplemental Teleconference/Web Meeting with City of Palm Coast Regional Trail Corridor Assessment (RTCA)

December 31, 2014, 11:00 am

- Participants: Stephan Harris, R2CTPO Jose Papa. City of Palm Coast Steve Cote, RS&H Ginger Hoke, Hoke Design
- Steve started by reviewing the presentation given on December 17th at Stakeholder Meeting #2 and using the most recent KMZ file as a reference.

- Steve thanked Jose for sending his trail information and stated that the information he sent for the three trails (shown as "purple" lines on the KMZ file) were coded in as connectors to the Regional Trail System. These trails run along (from west to east):
 - Old Kings Highway
 - o US 1
 - Sawgrass Road/Old N. Dixie Hwy (CR 13) this trail is west of the R2CTPO boundary.
- Jose stated that the City of Palm Coast wants to provide opportunities for new trails where feasible.
- We discussed the minimum threshold for a regional trail. Stephan stated that the preference is for 12 feet, but 10 feet is acceptable.
- We discussed the challenges with constructing a 12 foot trail along A1A and the City of Flagler Beach; however, any change in designation of the East Coast Greenway from its current alignment along A1A to an alternate alignment (such as one of the connector proposed by Palm Coast) would need to be made by others including elected officials from the various jurisdictions within Flagler County and the East Coast Greenway leadership. The team stated that Lois would need to be involved in any discussions regarding shifting alignments of existing trails, such as the East Coast Greenway.
- Jose stated that Palm Coast has not discussed trail alternatives in depth with Flagler County, only at a very conceptual/high level.
- Stephan asked about any east-west connections. Jose stated that the lines he sent to the study team were just a few potential alternate north-south routes and not every existing and planned trail within Palm Coast. A few additional facilities were discussed including:
 - City easement through approved DRI
 - Existing 8- foot facility north of Highway 100
- Old Kings Highway is planned to be widened with the construction of 8-foot facilities on each side. Team discussed the possibility of changing the design so that a 12-foot facility could be constructed with a smaller sidewalk (5-6 feet) on the other side. Jose was going to look into this option.
- Stephan asked about Seminole Hills Trail, which is on the R2CTPO's priority list. Jose stated it remains a priority, but will serve as a connector to existing local trails not regional trails.
- Jose was very appreciative of the opportunity to participate on the call and stated that he is happy with the direction of the study.

Small Group Workshop Summary

Summary of October 29-30, 2014 Small Group Meetings Regional Trail Corridor Assessment (RTCA)

Attendees:

Meeting No. 1:

- 1. Alison Stettner, Orange City
- 2. Nancy Church, Volusia County GIS
- 3. Ginger Hoke, Hoke Design
- 4. Lara Bouck, RS&H
- 5. Amy Blaida, RS&H
- 6. Steve Coté, RS&H
- 7. Elizabeth Alicia Lendian, R2CTPO-CAC
- 8. Stephan Harris, R2CTPO
- 9. Jean Parlow, R2CTPO
- 10. Deborah Tyrone, FDOT

Meeting No. 2:

- 1. Rebecca Hammock, City of DeBary
- 2. Nancy Maddox, Volusia County Parks, Recreation, and Culture
- 3. Michael Woods, Lake Sumter MPO- Florida Black Bets Scenic Byway
- 4. Jean Parlow, R2CTPO
- 5. David Martin, Seminole County
- 6. Ginger Hoke, Hoke Design
- 7. Steve Coté, RS&H
- 8. Amy Blaida, RS&H
- 9. Lara Bouck, RS&H
- 10. Jim White, Volusia County
- 11. Nancy Church, Volusia County GIS

Meeting No. 3:

- 1. Kay McNeely, City of Flagler Beach
- 2. Ric Goss, City of Ormond Beach
- 3. Gail Henrikson, City of New Smyrna Beach
- 4. Heather Blanck, Votran
- 5. Colleen Nicoulin, Lassiter Transportation Group
- 6. Rick Rice, City of Daytona Beach
- 7. Steve Coté, RS&H
- 8. Faith Alkhatib, Flagler County

- 9. Michelle Updike, City of New Smyrna Beach
- 10. Nancy Church, Volusia County GIS
- 11. Clay Ervin, Ponce Inlet (Lassiter Transportation Group)
- 12. Nancy Maddox, County of Volusia
- 13. Jose Papa, Palm Coast
- 14. Beth Lemke, City of Daytona Beach
- 15. Kelly White, Daytona Beach
- 16. Lara Bouck, RS&H
- 17. Ginger Hoke, Hoke Design

Meeting No. 4:

- 1. Tracey Barlow, City of Edgewater
- 2. Nicole Jeffers, RS&H
- 3. Amy Blaida, RS&H
- 4. Nancy Church, Volusia County GIS
- 5. Steve Coté, RS&H
- 6. PJ Smith, ECFRPC
- 7. Ginger Hoke, Hoke Design
- 8. Matthew West, Lassiter Transportation Group
- 9. Jim White, Volusia County
- 10. Lara Bouck, RS&H

Breakout Area 1

1A and 1B

Flagler Beach is doing a parking study looking at the potential for metered parking on the east and west sides of A1A. Flagler County gave maintenance responsibilities back to FDOT. Bike lane maintenance was reported as a problem with sand commonly encroaching on the pedestrian and bicycling facilities. Flagler does have a Community Traffic Safety Team (CTST). Flagler County plans to add a 6' sidewalk along John Anderson Highway/201 from SR 100 to the Flagler/Volusia County Line.

Added connector segments received from Jose Papa in Flagler County, classified as "Connector - Gap" (Purple)

- Graham Swamp Trail/Old Kings Road
- Lehigh Trail extension to Old Brick Road
- US 1

Breakout Area 2

2A

GAP SEGMENT. According to Steve Buck with FDOT District 5, this may possibly be programmed for the future, but not enough traffic to widen. No funding and no plans for segment. Need to redraw on the map to show alignment on the east side from CR3 to 17-92. Mike Woods – hope is for a trail visitor center at the SW corner of 40 and 17. Ginger is checking again with District 5 to verify side of road. Survey alignment(s) in the field.

2B

2B-North

Originally the project was on CR 3 and it was transferred to 17-92. Alignment needs to be shifted to the east of 17-92 all the way to the school. Still need to connect to state park. This is part of the spine route/East Coast Greenway alternative. DOT is going to look at this area in front of school (north of Baxter Street) for widening. Ginger asked FDOT (Catalina Chacon, PM for design job) to extend the trail to the south side of Baxter Street, which may take several months for FDOT to determine.

2B-South

On the north side of Baxter Street, there are 8' wide sidewalks (change to existing).

There were discussions about moving the existing pedestrian crossing that is south of Baxter. Approximately 100+ kids cross 17-92 daily. The school board owns that piece of property where the gas station is (the SE corner); should be fairly easy to get the land. There will be a safety issue with the kids; it is not signalized.

Connector: Proposed to connect to parks via Ponce de Leon Boulevard and Burts Park Road. Potential for a trail head here for park with ball fields (mountain bike riding is here) instead of De Leon Springs as there is more parking at this location.

2C

2C is complete (part of Spring to Spring Trail) from Baxter St. south to Lemon St. (2C) so line color needs to change to green. This section is 8' wide (Existing < 10') and located west of Grande from Baxter to Katrina then crosses to the east of Grand Avenue at Katrina where it runs south to Lemon Street as a 12' wide (Existing > 10') trail. This segment will be split into two segments: **2C-North** and **2C-South** with the status changed to existing < 10' and existing > 10' respectively.

Remove Cortez Avenue and Audubon Avenue lines (red jog) on the northern section. Add as a connection – the bike lanes along Ponce de Leon Boulevard from 17-92/Baxter Avenue northwest to Burts Park Road. The actual Spring to Spring Trail will follow 17-92. CAC member Elizabeth Alicia Lendion stated that she thinks someone is building a small sidewalk at Ponce de Leon just before you get to the park and could be the work of a private land owner.

2D

GAP SEGMENT: CAC member Elizabeth Alicia Lendion does not want to lose the trees; there were initial discussions of possibly running the trail using the existing southbound lanes of Grand Avenue then shifting all traffic (NB and SB) to the existing NB lanes of Grand Avenue. This would require some widening of Grand to the east. Using Google Earth[®], the team counted approximately 22 houses with access points to the west of Grande Avenue in this section.

Jim White (Volusia County) later commented that there are already plans to widen Grand Avenue a couple feet into the median, put in 5' sidewalks and bike lanes (making the lanes 16 feet wide); Jim stated that putting the traffic on one side of Grand Avenue is not feasible. He also thinks that the speed limit is lower than 35 in that area. Jim is going to send the survey to the study team. Steve to follow up with Jim White to obtain survey.

2E

Existing – no change

2F

GAP SEGMENT: Per Jim White, there is talk of Martin Marietta developing a small parcel on 44 just east of the RR tracks. The NE corner of the borrow pit (intersection of Grand Avenue/Rich Fern Road/W. Minnesota Avenue) will be tough as there is not a lot of room since the pit has been significantly dug out. Jim stated that the County has not developed any alternatives in this location, so study team has a clean slate to develop something.

There is a lot of undeveloped area here for which the County could work to preserve trail corridors should the parcels ever develop. Crossing at 44 is problematic due to high traffic volume. Remove "triangle" at S. Beresford Road/Old New York/S. Grand Avenue so trail alignment connects directly.

Phase 2 of SunRail is at the end of Old New York (currently Amtrak). Received information from Mike Holmes and he would like to meet with study team in the field.

DeLand has a different alignment shown that would take the trail south of W. Beresford Avenue on S. Beresford Road connecting to Alexander Drive, then crossing the railroad tracks connecting to segment 4 A (versus using the northern segment of 2G).

2G

Revised alignment to remove line through middle (which is a park entrance road).

Connectors: Trail along the east side of the park and the southern part of the trail adjacent to railroad.

Pending result of field review, part of this alignment may become connector(s).

2H

Remove note regarding the PD&E study (FM# 410676-1), which was the old PD&E for the road widening. A NEW PD&E study for the trail only is being planned (from Marion County, through Lake, to US 17 in

Volusia). Funded in 2018. Mike Woods' (Lake Sumter MPO) mentioned that we could include the other gaps on SR 40 (3S and 3U) into his PD&E.

2I, 2J

Mike Woods stated that there is a proposed trail head visitor center at the southwest corner of SR 40 and 17-92 to look like the Lake George Lighthouse; Mike has conceptual drawings.

Nancy (Volusia County) mentioned trail heads at US 17 & SR 40. Need to get Nancy's info on this.

40 & 11 – Northeast corner – FDOT owns the northeast corner - 40 acres; Mike Woods mentioned a wildflower trail head at Cone Road.

17 to 95 – all retention ponds – there is a conceptual for landscaping these.

2K

Proposed Connector: Discuss with Mike Holmes at the City of DeLand to see what plans exist in this area, if any.

2L

Status changed from "Connector - Gap" (Purple) to "Connector - Existing" (Blue).

DeLand Connectors

Added connector segments received from Ginger, classified according to statuses provided.

Breakout Area 3

3A

John Anderson Highway in Ormond Beach is a local road with limited right-of-way and a tree canopy; therefore, they are not able to add the proposed 8' sidewalks.

3B

The route in Ormond traveling along A1A (parallel to the golf course) should remain as the primary regional trail route.

3W

Ormond has improved North Halifax Drive with the addition of 4' bike lanes and sidewalks (although sidewalks are not on both sides) and Standish Drive (connecting A1A/Ocean Shore Boulevard and North Halifax) does not have bike lanes, but has sidewalks along one side. This route has been changed to a "Connector - Existing" (Blue).

3V

There is an alternate route – bike lanes/sharrows on Tomoka (Washington to Beach Street) Note: City of Ormond Beach maintains the trail from the coast to Airport Road.

3C

The 15'-wide side road/path along Riverview Drive is a marginal access road, which narrows to 8' to Holly Hill (per Ric Goss).

3D and 3E

Generally targeting segments through the City of Holly Hill. "Trail" through Holly Hill is the "Pat Northey Trail". Suggestion from Beth Lemke to follow up with Tom Horawski for any trail plans and generally check ROW widths through the city for opportunities to widen the existing trail/sidewalk. May have no other option other than sharrows. The study team assessed tax parcel data and it appears that there is adequate ROW from Arroyo Parkway south to 11th Street on the west side of Riverside Drive (with a few exceptions). The trail on the west side of Riverside Drive from 11th Street south to 5th Street looks constrained against private parcels adjacent to the west. There is adequate ROW for expansion from 5th Street south just past 2nd Street at the City limit line.

3F

Funded (pending catch basin). Rick Rice (Daytona Beach) noted that Daytona has funding to construct the trail once the City of Holly Hill figures out what they are going to do about the catch basin. Note: Property at the catch basin was recently purchased.

3G

Potential GAP SEGMENTS pending review of alternate routes: Trail is 10' to Root Canal Bridge. Rick Rice has plans for a 12' wide trail, but needs to figure out how to get around courthouse. This segment is also in the segment that Commissioner Kelly White laid out the routing.

Notes from Kelly White:

- Trailhead under SeaBreeze Bridge @ Sickler Park (City has funding to improve bridge).
- East side of Beach Street to Daytona is a stronger option to house the trail. Recommends trying to minimize how much crossover is needed.
- Boatworks property recently sold.
- Marina Vista complex (needs sidewalk on east side, ROW available)
- Beach Street from Orange Avenue to Live Oak currently has a 12' trail.
- Constrained ROW from the Root Canal Bridge to Anita.
- Commissioner White wants to convert the Main Street Bridge to a bike/ped only facility.
- To review/confirm alignment suggested by Commissioner White:

Daytona Beach Alternatives:

3G-ALT1

Potential crossing under the Main Street Bridge if bridge reconstructed.

3G-ALT2

Commissioner White: Anita Avenue/Rio Vista Avenue

3G-ALT3

Commissioner White: Mullally Street connection under 92/International Speedway Bridge/around Courthouse/Orange Avenue to S. Beach Street.

3H

Beach Street, from Shady Place south to Wilder – Rick Rice has plans to widen the existing sidewalk to 12' and move parallel parking closer to the road. Currently on R2CTPO priority list. Proposed, but alignment set?

3H-ALT1

Commissioner White: Beach Street from Orange Ave then behind marina parking lot along water back to Beach St and south to Bellevue to baseball fields, behind tree line to Shady Place then back to Beach Street to original 3H alignment.

31

Funded by the City of Daytona Beach and the R2CTPO. Twelve-foot path on the west side of the street. Being advanced for construction. Change color of line on map to yellow.

3J, 3K, 3L

Added several routes (Sauls Road and Carmen Road/FEC Railroad) as proposed connectors – per discussions with Patty Rippey at the City of South Daytona. According to Kent Donahue at Port Orange, the regional trail from South Daytona will come down A1A and connect with Port Orange at their new Riverwalk Park (located off A1A at Ocean Avenue).

3M

GAP SEGMENT. Within Port Orange limits. Currently being used by bikers in street (sharrows) – narrow road with little traffic. No sidewalks. Road ROW is thought to be prescriptive. Limits for Niver Street/versus Katherine Street were checked and line is accurate due to existing location of sidewalk.

3N

GAP SECTIONS: Within New Smyrna Beach limits; travels along Riverside Drive; 8'-wide paved shoulder; has debris and narrows to 4' in areas; FDOT maintained. Through the City of New Smyrna Beach, there are no riparian rights, so owners must get easements to build anything (i.e. docks) on the east side of Riverside Drive along the intra-coastal.

Will split into three segments, 3N-North, 3N-Mid, 3N-South will gaps noted (primarily over bridges).

Connectors: within New Smyrna Beach:

- N. Causeway has bike path, then sidewalk and wide shoulder over the bridge.
- Cross Volusia Trail, 12' through utility easement. Trailhead @Sugar Mill.

3O and 3P

Discussed the potential to use Magnolia as a parallel alternate route. No bike lanes, but wide roadway. Funded for sidewalk construction in '16-17. Add as an existing connector.

ALT-1

GAP SEGMENTS. City of Edgewater – Tracey Barlow, City Manager. Fraser Howe (with Metric) is working on the bike & ped PD&E for the Titusville and Edgewater sections. Some of the sections are challenging. Out of Titusville, alignment is up US 1 then West Park to East Central Regional Rail Trail (ECRRT). Edgewater City Council is trying to widen Park Avenue to three lanes currently, so we need to stay away from this roadway.

Edgewater Alternatives:

5D-ATL1 – this is primary regional route – review in field.

Per City Manager, from US 1 north to Roberts Road, west on Roberts Road across railroad tracks to Hibiscus Drive, then north on Hibiscus Drive north until 16th Street. Turns and follows 16th Street west until Mango Tree Drive, then onto Lime Tree Drive, then left on 12th Street, then sharp right onto Mango Tree Lane north to Park Avenue, then west on Park Avenue to Dale Avenue connector to Coast to Coast.

5D-ATL2 – this is a connector.

US 1 north to 442, then west on 442 all the way to Cow Creek Road, connecting to the Coast to Coast in this general area.

5D-ALT3 – this alternative has been removed since not favored by City of Edgewater.

FDOT's alignment alternative that goes north US 1 to Park Avenue then west on Park Avenue to Dale Avenue Connector to Coast to Coast. The final FDOT alignment will likely not be the preferred City alignment.

There is NO official alignment yet in Edgewater where the Sea Loop comes up. When study is done (study is almost done), there will be a recommended alternative. FDOT is funding the PD&E study; the FDOT alignment will NOT be called the locally preferred alignment, so there will be 2 alignments – FDOT and the City's. The most likely alignment will be the City's.

Along US 1, there are sidewalks on the west side, which stop at the cemetery. Along the east side of US 1, there is a sidewalk that goes past the cemetery to Jasmine. There is a LAP project to continue the sidewalks -5' on the west side of US 1 to 442; south of 442 on the east side, 8' sidewalks will be constructed. The City tried to get 12' sidewalks from FDOT, but FDOT would not allow it.

The City is getting ready to install sidewalks via Safe Routes to School on Flagler Avenue.

Edgewater's Master Plan is adopted and on the City's website. It is identified as a sidewalk, not a trail. Study team has reached out to Edgewater's GIS contact to get their information.

3S

GAP SEGMENT. Per Jim White, there is plenty of ROW, but may have swales.

40 & Airport – As part of a development, signal to be installed; therefore, crossing will be at that location. From Cone down, there might be plenty of ROW; is there is existing ROW, what do you do if you have a swale. Nancy said that trail needs to be on the south side as there are state lands to the south (Tiger Bay/Division of Forestry). FDOT may have enough ROW so that we do not have to deal with the lands. (Rema Ridge to the north)

3Q

Six-foot sidewalks. Confirm with Paul Haydt that this is designated currently as the East Coast Greenway. Part of segment changed from "Existing <10'" (Light Green) to "Connector - Existing" (Blue) **3S and 3U**

GAP SEGMENT. Examine tie into Mike Woods' PD&E for Segment 2H.

Breakout Area 4

4A/2G/2F

This is 12' existing; Need to highlight the main trail and still show the other trails as connections. Main trail should be the northern and western lines that then cross the railroad tracks. The other lines (just west of Fatio Road and the bottom triangle should be made connections. Take out the middle line as it is the park entrance road and not a trail.

Examined 4A trail connector going north from Beresford Park Trail diversion; unclear whether connects to park or road. DeLand has a different alignment shown that would take the Segment 2F trail south of W. Beresford Avenue on S. Beresford Road connecting to Alexander Dr. then crossing the railroad tracks connecting to Segment 4A (versus using the northern segment of 2G). Need to survey during field review to determine if it connects to anything. If not, Connector 4A should be removed

4B

Connector - Alison Stettner, Orange City, spoke about a separate project in this area. They are going to build a tunnel under French Road (design-build). Feasibility study has been completed and they are in the design stage; looking at getting funding for trails connectivity bucket (per Frank O'Dea, FDOT V) since they cannot get LAP certified; this has been on the plan for 10-15 years. Another project element includes a new 10' trail from Valentine Park (owned by Orange City) to Spring to Spring Trail that travels to the north of W. French Road, which does have LAP funding. The French Road trail should be in design by 2015, EOQ in 2016, XU funds. Will be added as a connection to the main regional trail. There will also be a new trail bridge constructed over the RR tracks that will be parallel to the existing bridge (which is not safe to use). This is programmed for 15/16 for Design and ROW in the following year (R2CTPO funds); no construction

funding yet. Per Jim White, the alignment shown is good. The feasibility study is on the R2CTPO website; tunnel is on the yellow line of map under French Road. There is a sand mine to the east. This is a corridor for animals in this area.

The remainder of this section is currently undergoing a PD&E all the way down to Detroit Terrace where yellow ends and red begins (through Blue Springs Park) – trail will be 12' wide and is a design-build project. Bridge construction in mid-January 2015; already done mitigation for scrub jays. Going south, went in to ROW to get 25' from pole; and purchased ROW around pond (south of that).

4C-4D (segments combined)

4C

Trail will be 12 feet wide. County talking to Duke about this section. May run to the south of the ponds and down utility easement. Under design.

4D

Change the alignment on the map from 12' on east side of Donald E. Smith Blvd. to the west side. This is problematic as it is in Duke Corridor alignment (Jim is meeting with Duke on Friday, 10/31/14). Per Jim White, this section is not funded. Jim stated that he would like to avoid culverts and would be best to construct along a ridge for drainage purposes.

4E (split into two segments: 4E-North and 4E-South)

4E-North

Highbanks/Don – Jim White says this is County's ROW – from 17-92 to the tracks along Highbanks (Existing 4 - 12') so this section is existing and not a gap. Proposed to remove existing and add 12' trail. Need to confirm funding.

4E-South

GAP SEGMENT: The bottom piece is platted as 2nd Street and is County ROW (change to yellow since County owns ROW); then City of Debary property around the corner with Duke property/FL Power and Light property all having ROW on the section just east of the RR tracks (should remain a gap). See files that Jim White gave us on the DVD, which shows alignment "jogging" around utility poles (check in field). He is in the midst of discussions with Duke. Need to add SunRail Station to the map here. Need to look at TOD overlay in Debary and talk to the City. Should look at alignment to SunRail – the most efficient. Change to red. Review in the field.

4F/4H

Dirksen Road and 17-92; County extended Spring to Spring Trail west on Dirksen to 17-92 and added a crosswalk to connect to sidewalks on west side of 17-92 so gap has been closed; connection exists to cross at Dirksen.

4F

Existing

4G

County's preferred alignment on east side because it has to connect to Seminole side. It is 12' except for bridge; DOT is designing trail to be within the bridge. Design is funded; leave as is. Map change: Shave off top point (behind caretaker's house).

4J

Funded – Construction will be completed by next Fall (2015).

4K

Connector: One of the options shown in the TOD options shows connection from Debary SunRail Station to the Spring to Spring. Add as a connection, but not part of regional trail. Status changed from "Connector - Gap" (Purple) to "Connector - Existing" (Blue).

4L

Connector Gap: Crossing 17-92 – Fort FL Road – red – connection to SunRail. Stephan Harris (R2CTPO) has application in to get a feasibility study to determine what the preferred alternative may be. Red line – across Duke's property? Nothing to connect to; connection to SunRail; should end at connection to SunRail (remove red line that extends from rail station to the west across the RR tracks). Per Jim White - 4L vs. 4E: field work not necessary – just pick best alignment– this segment is not a high priority.

City of Debary: They want to turn retention pond on the east side of 17-92 across from SunRail Station into a master storm water pond and are giving a presentation on November 5th to city council. St. Johns owns the land; they want to swap the land and they want privately owned land in return. They need 20 acres to expand into a master storm water pond; would be a civic focal point; put a trail around the pond; Fort Florida Road is part of this area. There is talk of expanding the surface parking lot for SunRail to the south and she recommends a parking deck instead with mixed-use development with shops, etc. This was studied in the *US Highway 17-92 TOD Bicycle/Pedestrian Trail Feasibility Study*.

4M

- French Avenue Connector getting funding. Status changed from "Connector Gap" (Purple) to "Connector Existing" (Blue)
- Two segments:
 - Trail connector along French Avenue from Spring to Spring Trail to Valentine Park (shown)
 - Sidewalks along French Avenue from Valentine Park to 17-92 (not shown)

Breakout Area 5

5A

Has been constructed.

5B

Officially is fully funded but County has new estimates on cost and it may be unfunded. \$10 MIL put towards this project last year; officially funded by FDOT. Section from Osteen to Guisse Road is currently under CST. Guisse Road to Gobling is funded. County will be closing road at Osteen Civic Center to use for parking and trail head. Bridge over 415 will be completed by December 2014. The southern section extends down into Brevard County where FDOT has taken back control of the trail development.

5C/5D

- Six foot sidewalks.
- Since in PD&E study, no field work is required (not a gap).
- Currently classified as "Alignment Pending" (Orange).

5D & 5E

5D Alternatives presented by City Manager discussed previously.

On the southern sections, remove as GAP Sections since these are both part of PD&E study; this is red as there is no confirmed alignment. Review Metro and STV PD&E studies to confirm correct alignments. The final alignment is pending to be decided by others.

Within Brevard - FDOT starts at US 1 to Park. FDOT took Brevard section of Rail to Trail to Titusville back (Brevard could not do fast enough for FDOT's schedule). Confirm funding status.

5F

Section is funded and will be a design-build (13.5 miles in length). \$1.6M going forward this year. There will be a large bridge over Cow Creek Road being completed by design-build. Bridge over 442 will be completed by Nov and is also design-build. Mapping change: alignment should come into Dale at a right angle (parallel to Park and Massey Roads) then there will be a sidewalk to West Park. RS&H completed PD&E for this segment.

5G

Segment has been constructed.

5H

Mapping change: Remove this short spur and delete segment

Matt West – Farmton

Farmton has a long range 50-year plan. At I-95 and Maytown Road – at some point this needs to be an interchange; possibly between 2030 and 2035; Volusia County has to be fiscally neutral so no local funding from cities or the county; developer will pay for this; trail may go under the interstate; or trail going over the interstate; Sans Lassiter has looked at this; nothing in Maytown can be built until 2025. The Gateway for Farmton (800 acre area) is only thing that can be built before 2025; can't get permits until 2017.

Jim White says there is a design-build for rail trail on 95 this year in this area. **5F** goes under I-95 to Maytown spur to County Line.

At **5B** & **5F**, potential for a trail head here.

Jim White – South of Cowcreek at old Maglev site – planned trail head – RS&H did the PD&E for this – ECRRT.

Need to look at R2CTPO's adopted priority list

- 1. Orange Avenue to Live Oak 12' trail
- 2. Wilder to Shady Place
- 3. 5A along Nova Road this alignment came from the county.

Other potential connections:

- R2CTPO list project priority list between I-95 and Airport Road on 442 connect to trail as it crosses 442; on-road bike lane terminates at Airport & 442 and connect to Cow Creek Road.
- On south side of 442, protected area so great place for a trail cause no driveway cuts, etc. This is a strong priority for Edgewater.
- New Smyrna Beach 70 acres future public works site off of Park Avenue; trail connects to high school and college; and tie into rail trail; trail head across the street from future public works facility.
- Navy Canal Project is on the priority list (to be shown as a Connector segment).

Side notes:

- Office of Greenways and Trails Map to get this funding, needs to be on the OGT map; need to find out timeframe of when to add items to the map
- Different funding requirements for different agencies- FDOT, FHWA, OGT need to know these

Field Review Notes

Trail Gap - Field Review Summaries Regional Trail Corridor Assessment 11-24-14

1. South Daytona/Port Orange (11-20-14 at 1:00 pm)

Meeting attendees:

- Patty Rippey, City of South Daytona Beach
- Kent Donahue, City of Port Orange
- Stephan Harris, RTCTPO
- Steve Cote, RS&H
- Ginger Hoke, Hoke Design

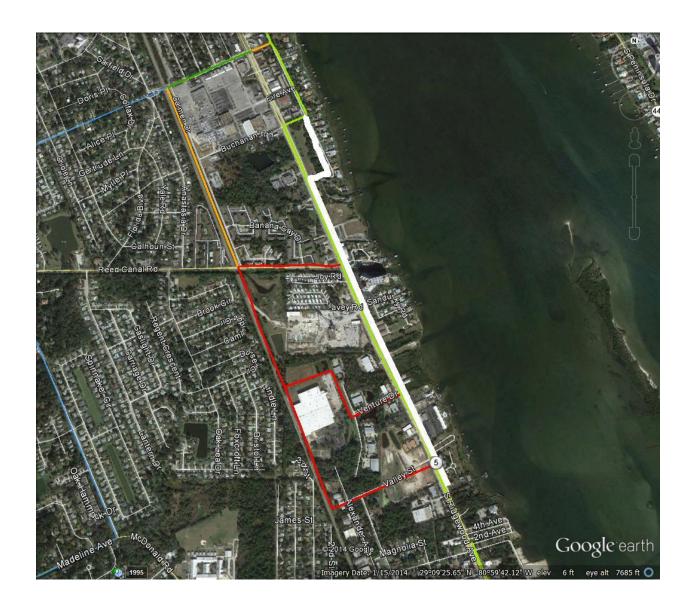
Gap Description: Segment 3L: After receipt of information from the City of South Daytona and City of Port Orange, there appears to be a gap in the proposed ECG alignment connecting these two cities. The City of South Daytona and Paul Haydt (East Coast Greenway Alliance) favor an alignment behind the old mall that would go south parallel to the Florida East Coast (FEC) Railroad tracks and Carmen Drive. The gap lies between the terminus of this alignment and the new Port Orange Riverwalk. US 1/Ridgewood Avenue includes 5-foot sidewalks on both sides and 5-foot striped shoulders on both sides.

Meeting Notes:

<u>South Daytona</u>: Patty discussed the background of several of the proposed alignments. The group discussed pros and cons of each alternative, presented below:

- a. <u>Ridge Road to Sauls Road to McDonald:</u> Trail along Ridge Road exists. Challenge will be along McDonald. Option long and not as feasible as others.
- b. <u>Ridge Road to Carmen/FEC Railroad to Reed Canal Road</u>: Any trail along Carmen/FEC Railroad will be challenging as use of FEC right-of-way would not be likely, and trees planted as buffer between road and railroad track would need to be removed to fit a 10-foot wide trail along west side. Poles for transmission lines along east side of Carmen make this alignment unfeasible. Feasibility study was conducted for trail along Reed Canal Road, but was determined to be unfeasible due to obstacle of railroad not permitting crossing of tracks. Five (5) sidewalks exist along Reed Canal Road and could be used for trail, but would still need to run trail along US 1/Ridgewood Avenue south to connect to Port Orange.

- c. <u>Ridge to Carmen/FEC Railroad to other alternatives (Venture Drive or Valley Street)</u>: These options would require a bridge to cross Reed Canal and boardwalk over wetlands. Patty discussed concerns with "isolation and safety" for such a design. Both options would still require a partial alignment along US 1/Ridgewood Avenue south to connect to Port Orange.
- d. <u>Preferred Alternative: S. Palmetto Drive to west side of Palmetto Circle obtain easement</u> from vacant parcel, then south along US 1/Ridgewood Avenue south to connect to Port <u>Orange</u>. This alignment would be the most direct along the eastern side of the roadway; therefore, likely lowest cost of all other alternatives. Easements may be needed for parcels along roadway to accommodate 10-foot trail.



2. Daytona Beach (11-20-14 at 10:00 am)

Meeting Attendees:

- Rick Rice, City of Daytona Beach
- Kelly White, Commissioner, City of Daytona Beach
- Stephan Harris, RTCTPO
- Steve Cote, RS&H
- Ginger Hoke, Hoke Design

Gap Description: Several alternative alignments (see table below) were presented by City of Daytona Beach Commissioner, Kelly White, at the Small Group Meetings. Paul Haydt was not aware of these alternatives and recommended that the initial South Beach Street alignments be maintained at the designated routes for the EGC.

2a) Anita Avenue/Rio Vista Alternative:

- This is the City of Daytona's preferred option
- Inadequate ROW along Anita Avenue, with adequate ROW along Rio Vista
- City does not have enough right-of-way along Ballough Road with several commercial buildings immediately adjacent to sidewalks; however, bike lanes could be added with road diet and loss of on-street parking.

Recommended Alternative: Anita Avenue/Rio Vista versus Ballough Road

- 2b) County Courthouse/Orange Avenue
 - Due to uncertainties with the new Orange Avenue bridge, Orange Avenue redevelopment and also Veteran's Park, Commissioner White recommends that Beach Street remain the primary "showcase trail" with any future trail extensions behind the courthouse and along Orange Avenue to become a scenic connector.

2c) Halifax Harbor Marina

- Existing 8-foot trail in rear of Marina
- Utilize this alignment
- Needs wayfinding signage

2d) Bellevue Avenue to tree line behind ball fields to Shady Place

- City owns ball field and property to the east.
- Bellevue Avenue is very tight may need a future easement through small commercial property or neighboring apartment complex
- Lighthouse (Rd) is preferred alignment to Shady Place as this alternative would impact onstreet parking in front of retirement home
- If Lighthouse (Rd?) is used, will need easement as this appears to be private property

Summary of Recommendations:

Segment ID	Routes	Termini	Length (miles)	Recommendation
3G-ALT1 3G-ALT2	Anita Ave, Rio Vista	Ballough Rd to Main St. Bridge	0.3	Utilize this route in near term.
3G-ALT3/ 3G-ALT4	Adjacent to County Courthouse & along Orange Ave	Mullally St to S. Beach St	0.9 and 0.3	This becomes a future connector.
3H-ALT1	Halifax Harbor Marina	Backside of Marina parking lot	0.3	Existing 8 foot trail in rear of parking lot.
3H-ALT1	Bellevue Ave to tree line behind ball fields to Shady Pl	S. Beach St to Shady Pl	0.4	Utilize this alignment as City owns right-of-way for most.

3. City of Edgewater (11-20-14 at 3:30 pm)

Meeting Attendees:

- Jack Cordner, City of Edgewater
- Stephan Harris, RTCTPO
- Steve Cote, RS&H
- Ginger Hoke, Hoke Design

Gap Description: Segments 5D-ALT1 and 3R. City's preferred alignment is Mango Tree to West Park Avenue. Stephan Harris spoke to the City of Edgewater on November 17 – the City would like to keep Segments 3Q (Riverside north of Park) and Segments 3R and 5D along Park Avenue. The City of Edgewater prefers to use Park Avenue as a connector for the trail if the roadway is not narrowed between US 1 and the railroad tracks.

<u>Gap Length:</u> 0.75 to 1 square miles (Ginger is looking at a narrowed and more focused area in advance of the field visits).

Recommendations:

- North: Go north from Dale into property to be acquired by City then through Daytona State Campus to 10th, then east.
- South: Riverside to US 1

4. City of DeBary

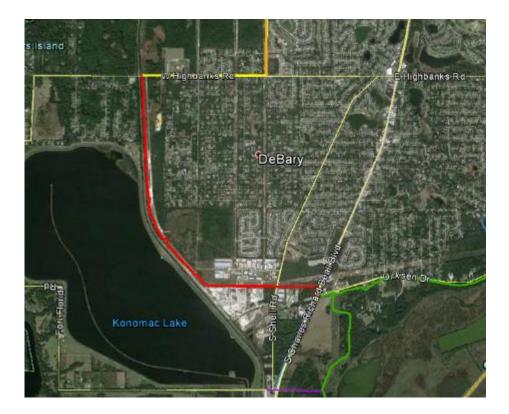
Meeting Attendees:

- John Fletcher, City of DeBary
- Alan Williamson, City of DeBary
- Stephan Harris, RTCTPO
- Steve Cote, RS&H
- Ginger Hoke, Hoke Design

<u>Gap Description</u>: Segment 4E-South. Adjacent to railroad tracks, along power easement next Lake Beresford connecting W. Highbanks Road and 17-92.

Gap Length: 1.2 miles

Recommendation: Utilize initial proposed alternative that is under development by County.



5. Volusia County/near City of DeLand

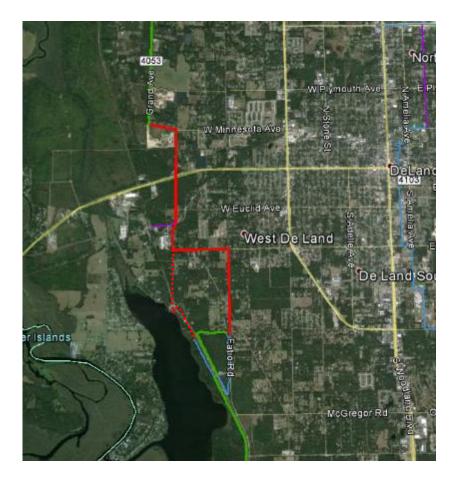
Jurisdiction Contact(s):

- Jim White
- Mike Holmes

<u>Gap Descriptions and Lengths</u>: Segment 2F and alternative that is included in the *DeLand Greenway Alignment & Trails Plan* (March 2013). See table below.

Recommendation: Evaluate two alternatives

Segment ID	Route Location	Termini	Length (miles)	Alignment Source
2F	Grand Ave, S. Grand Ave, S. Beresford Rd, W. Beresford Rd, Fatio Rd connecting to Beresford Park	Grand Ave to Beresford Park	3.57	Volusia County GIS shape files
2F-ALT	Alternative: S. Beresford Rd. to Alexander Dr. connecting to existing trail	W. Beresford Rd to terminus of Alexander Dr.	1.16	DeLand Greenway Alignment & Trails Plan (March 2013)





6. Volusia County/near City of DeLand

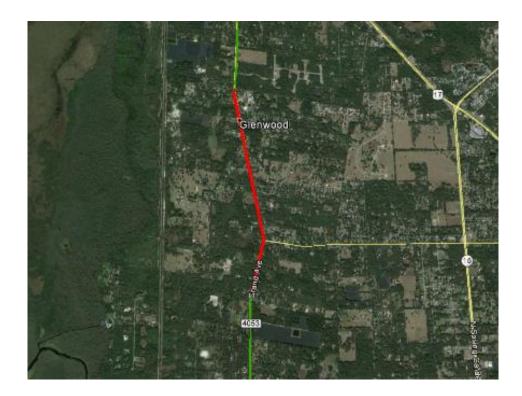
Jurisdiction Contact(s):

- Mike Holmes
- Jim White (request that he brings survey of Grand Ave)

Gap Description: Segment 2-E along Grand Avenue from Lemon Street to King Street. Jim White presented option that he stated has the support of the local community – to slightly reduce median, add bike lanes and sidewalks. Ginger Hoke proposed an alternative alignment that would use the existing southbound road lane as the future trail, and the vehicular traffic would both utilize the existing northbound pavement after widening. Need Jim White to bring survey of roadway to evaluate both options in the field.

Gap Length: 1.7 miles

Recommendation: Utilize County's plan as design is 100% complete and has support of community.



7. Volusia County

Meeting Attendees:

- Steve Cote, RS&H
- Ginger Hoke, Hoke Design

Gap Description: 13.7 miles along 17-92 extending from SR 40 north to Putnam County.

Field Notes:

- Primarily rural with more frequent driveways within City of Pearce; most dense to the west of 17-92
- Railroad runs along western edge of roadway.

Recommended alignment: East and parallel to 17-92.

8. Volusia County/City of Ormond Beach

Meeting Attendees:

- Ric Goss, City of Ormond Beach
- Stephan Harris, RTCTPO
- Steve Cote, RS&H
- Ginger Hoke, Hoke Design

Gap Description: 2.2 mile segment 3S along SR 40 connecting *Cone Road* to *Airport Road*.

Per Mike Woods, Lois needs to write a letter to FDOT to request that this segment be rolled into his ongoing PD&E for Segment 2H.

Projects West of Gap:

- <u>17-92 to SR 11</u>: Currently under design, not funded for construction. FM# 240836-1. 12' paved trail on south side of the roadway (Segment 2I)
- <u>SR 11 to Cone Road</u>: Design is 90% complete. Not currently funded for ROW or construction. 12' trail proposed on the south side of the roadway

Trail Facility East of Gap:

• Airport Road to Tymber Creek Road: SR 40 Multi-Use Trail Project (Phases 1 through 3). 8foot trail north of SR 40.

Alternatives Assessment for Gap:

South of SR 40:

- 10 driveways/roadways
- Potential wetlands issues on western segment

North of SR 40:

- 11 driveways/roadways
- Potential topographic issues on eastern segment

Recommendation: Engineers should evaluate specific alignment impacts for both alternatives and determine best option.

9. Volusia County/City of Ormond Beach

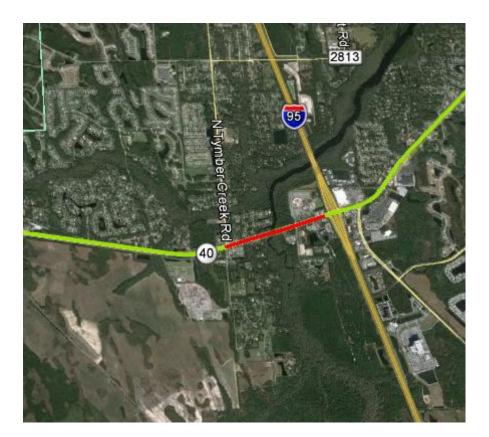
Jurisdiction Contact(s):

- Ric Goss, City of Ormond Beach
- Stephan Harris, RTCTPO
- Steve Cote, RS&H
- Ginger Hoke, Hoke Design

<u>Gap Description</u>: Segment 3U along SR 40 connecting N. Tymber Creek Road to I-95. Need to contact Mike Woods to see if segment can be rolled into his ongoing PD&E for Segment 2H.

Gap Length: 0.8 mile

<u>Recommendation</u> – Obtain and utilize existing PD&E – have requested from Kittleson & Associates, Inc.



ENGINEER'S ESTIMATE CITY OF DAYTONA BEACH TRAIL CONSTRUCTION FROM LIGHTHOUSE RD. TO MARINE POINT DR. ALTERNATIVE 1							
PAY ITEM NO.	ITEM DESCRIPTION	ITEM DESCRIPTION UNIT BASE BASE UNIT . QTY COST			Т	TOTAL COST	
104-10-3	SEDIMENT BARRIER	LF	3125.3	\$	1.50	\$	4,687.95
120-1	REGULAR EXCAVATION	СҮ	4962	\$	5.00	\$	24,810.00
160-4	TYPE B STABILIZATION	SY	4795	\$	4.00	\$	19,180
285-704	OPTIONAL BASE GROUP 4	SY	4332	\$	10.00	\$	43,319.00
334-1-12	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC B) (2")	TN	451	\$	85.00	\$	38,344
430-175-124	PIPE CULVERT, OPT MTL, ROUND, 24" S/CD	LF	72	\$	65.00	\$	4,680
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	EA	4	\$	900.00	\$	3,600
515-1-2	PIPE HANDRAIL-GUIDERAIL, ALUMINUM	LF	489.0	\$	25.00	\$	12,225
522-2	CONCRETE SIDEWALK, 6" THICK	SY	332.8	\$	50.00	\$	16,640
570-1-2	PERFORMANCE TURF, SOD	SY	6536.7	\$	3.00	\$	19,610
700-1-11	SIGN SINGLE POST (LESS THAN 12 SF)	AS	16	\$	260.00	\$	4,160
700-1-50	SINGLE SIGN POST (RELOCATE)	EA	6	\$	110.00	\$	660
710-11-111	PAINTED PAVEMENT MARKINGS (STANDARD 6" SOLID WHITE)	NM	0.068	\$	925.00	\$	63
711-11-123	12" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	569	\$	3.00	\$	1,707
711-11-125	24" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	303	\$	6.00	\$	1,821
710-11-211	PAINTED PAVEMENT MARKINGS (STANDARD 6" SOLID YELLOW)	NM	0.076	\$	925.00	\$	70
715-4-400	LIGHT POLE COMPLETE (RELOCATE)	EA	5	\$	2,600.00	\$	13,000
					SUB-TOTAL	\$	208,576
101-1	MOBILIZATION	LS	1		10%	\$	20,857.63
102-1	MAINTENANCE OF TRAFFIC	LS	1		5%	\$	10,428.81
110-1-1	CLEARING AND GRUBBING (2.41 ACRES)	LS	1.00		10%	\$	20,857.63
SUB-TOTAL						\$	260,720
N/A	ENGINEERING AND DESIGN	LS	1		30%	\$	78,216.11
N/A	SURVEY	LS	1	\$	8,000.00	\$	8,000
TOTAL						\$	346,936
FDOT Inflation-Adjusted Estimate Factor PDC Multiplier						Estimate	
	Year 1 Inflation-adjusted Estimate (2016)				1.027	\$	356,304
	Year 2 Inflation-adjusted Estimate (2017)		2.5%		1.053	\$	365,324
	Year 3 Inflation-adjusted Estimate (2018)2.5%1.079					\$	374,344

Appendix D. Engineer's Cost Estimates

CITY OF DAYTONA BEACH TRAIL CONSTRUCTION FROM LIGHTHOUSE RD. TO MARINE POINT DR. ALTERNATIVE 2 (REALIGMENT)							
PAY ITEM NO.	ITEM DESCRIPTION	UNIT	BASE QTY	E	BASE UNIT COST	Т	OTAL COST
104-10-3	SEDIMENT BARRIER	LF	3391.6	\$	1.50	\$	5,087.40
120-1	REGULAR EXCAVATION	CY	5434	\$	5.00	\$	27,170.00
160-4	TYPE B STABILIZATION	SY	5209	\$	4.00	\$	20,835
285-704	OPTIONAL BASE GROUP 4	SY	4706	\$	10.00	\$	47,063.00
327-70-13	MILLING EXIST. ASPH PAVT. (1 3/4 " AVG DEPTH)	SY	4109	\$	2.00	\$	8,217.00
334-1-12	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC B) (2")	TN	490	\$	85.00	\$	41,658.50
334-1-23	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C, PG76-22, PMA) (1")	TN	226	\$	95.00	\$	21,470.00
337-7-22	ASPH COCN FC, INC BIT, FC-5, PG76-22, PMA (3/4")	TN	164	\$	130.00	\$	21,372.00
430-175-124	PIPE CULVERT, OPT MTL, ROUND, 24" S/CD	LF	72	\$	65.00	\$	4,680
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	EA		\$	900.00	\$	3,600
515-1-2	PIPE HANDRAIL-GUIDERAIL, ALUMINUM	LF	489.0	\$	25.00	\$	12,225
522-2	CONCRETE SIDEWALK, 6" THICK	SY	450.4	\$	50.00	\$	22,520
570-1-2	PERFORMANCE TURF, SOD	SY	11038.9	\$	3.00	\$	33,117
700-1-11	SIGN SINGLE POST (LESS THAN 12 SF)	AS	16	\$	260.00	\$	4,160
700-1-50	SINGLE SIGN POST (RELOCATE)	EA	6	-	110.00	\$	660
710-11-111	PAINTED PAVEMENT MARKINGS (STANDARD 6" SOLID WHITE)	NM	0.068	\$	925.00	\$	63
711-11-123	12" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	660	\$	3.00	\$	1,980
711-11-125	24" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	492	\$	6.00	\$	2,952
710-11-211	PAINTED PAVEMENT MARKINGS (STANDARD 6" SOLID YELLOW)	NM	0.076	\$	925.00	\$	70
711-14-160	THERMOPLASTIC, PERFORMED, WHITE, MESSAGE	EA	2.000	\$	250.00	\$	500
711-14-170	THERMOPLASTIC, PERFORMED, WHITE, ARROW	EA	2.000	\$	250.00	\$	500
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	NM	0.411	\$	4,500.00	\$	1,849
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	GM	0.071	\$	1,500.00	\$	107
715-4-400	LIGHT POLE COMPLETE (RELOCATE)	EA	5	\$	2,600.00	\$	13,000
					SUB-TOTAL	\$	294,856
101-1	MOBILIZATION	LS	1		10%	\$	29,485.57
102-1	MAINTENANCE OF TRAFFIC	LS	1		5%	\$	14,742.78
110-1-1	CLEARING AND GRUBBING (3.45 ACRES)	LS	1		10%	\$	29,485.57
SUB-TOT							368,570
N/A	ENGINEERING AND DESIGN	LS	1		30%	;	110,570.88
N/A	SURVEY	LS	1	\$	8,000.00	\$	8,000
	•				TOTAL	\$	487,140
	FDOT Inflation-Adjusted Estimate		Factor	PD	C Multiplier	ŀ	Estimate
	Year 1 Inflation-adjusted Estimate (2016)		2.7%		1.027	\$	500,293
	Year 2 Inflation-adjusted Estimate (2017)		2.5%	-	1.053	\$	512,959
	Year 3 Inflation-adjusted Estimate (2018)		2.5%	_	1.079	Ś	525,625

ENGINEER'S ESTIMATE CITIES OF DAYTONA & PORT ORANGE TRAIL CONSTRUCTION ALONG REED CANAL RD. AND CARMEN DR.							
PAY ITEM NO.	ITEM DESCRIPTION	UNIT	BASE QTY		SE UNIT COST	т	OTAL COST
104-10-3	SEDIMENT BARRIER	LF	4189.3	\$	1.50	\$	6,283.95
120-1	REGULAR EXCAVATION	CY	6539	\$	5.00	\$	32,695.00
160-4	TYPE B STABILIZATION	SY	6517	\$	4.00	\$	26,067
285-704	OPTIONAL BASE GROUP 4	SY	5896	\$	10.00	\$	58,960.00
334-1-12	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC B) (2")	TN	615	\$	85.00	\$	52,232.50
522-2	CONCRETE SIDEWALK, 6" THICK	SY	42.7	\$	50.00	\$	2,135
570-1-2	PERFORMANCE TURF, SOD	SY	2781.8	\$	3.00	\$	8,345
649-34-000	M/ARM, RELOCATED	EA	1	\$	15,000.00	\$	15,000
665-1-40	PEDESTRIAN DETECTOR, RELOCATED	EA	1	\$	160.00	\$	160
700-1-11	SIGN SINGLE POST (LESS THAN 12 SF)	AS	32	\$	260.00	\$	8,320
700-1-50	SINGLE SIGN POST (RELOCATE)	EA	5	\$	110.00	\$	550
711-11-123	12" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	446	\$	3.00	\$	1,337
711-11-125	24" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	206	\$	6.00	\$	1,235
710-11-211	PAINTED PAVEMENT MARKINGS (STANDARD 6" SOLID YELLOW)	NM	0.076	\$	925.00	\$	70
715-4-400	LIGHT POLE COMPLETE (RELOCATE)	EA	6	\$	2,600.00	\$	15,600
SUB-TOTA							228,992
101-1	MOBILIZATION	LS	1		10%	\$	22,899.15
102-1	MAINTENANCE OF TRAFFIC	LS	1		5%	\$	11,449.58
110-1-1	CLEARING AND GRUBBING (1.93 ACRES)	LS	1		10%	\$	22,899.15
SUB-TOTAI							286,239
N/A	ENGINEERING AND DESIGN	LS	1		30%	\$	85,871.82
N/A	SURVEY	LS	1	\$	9,000.00	\$	9,000
TOTAL						\$	381,111
FDOT Inflation-Adjusted Estimate Factor PDC Multiplier							Estimate
Year 1 Inflation-adjusted Estimate (2016) 2.7% 1.0					1.027	\$	391,401
Year 2 Inflation-adjusted Estimate (2017) 2.5% 1.053 Year 3 Inflation-adjusted Estimate (2018) 2.5% 1.079						\$	401,310
						\$	411,219

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	BASE QTY	B	BASE UNIT COST	Т	OTAL COST
104-10-3	SEDIMENT BARRIER	LF	17100.3	\$	1.50	\$	25,650.45
120-1	REGULAR EXCAVATION	CY	27061	\$	5.00	\$	135,305.00
160-4	TYPE B STABILIZATION	SY	26601	\$	4.00	\$	106,402
285-704	OPTIONAL BASE GROUP 4	SY	24067	\$	10.00	\$	240,670.00
334-1-12	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC B) (2")	TN	2508	\$	85.00	\$	213,188.50
522-2	CONCRETE SIDEWALK, 6" THICK	SY	920.4	\$	50.00	\$	46,020
570-1-2	PERFORMANCE TURF, SOD	SY	18023.5	\$	3.00	\$	54,071
700-1-11	SIGN SINGLE POST (LESS THAN 12 SF)	AS	56	\$	260.00	\$	14,560
700-1-50	SINGLE SIGN POST (RELOCATE)	EA	10	\$	110.00	\$	1,100
711-11-123	12" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	849	\$	3.00	\$	2,548
711-11-125	24" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	392	\$	6.00	\$	2,354
710-11-211	PAINTED PAVEMENT MARKINGS (STANDARD 6" SOLID YELLOW)	NM	0.265	\$	925.00	\$	245
715-4-400	LIGHT POLE COMPLETE (RELOCATE)	EA	23	\$	2,600.00	\$	59,800
1080-14	UTILITY FIXTURES, RELOCATED	EA	4	\$	1,250.00	\$	5,000
	SUB-TOTAL						
101-1	MOBILIZATION	LS	1		10%	\$	90,191.31
102-1	MAINTENANCE OF TRAFFIC	LS	1		5%	\$	45,095.66
110-1-1	CLEARING AND GRUBBING (9.41 ACRES)	LS	1		10%	\$	90,191.31
SUB-TOTAL							1,127,391
N/A	ENGINEERING AND DESIGN	LS	1		30%	\$	338,217.42
N/A	SURVEY	LS	1	\$	25,000.00	\$	25,000
					TOTAL	\$	1,490,609
	FDOT Inflation-Adjusted Estimate		Factor	PD	C Multiplier		Estimate
	Year 1 Inflation-adjusted Estimate (2016)		2.7%		1.027	\$	1,530,855
	Year 2 Inflation-adjusted Estimate (2017)		2.5%		1.053	\$	1,569,611
	Year 3 Inflation-adjusted Estimate (2018)		2.5%		1.079	Ś	1,608,367

ENGINEER'S ESTIMATE

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	ENGINEER'S ESTIMATE VOLUSIA COUNTY/PUTNAM COUNTY LINE TRAIL CONSTRUCTION US 17 (SR 40 NORTH TO PUTNAM COUNTY)							
PAY ITEM NO.	ITEM DESCRIPTION	UNIT	BASE QTY	B	SASE UNIT COST	т	OTAL COST	
104-10-3	SEDIMENT BARRIER	LF	72455.4	\$	1.50	\$	108,683.10	
120-1	REGULAR EXCAVATION	CY	113957	\$	5.00	\$	569,785.00	
160-4	TYPE B STABILIZATION	SY	112708	\$	4.00	\$	450,833	
285-704	OPTIONAL BASE GROUP 4	SY	101974	\$	10.00	\$	1,019,737.00	
334-1-12	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC B) (2")	TN	10627	\$	85.00	\$	903,278.00	
425-1-529	INLETS, DT BOT, TYPE C, MODIFY (RELOCATED)	EA	5	\$	3,800.00	\$	19,000.00	
430-175-124	PIPE CULVERT, OPT MTL, ROUND, 24" S/CD	LF	28	\$	65.00	\$	1,820.00	
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	EA	2	\$	900.00	\$	1,800.00	
522-2	CONCRETE SIDEWALK, 6" THICK	SY	2496.6	\$	50.00	\$	124,830	
570-1-2	PERFORMANCE TURF, SOD	SY	91463.1	\$	3.00	\$	274,389	
649-34-000	M/ARM, RELOCATED	EA	3	\$	15,000.00	\$	45,000	
665-1-40	PEDESTRIAN DETECTOR, RELOCATED	EA	2	\$	160.00	\$	320	
700-1-11	SIGN SINGLE POST (LESS THAN 12 SF)	AS	216	\$	260.00	\$	56,160	
700-1-50	SINGLE SIGN POST (RELOCATE)	EA	10	\$	110.00	\$	1,100	
711-11-123	12" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	3113	\$	3.00	\$	9,339	
711-11-125	24" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	1414	\$	6.00	\$	8,481	
710-11-211	PAINTED PAVEMENT MARKINGS (STANDARD 6" SOLID YELLOW)	NM	1.023	\$	925.00	\$	946	
715-4-400	LIGHT POLE COMPLETE (RELOCATE)	EA	33	\$	2,600.00	\$	85,800	
1080-14	UTILITY FIXTURES, RELOCATED	EA	3	\$	1,250.00	\$	3,750	
1644800	FIRE HYDRANT, RELOCATE	EA	2	\$	2,000.00	\$	4,000	
					SUB-TOTAL	\$	3,689,052	
101-1	MOBILIZATION	LS	1		10%	\$	368,905.19	
102-1	MAINTENANCE OF TRAFFIC	LS	1		5%	\$	184,452.60	
110-1-1	CLEARING AND GRUBBING (42.7 ACRES)	LS	1		10%	\$	368,905.19	
SUB-TOTAL							4,611,315	
N/A	ENGINEERING AND DESIGN	LS	1		30%	\$	1,383,394.47	
N/A	SURVEY	LS	1	\$	70,000.00	\$	70,000	
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	FDOT Inflation-Adjusted Estimate		Factor	PD	C Multiplier		Estimate	
	Year 1 Inflation-adjusted Estimate (2016)		2.7%		1.027	\$	6,228,457	
	Year 2 Inflation-adjusted Estimate (2017)		2.5%		1.053	\$	6,386,139	
	Year 3 Inflation-adjusted Estimate (2018)		2.5%		1.079	\$	6,543,821	

ENGINEER'S ESTIMATE VOLUSIA COUNTY/CITY OF ORMOND BEACH TRAIL CONSTRUCTION SR 40 (CONE ROAD TO AIRPORT ROAD)								
PAY ITEM NO.	ITEM DESCRIPTION	UNIT	BASE QTY	BASE UNIT COST	Т	OTAL COST		
104-10-3	SEDIMENT BARRIER	LF	12294.8	\$ 1.50	\$	18,442.20		
120-1	REGULAR EXCAVATION	CY	19499	\$ 5.00	\$	97,495.00		
160-4	TYPE B STABILIZATION	SY	19125	\$ 4.00	\$	76,501		
285-704	OPTIONAL BASE GROUP 4	SY	17304	\$ 10.00	\$	173,038.00		
334-1-12	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC B) (2")	TN	1803	\$ 85.00	\$	153,280.50		
400-0-11	CONCRETE NS - GRAVITY WALL	CY	7.6	\$ 550.00	\$	4,180.00		
400-2-10	CONCRETE II - APPROACH SLABS	CY	8.4	\$ 420.00	\$	3,528.00		
415-1-9	REINFORCING STEEL - APPROACH SLAB	LB	846	\$ 1.05	\$	888.30		
471-1	TREATED STRUCTURAL TIMBER	MB	5.4	\$ 5,500.00	\$	29,700.00		
515-1-1	PIPE HANDRAIL - GUIDERAIL, STEEL	LF	43	\$ 55.00	\$	2,365.00		
522-2	CONCRETE SIDEWALK, 6" THICK	SY	746.5	\$ 50.00	\$	37,325		
570-1-2	PERFORMANCE TURF, SOD	SY	30077	\$ 3.00	\$	90,231		
700-1-11	SIGN SINGLE POST (LESS THAN 12 SF)	AS	16	\$ 260.00	\$	4,160		
700-1-50	SINGLE SIGN POST (RELOCATE)	EA	2	\$ 110.00	\$	220		
711-11-123	12" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	175	\$ 3.00	\$	525		
711-11-125	24" WHITE SOLID STRIPE (THERMOPLASTIC)	LF	60	\$ 6.00	\$	360		
710-11-211	PAINTED PAVEMENT MARKINGS (STANDARD 6" SOLID YELLOW)	NM	0.076	\$ 925.00	\$	70		
N/A	PEDESTRIAN BRIDGE*	LS	1	\$ 350,000.00	\$	350,000		
SUB-TOTAL								
101-1	MOBILIZATION	LS	1	10%	\$	104,230.94		
102-1	MAINTENANCE OF TRAFFIC	LS	1	5%	\$	52,115.47		
110-1-1	CLEARING AND GRUBBING (10.32 ACRES)	LS	1	10%	\$	104,230.94		
SUB-TOTAI								
N/A	ENGINEERING AND DESIGN	LS	1	30%	\$	390,866.03		
N/A	SURVEY	LS	1	\$ 20,000.00	\$	20,000		
				TOTAL	\$	1,713,753		
	FDOT Inflation-Adjusted Estimate		Factor	PDC Multiplier	Ī	Estimate		
	Year 1 Inflation-adjusted Estimate (2016)		2.7%	1.027	\$	1,760,024		
	Year 2 Inflation-adjusted Estimate (2017)		2.5%	1.053	\$	1,804,582		
Year 3 Inflation-adjusted Estimate (2018) 2.5% 1.079						1,849,139		