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Appendices (Under Separate Covers)

List of Abbreviated Terms

AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACS	American Community Survey
ADA	Americans with Disabilities Act
CE	Conservation Easements
CEI	Construction Engineering and Inspection
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CoSA	City of St. Augustine
CoSAB	City of St. Augustine Beach
ECG	East Coast Greenway
EFH	Essential Fish Habitat
FDEP	Florida Department of Environmental Protection
FDM	Florida Design Manual
FDOT	Florida Department of Transportation
FEC	Florida East Coast
FEMA	Federal Emergency Management Agency
FGTS	Florida Greenways and Trails System
FHWA	Federal Highway Administration
FMSF	Florida Master Site File
FPL	Florida Power & Light
MUTCD	Manual of Uniform Traffic Control Devices
NPDES	National Pollutant Discharge Elimination Systems
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OFW	Outstanding Florida Water
OSW	Other Surface Waters
PD&E	Project Development and Environment
PE	Preliminary Engineering
PIP	Public Involvement Plan
ROW	Right-of-way
SHPO	State Historic Preservation Officer
SJC	St. Johns County
SJC-S	St. Johns County-South
SJC-W	St. Johns County-West
SJR2C	St. Johns River-to-Sea
SJRWMD	St. Johns River Water Management District
SLOSH	Sea, Lake, and Overland Surges from Hurricanes
SUN	Shared-Use Nonmotorized
TDA	Transportation Data and Analytics
TPO	Transportation Planning Organization
USBRS	U.S. Bike Route System
USFWS	U.S. Fish and Wildlife Service
WACS	Water Assurance Compliance System

Executive Summary

The Shared-Use Nonmotorized (SUN) Trail-St. Johns River-to-Sea (SJR2C) Loop Planning Study was completed in 2020 to establish the final recommended route through St. Johns County (SJC). The study was funded by the Florida Department of Transportation (FDOT) and administered by SJC. Once completed, the SUN Trail-SJR2C Loop will be the longest multi-use loop trail in the Southeast United States with more than 260 miles of continuous trail. The purpose of this project is to provide local and regional bicycle and pedestrian connectivity to users of all ages and physical abilities by closing the 26-mile gap of the SUN Trail-SJR2C Loop trail in SJC. It will connect unincorporated areas of the County with the City of St. Augustine (CoSA) and the City of St. Augustine Beach (CoSAB) to establish a regional trail connection consistent with SUN Trail criteria. The project is needed to provide local and regional connectivity, improve quality of life, and create positive economic development.

This study is a planning-level evaluation of safety, environmental, engineering criteria, and community factors that may influence the success of subsequent phases of work required for trail development and implementation. The process used for the study combines planning, public involvement, and engineering efforts to identify a recommended route. As part of the overall analysis, the following documents were developed:

1. **Existing Conditions Report** – Documents the existing characteristics, conditions, issues, constraints, and previous studies conducted relevant to this project.
2. **Purpose and Need Statement** – Defines the project need, goals, objectives, and measures of success.
3. **Public Involvement Plan (PIP)** – Provides an overview of the outreach and engagement efforts conducted throughout the study.
4. **Alternatives Analysis Report** – Builds on the Existing Conditions and Purpose and Need Statement to develop a recommended route.
5. **Final Report** – Summary of the complete study and includes planning-level concept plans of the recommended trail.

As a result of extensive qualitative and quantitative analyses supported by coordination with project stakeholders and public outreach, the final route was recommended along with a secondary complementary route. The final recommended route connects to the existing trail at Vermont Boulevard using Allen Nease Road, CR 214, and West King Street through the west portion of SJC. Within the CoSA, the final recommended route is along King Street, Anastasia Boulevard, and through Anastasia State Park. The secondary route is along US 1, SR 312, Mizell Road, and Pope Road, providing a loop within the CoSA and the CoSAB. The final recommended route is along A1A Beach Boulevard through the CoSAB and continues along SR A1A to the SJC line. Another secondary route is along Mickler Boulevard and A Street, providing a loop within the CoSAB. The final recommended route and the secondary route have been accepted by the jurisdictional agency through adopted resolutions by the respective Commissioners.

This planning study is the first step in a larger process to implement this portion of the SUN Tail-SJR2C Loop. The final and secondary routes were divided into 13 projects to request funding for future project development phases through the FDOT SUN Trail Program and other potential funding sources that may be available. Future project phases include Project Development & Environmental (PD&E) Study, Preliminary Engineering (PE) / design, and construction. The funding applications for the future phases of the 13 projects were submitted to FDOT in December 2019.

1 Introduction

The Shared-Use Nonmotorized (SUN) Trail-St. Johns River-to-Sea (SJR2C) Loop through St. Johns County Planning Study Final Report is a compilation of all planning study information and documentation to establish the final recommended route. The report basis of findings includes analysis and input collected to select and adopt the recommended route by the respective jurisdictional agencies, which include: (1) St. Johns County (SJC); (2) City of St. Augustine (CoSA); and (3) City of St. Augustine Beach (CoSAB). In addition, the Florida Department of Transportation (FDOT) provided continual input and participation to assist in the determination of the recommended route. This report includes:

- Review of Purpose and Need for the Project
- Review of PIP
- Summary of Existing Conditions based on previously completed Existing Conditions Report
- Review of Alignment Alternatives
- Review of Design Considerations
- Preferred Alignment Concept Plans
- Implementation Plan

The following provides an overview of the project background and purpose, project description, and project segmentation. In addition, a description of the processes and steps taken to develop the final recommended route, along with insight into the steps necessary to implement the project, are provided.

1.1 Project Background and Purpose

The SUN Trail-SJR2C Loop Planning Study is funded by FDOT Contract No. G0M37 (Financial Project ID No. 439932-1-14-01) awarded to SJC for its execution and administration. The project limits began at the existing SUN Trail-SJR2C Loop termination point west of I-95 at SR 207 near Concourse Drive and the Smyrna Ready Mix Concrete Plant, then into the CoSA, then across the Matanzas River to SR A1A to the CoSAB, and then south along SR A1A to the St. Johns / Flagler County line.

The overall SUN Trail-SJR2C Loop network system is shown by **Figure 1-1**. The previously developed conceptual loop alignment for the remaining gap is shown by **Figure 1-2**. The project purpose was to determine and further refine potential alignments for this remaining segment. FDOT previously identified the need for a planning study to consider potential corridor alternatives. The Existing Conditions Report for the study provided the basis to identify viable corridors, determine the feasibility, and recommend a preferred alignment alternative for adoption by the respective jurisdictional agencies, which included SJC, CoSA, CoSAB, and FDOT. The planning study area for potential SUN Trail-SJR2C Loop corridor route alternatives is shown in **Figure 1-3**. The planning study area was determined by considering previous concepts, results of previous trail planning studies, results of the Existing Conditions Report, Purpose and Need Statement, and consultation / review / meetings with the Primary Stakeholder Group (the respective jurisdictional agencies).

These planning study results are provided to allow the jurisdictional agencies to move forward with additional planning and / or design efforts to facilitate construction of SUN Trail-SJR2C Loop segments within SJC. The local jurisdictions have adopted these planning study results as the final recommended route.

1.2 Project Description

The SUN Trail-SJR2C Loop is the longest multi-use loop trail in the Southeast United States and has its northern segment in SJC. The overall facility includes more than 260 miles with nearly 40 miles in the County. It traverses five counties (St. Johns, Flagler, Volusia, Brevard, and Putnam) and FDOT Districts 2 and 5. It is one of two regional trail systems identified on the SUN Trail Program network, making it eligible for targeted trail construction funding created specifically by the State Legislature.

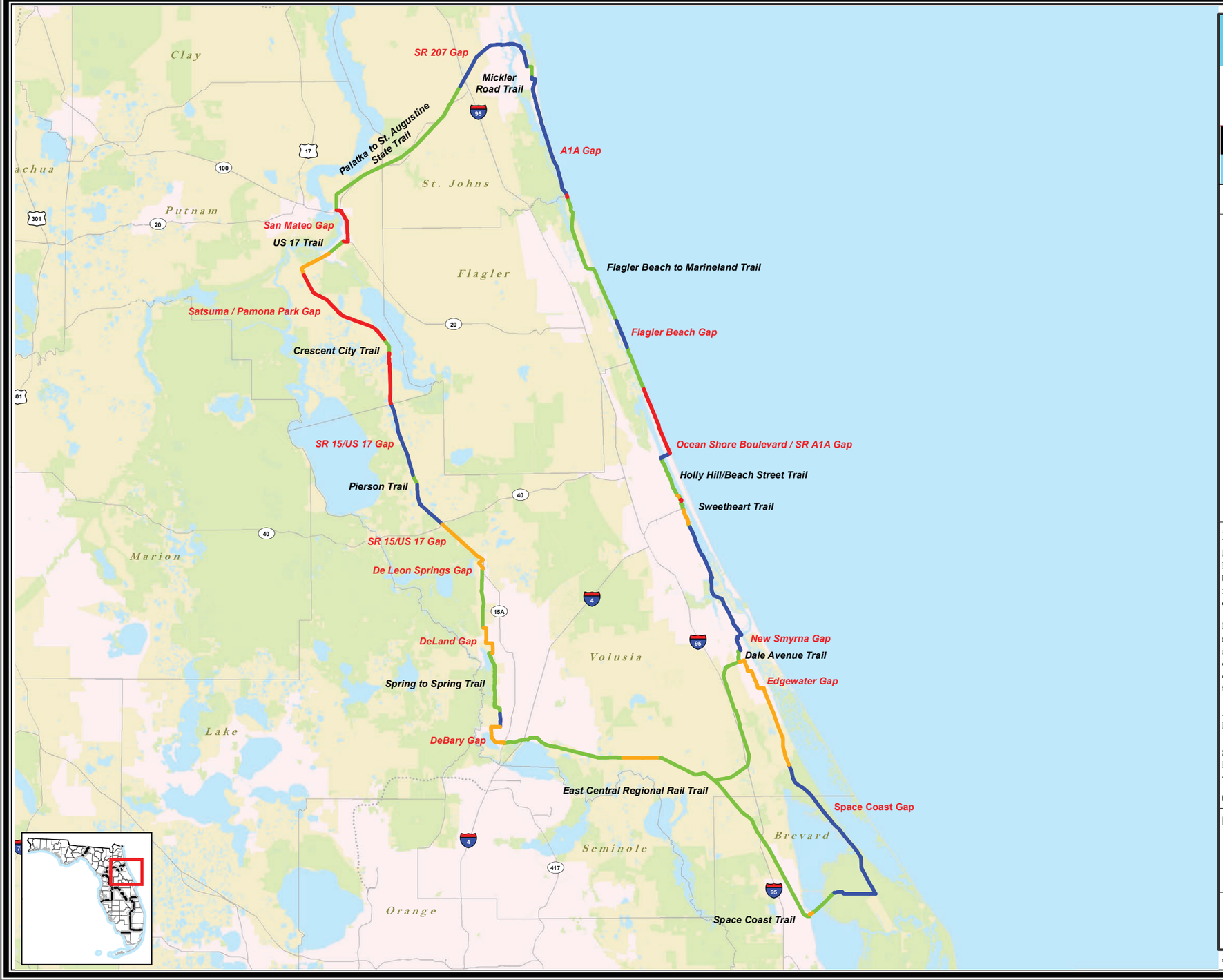
This SUN Trail-SJR2C Loop Planning Study involved analyzing alternatives to identify a preferred multi-use trail alignment from SR 207 near I-95 to the St. Johns / Flagler County line. The intent was to provide a connection for a 26-mile gap of multi-use trail facilities to complete the northern segment of the SUN Trail-SJR2C Loop. The alternatives review considered various alignments available through city, county, state, and other lands. The Existing Conditions Report was the compilation of a wide range of engineering, environmental, and socioeconomic criteria that was used to determine the desirability of respective trail alignment alternatives.

1.3 Project Segmentation

The planning study area was divided into four segments based on jurisdictional authority limits and related geographical, transportation, social, and environmental characteristics. These segments are referred to as follows:

- **Segment 1 –** SJC-West (SJC-W). Includes various alignment alternatives from the existing trail at SR 207 / I-95 to CoSA (Segment 2).
- **Segment 2 –** CoSA. Includes various alignment alternatives from Segment 1 into and out of the CoSA to CoSAB (Segment 3).
- **Segment 3 –** CoSAB. Includes various alignment alternatives from Segment 2 into and out of the CoSAB to SR A1A (Segment 4).
- **Segment 4 –** SJC-South (SJC-S). Includes alignment from Segment 3 along SR A1A going south and terminating at the St. Johns / Flagler County line.

Respective maps for the above segments depicting potential alignment alternatives are presented by **Figure 1-4**.



FDOT STRATEGIC DEVELOPMENT

Shared-Use Nonmotorized (SUN) Trail Regional System

St. Johns River - to - Sea Loop

State of Florida Department of Transportation
Systems Implementation Office

LEGEND

- Existing Trails
- Programmed or Funded for Construction
- Partially Funded for Pre-Construction Phases
- Unfunded Gap

Existing Trail Name
Project in Development

NOTES:

No Warranties: This map and its content is made available by the Florida Department of Transportation (FDOT) on an "as is", "as available" basis without warranties of any kind, expressed or implied. This product is for reference purposes only and is not to be construed as a legal document or survey instrument. Information is subject to change.

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Additional trail information may be obtained by contacting your local government.

Source:
Florida Department of Transportation
- Systems Implementation Office

Date: 7/24/2019

Existing Conditions

- SIS Highways
- Planned SIS roads
- County Boundaries
- Water
- Urban Areas
- Managed Lands

0 4.5 9 18
Miles

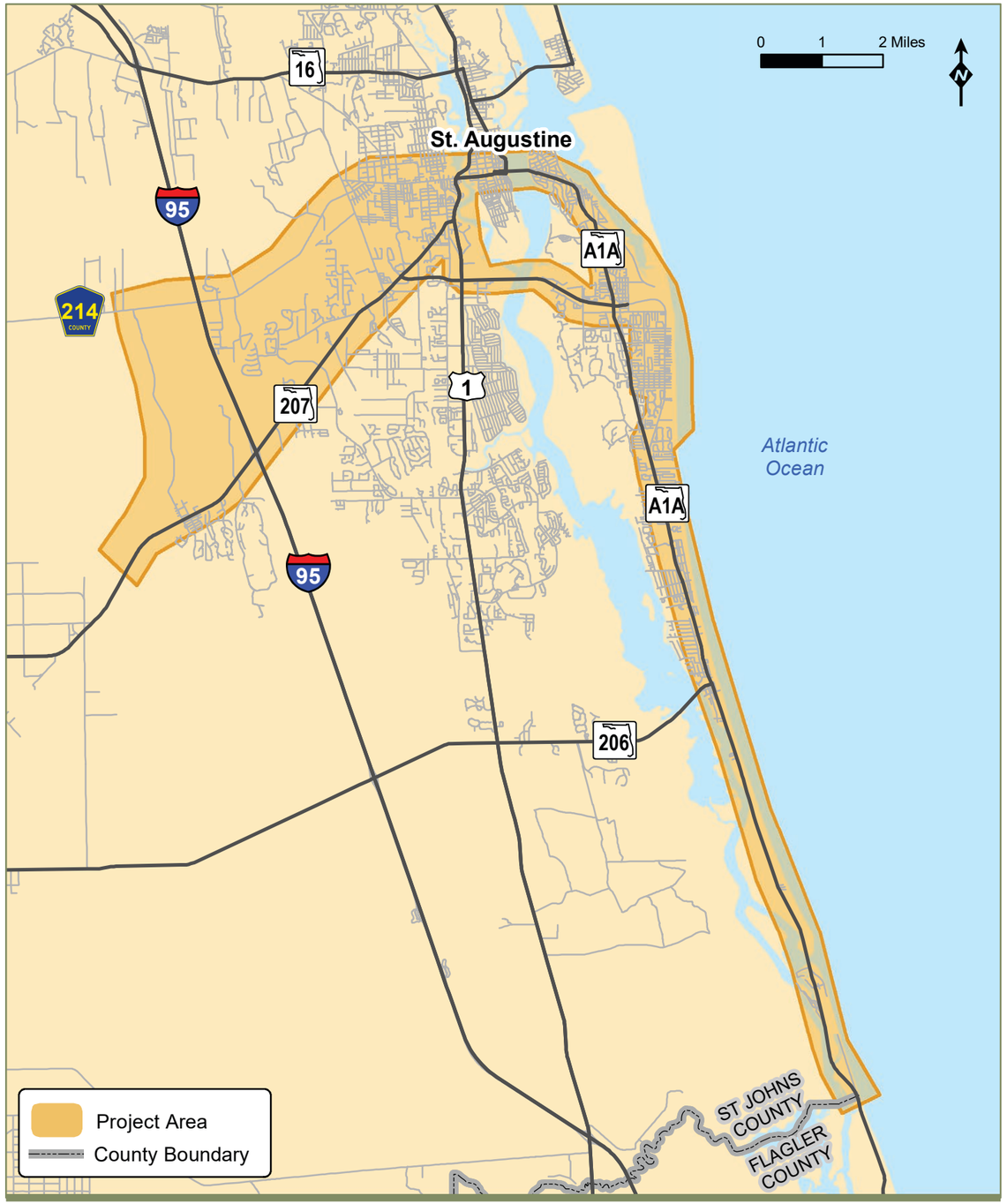
Document Path: S:\Proj\Recurring\SunTrail\eGIS\Mapping\SJR2C\SUN Trail Network 2018_StJohnsSea.mxd

SUN Trail-SJR2C Loop Overall Map

FIGURE 1-1

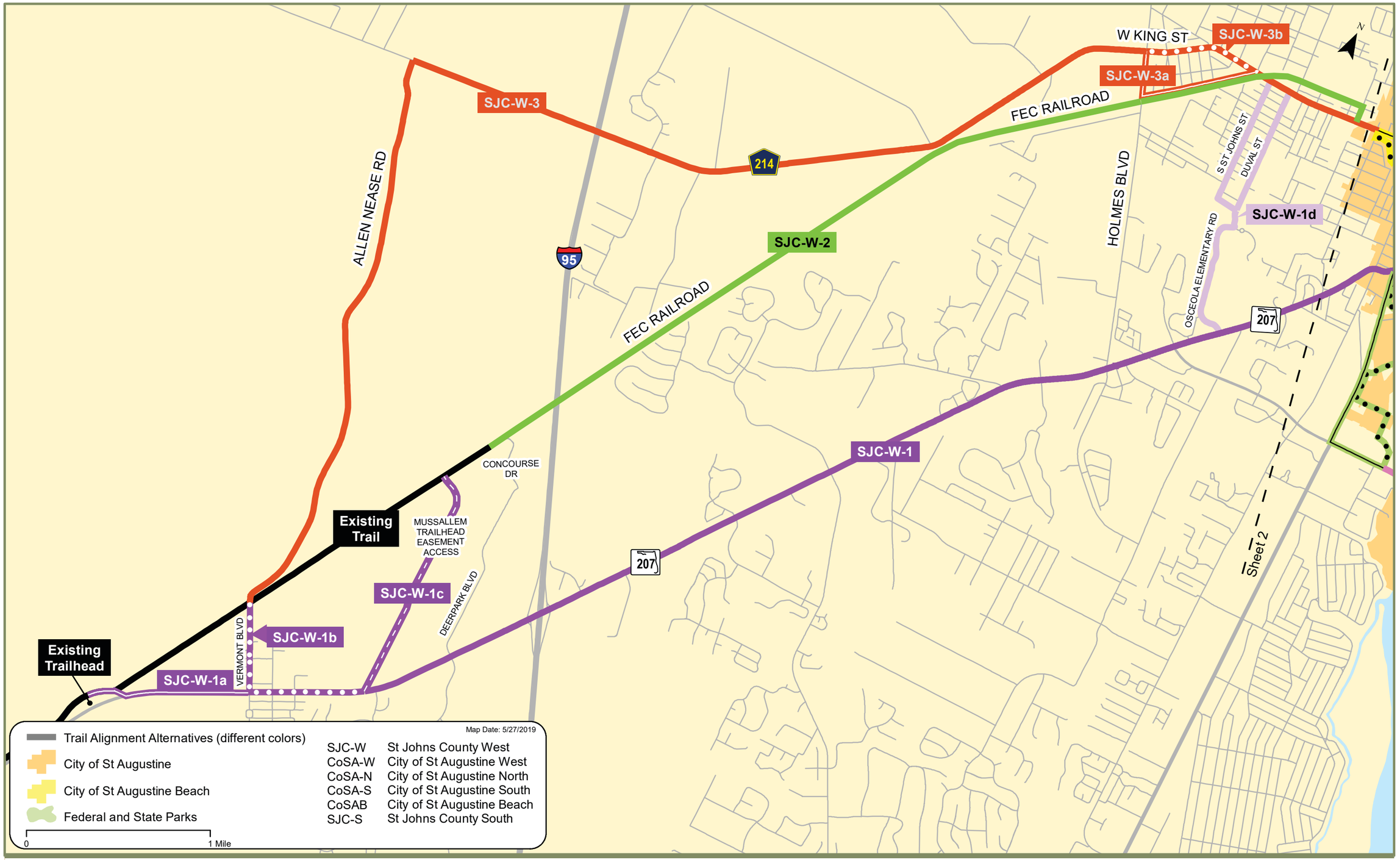
SUN Trail-SJR2C Loop Original Alignment
St. Johns County Segment

FIGURE 1-2



SUN Trail-SJR2C Loop Project Study Area
St. Johns County

FIGURE 1-3

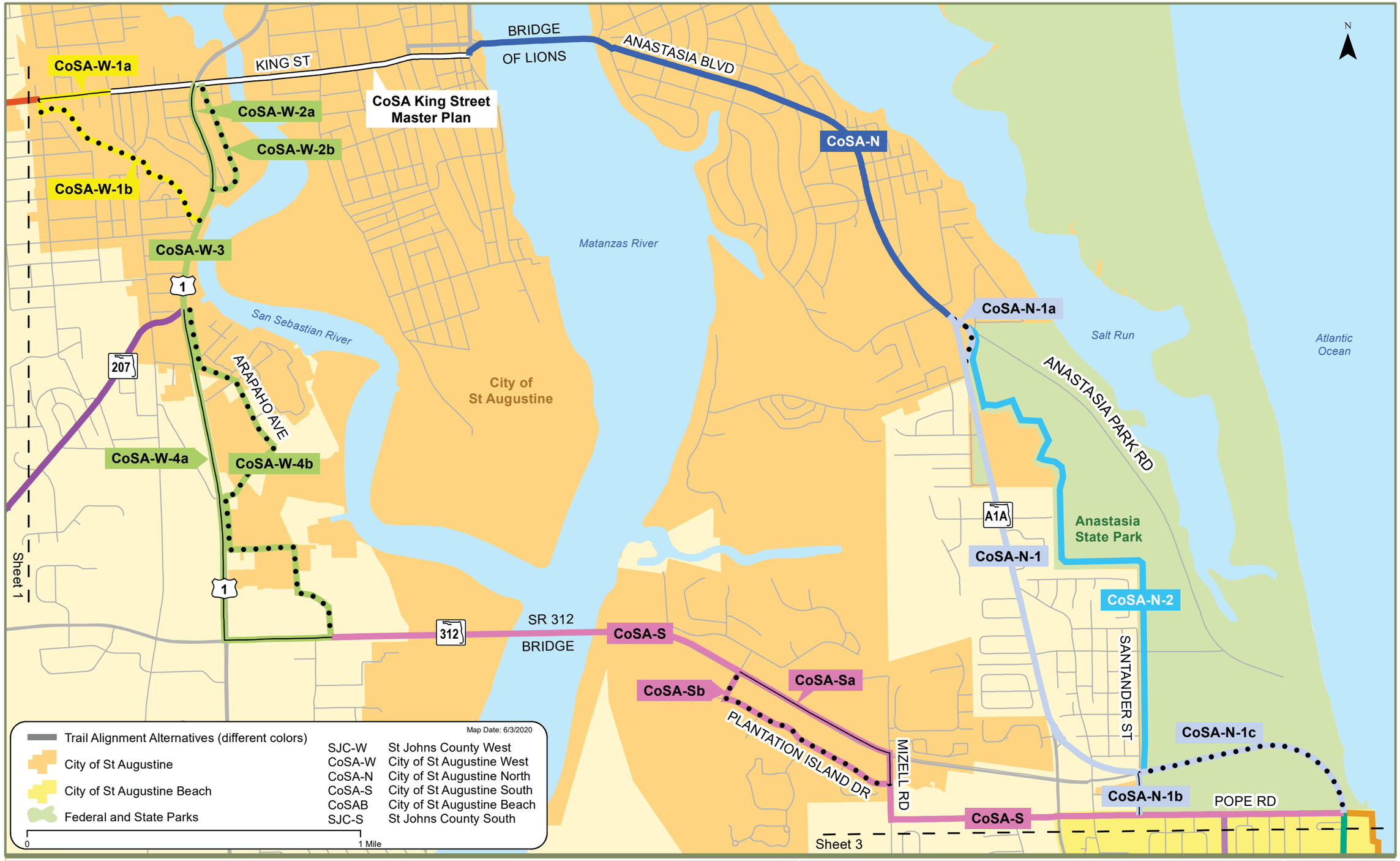


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Trail Alignment Alternatives

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 1-4
SHEET 1 OF 4

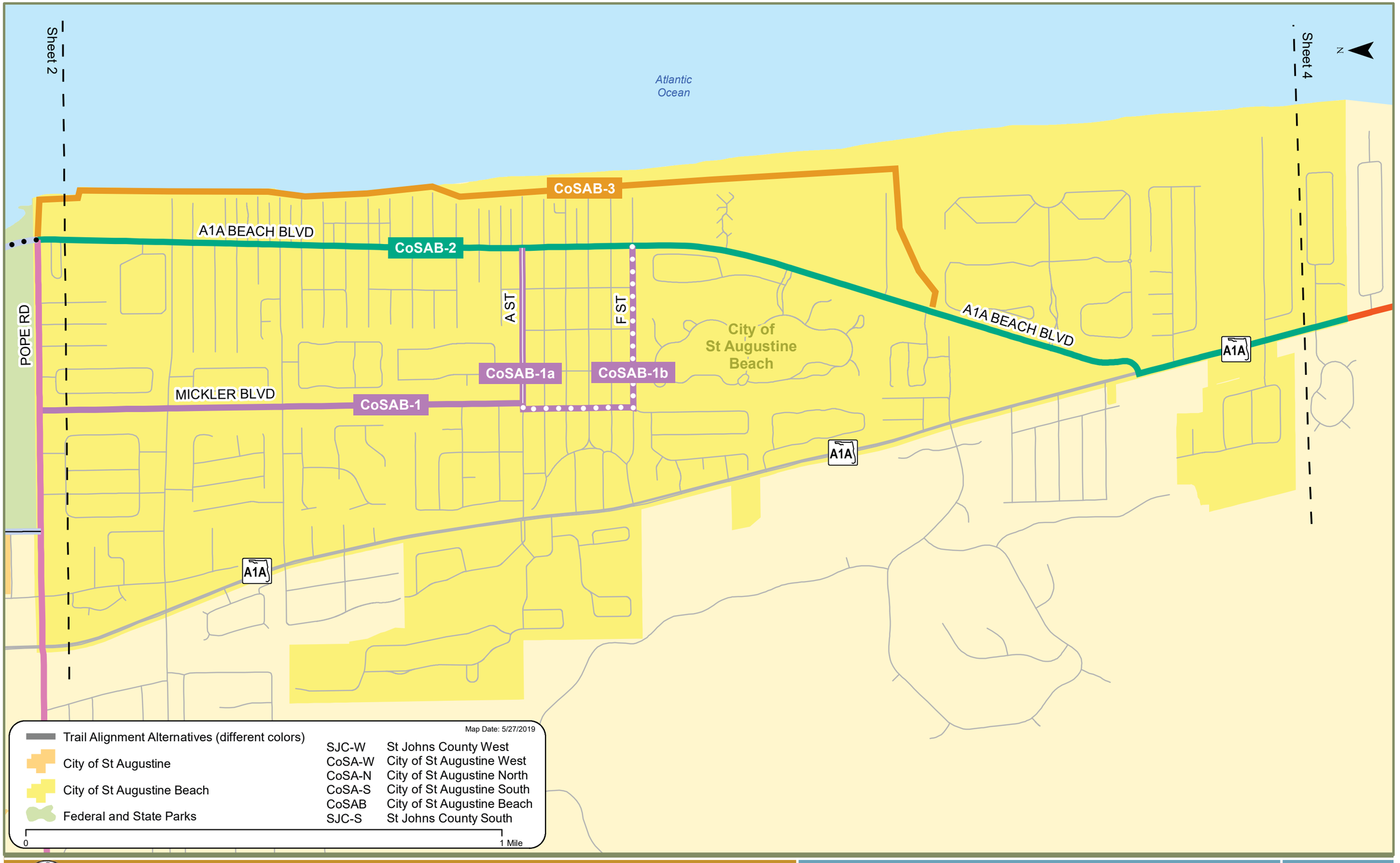


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Trail Alignment Alternatives

Segment 2 - City of St. Augustine (CoSA)

FIGURE 1-4
SHEET 2 OF 4

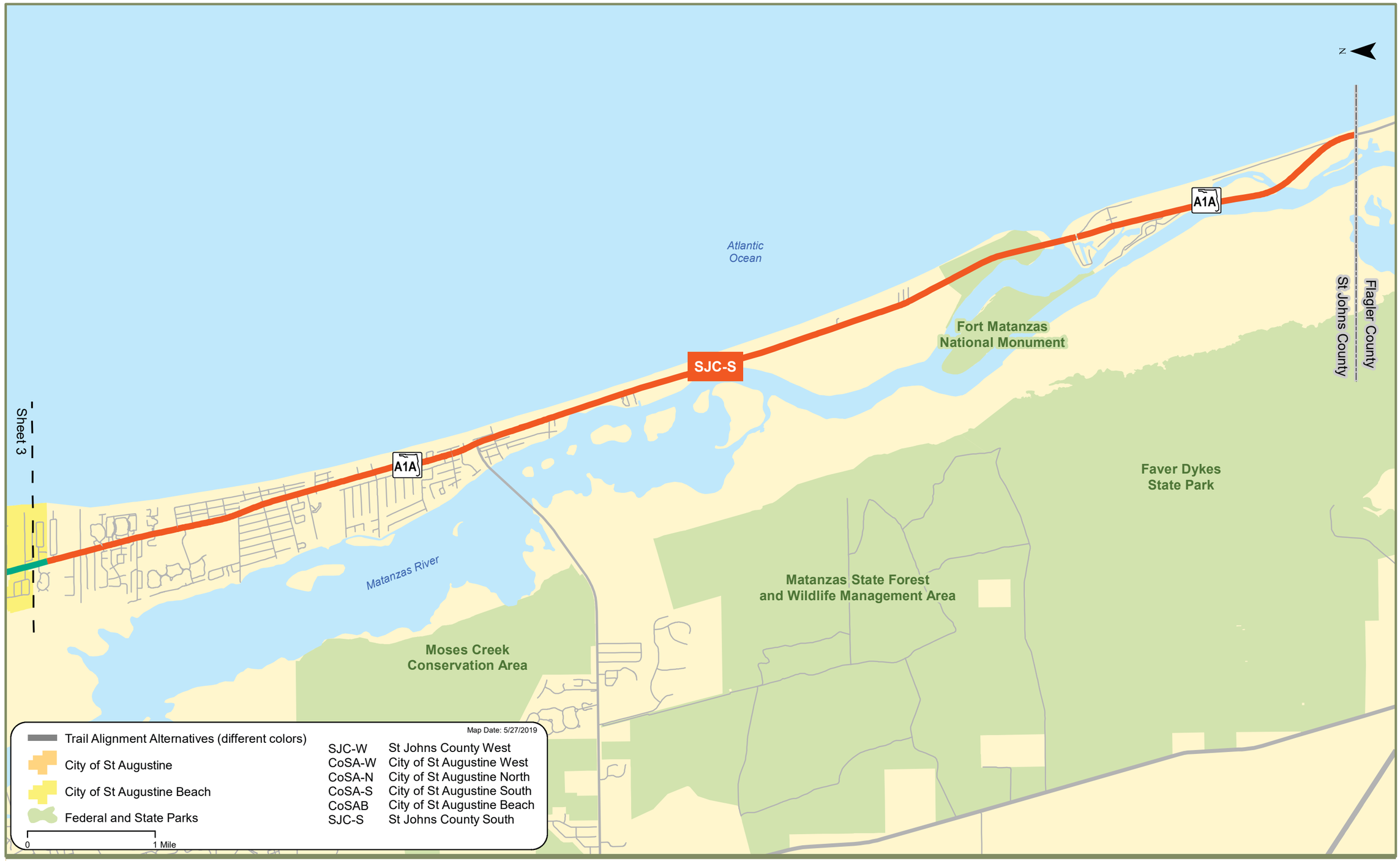


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Trail Alignment Alternatives

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 1-4
SHEET 3 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Trail Alignment Alternatives

Segment 4 - St. Johns County - South (SJC-S)

FIGURE
1-4
SHEET 4 OF 4

2 Project Initiation

2.1 Purpose and Need

2.1.1 Overview of Purpose and Need Statement

The Purpose and Need Statement provides justification for undertaking any project. It is used to guide a project through its various phases by tying the project to solving a specific problem or need. For this project, the Purpose and Need Statement was used as the basis to evaluate the alternative trail alignments depicted in the Existing Conditions Report and ultimately select the preferred alternative for acceptance by the maintaining agencies. It reflects the reason this project was initiated and the issues this project aims to address.

For this study, the purpose and need was developed through continuous input from the primary jurisdictional stakeholder groups, which include the County, CoSA, CoSAB, and FDOT. In addition to these stakeholders, citizen input was gathered through a questionnaire to rank priorities at the public meetings held on July 11, 2019, and on October 24, 2019. Input from the public and the primary stakeholder group serves as the framework for the Purpose and Need Statement.

2.1.2 Purpose

The purpose of this project is to provide local and regional bicycle and pedestrian connectivity to users of all ages and physical abilities by closing the approximately 26-mile gap of the SUN Trail-SJR2C Loop trail in SJC. It will connect unincorporated areas of the County with the CoSA and the CoSAB to establish a regional trail connection consistent with SUN Trail criteria.

2.1.3 Need

Three primary issues outline the need for developing this project: (1) local and regional connectivity, (2) quality of life, and (3) positive economic development. The need is reinforced by the following input and observations within the project area and surrounding region.

A. Local and Regional Connectivity

As part of the 260-mile SUN Trail-SJR2C Loop, the SJC trail segment is a major component of the state's regionally connected trail system. The significance of this trail is further reinforced by the state's recognition of the SJR2C Loop as the second trail priority to receive focused SUN Trail funding.

This trail is needed to complete the SJR2C Loop's northern portion, and on a local scale, it provides much needed connectivity to the existing Palatka to St. Augustine State Trail, which connects to other major trail systems in the state. Currently, the only realistic connection to the Palatka to St. Augustine State Trail from this area of the County is by motorized vehicle. Providing a direct trail connection to the County's more urbanized areas will provide new opportunities for residents and visitors to use the entire trail system to access services and amenities without depending on motorized travel.

When completed, the SUN Trail-SJR2C Loop will connect five counties with a continuous loop trail that intersects and overlaps other regionally and nationally recognized trail systems such as the Florida Coast-to-Coast Trail, the Heart of Florida Loop, and the East Coast Greenway (ECG) trail, which connects cities along the East Coast from Maine to Key West.

B. Quality of Life

The study area provides a diverse landscape of rural, suburban, and urban uses. Most of these areas are linked by roadways solely intended for motorized vehicles and do not provide for alternative forms of transportation such as bicycling or walking. This trail is a significant quality of life project that provides expanded transportation options, connects people to nature, and provides cultural resources and services within the County for everyone to access.

C. Positive Economic Development

Trail and greenway network systems increasingly are becoming an economic engine for communities throughout Florida. By combining trails into larger multimodal transportation systems, there is potential to advance regional and statewide economic development strategies. These networks can provide valuable resources for neighborhood, municipal, county, and state connectivity. The overall area of SJC, CoSA, and CoSAB offers many opportunities to enhance economic development due to its diverse nature of rural and urban land-use environments as well as being one of Florida's unique tourist destinations.

2.2 Guiding Principles

2.2.1 Overview of Guiding Principles

The following principles are recommended to guide decisions for the selection of a singular trail route to close the approximately 26-mile gap of the SUN Trail-SJR2C Loop within the County. The guiding principles are a road map to use in evaluating the alternatives depicted in the Existing Conditions Report. These alternatives resulted from close collaboration with local jurisdictions. The focus will be to provide a trail facility that can meet the needs of pedestrians and bicyclists of all ages and physical abilities. The principles listed below take into account the overall vision for the SUN Trail-SJR2C Loop and input from the local jurisdictions and the public.

2.2.2 The Guiding Principles

A. Collaboration with Local Stakeholders

- Be generally consistent with statewide, regional, and local visions and plans. Make decisions aligned with:
  - SUN Trail program requirements; goals and objectives of the Florida Greenways and Trails System Plan and other statewide, regional, and local comprehensive plans
  - Long range visions of regional and local significance to form a continuous trail system
- Develop a structured planning process that:
  - Involves stakeholders throughout the planning process, guided by a Public Involvement Plan (PIP)
  - Considers citizen input, trail corridor conditions, land use, recreation, health, mobility, and maintenance

B. Trail Development Strategies

- Gain local government adoption of the trail
- Commitment for trail maintenance after construction is completed
- Maximize alignment with SUN Trail funding opportunities, which will reduce local government capital costs and increase potential for funding approvals
- Minimize need to acquire new ROW where feasible to reduce project costs and maximize potential for alignment with SUN Trail program requirements
- Minimize impacts to existing infrastructure such as roadway reconstruction, utility relocations, and / or drainage modifications to keep costs down
- Develop implementation plan to identify fast-tracked projects

C. Community Connections to Maximize Potential

- Provide users with safe crossings at intersections and traffic separation, maximize trail width, and create a desirable environment in which to walk or bicycle
- Plan a trail corridor that fits within the context of the study area and provides connections to social, cultural, and recreational opportunities

2.3 Measures of Success

Evaluation measures are designed to assess the feasibility of the various conceptual alignments proposed for the SJR2C trail alignment through SJC. The criteria developed for the measures of success is driven by the purpose and need and the guiding principles established for this project. Through the following evaluation measures listed in **Table 2-1**, the project team can determine whether the potential trail alternatives align with the project objectives to make informed decisions on the preferred alternative.

Table 2-1 – Evaluation Measures

Guiding Principle	Objectives	Measure of Success
A1	Stakeholder participation in meetings	Number of attendees at meetings
A2	Provide multiple opportunities for stakeholder input throughout the study	Hold public meetings at locations that provide easy access and provide public meeting notices in a timely manner
B1	Identify potential need to acquire ROW	Minimize need for ROW acquisition (Less ROW needed = higher preference)
		Cost for acquisition (Lower cost = higher preference)
		Amount of time required to acquire additional ROW (Shorter time = higher preference)
B2	Identify potential impacts to existing infrastructure	Cost for mitigation (Lower cost = higher preference)
		Amount of time (permitting, design, and construction) required to mitigate impact (Shorter time = higher preference)
B3	Minimize overall capital cost	Lower cost = higher preference
B4	Ability to implement project in a short time frame	Shorter time = higher preference
C1	Create a safe environment to walk and bicycle	Number of times trail crosses the street
		Miles of trail adjacent to residentially developed / populated areas
		Use trail standards that accommodate pedestrians and bicyclists of all skill levels
		Separation from roadway
	Maximize separation between bicyclists / pedestrians and motor vehicles	Miles of trail at least 5 feet from a roadway
	Maximize trail width	Miles of trail 10 to 12 feet wide
C2	Provide consistency in aesthetic elements	Continuity in appearance and reduced number of different cross sections
	Connectivity	Number of points of interest within ¼ mile (5-minute walk) of trail route
		Connection to existing trails
		Access to parks and recreation locations and attractions / points of interest

3 Public Involvement Plan

The PIP was developed at the onset of the study with the purpose of establishing cooperative working relationships among project stakeholders and respective jurisdictional agencies (SJC / FDOT / CoSA / CoSAB). This proactive public involvement approach helped the identification and development of a common vision leading to the recommended corridor. The planned public outreach efforts encouraged collaboration, giving individuals an opportunity to learn about the project and have a voice in the outcome of this study.

The PIP was developed as a stand-alone document to guide the project team in ensuring adequate input through multiple communication channels and was updated continually throughout the study. The PIP lists public outreach goals, outlines engagement activities, and provides an extensive list of stakeholders including federal, state, and local agencies; elected officials; advocacy groups; and businesses and community stakeholders in the study area. The PIP describes specific methods and techniques regarding the public involvement approach for the project and to ensure a free flow of information among stakeholders. For more information, please refer to the final PIP document located in **Appendix I**.

3.1 Summary of Public Meetings and Stakeholder Interviews

Stakeholder coordination was a critical component of this study's process. At the beginning of the process, a list of stakeholders was developed that included business, local government, and community leaders. As part of the program, regular project briefings were conducted among all the municipalities within the project limits, including SJC, CoSA, CoSAB, FDOT, and Anastasia State Park (under jurisdiction of Florida Park Service – FDEP). Throughout the project, the study team met and spoke to agency staff and various stakeholders who had a vested interest in the study. This included regular project coordination meetings and scheduled updates to various agencies promoting an open dialogue on key project issues. **Table 3-1** summarizes the key meetings and interviews that occurred.

Table 3-1 – Public Meetings and Interviews

Date	Meeting / Event Description
7/27/2018	SJC Kick-off Project Review Meeting
10/4/2018	SJC Progress Review/PIP Review Meeting
10/30/2018	SJC Inter-Department Review Meeting
11/6/2018	SJC-CoSA-CoSAB Internal Review Meeting
11/13/2018	CoSA Coordination Meeting
1/18/2019	SJC Trail Route Alternatives Field Review
2/7/2019	SJC / FDOT D2 Alternatives Coordination/Review Meeting – 1
2/12/2019	SJC / FDOT D2 Alternatives Coordination/Review Meeting – 2
2/21/2019	Green Path Gathering at St. Augustine Amphitheatre
3/13/2019	SJC / CoSA / CoSAB / FDOT Alternatives Review Meeting
4/6/2019	Palatka to St. Augustine Rail-Trail Ribbon Cutting - Hastings
5/8/2019	SJC Existing Conditions Review Meeting
5/14/2019	Florida Department of Environmental Protection (FDEP) Anastasia State Park Coordination Meeting
5/16/2019	SJC-CoSA-CoSAB-FDOT Existing Conditions Analysis Meeting
7/11/2019	**Public Information Meeting**
10/3/2019	SJC Alternatives Analysis Review Meeting
10/9/2019	SJC-CoSA-CoSAB-FDOT Alternatives Analysis Meeting
10/22/2019	SJC Pre-Final Public Meeting Review Meeting
10/24/2019	**Final Public Meeting**
10/29/2019	CoSA / CoSAB Coordination Meeting
11/04/2019	**CoSAB City Commission Meeting**
11/12/2019	**CoSA City Commission Meeting**
11/19/2019	**SJC Board of County Commissioners Meeting**

3.2 Public Meetings

3.2.1 Public Information Meeting – July 11, 2019

A Public Information Meeting was held on July 11, 2019, at the Guy Harvey Resort at 860 A1A Beach Boulevard, St. Augustine Beach, FL 32080. Meeting invitations were distributed via e-mail, project website, and social media. The meeting started at 5 p.m. as an open house with a formal presentation at 5:30 p.m. The project team was available after the presentation to answer questions from the public. The meeting concluded at 7 p.m. The purpose of the meeting was to introduce the project and project team, discuss the purpose and need and the scope of work for the project, and to obtain public input on the potential trail routes. A project fact sheet was available as a handout. A Criteria Ranking Form was included with the comment form to get the public's input on the criteria priority preference for selection of a preferred alternative. Comments cards were available for the public to leave behind or to send back to the project manager. Meeting notifications, materials, sign-in sheets, public comments, criteria ranking summary, and the presentation are included in **Appendix J**.

3.2.2 Final Public Meeting – October 24, 2019

A Final Public Meeting was held on October 24, 2019, at the Solomon Calhoun Community Center at 1300 Duval Street, St. Augustine, FL 32084. Meeting invitations were distributed via e-mail, project website, and social media. The meeting started at 5 p.m. as an open house with a formal presentation at 5:30 p.m. The project team was available after the presentation to answer questions from the public. The meeting concluded at 7 p.m. The purpose of the meeting was to present the final recommendation for the SUN-Trail route and to obtain public input on the final recommendation. A project fact sheet was available as a handout. Comments cards were available for the public to leave behind or to send back to the project manager. Meeting notifications, materials, sign-in sheets, public comments, and the presentation are included in **Appendix K**.

3.2.3 Other Related Public Involvement Efforts

In addition, other stakeholder involvement occurred during the study process independent of this study. These are documented in **Appendix L**.

3.2.4 City of St. Augustine Beach City Commission Meeting – November 4, 2019

The project was presented at the CoSAB City Commission Meeting on November 4, 2019, to request adoption of a resolution in support of the final recommendation "Preferred Alignment and Complimentary Route." Resolution 19-11 states "Expressing support for the preferred alignment presented for the proposed Florida Department of Transportation St. Johns River to Sea Loop Multi-Use Regional Trail Project Planning Study and adoption of Maintenance management of asset requirements." A copy of the adopted resolution is included in **Appendix M**.

3.2.5 City of St. Augustine City Commission Meeting – November 12, 2019

The project was presented at the CoSA City Commission Meeting on November 12, 2019, to request the adoption of a resolution in support of the final recommendation and facility maintenance agreement. Resolution 2019-45 states "A Resolution of the city commission of the City of St. Augustine, Florida, adopting the preferred alignment and complimentary route for St. Johns River to Sea Loop multi-use regional trail project planning study." Resolution 2019-46 states "A Resolution of the city commission of the City of St. Augustine, Florida, to agree to enter into a future maintenance agreement with the Florida Department of Transportation (FDOT) recognizing certain maintenance requirements as outlined in the attached FDOT memorandum of agreement's (Exhibits II & III) for the St. Johns River to Sea Loop multi-use trail preferred alignment and complementary route." A copy of the adopted resolutions is included in **Appendix N**.

3.2.6 St. Johns County Board of County Commissioners Meeting – November 19, 2019

The project was presented at the SJC Board of County Commissioners Meeting on November 19, 2019, to request the adoption of a resolution in support of the final recommendation. Resolution 2019-389 states "A resolution by the board of county commissioners of St. Johns County, Florida, adopting the preferred alignment and complementary route for the St. Johns River to Sea Loop multi-use regional trail project planning study." A copy of the adopted resolution is included in **Appendix O**.

4 Summary of Transportation Plans

4.1 FDOT Work Program

FDOT District 2 has several projects ongoing or planned within the planning study area. **Table 4-1** below shows the projects listed in the FDOT Five-Year Work Program.

Table 4-1 – FDOT Ongoing or Planned Projects

Roadway ID	Item Seg.	Description	Type of Work	Current Status	Trail Alignment Alternative	Adjacent / Crossing
78010000	437381-1	Install ITS Components and Upgrade Signals along US 1, City of St. Augustine	ATMS – Arterial Traffic Management	Candidate Line Item (Currently Unfunded)	CoSA-W-2a CoSA-W-2b CoSA-W-3 CoSA-W-4a CoSA-W-4b	Adjacent
78010000	433843-2	US 1 at Oyster Creek Bridge #780103	Replace or Widen BR Culvert	Pre-construction Underway	CoSA-W-3	Crossing
78010000	432406-1	US 1 from Lewis Point Road to SR 207	Traffic Signal Update	Pre-construction Underway	"CoSA-W-4a CoSA-W-4b"	Adjacent
78010000	436168-1	US 1 from SR 207 to City Gates	Resurfacing	Pre-construction Underway	"CoSA-W-4a CoSA-W-4b"	Adjacent
78010027	428271-2	SR 5A (A1A) King Street from Bridge of Lions to Charlotte Street	PD&E / EMO Study	Pre-construction Underway	CoSA-N	Adjacent
78010027	430897-1	SR 5A (King Street) from Malaga Street to Avenida Menendez (A1A)	Drainage Improvements	ROW Acquisition Beg.	CoSA King Street Master Plan	Adjacent
78010027	434039-1	SR 5A (USB 1) at San Sebastian River Bridge #780003	PD&E / EMO Study	Candidate Line Item (Currently Unfunded)	CoSA King Street Master Plan	Adjacent
78010027	443554-1	SR A1A (Avenida Menendez) from King Street to Castillo de San Marcos	Pedestrian Safety Improvement	Candidate Line Item (Currently Unfunded)	CoSA-N	Adjacent
78010027	437428-1	US 1 (SR 5A) over St. Sebastian River Bridge #780003	Bridge Replacement	Pre-construction Underway	CoSA King Street Master Plan	Adjacent
78040000	437374-1	SR A1A at Mary Street – Adding Left-turn Lane from A1A to Mary Street	Add Left-turn Lane(s)	Pre-construction Underway	SJC-S	Adjacent
78040000	443303-1	SR A1A at Riverside Boulevard	Add Left-turn Lane(s)	Candidate Line Item (Currently Unfunded)	SJC-S	Adjacent
78040000	432142-1	SR A1A Bridge of Lions #780074	Bridge Painting	Pre-construction Underway	CoSA-N	Adjacent
78040000	433842-1	SR A1A Bridge of Lions at Matanzas River Bridge #780074	Bridge Painting	Under Construction	CoSA-N	Adjacent
78051000	432893-1	Hastings Road Near Dobbs Road in St. Augustine Railroad Crossing 271891R	Rail Safety Project	Candidate Line Item (Currently Unfunded)	SJC-W-1	Crossing
78051000	445546-1	SR 207 from I-95 to SR 312	Resurfacing	Candidate Line Item (Currently Unfunded)	SJC-W-1	Adjacent
78051000	429065-1	SR 207 from SR 207 to West SR 207	Landscaping	Pre-construction Underway	SJC-W-1	Adjacent
78051000	439763-1	SR 207 from Wildwood Drive to CR 5A (South Dixie Highway)	Lighting	Line Item Completed	SJC-W-1	Adjacent

4.2 Funding Sources

One of the primary goals of this planning study is to review potential alignment alternatives of a multi-use trail in accordance with guidelines of the SUN Trail program. The program provides funding for developing a statewide system of paved shared-use trails for bicyclists and pedestrians. FDOT defines the SUN trail as a 10- to 12-foot-wide paved path that is physically separated from vehicular traffic.

To receive consideration for SUN Trail funding, a completed funding request must be submitted that complies with SUN Trail Funding eligibility. The regulations include:

1. The project is developed as a paved multi-use trail within the SUN Trail network, which is aligned to the Florida Greenways and Trails System (FGTS) Priority Land Trail Network.
2. The project is included as a priority project designated by the North Florida Transportation Planning Organization (TPO).
3. A non-FDOT governmental entity is formally committed to the operation and maintenance of the project (long-term trail manager).
4. The project is consistent with the applicable comprehensive plan(s), transportation plan(s), or the long-term management plan(s).

While SUN Trail funding is the primary funding source for paved trails in Florida, additional sources could be sought for the purposes of health, recreation, mobility, environment, community development, and equity. The additional funding sources could include federal, state, local, government agencies, corporations, or foundations. FDOT is not planning to exercise eminent domain to acquire ROW for building standalone trail projects. If there are not willing sellers, the result may be an inability to construct a trail. As such, this fact weighs heavily in the consideration of alternatives.

4.3 Previous / Ongoing Planning Studies

The following list provides previous and / or ongoing planning studies related to the northern segment of the SUN Trail-SJR2C Loop through the County based on information provided by the respective jurisdictional agencies. SJC does not currently have a dedicated bicycle / pedestrian or mobility plan.

First Coast Regional Greenways & Trails Plan
Prepared for First Coast Metropolitan Planning Organization (MPO)
Prepared by Sprinkle Consulting, Inc.
Date: September 2006

St. Johns County Rails with Trails Planning Study
Prepared for St. Johns County
Prepared by Vanasse Hangen Brustlin, Inc.
Date: April 30, 2009

St. Johns River-to-Sea Loop Trail Status Update
Prepared for FDOT D2 / D5 and East Coast Greenway Alliance
Prepared by England-Thims & Miller, Inc.
Date: September 2011

Bicycle Plan for St. Augustine, Florida
Prepared for North Florida TPO
Prepared by Sprinkle Consulting, Inc.
Date: December 2011

Conceptual Enhancement Plan (A1A / Beach Boulevard) at St. Augustine Beach
Prepared for St. Johns County
Prepared by Stone Engineering Group, Inc.
Date: August 2016

Multi-Use Trail Planning Study (SR 207 to Ponte Vedra)
Prepared for St. Johns County
Prepared by Ayres Associates Inc
Date: December 2016

St. Johns County Transit Development Plan 2016 Major Update
Prepared for St. Johns County, The Sunshine Bus Company, and the North Florida TPO
Prepared by England-Thims & Miller, Inc.
Date: October 2016

St. Johns County Transportation Disadvantaged Service Plan 2016–2021
Prepared for St. Johns County Transportation Disadvantaged Local Coordinating Board with assistance from Northeast Florida Regional Council
Date: June 2017

Bike-Ped Gap Study
Prepared for FDOT District 2
Date: March 2018

St. Johns River-To-Sea Loop Strategic Plan
Prepared for East Central Florida Regional Planning Council and SJR2C Loop Alliance
Prepared by ECFRPC
Date: May 2018

Oyster Creek Neighborhood Study
Prepared for City of St. Augustine
Prepared by Pond & Company
Date: January 2019

City of St. Augustine Mobility Plan
Prepared for City of St. Augustine
Prepared by NUE Urban Concepts, LLC
Date: Ongoing

King Street at San Sebastian Bridge Replacement PD&E
Prepared for FDOT District 2
Prepared by Infrastructure Engineers, Inc.
Date: Ongoing

King Street Master Plan
Prepared for City of St. Augustine
Prepared by S&ME, Inc.
Date: Ongoing

West King Street Planning Study
Prepared for St. Johns County
Prepared by WGI, Inc.
Date: Ongoing

Northeast Florida Regional Multi-Use Trails Master Plan
Prepared for the North Florida TPO
Prepared by Atkins North America, Inc.
Date: Ongoing

5 Existing Conditions

5.1 Study Area Description

The planning study area was divided into four segments based on respective defined jurisdictional authority limits and related geographical, transportation, social, and environmental characteristics. Within respective segments are potential trail alignment alternatives that will be considered, presented as follows:

Segment 1 – SJC-W. Includes alignment alternatives from the existing Palatka to St. Augustine Trail at SR 207 / I-95 to CoSA (Segment 2). The alignment alternatives within Segment 1 include:

Alignment	On	From	To
SJC-W-1a	SR 207	Existing Trailhead	Vermont Boulevard
SJC-W-1b	Vermont Boulevard	SR 207	Existing Trail
	SR 207	Vermont Boulevard	Mussallem Trailhead Easement Access
SJC-W-1c	Mussallem Trailhead Easement Access	US 207	Existing Trail
SJC-W-1d	St. Johns Street, Duval Street, Osceola Elementary Road	US 207	West King Street
SJC-W-1	SR 207	Mussallem Trailhead Easement Access	US 1
SJC-W-2	Florida East Coast (FEC) Railroad Corridor	Existing Trail	West King Street
SJC-W-3	Allen Nease Road	Existing Trail	CR 214
	CR 214	Allen Nease Road	Holmes Boulevard
	West Kings Boulevard	FEC Railroad Corridor	South Whitney Street
SJC-W-3a	South Holmes Boulevard	West King Street	FEC Railroad Corridor
	FEC Railroad Corridor	Holmes Boulevard	West King Street
SJC-W-3b	West King Street	Holmes Boulevard	FEC Railroad Corridor

Segment 2 – CoSA. Includes alignment alternatives from Segment 1 into and out of the CoSA to CoSAB (Segment 3). The alignment alternatives within Segment 2 include:

Alignment	On	From	To
CoSA-W-1a	West King Street	South Whitney Street	Pellicer Lane
CoSA-W-1b	North Bank of Oyster Creek	West King Street	Pellicer Lane / South Dixie Highway
	South Bank of Lake Connecting Oyster Creek and San Sebastian River	Pellicer Lane / South Dixie Highway	US 1
CoSA-W-2a	US 1	West King Street	Lewis Boulevard
CoSA-W-2b	Behind Properties on East Side of US 1	West King Street	US 1
CoSA-W-3	US 1	Lewis Boulevard	SR 207
CoSA-W-4a	US 1	SR 207	SR 312
	SR 312	US 1	Sgt. Tutten Drive
CoSA-W-4b	US 1 / Arapaho Avenue / Nix Boat Yard Road	SR 207	SR 312
CoSA-S	SR 312	Sgt. Tutten Drive	Plantation Island Drive
	Mizell Road	Plantation Island Drive	Pope Road
	Pope Road	Mizell Road	SR A1A
CoSA-Sa	SR 312	Plantation Island Drive South	Mizell Road
	Mizell Road	SR 312	Plantation Island Drive South
CoSA-Sb	Plantation Island Drive	SR 312	Mizell Road
CoSA-N	Bridge of Lions / Anastasia Boulevard	Avenida Menendez	Anastasia Park Road
CoSA-N-1	SR A1A	Anastasia Park Road	Santander Street
CoSA-N-1a	Behind Businesses at Anastasia Boulevard / SR A1A and Anastasia Park Road	Anastasia Park Road	Anastasia Boulevard / SR A1A
CoSA-N-2	Through West Edge of Anastasia Park	Park Road	A1A Beach Boulevard
CoSA-N-1b	Santander Street	A1A Beach Boulevard	Pope Road
CoSA-N-1c	A1A Beach Boulevard	Santander Street	Pope Road

Segment 3 – CoSAB. Includes alignment alternatives from Segment 2 into and out CoSAB to SR A1A (Segment 4). The alignment alternatives within Segment 3 include:

Alignment	On	From	To
CoSAB-1	Mickler Boulevard	Pope Road	A Street
CoSAB-1a	A Street	Mickler Boulevard	A1A Beach Boulevard
CoSAB-1b	Mickler Boulevard	A Street	F Street
	F Street	Mickler Boulevard	A1A Beach Boulevard
CoSAB-2	A1A Beach Boulevard	Pope Road	SR A1A
	SR A1A	A1A Beach Boulevard	CoSAB Boundary Line
CoSAB-3	Beachfront – Parallel to SR A1A	Pope Road	A1A Beach Boulevard

Segment 4 – SJC-S. Includes alignment from Segment 3 along SR A1A going south and terminating at the St. Johns / Flagler County line. The alignment alternative within Segment 4 includes:

Alignment	On	From	To
SJC-S	SR A1A	CoSAB Boundary Line	St. Johns County Boundary Line

5.1.1 Existing Land Use

The SJC zoning file was reviewed to determine existing land uses adjacent to respective trail alignment alternatives for Segment 1 – SJC-W and Segment 4 – SJC-S. The FDOT District 2 existing land use file was used to determine existing land uses adjacent to the trail alignment alternatives for Segment 2 – CoSA and Segment 3 – CoSAB. The categories from the two sources were generalized with common land use categories for consistency and commonality throughout the planning study area. The existing land use across the planning study area is shown by **Figure 5-1**.

Segment 1 – SJC-W

The majority of Segment 1 in SJC-W is in rural open agriculture and vacant land with some areas of residential, commercial, and industrial. The tables below show the land uses for each alignment within Segment 1 by percentage of land within 300 feet of the proposed trail.

	SJC-W-1	SJC-W-1a	SJC-W-1b	SJC-W-1c	SJC-W-1d
Acreage Not Zoned for Agriculture / Open Rural	20%	78%	30%	96%	32%
Vacant / Planned Development	31%	-	9%	2%	2%
Residential	10%	22%	59%	-	61%
Commercial	38%	-	1%	2%	6%
Other / No Value	1%	-	-	-	-

	SJC-W-2	SJC-W-3	SJC-W-3a	SJC-W-3b
Acreage Not Zoned for Agriculture / Open Rural	42%	86%	18%	5%
Vacant / Planned Development	31%	11%	79%	88%
Residential	20%	2%	-	-
Commercial	7%	1%	3%	6%

Segment 2 – CoSA

The areas near the trail alignment alternatives in Segment 2 in the CoSA include a variety of land uses, with the majority being residential or commercial. The trail alignment alternative CoSA-N-2 traverses through Anastasia State Park. The tables below show the land uses for each alignment within Segment 2 by percentage of land within 300 feet of the proposed trail.

	CoSA-W-1a	CoSA-W-1b	CoSA-W-2a	CoSA-W-2b	COSA-W-3	CoSA-W-4a	CoSA-W-4b
Residential	30%	29%	48%	31%	31%	3%	6%
Commercial	12%	7%	35%	47%	31%	68%	50%
Public	32%	30%	1%	1%	1%	1%	4%
Vacant / Planned Development	10%	5%	7%	5%	8%	10%	7%
Acreage Not Zoned for Agriculture / Open Rural	-	-	-	-	-	8%	21%
Industrial	4%	-	-	-	-	1%	2%
Institutional	4%	2%	-	-	-	1%	2%
Other / No Value	8%	27%	9%	15%	29%	7%	9%

	"CoSA King St. Master Plan"	CoSA-N	CoSA-N-1	CoSA-N-1a	CoSA-N-1b	CoSA-N-1c	CoSA-N-2
Residential	28%	35%	50%	24%	14%	3%	22%
Commercial	25%	25%	27%	37%	-	-	32%
Public	10%	4%		1%	19%	2%	
Vacant / Planned Development	9%	9%	4%	8%	8%	3%	1%
Recreation	-	2%	4%	11%	30%	67%	39%
Acreage Not Zoned for Agriculture / Open Rural	-	-	-	-	11%	-	-
Industrial	4%	-	-	-	-	-	-
Institutional	18%	1%	1%	2%	-	-	--
Other / No Value	5%	23%	14%	18%	17%	24%	5%

Segment 3 – CoSAB

The CoSAB is highly residential near the trail alignment alternatives in Segment 3 with extensive commercial land in this area. The table below shows the land uses for each alignment within Segment 3 by percentage of land within 300 feet of the proposed trail.

	CoSA-S	CoSA-Sa	CoSA-Sb
Residential	18%	6%	19%
Commercial	11%	13%	13%
Public	18%	31%	18%
Vacant / Planned Development	12%	24%	29%
Recreation	10%	0%	0%
Acreage Not Zoned for Agriculture / Open Rural	7%	0%	0%
Industrial	0%	0%	0%
Institutional	1%	0%	9%
Other / No Value	24%	26%	13%

Segment 4 – SJC-S

The potential trail alignment along SR A1A in Segment 4 – SJC-S is mostly residential on the northern end and open acreage. The trail alignment in this area traverses through the Fort Matanzas National Monument area. The table below shows the land uses for each alignment within Segment 4 by percentage of land within 300 feet of the proposed trail.

	SJC-S
Residential	47%
Acreage Not Zoned for Agriculture / Open Rural	25%
Commercial	15%
Vacant / Planned Development	13%
Public	1%

5.1.2 Socioeconomic Data

Socioeconomic data from the American Community Survey (ACS) five-year estimates for 2017 were analyzed for block groups within the planning study area. The trail alignment alternatives intersect 32 block groups in SJC. Within these groups, the population is approximately 60,700 with 23,600 households. The population is 48% male and 52% female. The planning study area is home to people of all ages: 15% are younger than 18 years old; 12% are ages 18 – 24; 11% are ages 25 – 34; 11% are ages 35 – 44; 13% are ages 45 – 54; 16% are ages 55 – 64; and 22% are ages 65 or older.

The median household income within the planning study area is approximately $60,000 annually in 2017 dollars, according to the ACS. The population is 87% Caucasian and 13% minority. Most residents speak only English (93%). Approximately 4% of the population speak Spanish and 3% speak other languages. Approximately 90% of residents whose first language is not English speak English “very well” or “well.”

Segment 1 – SJC-W

The SJC-W trail alignment alternatives intersect 11 block groups. Within these block groups, the population is 48% male and 52% female. The ages of the population within these block groups includes: 19% less than 18 years, 12% between 18 – 24 years, 13% between 25 – 34 years, 11% between 35 – 44 years, 13% between 45 – 54 years, 15% between 55 – 64 years, and 18% age 65 and over.

The median household income in 2017 dollars is approximately $50,000. The population is 82% Caucasian and 18% minority. Most residents speak only English (94%). Approximately 4% of the population speak Spanish and 2% speak other languages. Approximately 88% of the residents whose first language is not English speak English “very well” or “well.”

Segment 2 – CoSA

The CoSA trail alignment alternatives intersect 10 block groups. Within these block groups, the population is 47% male and 53% female. The ages of the population within these block groups includes: 13% less than 18 years, 17% between 18 – 24 years, 12% between 25 – 34 years, 11% between 35 – 44 years, 12% between 45 – 54 years, 14% between 55 – 64 years, and 21% age 65 and over.
The median household income in 2017 dollars is approximately $51,000. The population is 88% Caucasian and 12% minority. Most residents speak only English (92%). Approximately 5% of the population speak Spanish and 2% speak other languages. Approximately 92% of the residents whose first language is not English speak English “very well” or “well.”

Segment 3 – CoSAB

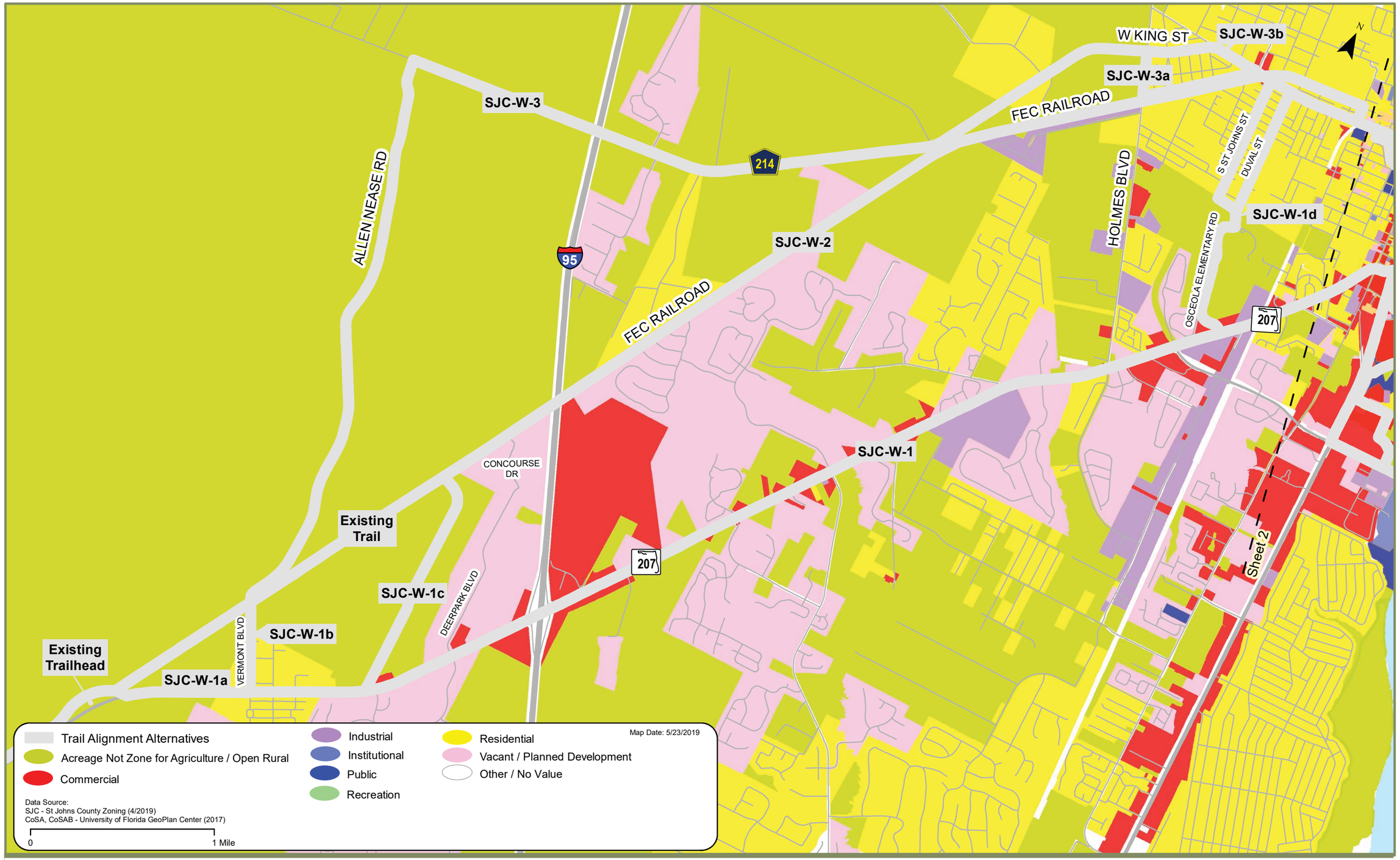
The CoSAB trail alignment alternatives intersect 5 block groups. Within these block groups, the population is 51% male and 49% female. The ages of the population within these block groups includes: 14% less than 18 years, 10% between 18 – 24 years, 8% between 25 – 34 years, 12% between 35 – 44 years, 13% between 45 – 54 years, 13% between 55 – 64 years, and 29% age 65 and over.

The median household income in 2017 dollars is approximately $84,000. The population is 97% Caucasian and 3% minority. Most residents speak only English (91%). Approximately 3% of the population speak Spanish and 6% speak other languages. Approximately 83% of the residents whose first language is not English speak English “very well” or “well.”

Segment 3 – SJC-S

The SJC-S trail alignment alternatives intersect 6 block groups. Within these block groups, the population is 50% male and 50% female. The ages of the population within these block groups includes: 10% less than 18 years, 5% between 18 – 24 years, 6% between 25 – 34 years, 7% between 35 – 44 years, 13% between 45 – 54 years, 22% between 55 – 64 years, and 37% age 65 and over.

The median household income in 2017 dollars is approximately $72,000. The population is 98% Caucasian and 2% minority. Most residents speak only English (94%). Approximately 2% of the population speak Spanish and 4% speak other languages. Approximately 90% of the residents whose first language is not English speak English “very well” or “well.”

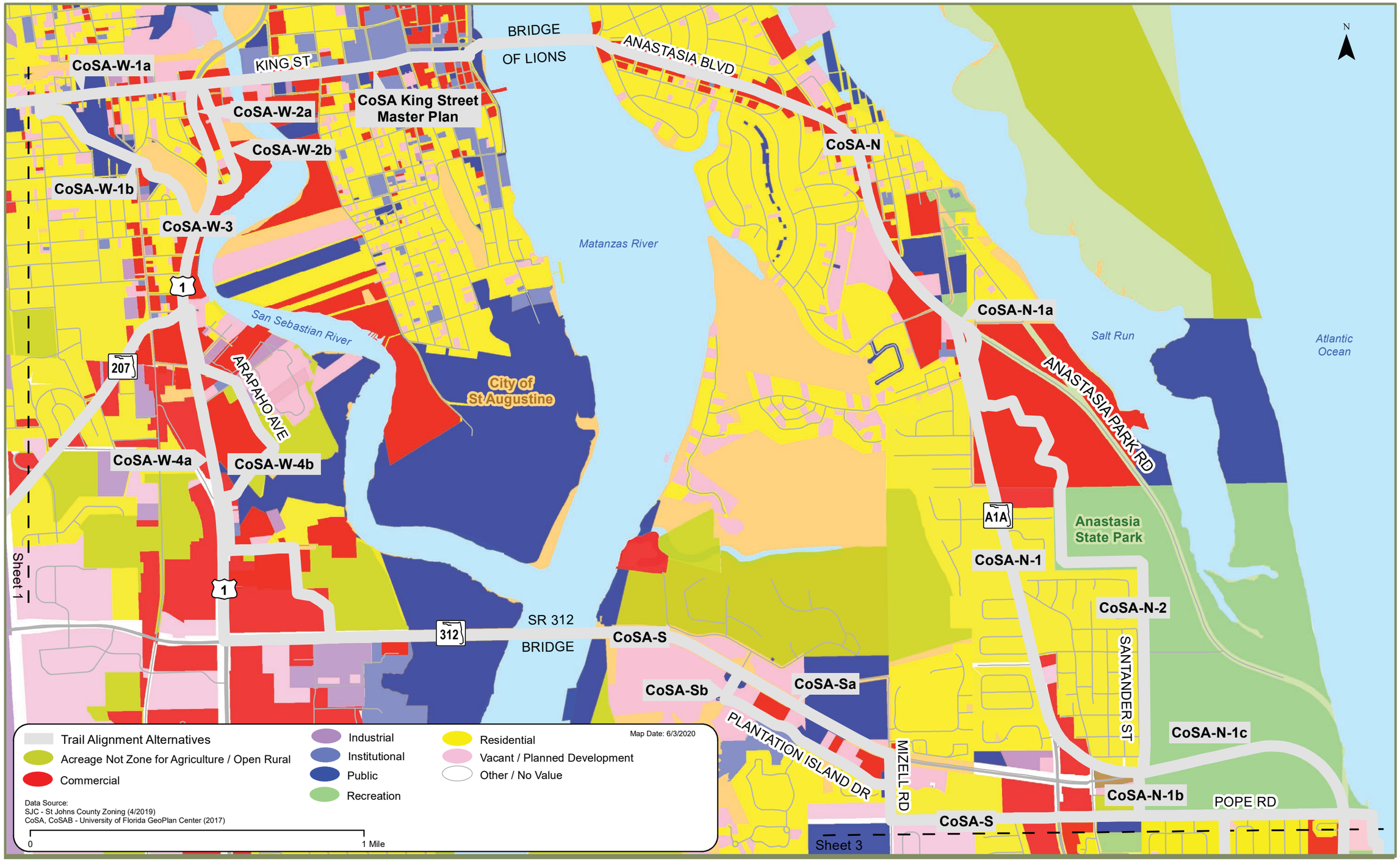


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Existing Land Use

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 5-1
SHEET 1 OF 4

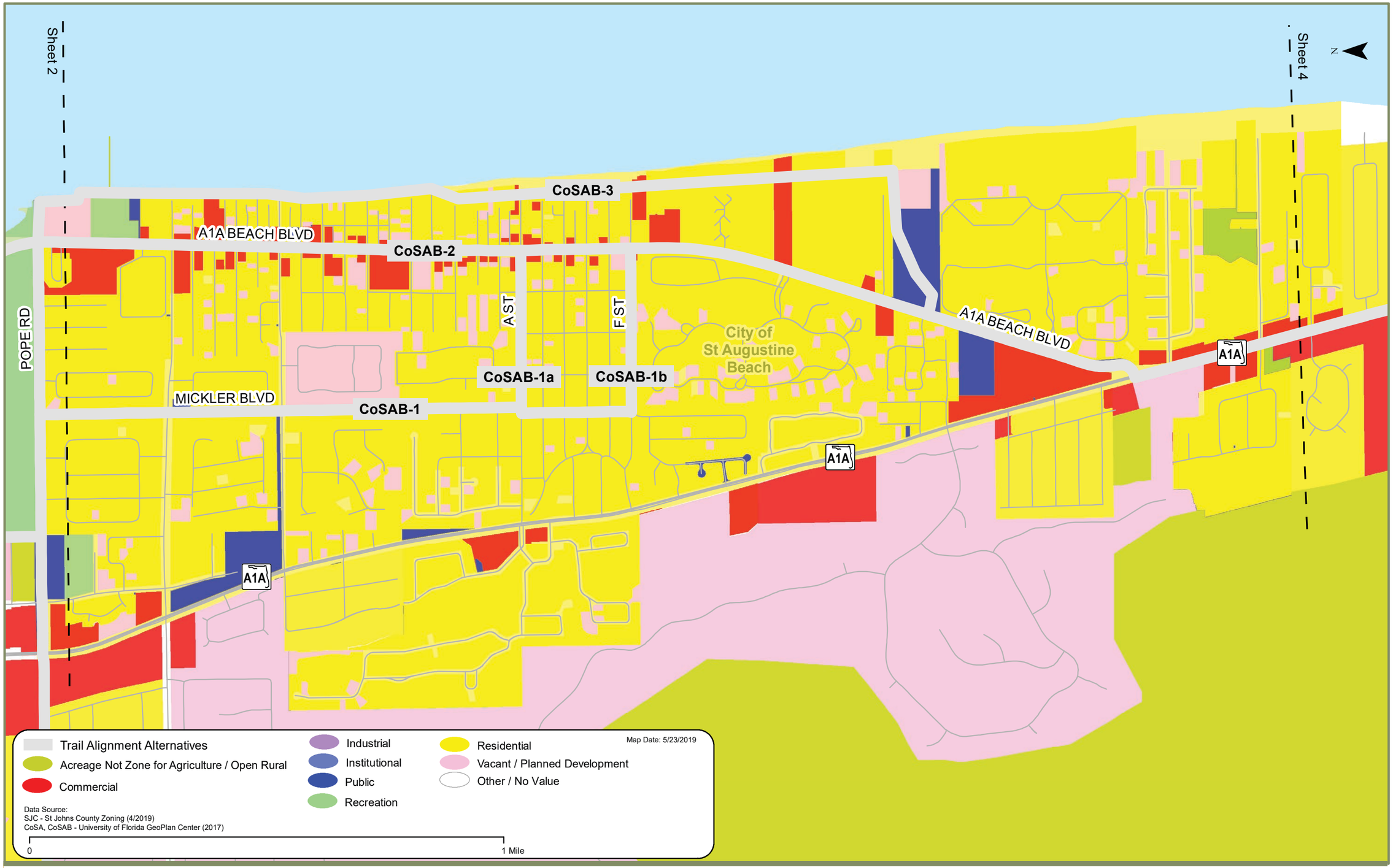


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Existing Land Use

Segment 2 - City of St. Augustine (CoSA)

FIGURE 5-1
SHEET 2 OF 4

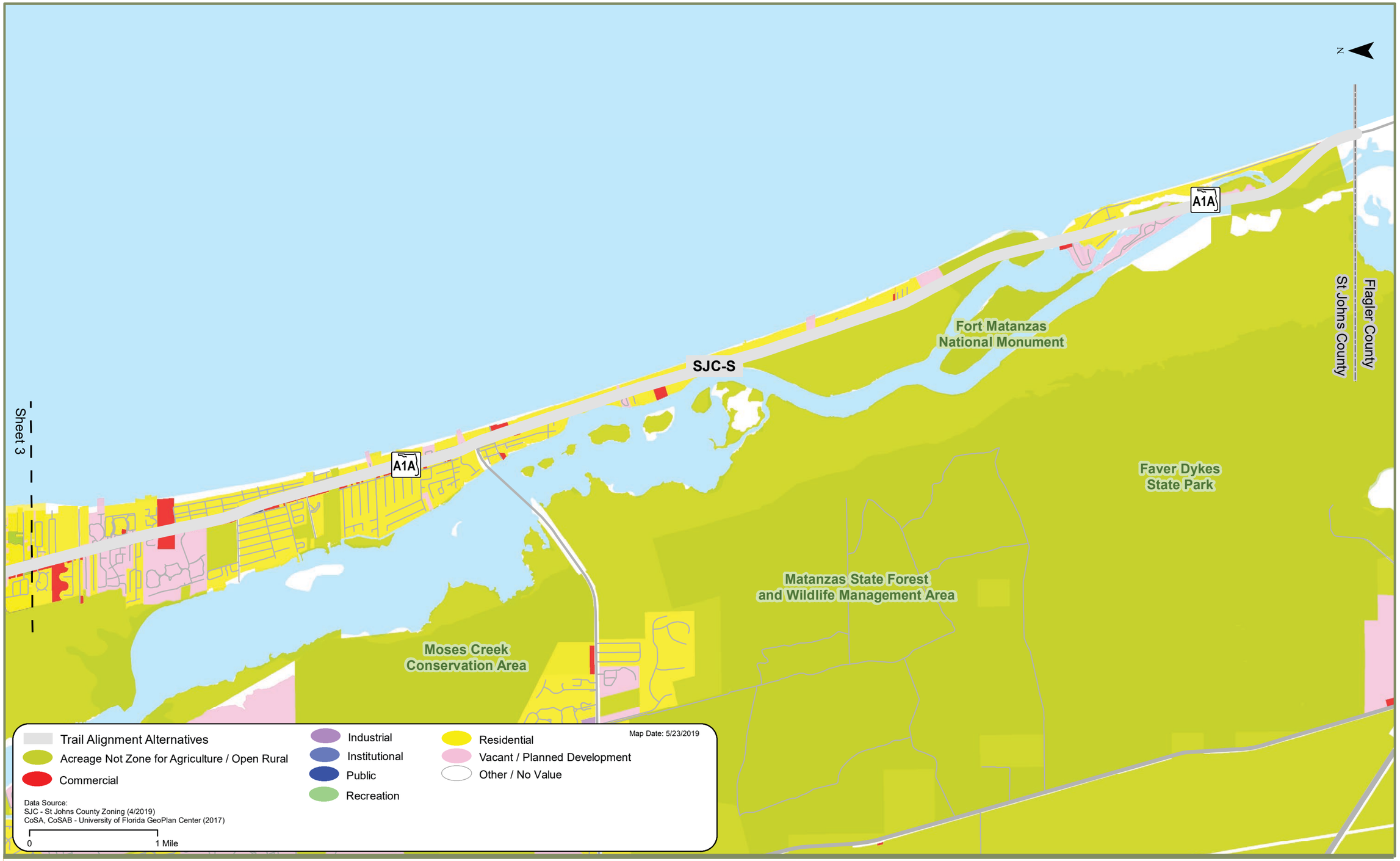


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Existing Land Use

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE
5-1
SHEET 3 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Existing Land Use

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-1
SHEET 4 OF 4

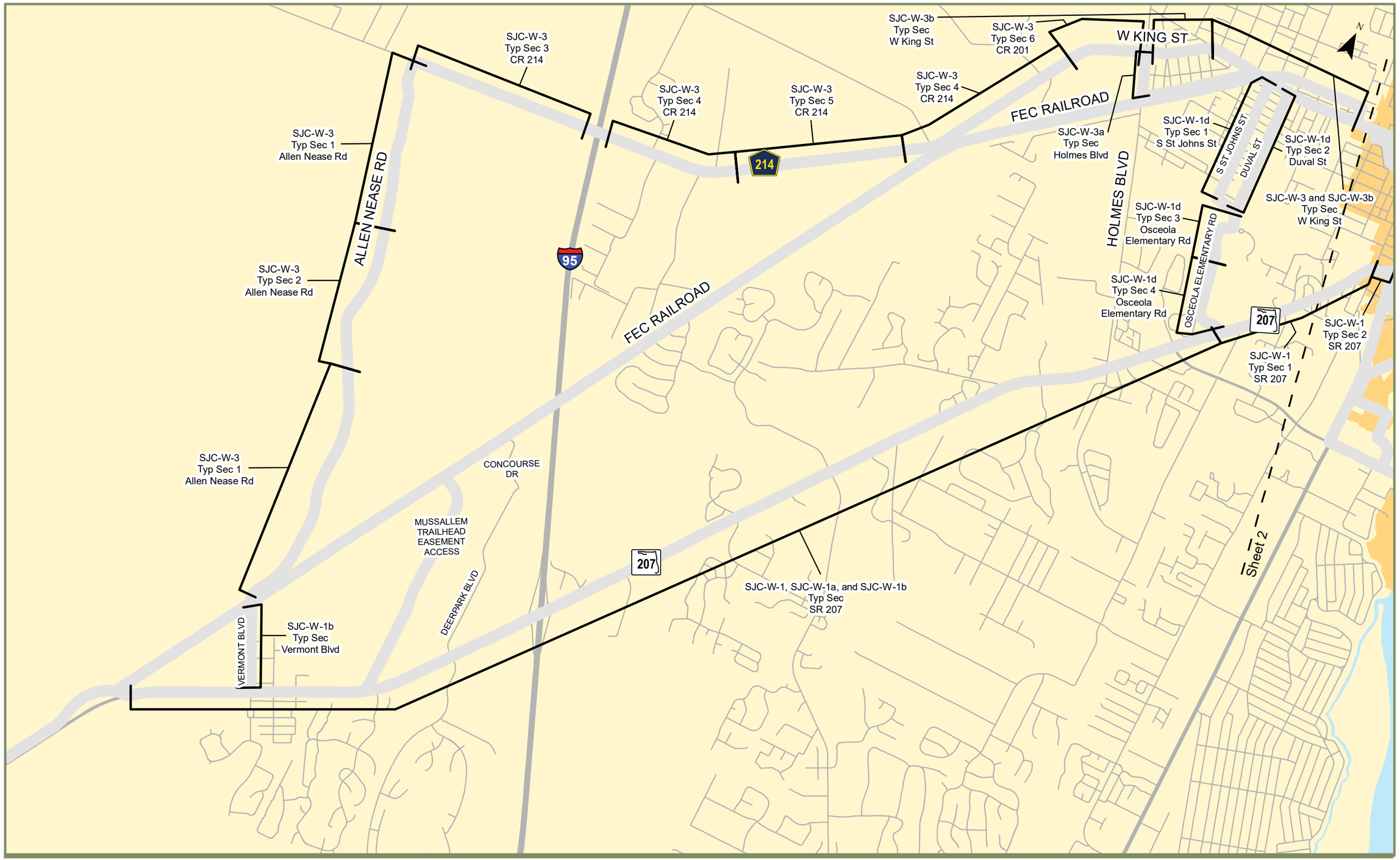
5.2 Summary of Existing Facility

Several data sources were used to evaluate the existing facilities within the planning study area, including as-built plan sets, right-of way-maps, and datasets from several agencies that publish geographic and environmental data. The source is described within each section and summarized in **Appendix A**.

5.2.1 Existing Typical Sections

Existing roadway alternative corridors typical section key maps and drawings for each of the four segments is included as **Appendix B**. A Typical Section Overview Map is provided for each segment that references specific locations followed by respective typical section drawings. The typical section drawings were developed using as-built roadway plans provided by respective jurisdictional authorities and / or on-line aerial / mapping services. For convenience, the typical section overview maps are also provided as point of reference on following pages by **Figure 5-2**.

Typical sections of the FEC Railway ROW were developed by a previous planning study prepared by others. Please refer to **Appendix C** for typical section information related to the FEC ROW.

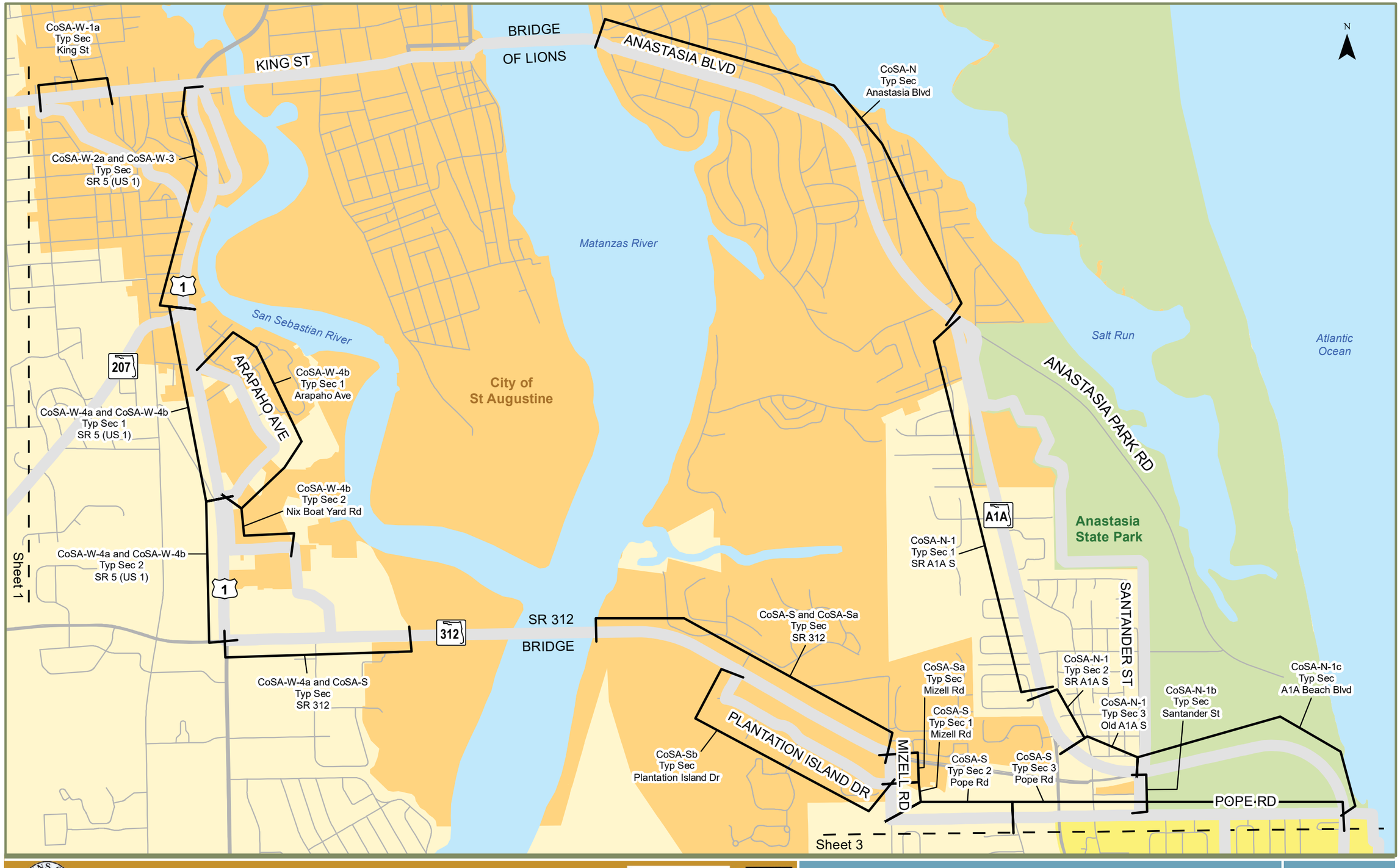


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Typical Section Overview Map

Segment 1 - St. Johns County - West (SJC-W)

FIGURE
5-2
SHEET 1 OF 4

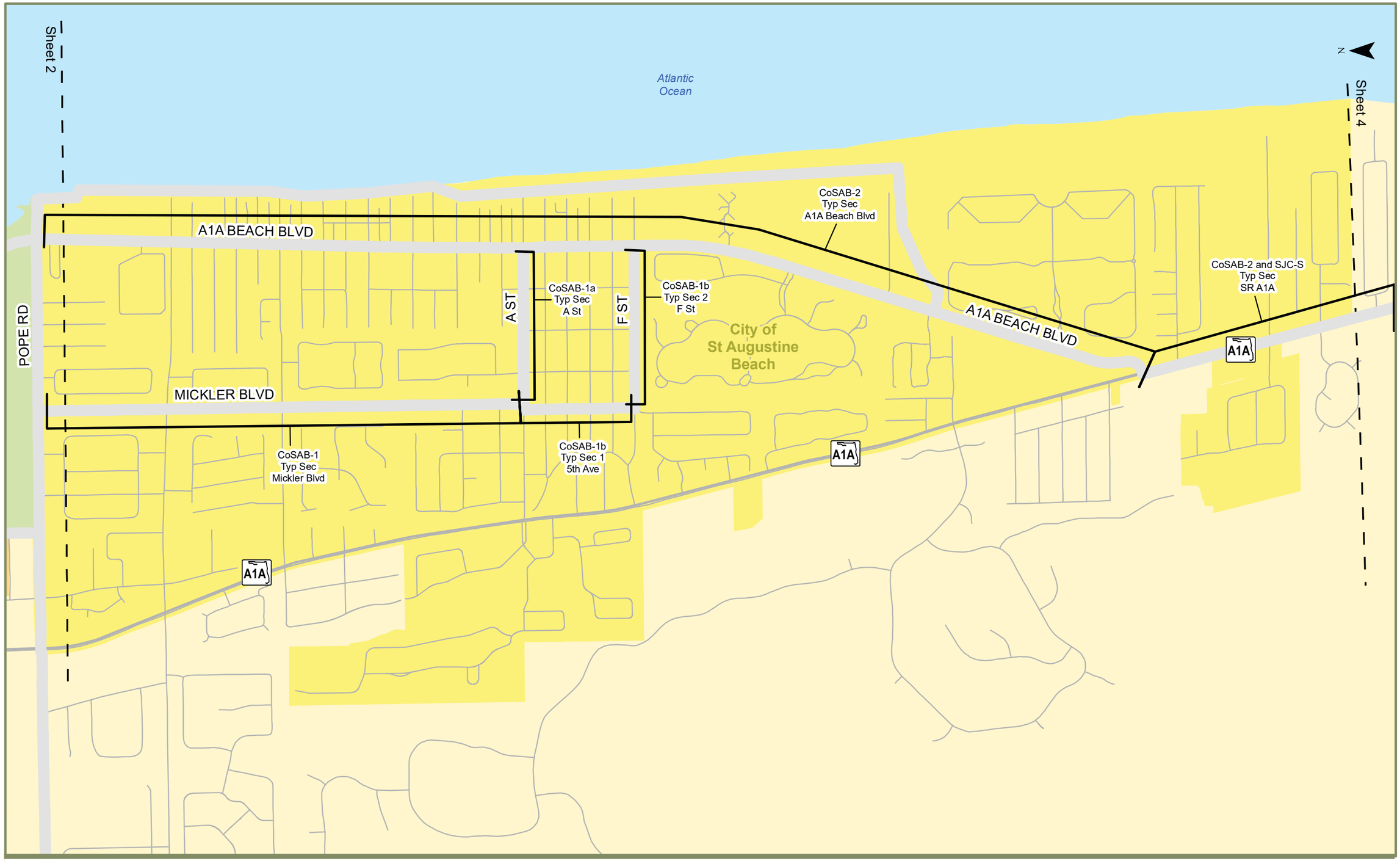


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Typical Section Overview Map

Segment 2 - City of St. Augustine (CoSA)

FIGURE
5-2
SHEET 2 OF 4


Sheet 2
Atlantic Ocean
N
Sheet 4
A1A BEACH BLVD
CoSAB-2
Typ Sec
A1A Beach Blvd
CoSAB-2 and SJC-S
Typ Sec
SR A1A
POPE RD
A ST
CoSAB-1a
Typ Sec
A St
F ST
CoSAB-1b
Typ Sec 2
F St
City of
St Augustine
Beach
A1A BEACH BLVD
MICKLER BLVD
CoSAB-1
Typ Sec
Mickler Blvd
CoSAB-1b
Typ Sec 1
5th Ave
A1A
A1A

SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Typical Section Overview Map

Segment 4 - St. Johns County - South (SJC-S)

FIGURE
5-2
SHEET 4 OF 4

5.2.2 Posted Speed

The traffic speed on roadways parallel to a multi-use trail is an important safety aspect for trail users. The posted speed limits on roads parallel to the trail alignment alternatives were reviewed and are shown by **Figure 5-3.** The summary for each trail alignment alternative is described in the tables below.

Segment 1 – SJC-W

Alignment	Speed Limit
SJC-W-1a	55
SJC-W-1b	25 - 55
SJC-W-1c	N/A (Park)
SJC-W-1d	25
SJC-W-1	45
SJC-W-2	N/A (FEC Rail)
SJC-W-3a	35
SJC-W-3b	35
SJC-W-3	35 - 55

Segment 2 – CoSA

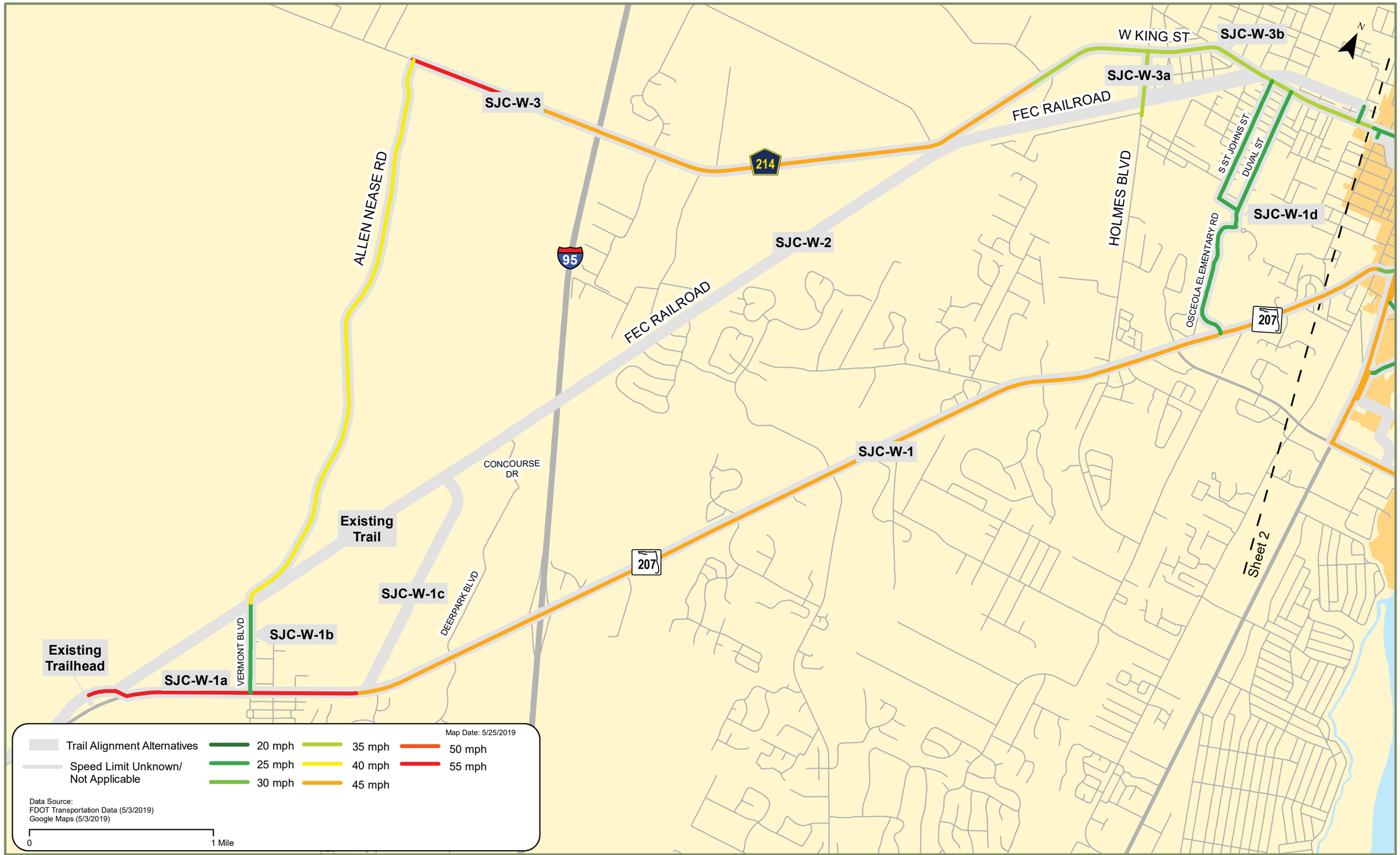
Alignment	Speed Limit
CoSA-W-1a	25
CoSA-W-1b	N/A (Greenspace)
CoSA-W-2a	35 - 45
CoSA-W-2b	25
CoSA-W-3	45
CoSA-W-4a	45
CoSA-W-4b	25
CoSA-S	25 - 50
CoSA-Sa	55
CoSA-Sb	25
CoSA-N	30 - 40
CoSA-N-1	40 - 45
CoSA-N-1a	N/A (Park)
CoSA-N-1b	20
CoSA-N-1c	45
CoSA-N-2	N/A (Park)

Segment 3 – CoSAB

Alignment	Speed Limit
CoSAB-1	25
CoSAB-1a	25
CoSAB-1b	25
CoSAB-2	35
CoSAB-3	N/A (Beachfront)

Segment 4 – SJC-S

Alignment	Speed Limit
SJC-S	40 - 55

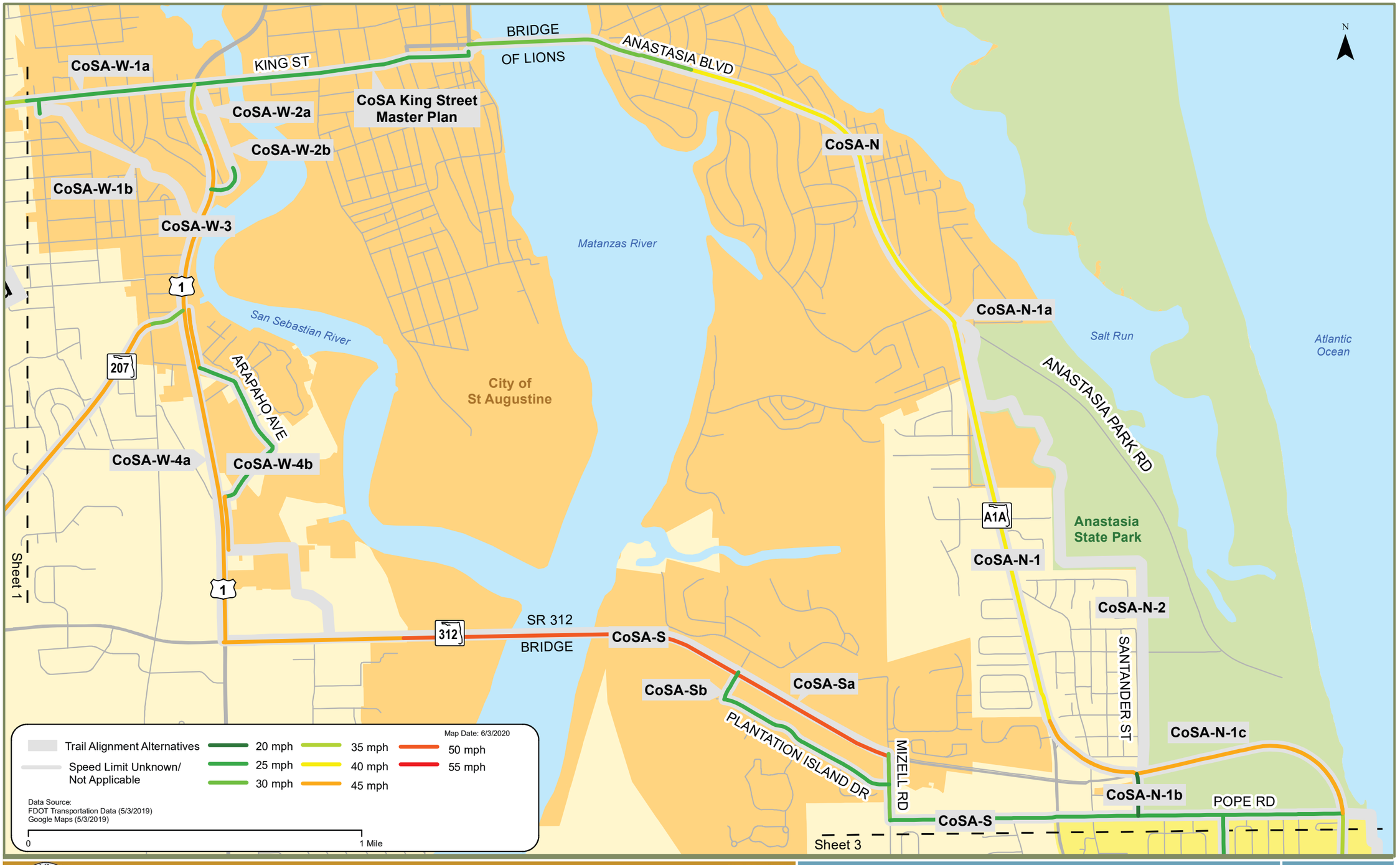


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Posted Speed Limit

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 5-3
SHEET 1 OF 4

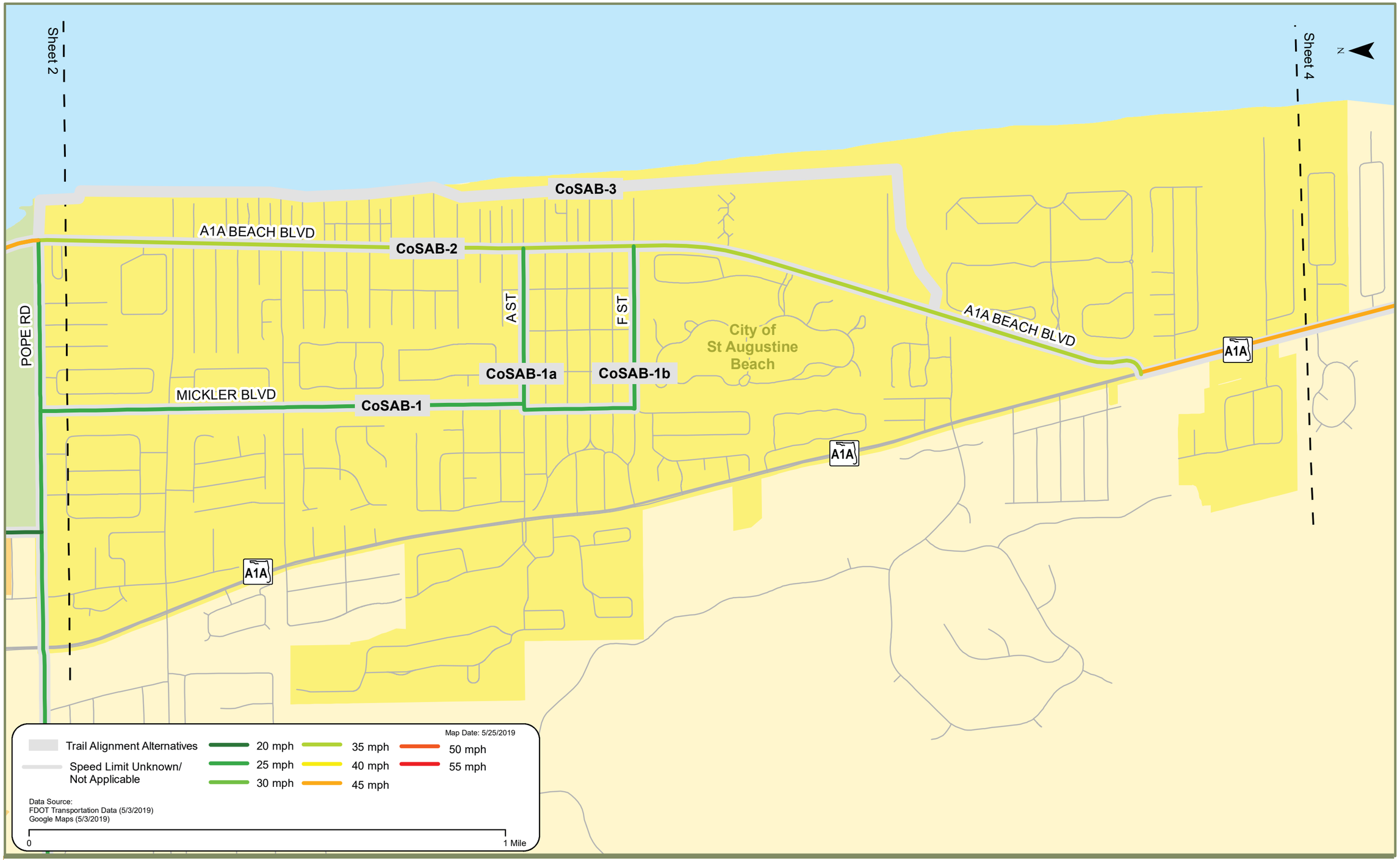


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Posted Speed Limit

Segment 2 - City of St. Augustine (CoSA)

FIGURE
5-3
SHEET 2 OF 4


Sheet 2
Sheet 4
N
CoSAB-3
A1A BEACH BLVD
CoSAB-2
POPE RD
A ST
F ST
City of
St Augustine
Beach
A1A BEACH BLVD
A1A
CoSAB-1a
CoSAB-1b
MICKLER BLVD
CoSAB-1
A1A
A1A
Map Date: 5/25/2019
Trail Alignment Alternatives
Speed Limit Unknown/
Not Applicable
20 mph
25 mph
30 mph
35 mph
40 mph
45 mph
50 mph
55 mph
Data Source:
FDOT Transportation Data (5/3/2019)
Google Maps (5/3/2019)
0
1 Mile

SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Posted Speed Limit

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-3
SHEET 4 OF 4

5.2.3 Functional Classification

Functional classification involves FDOT's assignment of the state's streets and highways into classes according to the character of service they provide. Roadways are grouped into five functional classification categories, from highest to lowest use. Categories include: principal arterial, minor arterial, major collector, minor collector, and local. The categories are used for both rural and urban roads, a property of the roadway determined by the Federal Highway Administration (FHWA) urban area boundaries. The functional classification for roadways of the trail alignment alternatives are described below and shown by **Figure 5-4**.

Segment 1 – SJC-W

SR 207, from the existing trailhead to Wildwood Drive, is classified by FDOT as a principal arterial in a rural area; this road segment coincides with the SJC-W-1a alternative, approximately half of the SJC-W-1b alternative, and a major segment of the SJC-W-1 alternative. The remaining segment of the SJC-W-1 trail alignment along SR 207 from Wildwood Drive to US 1 is defined as a principal arterial in an urban area.

A section of the SJC-W-3 trail alignment alternative follows along CR 214, which is considered a minor collector in a rural area from Allen Nease Road to Holmes Boulevard. After Holmes Boulevard, CR 214 becomes King Street, a minor collector in an urban area, and includes the SJC-W-3b alternative.

Additionally, some small segments along potential trail alternatives are defined as major collectors in an urban area; this includes Holmes Boulevard from King Street to the FEC Railroad Corridor and Rodriguez Street from Railroad Street to King Street.

Segment 2 – CoSA

For this segment, many of the trail alignment alternatives fall along roadways that are classified by FDOT as minor arterials in an urban area. This includes SR A1A from the Bridge of Lions to just north of SR 312, covering the entire CoSA-N alternative and a major segment of the CoSA-N-1 alternative. SR 312 also has this classification from US 1 to Mizell Road, encompassing a small segment of CoSA-W-4a, a major segment of CoSA-S, and CoSA-Sa.

The CoSA-W-1a alternative is on a segment of King Street, a minor collector in an urban area. Along US 1, from King Street to SR 312, the road is considered a principal arterial in an urban area. This section of US 1 includes the CoSA-W-2a, CoSA-W-3, and CoSA-W-4a trail alignment alternatives. The CoSA-N-1c alternative is at the start of A1A Beach Boulevard, a major collector in an urban area.

Segment 3 – CoSAB

The section of A1A Beach Boulevard that goes from Pope Road to the intersection of SR A1A is defined as a major collector in an urban area; it makes up most of the CoSAB-2 trail alignment alternative. The remaining fragment of the trail alternative is along SR A1A where it is considered a minor arterial in an urban area.

The only other trail alignment alternative in this segment with a functional classification from FDOT was the CoSAB-1a alternative. This alternative is on A Street from A1A Beach Boulevard to Mickler Boulevard, which is classified as a major collector in an urban area.

Segment 4 – SJC-S

The SJC-S trail alignment alternative is entirely along SR A1A, which is classified by FDOT as a minor arterial in an urban area until just south of the bridge over the Matanzas River when it becomes a minor arterial in a rural area.

5.2.4 Access Management

Access management refers to the regulation of interchanges, intersections, driveways, and median openings to a roadway. The objective is to enable access to land uses while maintaining roadway safety and mobility through controlling access location, design, spacing, and operation. Access management classifications and standards were obtained from the FDOT 2014 Median Opening Handbook and are defined in **Table 5-1**. These standards are also mirrored in the SJC Land Development Code Section 6.04.05. Access Class 2, 3, and 4 roadways are not extensively developed and are less restrictive of vehicles crossing the roadway. Access Class 5 and 6 roadways are extensively developed, with Class 5 representing restrictive roadways and Class 6 representing non-restrictive roadways. The FDOT provides access management classifications along FDOT-maintained roads. An overview of the access management classifications within the planning study area are shown by **Figure 5-5**.

Segment 1 – SJC-W

SR 207 from the existing trailhead to I-95 is a Class 3, covering the SJC-W-1a trail alignment alternative and sections of the SJC-W-1 and SJC-W-1b alternatives. From I-95 to SR 312, SR 207 is a Class 5, and from SR 312 to US 1, SR 207 is Class 6.

The following trail alternatives did not have an assigned access management classification: SJC-W-1b on Vermont Boulevard, SJC-W-1c, SJC-W-1d, SJC-W-2, SJC-W-3, SJC-W-3a, and SJC-W-3b.

Segment 2 – CoSA

SR 312 from US 1 to Mizell Road is a Class 2; however, it is Limited Access ROW. This portion of the road covers most of the CoSA-S and CoSA-Sa trail alignment alternatives and a small portion of the CoSA-W-4a alternative.

For the CoSA-W trail alignment alternative, US 1 from King Street to SR 312 is a Class 5, which includes the alignments for CoSA-W-2a, CoSA-W-3, and most of CoSA-W-4a.

A major part of the CoSA-N alternative beginning at the Bridge of Lions and continuing to Anastasia Park Road is a Class 5. Along the CoSA-N-1 alternative on SR A1A from Anastasia Park Road to just north of SR 312, the road is a Class 6.

There was no access management classification available for the remaining trail alternatives in Segment 2, including the section of CoSA-S from Mizell Road to A1A Beach Boulevard and the section of CoSA-N-1 from SR A1A to A1A Beach Boulevard.

Segment 3 – CoSAB

A minor fragment of the CoSAB-2 trail alternative along SR A1A from A1A Beach Boulevard to the border of St. Augustine Beach is a Class 5. All additional trail alignment alternatives in this segment, including the remaining section of CoSAB-2 from Pope Road to SR A1A, did not have access management classifications.

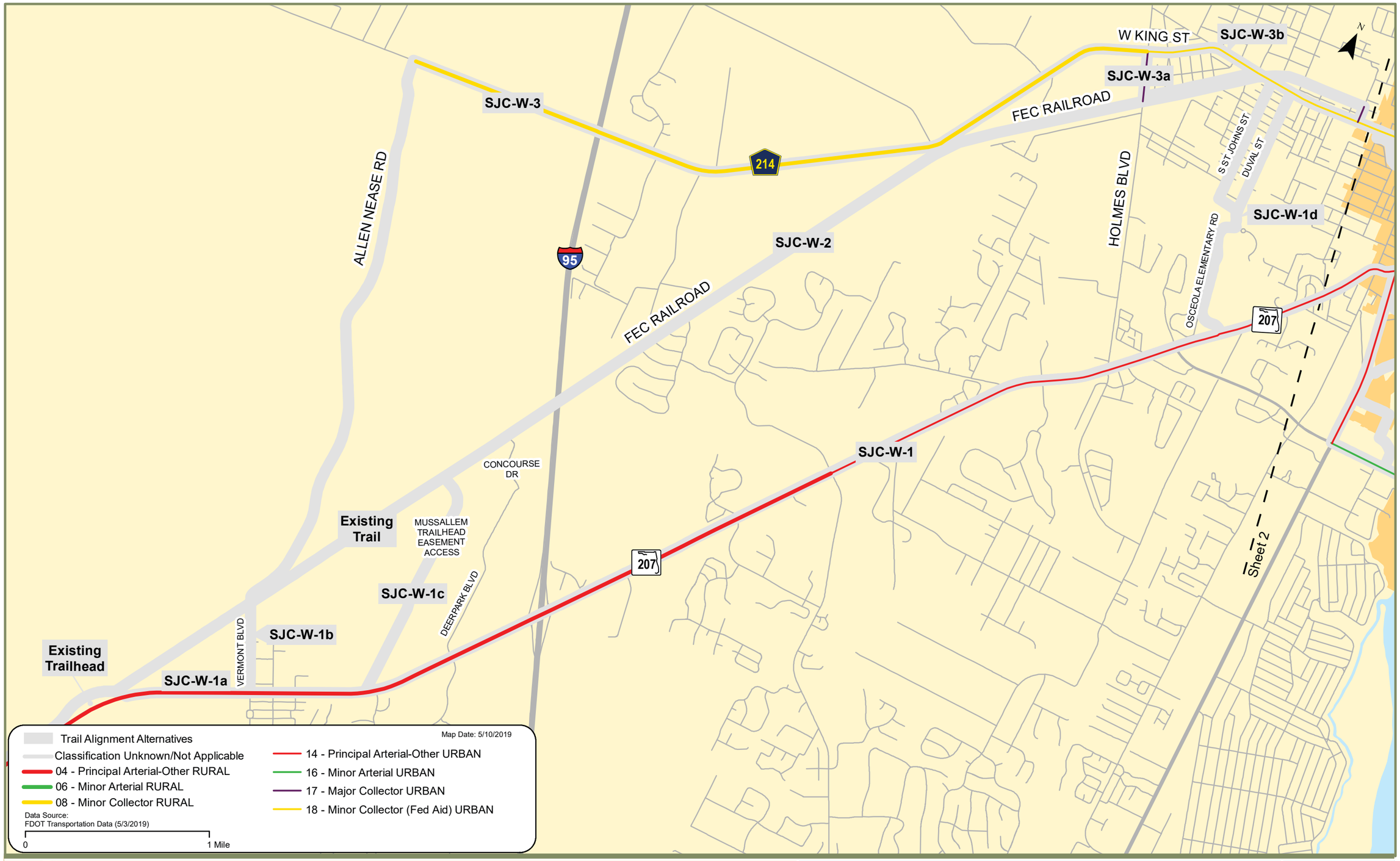
Segment 4 – SJC-S

The SJC-S trail alignment alternative on SR A1A is split into three access management classifications: from the St. Augustine Beach border to SR 206 is a Class 5, a Class 6 extending just south of the bridge over the Matanzas River, and a Class 4 from the bridge to the St. Johns / Flagler County line.

Table 5-1 – Access Management Classifications and Standards

Class	Median	Median Opening Spacing (feet)		Signal Spacing (feet)	Connection Spacing (feet)	
		Full	Directional		More than 45 mph Posted Speed	45 mph and less Posted Speed
2	Restrictive with Service Roads	2,640	1,320	2,640	1,320	660
3	Restrictive	2,640	1,320	2,640	660	440
4	Non-Restrictive			2,640	660	440
5	Restrictive	2,640 at greater than 45 mph Posted Speed	660	2,640 at greater than 45 mph Posted Speed	440	245
		1,320 at 45 mph or less Posted Speed		1,320 at 45 mph or less Posted Speed		
6	Non-Restrictive			1,320	440	245

Source: FDOT 2014 Median Opening Handbook

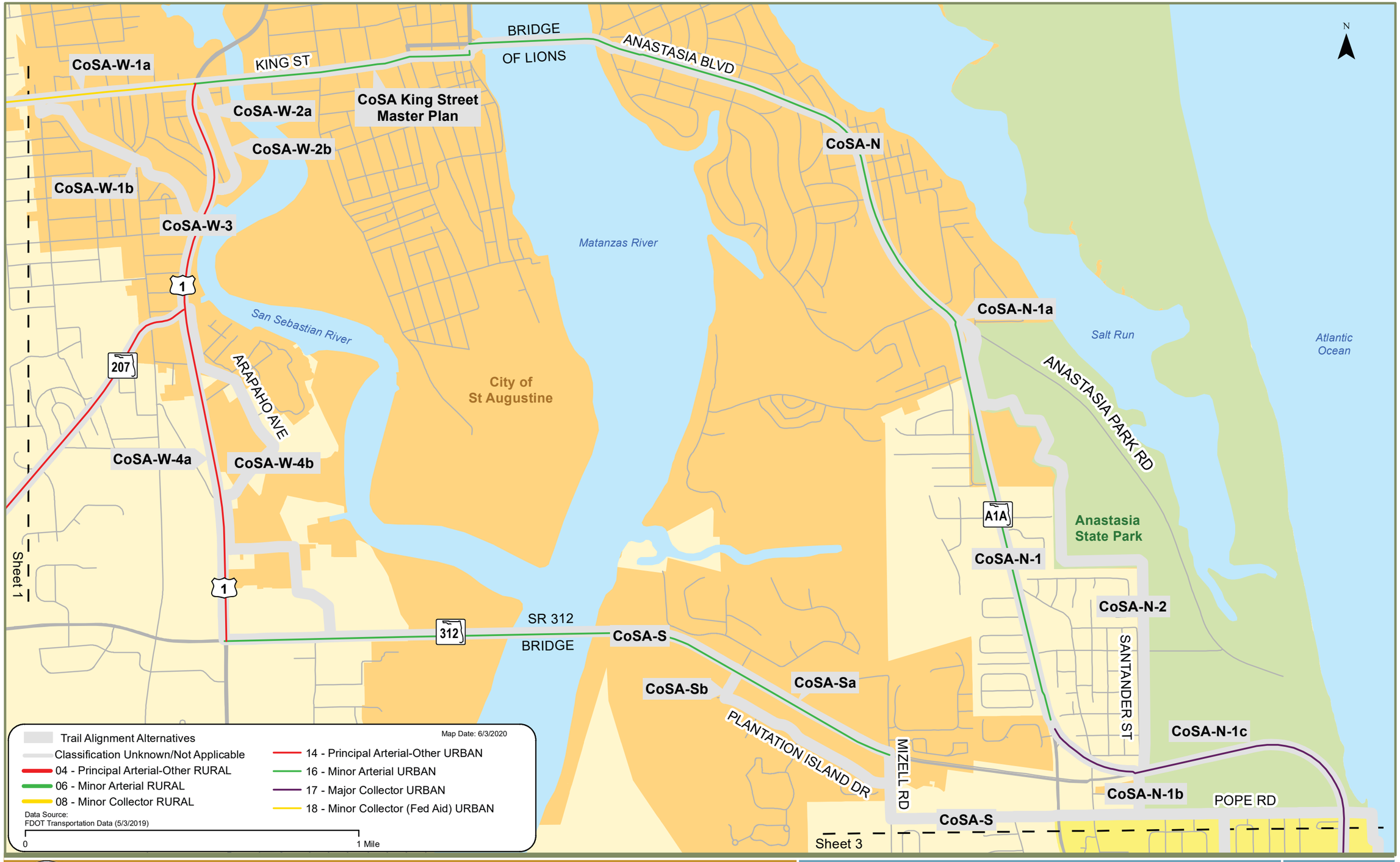


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Functional Classification

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 5-4
SHEET 1 OF 4

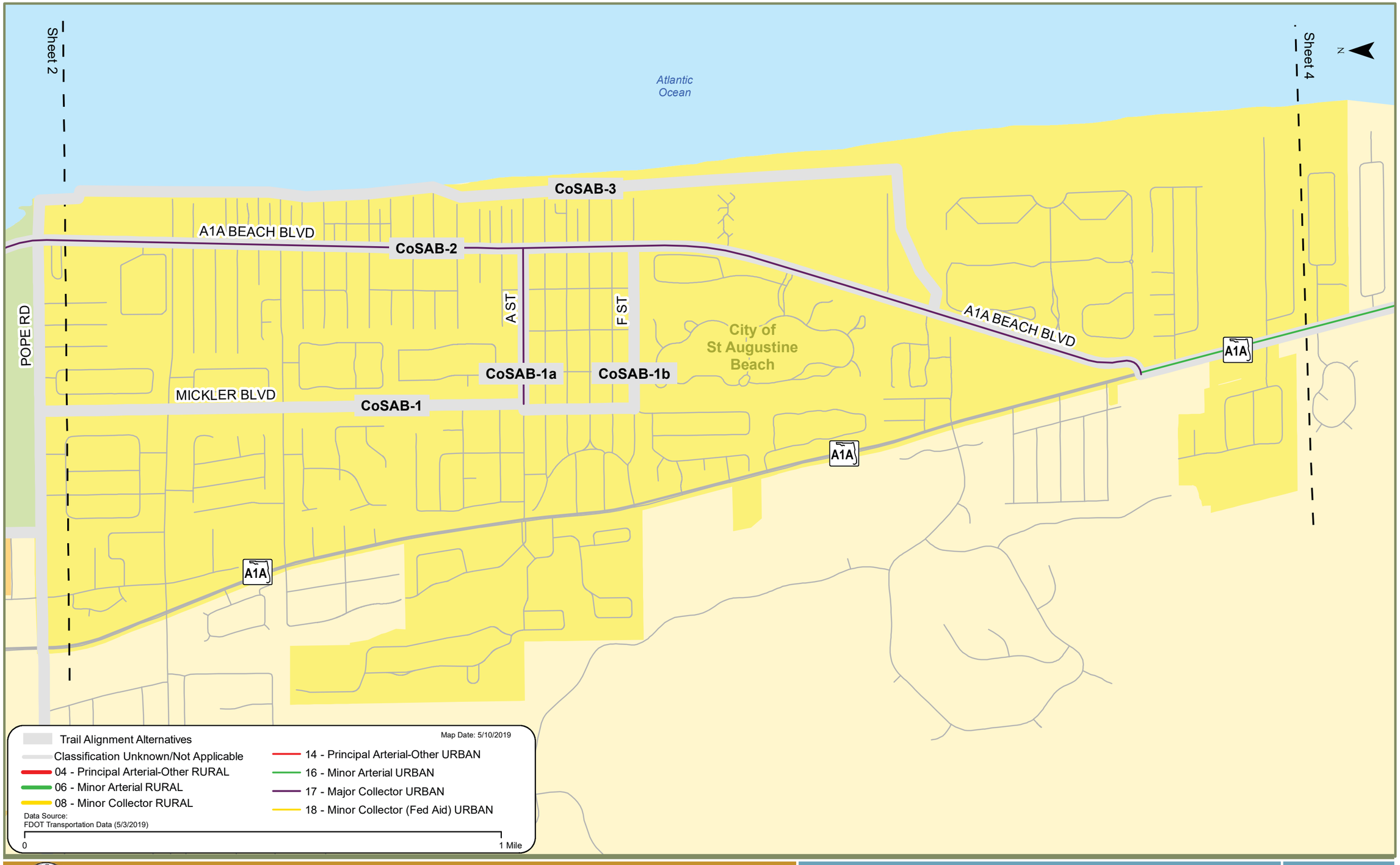


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Functional Classification

Segment 2 - City of St. Augustine (CoSA)

FIGURE 5-4
SHEET 2 OF 4

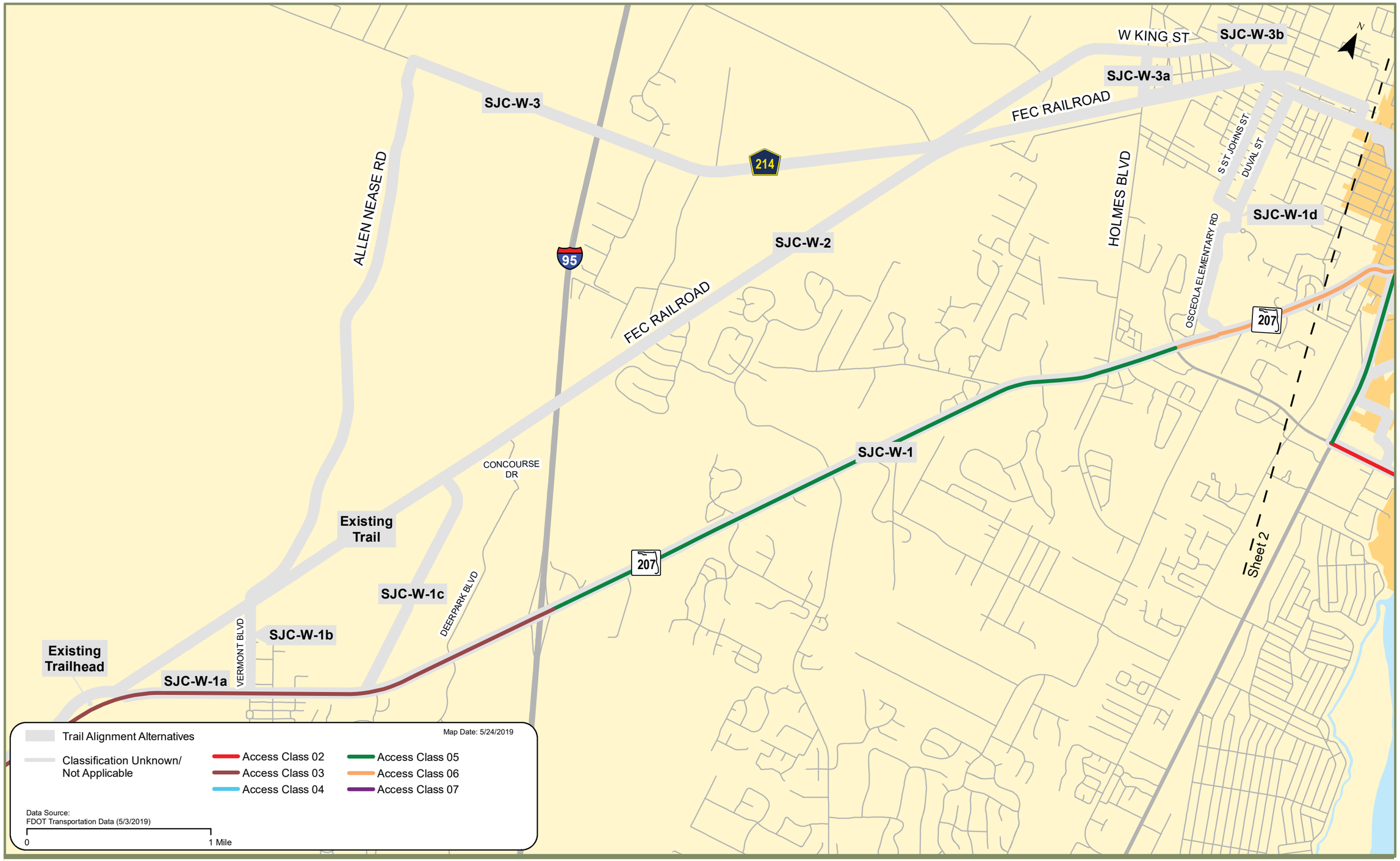

Sheet 2
Sheet 4
N
Atlantic Ocean
CoSAB-3
A1A BEACH BLVD
CoSAB-2
POPE RD
A ST
F ST
City of St Augustine Beach
A1A BEACH BLVD
A1A
CoSAB-1a
CoSAB-1b
MICKLER BLVD
CoSAB-1
A1A
A1A
Trail Alignment Alternatives
Classification Unknown/Not Applicable
04 - Principal Arterial-Other RURAL
06 - Minor Arterial RURAL
08 - Minor Collector RURAL
Map Date: 5/10/2019
14 - Principal Arterial-Other URBAN
16 - Minor Arterial URBAN
17 - Major Collector URBAN
18 - Minor Collector (Fed Aid) URBAN
Data Source:
FDOT Transportation Data (5/3/2019)
0
1 Mile

SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Functional Classification

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-4
SHEET 4 OF 4

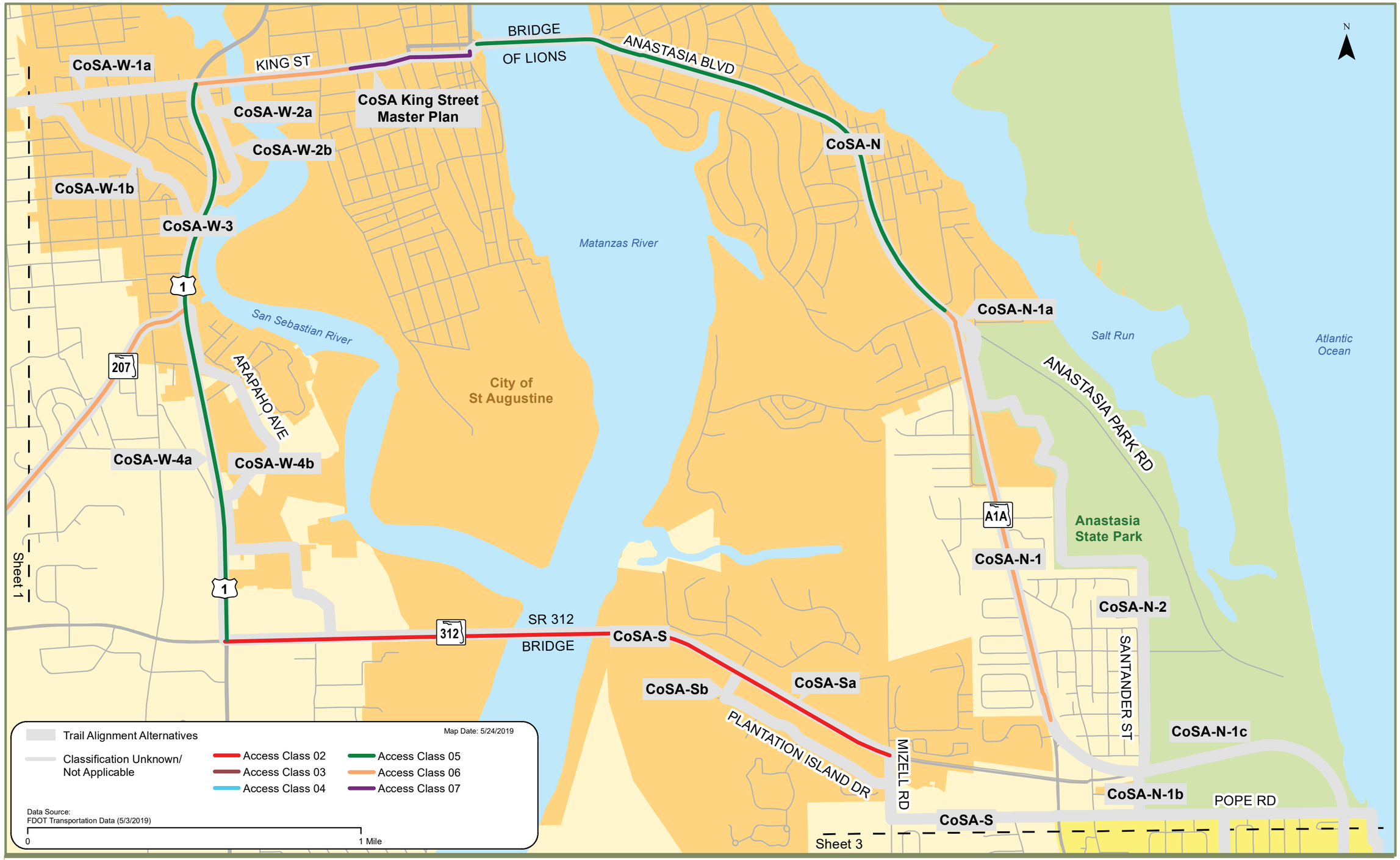


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Access Classification

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 5-5
SHEET 1 OF 4

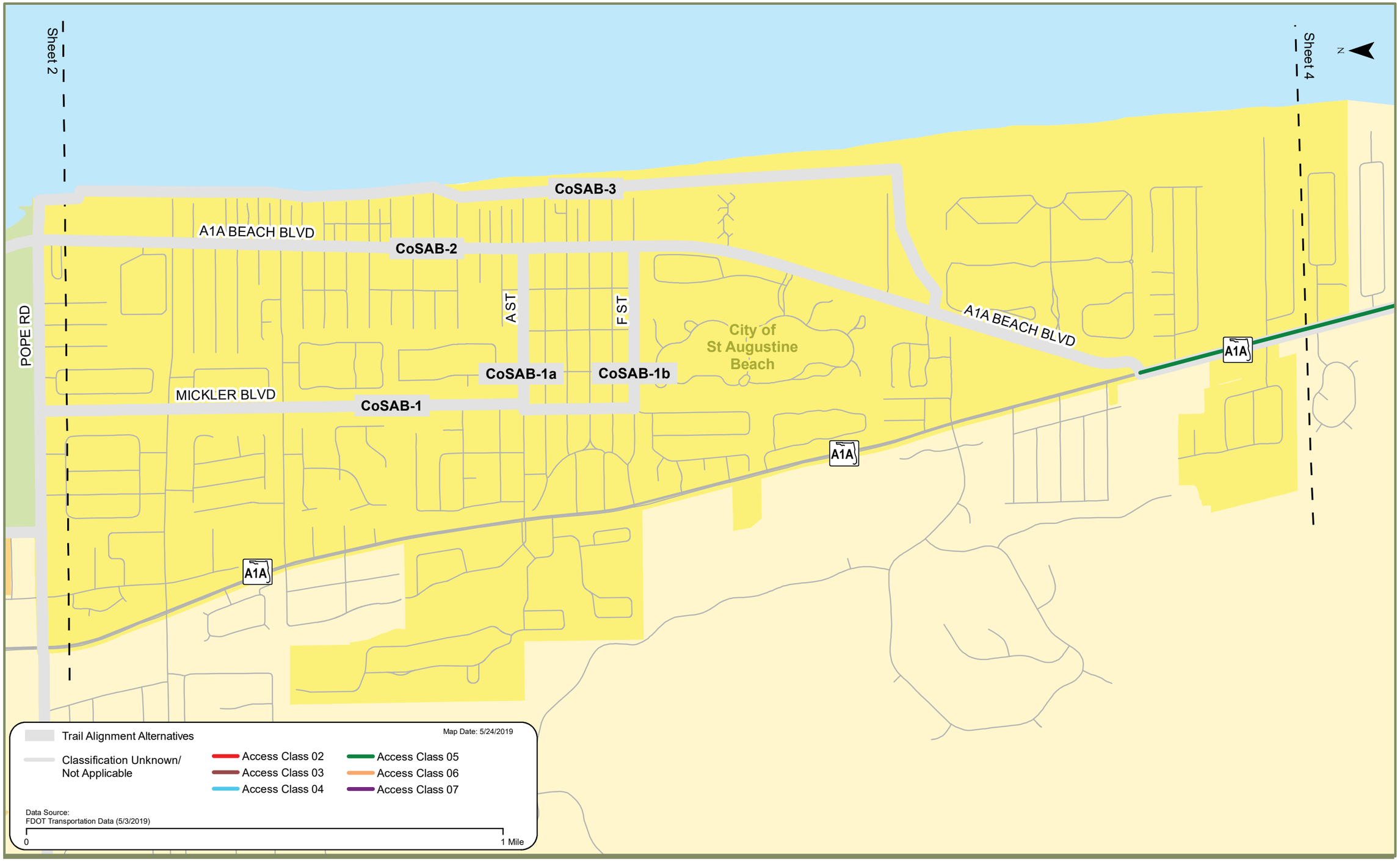


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Access Classification

Segment 2 - City of St. Augustine (CoSA)

FIGURE
5-5
SHEET 2 OF 4


Sheet 2
Sheet 4
N
CoSAB-3
A1A BEACH BLVD
CoSAB-2
POPE RD
A ST
F ST
City of
St Augustine
Beach
A1A BEACH BLVD
A1A
CoSAB-1a
CoSAB-1b
MICKLER BLVD
CoSAB-1
A1A
A1A
Trail Alignment Alternatives
Classification Unknown/
Not Applicable
Access Class 02
Access Class 03
Access Class 04
Access Class 05
Access Class 06
Access Class 07
Map Date: 5/24/2019
Data Source:
FDOT Transportation Data (5/3/2019)
0
1 Mile

SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Access Classification

Segment 4 - St. Johns County - South (SJC-S)

FIGURE
5-5
SHEET 4 OF 4

5.2.5 Right-of-way

The SJC parcel boundaries and respective jurisdictional agency provided information were used to determine ROW along the trail alignment alternatives. The ROW widths are summarized in the tables below.

Segment 1 – SJC-W

Alignment	On	From	To	ROW Width
SJC-W-1a	SR 207	Existing Trailhead	Vermont Boulevard	100 feet
SJC-W-1b	Vermont Boulevard	US 207	Existing Trail	70 - 80 feet
	SR 207	Vermont Boulevard	Mussallem Trailhead Easement Access	80 - 100 feet
SJC-W-1c	Mussallem Trailhead Easement Access	US 207	Existing Trail	N/A (Park)
SJC-W-1d	St. Johns Street, Duval Street, Osceola Elementary Road	US 207	West King Street	30 - 60 feet
SJC-W-1	SR 207	Mussallem Trailhead Easement Access	US 1	80 - 175 feet
SJC-W-2	FEC Railroad Corridor	Existing Trail	West King Street	60 - 110 feet
SJC-W-3	Allen Nease Road	Existing Trail	CR 214	60 feet
	CR 214	Allen Nease Road	Holmes Boulevard	70 - 100 feet
	West King Street	FEC Railroad Corridor	South Whitney Street	40 - 70 feet
SJC-W-3a	South Holmes Boulevard	West King Street	FEC Railroad Corridor	50 feet
	FEC Railroad Corridor	Holmes Boulevard	West King Street	70 - 100 feet
SJC-W-3b	West King Street	Holmes Boulevard	FEC Railroad Corridor	70 - 80 feet

Segment 2 – CoSA

Alignment	On	From	To	ROW Width
CoSA-W-1a	West King Street	South Whitney Street	Pellicer Lane	30 feet
CoSA-W-1b	North Bank of Oyster Creek	West King Street	Pellicer Lane / South Dixie Highway	N/A (Greenspace)
	South Bank of Lake Connecting Oyster Creek and San Sebastian River	Pellicer Lane / South Dixie Highway	US 1	N/A (Greenspace)
CoSA-W-2a	US 1	West King Street	Lewis Boulevard	100 feet
CoSA-W-2b	Behind Properties on East Side of US 1	West King Street	US 1	50 - 60 feet
CoSA-W-3	US 1	Lewis Boulevard	SR 207	140 feet
CoSA-W-4a	US 1	SR 207	SR 312	140 - 200 feet
	SR 312	US 1	Sgt. Tutten Drive	200 feet
CoSA-W-4b	US 1 / Arapaho Avenue / Nix Boat Yard Road	SR 207	SR 312	30 - 90 feet
CoSA-S	SR 312	Sgt. Tutten Drive	Plantation Island Drive	200 feet
	Mizell Road	Plantation Island Drive	Pope Road	60 feet
	Pope Road	Mizell Road	SR A1A	90 - 130 feet
CoSA-Sa	SR 312	Plantation Island Drive South	Mizell Road	200 feet
	Mizell Road	SR 312	Plantation Island Drive South	60 feet
CoSA-Sb	Plantation Island Drive	SR 312	Mizell Road	60 - 100 feet
CoSA-N	Bridge of Lions / Anastasia Boulevard	Avenida Menendez	Anastasia Park Road	70 - 100 feet
CoSA-N-1	SR A1A	Anastasia Park Road	Santander Street	100 feet
CoSA-N-1a	Behind businesses at Anastasia Boulevard / SR A1A and Anastasia Park Road	Anastasia Park Road	Anastasia Boulevard / SR A1A	N/A (Park)
CoSA-N-2	Through West Edge of Anastasia Park	Park Road	A1A Beach Boulevard	N/A (Park)
CoSA-N-1b	Santander Street	A1A Beach Boulevard	Pope Road	40 feet
CoSA-N-1c	A1A Beach Boulevard	Santander Street	Pope Road	100 - 130 feet

Segment 3 – CoSAB

Alignment	On	From	To	ROW Width
CoSAB-1	Mickler Boulevard	Pope Rd	A Street	100 feet
CoSAB-1a	A Street	Mickler Boulevard	A1A Beach Boulevard	40 feet
CoSAB-1b	Mickler Boulevard	A Street	F Street	60 feet
	F Street	Mickler Boulevard	A1A Beach Boulevard	40 feet
CoSAB-2	A1A Beach Boulevard	Pope Road	SR A1A	40 - 100 feet
	SR A1A	A1A Beach Boulevard	CoSAB Boundary Line	100 feet
CoSAB-3	Beachfront – Parallel to A1A	Pope Road	A1A Beach Boulevard	N/A (Beachfront)

Segment 4 – SJC-S

Alignment	On	From	To	ROW Width
SJC-S	SR A1A	CoSAB Boundary Line	St. Johns County Boundary Line	40 - 100 feet

5.2.6 Clear Zone

Multi-use trail clear zones are viewed through two FDOT standards: the FDOT Greenbook and the FDOT Design Manual (FDM). Per the Greenbook, the minimum distance between a path and the face of curb or edge of traveled way (where there is no curb) should be 5 feet. On roadways with flush shoulders, this separation is measured from the outside edge of the shoulder to the inside edge of the path. Where the separation is less than 5 feet, a physical barrier or railing should be provided between the path and the roadway.

Per the FDM, on flush shoulder roadways with design speeds of 45 mph or less, the edge of the path is to be at least 5 feet from the edge of the paved shoulder. On curbed roadways with design speeds of 45 mph or less, the edge of the path is to be at least 4 feet from the back of curb, with consideration of other roadside obstructions (e.g., signs and light poles). On all roadways with design speeds of 50 mph or greater, the edge of the path is to be at least 5 feet from the shoulder break.

In addition to these standards, both the Greenbook and FDM require a minimum 2-foot-wide graded area with a maximum 1:6 slope adjacent to both sides of the trail. A 4-foot-wide clear area should be maintained on both sides of the trail including placement of signs.

5.2.7 Drainage Features

The trail alignment planning study area is entirely within the St. Johns River Water Management District. The potential trail alignments are within two hydrological basins. The alignment alternatives west of Allen Nease Road are within the Lower St. Johns River Basin. The trail alignments east of Allen Nease Road are within the Upper East Coast Basin. The basins and sub-basins are shown by **Figure 5-6**.

The drainage structures were reviewed where available from FDOT Straight Line Diagrams. The FDOT maintains Straight Line Diagrams for the following roads within the planning study area: SR 207, US 1, SR 312, and SR A1A. The tables following show the drainage structures on these roadways within the planning study area.

Segment 1 – SJC-W

Roadway	Roadway ID	Mile Post (MP)	Structure Type	Number of Structures / Barrels	Diameter (inches)	Width (feet)	Height (feet)	Length (feet)
SR 207	78051000	Begin 10.551 End 10.556	Box Culvert greater than 20' #780118	1	-	-	-	26.4
SR 207	78051000	11.558	Concrete Pipe	2	36	-	-	126
SR 207	78051000	11.924	Concrete Pipe	3	24	-	-	126
SR 207	78051000	12.87	Concrete Box Culvert	1	-	6	4	115
SR 207	78051000	13.356	Concrete Pipe	2	36	-	-	136
SR 207	78051000	Begin 14.565 End 14.575	Box Culvert greater than 20' #780114	1	-	-	-	52.8
SR 207	78051000	14.912	Concrete Pipe	1	36	-	-	130
SR 207	78051000	15.87	Concrete Box Culvert	2	-	8	4	131
SR 207	78051000	16.94	Concrete Pipe	2	30	-	-	156
SR 207	78051000	16.956	Concrete Pipe	1	24	-	-	150
SR 207	78051000	17.388	Concrete Pipe	1	45	-	-	92

Segment 2 – CoSA

Roadway	Roadway ID	Mile Post (MP)	Structure Type	Number of Structures / Barrels	Diameter (inches)	Length (feet)
US 1	78010000	15.511	Concrete Pipe	1	18	47
US 1	78010000	15.565	Concrete Pipe	2	18	147
US 1	78010000	16.074	Concrete Pipe	1	36	140
US 1	78010000	Begin 16.356 End 16.360	Box Culvert greater than 20' #780103	1		21
SR 312	78002000	0.256	Concrete Pipe	1	18	112
SR 312	78002000	0.498	Concrete Pipe	1	24	105
SR 312	78002000	1.298	Concrete Pipe	1	48	98
SR 312	78002000	1.336	Concrete Pipe	1	18	86
SR 312	78002000	1.414	Concrete Pipe	1	18	86
SR 312	78002000	1.467	Concrete Pipe	1	18	66
SR 312	78002000	1.795	Concrete Pipe	1	24	88
SR 312	78002000	1.884	Concrete Pipe	1	18	68
SR 312	78002000	2.05	Concrete Pipe	1	20	95

Segment 3 – CoSAB

None

Segment 4 – SJC-S

Roadway	Roadway ID	Mile Post (MP)	Structure Type	Number of Structures / Barrels	Diameter (inches)	Length (feet)
SR A1A	78040000	4.282	Concrete Pipe	1	15	64
SR A1A	78040000	5.4	Concrete Pipe	1	18	68
SR A1A	78040000	5.77	Concrete Pipe	1	18	64
SR A1A	78040000	7.651	Concrete Pipe	1	15	76

5.2.8 Bridge Structures

In consideration of potential alignment alternatives that may cross major roadways and / or water bodies, preliminary assessments were conducted for existing bridge structures. These structures were reviewed for compliance with feasibility and design standards to accommodate a multi-use trail. These structures include the following locations:

CR 214 over I-95 (Bridge No. 780049)
A previous Multi-use Trail Planning Study (Ayres Associates-December 2016) recommended a new parallel pedestrian bridge (multi-use trail) based on its review of current structure conditions. No additional bridge structure existing conditions evaluation is included in this report.

King Street over San Sebastian River (Bridge 780003)
Based on preliminary review of this structure, a multi-use trail does not appear viable. A parallel structure will most likely be required. Note, there is an ongoing PD&E Study by FDOT to replace this bridge that may offer an opportunity to include a multi-use trail segment. No additional bridge structure existing conditions evaluation is included in this report.

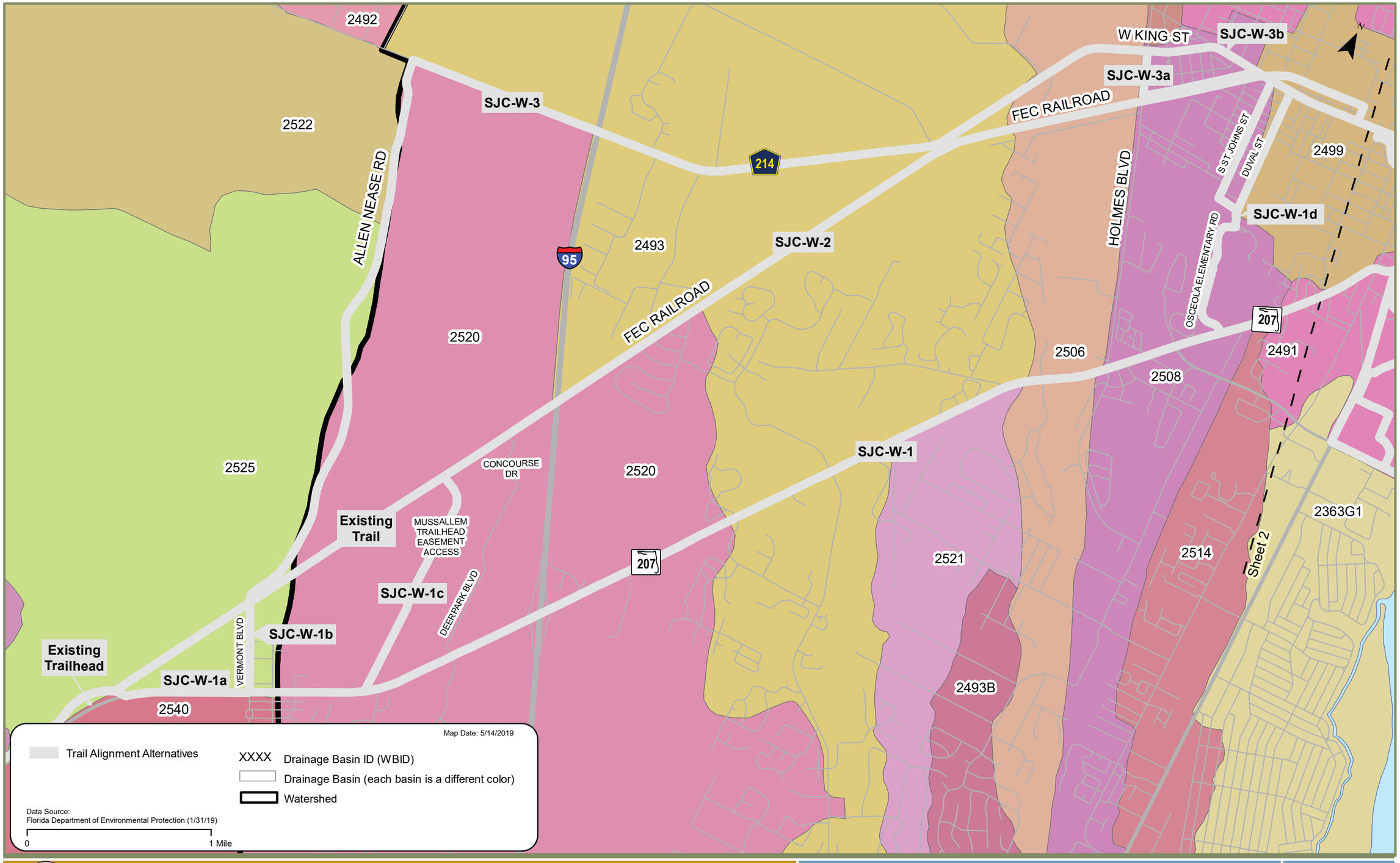
US 1 over San Sebastian River (Bridge 780129)
Based on preliminary review of this structure, a multi-use trail does not appear viable. No additional bridge structure existing conditions evaluation is included in this report.

SR A1A over Matanzas River [Bridge of Lions] (Bridge No. 780074)
Based upon preliminary review of this structure, a multi-use trail does not appear viable. No additional bridge structure existing conditions evaluation is included in this report.

CR 312 over Matanzas River (Bridge Nos. 780089 / 780100)
Based on preliminary review of these structures, a multi-use trail does appear viable with modifications. Additional bridge structure existing conditions evaluation is included with a preliminary review of potential modifications to accommodate a multi-use trail. **Please refer to Appendix D.**

SR A1A over Matanzas Inlet (Bridge No. 780097)
Based on preliminary review of this structure, a multi-use trail does appear viable with modifications. Additional bridge structure existing conditions evaluation is included with a preliminary review of potential modifications to accommodate a multi-use trail. **Please refer to Appendix D.**

SR A1A over Matanzas River (Bridge Nos. 780119 / 780120)
Based on preliminary review of these structures, a multi-use trail does appear viable with modifications. Additional bridge structure existing conditions evaluation is included with a preliminary review of potential modifications to accommodate a multi-use trail. **Please refer to Appendix D.**

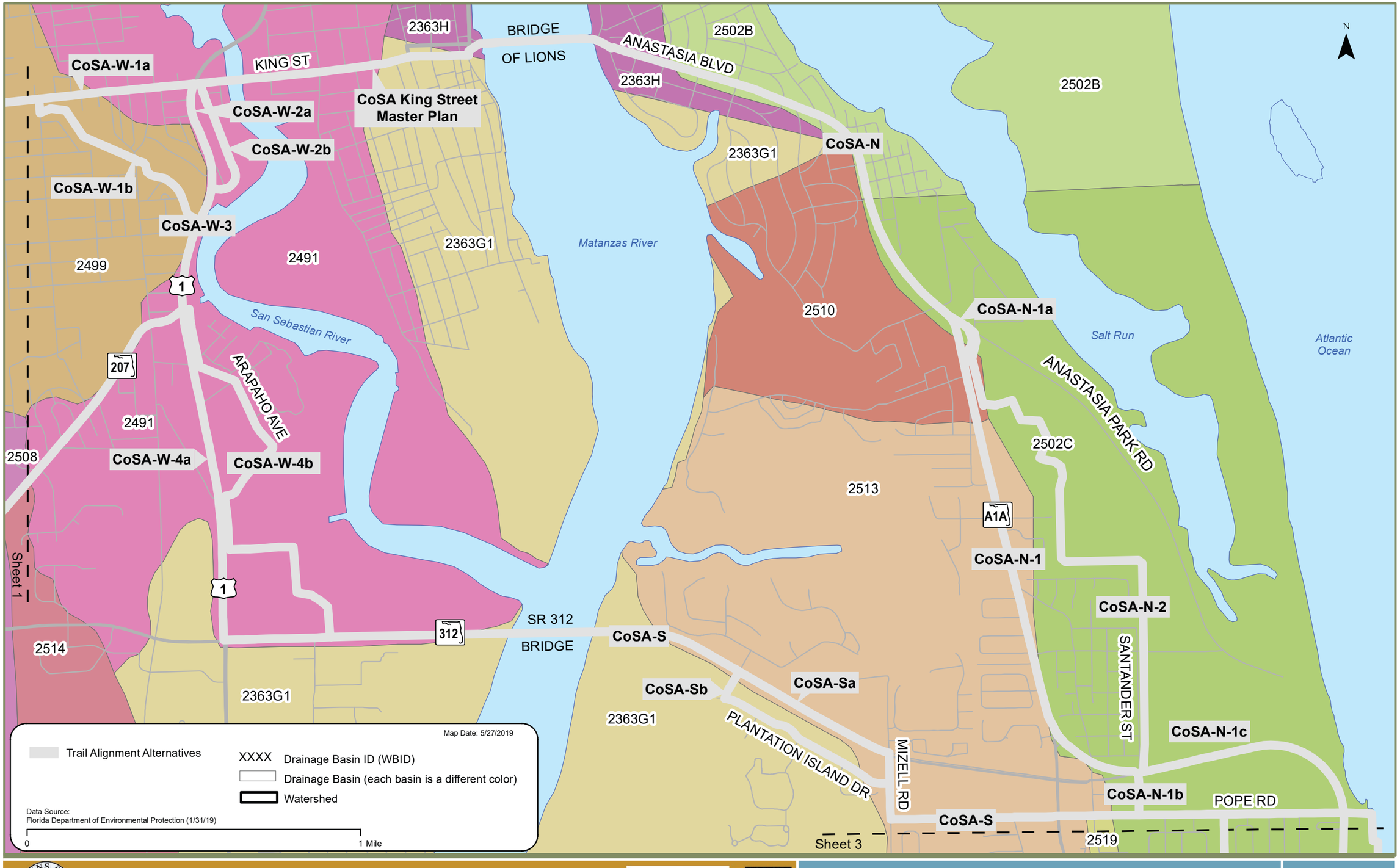


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Corridor Drainage Basins

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 5-6
SHEET 1 OF 4

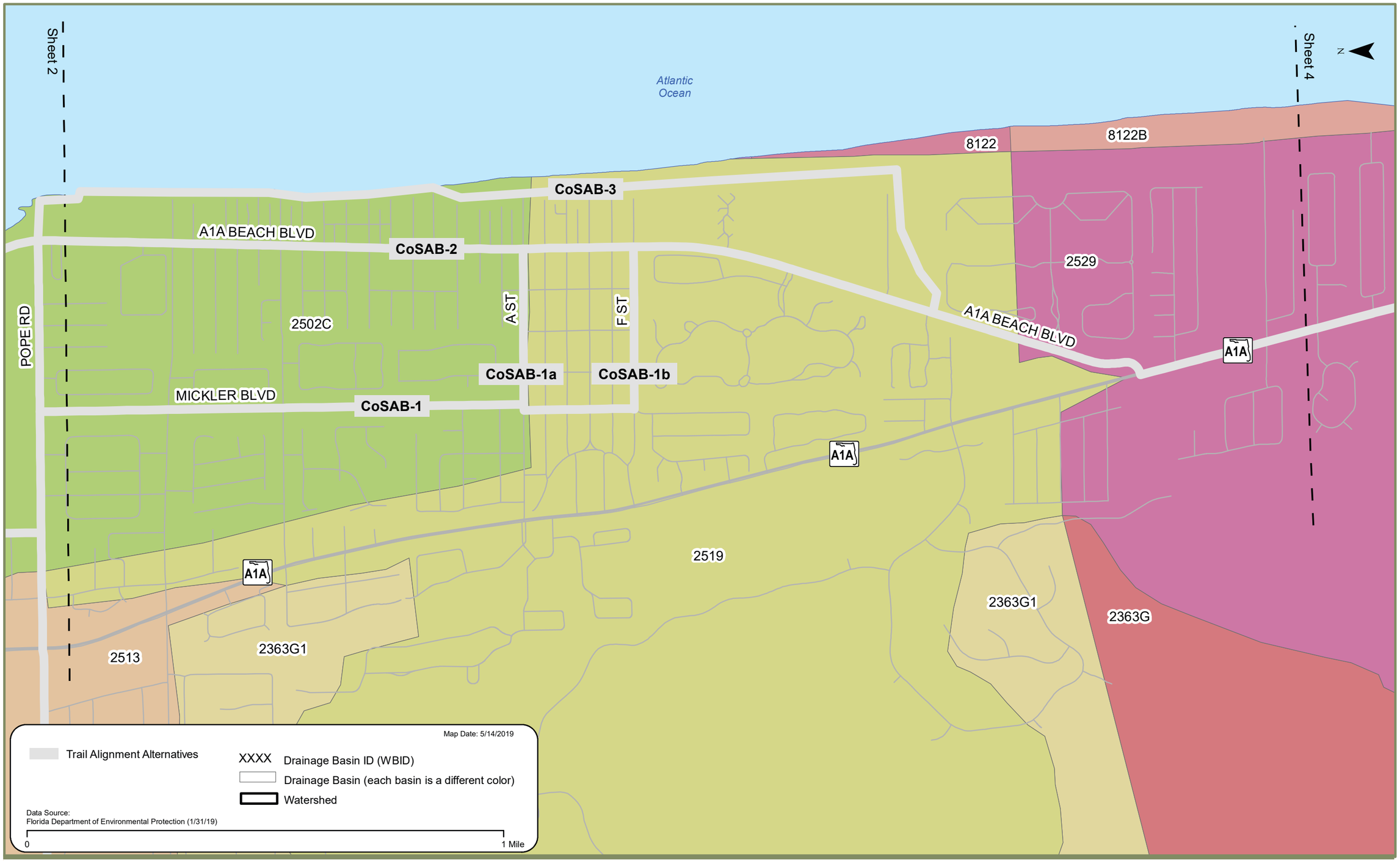


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Corridor Drainage Basins

Segment 2 - City of St. Augustine (CoSA)

FIGURE
5-6
SHEET 2 OF 4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POPE RD
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F ST
A1A BEACH BLVD
A1A
CoSAB-1a
CoSAB-1b
MICKLER BLVD
CoSAB-1
A1A
2519
A1A
2363G1
2363G
2513
2363G1
Map Date: 5/14/2019
Trail Alignment Alternatives
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Drainage Basin (each basin is a different color)
Watershed
Data Source:
Florida Department of Environmental Protection (1/31/19)
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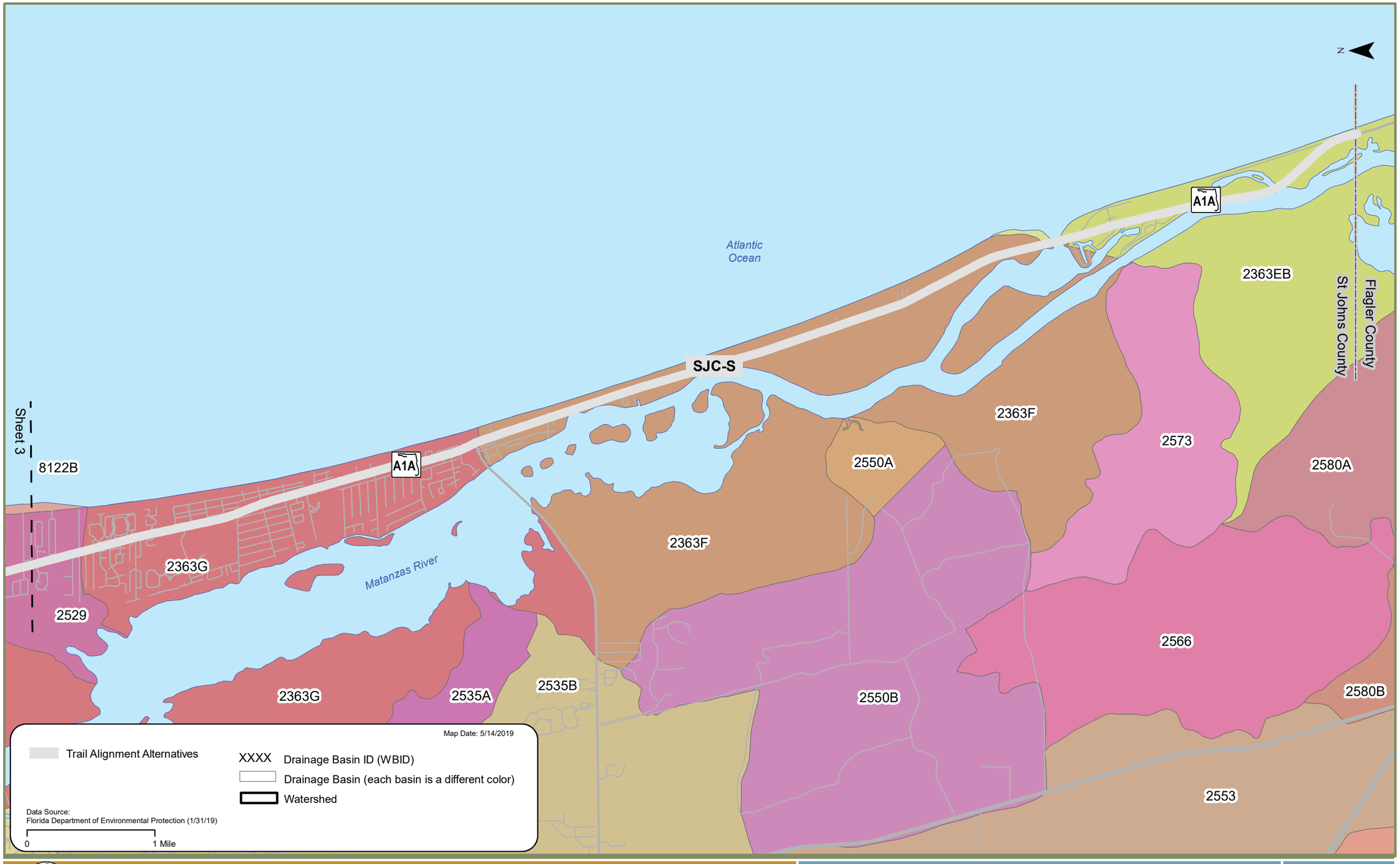
1 Mile



SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Corridor Drainage Basins

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-6
SHEET 4 OF 4

5.2.9 Lighting

A review of Google Earth Street View maps was conducted to record the trail alignment alternatives with existing street lighting, as shown on the tables below.

Segment 1 – SJC-W

Alignment	On	From	To	Street Lighting
SJC-W-1a	SR 207	Existing Trailhead	Vermont Boulevard	No
SJC-W-1b	Vermont Boulevard	US 207	Existing Trail	No
	SR 207	Vermont Blvd	Mussallem Trailhead Easement Access	No
SJC-W-1c	Mussallem Trailhead Easement Access	US 207	Existing Trail	No
SJC-W-1d	St. Johns Street, Duval Street, Osceola Elementary Road	US 207	West King Street	Yes
SJC-W-1	SR 207	Mussallem Trailhead Easement Access	US 1	No
SJC-W-2	FEC Railroad Corridor	Existing Trail	West King Street	No
SJC-W-3	Allen Nease Road	Existing Trail	CR 214	Yes
	CR 214	Allen Nease Road	Holmes Boulevard	Yes
	West King Street	FEC Railroad Corridor	South Whitney Street	Yes
SJC-W-3a	South Holmes Boulevard	West King Street	FEC Railroad Corridor	Yes
	FEC Railroad Corridor	Holmes Boulevard	West King Street	No
SJC-W-3b	West King Street	Holmes Boulevard	FEC Railroad Corridor	Yes

Segment 2 – CoSA

Alignment	On	From	To	Street Lighting
CoSA-W-1a	West King Street	South Whitney Street	Pellicer Lane	Yes
CoSA-W-1b	North Bank of Oyster Creek	West King Street	Pellicer Lane / South Dixie Highway	No
	South Bank of Lake Connecting Oyster Creek and San Sebastian River	Pellicer Lane / South Dixie Highway	US 1	No
CoSA-W-2a	US 1	West King Street	Lewis Boulevard	Yes
CoSA-W-2b	Behind Properties on East Side of US 1	West King Street	US 1	No
CoSA-W-3	US 1	Lewis Boulevard	SR 207	Yes
CoSA-W-4a	US 1	SR 207	SR 312	Yes
	SR 312	US 1	Sgt. Tutten Drive	Yes
CoSA-W-4b	US 1 / Arapaho Avenue / Nix Boat Yard Road	SR 207	SR 312	Yes
CoSA-S	SR 312	Sgt. Tutten Drive	Plantation Island Drive	Yes
	Mizell Road	Plantation Island Drive	Pope Road	Yes
	Pope Road	Mizell Road	SR A1A	Yes
CoSA-Sa	SR 312	Plantation Island Drive South	Mizell Road	Yes
	Mizell Road	SR 312	Plantation Island Drive South	Yes
CoSA-Sb	Plantation Island Drive	SR 312	Mizell Road	Yes
CoSA-N	Bridge of Lions / Anastasia Boulevard	Avenida Menendez	Anastasia Park Road	Yes
CoSA-N-1	SR A1A	Anastasia Park Road	Santander Street	Yes
CoSA-N-1a	Behind businesses at Anastasia Boulevard / SR A1A and Anastasia Park Road	Anastasia Park Road	Anastasia Boulevard / SR A1A	No
CoSA-N-2	Through West Edge of Anastasia Park	Park Road	A1A Beach Boulevard	No
CoSA-N-1b	Santander Street	A1A Beach Boulevard	Pope Road	Yes
CoSA-N-1c	A1A Beach Boulevard	Santander Street	Pope Road	No

Segment 3 – CoSAB

Alignment	On	From	To	Street Lighting
CoSAB-1	Mickler Boulevard	Pope Road	A Street	Yes
CoSAB-1a	A Street	Mickler Boulevard	A1A Beach Boulevard	Yes
CoSAB-1b	Mickler Boulevard	A Street	F Street	Yes
	F Street	Mickler Boulevard	A1A Beach Boulevard	Yes
CoSAB-2	A1A Beach Boulevard	Pope Road	SR A1A	Yes
	SR A1A	A1A Beach Boulevard	CoSAB Boundary Line	Yes
CoSAB-3	Beachfront – Parallel to A1A	Pope Road	A1A Beach Boulevard	No

Segment 4 – SJC-S

Alignment	On	From	To	Street Lighting
SJC-S	SR A1A	CoSAB Boundary Line	East Magnolia Avenue	Yes
	SR A1A	East Magnolia Avenue	St. Johns County Boundary Line	No

5.2.10 Existing Traffic Data

The AADT and truck percentages are shown by **Figure 5-7.** AADT calculates the average number of vehicles per day on a road segment in both directions of travel combined with truck percentages showing the ratio of heavy trucks. This data is from FDOT for 2018 and is only available on FDOT-maintained roads.

5.2.11 Crash Data

Vehicle crash locations within the planning study area were analyzed to determine locations with potential safety concerns. **Figure 5-8** shows locations of the crashes that occurred in 2012 through 2017, according to the FDOT State Safety Office. Crashes involving a bicycle or pedestrian are of particular interest for planning a trail. The figure also shows a heat map in the background to highlight areas of high crash density. The tables on the following pages summarize the number of crashes for each trail alignment alternative.

Segment 1 – SJC-W

Trail Alternative Name	Vehicle Crashes	Fatalities	Bicycle Crashes	Bicycle Fatalities	Pedestrian Crashes	Pedestrian Fatalities
SJC-W-1	466	2	7	0	6	0
SJC-W-1a	5	0	0	0	1	0
SJC-W-1b	30	0	0	0	0	0
SJC-W-1c	0	0	0	0	0	0
SJC-W-1d	12	0	0	0	1	0
SJC-W-2	0	0	0	0	0	0
SJC-W-3	90	2	1	1	0	0
SJC-W-3a	24	0	0	0	1	0
SJC-W-3b	17	0	1	0	0	0

Segment 2 – CoSA

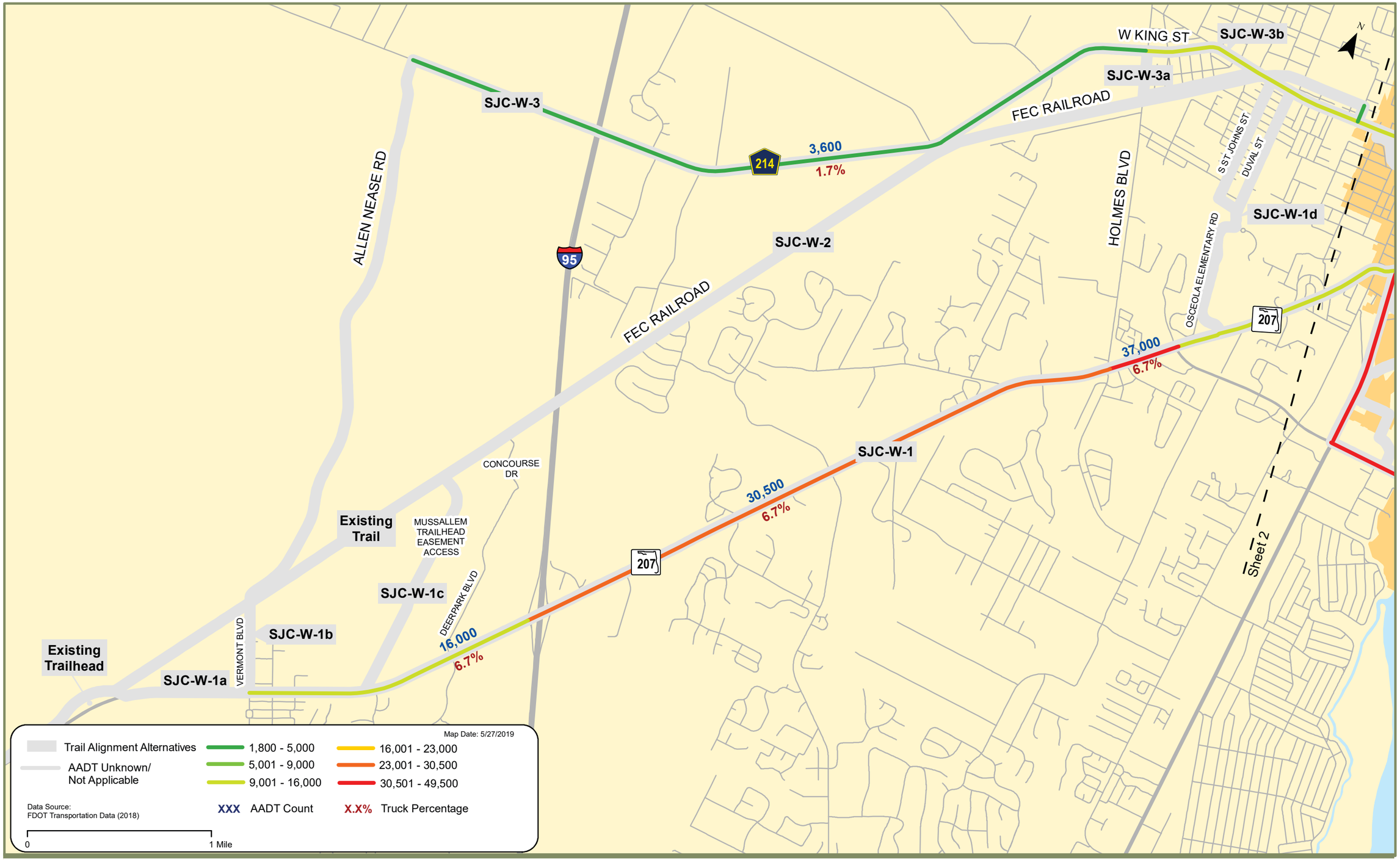
Trail Alternative Name	Vehicle Crashes	Fatalities	Bicycle Crashes	Bicycle Fatalities	Pedestrian Crashes	Pedestrian Fatalities
CoSA-W-1a	24	0	1	0	2	0
CoSA-W-1b	0	0	0	0	0	0
CoSA-W-2a	68	2	3	0	5	0
CoSA-W-2b	0	0	0	0	0	0
CoSA-W-3	69	0	5	0	2	0
CoSA-W-4a	455	4	21	1	8	2
CoSA-W-4b	0	0	0	0	0	0
CoSA King Street Master Plan	107	0	12	0	3	0
CoSA-N	220	4	15	1	8	2
CoSA-N-1	73	3	2	0	0	0
CoSA-N-1a	0	0	0	0	0	0
CoSA-N-1b	0	0	0	0	0	0
CoSA-N-1c	5	1	0	0	0	0
CoSA-N-2	0	0	0	0	0	0
CoSA-S	90	3	2	0	5	1
CoSA-Sa	55	0	0	0	0	0
CoSA-Sb	6	0	0	0	1	0

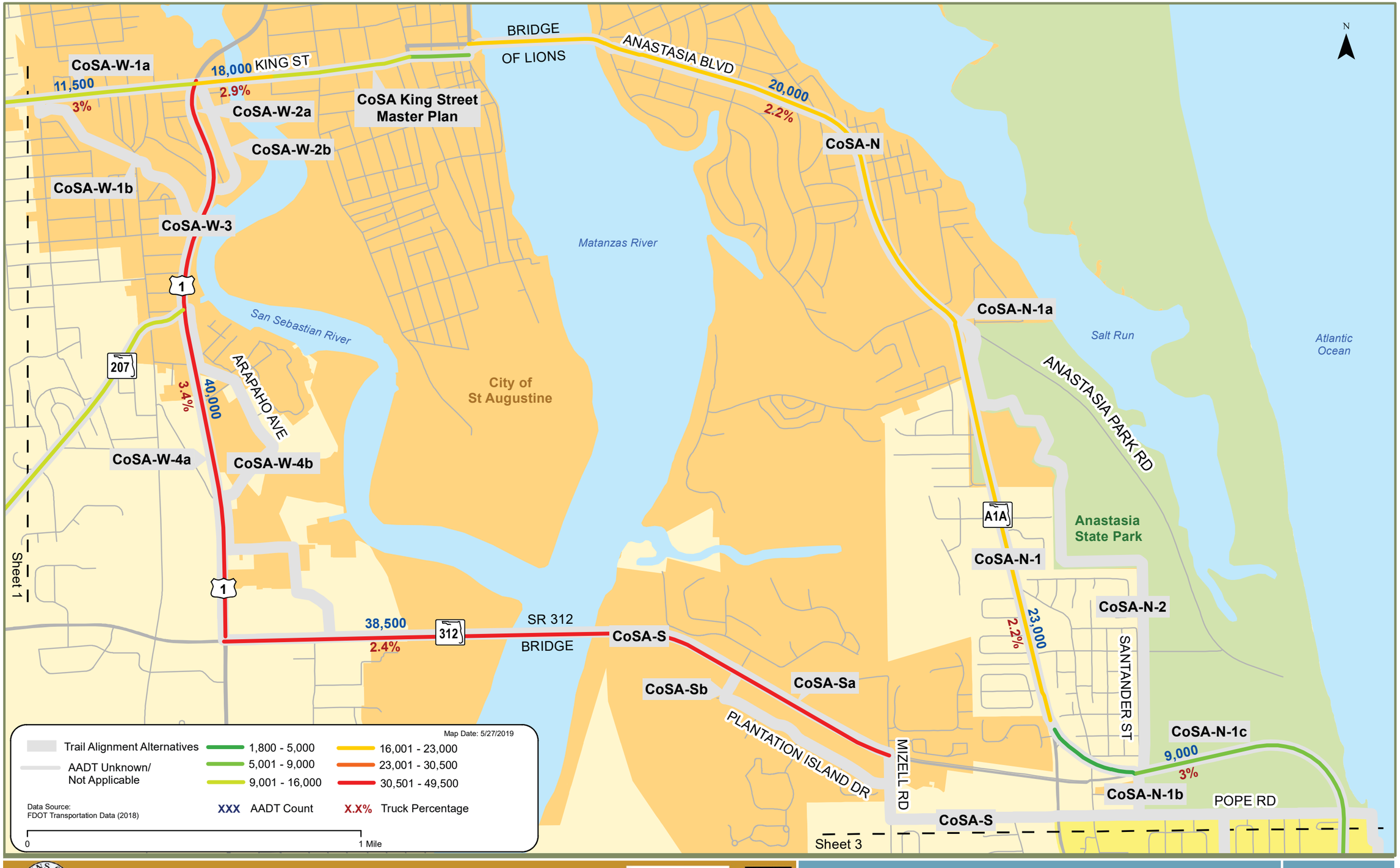
Segment 3 – CoSAB

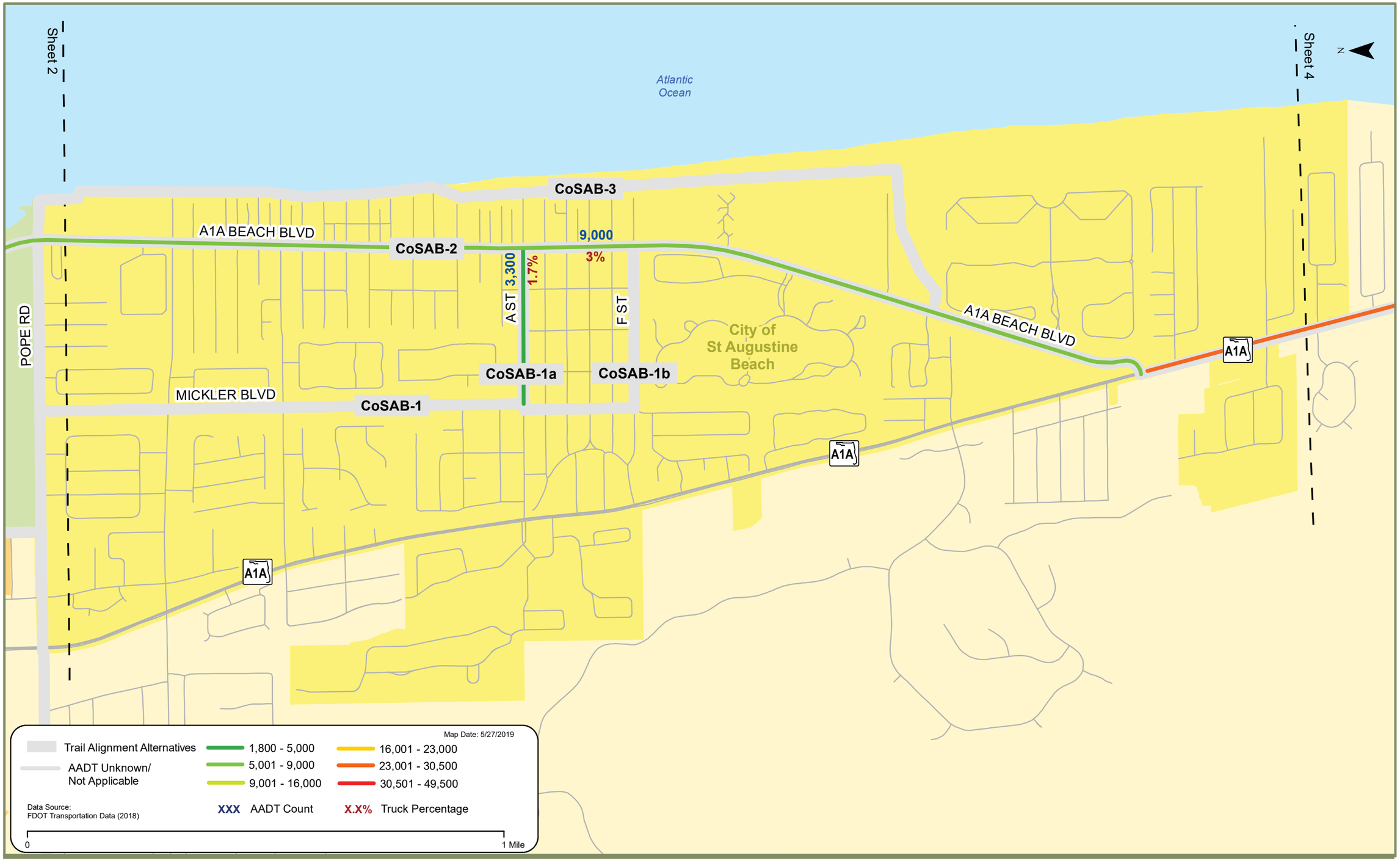
Trail Alternative Name	Vehicle Crashes	Fatalities	Bicycle Crashes	Bicycle Fatalities	Pedestrian Crashes	Pedestrian Fatalities
CoSAB-1	1	0	0	0	0	0
CoSAB-1a	5	0	0	0	0	0
CoSAB-1b	2	0	0	0	0	0
CoSAB-2	86	1	4	0	3	0
CoSAB-3	0	0	0	0	0	0

Segment 4 – SJC-S

Trail Alternative Name	Vehicle Crashes	Fatalities	Bicycle Crashes	Bicycle Fatalities	Pedestrian Crashes	Pedestrian Fatalities
SJC-S	224	2	13	0	5	1


SJC-W-3
SJC-W-3b
W KING ST
SJC-W-3a
FEC RAILROAD
3,600
1.7%
214
ALLEN NEASE RD
95
SJC-W-2
FEC RAILROAD
HOLMES BLVD
S ST JOHNS ST
DUVAL ST
OSCEOLA ELEMENTARY RD
SJC-W-1d
207
37,000
6.7%
SJC-W-1
CONCOURSE DR
30,500
6.7%
Existing Trail
MUSSALLEM TRAILHEAD EASEMENT ACCESS
SJC-W-1c
DEERPARK BLVD
207
Sheet 2
SJC-W-1b
VERMONT BLVD
16,000
6.7%
Existing Trailhead
SJC-W-1a
N
Map Date: 5/27/2019
Trail Alignment Alternatives
AADT Unknown/ Not Applicable
1,800 - 5,000
5,001 - 9,000
9,001 - 16,000
16,001 - 23,000
23,001 - 30,500
30,501 - 49,500
Data Source: FDOT Transportation Data (2018)
XXX AADT Count
X.X% Truck Percentage
0
1 Mile


CoSA-W-1a
11,500
3%
18,000 KING ST
2.9%
CoSA-W-2a
CoSA King Street Master Plan
CoSA-W-2b
CoSA-W-1b
CoSA-W-3
BRIDGE OF LIONS
ANASTASIA BLVD
20,000
2.2%
CoSA-N
Matanzas River
San Sebastian River
CoSA-N-1a
Salt Run
Atlantic Ocean
ANASTASIA PARK RD
ARAPAHO AVE
3.4%
40,000
City of St Augustine
CoSA-W-4a
CoSA-W-4b
A1A
Anastasia State Park
CoSA-N-1
CoSA-N-2
23,000
2.2%
SANTANDER ST
Sheet 1
38,500
2.4%
SR 312
BRIDGE
CoSA-S
CoSA-Sb
CoSA-Sa
PLANTATION ISLAND DR
MIZELL RD
CoSA-N-1c
9,000
3%
CoSA-N-1b
POPE RD
CoSA-S
Sheet 3
N
Map Date: 5/27/2019
Trail Alignment Alternatives
AADT Unknown/ Not Applicable
1,800 - 5,000
5,001 - 9,000
9,001 - 16,000
16,001 - 23,000
23,001 - 30,500
30,501 - 49,500
Data Source: FDOT Transportation Data (2018)
XXX AADT Count
X.X% Truck Percentage
0
1 Mile

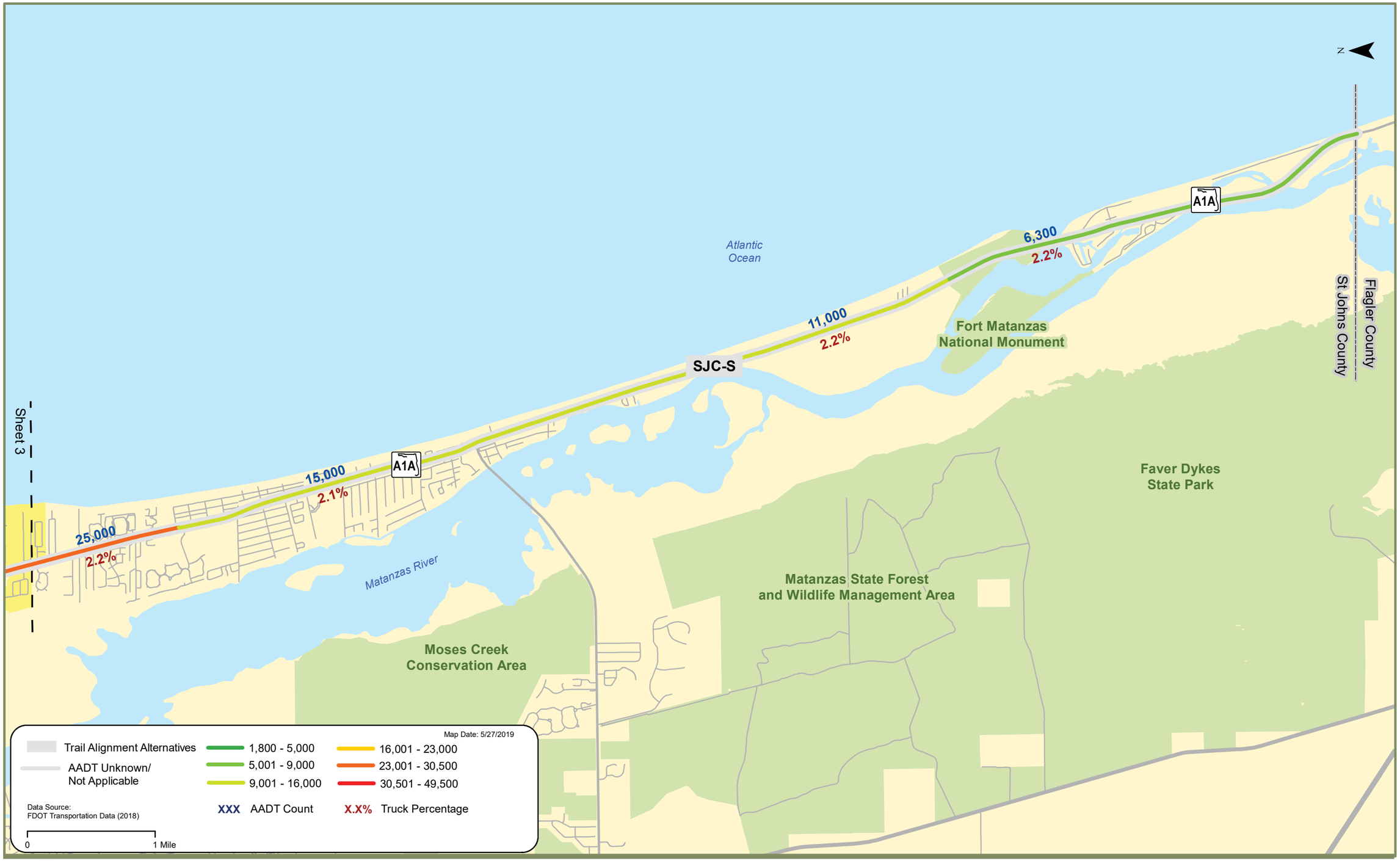


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Annual Average Daily Traffic

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 5-7
SHEET 3 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Annual Average Daily Traffic

Segment 4 - St. Johns County - South (SJC-S)

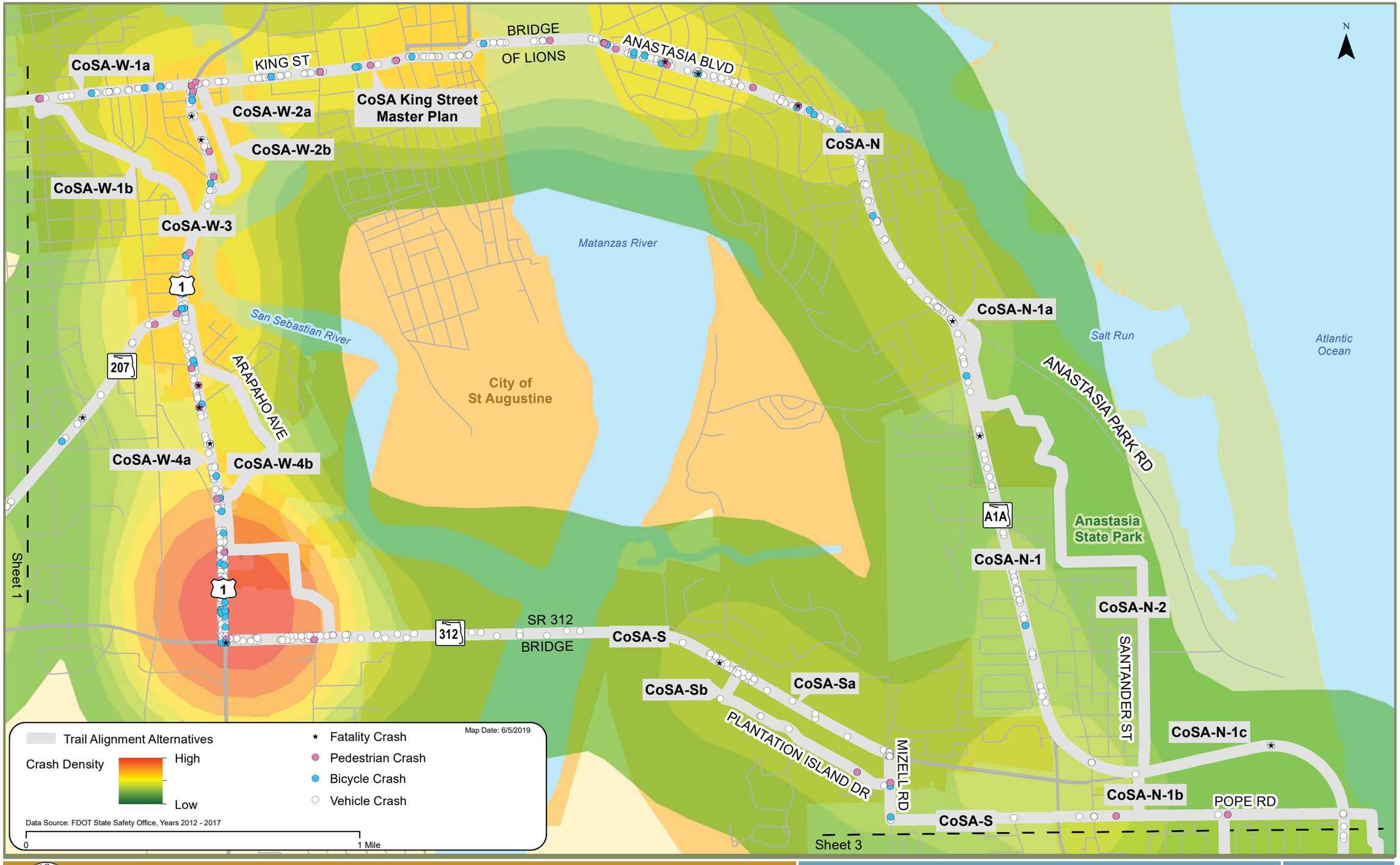
FIGURE 5-7
SHEET 4 OF 4

SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Crash Data

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 5-8
SHEET 1 OF 4

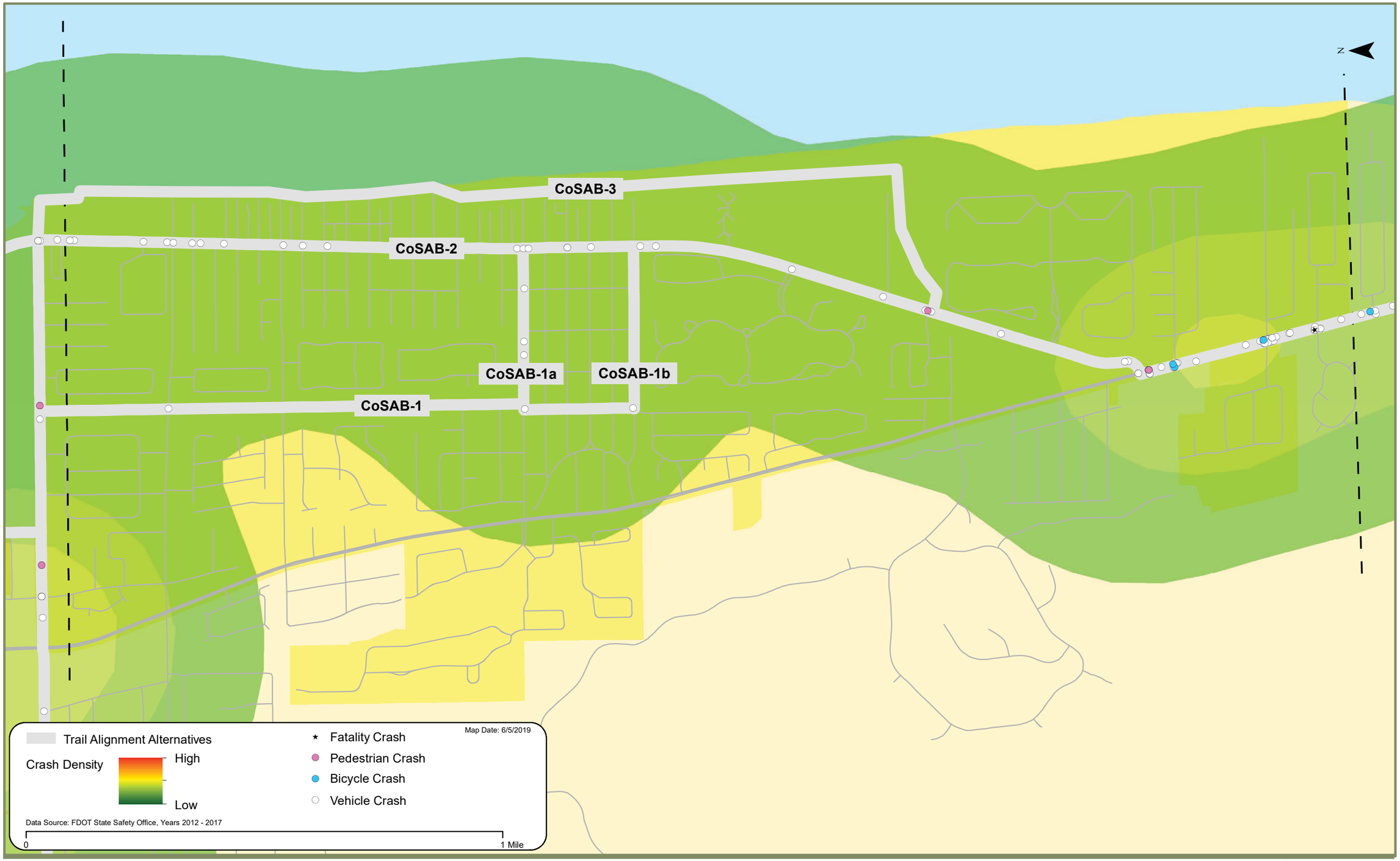


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Crash Data

Segment 2 - City of St. Augustine (CoSA)

FIGURE 5-8
SHEET 2 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Crash Data

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 5-8
SHEET 3 OF 4

SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Crash Data

Segment 4 - St. Johns County - South (SJC-S)

FIGURE
5-8
SHEET 4 OF 4

5.2.12 Utilities

Within the planning study area, various utilities were identified using the Sunshine State One-Call system. The utility companies with services within the planning study area segments are summarized in the tables below.

Segment 1 – SJC-W

SJC-W-1	
Comcast Cable Communications	CATV
Resurgence Infrastructure Group LLC	Fiber
City of St. Augustine	Water, Sewer
Florida Power & Light – St. Johns	Electric
CenturyLink	Fiber
MCI	Fiber, Communication Lines
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
St. Johns County Utility Department	Water, Sewer
Uniti Fiber LLC	Fiber
Sprint	Fiber

SJC-W-3	
Comcast Cable Communications	CATV
City of St. Augustine	Water, Sewer
Florida Power & Light – St. Johns	Electric
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
Uniti Fiber LLC	Fiber

SJC-W-3b	
Comcast Cable Communications	CATV
Resurgence Infrastructure Group LLC	Fiber
City of St. Augustine	Water, Sewer
Florida Power & Light – St. Johns	Electric
CenturyLink	Fiber
MCI	Fiber, Communication Lines
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
Uniti Fiber LLC	Fiber
Sprint	Fiber

Segment 2 – CoSA

CoSA-W-1a	
Comcast Cable Communications	CATV
Resurgence Infrastructure Group LLC	Fiber
City of St. Augustine	Water, Sewer
Florida Power & Light – St. Johns	Electric
Florida Power & Light – Subaqueous	Electric
CenturyLink	Fiber
MCI	Fiber, Communication Lines
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
Uniti Fiber LLC	Fiber
Sprint	Fiber

CoSA-W-1b, CoSA-W-2b	
Comcast Cable Communications	CATV
Resurgence Infrastructure Group LLC	Fiber
City of St. Augustine	Water, Sewer
Florida Power & Light – St. Johns	Electric
Florida Power & Light – Subaqueous	Electric
CenturyLink	Fiber
MCI	Fiber, Communication Lines
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
Uniti Fiber LLC	Fiber
Sprint	Fiber

CoSA-W-2a, CoSA-W-3, CoSA-W-4a, CoSA-S, CoSA-Sb, CoSA-S	
Comcast Cable Communications	CATV
City of St. Augustine	Water, Sewer
Florida Power & Light – St. Johns	Electric
Florida Power & Light – Subaqueous	Electric
CenturyLink	Fiber
MCI	Fiber, Communication Lines
Crown Castle NG	Fiber
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
St. Johns County Utility Department	Water, Sewer
Uniti Fiber LLC	Fiber
Sprint	Fiber

CoSA-Sa	
Comcast Cable Communications	CATV
City of St. Augustine	Water, sewer
Florida Power & Light – St. Johns	Electric
Crown Castle NG	Fiber
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
St. Johns County Utility Department	Water, sewer
Uniti Fiber LLC	Fiber

CoSA-N, CoSA-N-1a, CoSA-N-1	
Comcast Cable Communications	CATV
City of St. Augustine	Water, sewer
Florida Power & Light – St. Johns	Electric
Florida Power & Light – Subaqueous	Electric
Crown Castle NG	Fiber
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
St. Johns County Utility Department	Water, Sewer
Uniti Fiber LLC	Fiber

CoSA-N-2	
City of St. Augustine	Water, sewer
Florida Power & Light – St. Johns	Electric
Crown Castle NG	Fiber
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
St. Johns County Utility Department	Water, Sewer

CoSA-N-1d	
Comcast Cable Communications	CATV
Florida Power & Light – St. Johns	Electric
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
St. Johns County Utility Department	Water, sewer

Segment 3 – CoSAB

CoSAB-2	
Comcast Cable Communications	CATV
Florida Power & Light – St. Johns	Electric
Crown Castle NG	Fiber
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
St. Johns County Utility Department	Water, Sewer
Uniti Fiber LLC	Fiber

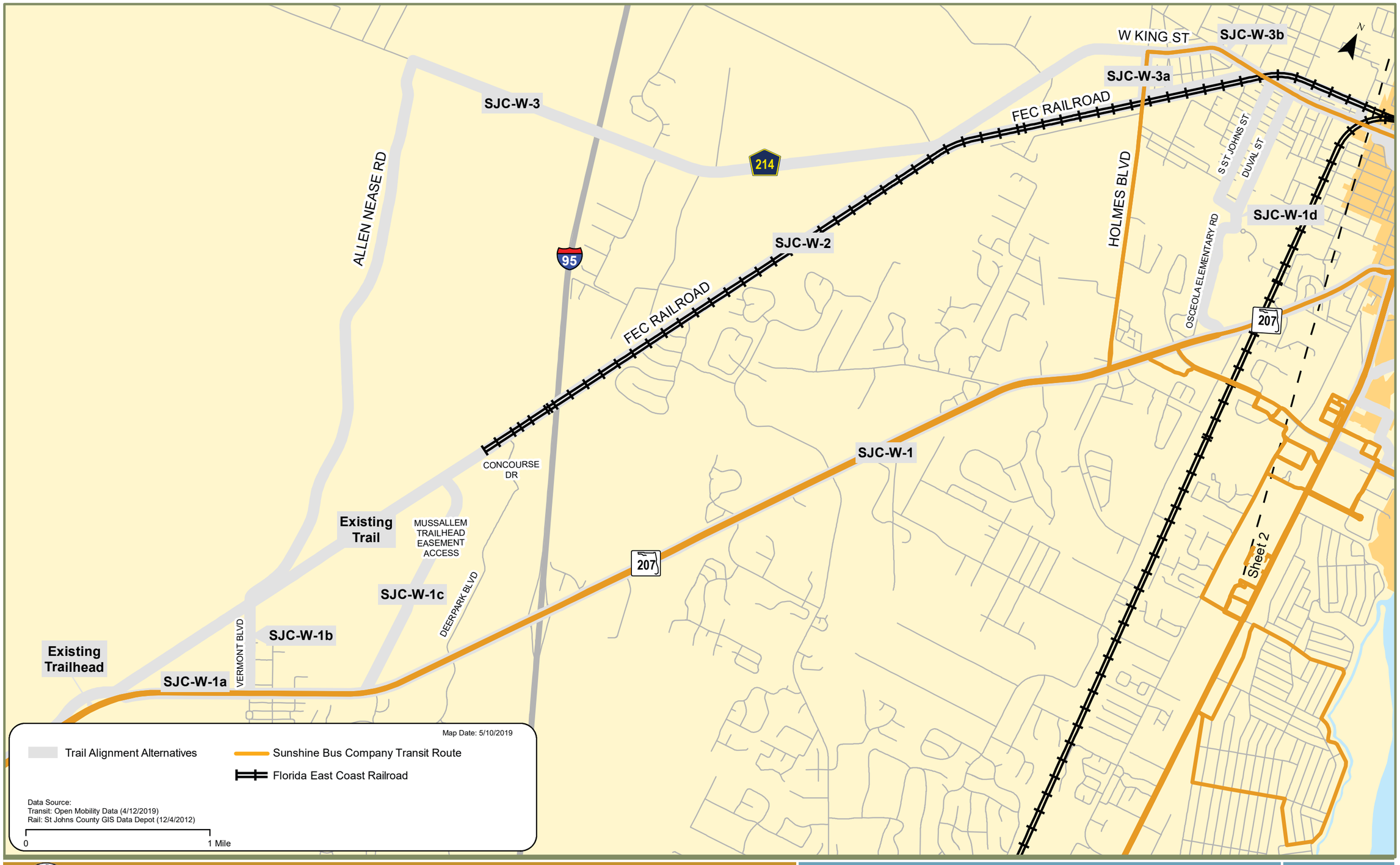
CoSAB-3	
Comcast Cable Communications	CATV
Florida Power & Light – St. Johns	Electric
Crown Castle NG	Fiber
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
St. Johns County Utility Department	Water, Sewer
Uniti Fiber LLC	Fiber

Segment 4 – SJC-S

SJC-S	
Comcast Cable Communications	CATV
Florida Power & Light – Flagler	Electric
Florida Power & Light – St. Johns	Electric
Florida Power & Light – Subaqueous	Electric
Crown Castle NG	Fiber
City of Palm Coast Utility Department	Water, Sewer
TECO Peoples Gas Jacksonville	Gas
AT&T / Distribution	Telephone
St. Johns County Utility Department	Water, Sewer
Uniti Fiber LLC	Fiber

5.2.13 Transit Data and Existing Rail

The Sunshine Bus Company offers transit services to St. Johns County with bus routes operating on many of the trail alignment alternatives. **Figure 5-9** shows the Sunshine Bus Transit service lines along with the existing FEC Railway lines.

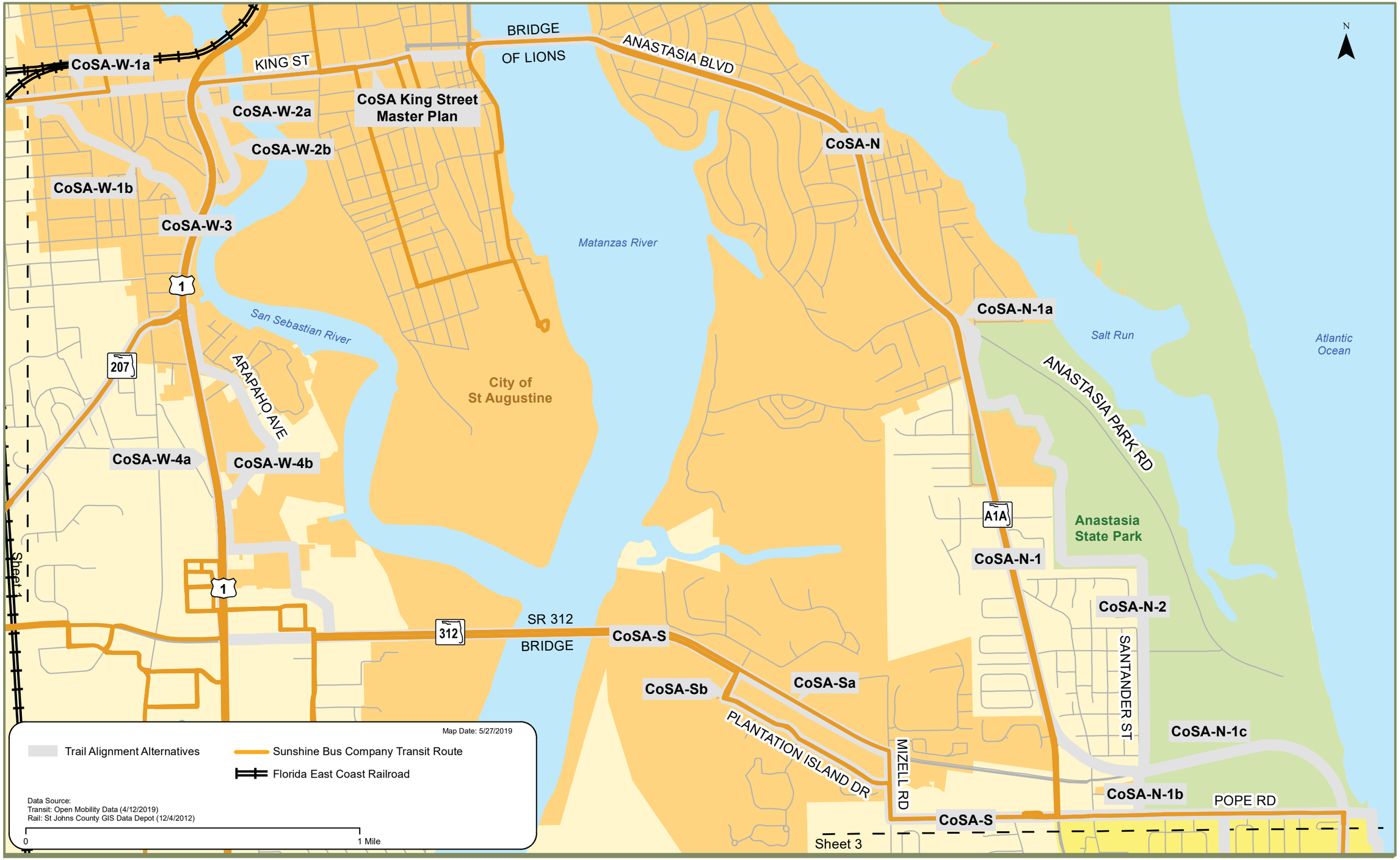


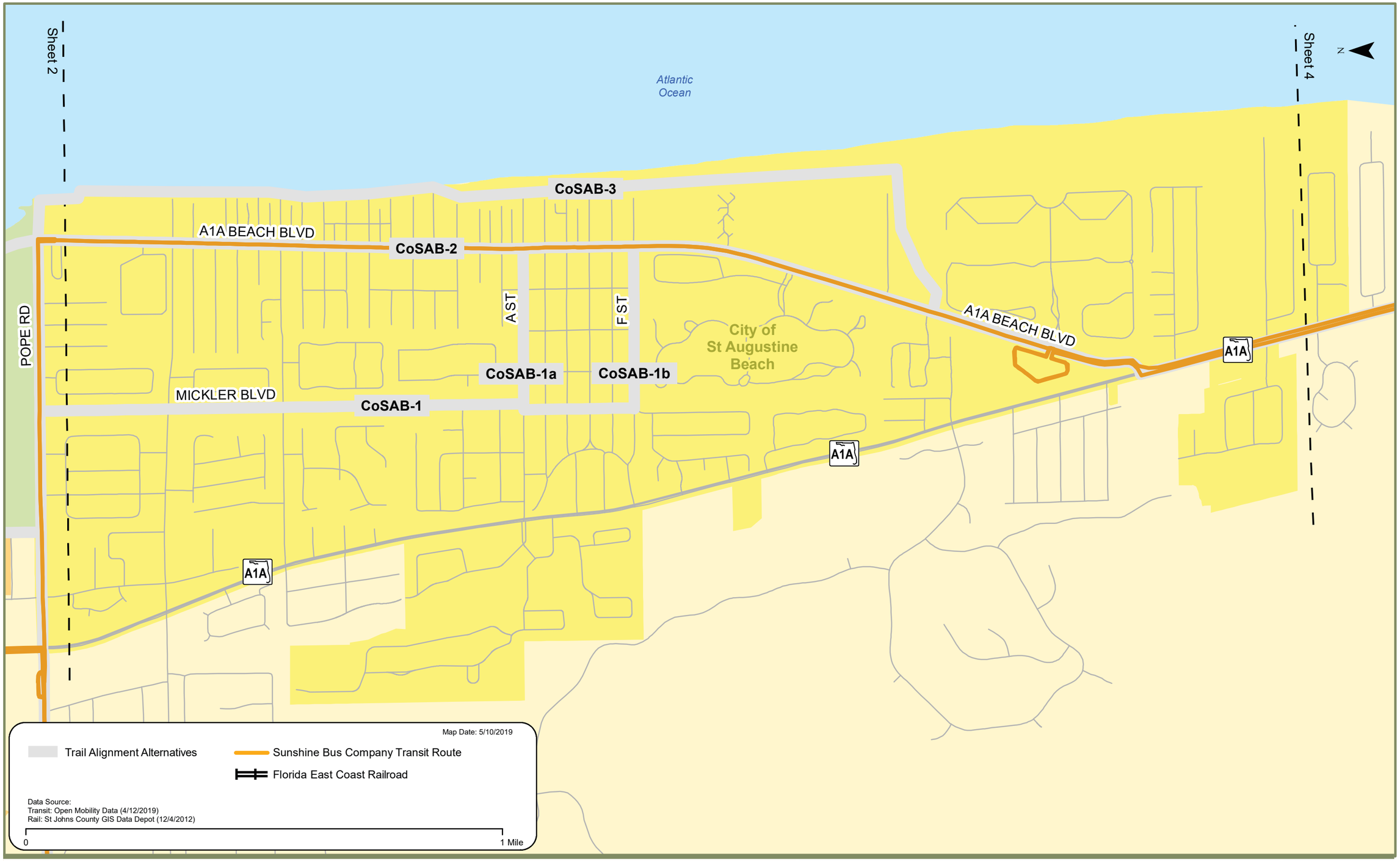
SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

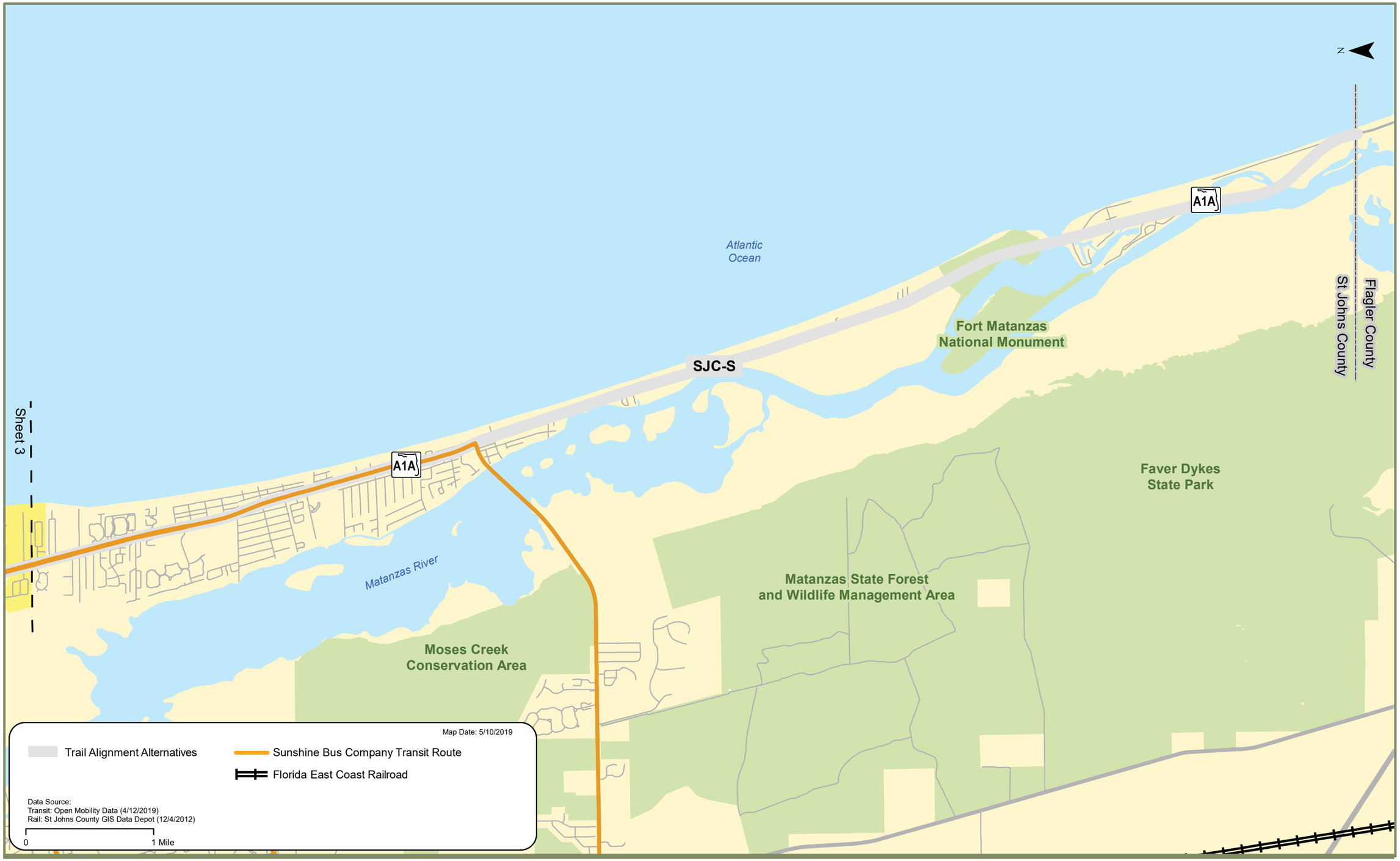
Railroad and Transit

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 5-9
SHEET 1 OF 4


N
BRIDGE
OF LIONS
ANASTASIA BLVD
KING ST
CoSA-W-1a
CoSA-W-2a
CoSA King Street
Master Plan
CoSA-W-2b
CoSA-W-1b
CoSA-W-3
CoSA-N
Matanzas River
1
San Sebastian River
CoSA-N-1a
Salt Run
Atlantic
Ocean
207
ARAPAHO AVE
City of
St Augustine
ANASTASIA PARK RD
CoSA-W-4a
CoSA-W-4b
A1A
Anastasia
State Park
CoSA-N-1
Sheet 1
1
CoSA-N-2
SR 312
BRIDGE
312
CoSA-S
SANTANDER ST
CoSA-Sb
CoSA-Sa
CoSA-N-1c
PLANTATION ISLAND DR
MIZELL RD
CoSA-N-1b
POPE RD
CoSA-S
Sheet 3
Map Date: 5/27/2019
Trail Alignment Alternatives
Sunshine Bus Company Transit Route
Florida East Coast Railroad
Data Source:
Transit: Open Mobility Data (4/12/2019)
Rail: St Johns County GIS Data Depot (12/4/2012)
0
1 Mile


Sheet 2
Sheet 4
N
Atlantic Ocean
CoSAB-3
A1A BEACH BLVD
CoSAB-2
POPE RD
A ST
F ST
City of St Augustine Beach
A1A BEACH BLVD
A1A
CoSAB-1a
CoSAB-1b
MICKLER BLVD
CoSAB-1
A1A
A1A
Map Date: 5/10/2019
Trail Alignment Alternatives
Sunshine Bus Company Transit Route
Florida East Coast Railroad
Data Source:
Transit: Open Mobility Data (4/12/2019)
Rail: St Johns County GIS Data Depot (12/4/2012)
0
1 Mile



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Railroad and Transit

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-9
SHEET 4 OF 4

5.2.14 Pedestrian and Bicycle Facilities

The presence of existing sidewalks and bicycle lanes along the trail alignment alternatives are listed in the tables below. This data was captured from the FDOT Transportation Data and Analytics (TDA) GIS data and aerial photography in Google Maps.

Segment 1 – SJC-W

Alignment	On Street	From	To	Sidewalk	Bicycle Lane
SJC-W-1a	SR 207	Existing Trailhead	Vermont Boulevard	Both Sides	Designated - Both Sides
SJC-W-1b	Vermont Boulevard	US 207	Existing Trail	None	None
	SR 207	Vermont Boulevard	Mussallem Trailhead Easement Access	Both Sides	Designated - Both Sides
SJC-W-1c	Mussallem Trailhead Easement Access	US 207	Existing Trail	None	None
SJC-W-1d	St. Johns Street, Duval Street, Osceola Elementary Road	US 207	West King Street	West Side of Osceola Elementary Road South of Osceola Elementary School; East Side of Osceola Elementary Road from Osceola Elementary School to Duval Street; West Side of St. Johns Street and Duval Street	Paved Shoulder on Duval Street and St. Johns Street; Curb and Gutter but no Pavement Markings for Bike Lane
SJC-W-1	SR 207	Mussallem Trailhead Easement Access	US 1	Both Sides	Designated - Both Sides
SJC-W-2	FEC Railroad Corridor	Existing Trail	West King Street	None	None
SJC-W-3	Allen Nease Road	Existing Trail	CR 214	None	None
	CR 214	Allen Nease Road	Holmes Boulevard	None	None
	West King Street	FEC Railroad Corridor	South Whitney Street	Both Sides	Paved Shoulder - South Side of West King Street
SJC-W-3a	South Holmes Boulevard	West King Street	FEC Railroad Corridor	None	None
	FEC Railroad Corridor	Holmes Boulevard	West King Street	None	None
SJC-W-3b	West King Street	Holmes Boulevard	FEC Railroad Corridor	Both Sides	Paved Shoulder - South Side of West King Street

Segment 2 – CoSA

Alignment	On Street	From	To	Sidewalk	Bicycle Lane
CoSA-W-1a	West King Street	South Whitney Street	Pellicer Lane	Both Sides	None
CoSA-W-1b	North Bank of Oyster Creek	West King Street	Pellicer Lane / South Dixie Highway	None	None
	South Bank of Lake Connecting Oyster Creek and San Sebastian River	Pellicer Lane / South Dixie Highway	US 1	None	None
CoSA-W-2a	US 1	West King Street	Lewis Boulevard	Both Sides	None
CoSA-W-2b	Behind Properties on East Side of US 1	West King Street	US 1	None	None

Alignment	On Street	From	To	Sidewalk	Bicycle Lane
CoSA-W-3	US 1	Lewis Boulevard	SR 207	Both Sides	Paved Shoulder - Both Sides; Curb and Gutter but no Pavement Markings for Bike Lane
CoSA-W-4a	US 1	SR 207	SR 312	West Side of US 1	Designated - Both Sides
	SR 312	US 1	Sgt. Tutten Drive	Both Sides	Paved Shoulder - Both Sides; Curb and Gutter but no Pavement Markings for Bike Lane
CoSA-W-4b	US 1 / Arapaho Avenue / Nix Boat Yard Road	SR 207	SR 312	West Side of US 1	None
CoSA-S	SR 312	Sgt. Tutten Drive	Plantation Island Drive	None	Paved Shoulder - Both Sides; Curb and Gutter West of Bridge but no Pavement Markings for Bike Lane
	Mizell Road	Plantation Island Drive	Pope Road	None	None
	Pope Road	Mizell Road	SR A1A	Both Sides	None
CoSA-Sa	SR 312	Plantation Island Drive South	Mizell Road	None	Paved Shoulder - Both Sides
	Mizell Road	SR 312	Plantation Island Drive South	None	None
CoSA-Sb	Plantation Island Drive	SR 312	Mizell Road	None	None

Alignment	On Street	From	To	Sidewalk	Bicycle Lane
CoSA-N	Bridge of Lions / Anastasia Boulevard	Avenida Menendez	Anastasia Park Road	Both Sides	Sharrow from Gerado Street to North St. Augustine Boulevard
CoSA-N-1	SR A1A	Anastasia Park Road	Santander Street	Both Sides	Designated - Both Sides
CoSA-N-1a	Behind Businesses at Anastasia Boulevard / SR A1A and Anastasia Park Road	Anastasia Park Road	Anastasia Boulevard / SR A1A	None	None
CoSA-N-2	Through West Edge of Anastasia Park	Park Road	A1A Beach Boulevard	None	None
CoSA-N-1b	Santander Street	A1A Beach Boulevard	Pope Road	None	None
CoSA-N-1c	A1A Beach Boulevard	Santander Street	Pope Road	None	Designated - Both Sides

Segment 3 – CoSAB

Alignment	On Street	From	To	Sidewalk	Bicycle Lane
CoSAB-1	Mickler Boulevard	Pope Road	A Street	East Side of Mickler Boulevard	None
CoSAB-1a	A Street	Mickler Boulevard	A1A Beach Boulevard	North Side of A Street	None
CoSAB-1b	Mickler Boulevard	A Street	F Street	East Side of Mickler Boulevard	None
	F Street	Mickler Boulevard	A1A Beach Boulevard	None	None

Alignment	On Street	From	To	Sidewalk	Bicycle Lane
CoSAB-2	A1A Beach Boulevard	Pope Road	SR A1A	Both Sides	Paved Shoulder - Both Sides; Curb and Gutter but no Pavement Markings for Bike Lane
	SR A1A	A1A Beach Boulevard	CoSAB Boundary Line	Both Sides	Designated - Both Sides
CoSAB-3	Beachfront – Parallel to A1A	Pope Road	A1A Beach Boulevard	None	None

Segment 4 – SJC-S

Alignment	On Street	From	To	Sidewalk	Bicycle Lane
SJC-S	SR A1A	A1A Beach Boulevard	San Nicolas Way	Both Sides	Designated - Both Sides
SJC-S	SR A1A	San Nicolas Way	2nd Street	East Side	Paved Shoulder
SJC-S	SR A1A	2nd Street	Cubbege Road	None	Paved Shoulder
SJC-S	SR A1A	Cubbege Road	Matanzas Inlet East Parking Lot	West Side	Paved Shoulder
SJC-S	SR A1A	Matanzas Inlet East Parking Lot	South of Matanzas Inlet Bridge	Both Sides	Paved Shoulder
SJC-S	SR A1A	Barrataria Drive	Gene Johnson Road	None	Paved Shoulder
SJC-S	SR A1A	Gene Johnson Road	St. Johns / Flagler County Line	None Except on Both Sides of Bridges	Paved Shoulder

5.2.15 Existing / Planned Trails

The SUN Trail-SJR2C Loop Trail section through SJC is a regional trail connection that has been included in multiple trail routes over the years, including the ECG and the U.S. Bike Route System (USBRS). In the many previous reports that include this alignment, the trail route has generally followed the FEC Railway line from I-95 into the CoSA. This proposed alignment was studied previously (see **Appendix C**), and it is anticipated that any deviation from this route would ultimately result in route adjustments to adjacent roadways and / or other corridors.

St. Johns River to Sea (SJR2C) Loop

The SJR2C Loop is a nearly 260-mile regional loop trail spanning five counties: Brevard, Volusia, Putnam, Flagler, and St. Johns. The trail is in various stages of planning, construction, and completion. The generalized route of the SJR2C Loop was to follow the FEC Railway line into the CoSA and then the ECG spine route south to tie into the existing trail in Flagler County. The vision for the River-to-Sea Loop took shape in 2004, and from that, the following milestones for the SJR2C Loop took place:

- In September 2008, the five affected counties signed a Memorandum of Agreement emphasizing their commitment to complete the trail.
- In September 2011, the first comprehensive trail status report was completed, assessing the county-by-county status of the overall SJR2C Loop trail corridor.
- On March 31, 2016, the Florida Greenways and Trails Council ranked the SJR2C Loop as the second regional trail system for FDOT's SUN Trail program funding to help complete the trail.
- In July 2016, the SJR2C Loop Alliance was established as a 501(c)3 nonprofit with the mission to support, advance, advocate, promote, and protect the SJR2C Loop.
- In May 2018, the SJR2C Loop Strategic Plan was published as part of a Florida Department of Community Affairs Technical Assistance Grant. The purpose of the grant was to develop a cohesive brand, marketing strategy, and plan to promote and integrate the SJR2C Loop through the five affected counties.

St. Johns County Blueways and Trails Master Plan

The River-to-Sea Loop was included in the 2004 SJC Blueways and Greenways Master Plan. The master plan followed the approximate route of the existing FEC Railway line in the western study area with the trail entering the CoSA at King Street. The latest draft of the SJC Parks and Recreation Plan includes a Trails Subsystem Vision that continues to show the proposed trail alignment collocated with the FEC Railway line. The trail then connects to the CoSA crossing the Bridge of Lions, then passes through Anastasia Park, and follows A1A Beach Boulevard before it continues down A1A. This plan depicts the proposed trail alignment as a paved trail.

East Coast Greenway

The ECG is a 3,000-mile trail system stretching from Calais, Maine, to Key West, Florida. The ECG is envisioned to be a traffic-separated trail available for all users. The ECG is governed by the ECG Alliance, a non-profit organization that advocates for and provides trail designations in accordance with their Route Guidance and Criteria. The ECG primary route includes the entire coastal portion of the proposed project route. In addition, the SUN Trail-SJR2C Loop outside of the coastal route is included as an ECG complementary route and is subject to ECG designation. Currently, the existing Palatka to St. Augustine Trail has been designated as part of the ECG. The current conceptual alignment of the ECG follows Allen Nease Road and CR 214. A small section of ECG trail designated within the CoSAB includes a portion of the 8-foot trail along Pope Road and Mickler Boulevard. It is anticipated that once a final route is selected and trail segments are built, this section would achieve ECG trail designation. Following this study and any future studies, the ECG's final route may adjust accordingly to complete the overall vision.

U.S. Bike Route System

The USBRS is a developing national network of bicycle routes connecting urban, suburban, and rural areas using roads, trails, and other facilities appropriate for bicycle travel. Routes are numbered and may be signed. The proposed routes interface with USBRS routes. USBR 1 follows the approximate route of A1A along the entire coast of Florida from the Georgia line to Key West. The second route that impacts this study is USBR 90, which stretches from Pensacola to the Atlantic Ocean. The current route follows the Palatka to St. Augustine Trail until it intersects with SR 206, at which time it follows SR 206 to Crescent Beach.

5.2.16 Field Review

Field reviews were conducted from January 2019 to June 2019. This included consultant independent reviews and reviews held jointly with SJC Public Works Department staff. Various meetings with the jurisdictional agencies were conducted to present and discuss encountered field observations for respective potential corridors, which resulted in the alternatives presented in this planning study. Data collected during the field reviews, including photos of key features, are included in **Appendix F**.

5.3 Environmental Setting

The existing environmental setting is comprised of natural, cultural, social, and physical resources. The potential impacts to wetlands, Essential Fish Habitat (EFH), listed species, public parks and recreation areas, and recorded conservation easements (CEs) were evaluated for the 24 segment alternatives of the proposed SUN Trail-SJR2C Loop through SJC. Most segment alternatives follow existing roads where the trail is expected to be constructed within existing ROW. Impacts to each resource within each segment alternative will vary based on the design and position of the trail. Further details on the evaluation conditions and results are presented in the Preliminary Natural Resources Analysis Report provided in **Appendix H**. The environmental features are described in the following sections.

5.3.1 Wetlands and Floodplains

The wetlands and floodplains within the planning study area were reviewed using the National Wetlands Inventory (NWI) data and the Federal Emergency Management Agency (FEMA) floodplains. The resulting map is shown by **Figure 5-10**.

The wetlands and Other Surface Waters (OSWs) in each segment alternative that would require mitigation to impact were estimated using GIS habitat and land use data from the SJRWMD and aerial interpretation. All segment alternatives except for CoSA-W-1a, CoSA-N-1, CoSA-N-1b, CoSA-N-1c, CoSA-N-2, CoSAB-1, CoSAB-1a, and CoSAB-1b contain wetlands and / or OSWs that likely will require mitigation to impact. Impacts are unlikely to occur to wetlands and OSWs under existing bridges because the trail will likely be constructed on the existing bridge structures.

A Preliminary Natural Resources Analysis Report was performed for the SUN Trail-SJR2C Loop study area and can be found in **Appendix H**. Additional information related to the FEC ROW corridor alternative is provided by previous study included in **Appendix C**.

5.3.2 Habitat

The St. Johns County Data Depot contains locations of eagle nests and turtle zones, which are shown by **Figure 5-11**. No bald eagle nests are within 300 feet of the trail alignment alternatives. However, the Atlantic Ocean coastline is considered a turtle zone. The preservation areas from the Florida Natural Areas Inventory are also shown on the figure.

Essential Fish Habitat

EFH consists of marine waters and all inland waters and wetlands (regardless of salinity) that are subject to the ebb and flow of the tide. In the portions of SJC through which the trail traverses, EFH is limited to brackish and saline waterways such as Oyster Lake, the San Sebastian River, the Matanzas River, the Matanzas Inlet, and to the salt marshes associated with these waterways. EFH occurs in segment alternatives CoSA-W-2a, CoSA-W-3, CoSA-King Street, CoSA-N, CoSA-S, and SJC-S. Due to the expected position and design of the trail, EFH impacts (permanent fill below the Mean High Water Level [MHWL] of these systems) are unlikely to be incurred.

Listed Species

The listed species that may occur in SJC were determined, and those that have at least a moderate probability of occurrence and / or that may affect the permitting or construction of the project were addressed in the report. Gopher tortoises have at least a low probability of occurrence in all undeveloped and other open uplands in all segment alternatives in which these potentially suitable habitats occur. They have a higher probability of occurrence in and around Anastasia State Park (segment alternatives CoSA-N-2, CoSA-S, and CoSA-N-1c) and in segment SJC-S. In suitable areas, gopher tortoises may occur within existing maintained road ROW. Impacts to sea turtles and manatees are unlikely to occur because the trail is likely to be constructed on existing bridge structures over the waterways and beaches where these species may occur. All segment alternatives except one are unlikely to adversely affect the wood stork. However, if impacts are proposed to the small tidal creek in segment alternative CoSA-N, just north of the Alligator Farm wood stork colony, consultation with the U.S. Fish and Wildlife Service (USFWS) may be necessary. The Anastasia beach mouse may occur near segment alternatives CoSA-N-1c, CoSA-S, and SJC-S. Because these segments are considered in the future, coordination may be necessary with state and federal park and wildlife officials regarding this species.

A Preliminary Natural Resources Analysis Report was performed for the SUN Trail-SJR2C Loop study area and can be found in **Appendix H**. Additional information related to the FEC ROW corridor alternative is provided by previous study included in **Appendix C**.

5.3.3 Coastal High Hazard Areas and Outstanding Florida Waters

The Coastal High Hazard Area is an area particularly vulnerable to the effects of coastal flooding from tropical storm events and is defined by section 163.3178(2)(h)9, Florida Statutes, as the area below the elevation of the Category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. The St. Johns County Data Depot contains information for the Coastal High Hazard Area, which is shown by **Figure 5-12**.

An Outstanding Florida Water (OFW) is a water designated worthy of special protection because of its natural attributes. This special designation is applied to certain waters and is intended to protect existing good water quality. Most OFWs are managed by the state or federal government as parks, including wildlife refuges, preserves, marine sanctuaries, estuarine research reserves, certain waters within state or national forests, scenic and wild rivers, or aquatic preserves. Generally, waters within these managed

areas are OFWs because the managing agency has requested this special protection. Waters that are not already in a state or federally managed area may be designated as “special water” OFWs if certain requirements are met, including a public process of designation. Two OFWs are within the planning study area potential alternatives: Anastasia State Recreation Area in Segment 2 – CoSA and Faver Dykes State Park in Segment 4 – SJC-S. The Coastal High Hazard Areas and the OFWs are shown by **Figure 5-12**.

5.3.4 Cultural and Historic Resources

The National Register of Historic Places (NRHP) is the official list of historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service’s NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America’s historic and archaeological resources. The Florida Master Site File is the State’s official inventory of historical and cultural resources. These sites are evaluated by the State Historic Preservation Officer (SHPO). Historic structures, bridges, and cemeteries that have been evaluated by the SHPO and eligible for the NRHP, as recorded in the SMFS, are displayed by **Figure 5-13**. The figure also shows resource group locations eligible for the NRHP, which are historical districts, archaeological districts, or building complexes.

Eight historic structures are within the planning study area and several historic roads. Additionally, the Bridge of Lions is a historic bridge.

As shown on **Figure 5-13**, SR A1A is also designated as the A1A Scenic and Historic Coastal Byway within the Florida Scenic Highways Program. The program is a grassroots effort to raise awareness of these resources that enhance the overall traveling experience in Florida. With this designation, SR A1A is subject to resource preservation, enhancement, and protection.

Soils maps, historic maps, and topographical maps were used to evaluate each corridor segment for its archaeological potential. Based on this review, approximately 20.7 percent of the testable study area is considered to have high probability for unrecorded archaeological deposits, 43.1 percent is considered moderate probability, and 36.2 percent of the study area exhibits low probability. The SJC Property Appraiser’s website was also consulted to identify any parcels within the study area, which contained historic (pre-1975) but unrecorded structures; a total of 316 were noted. In addition, two unrecorded historic bridges (Bridge Nos. 780046 and 780049) and one unrecorded cemetery (St. Augustine Parrish Cemetery) are located within the study area.

A cultural resource desktop analysis was performed for the SUN Trail-SJR2C Loop study area and can be found in **Appendix G**.

5.3.5 Parks and Recreation Facilities

Local parks and CEs occur near several segments but are not likely to be affected by trail construction. Exception will be for the preferred route through Anastasia State Park (Segment CoSA-N-2). Although the Anastasia State Park manager and the park’s jurisdiction authority (FDEP) have indicated support for constructing this segment alternative through the park, potential environmental impacts will likely require further study and coordination based on the specific alignment to be designated. Other nearby segment alternatives that pass through or adjacent to Anastasia State Park do so within existing road ROW and will not directly affect park property. Due to the presence of the edges of sensitive habitats and potential listed species occurrence, Anastasia State Park officials may also comment about some of these alternatives. Segment SJC-S follows SR A1A through Anastasia Island and passes through several federal and state parks and preservation areas. While these areas are not likely to be affected directly, state and federal agencies may want to comment on the trail’s potential effects to listed species.

Several parks, trails, campgrounds, and other recreational facilities are within the planning study area and shown by **Figure 5-14**. Thirty-six parks are within 300 feet of the potential trail alignment alternatives, which are presented in the tables that follow.

Segment 1 – SJC-W

Park Name	Type	Status	Owner	Operator	Acres
Collier-Blocker-Puryear Park	Community	Open	County	St. Johns County	6.12
BMX Track	Special Purpose	Open	County	St. Johns County	2.14
Mussallem Trailhead Park	Proposed	Not Open	County	St. Johns County	24.67
Osceola School Fields	School Board Park	Open	County School Board	St. Johns County	6.68
Tocoi Junction Park	Special Purpose	Not Open	County Conservation	St. Johns County	18.61
West Augustine Park & Solomon Calhoun Community Center	Regional	Open	County	St. Johns County	13.60
St. Augustine Little League Park	Community	Open	County	St. Johns County	34.88
River to Sea Loop Trail	Regional	Open	County	St. Johns County	97.11
St. Johns Golf Club	Special Purpose	Open	County	St. Johns County	379.97

Segment 2 – CoSA

Park Name	Type	Status	Owner	Operator	Acres
Plaza de la Constitucion	Community	Open	City	City of St. Augustine	1.21
Government Yard	Community	Open	City	City of St. Augustine	0.42
St. Augustine Municipal Marina	Water Access	Open	City	City of St. Augustine	4.22
Pope Road Park	Water Access	Open	County	St. Johns County	0.97
Hamilton Upchurch Neighborhood Park	Neighborhood	Open	City	City of St. Augustine	2.29
Anderson Circle	Community	Open	City	City of St. Augustine	0.44
Gary Lee Park	Neighborhood	Open	City	City of St. Augustine	0.09
Anastasia State Park	Conservation	Open	State	State of Florida	1,498.79
St. Augustine Amphitheatre	Special Purpose	Open	County	St. Johns County	21.26
Parque de Menendez	Community	Open	City	City of St. Augustine	0.89
St. Augustine Carpet Golf Park	Community	Open	City	City of St. Augustine	0.41
Gibbs Park	Community	Open	City	City of St. Augustine	1.24
Zora Neale Hurston Memorial Park	Community	Open	City	City of St. Augustine	0.36

Segment 3 – CoSAB

Park Name	Type	Status	Owner	Operator	Acres
Ron Parker Park	Community	Open	County	St. Johns County	4.33
Hammock Dunes Park	Proposed	Not Open	County	St. Johns County	6.11
St. Johns County Ocean Pier & Courts Park	Water Access	Open	County	St. Johns County	5.78
Ocean Hammock Park	Water Access	Open	City	City of St. Augustine Beach	14.02

Segment 4 – SJC-S

Park Name	Type	Status	Owner	Operator	Acres
Joel A. "Bubba" Williams Windswept Acres Park	Neighborhood	Open	County	St. Johns County	3.55
Spyglass Walkover & Parking Lot	Water Access	Open	County	St. Johns County	1.20
Matanzas Inlet Fishing Park	Water Access	Open	County	St. Johns County	1.17

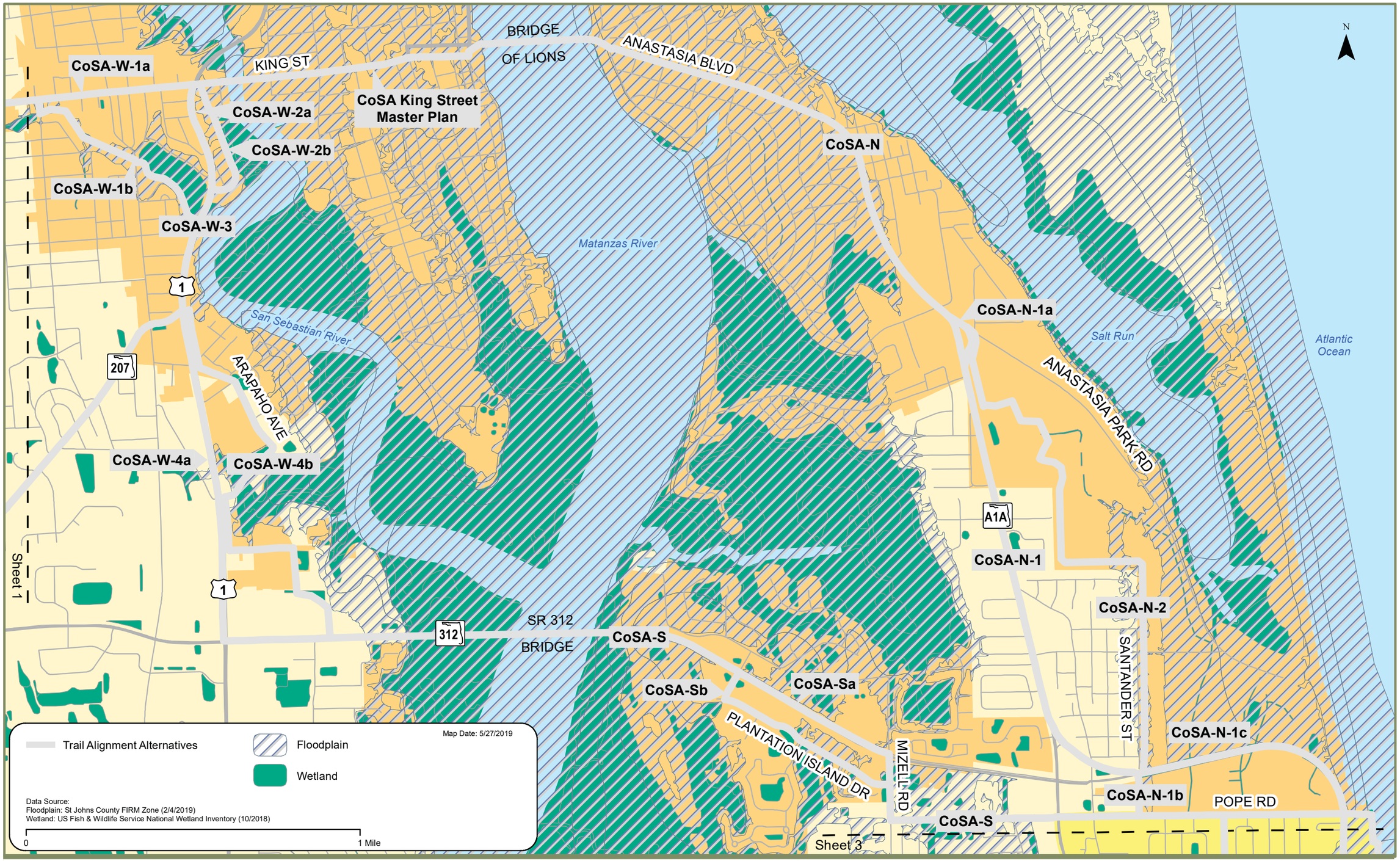
SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Wetlands and Floodplains

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 5-10

SHEET 1 OF 4

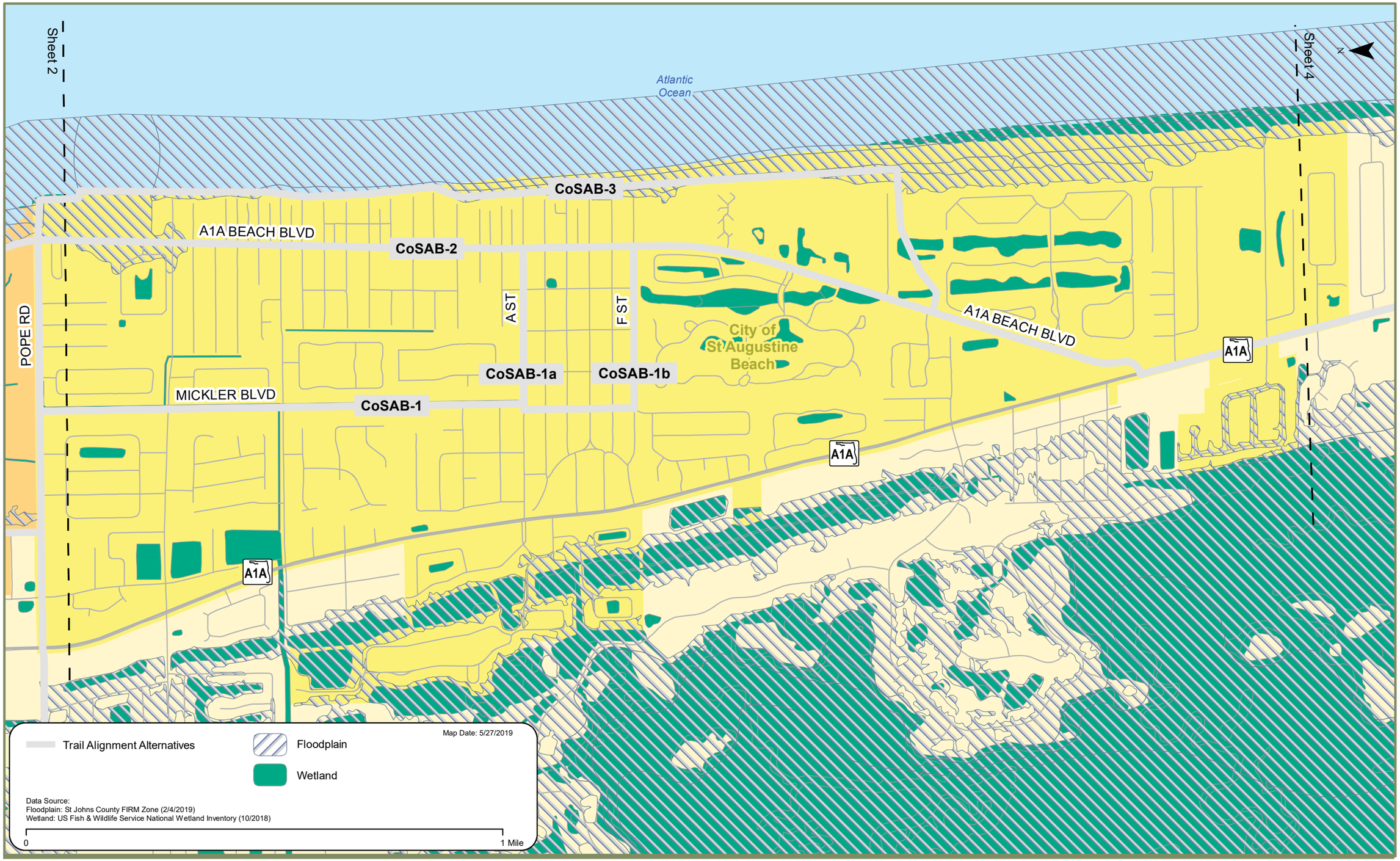


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Wetlands and Floodplains

Segment 2 - City of St. Augustine (CoSA)

FIGURE 5-10
SHEET 2 OF 4

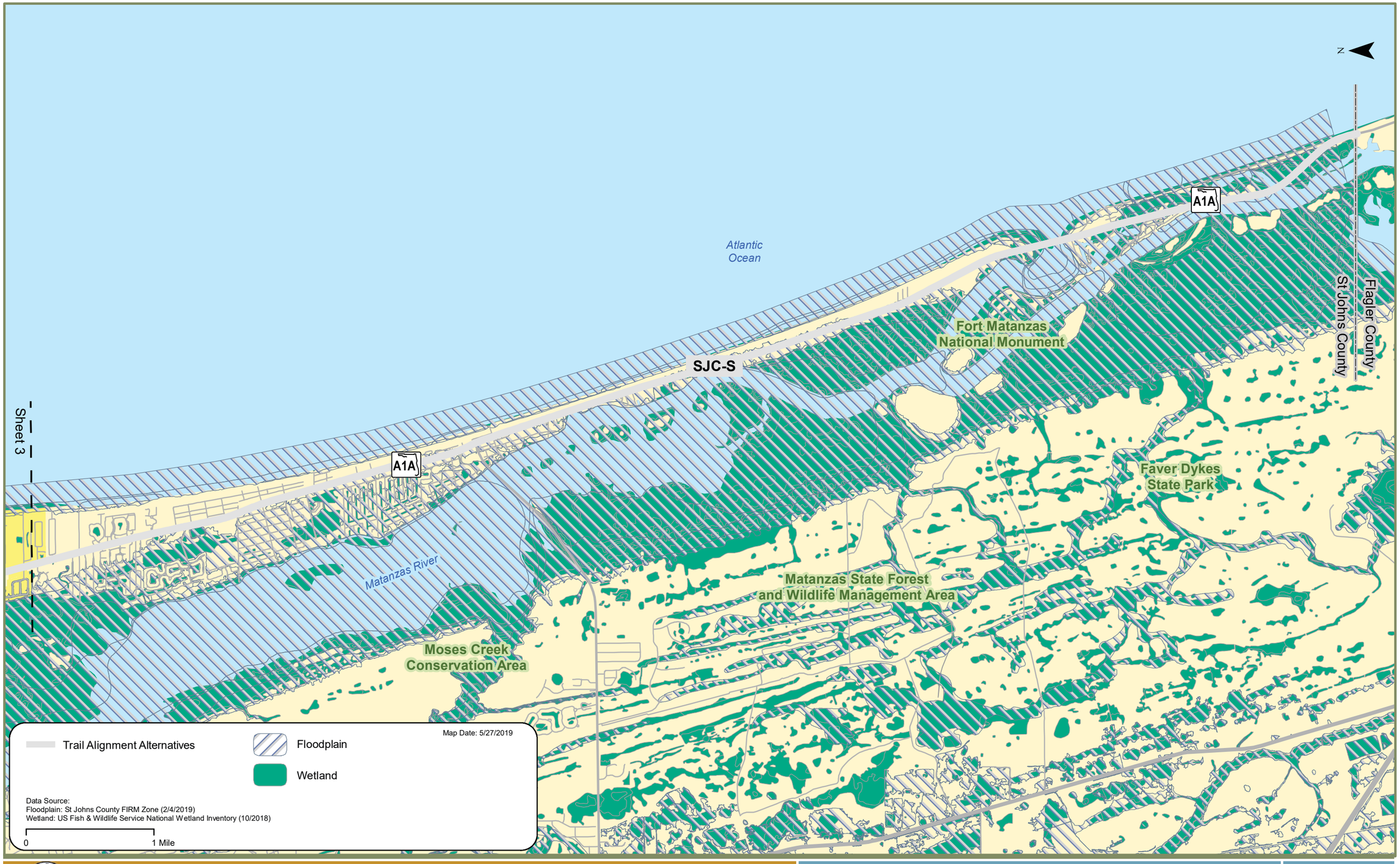


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Wetlands and Floodplains

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 5-10
SHEET 3 OF 4

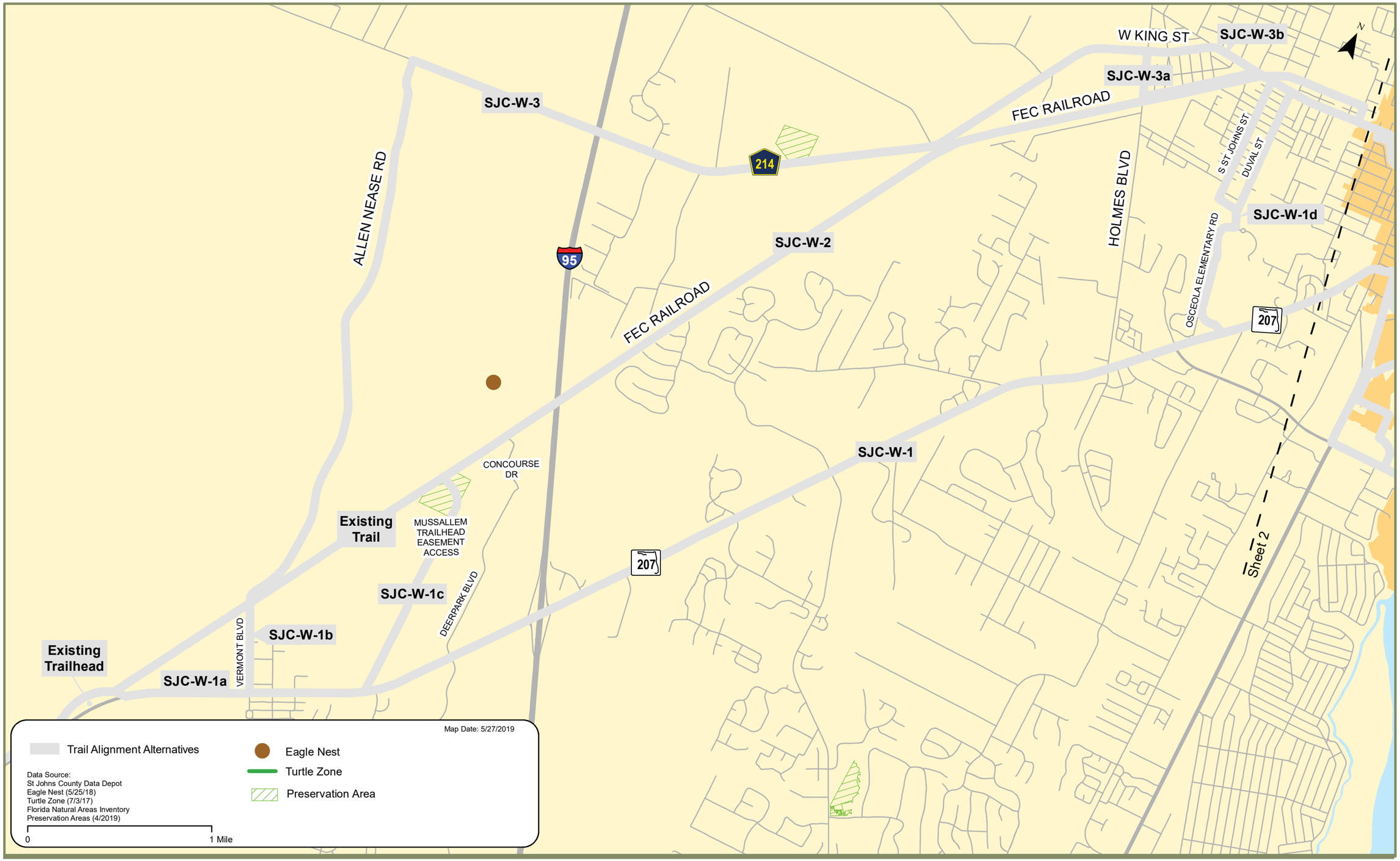


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Wetlands and Floodplains

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-10
SHEET 4 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Habitat

Segment 1 - St. Johns County - West (SJC-W)

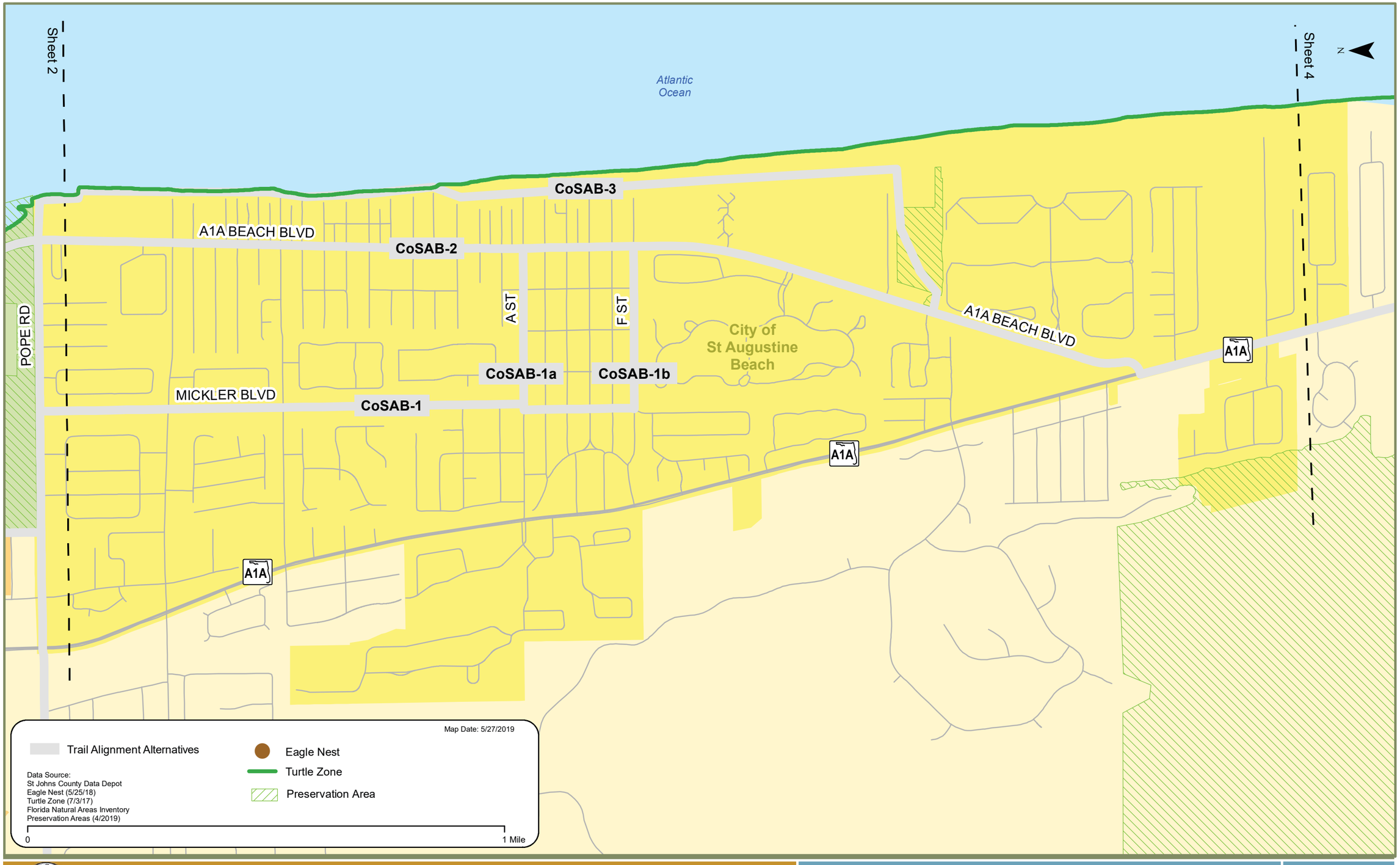
FIGURE 5-11
SHEET 1 OF 4

SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Habitat

Segment 2 - City of St. Augustine (CoSA)

FIGURE 5-11
SHEET 2 OF 4

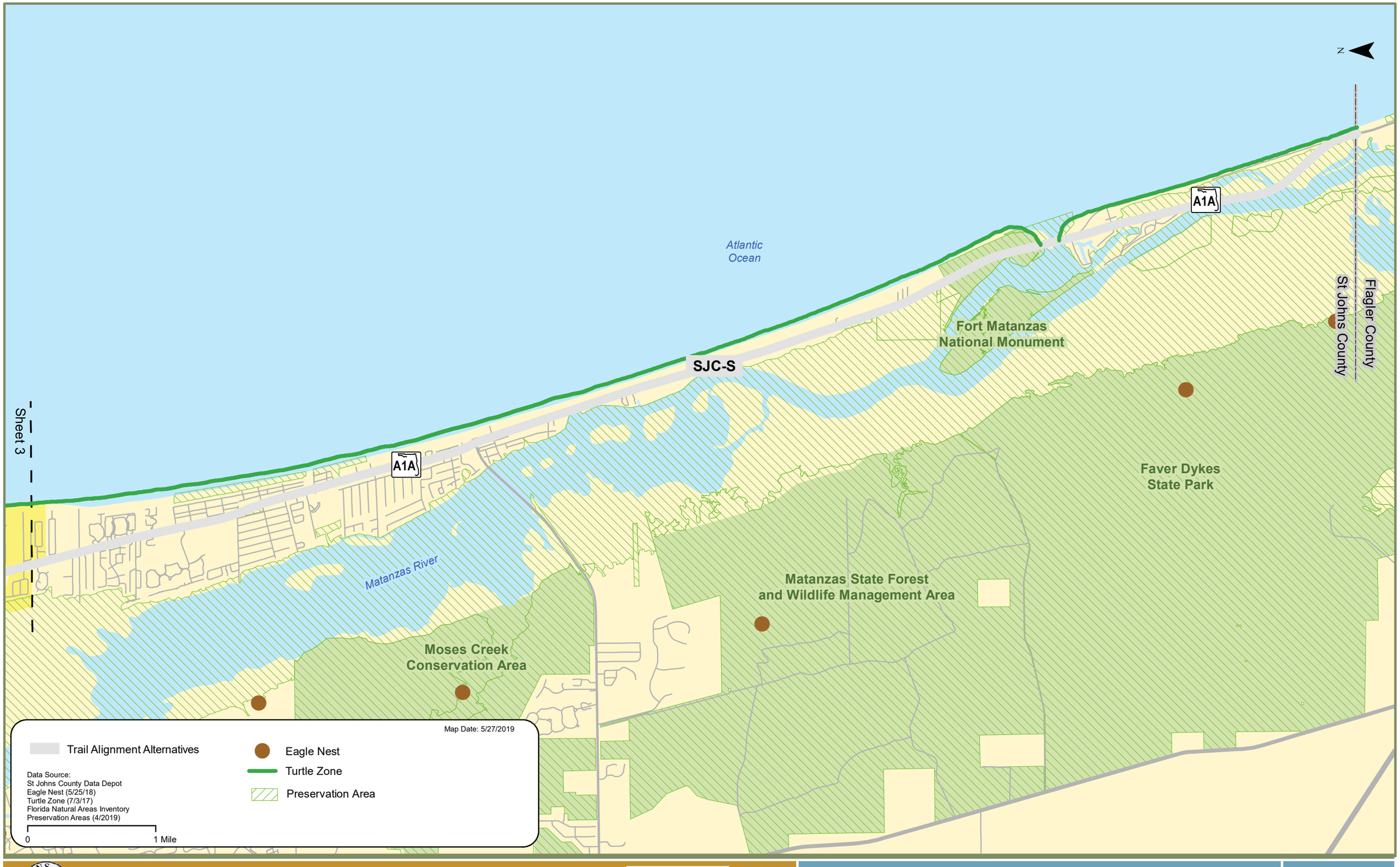


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Habitat

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 5-11
SHEET 3 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Habitat

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-11
SHEET 4 OF 4

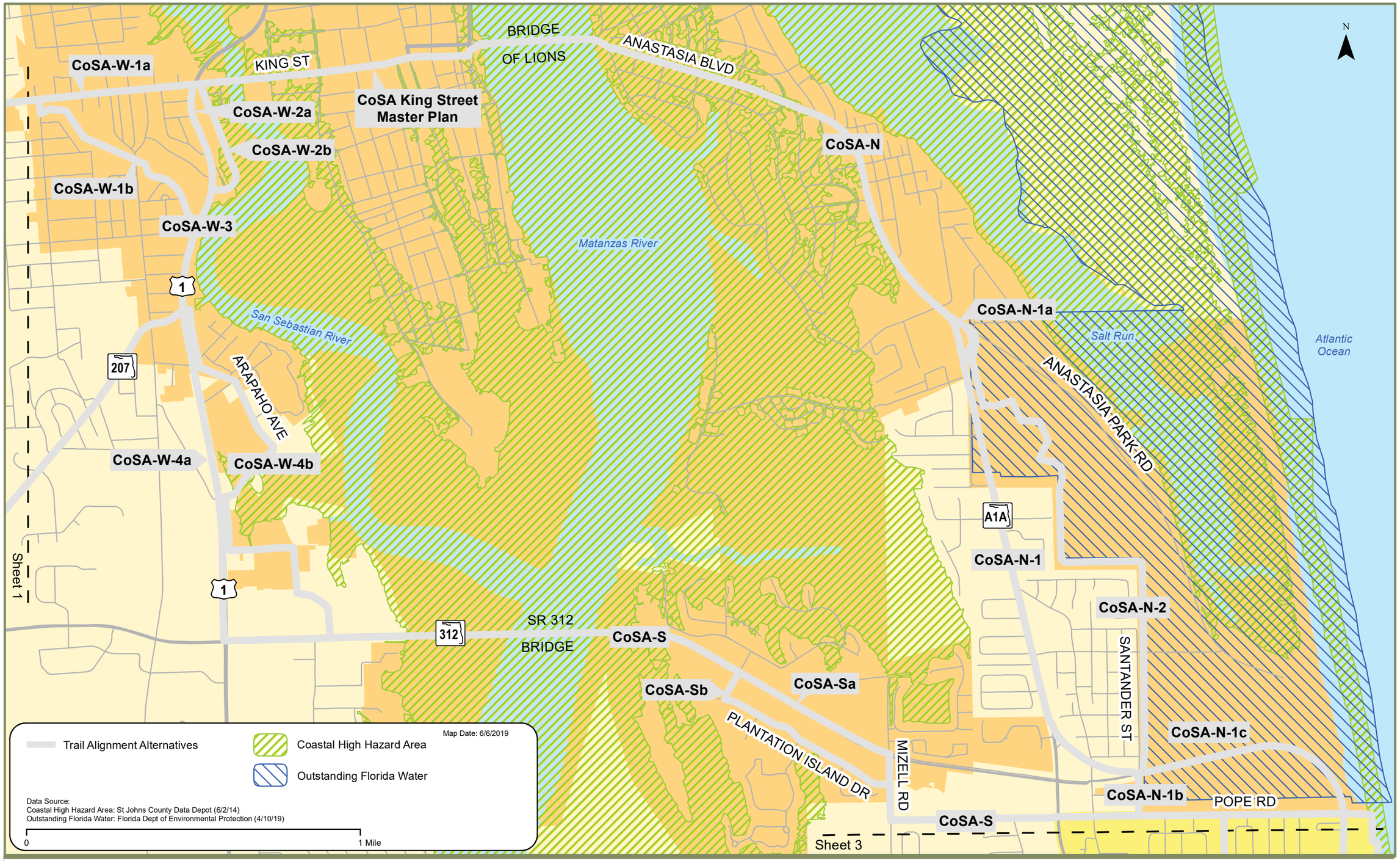
SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Outstanding Florida Waters and Coastal High Hazard Area

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 5-12

SHEET 1 OF 4

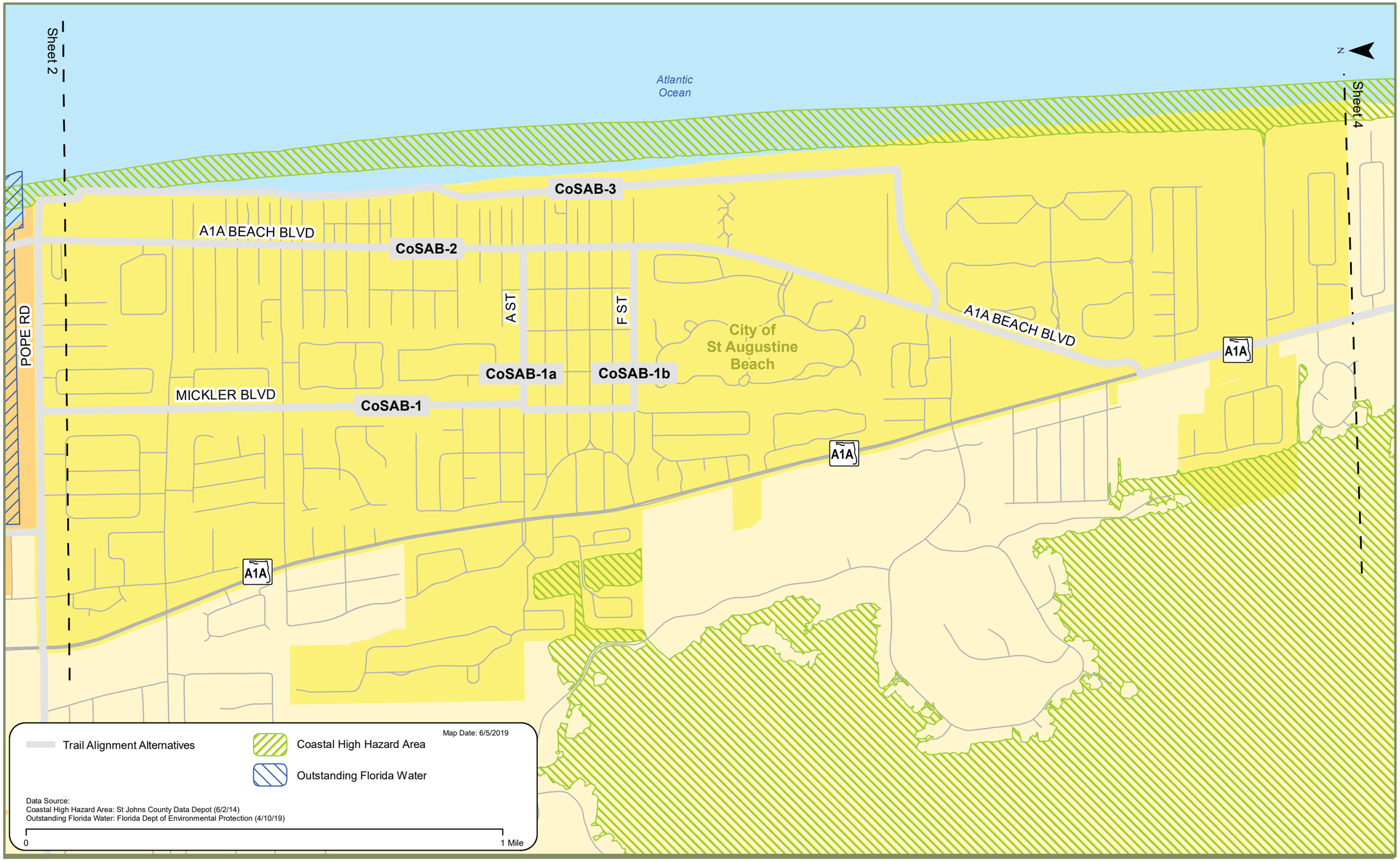


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Outstanding Florida Waters and Coastal High Hazard Area

Segment 2 - City of St. Augustine (CoSA)

FIGURE 5-12
SHEET 2 OF 4



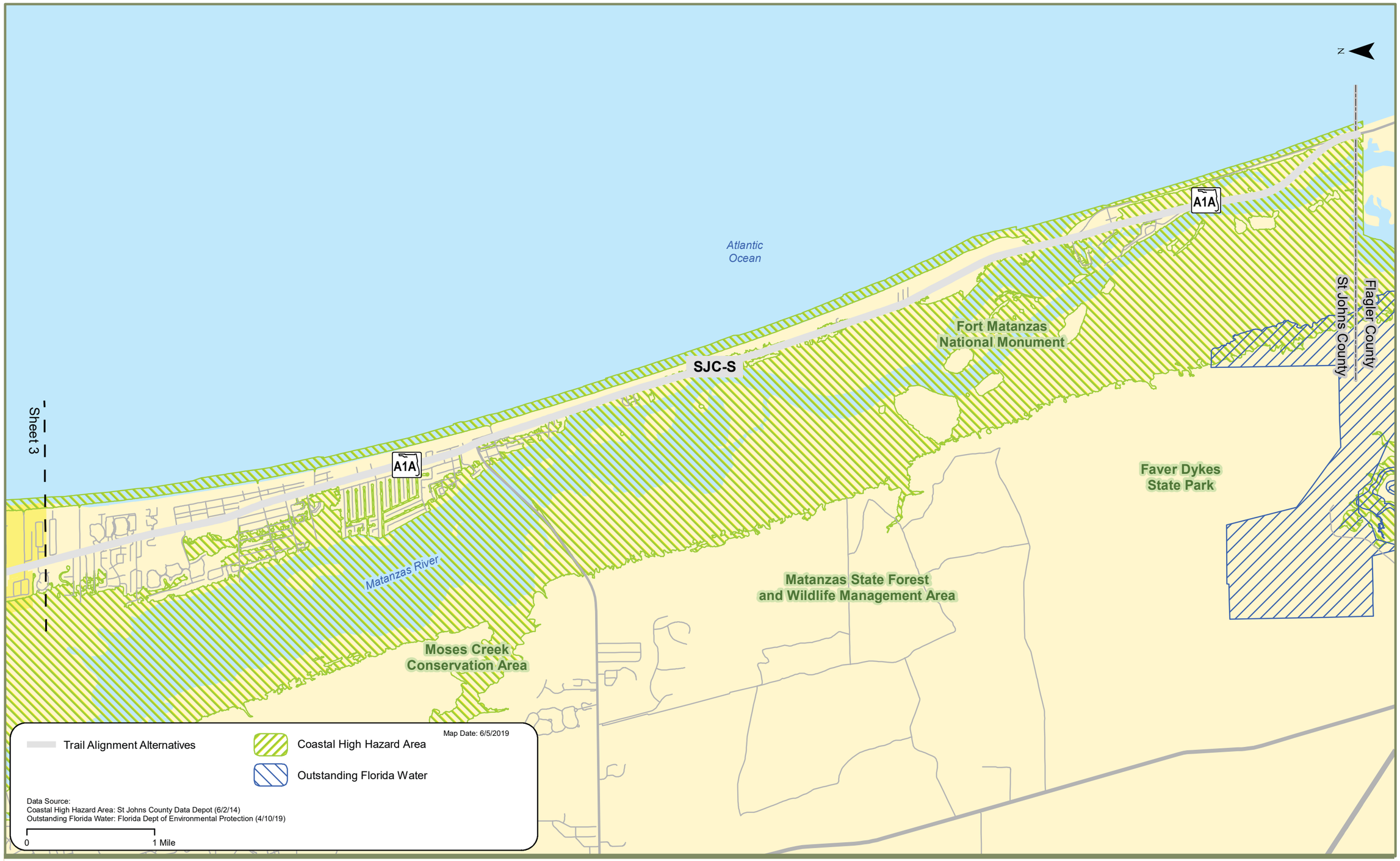
SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Outstanding Florida Waters and Coastal High Hazard Area

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 5-12

SHEET 3 OF 4

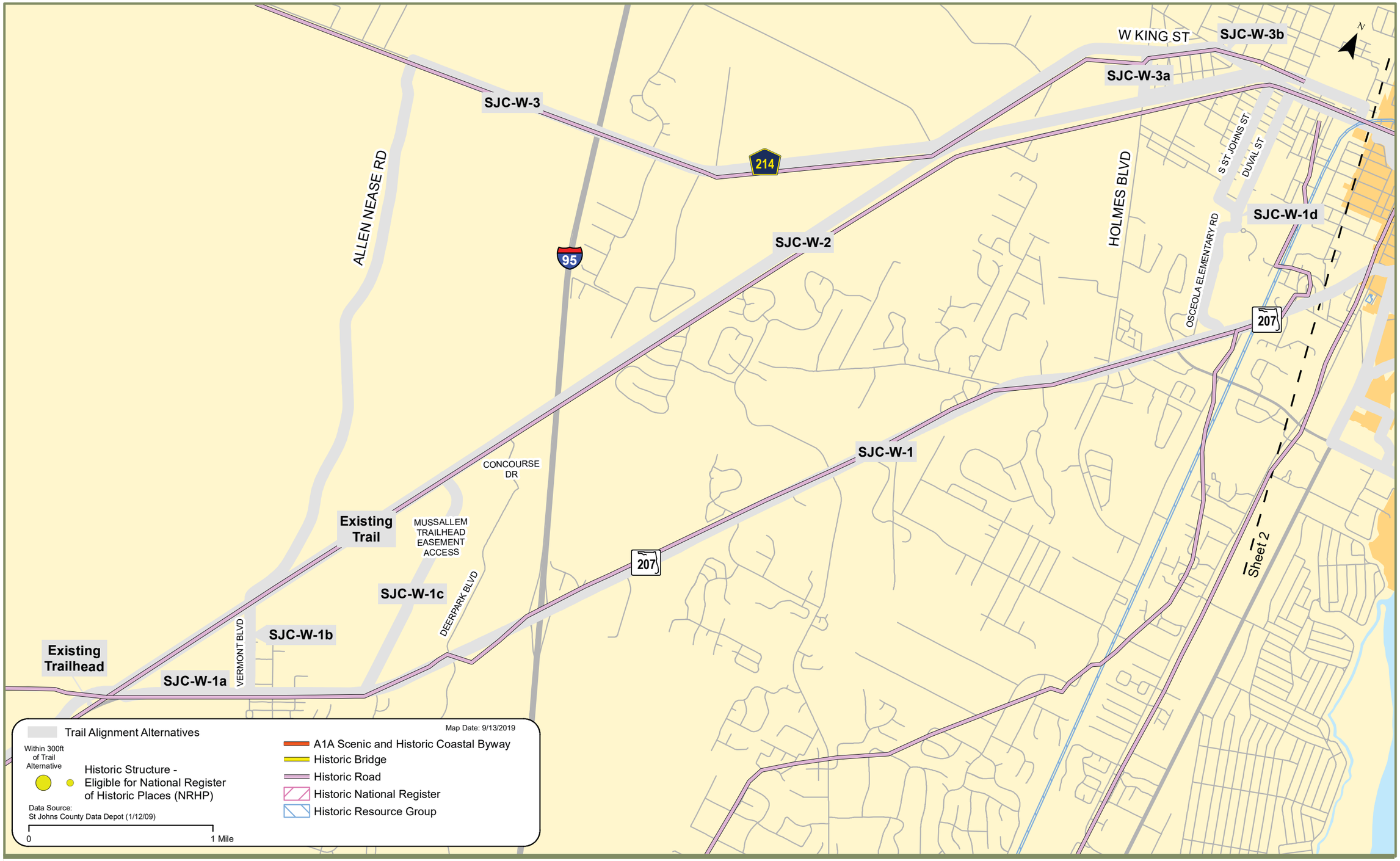


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Outstanding Florida Waters and Coastal High Hazard Area

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-12
SHEET 4 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Historical Sites

Segment 1 - St. Johns County - West (SJC-W)

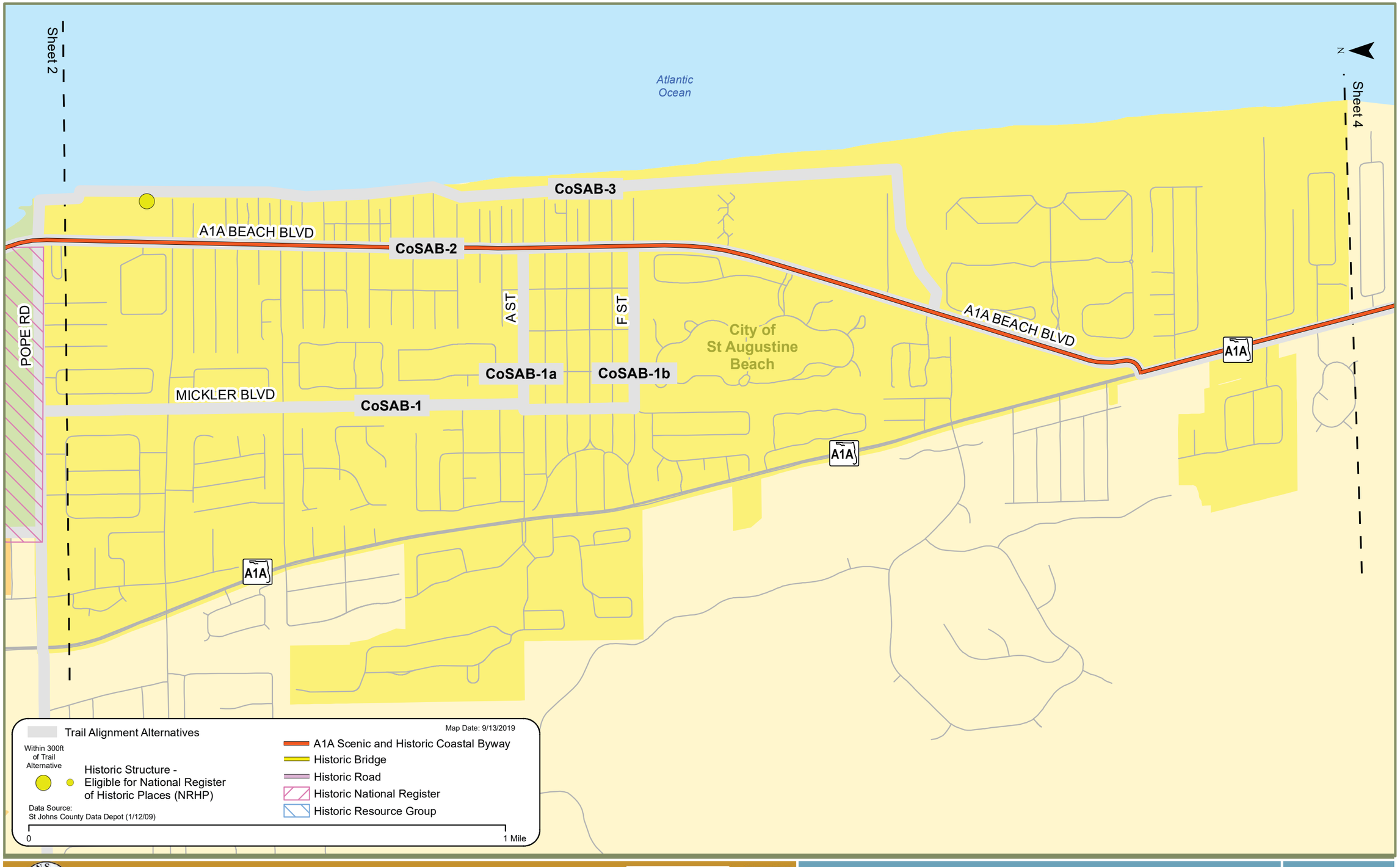
FIGURE 5-13
SHEET 1 OF 4

SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Historical Sites

Segment 2 - City of St. Augustine (CoSA)

FIGURE 5-13
SHEET 2 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Historical Sites

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 5-13
SHEET 3 OF 4

SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Historical Sites

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-13
SHEET 4 OF 4

SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Parks, Trails, and Recreation

Segment 1 - St. Johns County - West (SJC-W)

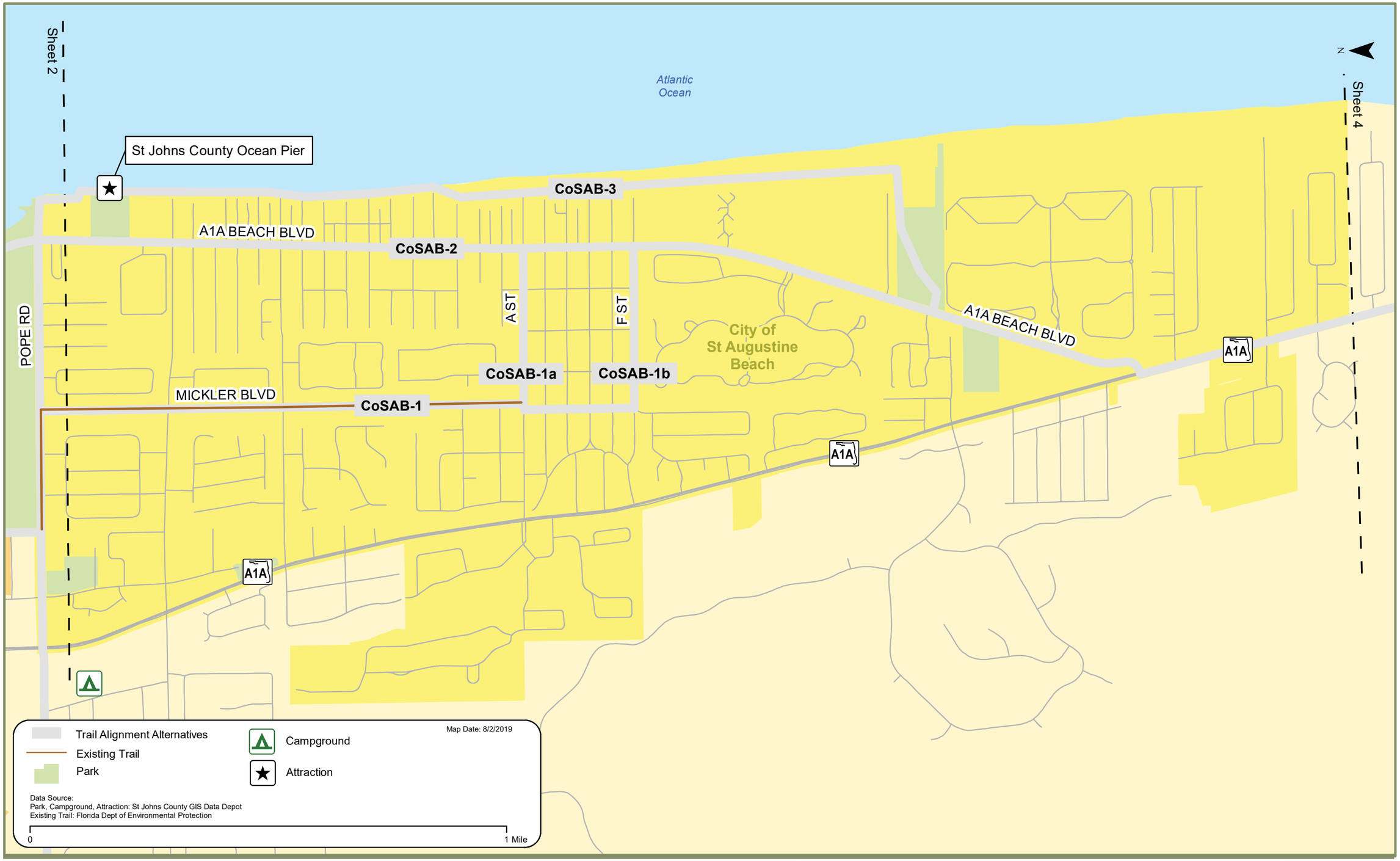
FIGURE 5-14
SHEET 1 OF 4

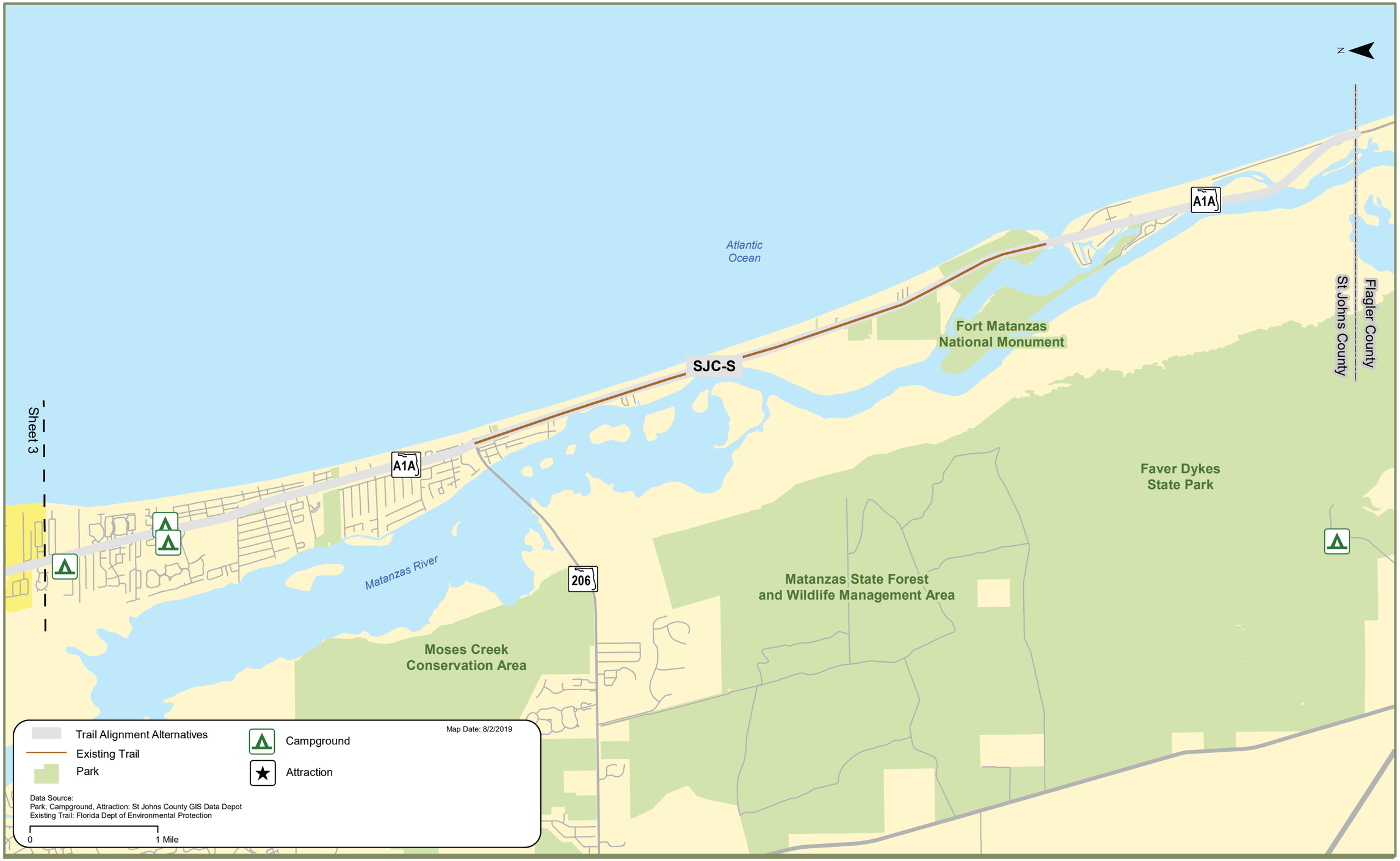
SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Parks, Trails, and Recreation

Segment 2 - City of St. Augustine (CoSA)

FIGURE
5-14
SHEET 2 OF 4


Sheet 2
Sheet 4
N
Atlantic Ocean
St Johns County Ocean Pier
A1A BEACH BLVD
CoSAB-3
CoSAB-2
POPE RD
A ST
F ST
City of St Augustine Beach
A1A BEACH BLVD
A1A
CoSAB-1a
CoSAB-1b
MICKLER BLVD
CoSAB-1
A1A
A1A
Trail Alignment Alternatives
Existing Trail
Park
Campground
Attraction
Map Date: 8/2/2019
Data Source:
Park, Campground, Attraction: St Johns County GIS Data Depot
Existing Trail: Florida Dept of Environmental Protection
0
1 Mile



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Parks, Trails, and Recreation

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-14
SHEET 4 OF 4

5.3.6 Community Features

Community features such as fire stations, schools, cemeteries, government buildings, hospitals, and religious centers were reviewed within the planning study area. Five fire stations, eight schools, two cemeteries, seven government facilities, and 25 religious centers are near the potential trail alignment alternatives. Flagler Hospital is in the planning study area but more than 1,000 feet away from SR 312. The tables below summarize the community features near the trail alignment alternatives. The locations of the community features are shown by **Figures 5-15 and 5-16.**

Segment 1 – SJC-W

Trail Alignment	Type	Name
SJC-W-3b	Fire Station	St. Johns County Fire Rescue Station 14 (St. Augustine West)
SJC-W-1d	School	Osceola Elementary School
SJC-W-1	School	Otis A. Mason Elementary School
SJC-W-3	School	RJ Murray Middle School
SJC-W-3b	School	Webster Elementary School
SJC-W-1	Government	National Guard Armory
SJC-W-1d	Government	Solomon Calhoun Community Center
SJC-W-3	Religious Center	Christ Ambassadors Ministry
SJC-W-1	Religious Center	Family Worship Center - Trinity Christian Fellowship
SJC-W-1	Religious Center	Islamic Center
SJC-W-1	Religious Center	Freedom Baptist Church
SJC-W-3	Religious Center	Holy Trinity Greek Orthodox
SJC-W-1d	Religious Center	Tabernacle Baptist Church
SJC-W-3	Religious Center	Church Of God In Christ
SJC-W-3	Religious Center	Church Of God By Faith
SJC-W-3	Religious Center	Macedonia Holiness Church
SJC-W-2	Religious Center	New Saint James Missionary Baptist Church
SJC-W-1d	Religious Center	Faith Temple Holiness Family
SJC-W-3	Religious Center	Bread Of Life
SJC-W-1d	Religious Center	Pentecostal Assembly Of Jesus
SJC-W-3	Religious Center	Church Of Christ
SJC-W-3	Religious Center	Universal Holiness Church Inc

Segment 2 – CoSA

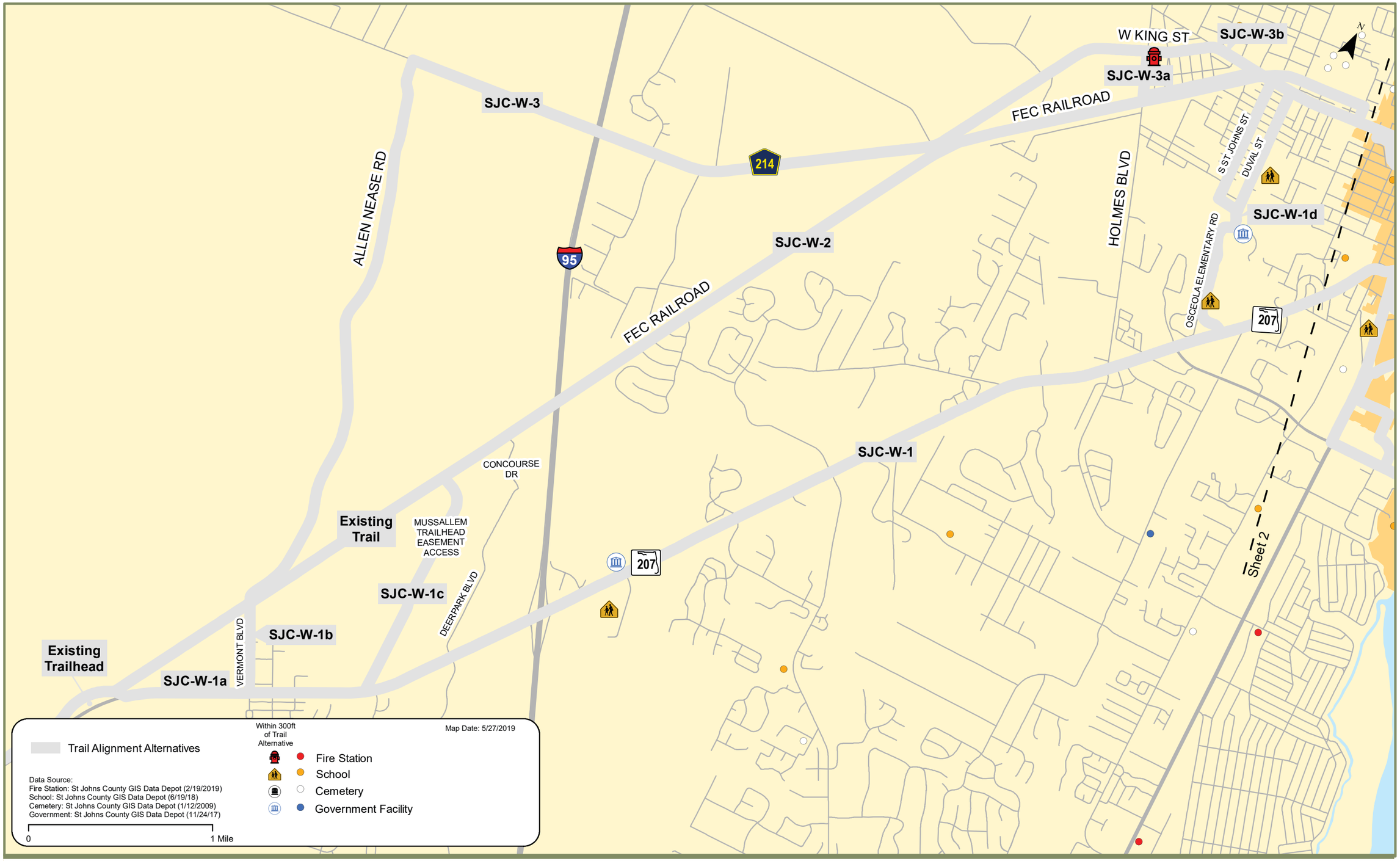
Trail Alignment	Type	Name
CoSA-N	Fire Station	City of St. Augustine Fire Department Island Station
St. Augustine	School	Flagler College
CoSA-N	School	R.B. Hunt Elementary School
CoSA-W-4a	School	St. Gerard Campus, Inc. Private School
CoSA-W-1b	School	Gaines Alternative School at the Evelyn Hamblen Center
CoSA-N	School	Ark Christian Academy Private School
CoSAB-2	School	Island Prep Private School
St. Augustine	Cemetery	St. Augustine Parish Cemetery
St. Augustine	Cemetery	Gen. William Wing Loring Monument
St. Augustine	Government	St. Augustine Branch Post Office
St. Augustine	Government	St. Augustine Police Department
CoSA-S	Government	St. Augustine Beach Public Works Facility
St. Augustine	Government	Lightner Museum City Hall Complex
CoSA-W-4a	Religious Center	Destiny Church International - Trinity Chapel
CoSA-W-1a	Religious Center	Shiloh Baptist Church
CoSA-W-1b	Religious Center	Restoration Time Deliverance
St. Augustine	Religious Center	Cathedral Basilica
St. Augustine	Religious Center	Trinity Episcopal Parish
St. Augustine	Religious Center	First United Methodist Church
CoSA-N	Religious Center	New Beginning Full Gospel
CoSA-N-1	Religious Center	Anastasia Baptist Church

Segment 3 – CoSAB

Trail Alignment	Type	Name
CoSAB-2	Fire Station	St. Johns County Fire Rescue Station 7 (St. Augustine Beach)
CoSAB-2	Fire Station	St. Johns County Fire Rescue Marine Rescue
CoSAB-2	Religious Center	The Shiloh Spiritual Center

Segment 4 – SJC-S

Trail Alignment	Type	Name
SJC-S	Fire Station	St. Johns County Fire Rescue Station 6 (Crescent Beach)
SJC-S	Government	County Annex (Crescent Beach)
SJC-S	Religious Center	Crescent Beach Baptist Church



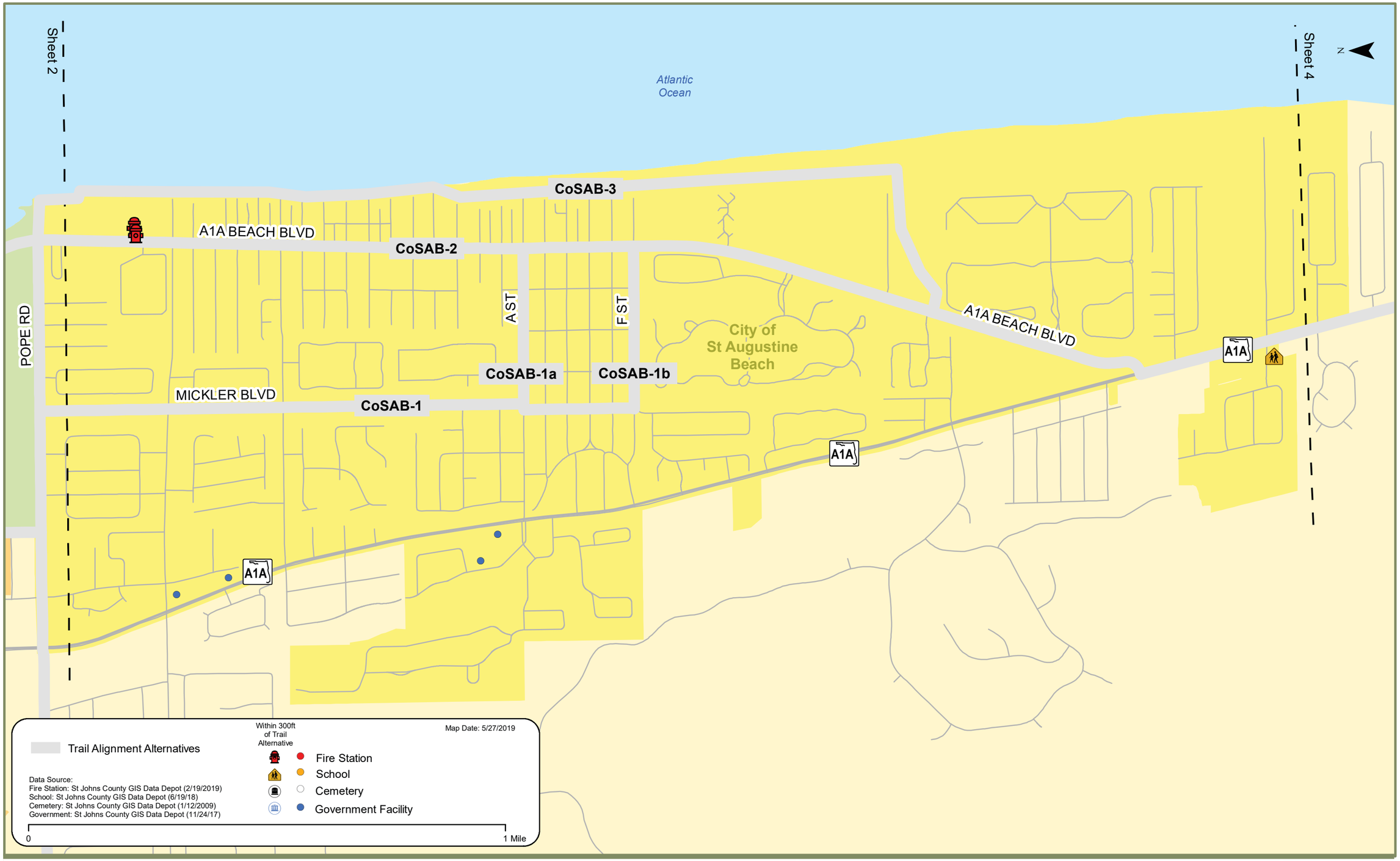
SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Community Features

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 5-15
SHEET 1 OF 4


CoSA-W-1a
KING ST
BRIDGE
OF LIONS
ANASTASIA BLVD
CoSA King Street
Master Plan
CoSA-W-2a
CoSA-W-2b
CoSA-N
CoSA-W-1b
CoSA-W-3
Matanzas River
1
San Sebastian River
CoSA-N-1a
Salt Run
Atlantic
Ocean
207
ARAPAHO AVE
City of
St Augustine
ANASTASIA PARK RD
CoSA-W-4a
CoSA-W-4b
A1A
Anastasia
State Park
CoSA-N-1
Sheet 1
1
CoSA-N-2
SR 312
312
BRIDGE
CoSA-S
SANTANDER ST
CoSA-Sb
CoSA-Sa
CoSA-N-1c
PLANTATION ISLAND DR
MIZELL RD
CoSA-N-1b
POPE RD
CoSA-S
Sheet 3
N
Trail Alignment Alternatives
Within 300ft
of Trail
Alternative
Fire Station
School
Cemetery
Government Facility
Map Date: 5/27/2019
Data Source:
Fire Station: St Johns County GIS Data Depot (2/19/2019)
School: St Johns County GIS Data Depot (6/19/18)
Cemetery: St Johns County GIS Data Depot (1/12/2009)
Government: St Johns County GIS Data Depot (11/24/17)
0
1 Mile

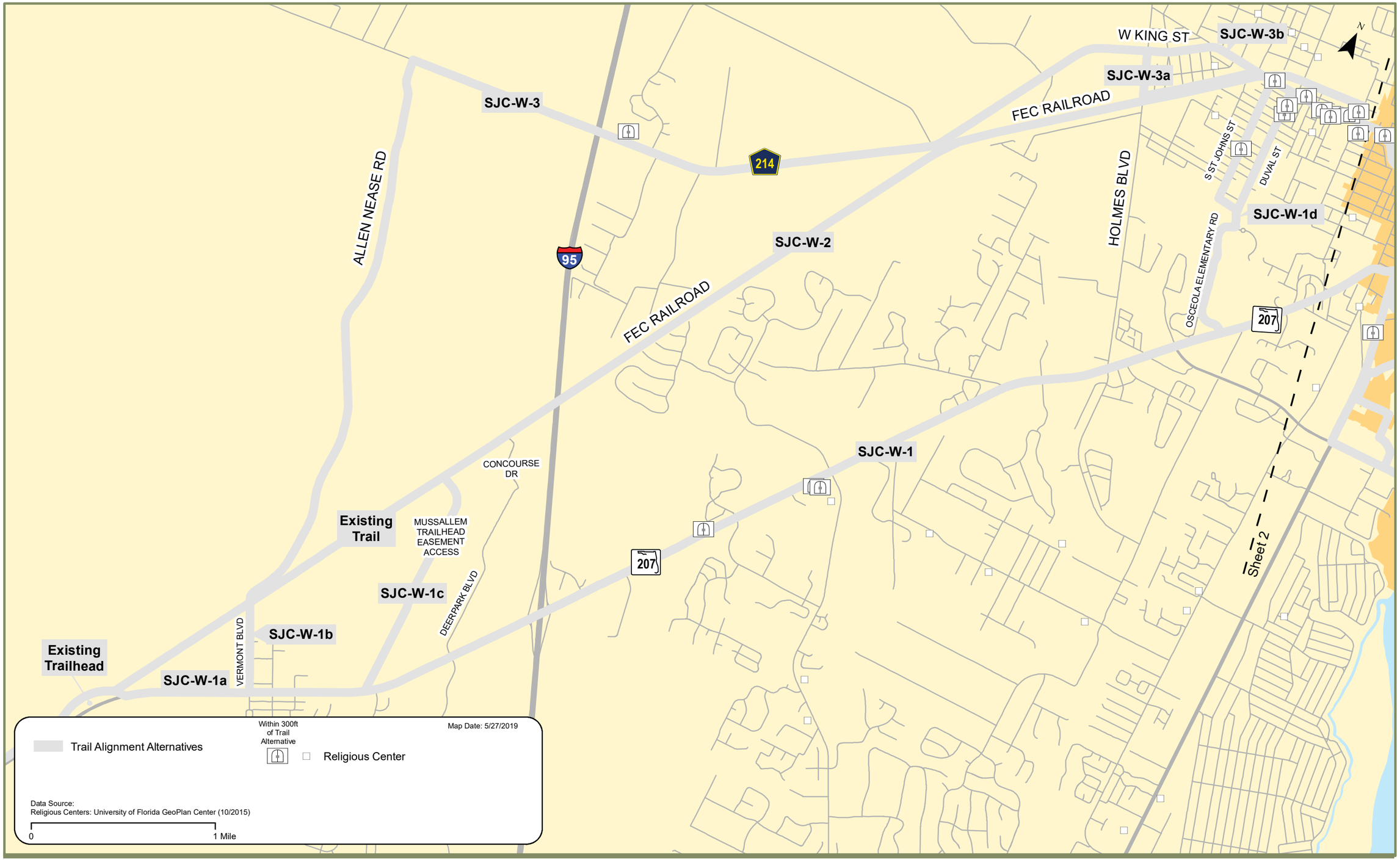

Sheet 2
Sheet 4
N
Atlantic Ocean
CoSAB-3
A1A BEACH BLVD
CoSAB-2
POPE RD
A ST
F ST
City of St Augustine Beach
A1A BEACH BLVD
A1A
CoSAB-1a
CoSAB-1b
MICKLER BLVD
CoSAB-1
A1A
A1A
Trail Alignment Alternatives
Within 300ft of Trail Alternative
Map Date: 5/27/2019
Fire Station
School
Cemetery
Government Facility
Data Source:
Fire Station: St Johns County GIS Data Depot (2/19/2019)
School: St Johns County GIS Data Depot (6/19/18)
Cemetery: St Johns County GIS Data Depot (1/12/2009)
Government: St Johns County GIS Data Depot (11/24/17)
0
1 Mile

SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Community Features

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-15
SHEET 4 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Religious Centers

Segment 1 - St. Johns County - West (SJC-W)

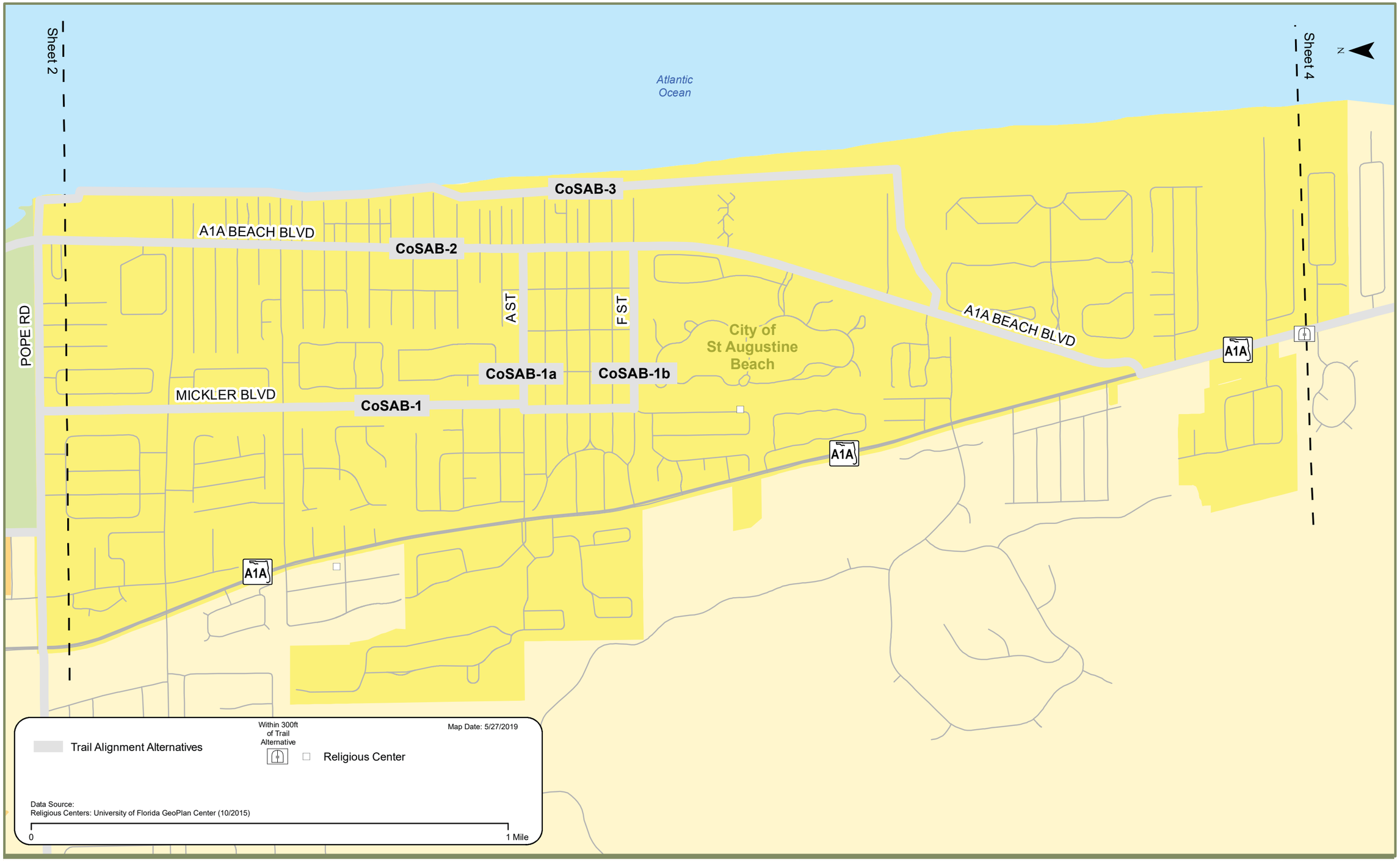
FIGURE 5-16
SHEET 1 OF 4

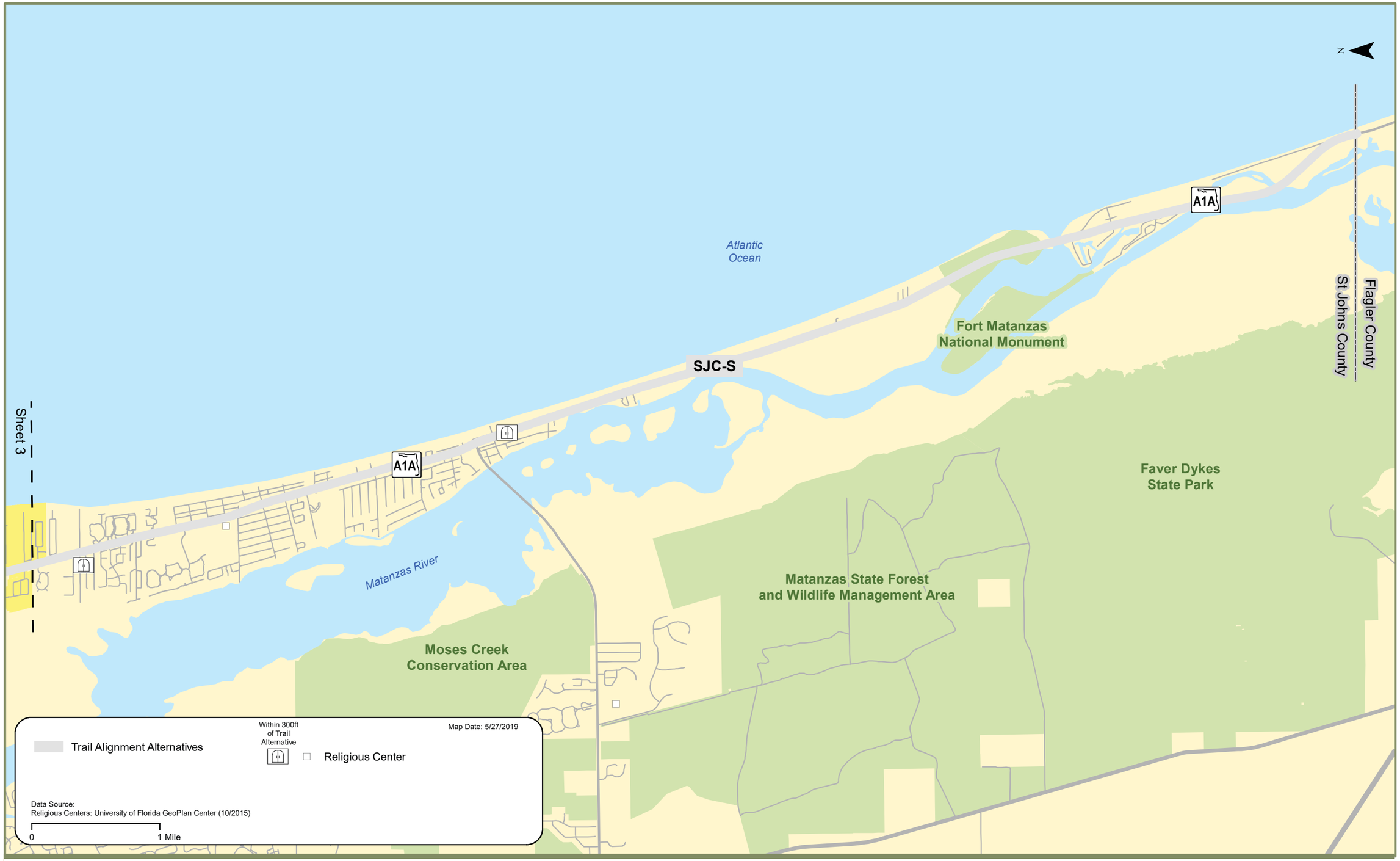
SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Religious Centers

Segment 2 - City of St. Augustine (CoSA)

FIGURE
5-16
SHEET 2 OF 4


Sheet 2
Sheet 4
N
Atlantic Ocean
CoSAB-3
A1A BEACH BLVD
CoSAB-2
POPE RD
A ST
F ST
City of St Augustine Beach
A1A BEACH BLVD
A1A
CoSAB-1a
CoSAB-1b
MICKLER BLVD
CoSAB-1
A1A
A1A
Trail Alignment Alternatives
Within 300ft of Trail Alternative
Religious Center
Map Date: 5/27/2019
Data Source:
Religious Centers: University of Florida GeoPlan Center (10/2015)
0
1 Mile



SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Religious Centers

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-16
SHEET 4 OF 4

5.3.7 Evacuation Routes

Several trail alignment alternatives fall along roadways designated as hurricane evacuation routes by the Florida Department of Emergency Management, as shown in **Figure 5-17**. These routes typically lead north and west to the safest major city furthest from the ocean. Most routes coinciding with trail alignment alternatives are eventually leading evacuees onto northbound I-95 or inland into Putnam and Clay Counties to the west. An overview of the hurricane evacuation routes within the planning study area are shown in **Table 5-2**.

SR A1A runs directly along the Atlantic Ocean; therefore, it is a major hurricane evacuation route for residents of the CoSA and surrounding areas. Similarly, A1A Beach Boulevard is also a designated hurricane evacuation route due to its proximity to the ocean and connection to major westbound roads. Both evacuation routes run north-south, sending vehicles to the nearest roadway heading west.

US 1 is another roadway that runs north-south and serves as a hurricane evacuation route. In the planning study area, it is primarily used for drivers traveling north to then head west on SR 16 either toward I-95 northbound or Clay County. US 1 could also be used for drivers traveling south toward SR 207.

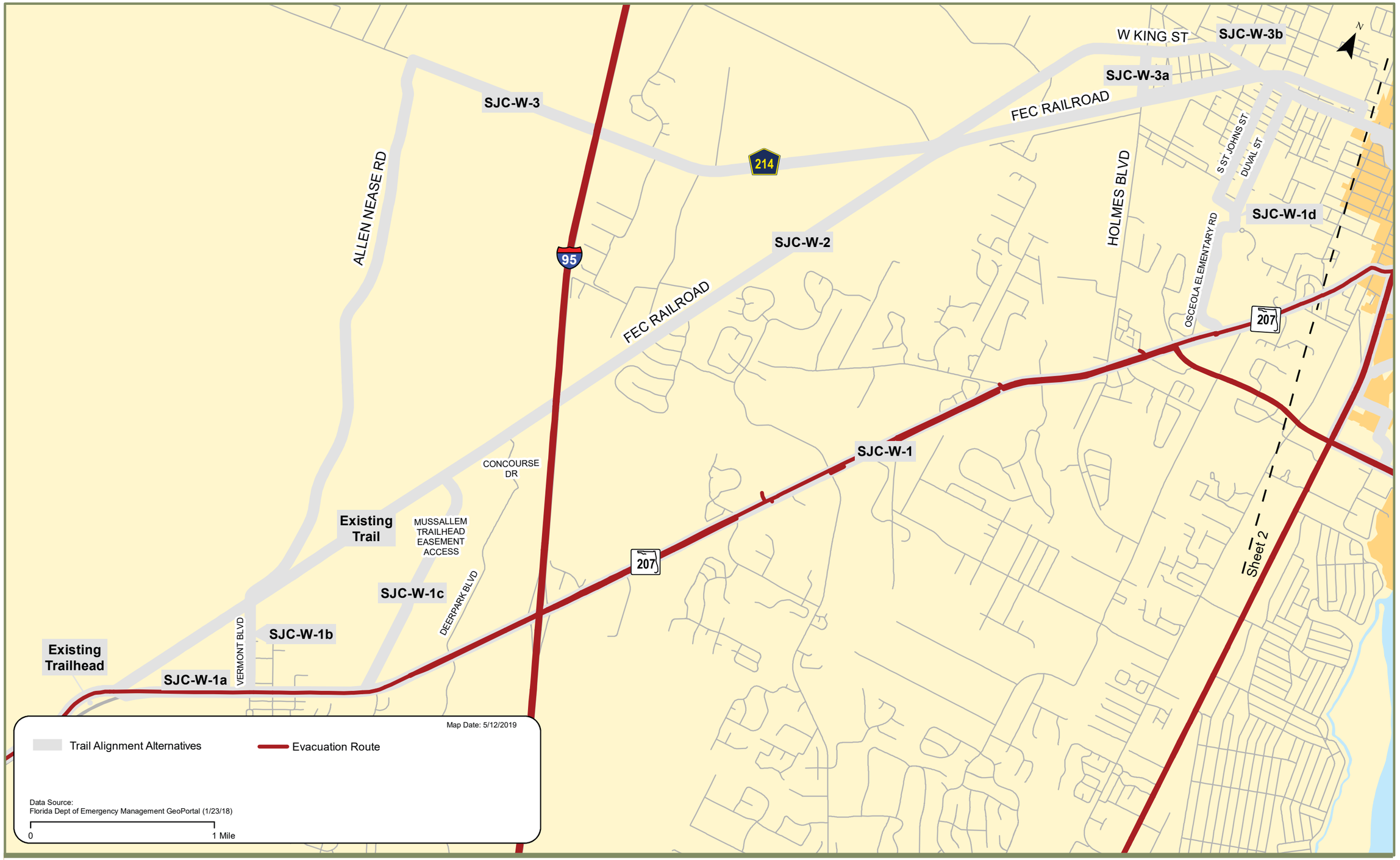
Traveling west from SR A1A to SR 312 is another designated hurricane evacuation route. Evacuees are instructed to proceed across the SR 312 Bridge to SR 207 to evacuate the area.

SR 207 is a designated hurricane evacuation route running primarily southwest from US 1 with direct access to I-95 to travel north. It is also suggested that SR 207 can be used to reach points further west and inland.

Table 5-2 – Designated Evacuation Routes and Corresponding Trail Alignment Alternatives

Evacuation Routes	Alignment Alternatives			
SR A1A	CoSA-N	CoSA-N-1	CoSAB-2*	SJC-S
A1A Beach Boulevard	CoSA-N-1c		CoSAB-2	
US 1	CoSA-W-2a	CoSA-W-3	CoSA-W-4a	
SR 312	CoSA-W-4a*	CoSA-S*	CoSA-Sa	
SR 207	SJC-W-1a	SJC-W-1b*	SJC-W-1	

*Approximately half or less of the alignment alternative falls on the evacuation route



SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Evacuation Routes

Segment 1 - St. Johns County - West (SJC-W)

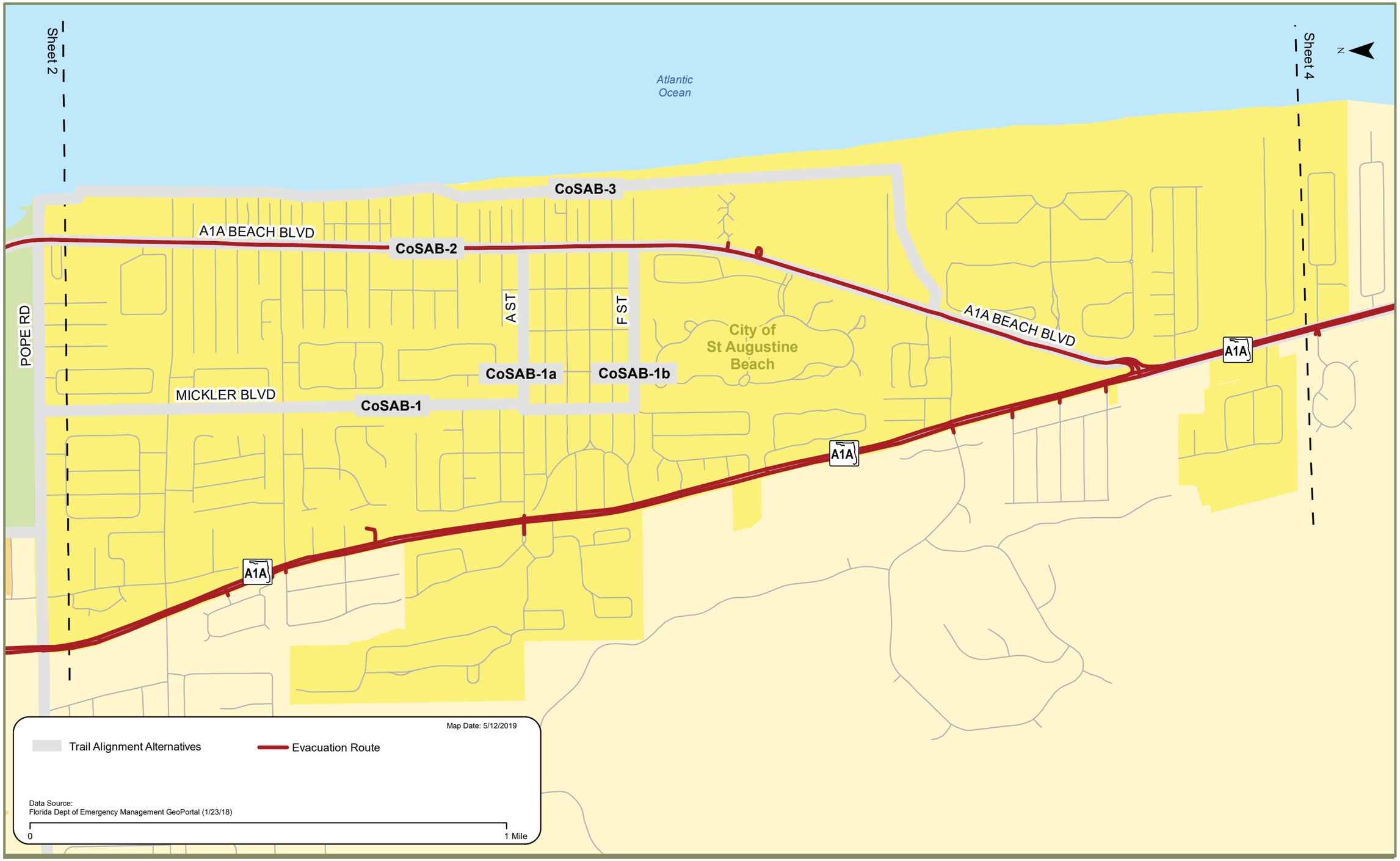
FIGURE 5-17
SHEET 1 OF 4

SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Evacuation Routes

Segment 2 - City of St. Augustine (CoSA)

FIGURE 5-17
SHEET 2 OF 4



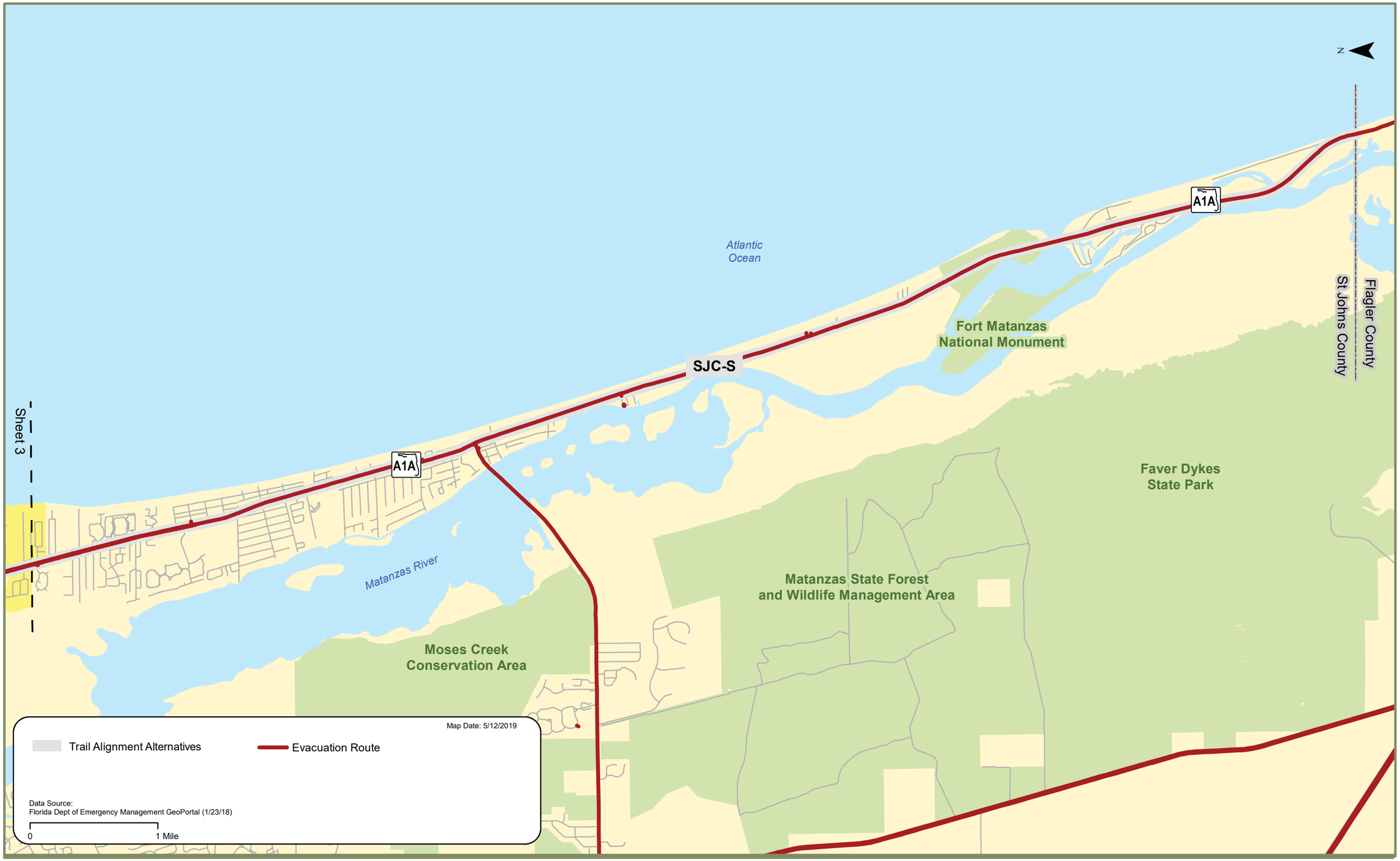
SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Evacuation Routes

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 5-17

SHEET 3 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Evacuation Routes

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-17
SHEET 4 OF 4

5.3.8 Contamination

The FDEP maintains data regarding contamination and cleanup. This data was reviewed within the planning study area and quantified within 300 feet of trail alignment alternatives.

An FDEP Cleanup Site is defined as being in the cleanup process or awaiting cleanup funding. Cleanup programs include: Brownfields, Petroleum, EPA Superfund (CERCLA), Drycleaning, Responsible Party Cleanup, State Funded Cleanup, State Owned Lands Cleanup, and Hazardous Waste Cleanup. There are 25 DEP Cleanup Sites within the planning study area, two Brownfields, and four Waste Cleanup Responsible Party Closed sites.

FDEP implements the National Pollutant Discharge Elimination Systems (NPDES) stormwater permitting program, which regulates point source discharges of stormwater into surface waters from certain municipal, industrial and construction activities. Sixteen NPDES stormwater facilities are within the planning study area.

Generators of Hazardous Waste are tracked based on their notification to FDEP as to their handler status or based on inspections conducted at their facilities. Small Quantity Generators of Hazardous Waste are generators of hazardous wastes in quantities greater than 100 kilograms but less than 1,000 kilograms in any one calendar month. The planning study area includes two Small Quantity Hazardous Waste Generators and no Large Quantity Hazardous Waste Generators.

A Solid Waste Facility is identified from the state-wide coverage of Water Assurance Compliance System (WACS) Solid Waste Facilities. Eleven Solid Waste Facilities are within the planning study area.

Superfund sites contain hazardous waste cleanup activities designated under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). Superfund is the environmental program established to address these abandoned hazardous waste sites. No superfund sites are within the planning study area.

The tables below show the contamination sites within 300 feet of the trail alignment alternatives. These sites are shown by **Figure 5-18**.

Segment 1 – SJC-W

Trail Alternative Name	DEP Cleanup Site	NPDES Stormwater Facility	"Small Quantity Hazardous Waste Generator"	Solid Waste Facility	Waste Cleanup Closed	Brownfield Areas
SJC-W-1	7	5	1	-	1	-
SJC-W-3	1	2	-	4	-	-

Segment 2 – CoSA

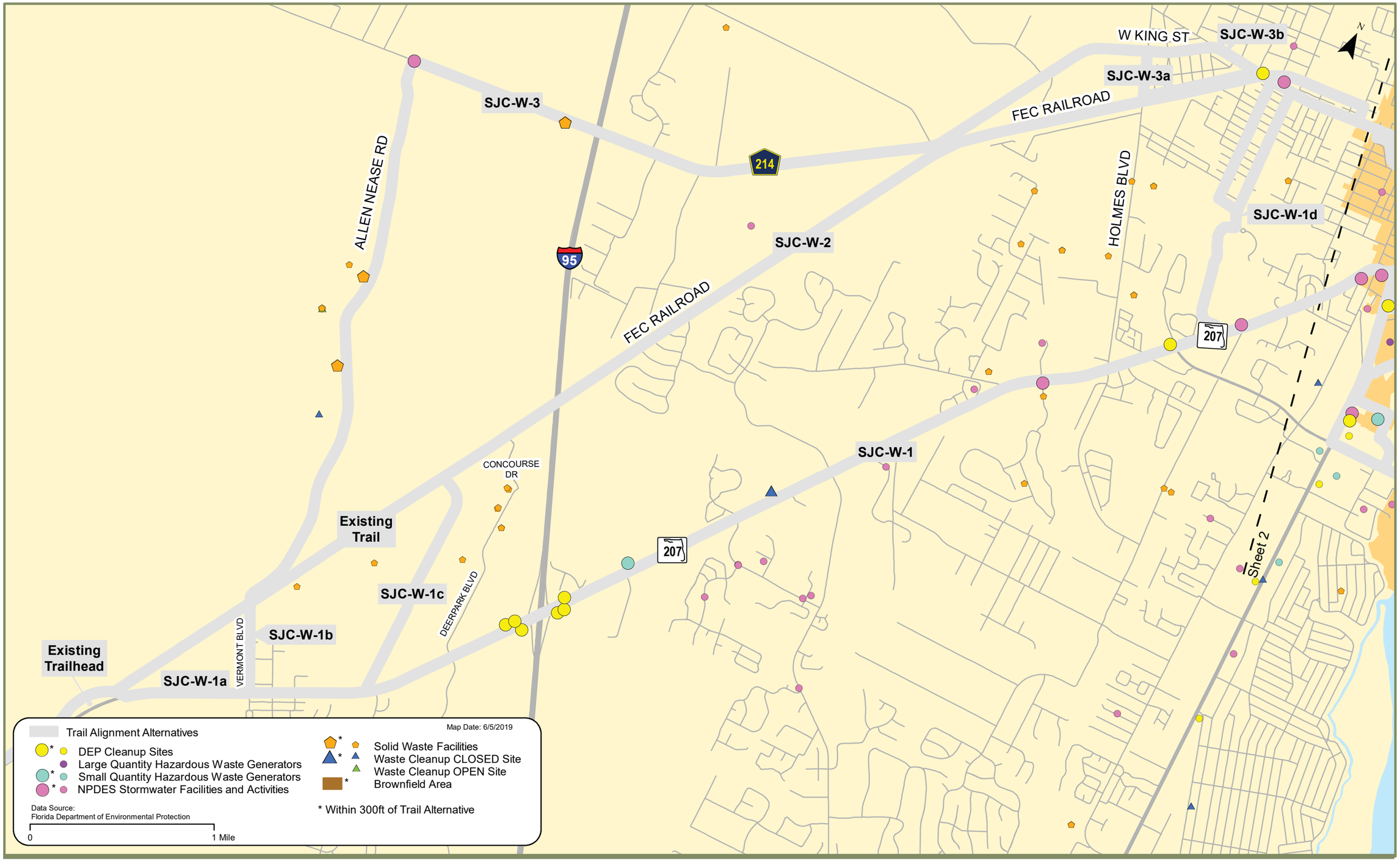
Trail Alternative Name	DEP Cleanup Site	NPDES Stormwater Facility	"Small Quantity Hazardous Waste Generator"	Solid Waste Facility	Waste Cleanup Closed	Brownfield Areas
CoSA-W-2a	3	-	-	1	-	-
CoSA-W-2b	-	4	-	-	-	-
CoSA-W-4a	2	1	-	-	-	-
CoSA-W-4b	-	-	1			
CoSA-N	4	-		1	1	2
CoSA-S	-	1	-	-	-	-
CoSA-Sa	-	1	-	-	-	-
CoSA King Street Master Plan	2	1	-	-	1	-

Segment 3 – CoSAB

Trail Alternative Name	DEP Cleanup Site	NPDES Stormwater Facility	"Small Quantity Hazardous Waste Generator"	Solid Waste Facility	Waste Cleanup Closed	Brownfield Areas
CoSAB-2	2	1	-	3	1	-
CoSAB-3	-	-	-	1	-	-

Segment 4 – SJC-S

Trail Alternative Name	DEP Cleanup Site	NPDES Stormwater Facility	"Small Quantity Hazardous Waste Generator"	Solid Waste Facility	Waste Cleanup Closed	Brownfield Areas
SJC-S	4	-	-	1	-	-

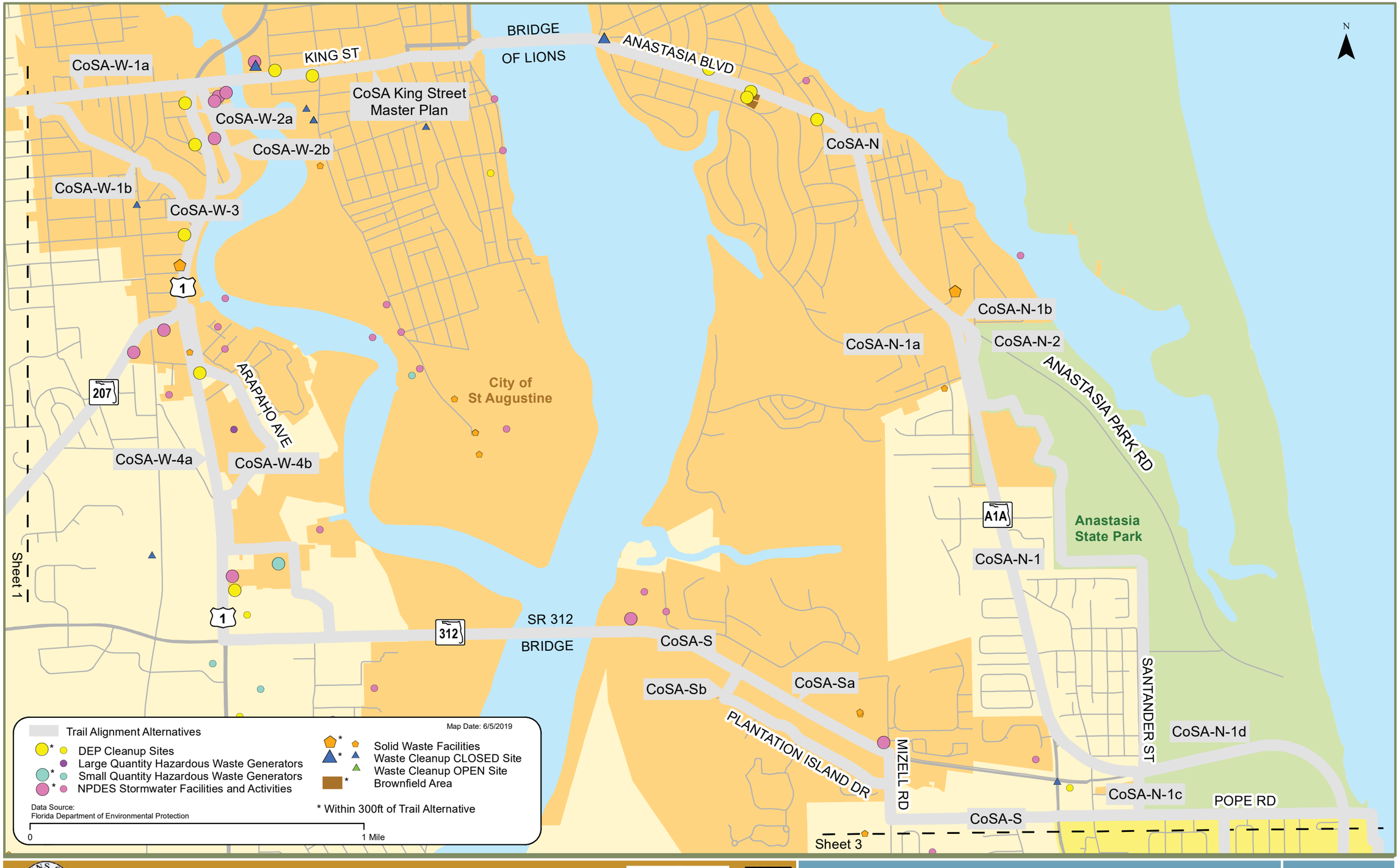


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Potential Sources of Contamination

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 5-18
SHEET 1 OF 4

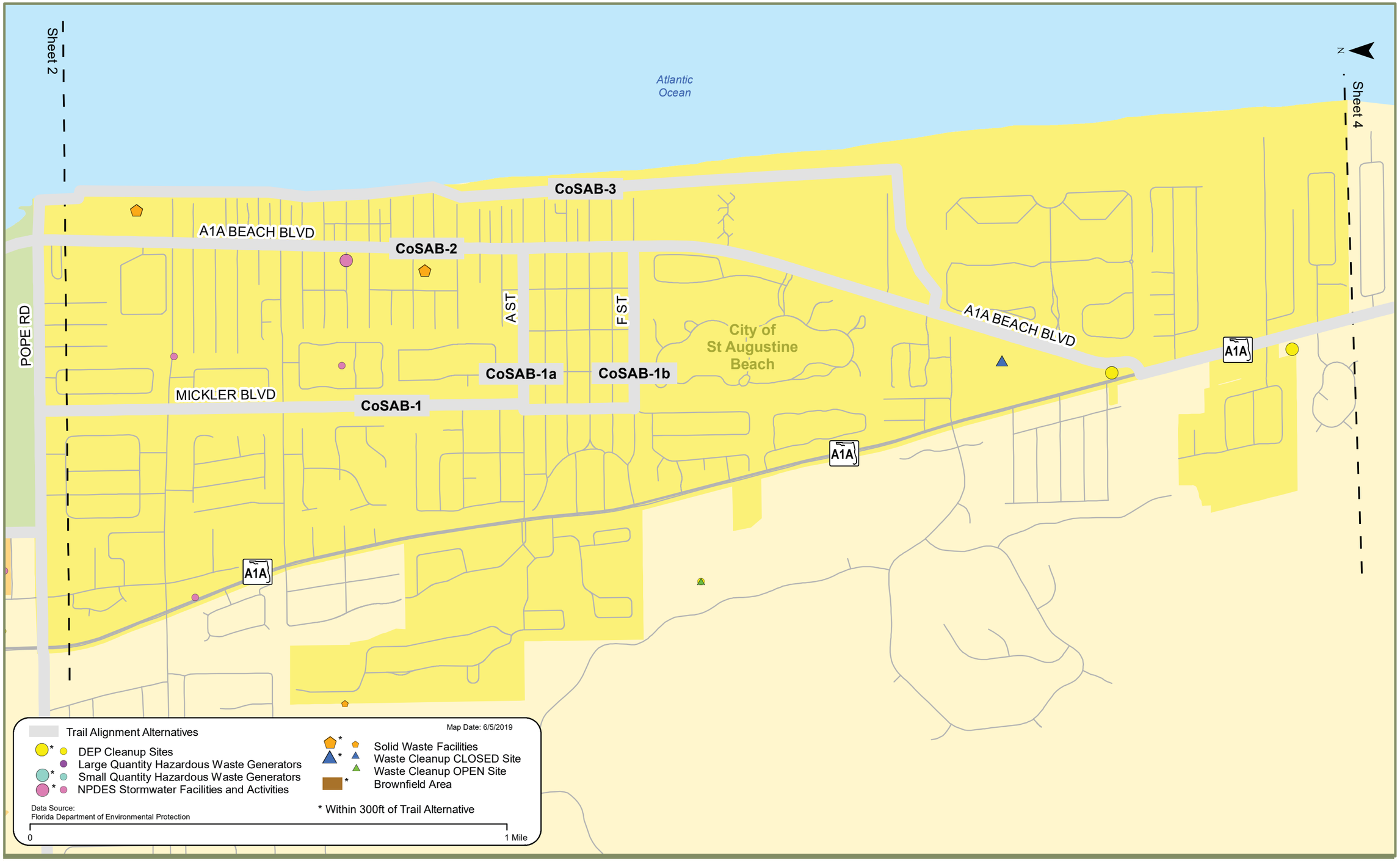


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Potential Sources of Contamination

Segment 2 - City of St. Augustine (CoSA)

FIGURE 5-18
SHEET 2 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Potential Sources of Contamination

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 5-18
SHEET 3 OF 4

SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Potential Sources of Contamination

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 5-18
SHEET 4 OF 4

5.3.9 Soil Types

The soil types within the trail alignment alternatives are listed below, according to the U.S. Department of Agriculture.

Segment 1 – SJC-W

SJC-W-1: Astatula-Urban Land Complex, Bluff Sandy Clay Loam, Frequently Flooded, Floridana Fine Sand, 0 To 2 Percent Slopes, Frequently Flooded, Holopaw Fine Sand, Immokalee-Urban Land Complex, Immokalee Fine Sand, Manatee Fine Sandy Loam, Frequently Flooded, Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes, Orsino Fine Sand, 0 To 5 Percent Slopes, Paola Fine Sand, 0 To 8 Percent Slopes, Parkwood Fine Sandy Loam, Frequently Flooded, Pits, Pomello Fine Sand, 0 To 5 Percent Slopes, Pomona Fine Sand, Pottsburg Fine Sand, Riviera Fine Sand, Frequently Flooded, Samsula Muck, Frequently Ponded, 0 To 1 Percent Slopes, Smyrna-Smyrna, Wet, Fine Sand, 0 To 2 Percent Slopes, Sparr Fine Sand, 0 To 5 Percent Slopes, St. Augustine-Urban Land Complex, St. Johns Fine Sand, St. Johns Fine Sand, Depressional, Tomoka Muck, Frequently Ponded, 0 To 1 Percent Slopes, Wesconnett Fine Sand, Frequently Flooded

SJC-W-1a: Bakersville Muck, Cassia Fine Sand, 0 To 2 Percent Slopes, Floridana Fine Sand, 0 To 2 Percent Slopes, Frequently Flooded, Immokalee Fine Sand, Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes, Pomona Fine Sand, Samsula Muck, Frequently Ponded, 0 To 1 Percent Slopes, Smyrna-Smyrna, Wet, Fine Sand, 0 To 2 Percent Slopes, St. Johns Fine Sand, St. Johns Fine Sand, Depressional, Tavares Fine Sand, 0 To 5 Percent Slopes

SJC-W-1b: Cassia Fine Sand, 0 To 2 Percent Slopes, Immokalee Fine Sand, Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes, Smyrna-Smyrna, Wet, Fine Sand, 0 To 2 Percent Slopes, St. Johns Fine Sand, St. Johns Fine Sand, Depressional, Tavares Fine Sand, 0 To 5 Percent Slopes, Tomoka Muck, Frequently Ponded, 0 To 1 Percent Slopes, Zolfo Fine Sand

SJC-W-1c: Immokalee Fine Sand, Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes, St. Johns Fine Sand, St. Johns Fine Sand, Depressional, Tomoka Muck, Frequently Ponded, 0 To 1 Percent Slopes

SJC-W-1d: Immokalee-Urban Land Complex, Immokalee Fine Sand, Pottsburg Fine Sand, Smyrna-Smyrna, Wet, Fine Sand, 0 To 2 Percent Slopes, St. Johns Fine Sand, Wesconnett Fine Sand, Frequently Flooded

SJC-W-2: Astatula-Urban Land Complex, Bluff Sandy Clay Loam, Frequently Flooded, Floridana Fine Sand, 0 To 2 Percent Slopes, Frequently Flooded, Immokalee-Urban Land Complex, Immokalee Fine Sand, Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes, Pits, Pomona Fine Sand, Pottsburg Fine Sand, Riviera Fine Sand, Frequently Flooded, Smyrna-Smyrna, Wet, Fine Sand, 0 To 2 Percent Slopes, St. Johns Fine Sand, St. Johns Fine Sand, Depressional, Water, Wesconnett Fine Sand, Frequently Flooded

SJC-W-3: Arents, 0 To 2 Percent Slopes, Astatula-Urban Land Complex, Cassia Fine Sand, 0 To 2 Percent Slopes, Floridana Fine Sand, 0 To 2 Percent Slopes, Frequently Flooded, Hontoon Muck, Frequently Ponded, 0 To 1 Percent Slopes, Immokalee-Urban Land Complex, Immokalee Fine Sand, Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes, Myakka Fine Sand, Frequently Ponded, 0 To 1 Percent Slopes, Pomello Fine Sand, 0 To 5 Percent Slopes, Pottsburg Fine Sand, Riviera Fine Sand, Frequently Flooded, Samsula Muck, Frequently Ponded, 0 To 1 Percent Slopes, Smyrna-Smyrna, Wet, Fine Sand, 0 To 2 Percent Slopes, St. Johns Fine Sand, St. Johns Fine Sand, Depressional, Tavares Fine Sand, 0 To 5 Percent Slopes, Water, Wesconnett Fine Sand, Frequently Flooded, Zolfo Fine Sand

SJC-W-3a: Floridana Fine Sand, 0 To 2 Percent Slopes, Frequently Flooded, Immokalee-Urban Land Complex, Immokalee Fine Sand, Pottsburg Fine Sand, St. Johns Fine Sand

SJC-W-3b: Immokalee-Urban Land Complex, Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes, Pottsburg Fine Sand

Segment 2 – CoSA

CoSA-W-1a: Astatula-Urban Land Complex, Immokalee-Urban Land Complex

CoSA-W-1b: Astatula-Urban Land Complex, Pellicer Silty Clay Loam, Frequently Flooded, Water

CoSA-W-2a: Immokalee-Urban Land Complex, Pellicer Silty Clay Loam, Frequently Flooded, Water

CoSA-W-2b: Immokalee-Urban Land Complex, Pellicer Silty Clay Loam, Frequently Flooded, Water

CoSA-W-3: Astatula-Urban Land Complex, Immokalee-Urban Land Complex, Pellicer Silty Clay Loam, Frequently Flooded, Water

CoSA-W-4a: Adamsville Variant Fine Sand, Arents, 0 To 2 Percent Slopes, Astatula-Urban Land Complex, Astatula Fine Sand, 0 To 8 Percent Slopes, Cassia Fine Sand, 0 To 2 Percent Slopes, Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes, Pellicer Silty Clay Loam, Frequently Flooded, Pits, Samsula Muck, Frequently Ponded, 0 To 1 Percent Slopes, St. Johns Fine Sand

CoSA-W-4b: Adamsville Variant Fine Sand, Arents, 0 To 2 Percent Slopes, Astatula-Urban Land Complex, Astatula Fine Sand, 0 To 8 Percent Slopes, Cassia Fine Sand, 0 To 2 Percent Slopes, Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes, Pellicer Silty Clay Loam, Frequently Flooded, St. Johns Fine Sand

CoSA King Street Master Plan: Astatula-Urban Land Complex, Immokalee-Urban Land Complex, Pellicer Silty Clay Loam, Frequently Flooded, St. Augustine-Urban Land Complex, Water

CoSA-N: Astatula-Urban Land Complex, Fripp-Satellite Complex, Palm Beach Sand, 0 To 5 Percent Slopes, Pellicer Silty Clay Loam, Frequently Flooded, Pomello Fine Sand, 0 To 5 Percent Slopes, St. Augustine-Urban Land Complex, Water

CoSA-N-1: Astatula-Urban Land Complex, Fripp-Satellite Complex, Orsino Fine Sand, 0 To 5 Percent Slopes, Palm Beach Sand, 0 To 5 Percent Slopes, Paola Fine Sand, 0 To 8 Percent Slopes, Pits, Pomello Fine Sand, 0 To 5 Percent Slopes, Pompano Fine Sand

CoSA-N-1a: Astatula-Urban Land Complex, Fripp-Satellite Complex, Palm Beach Sand, 0 To 5 Percent Slopes, Pits

CoSA-N-1b: Astatula-Urban Land Complex, Fripp-Satellite Complex, Palm Beach Sand, 0 To 5 Percent Slopes, Pompano Fine Sand

CoSA-N-1c: Astatula-Urban Land Complex, Beaches, Fripp-Satellite Complex, Palm Beach Sand, 0 To 5 Percent Slopes, Pompano Fine Sand, Satellite Fine Sand, 0 To 2 Percent Slopes, St. Augustine-Urban Land Complex

CoSA-N-2: Astatula-Urban Land Complex, Fripp-Satellite Complex, Palm Beach Sand, 0 To 5 Percent Slopes, Pits, Pompano Fine Sand, Satellite Fine Sand, 0 To 2 Percent Slopes

CoSA-S: Adamsville Variant Fine Sand, Arents, 0 To 2 Percent Slopes, Astatula-Urban Land Complex, Cassia Fine Sand, 0 To 2 Percent Slopes, Fripp-Satellite Complex, Immokalee Fine Sand, Moultrie Fine Sand, Frequently Flooded, Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes, Myakka Fine Sand, Frequently Ponded, 0 To 1 Percent Slopes, Orsino Fine Sand, 0 To 5 Percent Slopes, Pellicer Silty Clay Loam, Frequently Flooded, Pomello Fine Sand, 0 To 5 Percent Slopes, Pompano Fine Sand, Pottsburg Fine Sand, Samsula Muck, Frequently Ponded, 0 To 1 Percent Slopes, Satellite Fine Sand, 0 To 2 Percent Slopes, Smyrna-Smyrna, Wet, Fine Sand, 0 To 2 Percent Slopes, St. Augustine-Urban Land Complex, St. Augustine Fine Sand, Clayey Substratum, St. Johns Fine Sand, St. Johns Fine Sand, Depressional, Water

CoSA-Sa: Arents, 0 To 2 Percent Slopes, Cassia Fine Sand, 0 To 2 Percent Slopes, Immokalee Fine Sand, Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes, Pomello Fine Sand, 0 To 5 Percent Slopes, Pottsburg Fine Sand, Samsula Muck, Frequently Ponded, 0 To 1 Percent Slopes, St. Johns Fine Sand

CoSA-Sb: Arents, 0 To 2 Percent Slopes, Cassia Fine Sand, 0 To 2 Percent Slopes, Immokalee Fine Sand, Orsino Fine Sand, 0 To 5 Percent Slopes, Pomello Fine Sand, 0 To 5 Percent Slopes, Pottsburg Fine Sand, Samsula Muck, Frequently Ponded, 0 To 1 Percent Slopes, St. Augustine Fine Sand, Clayey Substratum, St. Johns Fine Sand

Segment 3 – CoSAB

CoSAB-1: Astatula-Urban Land Complex, Fripp-Satellite Complex, Pompano Fine Sand, Satellite Fine Sand, 0 To 2 Percent Slopes

CoSAB-1a: Fripp-Satellite Complex, Pompano Fine Sand, Satellite Fine Sand, 0 To 2 Percent Slopes

CoSAB-1b: Fripp-Satellite Complex, Pompano Fine Sand, Satellite Fine Sand, 0 To 2 Percent Slopes

CoSAB-2: Fripp-Satellite Complex, Palm Beach Sand, 0 To 5 Percent Slopes, Pomello Fine Sand, 0 To 5 Percent Slopes, Pompano Fine Sand, Satellite Fine Sand, 0 To 2 Percent Slopes, St. Augustine-Urban Land Complex

CoSAB-3: Beaches, Fripp-Satellite Complex, Pompano Fine Sand, Satellite Fine Sand, 0 To 2 Percent Slopes, St. Augustine-Urban Land Complex, Waters of the Atlantic Ocean

Segment 4 – SJC-S

SJC-S: Beaches, Fripp-Satellite Complex, Immokalee Fine Sand, Jonathan Fine Sand, Moultrie Fine Sand, Frequently Flooded, Myakka Fine Sand, Frequently Ponded, 0 To 1 Percent Slopes, Orsino Fine Sand, 0 To 5 Percent Slopes, Palm Beach Sand, 0 To 5 Percent Slopes, Pellicer Silty Clay Loam, Frequently Flooded, Pits, Pomello Fine Sand, 0 To 5 Percent Slopes, Pompano Fine Sand, Pottsburg Fine Sand, Satellite Fine Sand, 0 To 2 Percent Slopes, St. Augustine-Urban Land Complex, St. Augustine Fine Sand, Water, Waters of the Atlantic Ocean

6 Route Alternatives Analysis

6.1 Narrowing of Alternatives

As part of this study various route alternatives were considered to complete the nearly 26-mile remaining northern gap of the SUN Trail-SJR2C Loop within SJC. An initial review of existing conditions was performed via desktop analysis and supplemented by multiple field visits to assess potential trail route alternatives. Viable alternatives were then determined based on input from stakeholder groups and the key jurisdictional agencies (SJC, CoSA, CoSAB, and FDOT). The final route recommendation was established in close coordination with the respective jurisdictional agencies, which will ultimately be responsible for construction and maintenance of the proposed multi-use trail. The following presents an overview of alternatives considered for each of the identified project segments.

Study Segment 1

SJC-W

Three potential routes within Segment SJC-W were considered and included:

1. SR 207 corridor (SJC-W-1)
2. FEC Railroad corridor (SJC-W-2)
3. Allen Nease Road / CR 214 corridor (SJC-W-3)

SR 207 (SJC-W-1)
The SR 207 corridor (SJC-W-1) is a direct route that has several challenges but provides an opportunity to connect the existing SR 207 trail terminus to the urbanized portion of SJC. Three alternatives were reviewed to connect the existing trail to SR 207. Options included a connection along SR 207 from the existing trailhead (SJC-W-1a), a connection from the existing trail down Vermont Boulevard to SR 207 (SJC-W-1b), and a connection from the existing trail within a SJC access easement through the Mussallem property (SJC-W-1c), which is part of a future trailhead project planned by SJC.

An important consideration for the SR 207 route includes feasibility to bring the trail under the I-95 / SR 207 interchange overpass bridge. A limited structural assessment was performed for the two bridges at the interchange for feasibility purposes. Bridge Nos. 780045 and 780046 are three-span, 189-foot-long, parallel prestressed concrete girder bridges built in 1966 and widened in 1992 that carry I-95 traffic over SR 207. The end bents of these bridges were constructed as conventional spill-through abutments with slope protection pavement extending to near the intermediate bents.

There is insufficient clear width along the westbound (north) side of SR 207 under the existing bridges to allow for construction of a protected trail without providing structural modifications. The most feasible approach requires providing a protected 12-foot-wide multi-use trail along the westbound (north) side of SR 207 under the I-95 bridges by removing a portion of the end bent front slope and constructing a retaining wall and new sidewalk along that side.

A significant challenge with the SR 207 route is available ROW leading to the CoSA as well as several intersecting road crossings that could affect trail quality. Further, this route also exhibits relatively high-volume / high-speed traffic conditions and provides limited to no opportunity for shading.

Use of a Florida Power & Light (FPL) utility easement (20 feet) along the north side of the road was explored to potentially alleviate the confined ROW conditions. The FPL easement begins approximately at the I-95 interchange area and proceeds northeast along SR 207, terminating approximately 450 feet northeast of Lightsey Road, a total of approximately 3 miles. However, discussions with FDOT and FPL indicated that a multi-use trail would not be allowed within the easement, which effectively eliminated the feasibility of the trail along SR 207.

An alternative route connecting SR 207 north to West King Street was also explored along Osceola Elementary Road and Duval Street / South St. Johns Street (SJC-W-1d). However, this connection was not considered further due to the ROW challenges along SR 207, but it could likely serve as a secondary community connection to the West King Street area described for the SJC-W-3 alternative route presented below.

FEC Railroad (SJC-W-2)
The FEC Railroad corridor (SJC-W-2) was considered based on previous studies and stakeholder interest. Interest for this route was also indicated during the public involvement process of this study. Benefits of this route include potential for a scenic trail separated from vehicular traffic with minimal crossings and conflict points. This route would also be a natural, continued northeastward extension of the existing SR 207 Trail. In addition, locating the trail within the 100-foot FEC ROW would allow the trail to pass underneath I-95 at relatively little cost in connecting to the St. Augustine area.

SJC / FDOT discussed with FEC the potential use of the ROW to construct the trail adjacent to the active rail. Ultimately, the terms in which FEC would agree included an annual lease with a 30-day cancellation clause. The intent of the SUN Trail-SJR2C Loop is to construct a permanent multi-use trail that will provide long-term use. Therefore, an annual lease with these terms was determined to be unacceptable. As such, the route alternative SJC-W-2 along the FEC corridor was not evaluated further as a potential route.

Should this alternative become feasible in the future, it is noted the route was investigated previously as a viable rail-with-trail facility by the “St. Johns County Rails with Trails” study prepared by VHB dated April 30, 2009 **(See Appendix C)**. This study provides additional previously compiled information related to existing conditions, rail-with-trail guidelines, and proposed multi-use trail concepts.

Allen Nease Road / CR 214 (SJC-W-3)
The Allen Nease Road / CR 214 corridor (SJC-W-3) begins at the existing trail crossing at Allen Nease Road, extends north to CR 214, and then follows CR 214 eastward into the CoSA along West King Street. Ultimately, this alternative was selected as the preferred route due to the availability of existing ROW, the scenic nature of the route, connections to community resources such as the SJC BMX track, and its alignment with West King Street to provide a direct connection to downtown St. Augustine. This route does have challenges, most notably the need for a new trail bridge over I-95.

Approaching Holmes Boulevard, a route was explored to proceed south along Holmes Boulevard to an existing unconstructed ROW adjacent to the FEC railway (SJC-W-3a) to avoid trail conflict points at West King Street and Holmes Boulevard. However, after reviewing this route, it was not preferred due to the challenges of including a mid-block trail crossing near an active rail crossing.

Study Segment 2

CoSA

Multiple options were considered for the CoSA segment to connect the trail from the SJC-W segment to downtown St. Augustine and then east and south to CoSAB. For purposes of this study, and agreed to by the jurisdictional agencies, the trail route through CoSA along King Street from Palmer Street (just west of US 1) to the Bridge of Lions west approach was not included because it is under separate consideration as part of the CoSA King Street Master Plan. Final recommended route and selection basis through this area will be determined by the CoSA study. Thus, three alternative route options were further considered and included:

1. Western routes via King Street and US 1 (CoSA-W-1a through CoSA-W-4b)
2. Northern routes via the Bridge of Lions east approach to Anastasia Boulevard to A1A Beach Boulevard / Pope Road area (CoSA-N through CoSA-N-2 and CoSA-S)
3. Southern routes via SR 312/Bridge to Pope Road (CoSA-S)

King Street / US 1 (CoSA-W-1a through CoSA-W-4b)
The western route provides options using US 1 as the trail corridor to connect SR 207 (SJC-W-1) north to King Street via CoSA-3 / CoSA-W-2a or south to SR 312 via CoSA-W-4a. Along US 1 several options were reviewed (CoSA-W-1b / CoSA-W-2b / CoSA-W-4b) that diverted from the US 1 corridor to avoid heavy volume traffic and predominance of conflict points. With connection to downtown St. Augustine as one of the primary guiding principles of this study, the decision process focused on connecting the trail back to King Street to facilitate optimal mobility choices to CoSA and in providing connection to this important point of interest.

Bridge of Lions (East Approach) to A1A Beach Boulevard / Pope Road (CoSA-N through CoSA-N-2 and CoSA-S)
The northern route options were appealing due to the overall character of the route corridors and direct connection capabilities provided between CoSA and CoSAB. The route from the Bridge of Lions to Anastasia State Park (CoSA-N) is well-defined and provides an efficient connection between these two major tourism destinations. While this route has some constraints, it offers favorable potential for the trail to link several key points of desired destination interests. Initially, the primary focus was to bring the trail south along SR A1A (CoSA-N-1) to SR 312 / A1A Beach Boulevard as a natural continuation.

However, another option became available through the route evaluation process, which directs the trail through Anastasia State Park along its western boundary (CoSA-N-2). This route provides a scenic and safe location for a multi-use trail. Discussions with Anastasia State Park ensued, which determined that the FDEP, as the agency with jurisdiction over the park, is amenable to accommodating the trail within the park. The park would be separated from the trail with a fence to prevent unauthorized access. Follow-up field work included establishing a tentative route using GPS methodology with park management and FDOT staff to facilitate additional study to advance this option. Because this route will provide the safest and most scenic opportunity, trail route alternative CoSA-N-2 is preferred over CoSA-N-1 on SR A1A. As such, SR A1A south of the park entrance was not further analyzed as a potential alternative.

From the Santander Street / A1A Beach Boulevard intersection, a route option to follow Santander Street (CoSA-N-1b) south to Pope Road (CoSA-S) was considered. Due to the constrained ROW of the Santander Street connection the respective jurisdictional agencies preferred the A1A Beach Boulevard connection (CoSA-N-1c) going into the CoSAB segment.

SR 312 / Bridge to Pope Road (CoSA-S)
The southern route (CoSA-S) was explored using SR 312 and the Matanzas River Bridge crossing as a trail connection. This will require modifying the SR 312 bridge to accommodate the trail. A preliminary structural assessment of this option is included in this study. Options were reviewed further for aligning the trail along SR 312 to Mizell Road as well as using Plantation Island Drive (CoSA-Sa / CoSA-Sb) to divert from a portion of SR 312. Both routes offer potential to connect to Pope Road and ultimately the Pope Road Trail, which extends from SR A1A to A1A Beach Boulevard.

While the primary route through CoSA to Anastasia Boulevard to Anastasia State Park to A1A Beach Boulevard was selected as the preferred route for SUN Trail funding, it was determined by the jurisdictional agencies that a secondary route is advantageous to be included for overall planning purposes. The secondary route will use the US 1 / SR 312 corridors as a complementary alternative outside of the Sun Trail system to offer expanded mobility opportunities for trail users.

Study Segment 3

CoSAB

Three potential routes within Segment CoSAB were considered and included:

1. Mickler Boulevard (CoSAB-1)
2. A1A Beach Boulevard (CoSAB-2)
3. Oceanfront Boardwalk (CoSAB-3)

Please note, in proceeding south of SR 312 a more western SR A1A corridor alignment that bypasses the CoSAB was not explored. The jurisdictional agencies agreed this option did not provide adequate connectivity to the CoSAB, so it was eliminated early in the planning process.

Mickler Boulevard (CoSAB-1)
Mickler Boulevard (CoSAB-1) was considered favorably because of the existing 8-foot-wide concrete trail adjacent to the road. This section of trail is currently designated as a route segment by the ECG. Two options were explored to address the major challenge of the route connection from the trail back to A1A Beach Boulevard. The first option is CoSAB-1a, which uses “A” Street as a connection to A1A Beach Boulevard. Due to ROW constraints this connection would be more suitable for a Complete Streets approach and would likely route bicyclists on the roadway instead of maintaining a trail within the corridor. The second option is CoSAB-1b, which uses the continued Mickler Boulevard Trail to “F” Street and connects to A1A Beach Boulevard. While this is the current designated route of the ECG, ROW constraints are a challenge because it is a residential street with no sidewalks for pedestrians.

The “A” Street connection (CoSAB-1a) was the favored option, although it does not avoid a constrained portion of A1A Beach Boulevard between “A” Street and “F” Street. The primary disadvantage with this route is it bypasses commercial development and desired points of interest along A1A Beach Boulevard that would be better served with a more direct trail access.

A1A Beach Boulevard (CoSAB-2)
A1A Beach Boulevard (CoSAB-2) is the recommended route for Segment CoSAB because it provides the best connectivity to commercial development and public beach access desired points of interests. This route has areas of constrained ROW; however, it appears these sections can be managed through design or by narrowing the trail to 8 feet wide in certain areas.

Oceanfront Boardwalk (CoSAB-3)
The Oceanfront Boardwalk (CoSAB-3) was included primarily for future consideration. Although this alternative is scenic and safe from vehicles, the cost and potential environmental impacts to construct a boardwalk currently outweigh its benefits. Concurrence by oceanfront private property owners would also likely present an obstacle that could prohibit the feasibility of this trail route. As such, CoSAB-3 was not analyzed further and is not recommended at this time.

Study Segment 4

SJC-S

Only one route was considered (SJC-S) because it is the most optimal route for this section to maintain the trail within existing ROW. While the route presents some challenges with ROW and existing bridges, it will be feasible to develop the trail along this corridor. Furthermore, the route will provide the best direct connection to the Flagler County SUN Trail-SJR2C Loop northern terminus on SR A1A. The primary challenge with this route will include modifications required at three bridges to accommodate the trail and need for the trail to change sides of the road to efficiently use existing ROW.

6.2 Evaluation Methodology

Considered trail route alternatives presented in the Existing Conditions Report were evaluated based on respective guiding principles outlined in the Purpose and Need Statement. To evaluate objectives included in the Purpose and Need Statement, various data sources were used to consider potential trail route alternatives. Collaboration with respective jurisdictional agencies resulted in the following evaluation criteria selected to assess potential trail route corridor options:

1. Available ROW
2. Street Crossings
3. Roadway Speed Conditions
4. Roadway Traffic Volumes
5. Crash Data
6. Wetlands / Floodplains
7. Natural / Cultural Resources
8. Transportation Connections
9. Community Connections
10. Trailhead Opportunities

The following sections describe the evaluation criteria assessed and the respective findings.

6.2.1 Available Right-of-Way

Available ROW was a critical component in evaluating potential trail route alternatives. ROW acquisition is typically not an allowable use of the SUN Trail Program funding. Additionally, identification of route alignments that have reduced or no need for ROW purchase can reduce the project segment implementation schedule, reduce project costs, and potentially reduce local capital need. Furthermore, SUN Trail Program funding does not allow for eminent domain as a tool to acquire ROW.

Available ROW is also an important factor to consider when determining proposed trail width and optimizing separation for bicyclists / pedestrians from motor vehicles. Ideal trail width is 10 to 12 feet to meet the needs of pedestrians and bicyclists of all ages; however, short segments can be reduced to 8 feet at times to allow for physical constraints. Separation from the roadway is important to create a safe and desirable environment for people to walk or bicycle.

SJC parcel boundaries were used to determine available ROW along trail route alternatives and summarized in the Existing Conditions Report. For ROW analysis available clear distance was determined from the edge of road pavement to the parcel boundary. This represents the feasible distance available to construct the proposed trail. The analysis considered the following three conditions:

1. A trail is feasible with at least 20 feet or more of space from the edge of pavement to the parcel boundary.
2. With 15 to 20 feet of space, the trail is feasible but with constraints; whereby, the trail width or roadway separation may be less than ideal.
3. Feasibility for the trail is considered constrained in areas with less than 15 feet of available space.

Figure 6-1 shows the ROW analysis results for each side of the roadway corridors considered to be potential trail route alternatives.

It is important to note, especially in urban areas, alternative approaches for the trail and connectivity may require further evaluation in subsequent phases of the planning and design process, including the use of sharrows, cycle tracks, etc., to complete the SUN Trail-SJR2C Loop gap within SJC. While these approaches may not agree with the intent of the SUN Trail program, they will be necessary in urbanized areas that do not provide ideal trail / roadway separation conditions and / or are in areas that offer slower traffic conditions. Examples include along the King Street area and Bridge of Lions within CoSA in which use of on-road options to close the trail gap is the most optimal alternative.

Segment 1 – SJC-W

The trail route alternative along SR 207 (SJC-W-1) contains areas to accommodate a separated trail but also areas of constraint due to available ROW width. The proposed trail area is especially constrained between Brinkhoff Road and Wildwood Drive on both sides of the road. A review of the corridor determined there is an FPL easement within the ROW; however, FPL officials indicated they are not interested in allowing trail placement within the easement.

The trail route alternative along Allen Nease Road, CR 214, and West King Street (SJC-W-3) also contain both feasible and constrained areas for locating a trail. Most of the Allen Nease Road route is feasible on the west side of the road, and most of CR 214 appears feasible on the south side of the road. West King Street is constrained on both sides near the CoSA. This more urbanized section will likely require a Complete Streets approach for design and may include routing bicyclists on the road via sharrows or other similar strategies.

The table below shows the approximate miles of feasible ROW for trail route alternatives in the SJC-W segment.

Alignment	Road	Road Side	Separated Trail Feasible (20 feet or more)	Trail Feasible with Constraints (15-20 feet)	Constrained Feasibility for Trail (less than 15 feet)
SJC-W-1	SR 207	North	3.18	1.36	2.80
SJC-W-1	SR 207	South	4.26	1.31	1.78
SJC-W-3	Allen Nease	East	0.64	0.82	1.72
SJC-W-3	Allen Nease	West	2.50	0.43	0.25
SJC-W-3	CR 214 / King Street west of US 1	North	3.96	0.81	1.34
SJC-W-3	CR 214 / King Street west of US 1	South	4.58	0.31	1.22

Segment 2 – CoSA

ROW analysis indicated more potential for a separated trail along the route alternatives for US 1, SR 312, and Pope Road (CoSA-W and CoSA-S) than the trail route alternative along King Street and Anastasia Boulevard (CoSA-N). US 1 has constrained ROW feasibility north of SR 207 but is mostly feasible south of SR 207. The ROW on SR 312 and Pope Road (CoSA-W) appear wide enough to accommodate a separated trail on either side of the road.

Although King Street and Anastasia Boulevard (CoSA-N) are constrained on both sides, this alternative offers potential to connect the trail through Anastasia State Park. This route would provide optimal conditions for a safe and comfortable trail because it would be removed from vehicular traffic. It also offers favorable shade and scenery conditions from the park's forested areas. These benefits, as well as the importance of providing connectivity to the CoSA, prompted the jurisdictional agencies group to select this route as the recommended alternative.

The table below shows the approximate miles of ROW feasibility for the trail route alternatives in the CoSA segment.

Alignment	Road	Road Side	Separated Trail Feasible (20 feet or more)	Trail Feasible with Constraints (15-20 feet)	Constrained Feasibility for Trail (less than 15 feet)
CoSA-W	US 1	East	0.95	0.16	0.59
CoSA-W	US 1	West	1.01	0.12	0.58
CoSA-W	SR 312	North	0.51	–	–
CoSA-W	SR 312	South	0.51	–	–
CoSA-S	SR 312	North	0.80	–	–
CoSA-S	SR 312	South	0.80	–	–
CoSA-S	Mizell Road	East	0.07	0.04	0.09
CoSA-S	Mizell Road	West	0.06	0.10	0.04
CoSA-S	Pope Road	North	1.36	–	–
CoSA-S	Pope Road	South	1.36	–	–
CoSA-N	A1A	East	0.61	0.97	–
CoSA-N	A1A	West	0.24	–	1.34
CoSA-N	Anastasia Boulevard / King Street east of US 1	North	–	–	2.19
CoSA-N	Anastasia Boulevard / King Street east of US 1	South	–	–	2.19
CoSA-N	Santander Street	East	–	–	0.13
CoSA-N	Santander Street	West	–	–	0.13
CoSA-N	State Park	Center	1.87	–	–

Segment 3 – CoSAB

The trail route alternative CoSAB-1 along Mickler Boulevard is feasible on either side of the road for a separated trail, and there is currently an 8-foot-wide trail on the east side of the road, making it the most likely option. However, "A" Street and "F" Street connections over to A1A Beach Boulevard are narrower streets with constrained ROW. "A" Street is slightly wider with a sidewalk and may be able to facilitate a Complete Streets approach. "F" Street is very constrained through a residential area with no sidewalks, thus modifying this roadway cross section would be challenging.

The trail route alternative along A1A Beach Boulevard (CoSAB-2) is feasible or feasible with constraints on the west side of the road for most of the area north of "A" Street. Both sides of A1A Beach Boulevard from "A" Street to south of "F" Street have constraints. The remainder of A1A Beach Boulevard to SR A1A is feasible for a separated trail on either side of the road. SR A1A is feasible with constraints on the east side of the road.

The table below shows the approximate miles of ROW feasibility for the trail route alternatives within the CoSAB segment.

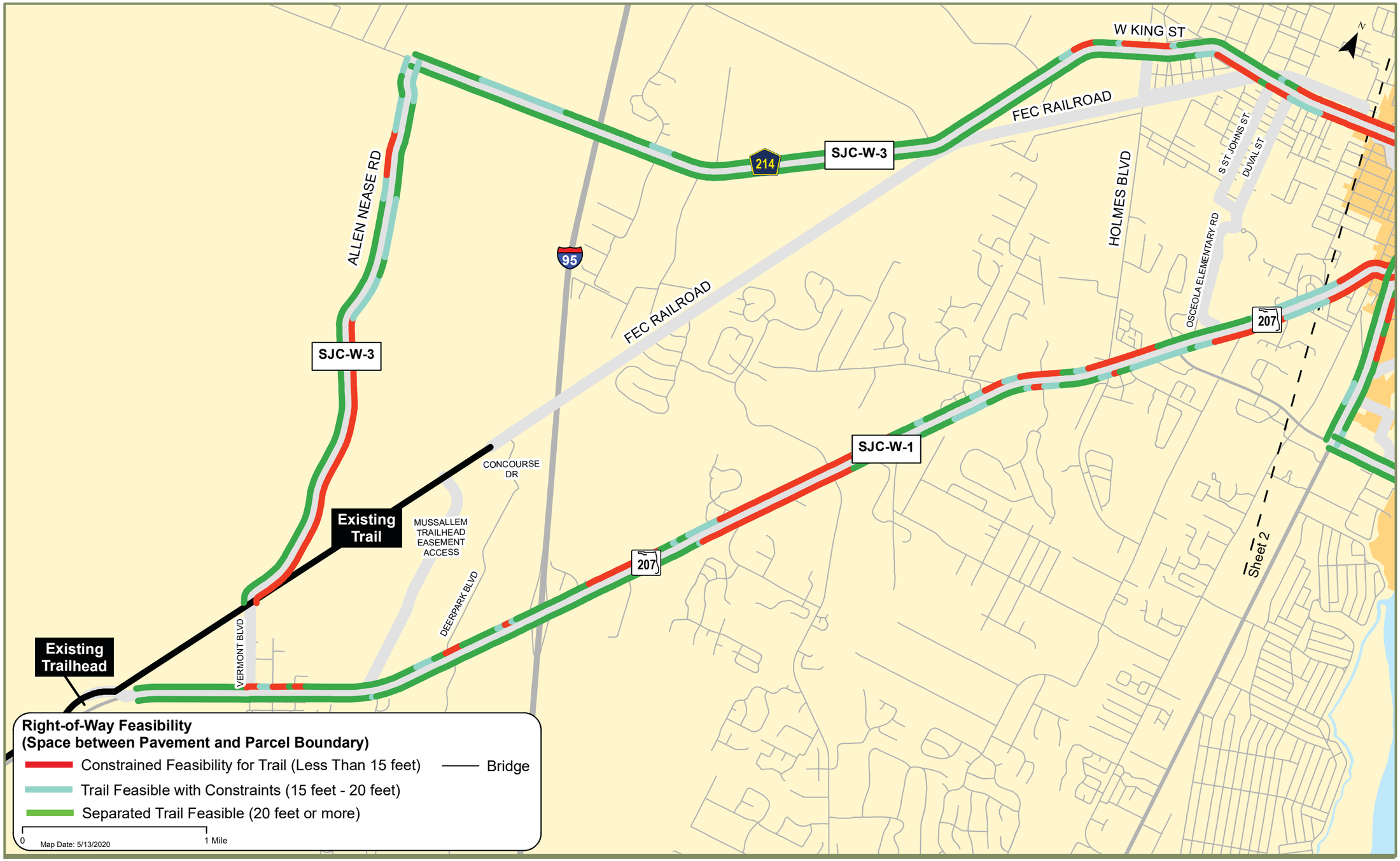
Alignment	Road	Road Side	Separated Trail Feasible (20 feet or more)	Trail Feasible with Constraints (15-20 feet)	Constrained Feasibility for Trail (less than 15 feet)
CoSAB-1	Mickler Boulevard	East	1.02	–	–
CoSAB-1	Mickler Boulevard	West	1.02	–	–
CoSAB-1	A Street	North	–	–	0.33
CoSAB-1	A Street	South	–	–	0.33
CoSAB-2	A1A Beach Boulevard	East	1.29	0.10	0.97
CoSAB-2	A1A Beach Boulevard	West	1.14	0.61	0.62
CoSAB-2	A1A	East	0.08	0.37	–
CoSAB-2	A1A	West	–	–	0.45

Segment 4 – SJC-S

The trail route alternative along SR A1A (SJC-S) is mostly feasible for a separated trail on either side of the road. The only constraints are north of Owens Avenue, which is mostly feasible with constraints on the east side of the road.

The table below shows the approximate miles of ROW feasibility for the trail route alternatives in the SJC-S segment.

Alignment	Road	Road Side	Separated Trail Feasible (20 feet or more)	Trail Feasible with Constraints (15-20 feet)	Constrained Feasibility for Trail (less than 15 feet)
SJC-S	A1A	East	8.79	0.95	0.22
SJC-S	A1A	West	7.57	0.42	1.92



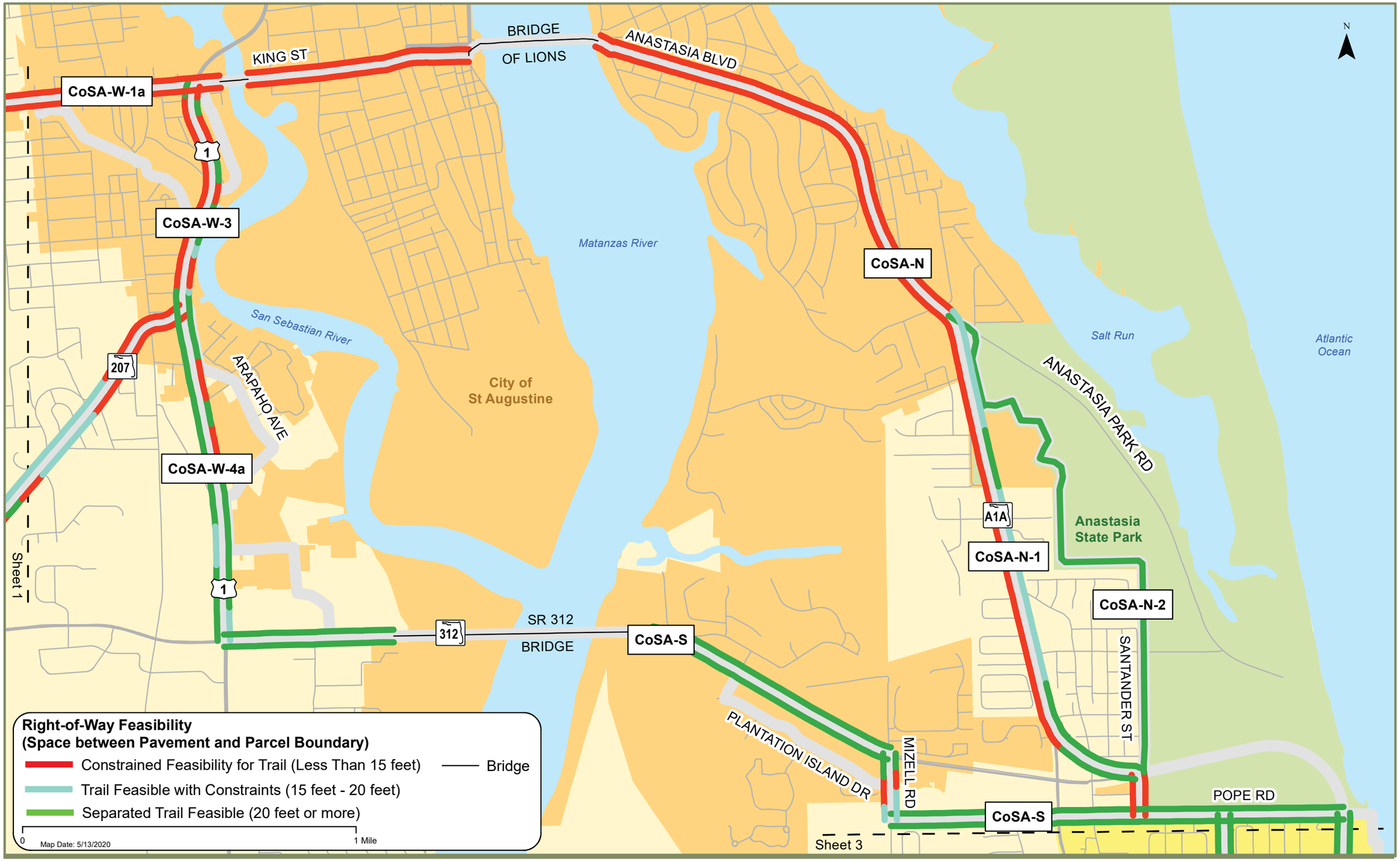
SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Right-of-Way Analysis

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 6-1

SHEET 1 OF 4

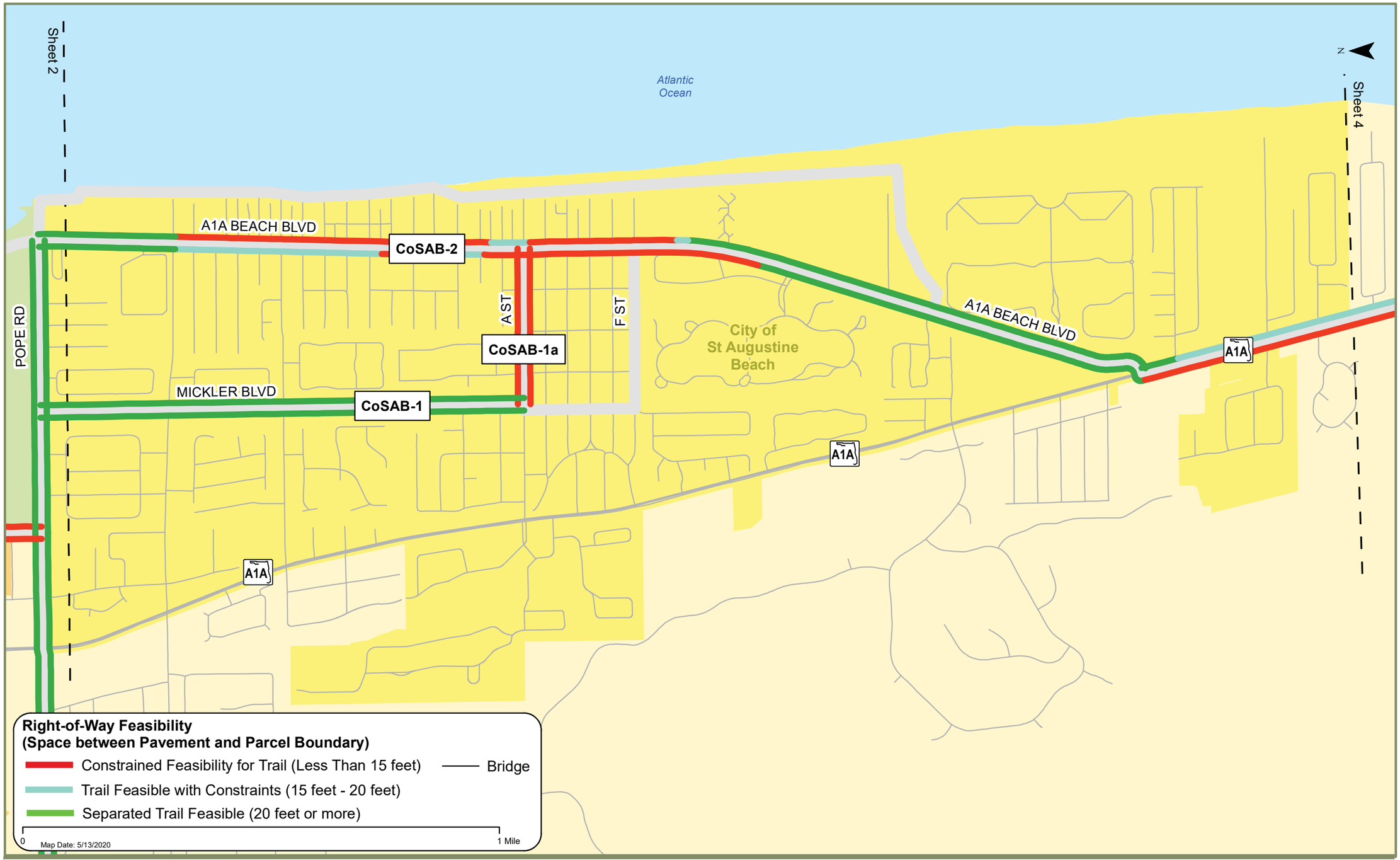


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Right-of-Way Analysis

Segment 2 - City of St. Augustine (CoSA)

FIGURE 6-1
SHEET 2 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Right-of-Way Analysis

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 6-1
SHEET 3 OF 4

SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Right-of-Way Analysis

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 6-1

SHEET 4 OF 4

6.2.2 Intersection Crossings

One of the SUN Trail-SJR2C Loop's guiding principles is to provide users with safe intersection crossings. Minimizing the number of areas where the trail must cross a street optimizes safety. For each trail route alternative, the number of intersecting roadways were summarized, according to the SJC road shapefile. The intersection crossings are shown on **Figure 6-2** and described in the sections below.

Segment 1 – SJC-W

As shown in **Figure 6-2,** the trail route alternative along Allen Nease Road, CR 214, and West King Street (SJC-W-3) appears to have fewer intersection crossings than along SR 207 (SJC-W-1). The table below shows that these two alternatives have a similar number of intersection crossings. However, the intersection crossings on SJC-W-3 are mostly on West King Street. There are no intersection crossings on Allen Nease Road, except at its intersection with CR 214, and there are few intersection crossings on CR 214. Therefore, based on intersection crossings, SJC-W-3 would offer an optimal safe environment for a trail.

Alignment	Road	Road Side	Intersection Crossings
SJC-W-1	SR 207	North	22
SJC-W-1	SR 207	South	25
SJC-W-3	Allen Nease	East	1
SJC-W-3	Allen Nease	West	0
SJC-W-3	CR 214 / King Street west of US 1	North	22
SJC-W-3	CR 214 / King Street west of US 1	South	26

Segment 2 – CoSA

Twenty-one intersection crossings occur in trail route alternative CoSA-N, as shown in **Figure 6-2** and the table below, along Anastasia Boulevard and King Street east of US 1 on the north and south sides of the roads. Anastasia State Park (CoSA-N-2) offers a more desirable and safer environment with no intersection crossings compared with SR A1A with seven intersection crossings on the east side of the road and 14 on the west.

Thirteen intersection crossings occur on trail route alternatives CoSA-W and CoSA-S on US 1, mostly on the west side of the road, along with a few intersection crossings on SR 312 and Mizell Road. There are 11 intersection crossings on the south side of Pope Road as it borders the CoSAB.

Trail route alternative CoSA-N is desirable due to the safer environment within Anastasia State Park but offers challenges with Anastasia Boulevard and King Street. Trail route alternatives CoSA-W and CoSA-S appear to offer safer conditions in locating the trail on the east side of US 1 and the north side of Pope Road.

Alignment	Road	Road Side	Intersection Crossings
CoSA-N	Anastasia Boulevard / King Street east of US 1	North	21
CoSA-N	Anastasia Boulevard / King Street east of US 1	South	21
CoSA-N	Anastasia State Park	N/A	0
CoSA-N	A1A	East	7
CoSA-N	A1A	West	14
CoSA-N	Santander Street	East	0
CoSA-N	Santander Street	West	1
CoSA-W	US 1	East	6
CoSA-W	US 1	West	13
CoSA-W	SR 312	North	0
CoSA-W	SR 312	South	2
CoSA-S	SR 312	North	2
CoSA-S	SR 312	South	1
CoSA-S	Mizell Road	East	1
CoSA-S	Mizell Road	West	1
CoSA-S	Pope Road	North	3
CoSA-S	Pope Road	South	11

Segment 3 – CoSAB

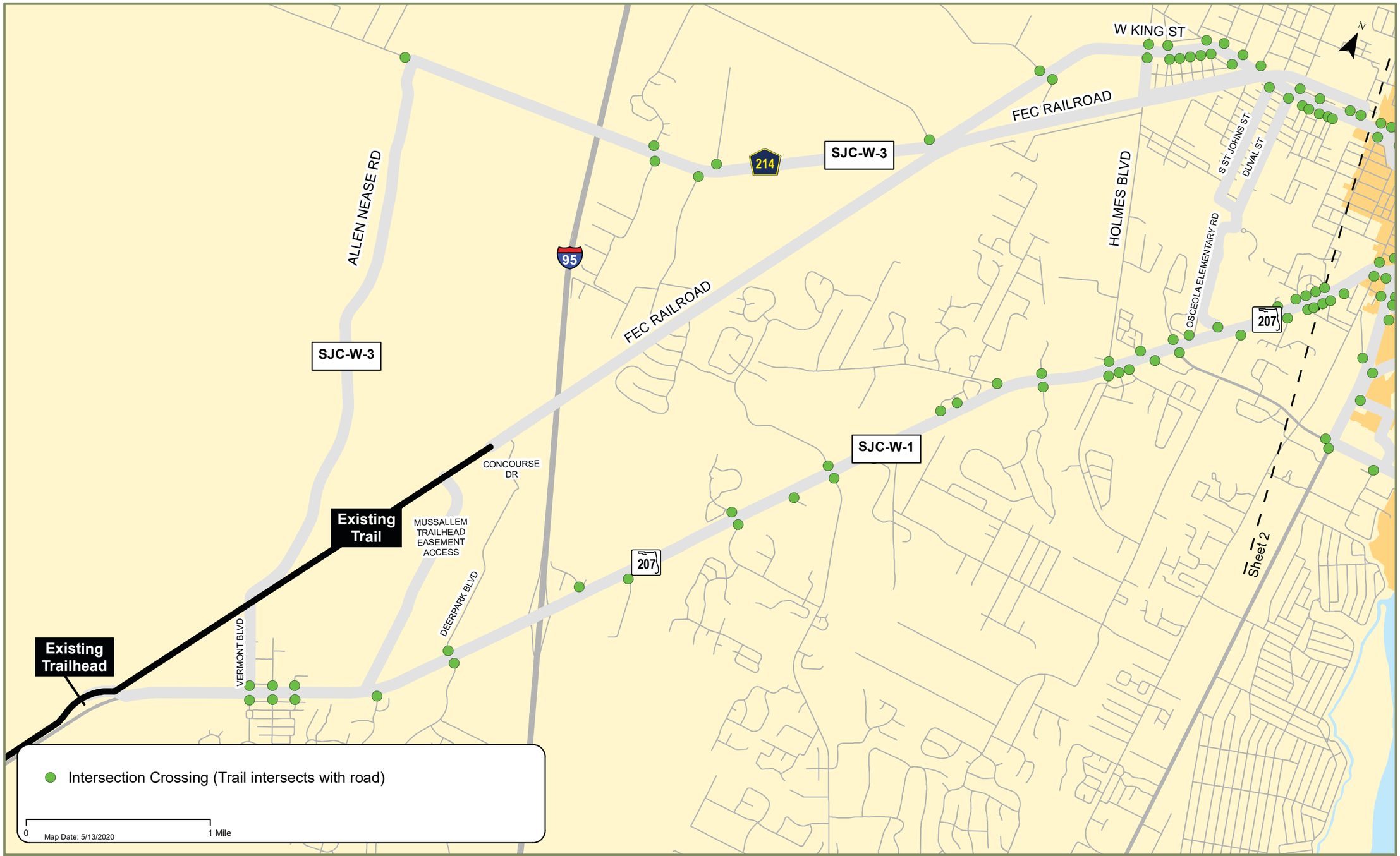
For the trail route alternatives within CoSAB, **Figure 6-2** and the table below show more intersection crossings along A1A Beach Boulevard than along Mickler Boulevard. On A1A Beach Boulevard (CoSAB-2), there are fewer intersection crossings on the west side of the road than the east, making the west side more optimal and safer. Using the east side of Mickler Boulevard (CoSAB-1) would be the most optimal and safest alternative based on the number of intersection crossings; however, CoSAB-1 does not offer the same connectivity to desired points of interest as CoSAB-2.

Alignment	Road	Road Side	Intersection Crossings
CoSAB-1	Mickler Boulevard	East	5
CoSAB-1	Mickler Boulevard	West	10
CoSAB-1	A Street	North	2
CoSAB-1	A Street	South	3
CoSAB-1	F Street	North	3
CoSAB-1	F Street	South	1
CoSAB-2	A1A Beach Boulevard	East	34
CoSAB-2	A1A Beach Boulevard	West	26
CoSAB-2	A1A	East	3
CoSAB-2	A1A	West	2

Segment 4 – SJC-S

Twenty-eight intersection crossings are on the east side of SR A1A on trail route alignment alternative SJC-S; 31 intersection crossings are on the west side of SR A1A.

Alignment	Road	Road Side	Intersection Crossings
SJC-S	A1A	East	28
SJC-S	A1A	West	31



SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Intersection Crossings

Segment 1 - St. Johns County - West (SJC-W)

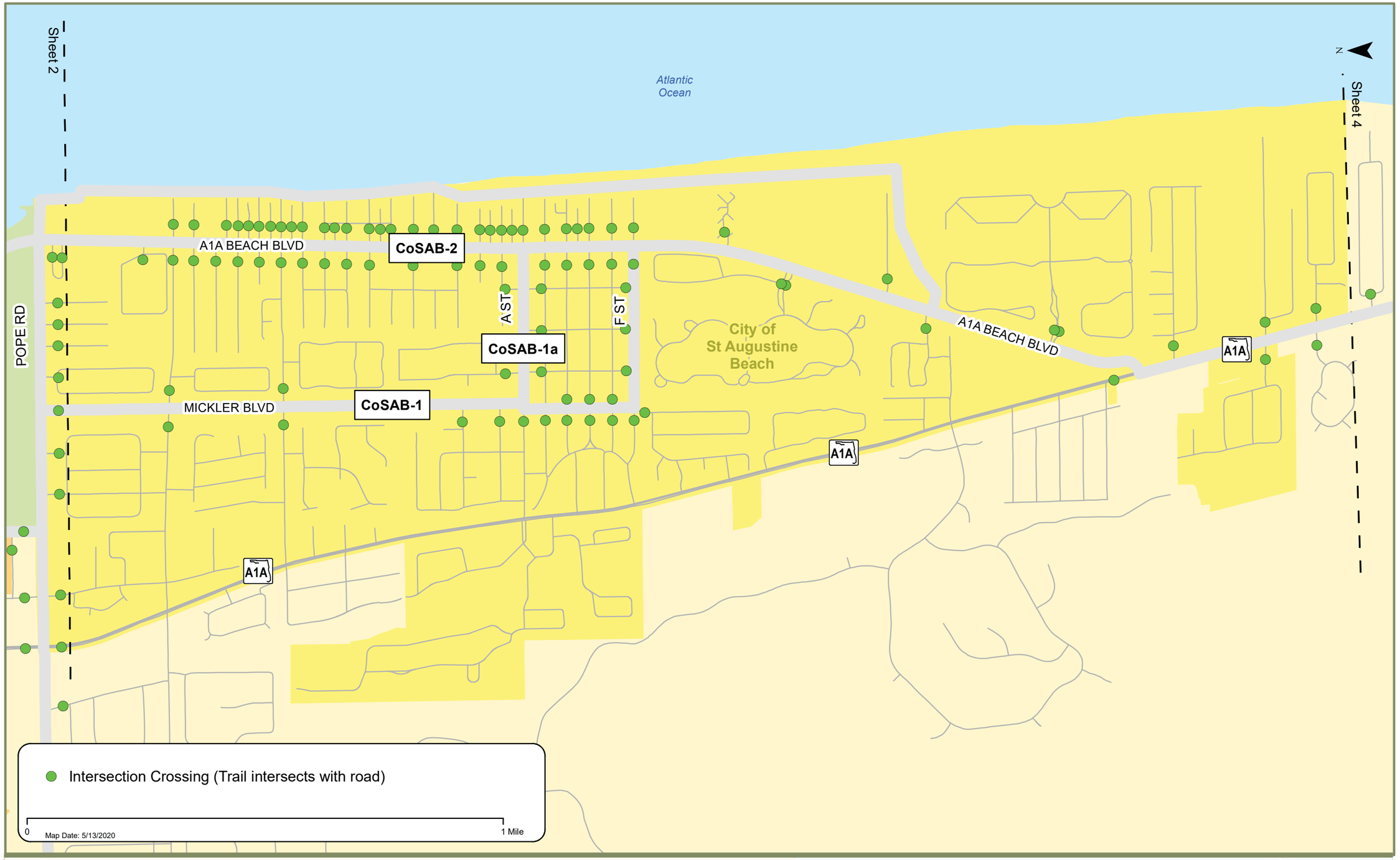
FIGURE 6-2
SHEET 1 OF 4

SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Intersection Crossings

Segment 2 - City of St. Augustine (CoSA)

FIGURE 6-2
SHEET 2 OF 4


Sheet 2
Sheet 4
N
Atlantic Ocean
A1A BEACH BLVD
CoSAB-2
A ST
F ST
CoSAB-1a
CoSAB-1
MICKLER BLVD
POPE RD
City of St Augustine Beach
A1A BEACH BLVD
A1A
A1A
A1A
Intersection Crossing (Trail intersects with road)
0
1 Mile
Map Date: 5/13/2020

SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Intersection Crossings

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 6-2
SHEET 4 OF 4

6.2.3 Roadway Speed Conditions

While separating the trail as much as possible from vehicular traffic will be a priority, assessing traffic speeds on roadways parallel to a multi-use trail is important to provide safety and comfort for trail users. The posted speed limits on roads parallel to the trail route alternatives were reviewed as part of the Existing Conditions Report. Refer to **Section 5.2.2** for the data collected and associated maps showing the posted speed limits.

Segment 1 – SJC-W

Trail route alternatives along SR 207 (SJC-W-1) and CR 214 (SJC-W-3) both have posted speed limit of 40 to 55 mph. However, as part of SJC-W-3, Allen Nease Road has a lower posted speed limit of 40 mph and King Street has a lower posted speed limit of 35 mph. Therefore, SJC-W-3 offers a more optimal and safer environment than SJC-W-1 considering the posted speed limits.

Segment 2 – CoSA

For trail route alternative CoSA-N, the posted speed limit ranges from 25 mph on King Street and 40 mph on Anastasia Boulevard to 45 mph on A1A Beach Boulevard. The trail route alternative through Anastasia State Park is desirable because the trail would be completely separated from vehicular traffic.
For trail route alternatives CoSA-W and CoSA-S, the posted speed limit ranges from 35 to 45 mph on US 1 and 50 to 55 mph on SR 312. Mizell Road and Pope Road have lower speed limits at 30 mph and 25 mph, respectively. CoSA-N is more optimal and safer than CoSA-W and CoSA-S considering the posted speed limits.

Segment 3 – CoSAB

For trail route alternatives in the CoSAB, Mickler Boulevard (CoSAB-1) has a lower posted speed limit at 25 mph than A1A Beach Boulevard (CoSAB-2) at 35 mph. Therefore, CoSAB-1 is a more optimal and safer option considering the posted speed limit. However, CoSAB-1 does not offer the same connectivity to desired points of interest as CoSAB-2.

Segment 4 – SJC-S

The posted speed limit along SR A1A for trail route alternative SJC-S is 45 mph from A1A Beach Boulevard to SR 206. Surrounding SR 206, the posted speed limit decreases to 40 mph. South of SR 206 to the St. Johns / Flagler County line, the posted speed limit ranges from 45 to 55 mph.

6.2.4 Roadway Traffic Volumes

Exposing trail users to high volume traffic conditions is undesirable because it increases likelihood of conflict between trail users and motor vehicles, which may reduce the quality of the trail user experience. The average annual daily traffic (AADT) volumes were reviewed as part of the Existing Conditions Report and are provided in **Section 5.2.10**. AADT calculates the average number of vehicles per day on a road segment in both directions of travel. The truck percentages were also reviewed and show the ratio of heavy trucks among traffic. The most recent data, acquired from FDOT for 2018, is only available on FDOT-maintained roads and was used for this study.

Segment 1 – SJC-W

There is significantly less traffic on CR 214 (SJC-W-3) compared to SR 207 (SJC-W-1), with 3,600 AADT on CR 214 and 16,000 to 30,500 AADT on SR 207. Additionally, fewer trucks appear to use CR 214, with 1.7%, compared to 6.7% for SR 207. Trail route alternative SJC-W-3 would be the desirable route for the SJC-W segment considering traffic volumes.

Segment 2 – CoSA

In the CoSA, the traffic volumes on US 1 (CoSA-W-2a / CoSA-W-3 / CoSA-W-4a) and SR 312 (CoSA-S) are quite high, reaching 40,000 AADT. The traffic volumes on King Street range from 11,500 to 18,000 AADT, and the traffic volumes on Anastasia Boulevard are approximately 20,000 AADT. As stated previously, the trail route alternative through Anastasia State Park is desirable because trail users would be separated from vehicular traffic conditions. Trail route alternative CoSA-N is the preferred route within the CoSA considering traffic volumes.

Segment 3 – CoSAB

In the CoSAB, A1A Beach Boulevard (CoSAB-2) traffic volume is 9,000 AADT. Because Mickler Boulevard (CoSAB-1) is not an FDOT-maintained road, traffic volumes were not available and are not part of the data used for this study. However, based on relative location and field observed conditions, it appears likely that traffic volumes on CoSAB-1 are less than CoSAB-2. However, CoSAB-1 does not offer the same connectivity to desired points of interest as CoSAB-2.

Segment 4 – SJC-S

On SR A1A (SJC-S), traffic volumes range from 6,300 to 25,000 AADT. Higher traffic volumes occur closer to the CoSAB and decrease going south to Flagler County.

6.2.5 Crash Data

Trail user safety is of utmost importance. To determine locations with potential safety concerns, vehicle crash locations were presented in the Existing Conditions Report and are shown in **Section 5.2.11**. The recorded crashes occurred from 2012 to 2017, according to the FDOT State Safety Office. Although the trail will be mostly separated from roadways, areas with several vehicle crashes, especially those that involved a bicyclist or pedestrian, should be avoided when determining a preferred trail route.

Segment 1 – SJC-W

Trail route alternative along SR 207 (SJC-W-1) had significantly more vehicle crashes during the analysis period than the trail route alternative along CR 214 (SJC-W-3). SR 207 had 466 vehicle crashes, with seven involving bicyclists and six involving pedestrians. CR 214 had 90 vehicle crashes, with only one involving a bicyclist and none involving pedestrians. Based on the historical crash data, SJC-W-3 would be a more preferred and safer route for a proposed trail.

Segment 2 – CoSA

Most vehicle crashes occurred on US 1, especially between SR 207 and CR 214 (King Street) (CoSA-W-2a). US 1 had 592 vehicle crashes, with 29 involving bicyclists and 15 involving pedestrians. This high number of crashes, especially those involving bicyclists or pedestrians, shows potential safety concerns for trail users. Fewer vehicle crashes – 327 – occurred on King Street and Anastasia Boulevard (CoSA-N), with 27 involving bicyclists and 11 involving pedestrians. While the total number of crashes is not significantly less, CoSA-N is a more preferred and safer route for a trail, especially with the segment through Anastasia State Park to separate trail users from vehicular traffic.

Segment 3 – CoSAB

More vehicle crashes occurred on A1A Beach Boulevard (CoSAB-2) than on Mickler Boulevard (CoSAB-1). A1A Beach Boulevard had 33 vehicle crashes of which two involved pedestrians. There was only one vehicle crash on Mickler Boulevard during the analysis period, which did not involve a bicyclist or pedestrian. Considering vehicle crash data, CoSAB-1 is a somewhat safer route for the trail. However, CoSAB-1 does not offer the same connectivity to desired points of interest as CoSAB-2.

Segment 4 – SJC-S

For the only trail route alternative considered for the SJC-S segment, analyzing crash data is still important because the proposed trail location must minimize safety concerns. SR A1A (SJC-S) had 277 vehicle crashes, with 13 involving bicyclists and six involving pedestrians.

6.2.6 Wetlands / Floodplains

The wetlands and floodplains within the planning study area were reviewed using the NWI data and the FEMA floodplains. The resulting map is shown with the Existing Conditions Analysis Report data in **Section 5.3.1.**

Segment 1 – SJC-W

Several patches of wetlands and floodplains are in the SJC-W segment. Both considered trail route alternatives (SJC-W-1 and SJC-W-3) cross wetlands and floodplains, although there are more wetlands and floodplains in SJC-W-3. These areas will require a more thorough review during the subsequent Project Development and Environment (PD&E) Study phase, and special design concepts will require consideration to avoid encroachment on the wetlands and floodplains.

Segment 2 – CoSA

The Matanzas River floodplain stretches from US 1 to nearly SR A1A. Both trail route alternatives (CoSA-N and CoSA-W / CoSA-S) cross floodplains. According to the map in **Section 5.3.1** showing wetland locations, it appears that CoSA-N would not affect any wetlands, whereas CoSA-W / CoSA-S crosses wetlands in several locations.

Segment 3 – CoSAB

Mickler Boulevard (CoSAB-1) does not cross floodplains or wetlands. Most of A1A Beach Boulevard (CoSAB-2) is also clear of floodplains and wetlands except for a small floodplain area just south of Pope Road. Some patches of wetlands near Ocean Walk Drive may be affected by the proposed trail.

Segment 4 – SJC-S

SR A1A is between the Atlantic Ocean and the Matanzas River and generally does not impact floodplains or wetlands within its ROW boundaries. Floodplains and wetlands in this area are anticipated to be further reviewed during the anticipated subsequent PD&E Study phase.

6.2.7 Natural / Cultural Resources

Historical and cultural resources were evaluated and presented in the Existing Conditions Report and is described in **Section 5.3.4**. Review of the FMSF database (updated October 2019) indicates previously recorded cultural resources are within the study area and are listed or eligible for listing on the NRHP. Many of the NRHP-listed resources within the study area are on trail route alternative CoSA-N, especially along King Street, in the vicinity of the CoSA King Street Master Plan. Areas within existing ROW are less likely to result in potential historical / cultural impacts than those outside of existing ROW. Cultural resources on the CoSA-N trail route alternative include:

- *St. Augustine Historical District (8SJ00010)* – archaeological and architectural historic district; may contain human remains
- *Alcazar Hotel (8SJ0060)* – late 19th century hotel
- *Lindsley (Horruytiner) House (8SJ00064)* – mid-18th century residence
- *Hotel Ponce de Leon (8SJ00080)* – late 19th century hotel
- *Markland Hotel (8SJ00083)* – mid-19th century residence
- *Government House (8SJ01027)* – located on the site of several previous Spanish governors' mansions, the current building was constructed in the early 20th century as a post office
- *Villa Zorayda (8SJ01028)* – late 19th century residence
- *Bridge of Lions (8SJ02460)* – early 20th century bridge carrying King Street over the Matanzas River
- *Model Land Company Historic District (8SJ02462)* – a National Historic Landmark, this district contains several NRHP-listed structures
- *Constitution Obelisk (8SJ02490)* – early 19th century monument
- *St. Augustine Alligator Farm Historic District (8SJ03230)* – early tourism attraction on Anastasia Island
- *Spanish Coquina Quarries Archaeological Site (8SJ00069)* – site of early Spanish coquina extraction

There is also a cultural resource on the SJC-S trail route alternative:

- *Fort Matanzas National Monument (8SJ00044)* – location of several early Spanish outposts, currently operated by the National Park Service

Additionally, overall SR A1A is designated as the A1A Scenic and Historic Coastal Byway within the Florida Scenic Highways Program. With this designation, SR A1A is subject to resource preservation, enhancement, and protection. A comprehensive cultural resources desktop analysis is provided in **Appendix G**.

6.2.8 Transportation Connections

Connecting the trail to other transportation systems is important for mobility of trail users and to establish an alternative transportation network within SJC. As part of the 260-mile SUN Trail-SJR2C Loop, a scenic trail through the CoSA area will provide an opportunity to attract tourists who enjoy outdoor activities or accommodate long-distance bicyclists. A trail connected to other trails, sidewalks, transit, and area roadways provides users with multiple access points. As discussed in **Section 2**, connectivity is a primary objective of the SUN Trail-SJR2C Loop vision and connections to existing trails is a measure of success for the recommended trail route.

The Sunshine Bus Company offers transit services to SJC with bus routes operating on many of the trail route alternatives. The transit routes were collected and provided in the Existing Conditions Report data and are shown in **Section 5.2.13**. Existing sidewalk and bicycle facilities are described in **Section 5.2.14**, and the existing and planned trails are shown in **Section 5.2.15**. There is no passenger rail operating within the overall study area.

Segment 1 – SJC-W

The trail will connect to the existing Palatka-to-St. Augustine State Trail. The existing trail terminates at the trailhead located on SR 207, approximately 1 mile west of Vermont Boulevard, and includes a kiosk with a trail map, parking, restroom, and picnic area.

The Sunshine Bus Company offers transit service on the Teal Line along SR 207 (SJC-W-1) with bus stops on SR 207 at I-95 and at US 1. For trail route alternative SJC-W-3, transit service is not offered on Allen Nease Road or CR 214, but the Orange Line operates on West King Street with several bus stops.

Currently, there are sidewalks and designated bike lanes on both sides of SR 207. There are no bicycle or pedestrian facilities on Allen Nease Road or CR 214. West King Street has sidewalks on both sides and a paved shoulder on the south side of the road. SJC-W-3 would offer a non-motorized transportation connection from the existing trailhead on SR 207 to West King Street leading into CoSA.

Segment 2 – CoSA

The Sunshine Bus Company offers several routes in CoSA with routes along both trail route alternatives (CoSA-N and CoSA-W / CoSA-S). Five bus routes operate on US 1 with several bus stops. The Red Line operates on King Street and Anastasia Boulevard (CoSA-N) and there are only two bus stops near the trail route alternative at the post office on King Street and at the west end of the Bridge of Lions. More transit options are available on CoSA-W / CoSA-S than CoSA-N.

US 1 (CoSA-W) and SR 312 (CoSA-S) provide existing sidewalks and bicycle lanes to Sgt. Tutten Drive. On SR 312 east of Sgt. Tutten Drive, there are paved shoulders but no designated bike lanes and no sidewalks. Pope Road has sidewalks on both sides but no bicycle facilities. CoSA-W / CoSA-S would connect the bicycle and pedestrian facilities on US 1 with sidewalks on Pope Road and connect on into the CoSAB.

King Street and Anastasia Boulevard (CoSA-N) provide existing sidewalks, and the only bicycle facilities are designated sharrows on Anastasia Boulevard. CoSA-N offers bicycle and pedestrian facilities to connect downtown St. Augustine with Anastasia State Park.

Segment 3 – CoSAB

There is an 8-foot-wide sidewalk along Pope Road (CoSA-S) and Mickler Boulevard (CoSAB-1) that is designated as ECG trail. On A1A Beach Boulevard (CoSAB-2), there are sidewalks on both sides and the roadway includes paved shoulders with curb and gutter on both sides that serve as a bicycle facility.

The Sunshine Bus Company operates the Green Line on A1A Beach Boulevard. The only bus stop is at the Publix at the intersection of A1A Beach Boulevard and SR A1A.

Both CoSAB-1 and CoSAB-2 offer connections to existing transportation systems.

Segment 4 – SJC-S

On SR A1A there are paved shoulders used by bicyclists and varying sections of sidewalks for pedestrian use. The proposed trail would provide bicycle and pedestrian connections from the CoSAB to Flagler County.

The Sunshine Bus Company's Green Line extends from A1A Beach Boulevard to SR A1A to SR 206, with bus stops at the SR A1A / SR 206 intersection. The Green Line then connects along SR 206 to US 1.

6.2.9 Community Connections

Connections to social, cultural, and recreational opportunities is a guiding principle for planning the SUN Trail-SJR2C Loop. Providing alternative forms of transportation such as walking and biking to desirable points of interest increases the quality of life for residents and visitors. The measures of success listed in **Section 2.3** include the number of points of interest within a quarter mile (5-minute walk) of the trail as well as access to parks and recreation locations / attractions / points of interest.
Community features such as fire stations, schools, cemeteries, government buildings, hospitals, and religious centers were reviewed as presented in the Existing Conditions Report data and are described in **Section 5.3.6**.

Segment 1 – SJC-W

Within a quarter mile of the trail route alternative along SR 207 (SJC-W-1), there are three parks, one campground, one government facility, three schools, and five religious centers, totaling 13 points of interest.

Within a quarter mile of the trail route alternative along Allen Nease Road, CR 214, and West King Street (SJC-W-3), there are five parks, two cemeteries, three schools, two fire stations, and 16 religious centers, totaling 28 points of interest.

Considering the proximity to community features, SJC-W-3 is more preferred than SJC-W-1.

Segment 2 – CoSA

Within a quarter mile of the trail route alternative along King Street, Anastasia Boulevard, and through Anastasia State Park (CoSA-N), there are 18 parks, five attractions, two government facilities, five cemeteries, four schools, three fire stations, and eight religious centers, totaling 45 points of interest.

Within a quarter mile of the trail route alternative along US 1, CR 312, and Pope Road (CoSA-W / CoSA-S), there are six parks, one campground, one hospital, one attraction, three government facilities, one cemetery, one school, two fire stations, and four religious centers, totaling 20 points of interest.

Considering the proximity to community features, CoSA-N is more preferred than CoSA-W / CoSA-S.

Segment 3 – CoSAB

Within the CoSAB, Mickler Boulevard (CoSAB-1) is residential, and there are no points of interest within a quarter mile. Within a quarter mile of trail route alternative along A1A Beach Boulevard (CoSAB-2), north of "A" Street, there are two parks, one attraction, and one fire station, totaling four points of interest. Considering the proximity to community features, CoSAB-2 is more preferred than CoSAB-1.

Segment 4 – SJC-S

Along SR A1A in SJC-S there are 11 parks, three campgrounds, one government facility, one school, one fire station, and three religious centers, totaling 20 points of interest.

6.2.10 Trailhead Opportunities

Opportunity for trailhead locations is an important consideration to accommodate overall trail system connectivity and provide favorable amenities for a complete trail user positive experience. The intent of this study is not to provide concept plans or details for trailhead sites, but to include potential locations that can take advantage of certain existing conditions and opportunities. This includes trailhead locations that may take advantage of existing public facilities, provide ease of access, and offer opportunities for economic development. Specific trailhead location opportunities are identified in subsequent **Section 7.4** for respective project jurisdictional agency segment routes (SJC-W / CoSA / CoSAB / SJC-S).

6.3 Evaluation Results

6.3.1 Final Recommended Trail Route

As presented in **Section 6.2** an extensive amount of data has been evaluated. In addition, respective jurisdictional agency coordination, stakeholders, and public input was included that resulted in the final recommended trail route. The route was selected to best fulfill the guiding principles, objectives, and measures of success outlined in **Section 2**. The final recommended trail route through each of the four segments is presented below. In addition, the recommended secondary route is also presented.

Segment 1 – SJC-W

Within the SJC-W segment the route along Allen Nease Road, CR 214, and West King Street (SJC-W-3) is the final recommended route. This route had more available ROW and a safer environment with fewer intersection crossings, lower speed limits, less traffic volume, and fewer past vehicle crashes. This trail route would provide access to the existing BMX facility on Allen Nease Road, provide trail access to West St. Augustine, and align with the current CoSA King Street Master Plan. The image below is a representation of what the trail could resemble along CR 214.

Segment 2 – CoSA

Within the CoSA segment the trail route alternative along King Street, Anastasia Boulevard, and through Anastasia State Park (CoSA-N) is the final recommended route. This route provides a safer environment with lower speeds limits, less traffic volume, and fewer past vehicle crashes. There are more amenities and points of interest along Anastasia Boulevard for trail users to access. This route also provides for a scenic trail within Anastasia State Park. The image below is a representation of what the trail could resemble through Anastasia State Park.

Photo credit: John Moran

Segment 3 – CoSAB

Within the CoSAB segment the trail route alternative along A1A Beach Boulevard (CoSAB-2) is the final recommended route. This route maximizes trail access to the commercial area within the City and allows connection to beach access and public parking.

The image below is a representation of what the trail could resemble along A1A Beach Boulevard.

Segment 4 – SJC-S

Within the SJC-S segment SR A1A is the final recommended route. This route uses existing ROW and bridge structures. The trail along SR A1A will also align with the existing trail in Flagler County.

The image below is a representation of what the trail could resemble along SR A1A.

Secondary Route

The final recommended route provides opportunity to close the 26-mile gap of the SUN Trail-SJR2C Loop within SJC. However, secondary routes were identified that provide smaller loops and alternative trail options. While SUN Trail funding requirements represent the primary funding source for the final recommended route, additional sources could be sought for secondary routes. Thus, two secondary routes are identified in this study.

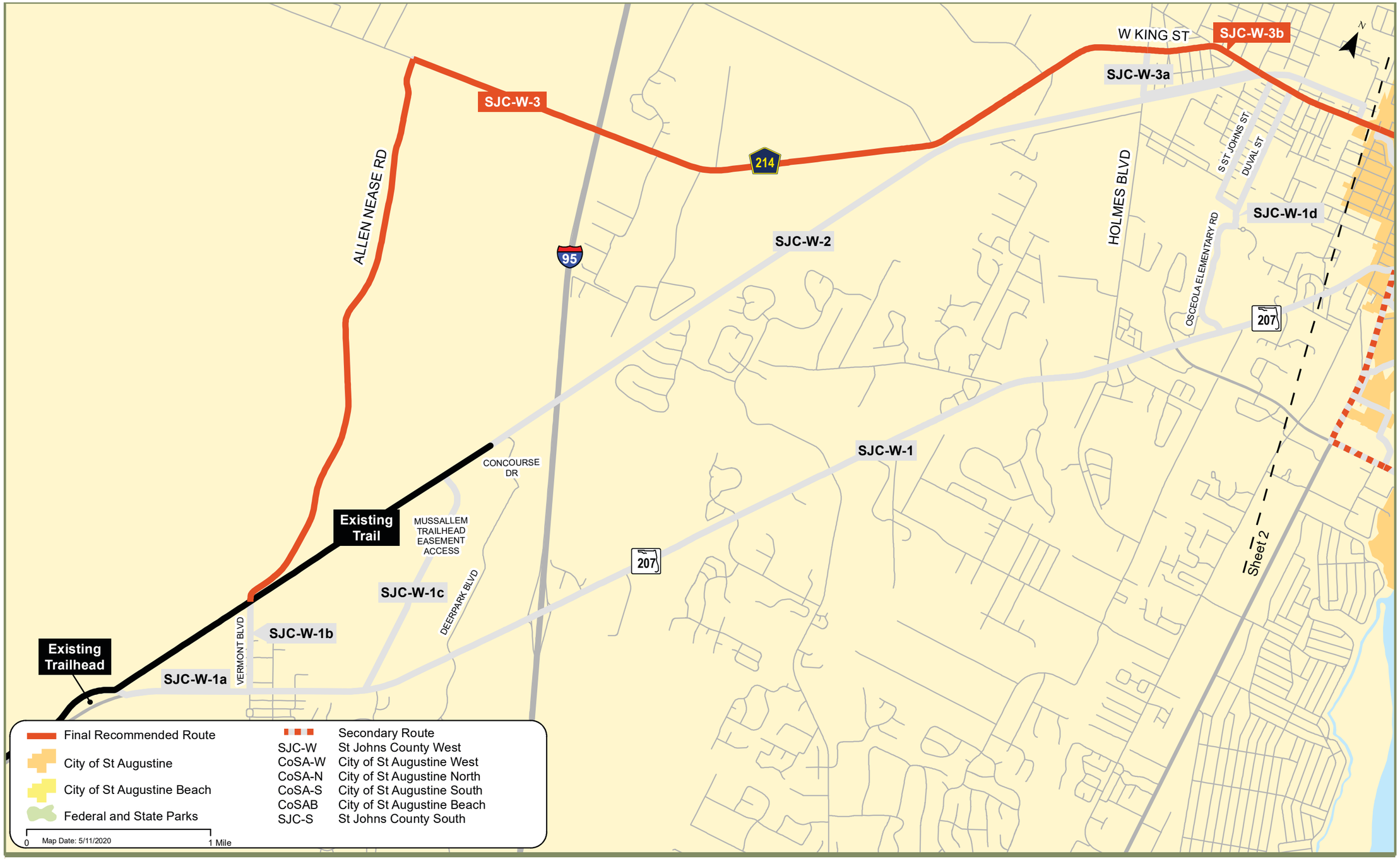
Segment 2 – CoSA

Within the CoSA segment US 1, SR 312, and Pope Road (CoSA-W / CoSA-S) is a recommended secondary route. This route could be used as a loop around the CoSA or as an alternative to the route along Anastasia Boulevard.

Segment 3 – CoSAB

Within the CoSAB segment Mickler Boulevard and A Street (CoSAB-1) is a recommended secondary route. This route could be used as a short loop within the CoSAB or as an alternative to the route along A1A Beach Boulevard. “A” Street could be a potential Complete Streets connector to SR A1A and A1A Beach Boulevard.

Figure 6-3 shows the final recommended route and the secondary routes.



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Final Recommended Route

Segment 1 - St. Johns County - West (SJC-W)

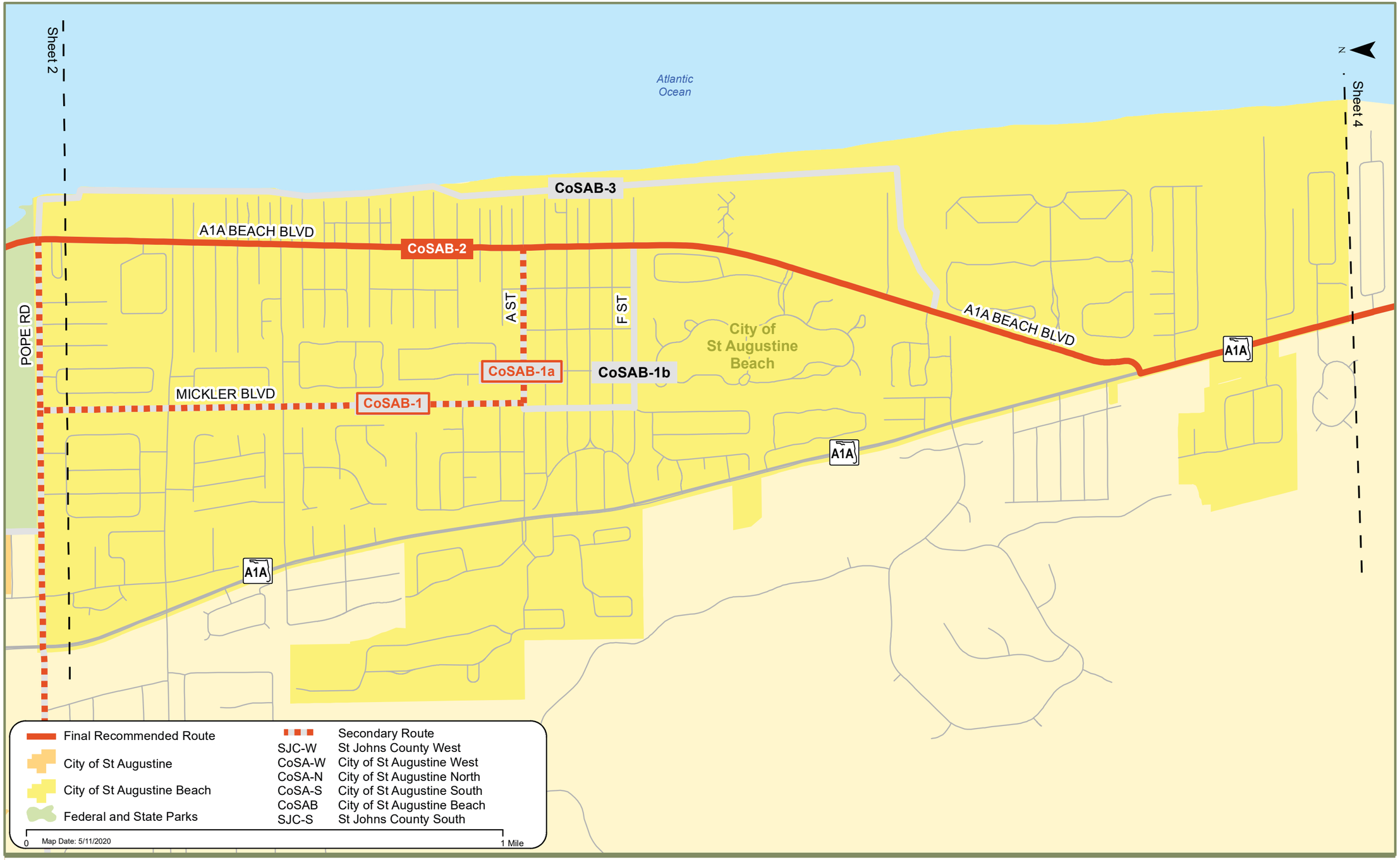
FIGURE 6-3
SHEET 1 OF 4

SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Final Recommended Route

Segment 2 - City of St. Augustine (CoSA)

FIGURE 6-3
SHEET 2 OF 4

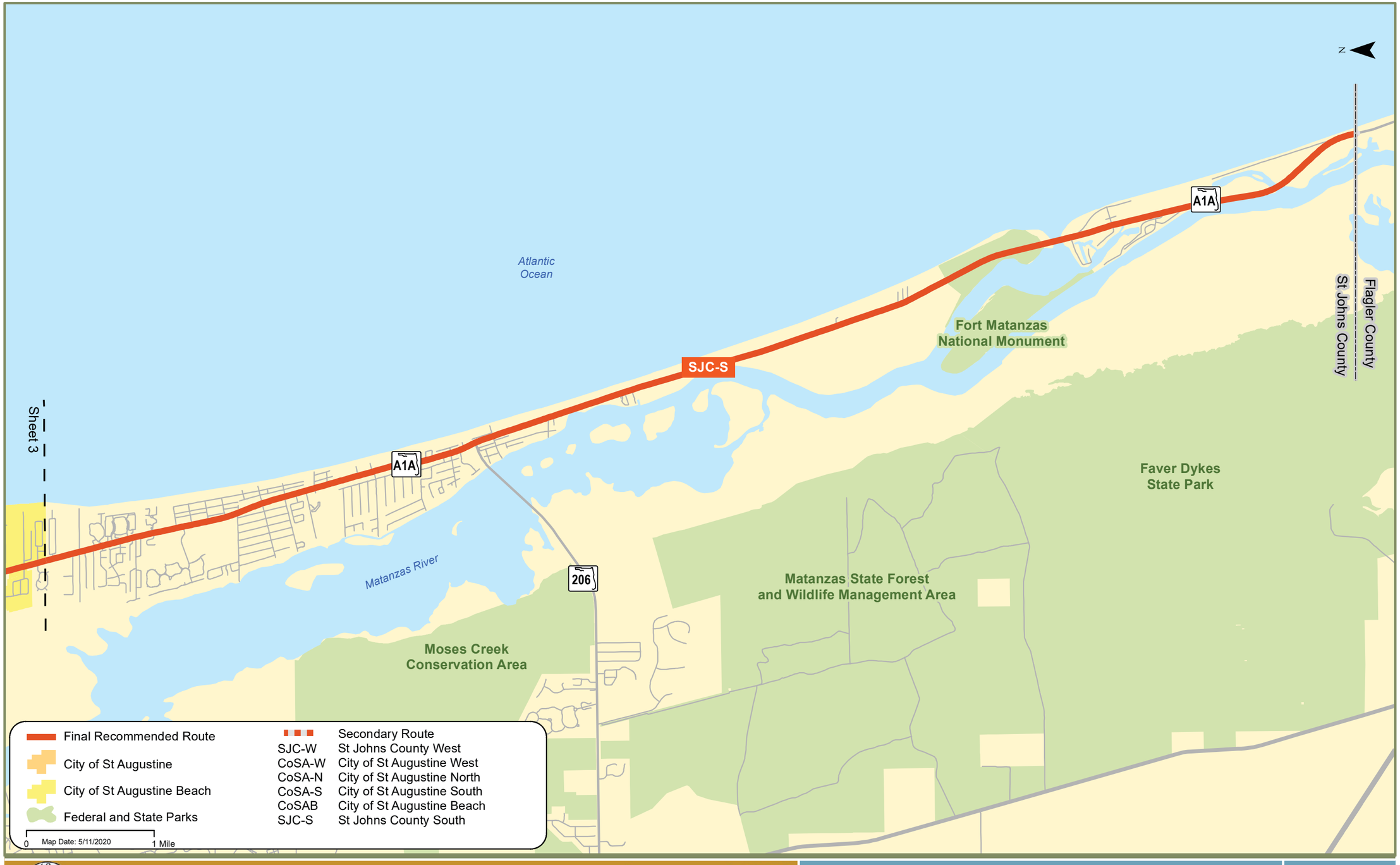


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Final Recommended Route

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 6-3
SHEET 3 OF 4



SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Final Recommended Route

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 6-3

SHEET 4 OF 4

7 Design Considerations

7.1 Trail Design Criteria

The design criteria for a multi-use trail may vary depending on its location within either FDOT ROW or in other designated areas. Developing this multi-use trail will require meeting several guidelines and criteria. Specific standards will be determined during further study and design phases depending on the trail's type and location. Key design manuals and guidelines that will need to be considered include:

- Florida Statutes
- Administrative Code
- ADA Requirements
- ADA Requirements for Access to FDOT Facilities
- FDOT Complete Streets Implementation Plan
- Florida Design Manual (FDM)
- FDOT Design Standards
- Manual of Uniform Traffic Control Devices (MUTCD)
- Florida Greenbook
- Guide for the Development of Bicycle Facilities (AASHTO)

General Design Criteria will include:

	Criteria	Notes
Trail Width	8 - 12 feet	12 feet is preferrred trail width; may be reduced to 8 feet for short segments
Cross Slope	2% (max)	–
Longitudinal Grade	5% (max), 8.33% (with landings)	–
Adjacent Slope	2 feet at 1:6 slope (max)	–
Horizontal Clearance	4 feet	Varies dependent on standard
Vertical Clearance	8 feet (min)	12 feet desired for Sun Trail
Trail Design Speed	18 mph, 30 mph (downhill grade >4%)	–
Roadway Separation	4 feet (from back of curb); 5 feet (from edge of paved shoulder)	–
Sign Vertical Clearance	8 feet	–
Lateral offset – Sign Poles	2 feet	–
Drop-Offs	10 inches or 1:2 slope; 2 feet from path	–
Subgrade	12 inches; Base Group 1	–
Structural Course	1.5 inches	–

7.2 Driveway and Street Crossings

The proposed SUN Trail-SJR2C Loop multi-use trail will impact some driveways and side-street crossings depending on which side of the street the trail is placed. While trails can separate bicyclists and pedestrians from motor vehicle traffic for most of the distance, a trail will inevitably intersect with roadways and driveways at some points, resulting in varying levels of conflict. Deciding which side of the roadway is best to locate the trail will be influenced by minimizing driveway and side street crossings. Signage and control mechanisms will be designed for the trail to ensure that users are made aware of conflict points before and again at the specific conflict area. At crossings, signs and crosswalks will warn motorists about upcoming multi-use trail crossings.

7.3 Physical or Natural Barriers

A preliminary structural assessment was performed for the bridges anticipated to be added and / or modified along the Final and Secondary Routes as summarized below. See **Appendix D** for further details.

7.3.1 Structures on the Final Recommended Route

The following provides description of new and modified bridge structures included on the final recommended route.

Trail Crossing of I-95 Adjacent to Existing CR 214 Bridge (No. 780049)

Segment 1 – SJC-W

This bridge is a 215.5-foot-long, four-span (37.5 feet-70.25 feet-70.25-feet-37.5 feet), prestressed concrete girder bridge. The deck has an overall width of only 33.08 feet; therefore, the bridge does not have sufficient width to accommodate a trail without extensive widening or replacement. The bridge, constructed in 1966, has a 78.9 sufficiency rating, suggesting that widening may not be practical. The bridge elements are generally in good condition and handles a light traffic load; therefore, it is unlikely the bridge will be scheduled for replacement for some time. The recommendation is to construct a separate parallel trail bridge along the eastbound (south) side of existing CR 214.

SR A1A Bridge (Bridge of Lions) over Matanzas River (Bridge No. 780074)

Segment 2 – CoSA

Based on preliminary review of this structure, modification to accommodate a multi-use trail does not appear viable. No additional bridge structure evaluation is included in this report. This bridge is included in the King Street Master Plan. The trail will likely include pavement sharrows for the bridge crossing.

King Street Bridge over San Sebastian River (Bridge No. 780003)

Segment 2 – CoSA

This bridge is an approximately 308-foot-long structure and is planned to be replaced by FDOT. The existing typical section includes two through travel lanes (one each direction), a center turn lane, and sidewalk on both sides. A PD&E Study is in process by others, and the proposed typical section includes a 10-foot-wide sidewalk on the north side and a 6-foot-wide sidewalk on the south side. The proposed travel/turn lane configuration will remain similar to existing. This bridge crossing is within the CoSA King Street Master Plan area.

SR A1A Bridge over Matanzas Inlet (No. 780097)

Segment 4 – SJC-S

This bridge is a 2,117-foot-long, 30-span, (60.75 feet-61.75 feet-26 at 72 feet-61.75 feet-60.75 feet) prestressed concrete girder bridge built in 1993. Each span has eight Type III AASHTO girders spaced 7.5 feet apart with an 8-inch-thick conventionally reinforced, cast-in-place concrete deck that is crowned along the centerline of construction. The overall deck width is 59 feet with 1.17-foot-wide outside sidewalk railings, 4.83-foot-wide sidewalks, and 1.5-foot-wide traffic railings on each side, leaving a 44-foot-wide clear deck between traffic railings. The current lane configuration is two 10-foot-wide outside shoulders and two 12-foot-wide travel lanes. The existing bridge elements are in fair condition, and the bridge has a 93.6 sufficiency rating.

The recommended configuration includes reducing the shoulder width on the east (northbound) side of the bridge to 3 feet and relocating the traffic railing to provide a protected trail width of 12 feet along that side. Final trail width and required bridge structure modifications will be determined in subsequent phases of project development.

SR A1A Bridge over Matanzas River North (No. 780120)

Segment 4 – SJC-S

This bridge is a 575-foot-long, five-span (5 at 155 feet), prestressed concrete girder bridge constructed in 2011. Each span is comprised of nine AASHTO Type IV girders with an 8-inch-thick conventionally reinforced, cast-in-place concrete deck that is crowned along the centerline of construction. The overall deck width is 63.42 feet with 1.42-foot-wide corral style traffic railings and 0.79-foot-wide outside parapets with bicycle picket railing on each side. The bridge currently has an 8-foot-wide sidewalk on the west (southbound) side and a 6-foot-wide sidewalk on the east (northbound) side, leaving a 45-foot-wide clear deck between the corral style traffic railings. The current lane configuration is an 11-foot-wide outside shoulder on the west, two 12-foot-wide travel lanes, and a 10-foot-wide outside shoulder on the east. The bridge elements are in good condition, and the bridge has a sufficiency rating of 95.4.

The recommended configuration includes relocating the corral style traffic railing on the east (northbound) side to provide a protected trail width of 12 feet, reducing the shoulder width on the east side of the bridge to 4 feet. Final trail width and required bridge structure modifications will be determined in subsequent phases of project development.

SR A1A Bridge over Matanzas River South (No. 780119)

Segment 4 – SJC-S

This bridge is a 530-foot-long, five-span (112 feet-100 feet-106 feet-112 feet-100 feet), prestressed concrete girder bridge built in 2011. Each span has nine AASHTO Type IV girders with an 8-inch-thick, conventionally reinforced, cast-in-place concrete deck super-elevated at a cross slope of 0.055 ft / ft between existing traffic railings. The overall deck width is 63.42 feet with 1.42-foot-wide corral style traffic railings and 0.79-foot-wide outside parapets with bicycle picket railing on each side. The bridge currently has a 6-foot-wide sidewalk on the west side and an 8-foot-wide sidewalk on the east side, leaving a 45-foot-wide clear deck between the corral style traffic railings. The current lane configuration is a 10-foot-wide outside shoulder on the west, two 12-foot-wide travel lanes, and an 11-foot-wide outside shoulder on the east. The structural elements are in good condition, and the bridge has a 96.5 sufficiency rating.

The recommended configuration includes relocating the corral style traffic railing on the east (northbound) side to provide a protected trail width of 12 feet, reducing the shoulder widths on the east side of the bridge to only 7 feet. It is anticipated that the widening of the existing sidewalk from 8 feet to a 12-foot-wide trail will require some overbuild on the sidewalk area to correct the cross slope to the ADA maximum of 0.02 feet per foot. Final trail width and required bridge structure modifications will be determined in subsequent phases of project development.

7.3.2 Structures on Secondary Route

The following provides description of bridge structures that will be encountered on the proposed secondary route. Because these structures are not considered in the same priority as the final recommended route, limited review is included as part of this study. Further study is anticipated during subsequent phases of project development.

SR 207 Under I-95 Overpass Bridges (Nos. 780045 / 780046)

Segment 1 – SJC-W

A limited structural assessment was performed for bridges at the I-95 / SR 207 interchange. Bridge Nos. 780045 and 780046 are three-span, 189-foot-long, parallel prestressed concrete girder bridges built in 1966 and widened in 1992 that carry I-95 traffic over SR 207. The end bents of these bridges were constructed as conventional spill-through abutments with slope protection pavement extending to near the intermediate bents.

There is insufficient clear width along the westbound (north) side of SR 207 under the existing bridges to allow for construction of a protected trail without structural modification. The recommended approach requires providing a protected 12-foot-wide multi-use trail along the westbound (north) side of SR 207 under the I-95 bridges by removing a portion of the end bent front slope and constructing a retaining wall and new sidewalk along that side.

SR 312 Eastbound Bridge over the Matanzas River (No. 780089)

Segment 2 – CoSA

The existing SR 312 bridges (No. 780089 / No. 780100) over the Matanzas River are each 3,575 feet long. The eastbound bridge (No. 780089), constructed in 1976, consists of 37 spans. The majority of the spans are 92.5 feet long and are comprised of six Type IV AASHTO girders with an 8-inch-thick, cast-in-place concrete deck made continuous over supports in three-span units. The main channel spans for the eastbound bridge consist of five three-span continuous steel plate girders with a cast-in-place concrete deck and span lengths of 130 feet-170 feet-130 feet.

To accommodate a trail facility on this structure the existing condition of different beam spacing on the approach spans and channel spans complicates positioning of a relocated traffic railing to minimize existing girder impacts. In addition, review of the load rating of the Eastbound SR 312 bridge reveals an existing overstress condition for the inventory rating that would be exacerbated by installing an additional bridge railing for a trail. For these reasons, constructing a trail on this bridge is not recommended.

SR 312 Westbound Bridge over the Matanzas River (No. 780100)

Segment 3 – CoSA

The westbound SR 312 bridge (No. 780100) over the Matanzas River was constructed in 1999 and consists of 24 spans. Most of the spans are 140 feet long with five modified Type VI AASHTO girders and an 8-inch-thick, cast-in-place concrete deck made continuous in three-span units. The main channel spans for the westbound bridge consist of five modified Type VI AASHTO girders post-tensioned for continuity over three spans with lengths of 192.5 feet-250 feet-192.5 feet.

Insufficient deck width will not allow for incorporating a protected 12-foot-wide trail on this bridge without widening the superstructure; however, a new crash-tested railing could be installed in a location that would provide for an 8-foot-wide trail and a bicycle / pedestrian railing to replace the existing outside bridge rail.

Further, review of the load rating of the Westbound SR 312 bridge indicates sufficient reserve capacity available in the girders to allow for adding a railing. While considering various trail configuration alternatives, a preliminary concept was developed to mount a raised sidewalk fabricated of lightweight material on top of the existing bridge deck outside of the new traffic railing. This raised sidewalk could be designed to cantilever sufficiently beyond the existing superstructure coping to provide the desired 12-foot-wide trail. The resulting lane and shoulder widths on the bridge would be substandard and require a Design Variation; however, this option is worth investigating if routing the trail along the SR 312 corridor and bridge is a desired option. A detailed load rating would need to be performed following determination and development of details for the lightweight materials.

These bridges are further discussed in **Section 4.8**, and details of the structural feasibility analysis of the bridges are shown in **Appendices D and E**.

7.4 Trailhead Opportunities

A trailhead provides access to a respective trail system and may include a shelter or building with or without restrooms, a paved or unpaved parking lot, trail information, and other related amenities. This northern gap of the SUN Trail-SJR2C Loop will connect to the existing trailhead on SR 207 located in the SJC-W segment and terminate along SR A1A at the St. Johns / Flagler County line. SUN Trail funding cannot be utilized for the development of trail amenities and trailheads, therefore an important factor in locating the trail is potential connection of points of interests and public parking areas. Several locations are identified as trailhead opportunities throughout the study area. These locations are presented following and include reference to the respective study segments / routes.

- SJC BMX track (SJC-W-3)
- Collier-Blocker-Puryear Park (SJC-W-3b)
- King Street (King Street Master Plan by CoSA) – a trailhead on King Street in downtown St. Augustine would provide trail access, but also visibility for the trail among the residents and visitors. There is an ongoing Planning Study on King Street that could help determine the best location.
- RB Hunt Elementary School (CoSA-N)
- Anastasia State Park (CoSA-N-2)
- Existing parking at beach access points along A1A Beach Boulevard (CoSAB-2)
- Windswept Acres Park (SJC-S)
- Fort Matanzas National Monument (SJC-S)
- Parking at Matanzas Inlet Bridge (SJC-S)

7.5 User Experience and Aesthetics

Ultimately, bicyclists and pedestrians will choose to use the trail based on their user experience. A safe and comfortable environment will attract more users to the trail. Many factors contribute to a safe experience, including separation from the roadway, minimal street crossings, and adequate lighting. Factors that contribute to a comfortable experience include trail width, shade, minimal street crossings, landscaping, and other amenities. Providing an aesthetic and scenic trail where users connect with nature also contributes to the user experience and makes the trail a more attractive alternative mode of transportation.

7.6 Americans with Disability Act (ADA) Accommodations

The ADA was passed in 1990 and prohibits discrimination against people with disabilities in employment, transportation, public accommodation, communications, and governmental activities. The FDOT is tasked with enforcing the ADA regulations governing transit. All trails and proposed facilities will be required to meet ADA standards.

8 Final Recommended Route Concept Plans

8.1 Concept Plans

Preliminary concept plans for the Final Recommended Route are presented in **Appendix P**. The concept plans were developed based on review of existing conditions, alternatives analysis, public involvement results, and continuous consultation review with the jurisdictional agencies (SJC, FDOT, CoSA, CoSAB). As such, the concept plans are to be provided as the planning study preference for route and location of the proposed trail and are intended to be used for developing the subsequent phases of project development and implementation.

The general basis and understanding of considerations for concept plans development are presented below:

1. Proposed trail route alignment provides overall conceptual intent based on existing conditions and other relevant information collected and presented in the Existing Conditions Report and Final Report documents. ROW lines displayed in the conceptual plans were not field verified and are provided as a graphical representation using SJC GIS parcel boundaries. The ROW should be field surveyed as part of the subsequent preliminary / final design phases for verification and determination of final proposed trail alignment / location.
2. Proposed trail width is anticipated to be 10 to 12 feet except where ROW and other constraint / conflict conditions cannot be avoided. Minimum trail width for constrained conditions will be 8 feet. The number of locations with trail width reduced to 8 feet will be minimized to the extent possible. Final trail width will be determined by subsequent phases of project development (PD&E Study and / or PE / Final Design).
3. The SUN Trail program provides funding for developing a statewide system of paved multi-use trails (SUN Trail network) for bicyclists and pedestrians, physically separated from vehicular traffic. FDOT defines a multi-use trail as a paved, shared-use path, which is typically 12 feet wide but may vary from 10 to 14 feet wide, or larger, depending on physical or environmental constraints or use. In some areas of extreme constraints, such as at bridges or in environmentally sensitive lands, a multi-use trail may be as narrow as 8 feet wide. In general, it is the primary intent that development of this project will follow the premise and preference to achieve SUN Trail-funded projects to provide a connected 12-foot-wide, asphalt, multi-use trail system.
4. The proposed trail location between roadway and ROW, as shown, is subject to change based on future acquisition of project-specific topographic and ROW survey data.
5. The proposed trail, as shown, may be located on the opposite side of the roadway based on future acquisition of project-specific survey and utility location information. This includes conditions where below / above ground utility conflicts are unavoidable and / or utility relocation is not practical to be technically and economically feasible.
6. Where the proposed trail conflicts with existing sidewalk, the proposed trail is intended to replace the existing sidewalk. Limits of sidewalk removal and replacement to accommodate the proposed trail will be determined during subsequent phases of project development.
7. The approximate location of wetland resources is shown based on NWI data and / or estimated by desktop planning review processes presented in the Preliminary Natural Resources Analysis Report. Wetland impacts and mitigation / permitting requirements will be determined in the subsequent study / design / permitting phases of the project.
8. Other information related to environmental / natural resources to include Soil Types, Essential Fish Habitat, Listed Species, Public Parks and Recreation areas, Conservation Easements, and other Cultural / Historical data are presented in the Existing Conditions Report, Preliminary Natural Resources Analysis Report, and Cultural Resource Desktop Analysis Report. This data is intended to provide preliminary existing conditions to assist with developing subsequent phases of project development.
9. Continuing coordination with SJC, CoSA, and CoSAB related to respective future planning initiatives along the proposed trail final recommended route corridors will be critical. Key examples include:
   a. FDOT's future SR 313 that currently indicates an at-grade intersection at CR 214 near Carter Road. This project is listed in the FDOT Five Year Work Program, item number 210230-2. The construction date has not been scheduled.
   b. SJC West King Street Corridor Update Study that provides improvements through the West Augustine area and includes four major intersections at Holmes Boulevard, North Orange Street, North Volusia Street, and Palmer Street. The study includes provisions to accommodate the proposed trail.
   c. CoSA King Street Master Plan that is considering the trail alignment along the King Street area from Palmer Street to the Bridge of Lions.
   d. FDOT / CoSA King Street infrastructure improvements from the San Sebastian River Bridge to Avenida Menendez area.
   e. FDOT replacement of existing King Street at San Sebastian River Bridge. Construction for this project is scheduled to begin in 2024 in the FDOT Five Year Work Program item number 437428-1.
   f. CoSA Mobility / Complete Streets Study along Anastasia Boulevard from the Bridge of Lions to Red Cox Road area that indicates including a shared-use trail facility.
10. In areas where wetland or other environmental / physical impacts cannot be avoided to maintain the proposed trail within existing ROW clear zone requirements, it may be required for the trail to be constructed using a shared-use boardwalk structure. A typical detail is provided in the concept plans.

Project-specific items related to the proposed trail route alignment shown by the concept plans is presented below:

1. ROW and roadway alignment shown along Allen Nease Road is based on SJC GIS information. The proposed trail location shown on the west side may be moved to the east side based on subsequent field survey verification of existing ROW / roadway alignment conditions. Field survey and implementation are anticipated to be provided by subsequent study / design phases of project development.
2. The CR 214 trail crossing at I-95 is proposed as a new non-motorized shared-use trail bridge structure parallel to the existing CR 214 vehicular bridge (780049). The proposed typical section depiction is shown on Concept Plans Sheet Nos. 16-17.
3. The future SR 313 at-grade intersection with CR 214 begins at approximate Sta 360+00 (Carter Road). Proposed intersection improvements along CR 214 end at approximate Sta 380+00. Coordination for final trail alignment through this area will be required.

4. The Holmes Boulevard intersection area going east to Palmer Street is under separate study by SJC and includes concepts for future improvements, including accommodation of the proposed SUN Trail-SJR2C Loop. Coordination is recommended.
5. The CR 214 at FEC Railway crossing requirements will be coordinated with FEC.
6. The proposed alignment along West King Street beginning at the Whitney Street / Palmer Street area going east through US 1 to King Street to the Bridge of Lions will be coordinated with the ongoing CoSA Complete King Street Study.
7. The King Street Bridge at San Sebastian River is under FDOT PD&E Study. The existing bridge typical section includes two through travel lanes in each direction, a center turn lane, and sidewalk on both sides. The future bridge typical section, according to the ongoing PD&E Study, is planned to include 10-foot-wide sidewalk on the north side and 6-foot-wide sidewalk on the other side and is shown on Concept Plans Sheet No. 36.
8. The Bridge of Lions crossing is anticipated to remain as a sidewalk and bicycle sharrow condition.
9. The proposed alignment along Anastasia Boulevard will require coordination with the CoSA Anastasia Boulevard Mobility Plan. A possible Complete Streets initiative is under study by the CoSA.
10. The proposed Anastasia State Park alignment (approximate Sta 635+00 to Sta 727+00) was tentatively determined in coordination with FDOT / FDEP and is subject to modification pending further study required during future phases of overall project development and implementation. Alignment within the park areas will be separated by a fence to prevent unauthorized entrance to the park.
11. Guardrail may be required for trail safety in areas where the trail location may be near existing roadway clear zone areas.
12. Areas along SR A1A (SJC-S) may require existing roadway swale drainage system adjustments to accommodate trail alignment and clear zone requirements.
13. Based on field survey to be provided in subsequent phases of project development, consideration should be given to locate the trail on the east side of SR A1A south of SR 206 (SJC-S) to accommodate existing roadway swale drainage system adjustments. A power line system is also on the proposed trail west side alignment.
14. SR A1A (SJC-S) trail bridge crossings from approximate Sta 1335+00 through approximate Sta 1450+00 include: (1) Matanzas Inlet (780097); (2) Matanzas River / Summer Haven River North (780120); and (3) Matanzas River / Summer Haven South (780119). The proposed typical section bridge modifications to accommodate a 12-foot-wide trail are presented on Concept Plans Sheet Nos. 96-97, 99, and 104. Additional narrative description and detail is presented in **Appendix E**.
15. On SR A1A (SJC-S) in this area at approximate Sta 1460+00 it may be worthwhile to consider locating the proposed trail on the west side of SR A1A to eliminate conflict with Old SR A1A and alternatively better align the connection to Flagler Beach to Marineland Trail.

8.2 Concept Typical Sections

Proposed trail typical sections are included in **Section 9.1 Project Logical Termini Breakdown**. Respective project limits have been determined in coordination with the jurisdictional agencies for future project development, implementation, and funding considerations. Proposed new and existing bridge typical sections are shown as described in **Section 8.1**.

9 Implementation Plan

9.1 Project Logical Termini Breakdown

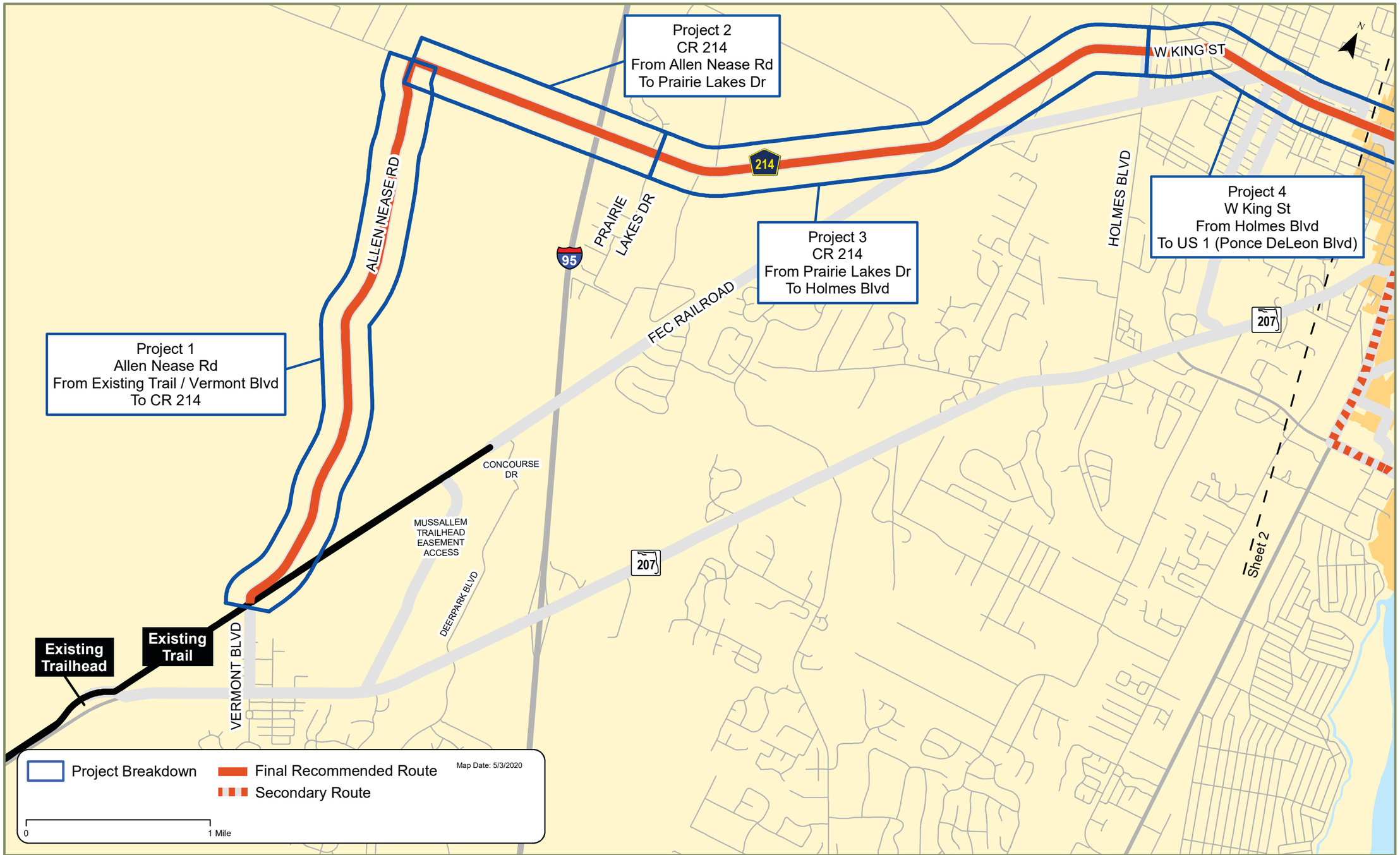
The Final Recommended Route and the Secondary Route within the respective jurisdictions of SJC, the CoSA, Anastasia State Park (FDEP), and the CoSAB are divided into 13 project segments based on logical termini assessment to facilitate optimal implementation feasibility. The proposed project limits are at logical locations that were coordinated with the respective jurisdictional agencies. This provides an organized and consensus basis for future phases of project development and pursuit of FDOT SUN Trail Program and / or other funding opportunities.

Ultimately, the goal of all participating jurisdictional agencies is to implement a continuous SUN Trail-SJR2C Loop connection through SJC from the existing SR 207 trail terminus to the St. Johns / Flagler County line at SR A1A. All jurisdictions understand that separate project limits are required to address varying degrees of project complexities and implementation requirements. Under the lead of SJC, in collaboration with the CoSA and CoSAB, projects were prioritized to move forward with future phases of project implementation. The projects are listed in the table below and shown on **Figure 9.1 (Project Breakdown Maps)**. The table provides respective project limits as well as the project prioritization indicated by the jurisdictional agencies that will assume final ownership and maintenance responsibility. The respective trail route typical sections discussed in **Section 8.2** are also shown following the Project Breakdown maps. It is noted that the initial applications for FDOT SUN Trail Program funding were submitted in December 2019. This is further described in **Section 9.4**.

	Project	Description	Jurisdictional Agency Project Priority		
			SJC	CoSA	CoSAB
Final Recommended Route	1	Allen Nease Road (SJC-W) From Existing Trail / Vermont Boulevard to CR 214	1		
	2	CR 214 (SJC-W) From Allen Nease Road to Prairie Lakes Drive	7		
	3	CR 214 (SJC-W) From Prairie Lakes Drive to Holmes Boulevard	8		
	4	West King Street (SJC-W / CoSA) From Holmes Boulevard to US 1 (Ponce DeLeon Boulevard)	6	4	
	5	King Street (CoSA) From US 1 (Ponce DeLeon Boulevard) to Bridge of Lions	11	3	
	6	Anastasia Boulevard (CoSA) From Bridge of Lions to Red Cox Drive / Old Quarry Road	4	2	
Final Recommended Route	7	Anastasia Boulevard / Anastasia State Park (CoSA / FDEP) From Red Cox Drive / Old Quarry Road to A1A Beach Boulevard / Pope Road	2	1	
	8	A1A Beach Boulevard (SJC / CoSAB) From Pope Road to SR A1A	3		1
	9	SR A1A (CoSAB / SJC-S) From A1A Beach Boulevard to SR 206	10		
	10	SR A1A (SJC-S) From SR 206 to Fort Matanzas	9		
	11	SR A1A (SJC-S) From Fort Matanzas to St. Johns / Flagler County Line	5		

Jurisdictional Agency Key

- SJC
- CoSA
- Multi-Jurisdiction (SJC / CoSA / CoSAB / FDEP)

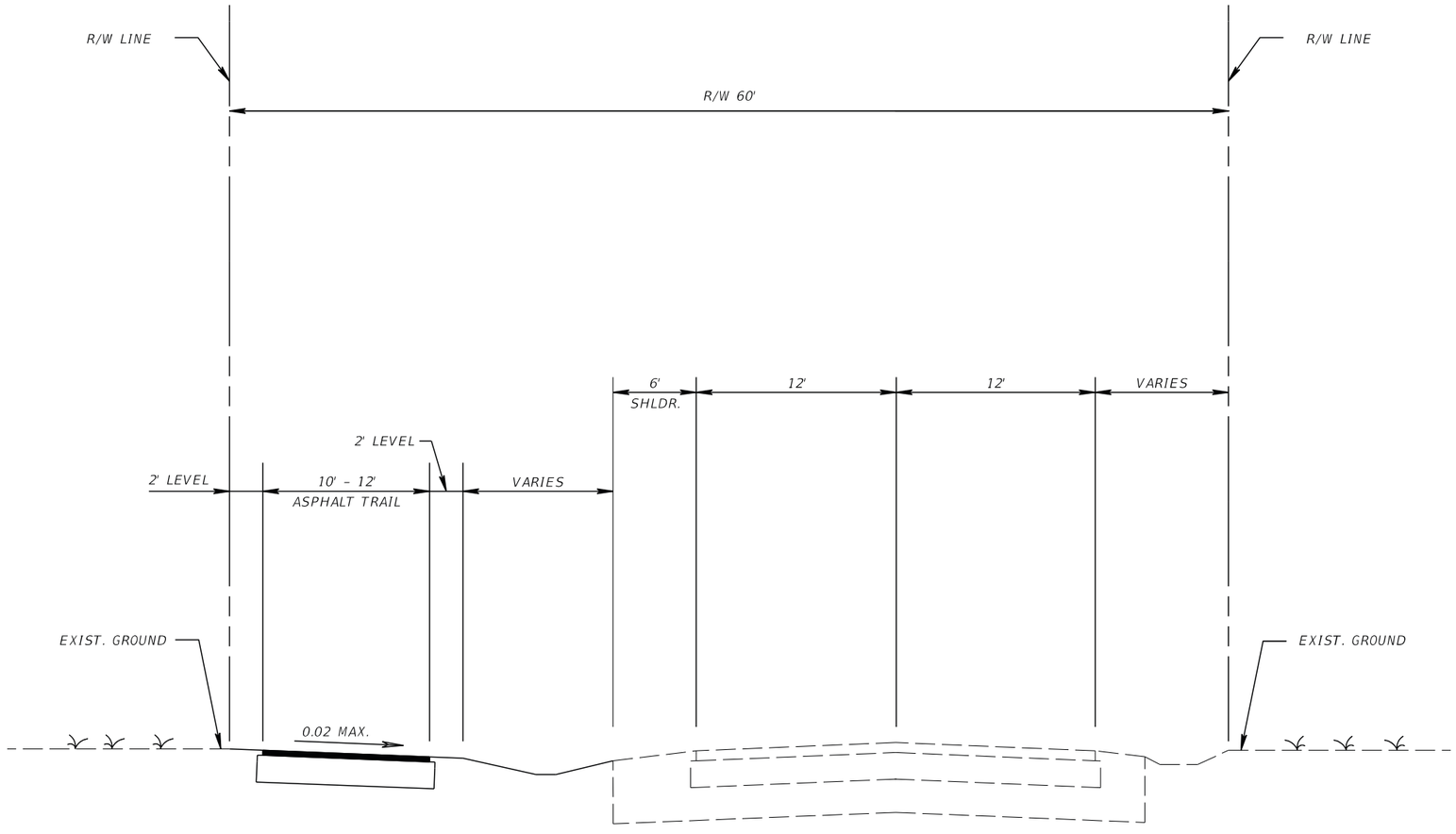


SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Project Breakdown

Segment 1 - St. Johns County - West (SJC-W)

FIGURE 9-1
SHEET 1 OF 21

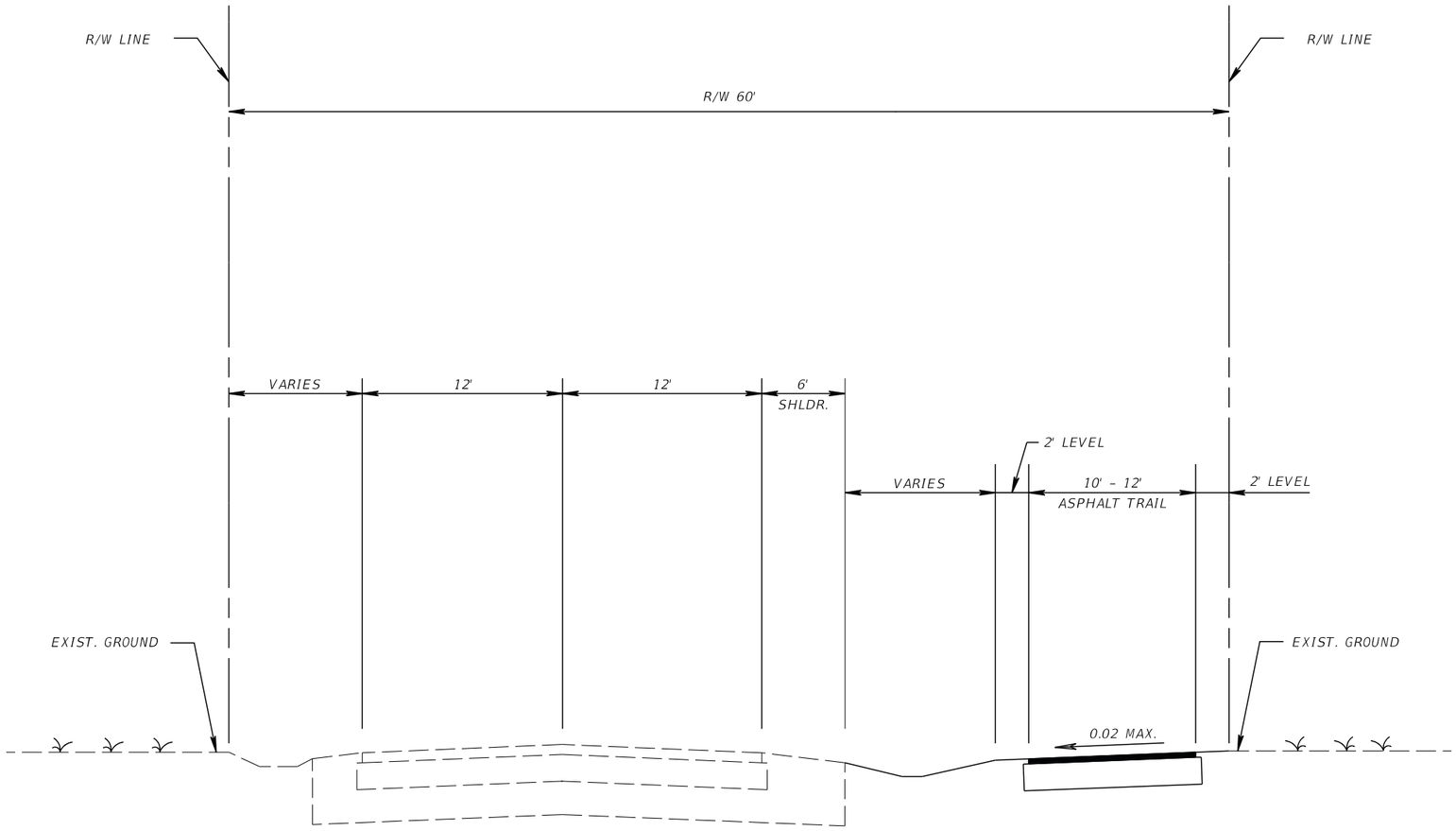


PROJECT #1

ALLEN NEASE RD

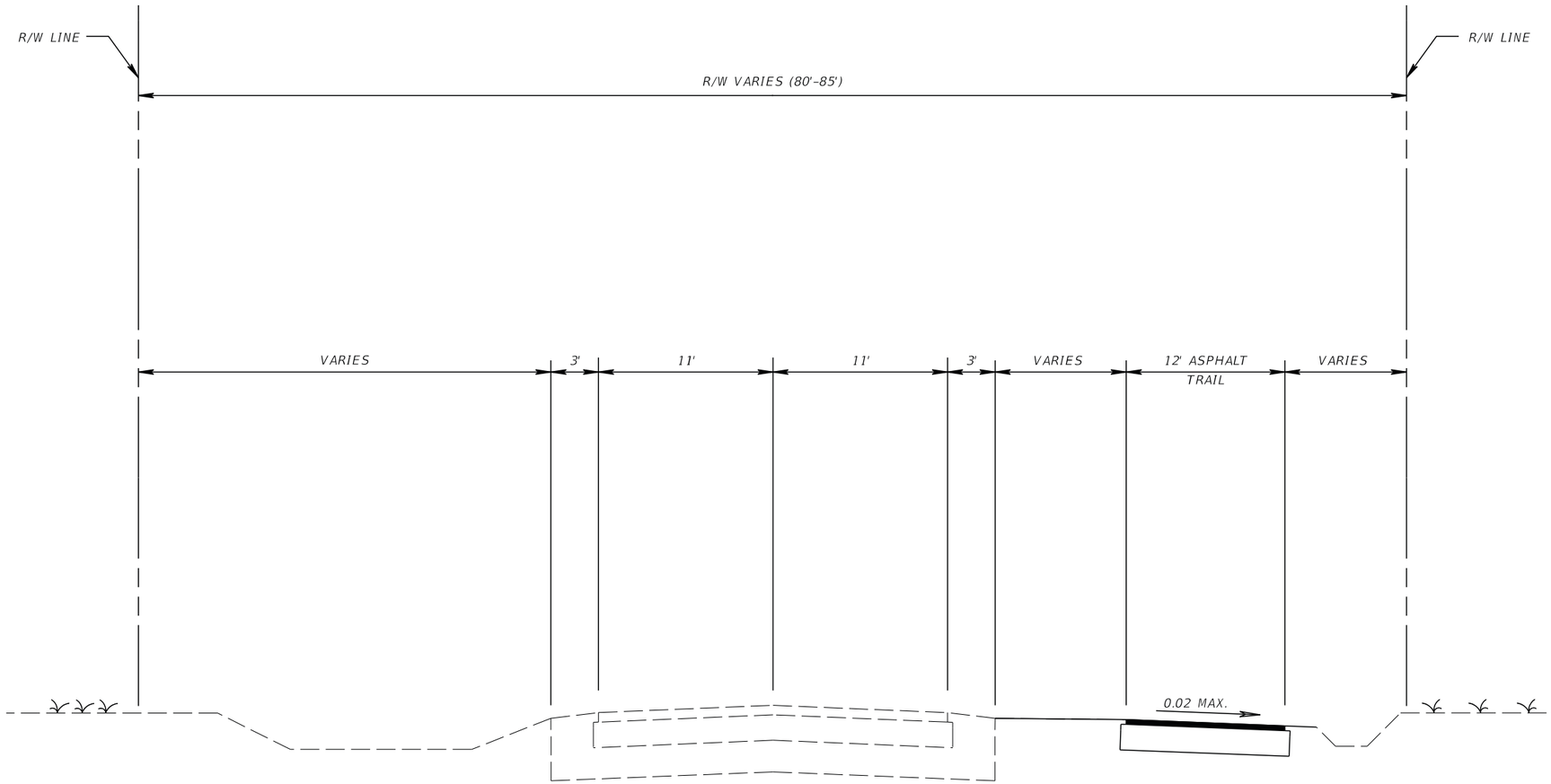
FROM EXISTING TRAIL/VERMONT BLVD

TO SJC SOLID WASTE



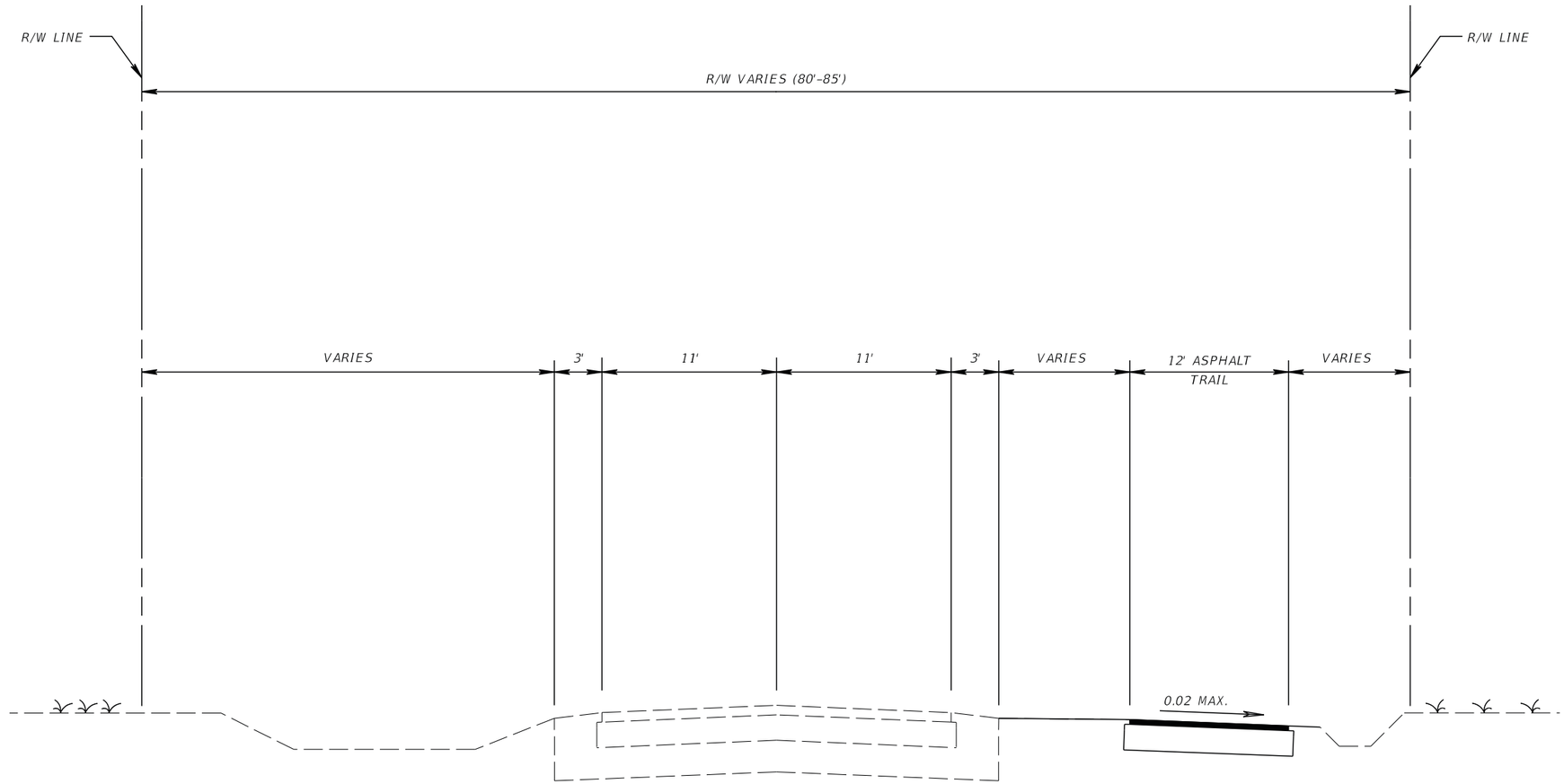
PROJECT #1

ALLEN NEASE RD
FROM SJC SOLID WASTE
TO CR 214



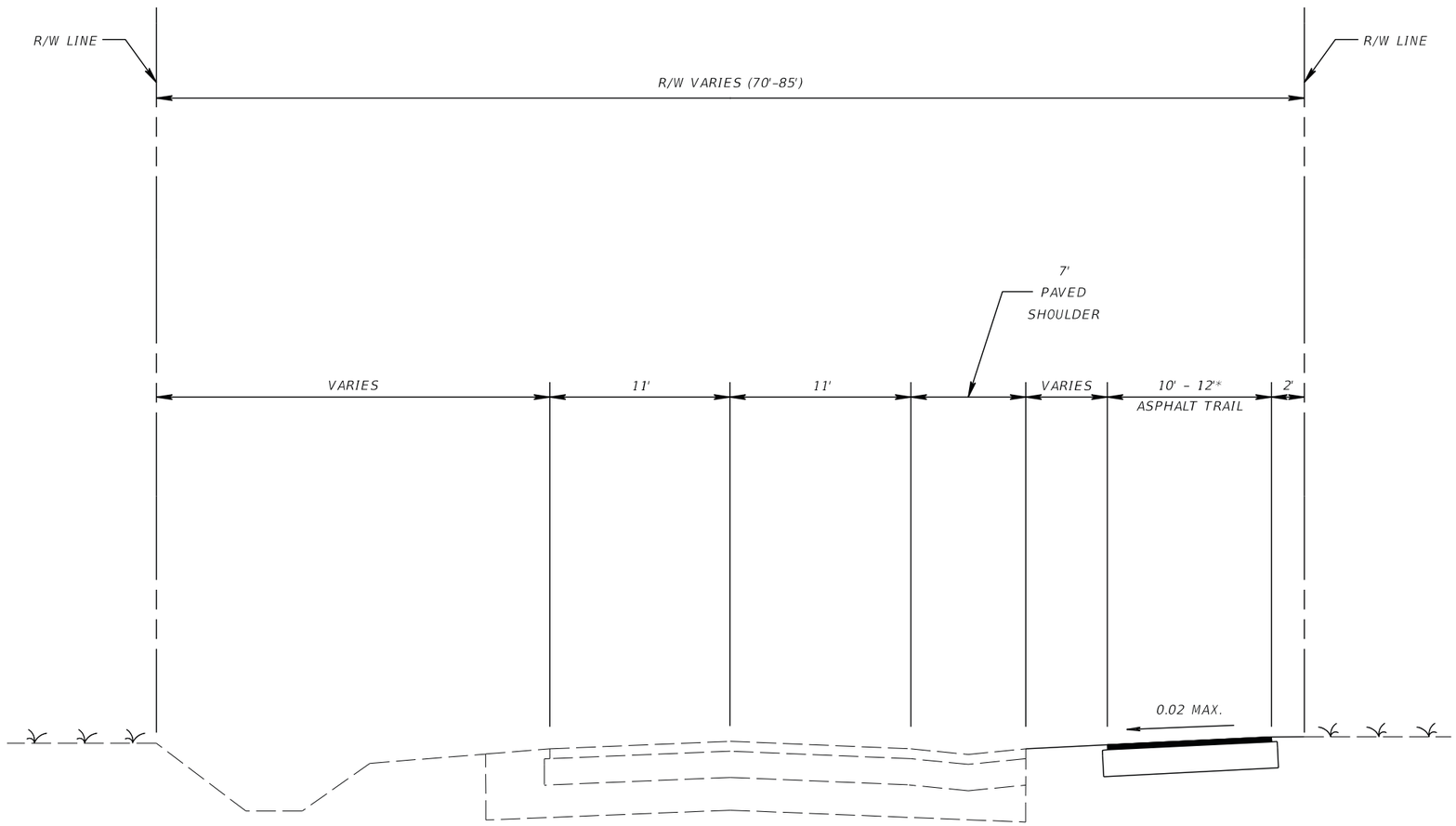
PROJECT #2

CR 214
FROM ALLEN NEASE RD
TO PRAIRIE LAKES DR



PROJECT #3

CR 214
FROM PRAIRIE LAKES DR
TO HOLMES BLVD



PROJECT #4

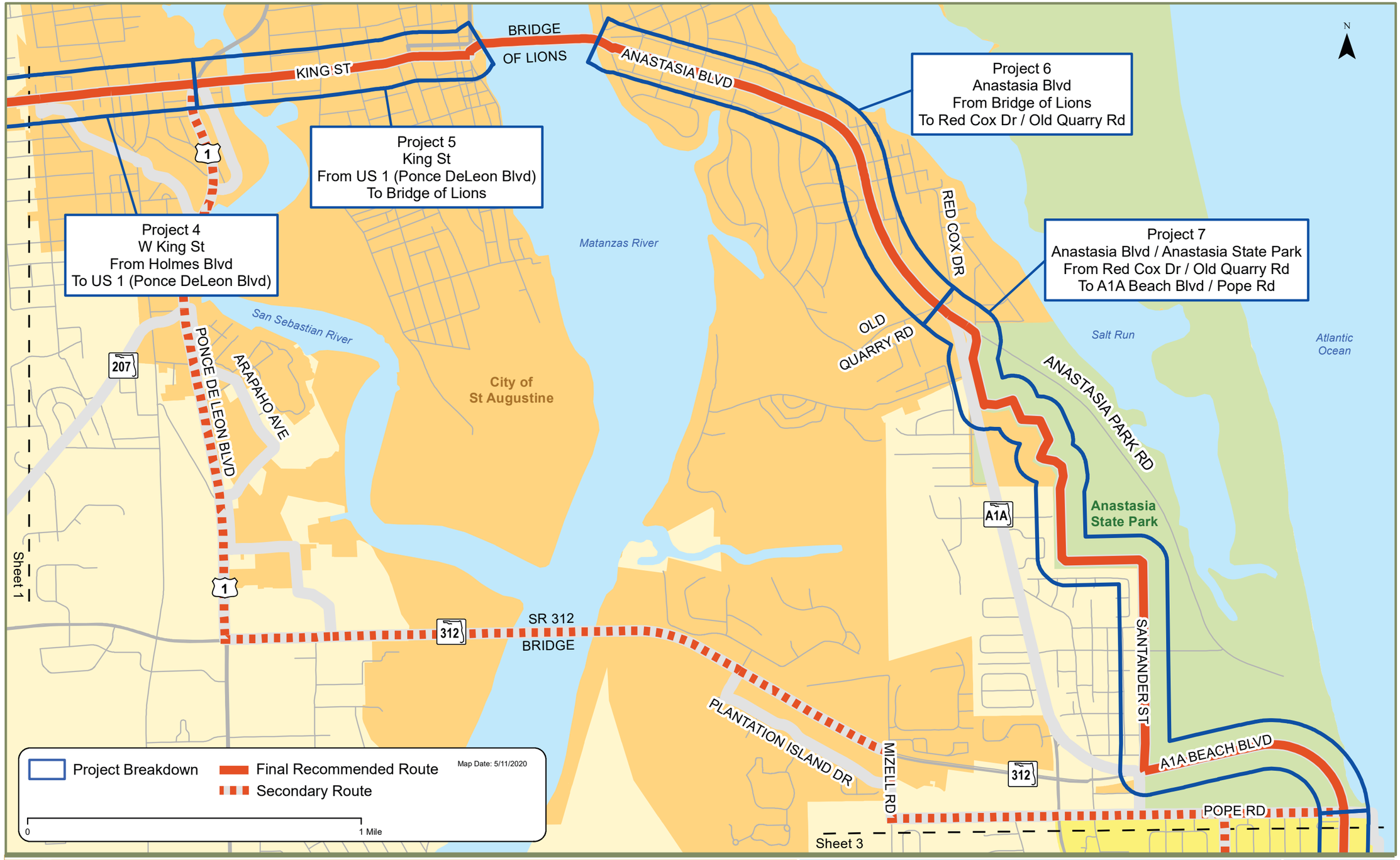
W KING ST

FROM HOLMES BLVD

TO US 1 (PONCE DELEON BLVD)

* FINAL LOCATION & WIDTH WILL BE SUBJECT TO PD&E

* IN LIMITED R/W THE USE OF SHARROWS MAY BE NEEDED

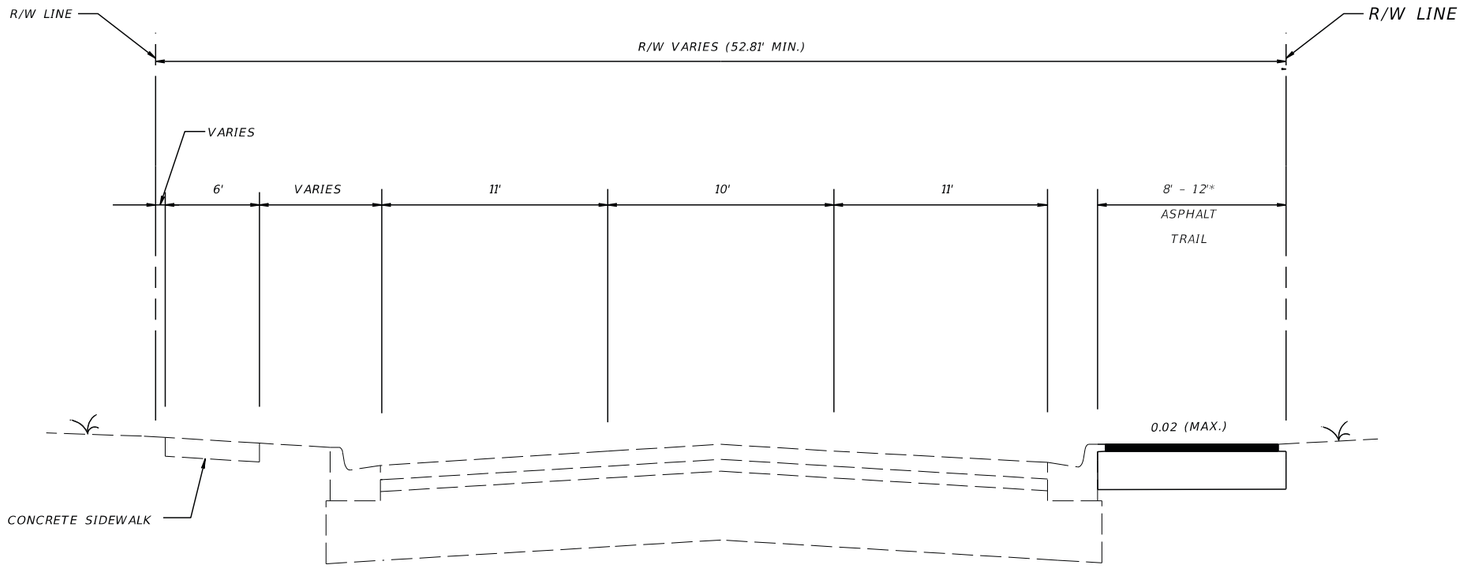


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Project Breakdown

Segment 2 - City of St. Augustine (CoSA)

FIGURE
9-1
SHEET 7 OF 21



PROJECT #5

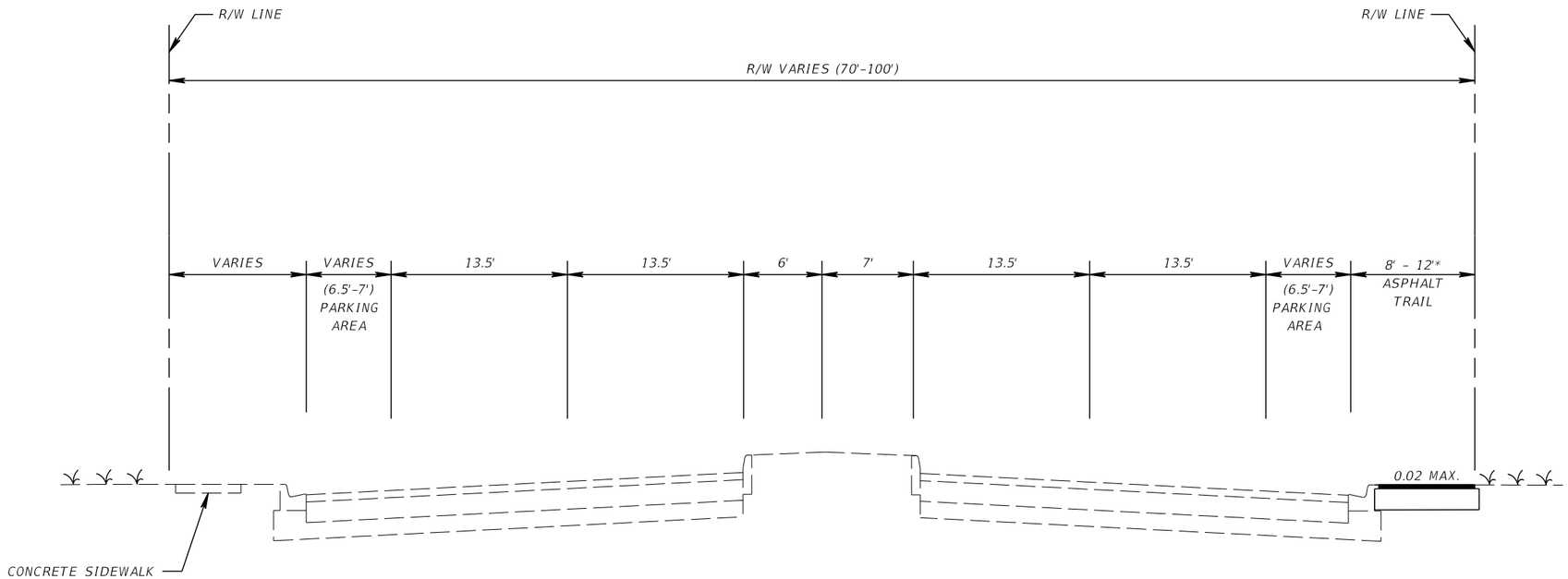
KING STREET

FROM SR 5 (US 1) (PONCE DELEON BLVD)

TO BRIDGE OF LIONS

** FINAL LOCATION & WIDTH WILL BE SUBJECT TO PD&E*

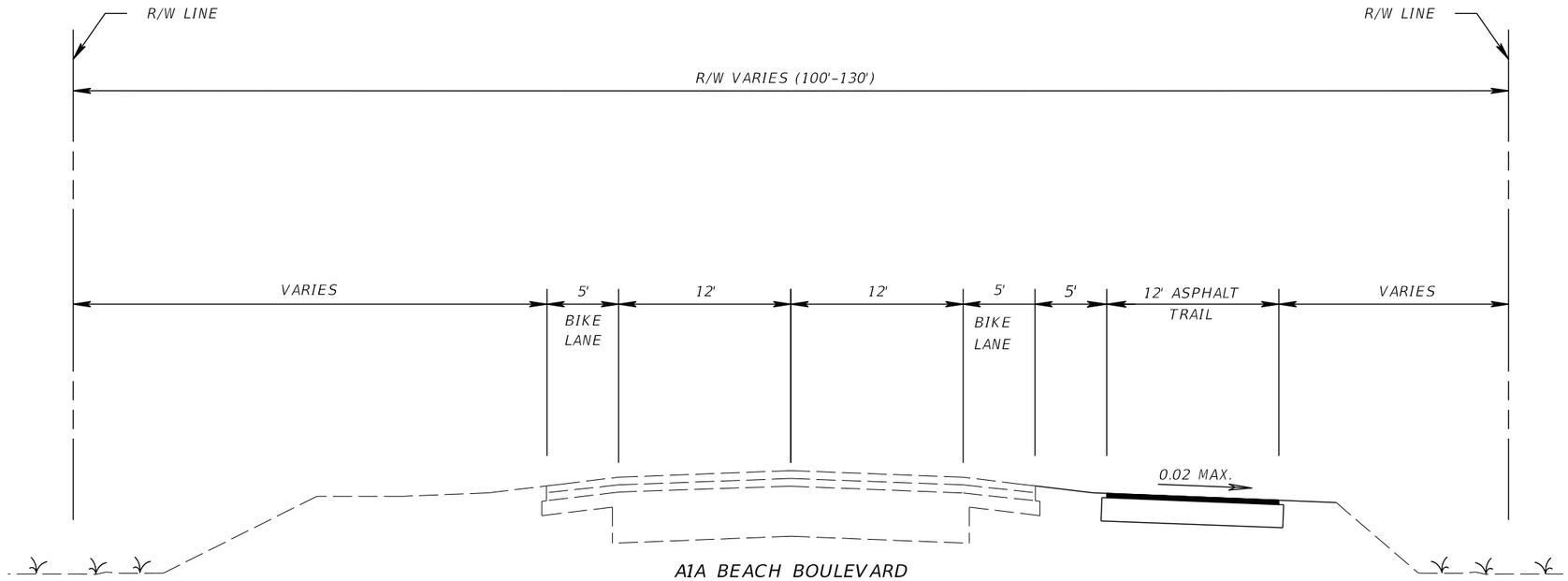
** IN LIMITED R/W THE USE OF SHARROWS MAY BE NEEDED*



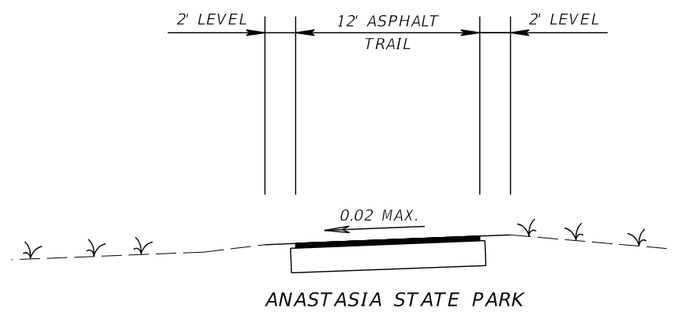
PROJECT #6

ANASTASIA BLVD
FROM BRIDGE OF LIONS
TO RED COX DR / OLD QUARRY RD

** FINAL LOCATION & WIDTH WILL BE SUBJECT TO PD&E*



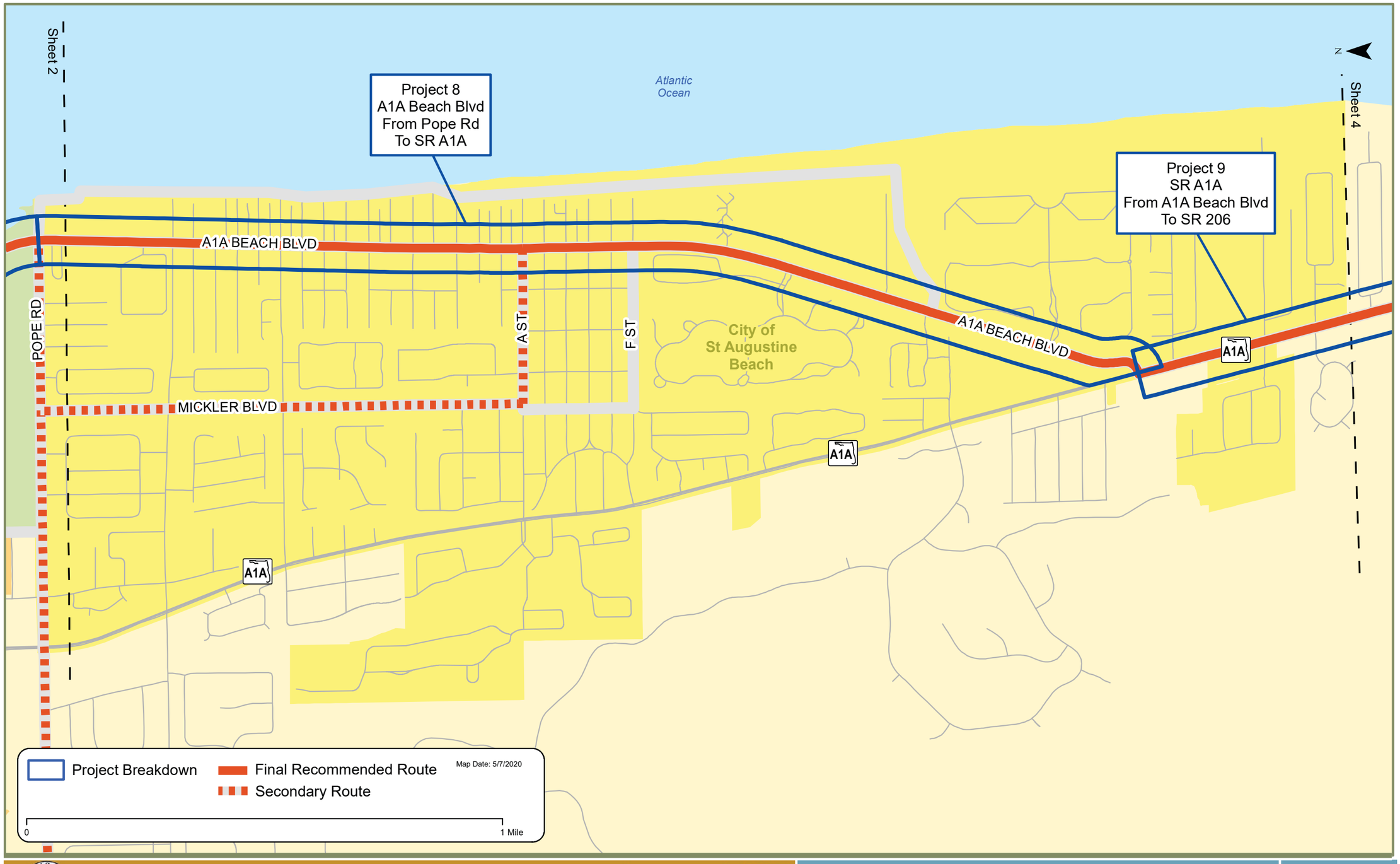
A1A BEACH BOULEVARD



ANASTASIA STATE PARK

PROJECT #7

A1A BEACH BOULEVARD / ANASTASIA STATE PARK
FROM RED COX DR / OLD QUARRY RD
TO POPE RD



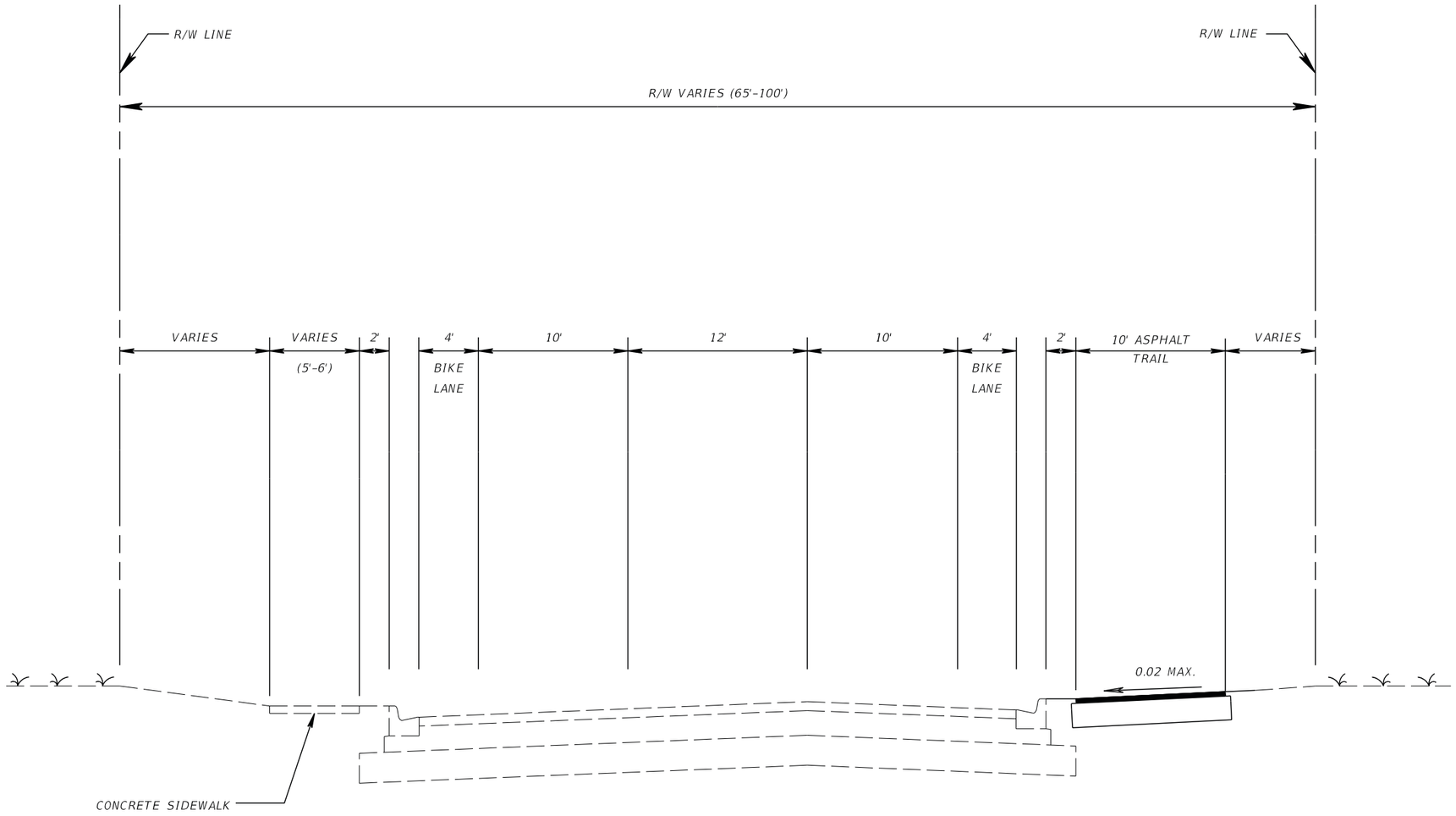
SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Project Breakdown

Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 9-1

SHEET 11 OF 21



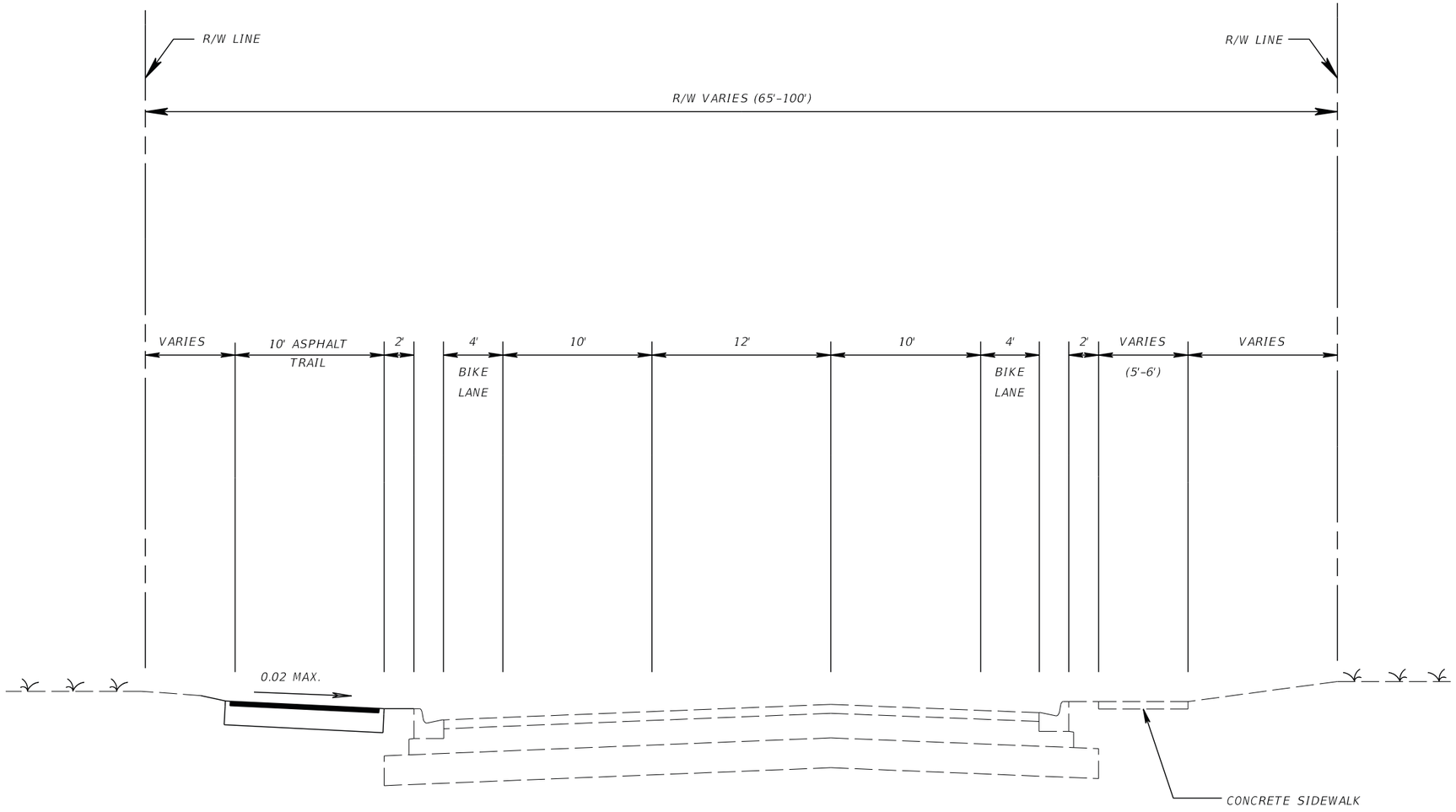
PROJECT #8

A1A BEACH BLVD
FROM POPE RD
TO A ST

SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

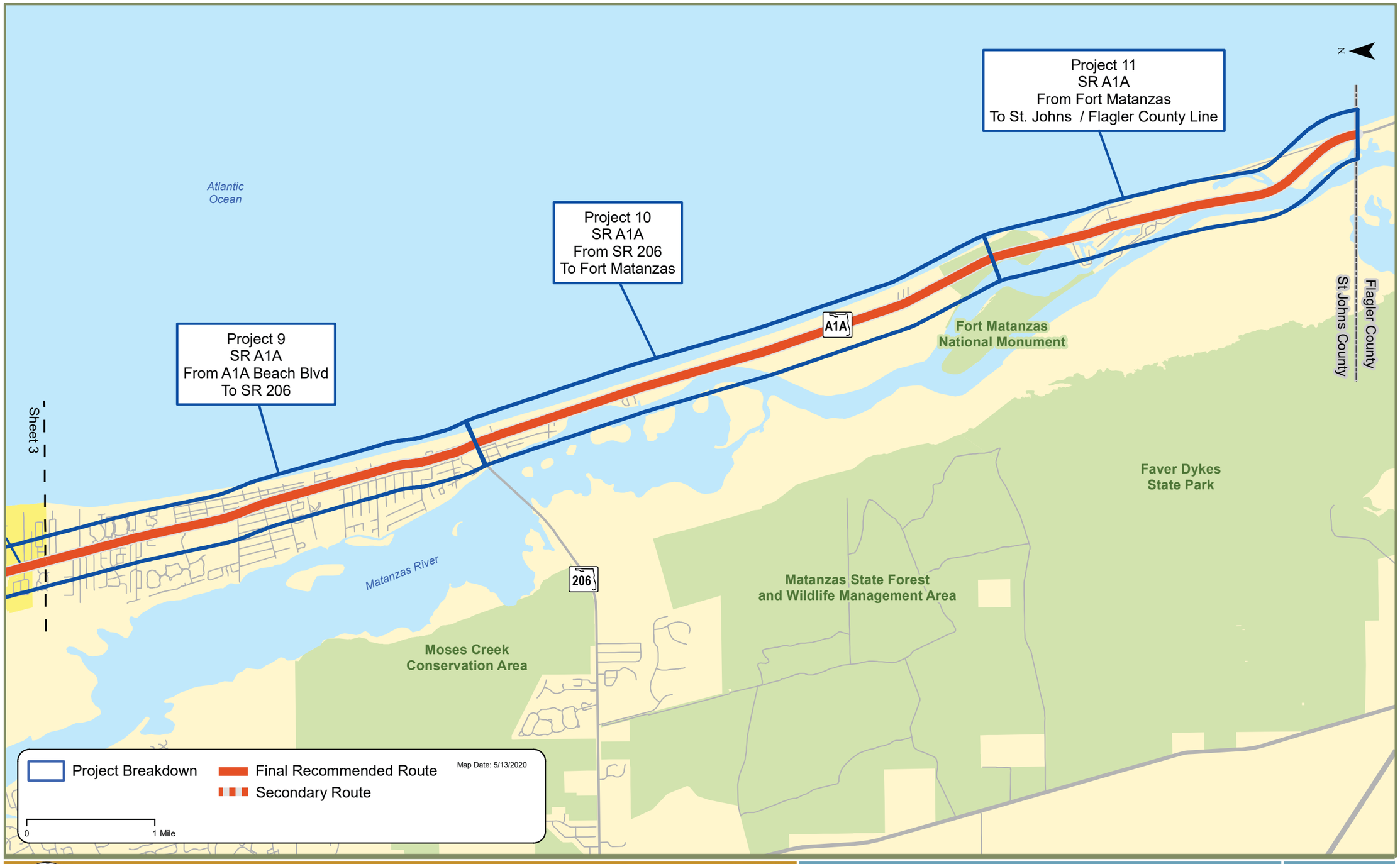
Proposed Typical Section
Segment 3 - City of St. Augustine Beach (CoSAB)

FIGURE 9-1
SHEET 12 OF 21



PROJECT #8

A1A BEACH BLVD
FROM A ST
TO SR A1A

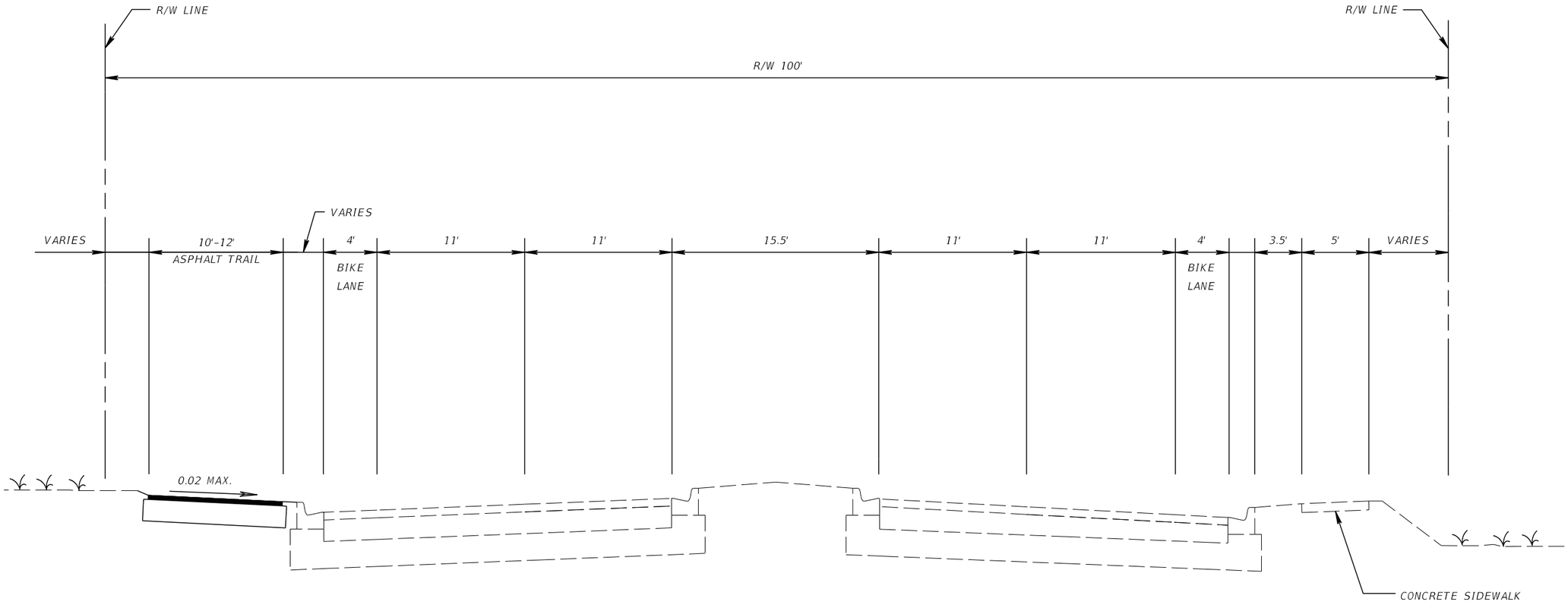


SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Project Breakdown

Segment 4 - St. Johns County - South (SJC-S)

FIGURE
9-1
SHEET 14 OF 21

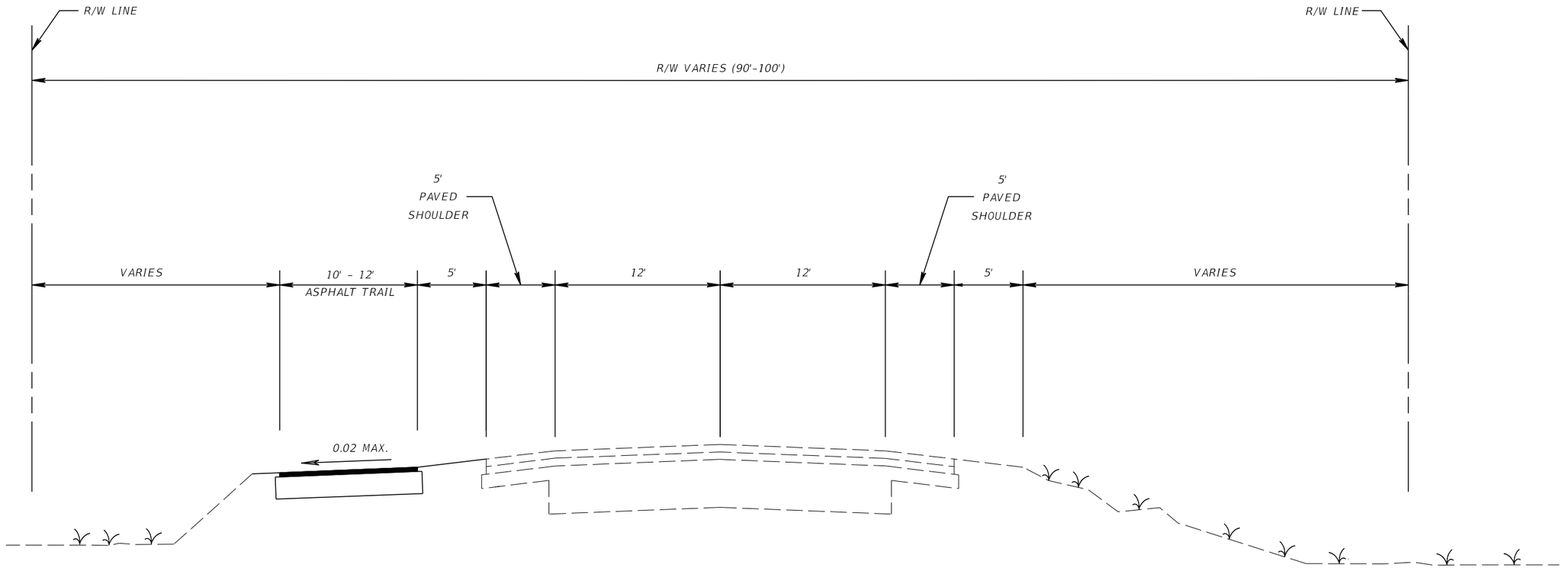


PROJECT #9

SR A1A

FROM A1A BEACH BLVD

TO E MAGNOLIA AVE



PROJECT #9

SR A1A

FROM E MAGNOLIA AVE

TO SR 206

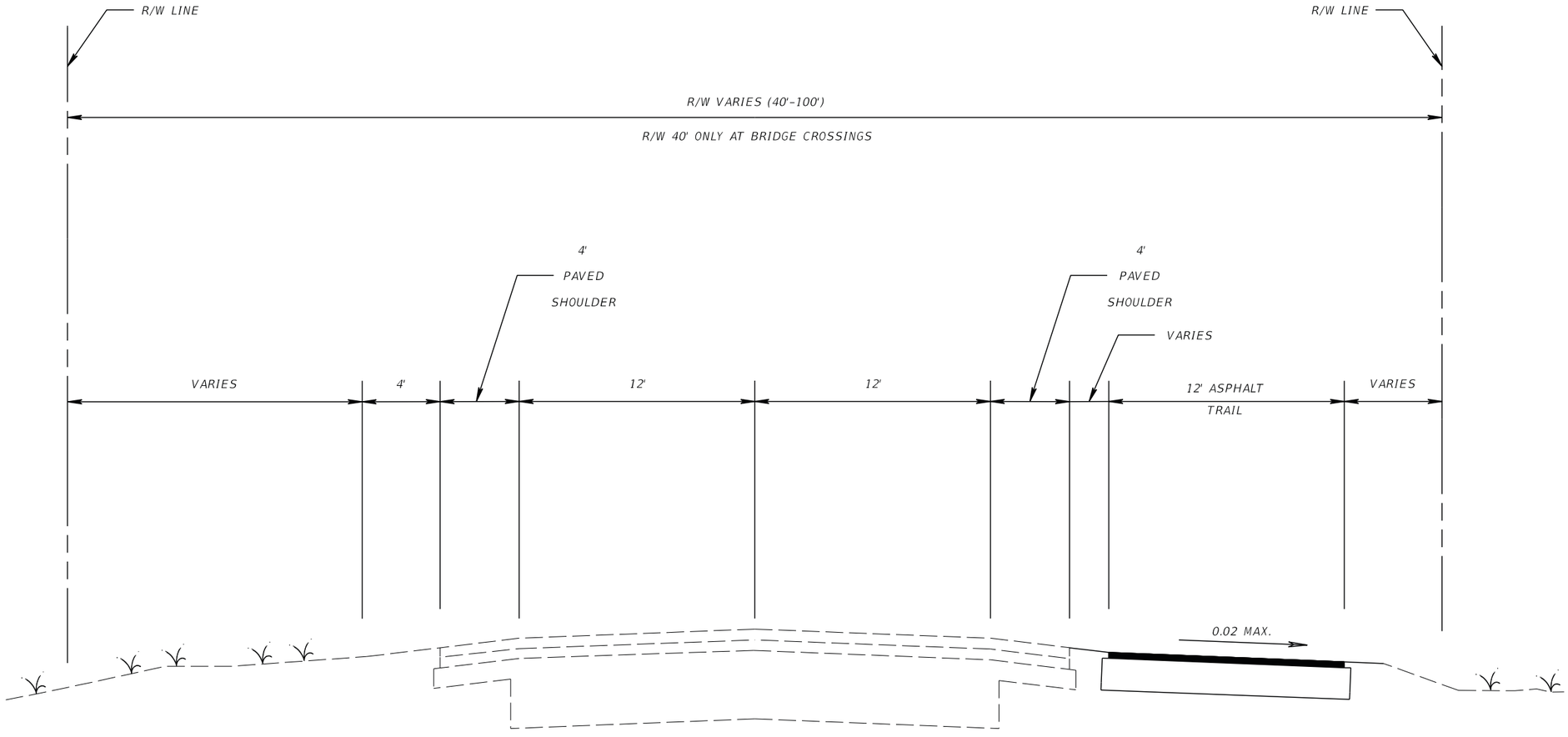
SHARED-USE NONMOTORIZED (SUN) TRAIL –
ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Proposed Typical Section

Segment 4 - St. Johns County - South (SJC-S)

FIGURE 9-1

SHEET 16 OF 21

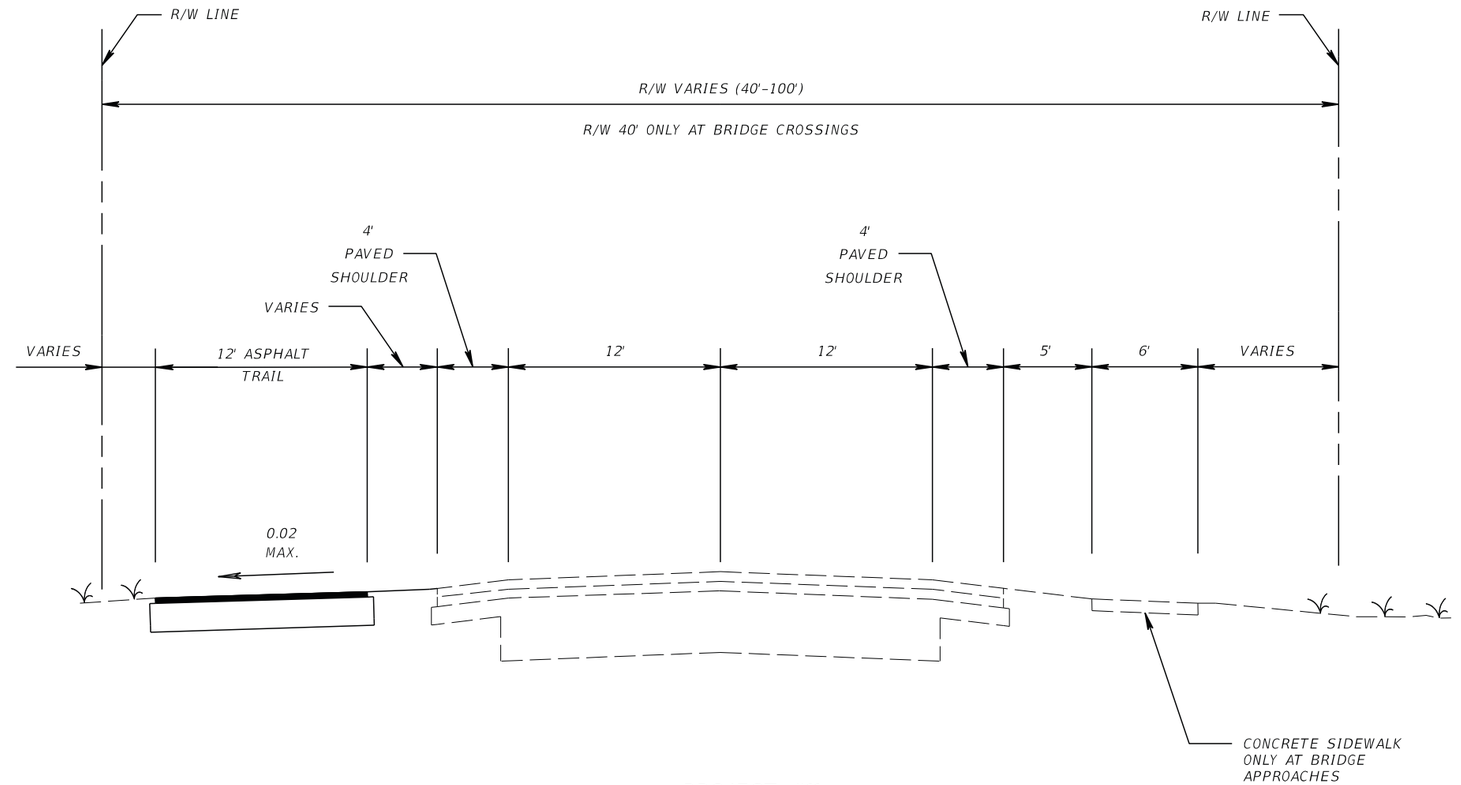


PROJECT #10

SR A1A

FROM SR 206

TO FORT MATANZAS

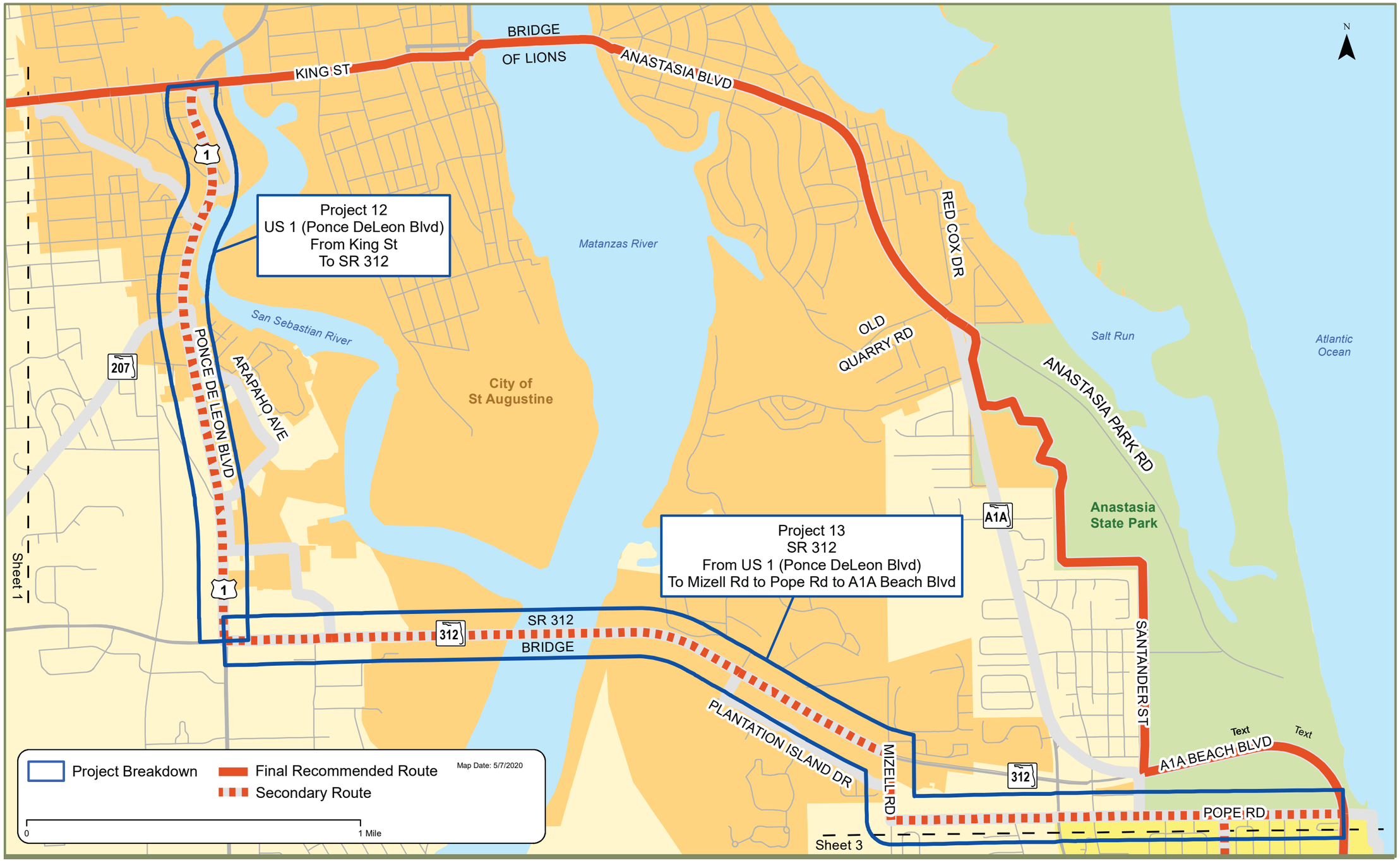


PROJECT #11

SR A1A

FROM FORT MATANZAS

TO ST JOHNS/FLAGLER COUNTY LINE



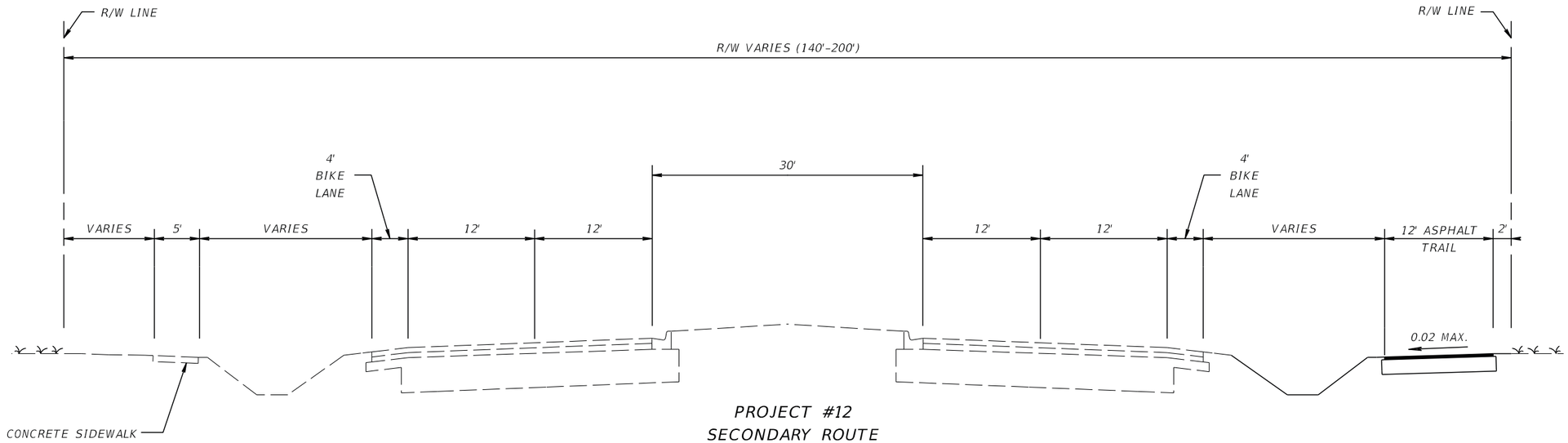
SHARED-USE NONMOTORIZED (SUN) TRAIL – ST. JOHNS RIVER-TO-SEA LOOP PLANNING STUDY

Project Breakdown

Segment 2 - City of St. Augustine (CoSA)

FIGURE 9-1

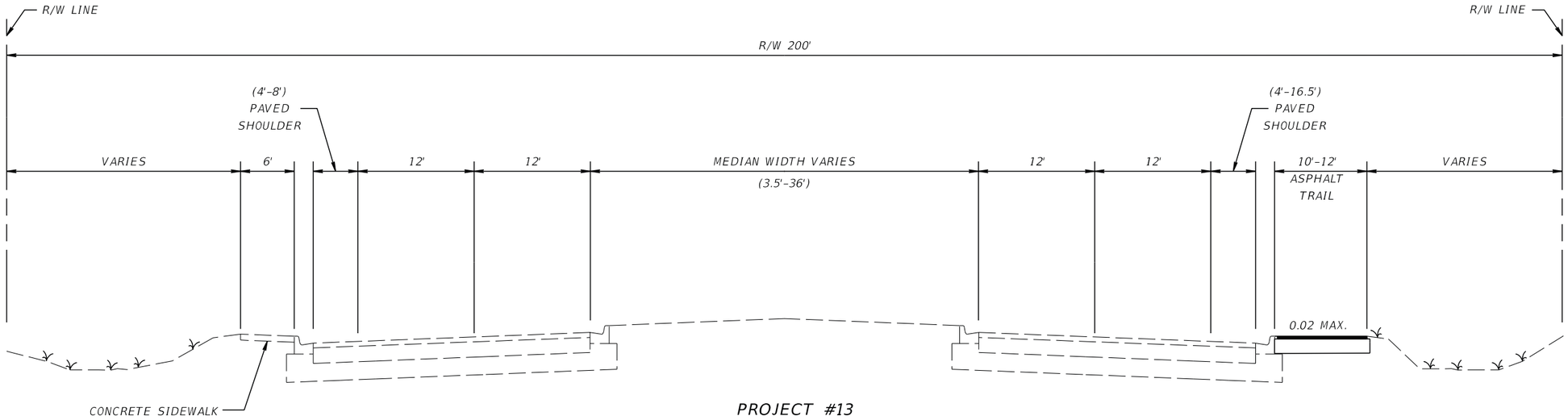
SHEET 19 OF 21



PROJECT #12
SECONDARY ROUTE

SR 5 (US 1) (PONCE DELEON BLVD)
FROM KING ST
TO SR 312

* FINAL LOCATION & WIDTH WILL BE SUBJECT TO PD&E



PROJECT #13
SECONDARY ROUTE

SR 312
FROM SR 5 (US 1) (PONCE DELEON BLVD)
TO SR A1A/ A1A BEACH BLVD

* FINAL LOCATION & WIDTH WILL BE SUBJECT TO PD&E

9.2 Cost Estimates

A reasonable estimate of respective project capital costs is required before adoption in FDOT's Five Year Work Program as well as other potential funding sources. Projects below will require either a PD&E Study phase or a PE phase before construction. Projects that require a PD&E Study is primarily due to significant roadway modifications necessary to accommodate a new shared-use path, required coordination with other ongoing studies, or known planned improvements that may impact feasibility. Projects that require a PD&E phase will also need a subsequent PE phase to complete the design for construction. Anticipated maintenance costs for completed trail segments are also important to identify for future consideration by the respective jurisdictional agencies. Both capital and maintenance estimated costs are provided in this section.

Capital Costs

Estimated capital costs for proposed projects presented in **Section 9.1** are summarized in the table below, including PD&E Study, PE, Construction, and Construction Engineering and Inspection (CEI) costs, as applicable. PD&E Study costs are based on previous similar project experience. Construction cost estimates are based on the FDOT Basis of Estimates Manual and FDOT historical cost information for the specific area and statewide averages and are current as of May 2020. In addition, new and / or existing bridge modification costs were developed and are provided in **Appendix E**. Itemization of construction cost typical pay items for the proposed projects, as applicable, are included in this section.

Table 9-1 – Estimated Project Capital Costs Summary

	Project	Description	PD&E Study	PE	Construction	CEI
Final Recommended Route	1	Allen Nease Road (SJC-W) From Existing Trail / Vermont Boulevard to CR 214	N/A	$440,453	$2,202,264	$330,340
	2	CR 214 (SJC-W) From Allen Nease Road to Prairie Lakes Drive	N/A	$787,811	$3,939,056	$590,858
	3	CR 214 (SJC-W) From Prairie Lakes Drive to Holmes Boulevard	N/A	$440,593	$2,202,965	$330,445
	4	West King Street (SJC-W / CoSA) From Holmes Boulevard to US 1 (Ponce DeLeon Boulevard)	$250,000	$200,000	$2,850,000	$185,000
	5	King Street (CoSA) From US 1 (Ponce DeLeon Boulevard) to Bridge of Lions	$475,000	$250,000	$2,000,000	$300,000
	6	Anastasia Boulevard (CoSA) From Bridge of Lions to Red Cox Drive / Old Quarry Road	$350,000	$300,000	$7,450,000	$650,000
Final Recommended Route	7	Anastasia Boulevard / Anastasia State Park (CoSA / FDEP) From Red Cox Drive / Old Quarry Road to A1A Beach Boulevard / Pope Road	N/A	$239,773	$1,198,865	$179,830
	8	A1A Beach Boulevard (CoSAB) From Pope Road to SR A1A	N/A	$224,494	$1,122,472	$168,371
	9	SR A1A (CoSAB / SJC-S) From A1A Beach Boulevard to SR 206	N/A	$581,863	$2,909,315	$436,397
	10	SR A1A (SJC-S) From SR 206 to Fort Matanzas	N/A	$998,310	$4,991,552	$748,733
	11	SR A1A (SJC-S) From Fort Matanzas to St. Johns / Flagler County Line	N/A	$972,531	$4,862,653	$729,398
Secondary Route	12	US 1 (Ponce DeLeon Boulevard) (CoSA / SJC) From King Street to SR 312	$175,000	$175,000	$2,500,000	$250,000
	13	SR 312 (SJC / CoSA / SJC) From US 1 (Ponce DeLeon Boulevard) to Mizell Road to Pope Road to A1A Beach Boulevard	$225,000	$200,000	$5,250,000	$300,000

Project costs were developed using the following criteria:

- Projects must follow appropriate design criteria and meet ADA requirements
- Use the following links to access the basis of estimates manual and historical cost information for the project area:

Basis of Estimates Manual:

www.fdot.gov/programmanagement/Estimates/BasisofEstimates/BOEManual/BOEOnline.shtm

Historical Cost Information:

www.fdot.gov/programmanagement/Estimates/HistoricalCostInformation/HistoricalCost.shtm

Maintenance Costs

Estimated maintenance costs for proposed projects presented in **Section 9.1** are summarized in the table below. These costs were derived in consultation with SJC and available other sources deemed applicable by each jurisdictional maintaining agency that will have ultimate responsibility. Annual maintenance costs are anticipated to include the following ongoing activities:

- Mowing and edging
- Surface clearing of trail
- Litter / trash removal
- Vegetation management

The following activities are anticipated on an as-needed basis:

- Repair / replacement of signage, benches, trash cans
- Enhancements of trail
- Fencing / gates to prevent access of motorized vehicles

The following activities are anticipated on a 10- to 20-year cycle and are not included in the costs presented in this report:

- Major trail repair / relocation
- Trail resurfacing / replacement

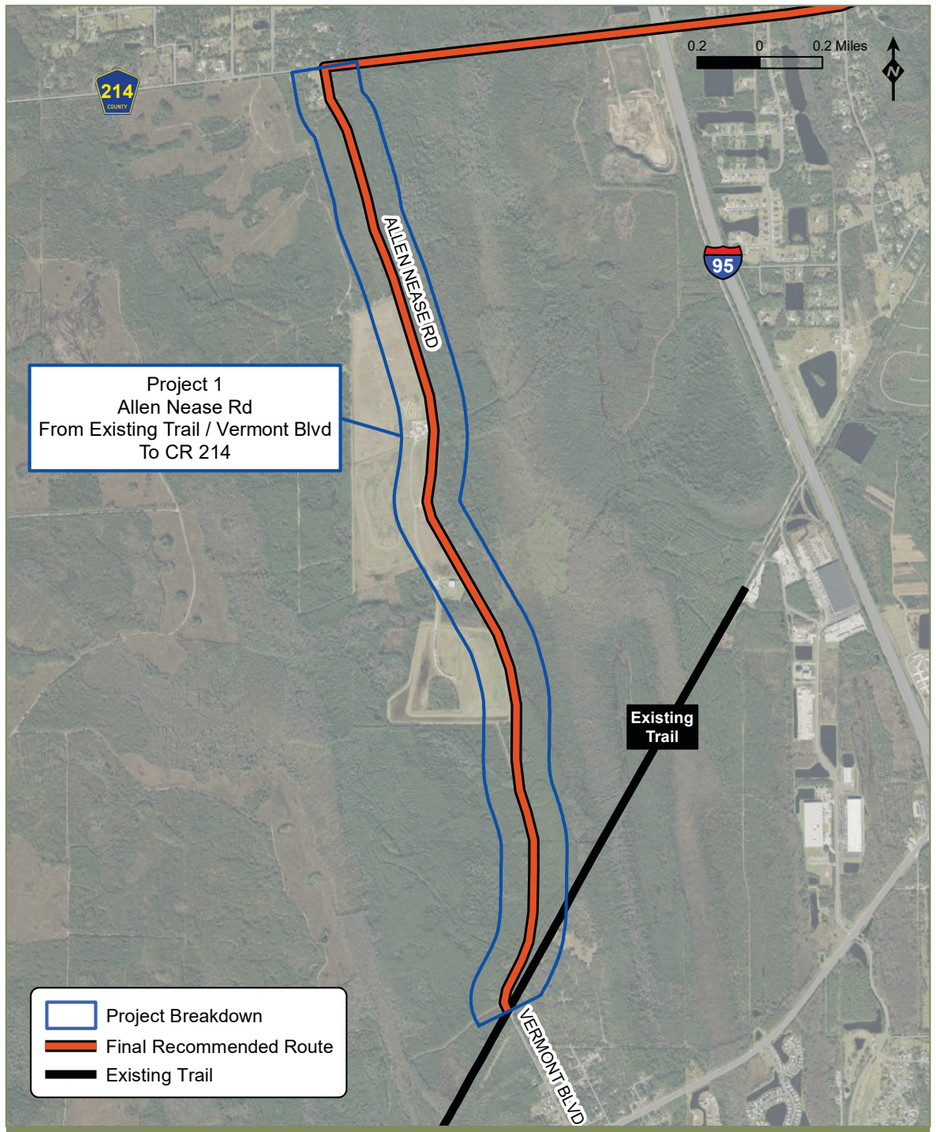
Table 9-2 – Estimated Annual Maintenance Costs Summary

	Project	Description	Project Length (Miles)	Project Classification	Est. Annual Maintenance Costs
Final Recommended Route	1	Allen Nease Road (SJC-W) From Existing Trail / Vermont Boulevard to CR 214	3.64	Rural	$3,640
	2	CR 214 (SJC-W) From Allen Nease Road to Prairie Lakes Drive	1.40	Rural	$1,400
	3	CR 214 (SJC-W) From Prairie Lakes Drive to Holmes Boulevard	2.85	Rural	$2,850
	4	West King Street (SJC-W / CoSA) From Holmes Boulevard to US 1 (Ponce DeLeon Boulevard)	1.25	Mixed	$3,750
	5	King Street (CoSA) From US 1 (Ponce DeLeon Boulevard) to Bridge of Lions	1.40	Urban	$5,600
	6	Anastasia Boulevard (CoSA) From Bridge of Lions to Red Cox Drive / Old Quarry Road	1.40	Urban	$5,600
Final Recommended Route	7	Anastasia Boulevard / Anastasia State Park (CoSA / FDEP) From Red Cox Drive / Old Quarry Road to A1A Beach Boulevard / Pope Road	2.40	Mixed	$7,200
	8	A1A Beach Boulevard (CoSAB) From Pope Road to SR A1A	2.00	Urban	$8,000
	9	SR A1A (CoSAB / SJC-S) From A1A Beach Boulevard to SR 206	3.80	Mixed	$11,400
	10	SR A1A (SJC-S) From SR 206 to Fort Matanzas	4.70	Rural	$4,700
	11	SR A1A (SJC-S) From Fort Matanzas to St. Johns / Flagler County Line	3.50	Rural	$3,500
Secondary Route	12	US 1 (Ponce DeLeon Boulevard) (CoSA / SJC) From King Street to SR 312	1.70	Urban	$6,800
	13	SR 312 (SJC / CoSA / SJC) From US 1 (Ponce DeLeon Boulevard) to Mizell Road to Pope Road to A1A Beach Boulevard	2.75	Urban	$11,000

Annual Maintenance Cost based on the following criteria/sources for Planning Study purposes:

Rural: $1,000.00 / Mile *
Mixed: $3,000.00 / Mile *
Urban: $4,000.00 / Mile *

* 1. St. Johns County Estimated Trail Maintenance Costs (Compiled by VRUM Planning) – October 2019
* 2. FDEP SR 207/SJR2C Loop Historical Costs (Compiled by VRUM Planning) – October 2019
* 3. Maintenance Practices and Costs of Rail-Trails (Rails-to-Trails Conservancy) – June 2015
* 4. St. Johns County Greenway, Blueway & Trails Master Plan – November 2003

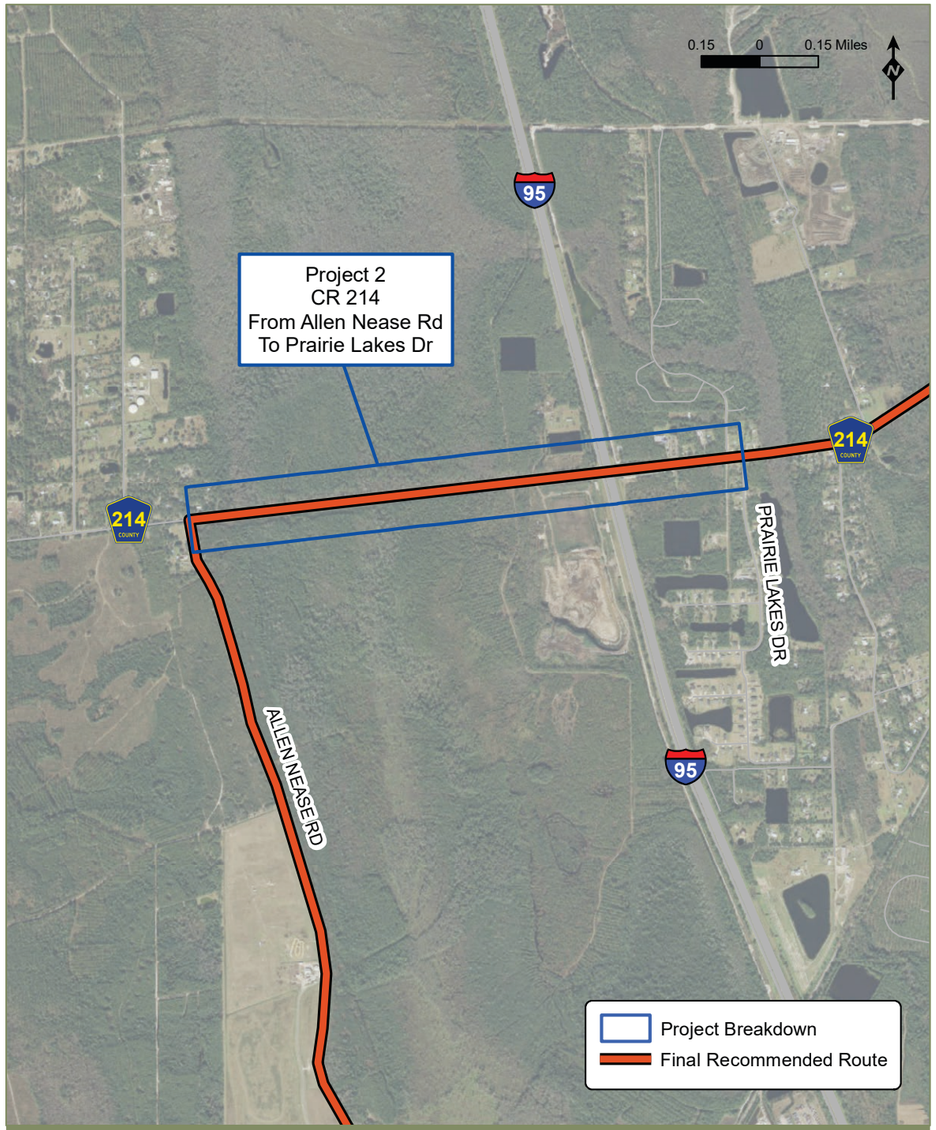


Project Breakdown
Project 1

FIGURE 9-2

OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE
PROJECT 1
ALLEN NEASE ROAD FROM EXISTING TRAIL / VERMONT BOULEVARD TO CR 214

Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
101-1	Mobilization	1	LS	$208,439.00	$208,439.00
102-1	Maintenance of Traffic	1	LS	$166,751.00	$166,751.00
104-10-3	Sediment Barrier	16,995	LF	$2.00	$33,990.00
110-1-1	Clearing & Grubbing	5.345	AC	$17,285.00	$92,388.33
120-1	Regular Excavation	3,080	CY	$8.75	$26,950.00
120-6	Embankment	33,880	CY	$11.00	$372,680.00
160-4	Type B Stabilization	25,872	SY	$8.75	$226,380.00
285-701	Optional Base, Base Group 01	19,712	SY	$13.80	$272,025.60
334-1-12	Superpave Asphaltic Conc, Traffic B	1,525	TN	$191.50	$292,037.50
400-0-11	Conc Class NS, Gravity Wall	650	CY	$875.50	$569,075.00
400-1-2	Conc Class I, Endwalls	15	CY	$1,724.50	$25,867.50
430-175-124	Pipe Culv, Opt Matl, Round 24" S/CD	80	LF	$105.00	$8,400.00
430-175-148	Pipe Culv, Opt Matl, Round 48" S/CD	60	LF	$303.00	$18,180.00
515-2-211	Ped/Bicycle Railing, Stl, 42" Type 1	1,000	LF	$100.00	$100,000.00
522-2	Concrete Sidewalk and Driveways, 6" Thick	5	SY	$66.00	$330.00
527-2	Detectable Warnings	40	SF	$32.20	$1,288.00
570-1-2	Performance Turf, Sod	12,936	SY	$3.00	$38,808.00
700-1-12	Single Post Sign, F&I Ground Mount, Up to 12-20 SF	4	EA	$1,151.00	$4,604.00
700-1-50	Single Post Sign, Relocate	4	EA	$225.00	$900.00
711-11-123	Thermoplastic, Standard, White, Solid, 12" for Crosswalk and Roundabout	48	LF	$3.00	$144.00
711-11-125	Thermoplastic, Standard, White, Solid 24" for Stop Line and Crosswalk	70	LF	$4.85	$339.50
999-25	Initial Contingency Amount	1	LS	$104,219.00	$104,219.00
Total Cost Estimate					**$2,563,796.43**

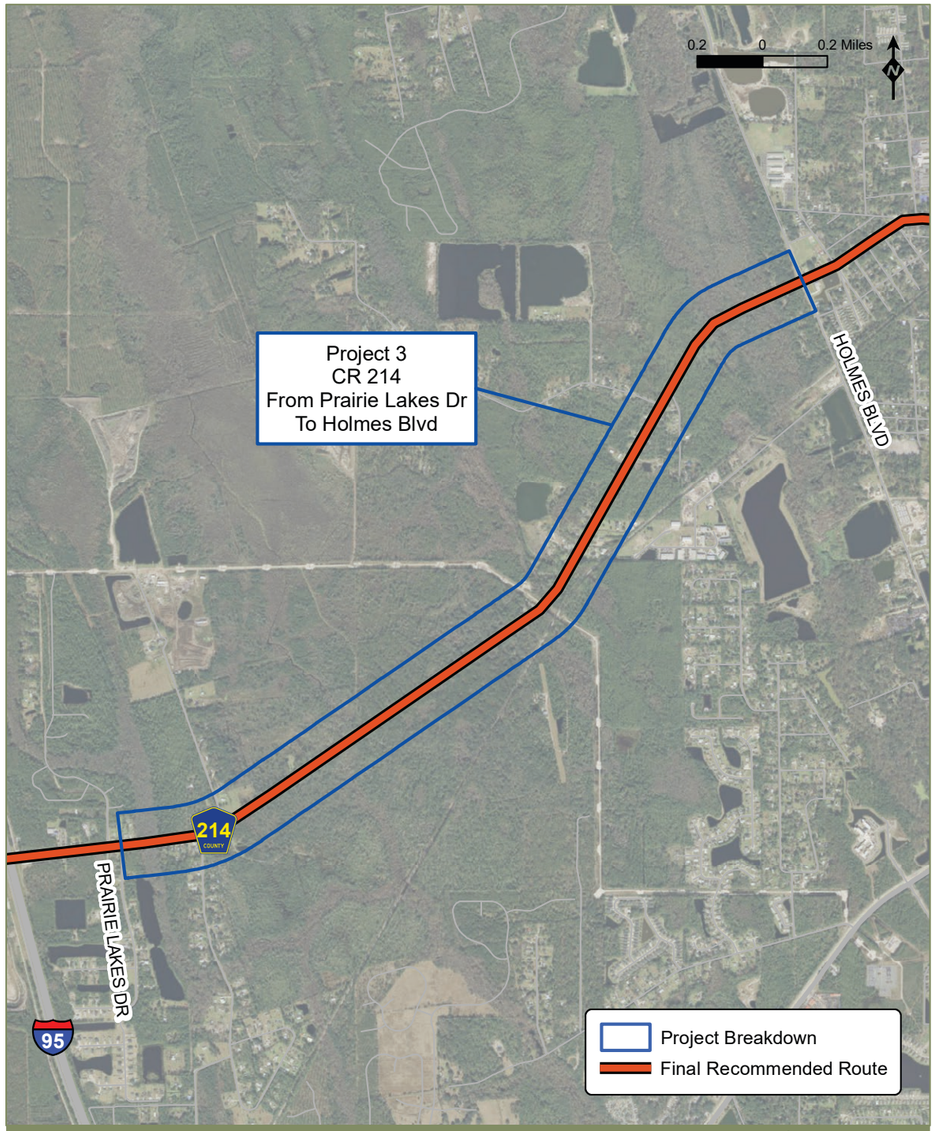


Project Breakdown
Project 2

FIGURE 9-2

OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE
PROJECT 2
CR 214 FROM ALLEN NEASE ROAD TO PRAIRIE LAKES DRIVE

Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
101-1	Mobilization	1	LS	$358,190.00	$358,190.00
102-1	Maintenance of Traffic	1	LS	$358,190.00	$358,190.00
104-10-3	Sediment Barrier	10,000	LF	$2.00	$20,000.00
110-1-1	Clearing & Grubbing	2.351	AC	$17,285.00	$40,637.04
120-1	Regular Excavation	1,575	CY	$8.75	$13,781.25
120-6	Embankment	34,990	CY	$11.00	$384,890.00
160-4	Type B Stabilization	13,329	SY	$8.75	$116,628.75
285-701	Optional Base, Base Group 01	10,552	SY	$13.80	$145,617.60
334-1-12	Superpave Asphaltic Conc, Traffic B	825	TN	$191.50	$157,987.50
400-0-11	Conc Class NS, Gravity Wall	130	CY	$875.50	$113,815.00
400-1-2	Conc Class I, Endwalls	20	CY	$1,724.50	$34,490.00
400-4-5	Conc Class IV, Substructure	53.6	CY	$1,277.25	$68,460.60
400-4-25	Conc Class IV, Mass, Substructure	145.1	CY	$1,000.00	$145,100.00
415-1-5	Reinf Steel- Substructure	22,079	LB	$1.50	$33,118.50
425-1-521	Inlets, Dt Bot, Type C, <10'	2	EA	$3,556.00	$7,112.00
430-174-124	Pipe Culv, Opt Matl, Round 24" SD	120	LF	$176.25	$21,150.00
430-175-118	Pipe Culv, Opt Matl, Round 18" S/CD	24	LF	$94.50	$2,268.00
430-175-124	Pipe Culv, Opt Matl, Round 24" S/CD	48	LF	$105.00	$5,040.00
430-175-148	Pipe Culv, Opt Matl, Round 48" S/CD	60	LF	$303.00	$18,180.00
430-984-129	Mitered End Sect, Optional Rd, 24" SD	2	EA	$1,605.00	$3,210.00
455-34-5	Prestressed Concrete Piling, 24" SQ	983	LF	$150.00	$147,450.00
455-143-5	Test Piles - Prestressed Concrete, 24" SQ	195	LF	$251.10	$48,964.50
460-7	Prefabricated Steel Ped Bridge	5,660	SF	$174.00	$984,840.00
515-2-211	Ped/Bicycle Railing, Stl, 42" Type 1	1,600	LF	$100.00	$160,000.00
522-2	Concrete Sidewalk and Driveways, 6" Thick	3	SY	$66.00	$198.00
527-2	Detectable Warnings	24	SF	$32.20	$772.80
548-12	Ret Wall System, Perm, Ex Barrier	25,379	SF	$34.85	$884,458.15
570-1-2	Performance Turf, Sod	6,300	SY	$3.00	$18,900.00
700-1-12	Single Post Sign, F&I Ground Mount, Up to 12-20 SF	3	EA	$1,151.00	$3,453.00
700-1-50	Single Post Sign, Relocate	6	EA	$225.00	$1,350.00
999-25	Initial Contingency Amount	1	LS	$179,094.00	$179,094.00
Total Cost Estimate					**$4,477,346.69**

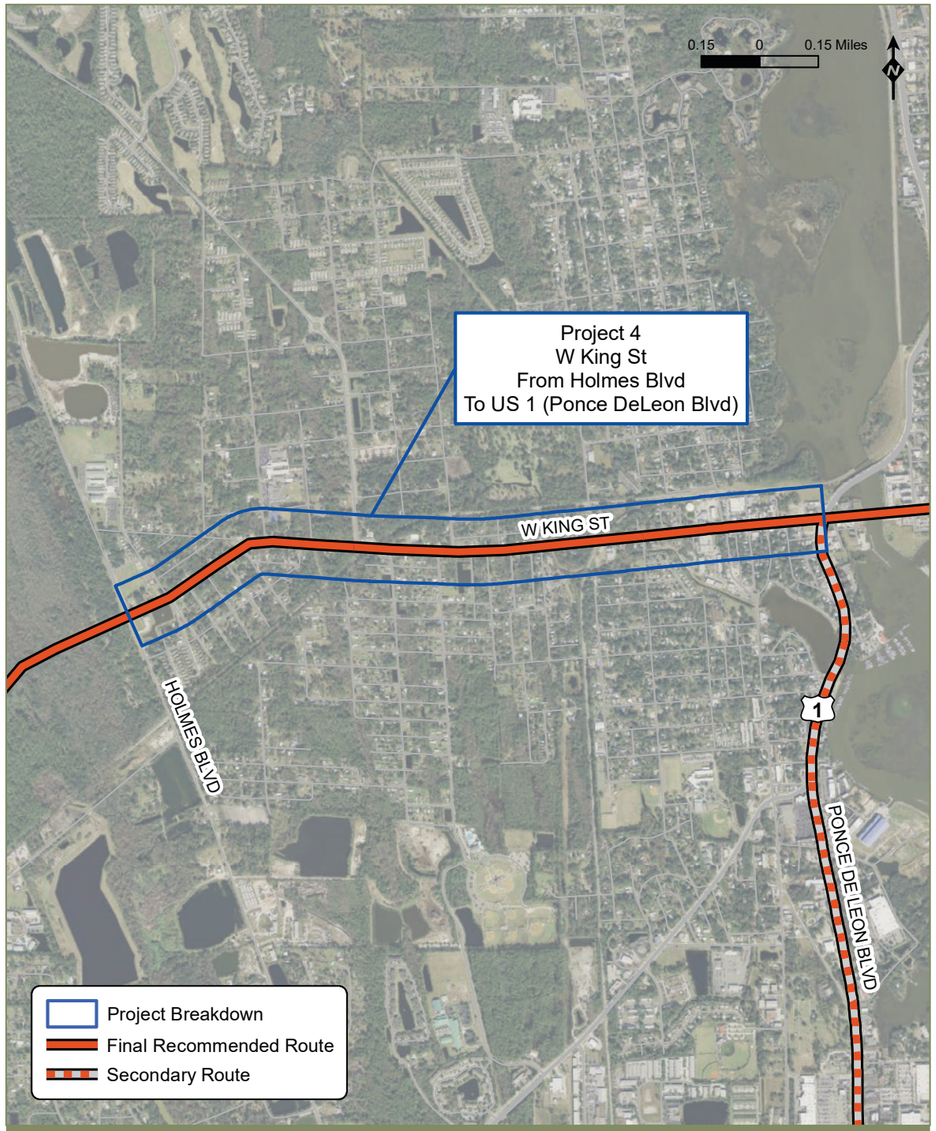


Project Breakdown
Project 3

FIGURE
9-2

OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE
PROJECT 3
CR 214 FROM PRAIRIE LAKES DRIVE TO HOLMES BOULEVARD

Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
101-1	Mobilization	1	LS	$211,614.00	$211,614.00
102-1	Maintenance of Traffic	1	LS	$169,291.00	$169,291.00
104-10-3	Sediment Barrier	16,640	LF	$2.00	$33,280.00
104-11	Floating Turbidity Barrier	80	LF	$13.00	$1,040.00
104-18	Inlet Protection System	3	EA	$115.00	$345.00
110-1-1	Clearing & Grubbing	6.09	AC	$17,285.00	$105,265.65
120-1	Regular Excavation	3,685	CY	$8.75	$32,243.75
120-6	Embankment	40,527	CY	$11.00	$445,797.00
160-4	Type B Stabilization	29,506	SY	$8.75	$258,177.50
285-701	Optional Base, Base Group 01	23,334	SY	$13.80	$322,009.20
285-704	Optional Base, Base Group 04	31	SY	$16.00	$496.00
334-1-12	Superpave Asphaltic Conc, Traffic B	2,097	TN	$191.50	$401,575.50
400-0-11	Conc Class NS, Gravity Wall	163	CY	$875.50	$142,706.50
400-1-2	Conc Class I, Endwalls	15	CY	$1,724.50	$25,867.50
400-4-1	Conc Class IV Culvert	55.4	CY	$1,270.00	$70,358.00
415-1-1	Reinforcing Steel-Roadway	11,650	LB	$1.30	$15,145.00
425-1-521	Inlets, Dt Bot, Type C, <10'	10	EA	$3,600.00	$36,000.00
425-2-61	Manholes, P-8, <10'	3	EA	$6,690.00	$20,070.00
430-175-118	Pipe Culv, Opt Matl, Round 18" S/CD	1,144	LF	$94.50	$108,108.00
430-175-124	Pipe Culv, Opt Matl, Round 24" S/CD	200	LF	$105.00	$21,000.00
515-2-211	Ped/Bicycle Railing, Stl, 42" Type 1	250	LF	$100.00	$25,000.00
522-2	Concrete Sidewalk and Driveways, 6" Thick	88	SY	$66.00	$5,808.00
527-2	Detectable Warnings	120	SF	$32.20	$3,864.00
570-1-2	Performance Turf, Sod	12,895	SY	$3.00	$38,685.00
700-1-12	Single Post Sign, F&I Ground Mount, Up to 12-20 SF	4	EA	$151.00	$604.00
700-1-50	Single Post Sign, Relocate	10	EA	$225.00	$2,250.00
711-11-123	Thermoplastic, Standard, White, Solid, 12" for Crosswalk and Roundabout	108	LF	$3.00	$324.00
711-11-125	Thermoplastic, Standard, White, Solid 24" for Stop Line and Crosswalk	24	LF	$4.85	$116.40
999-25	Initial Contingency Amount	1	LS	$105,807.00	$105,807.00
Total Cost Estimate					**$2,602,848.00**

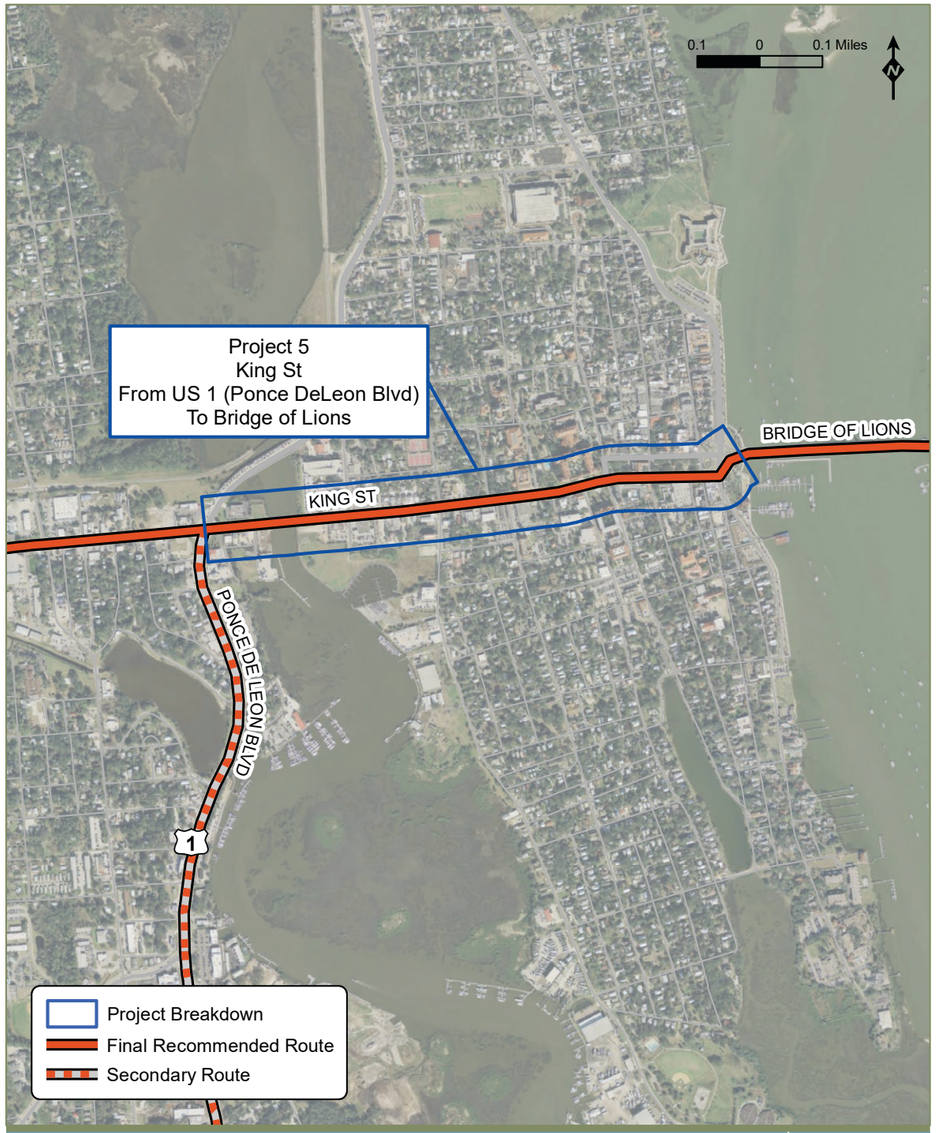


Project Breakdown
Project 4

FIGURE
9-2

OPINION OF PROBABLE COSTS ESTIMATE
PROJECT 4
WEST KING STREET FROM HOLMES BOULEVARD TO US 1 (PONCE DELEON BOULEVARD)

Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
N/A	Project Development & Environmental	1	LS	$250,000.00	$250,000.00
N/A	Preliminary Engineering**	1	LS	$200,000.00	$200,000.00
N/A	Construction**	1	LS	$2,850,000.00	$2,850,000.00
N/A	Construction Engineering Inspection**	1	LS	$185,000.00	$185,000.00
** These are estimated amounts					
Total Cost Estimate					**$3,485,000.00**

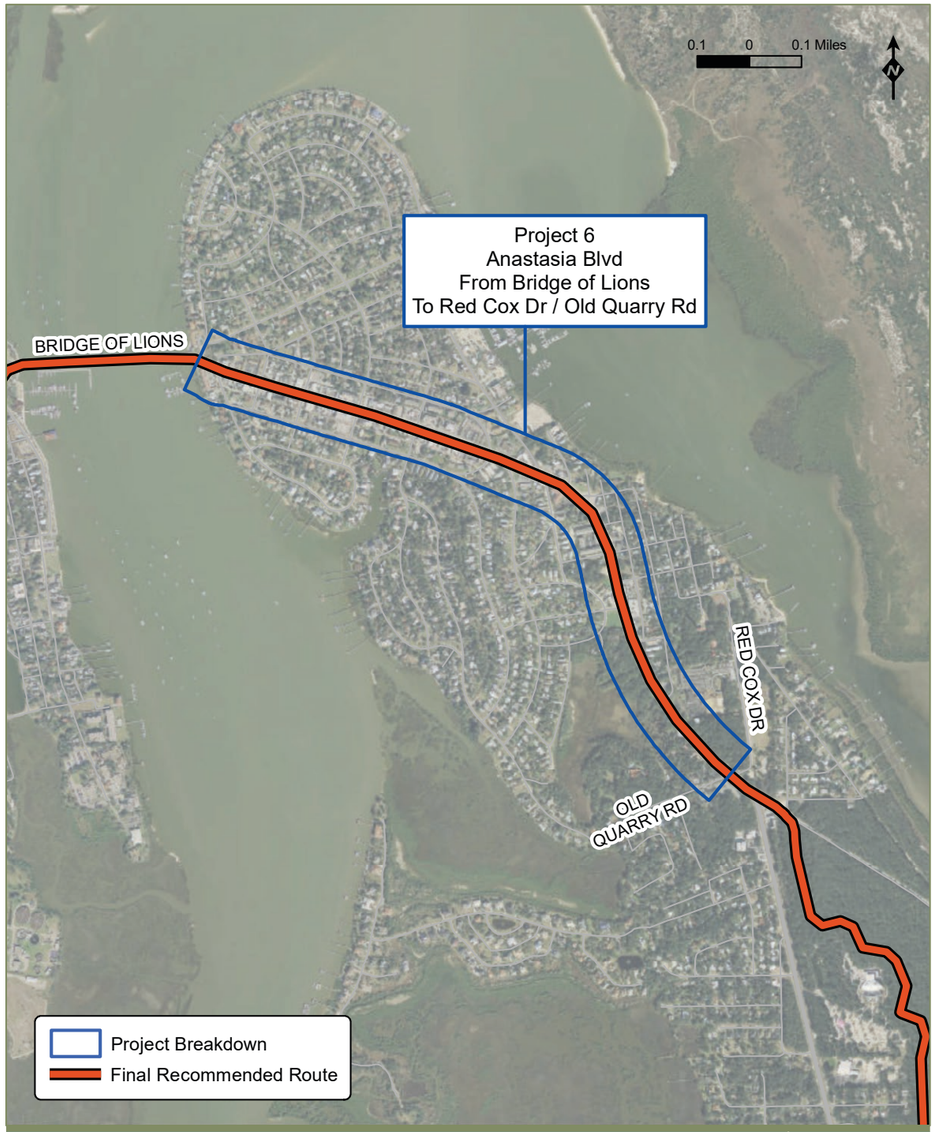


Project Breakdown
Project 5

FIGURE
9-2

OPINION OF PROBABLE COSTS ESTIMATE
PROJECT 5
KING STREET FROM US 1 (PONCE DELEON BOULEVARD) TO BRIDGE OF LIONS

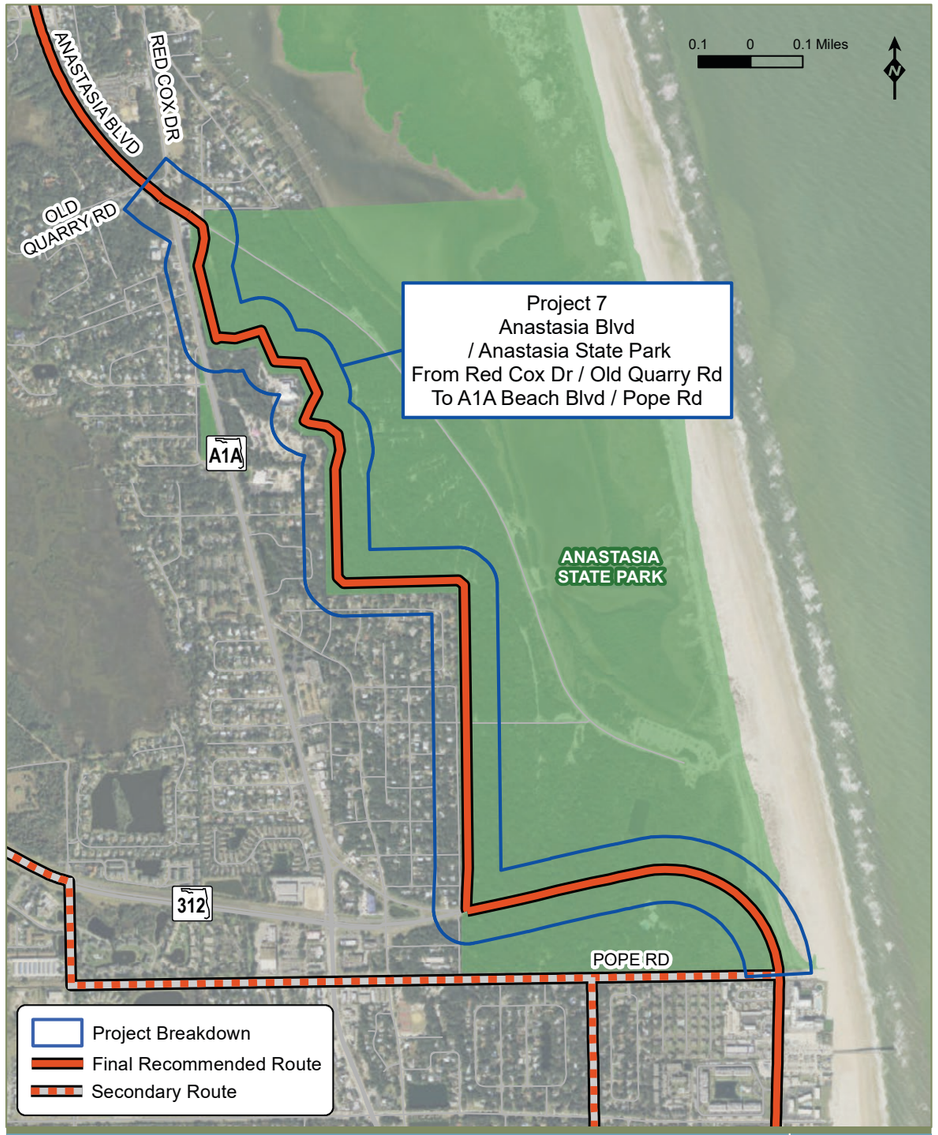
Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
N/A	Project Development & Environmental	1	LS	$475,000.00	$475,000.00
N/A	Preliminary Engineering**	1	LS	$250,000.00	$250,000.00
N/A	Construction**	1	LS	$2,000,000.00	$2,000,000.00
N/A	Construction Engineering Inspection**	1	LS	$300,000.00	$300,000.00
** These are estimated amounts					
Total Cost Estimate					**$3,025,000.00**



Project Breakdown Project 6	FIGURE 9-2

OPINION OF PROBABLE COSTS ESTIMATE
PROJECT 6
ANASTASIA BOULEVARD FROM BRIDGE OF LIONS TO RED COX DRIVE / OLD QUARRY ROAD

Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
N/A	Project Development & Environmental	1	LS	$350,000.00	$350,000.00
N/A	Preliminary Engineering**	1	LS	$300,000.00	$300,000.00
N/A	Construction**	1	LS	$7,450,000.00	$7,450,000.00
N/A	Construction Engineering Inspection**	1	LS	$650,000.00	$650,000.00
** These are estimated amounts					
Total Cost Estimate					**$8,750,000.00**

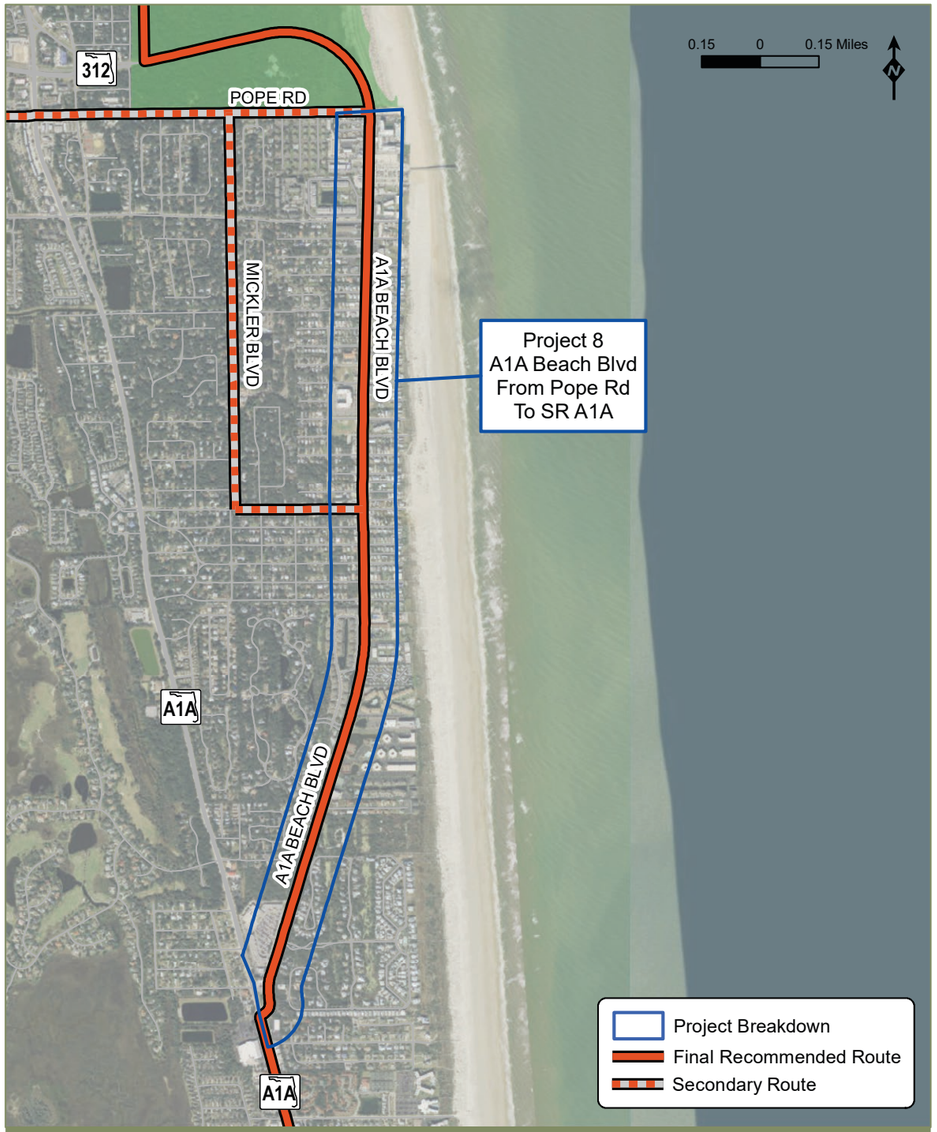


Project Breakdown
Project 7

FIGURE 9-2

OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE
PROJECT 7
ANASTASIA BOULEVARD / ANASTASIA STATE PARK FROM RED COX DRIVE / OLD QUARRY ROAD TO A1A BEACH BOULEVARD / POPE ROAD

Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
101-1	Mobilization	1	LS	$122,153.00	$122,153.00
102-1	Maintenance of Traffic	1	LS	$97,722.00	$97,722.00
104-10-3	Sediment Barrier	13,000	LF	$2.00	$26,000.00
104-18	Inlet Protection System	5	EA	$115.00	$575.00
110-1-1	Clearing & Grubbing	4.752	AC	$17,285.00	$82,138.32
110-4-10	Removal of Exist Conc	85	SY	$21.50	$1,827.50
120-1	Regular Excavation	2,875	CY	$8.75	$25,156.25
120-6	Embankment	5,750	CY	$11.00	$63,250.00
160-4	Type B Stabilization	22,998	SY	$8.75	$201,232.50
285-701	Optional Base, Base Group 01	18,207	SY	$13.80	$251,256.60
334-1-12	Superpave Asphaltic Conc, Traffic B	1,423	TN	$191.50	$272,504.50
400-0-11	Conc Class NS, Gravity Wall	195	CY	$875.50	$170,722.50
425-1-521	Inlets, Dt Bot, Type C, <10'	2	EA	$3,600.00	$7,200.00
430-174-124	Pipe Culv, Opt Matl, Round, 24" SD	128	LF	$176.25	$22,560.00
430-984-129	Mitered End Sect, Optional Rd, 24" SD	8	EA	$1,605.00	$12,840.00
515-2-211	Ped/Bicycle Railing, Stl, 42" Type 1	350	LF	$100.00	$35,000.00
522-2	Concrete Sidewalk and Driveways, 6" Thick	12	SY	$66.00	$792.00
527-2	Detectable Warnings	96	SF	$32.20	$3,091.20
570-1-2	Performance Turf, Sod	10,062	SY	$3.00	$30,186.00
700-1-12	Single Post Sign, F&I Ground Mount, Up to 12-20 SF	8	EA	$1,151.00	$9,208.00
700-1-50	Single Post Sign, Relocate	12	EA	$225.00	2,700.00
711-11-123	Thermoplastic, Standard, White, Solid, 12" for Crosswalk and Roundabout	436	LF	$3.00	$1,308.00
711-11-125	Thermoplastic, Standard, White, Solid 24" for Stop Line and Crosswalk	408	LF	$4.85	$1,978.80
999-25	Initial Contingency Amount	1	LS	$61,077.00	$61,077.00
Total Cost Estimate					**$1,502,479.17**

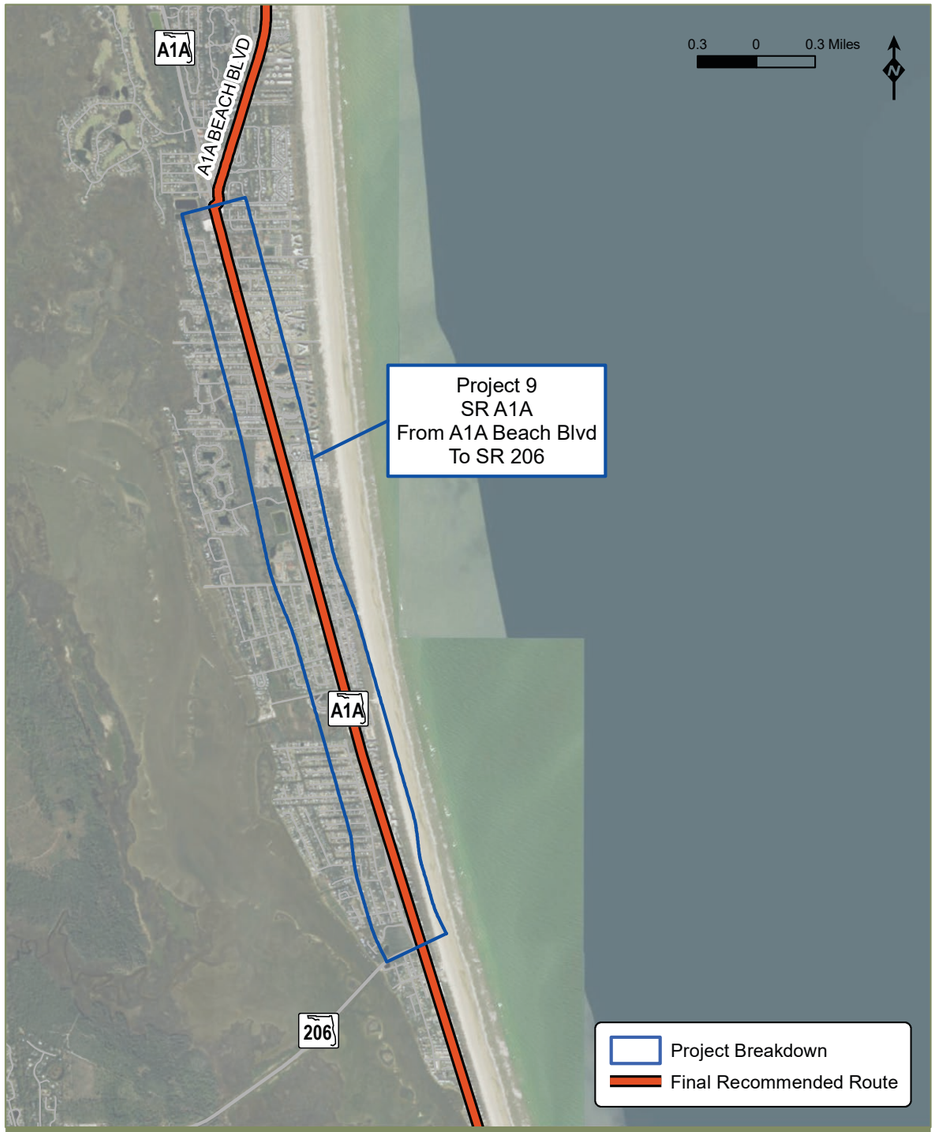


Project Breakdown
Project 8

FIGURE 9-2

OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE
PROJECT 8
A1A BEACH BOULEVARD FROM POPE ROAD TO SR A1A

Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
101-1	Mobilization	1	LS	$107,248.00	$107,248.00
102-1	Maintenance of Traffic	1	LS	$107,248.00	$107,248.00
104-10-3	Sediment Barrier	10,620	LF	$2.00	$21,240.00
104-18	Inlet Protection System	35	EA	$115.00	$4,025.00
110-1-1	Clearing & Grubbing	3.394	AC	$17,285.00	$58,665.29
110-4-10	Removal of Exist Conc	6,453	SY	$21.50	$138,739.50
120-1	Regular Excavation	1,956	CY	$8.75	$17,115.00
120-6	Embankment	3,911	CY	$11.00	$43,021.00
160-4	Type B Stabilization	16,427	SY	$8.75	$143,736.25
285-701	Optional Base, Base Group 01	12,516	SY	$13.80	$172,720.80
334-1-12	Superpave Asphaltic Conc, Traffic B	968	TN	$191.50	$185,372.00
400-0-11	Conc Class NS, Gravity Wall	98	CY	$875.50	$85,799.00
425-1-521	Inlets, Dt Bot, Type C, <10'	2	EA	$3,556.00	$7,112.00
430-175-124	Pipe Culv, Opt Matl, Round, 24" S/CD	80	LF	$105.00	$8,400.00
515-2-211	Ped/Bicycle Railing, Stl, 42" Type 1	250	LF	$100.00	$25,000.00
522-2	Concrete Sidewalk and Driveways, 6" Thick	255	SY	$66.00	$16,830.00
527-2	Detectable Warnings	1,560	SF	$32.20	$50,232.00
570-1-2	Performance Turf, Sod	8,215	SY	$3.00	$24,645.00
630-2-12	Conduit, Furnish & Install, Directional Bore	65	LF	$19.00	$1,235.00
635-2-11	Pull & Splice Box, F&I, 13" x 24" Cover Size	2	EA	$802.50	$1,605.00
654-2-22	Rectangular Rapid Flashing Beacon, Furnish & Install-Solar Powered, Complete Assembly- Back to Back	2	AS	$9,600.50	$19,201.00
700-1-12	Single Post Sign, F&I Ground Mount, Up to 12-20 SF	12	EA	$1,151.00	$13,812.00
700-1-50	Single Post Sign, Relocate	34	EA	$225.00	$7,650.00
711-11-123	Thermoplastic, Standard, White, Solid, 12" for Crosswalk and Roundabout	4,440	LF	$3.00	$13,320.00
711-11-125	Thermoplastic, Standard, White, Solid 24" for Stop Line and Crosswalk	2,680	LF	$4.85	$12,998.00
999-25	Initial Contingency Amount	1	LS	$53,623.50	$53,623.50
	Total Cost Estimate				**$1,340,593.34**



Project Breakdown
Project 9

FIGURE 9-2

OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE
PROJECT 9
SR A1A FROM A1A BEACH BOULEVARD TO SR 206

Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
101-1	Mobilization	1	LS	$267,735.00	$267,735.00
102-1	Maintenance of Traffic	1	LS	267,735.00	$267,735.00
104-10-3	Sediment Barrier	20,120	LF	$2.00	$40,240.00
104-18	Inlet Protection System	35	EA	$115.00	$4,025.00
110-1-1	Clearing & Grubbing	6.448	AC	$17,285.00	$111,453.68
110-4-10	Removal of Exist Conc	11,147	SY	$21.50	$239,660.50
110-7-1	Mailbox, F&I Single	18	EA	$180.50	$3,249.00
120-1	Regular Excavation	3,716	CY	$8.75	$32,515.00
120-6	Embankment	55,734	CY	$11.00	$613,074.00
160-4	Type B Stabilization	31,211	SY	$8.75	$273,096.25
285-701	Optional Base, Base Group 01	23,780	SY	$13.80	$328,164.00
334-1-12	Superpave Asphaltic Conc, Traffic B	1,839	TN	$191.50	$352,168.50
400-0-11	Conc Class NS, Gravity Wall	390	CY	$875.50	$341,445.00
425-1-521	Inlets, Dt Bot, Type C, <10'	17	EA	$3,556.00	$60,452.00
430-174-124	Pipe Culv, Opt Matl, Round, 24" SD	272	LF	$176.25	$47,940.00
430-984-129	Mitered End Sect, Optional Rd, 24" SD	16	EA	$1,605.00	$25,680.00
515-2-211	Ped/Bicycle Railing, Stl, 42" Type 1	600	LF	$100.00	$60,000.00
522-2	Concrete Sidewalk and Driveways, 6" Thick	175	SY	$66.00	$11,550.00
527-2	Detectable Warnings	1,560	SF	$32.20	$50,232.00
570-1-2	Performance Turf, Sod	15,605	SY	$3.00	$46,815.00
700-1-12	Single Post Sign, F&I Ground Mount, Up to 12-20 SF	12	EA	$1,151.00	$13,812.00
700-1-50	Single Post Sign, Relocate	27	EA	$225.00	$6,075.00
711-11-123	Thermoplastic, Standard, White, Solid, 12" for Crosswalk and Roundabout	4,220	LF	$3.00	$12,660.00
711-11-125	Thermoplastic, Standard, White, Solid 24" for Stop Line and Crosswalk	628	LF	$4.85	$3,045.80
999-25	Initial Contingency Amount	1	LS	$133,868.00	$133,868.00
Total Cost Estimate					**$3,346,690.73**

Project Breakdown
Project 10

FIGURE
9-2

OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE
PROJECT 10
SR A1A FROM SR 206 TO FORT MATANZAS

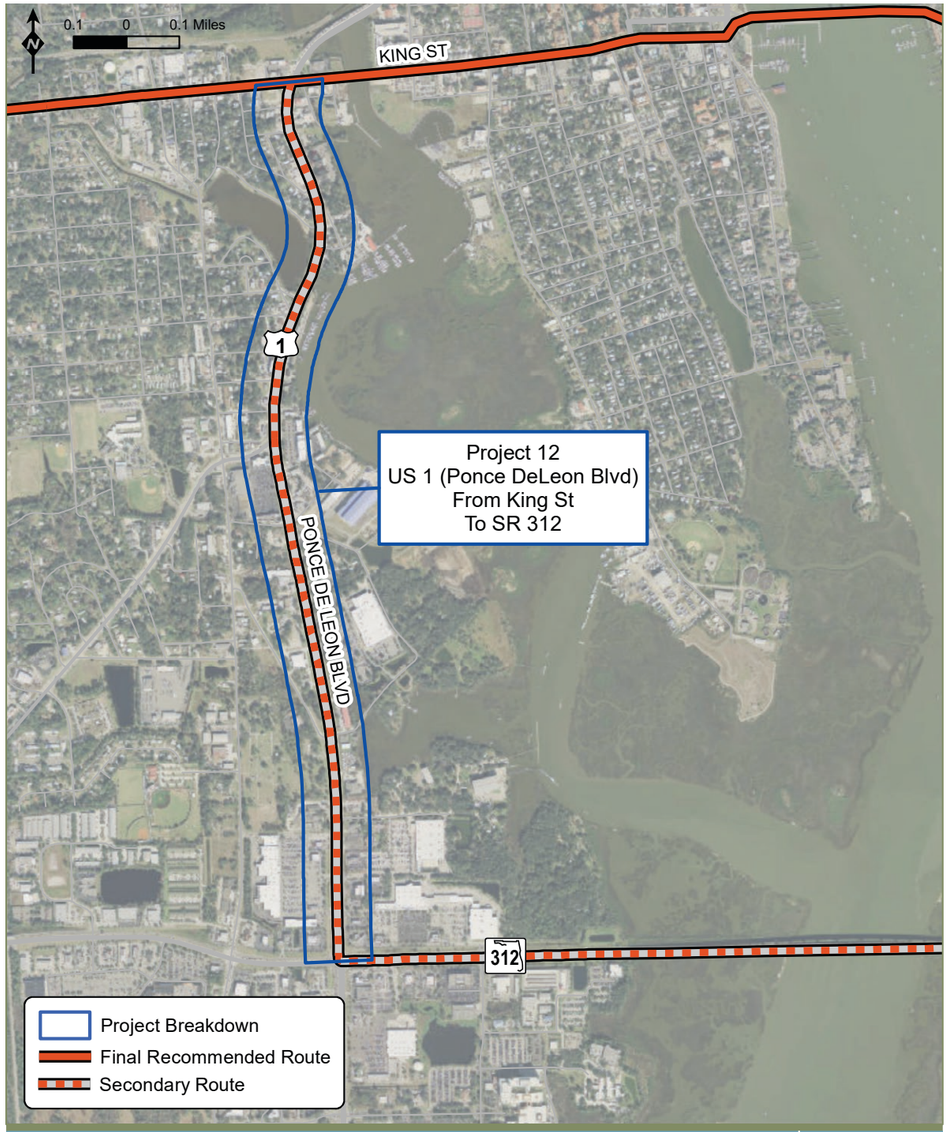
Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
101-1	Mobilization	1	LS	$428,596.00	$428,596.00
102-1	Maintenance of Traffic	1	LS	$342,877.00	$342,877.00
104-10-3	Sediment Barrier	24,876	LF	$2.00	$49,752.00
104-11	Floating Turbidity Barrier	120	LF	$13.00	$1,560.00
104-18	Inlet Protection System	5	EA	$115.00	$575.00
110-1-1	Clearing & Grubbing	9.115	AC	$17,285.00	$157,552.78
110-4-10	Removal of Exist Conc	13,787	SY	$21.50	$296,420.50
110-7-1	Mailbox, F&I Single	45	EA	$180.50	$8,122.50
120-1	Regular Excavation	5,515	CY	$8.75	$48,256.25
120-6	Embankment	115,808	CY	$11.00	$1,273,888.00
160-4	Type B Stabilization	44,118	SY	$8.75	$386,032.50
285-701	Optional Base, Base Group 01	34,926	SY	$13.80	$481,978.80
334-1-12	Superpave Asphaltic Conc, Traffic B	2,730	TN	$191.50	$522,795.00
400-1-2	Conc Class I, Endwalls	15	CY	$1,724.50	$25,867.50
425-1-521	Inlets, Dt Bot, Type C, <10'	15	EA	$3,556.00	$53,340.00
430-174-130	Pipe Culv, Opt Matl, Round, 30" SD	2,280	LF	$184.50	$420,660.00
430-175-124	Pipe Culv, Opt Matl, Round, 24"S/CD	120	LF	$105.00	$12,600.00
430-984-133	Mitered End Sect, Optional Rd, 30" SD	120	EA	$3,306.00	$396,720.00
515-2-211	Ped/Bicycle Railing, Stl, 42" Type 1	60	LF	$100.00	$6,000.00
522-2	Concrete Sidewalk and Driveways, 6" Thick	320	SY	$66.00	$21,120.00
527-2	Detectable Warnings	288	SF	$32.20	$9,273.60
570-1-2	Performance Turf, Sod	19,302	SY	$3.00	$57,906.00
630-2-12	Conduit, Furnish & Install, Directional Bore	72	LF	$19.00	$1,368.00
635-2-11	Pull & Splice Box, F&I, 13" x 24" Cover Size	2	EA	$802.50	$1,605.00
654-2-22	Rectangular Rapid Flashing Beacon, Furnish & Install- Solar Powered, Complete Assembly- Back to Back	2	AS	$9,600.50	$19,201.00
700-1-12	Single Post Sign, F&I Ground Mount, Up to 12-20 SF	18	EA	$1,151.00	$20,718.00
700-1-50	Single Post Sign, Relocate	20	EA	$225.00	$4,500.00
711-11-123	Thermoplastic, Standard, White, Solid, 12" for Crosswalk and Roundabout	1,824	LF	$3.00	$5,472.00
711-11-125	Thermoplastic, Standard, White, Solid 24" for Stop Line and Crosswalk	552	LF	$4.85	$2,677.20
999-25	Initial Contingency Amount	1	LS	$214,298.00	$214,298.00
Total Cost Estimate					**$5,271,732.63**

Project Breakdown
Project 11

FIGURE 9-2

OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE
PROJECT 11
SR A1A FROM FORT MATANZAS TO ST. JOHNS / FLAGLER COUNTY LINE

Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
101-1	Mobilization	1	LS	$498,610.50	$498,610.50
102-1	Maintenance of Traffic	1	LS	$398,888.50	$398,888.50
104-10-3	Sediment Barrier	18,480	LF	$2.00	$36,960.00
104-11	Floating Turbidity Barrier	3,900	LF	$13.00	$50,700.00
104-18	Inlet Protection System	10	EA	$115.00	$1,150.00
110-1-1	Clearing & Grubbing	6.788	AC	$17,285.00	$117,330.58
110-3	Removal of Existing Structures/Bridges	28,066	SF	$43.50	$1,220,871.00
110-4-10	Removal of Exist Conc	80	SY	$21.50	$1,720.00
120-1	Regular Excavation	4,107	CY	$8.75	$35,936.25
120-6	Embankment	82,133	CY	$11.00	$903,463.00
160-4	Type B Stabilization	26,658	SY	$8.75	$233,257.50
285-701	Optional Base, Base Group 01	21,105	SY	$13.80	$291,249.00
285-704	Optional Base, Base Group 04	400	SY	$16.00	$6,400.00
334-1-12	Superpave Asphaltic Conc, Traffic B	1,782	TN	$191.50	$341,253.00
400-2-4	Conc Class II, Bridge Superstructure	538.7	CY	$891.00	$479,981.70
405-70-2	Latex Mod Portland Cement Conc, Type III	3,105	CF	$50.00	$155,250.00
415-1-4	Reinf Steel- Superstructure	110,423	LB	$1.25	$138,028.75
521-5-13	Conc Traf Rail- Bridge, 36" Sing Slope	3,401	LF	$136.00	$462,536.00
522-2	Concrete Sidewalk and Driveways, 6" Thick	19	SY	$66.00	$1,254.00
527-2	Detectable Warnings	168	SF	$32.20	$5,409.60
536-1-1	Guardrail- Roadway, Gen TL-3	2,685	LF	$23.50	$63,097.50
536-6	Pipe Rail for Guardrail	2,685	LF	$23.50	$63,097.50
536-8-13	Approach Trans Conn To Rigid Ba, F&I, 3	6	EA	$2,966.00	$17,796.00
536-73	Guardrail Removal	2,685	LF	$108.50	$291,322.50
536-85-24	Guardrail End Treatment- Para App Term	6	EA	$2,891.50	$17,349.00
570-1-2	Performance Turf, Sod	11,663	SY	$3.00	$34,989.00
700-1-12	Single Post Sign, F&I Ground Mount, Up to 12-20 SF	9	EA	$1,151.00	$10,359.00
700-1-50	Single Post Sign, Relocate	15	EA	$225.00	$3,375.00
711-11-123	Thermoplastic, Standard, White, Solid, 12" for Crosswalk and Roundabout	540	LF	$3.00	$1,620.00
711-11-125	Thermoplastic, Standard, White, Solid 24" for Stop Line and Crosswalk	72	LF	$4.85	$349.20
999-25	Initial Contingency Amount	1	LS	$249,305.00	$249,305.00
Total Cost Estimate					**$6,132,909.08**

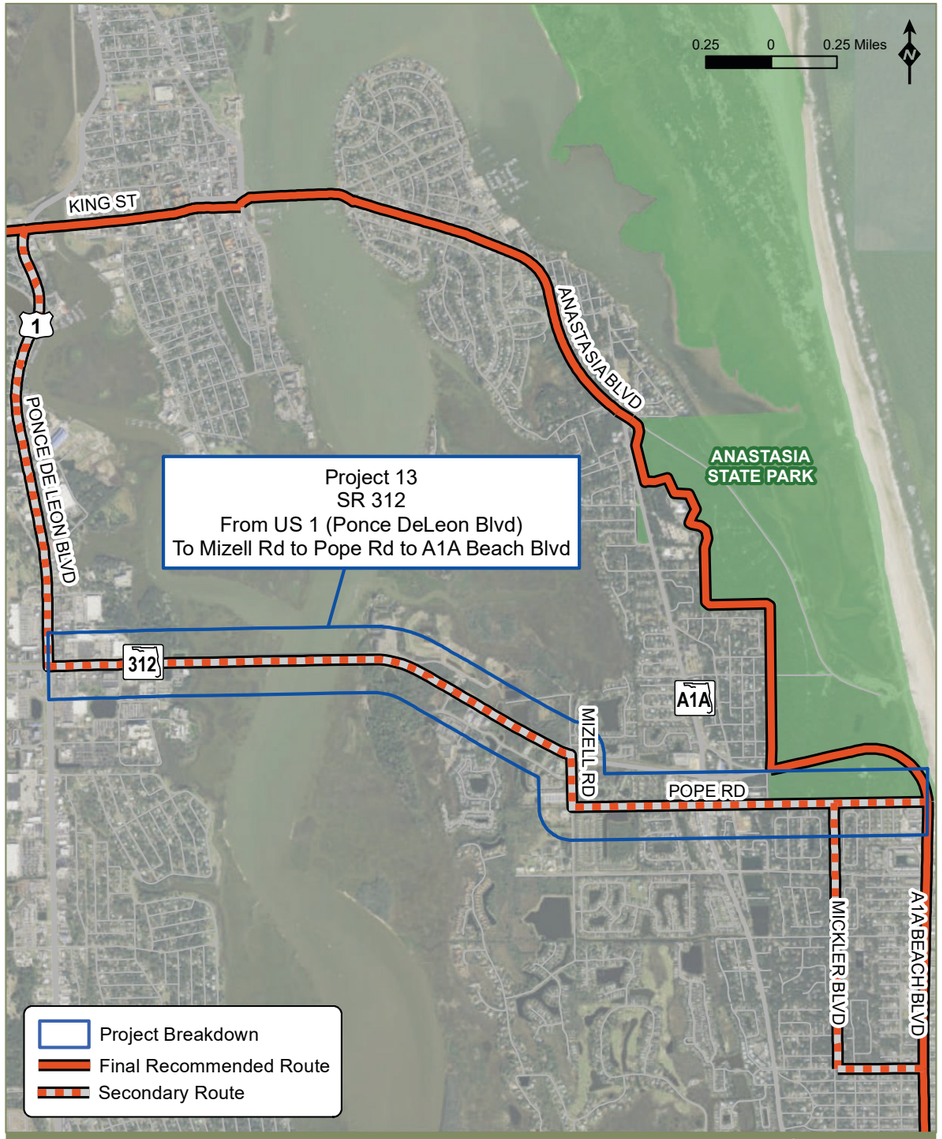


Project Breakdown
Project 12

FIGURE
9-2

OPINION OF PROBABLE COSTS ESTIMATE
PROJECT 12
(SECONDARY ROUTE)
US 1 (PONCE DELEON BOULEVARD) FROM KING STREET TO SR 312

Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
N/A	Project Development & Environmental	1	LS	$175,000.00	$175,000.00
N/A	Preliminary Engineering**	1	LS	$175,000.00	$175,000.00
N/A	Construction**	1	LS	$2,500,000.00	$2,500,000.00
N/A	Construction Engineering Inspection**	1	LS	$250,000.00	$250,000.00
** These are estimated amounts					
Total Cost Estimate					**$3,100,000.00**



Project Breakdown
Project 13

FIGURE 9-2

OPINION OF PROBABLE COSTS ESTIMATE
PROJECT 13
(SECONDARY ROUTE)
SR 312 FROM US 1 (PONCE DELEON BOULEVARD) TO A1A BEACH BOULEVARD

Pay Item Number	Pay Item Description	Quantity	Unit	Unit Cost	Total Cost
N/A	Project Development & Environmental	1	LS	$225,000.00	$225,000.00
N/A	Preliminary Engineering**	1	LS	$200,000.00	$200,000.00
N/A	Construction**	1	LS	$5,250,000.00	$5,250,000.00
N/A	Construction Engineering Inspection**	1	LS	$300,000.00	$300,000.00
** These are estimated amounts					
Total Cost Estimate					**$5,975,000.00**

9.3 Maintaining Agency Support and Responsibility

This northern part of the SUN Trail-SJR2C Loop traverses through several municipalities within SJC. Coordination, support, and a clear understanding of agency responsibilities is vital to successfully close the 26-mile gap of multi-use trail facilities. The municipalities and agencies involved in this project include SJC, CoSA, CoSAB, FDOT, and Anastasia State Park (FDEP).

The responsibility of FDOT, through the SUN Trail Program, is payment for PD&E Study, PE / Design, Construction, and CEI activities. Applications were submitted in December 2019 for the 13 respective projects (11 for the Final Recommended Route and two for the Secondary Route) requesting funding through the SUN Trail Program.

Once the trail is constructed, the municipality or agency in which the trail is located will be responsible for trail maintenance. The entities responsible for maintenance include SJC, CoSA, CoSAB, FDOT, and Anastasia State Park (FDEP).

As mentioned in **Chapter 3**, the Commissioners for SJC, CoSA, and CoSAB unanimously adopted formal resolutions in support of the final recommended route and agreement to enter into a future maintenance agreement with FDOT. Summaries of the respective resolutions are presented below:

City of St. Augustine Beach City Commission Meeting

The project was presented at the CoSAB City Commission Meeting on November 4, 2019, to request adoption of a resolution in support of the final recommendation "Preferred Alignment and Complimentary Route." Resolution 19-11 states "Expressing support for the preferred alignment presented for the proposed Florida Department of Transportation St. Johns River to Sea Loop Multi-Use Regional Trail Project Planning Study and adoption of Maintenance management of asset requirements." A copy of the adopted resolution is included in **Appendix M**.

City of St. Augustine City Commission Meeting

The project was presented at the CoSA City Commission Meeting on November 12, 2019, to request the adoption of a resolution in support of the final recommendation and facility maintenance agreement. Resolution 2019-45 states "A Resolution of the city commission of the City of St. Augustine, Florida, adopting the preferred alignment and complimentary route for St. Johns River to Sea Loop multi-use regional trail project planning study." Resolution 2019-46 states "A Resolution of the city commission of the City of St. Augustine, Florida, to agree to enter into a future maintenance agreement with the Florida Department of Transportation (FDOT) recognizing certain maintenance requirements as outlined in the attached FDOT memorandum of agreement's (Exhibits II & III) for the St. Johns River to Sea Loop multi-use trail preferred alignment and complementary route." A copy of the adopted resolutions is included in **Appendix N**.

St. Johns County Board of County Commissioners Meeting

The project was presented at the SJC Board of County Commissioners Meeting on November 19, 2019, to request the adoption of a resolution in support of the final recommendation. Resolution 2019-389 states "A resolution by the board of county commissioners of St. Johns County, Florida, adopting the preferred alignment and complementary route for the St. Johns River to Sea Loop multi-use regional trail project planning study." A copy of the adopted resolution is included in **Appendix O**.

In addition, discussion related to traversing through Anastasia State Park (FDEP) was conducted and met with favorable interest to proceed as a preferred route for this area. This was followed by continued coordination, including field determination of a proposed acceptable route alignment conducted with FDEP / FDOT staff. However, final formal approval of an alignment will require additional environmental field study. This is anticipated to be conducted in a PD&E phase that includes the park and immediate adjacent areas, accordingly.

9.4 Funding Applications

Applications for each of the 13 respective projects described in **Section 9.1** were submitted to the FDOT SUN Trail Program to request funding. SJC submitted the applications in December 2019. The applications detail how the projects meet the SUN Trail Program eligibility requirements. The project descriptions shown in the applications and the project phases requested are described below.

Project 1 – Allen Nease Road from Existing Trail / Vermont Boulevard to CR 214

Project 1 will provide a 3.64-mile, 10- to 12-foot-wide paved trail within the Allen Nease Road ROW. Allen Nease Road is a rural two-lane facility with two 12-foot-wide travel lanes and no paved shoulders. Posted speeds on this segment are 30 and 40 mph. The trail is planned to be separated from the roadway and will be placed as close to the ROW line as possible on the west side of the road. Existing side drains and driveway culverts paralleling CR 214 will be relocated closer to the roadway to accommodate placing the trail approximately 2 feet from the ROW line. On the northern portion of this segment the trail will have to switch to the east side of the roadway and a mid-block crossing will be required. Funding phases requested include:

- PE (Design)
- Construction
- CEI

Project 2 – CR 214 from Allen Nease Road to Prairie Lakes Drive

Project 2 will provide a 1.4-mile, 12-foot-wide paved trail within the CR 214 ROW. CR 214 is a rural two-lane facility with two 11-foot-wide travel lanes and no paved shoulders. Posted speeds on this segment are 45 and 55 mph. The trail is planned to be separated from the roadway and will be placed on the south side of the roadway. Existing side drains and roadside ditches will be adjusted as necessary to accommodate the trail. This segment will contain a pedestrian bridge over I-95 that is separated from the existing CR 214 bridge. Funding phases requested include:

- PE (Design)
- Construction
- CEI

Project 3 – CR 214 from Prairie Lakes Drive to Holmes Boulevard

Project 3 will provide a 2.85-mile, 12-foot-wide paved trail within the CR 214 ROW. CR 214 is a rural two-lane facility with two 11-foot travel lanes and no paved shoulders. Posted speeds on this segment are 35 and 45 mph. The trail is planned to be separated from the roadway and will be placed on the south side of the roadway. Existing side drains and roadside ditches will be adjusted as necessary to accommodate the trail. This segment terminates at the intersection with Holmes Boulevard, which is a

heavily traveled roadway. The last 0.15 mile of the project is in an urban section of the roadway. Funding phases requested include:

- PE (Design)
- Construction
- CEI

Project 4 – West King Street from Holmes Boulevard to US 1 (Ponce DeLeon Boulevard)

Project 4 is a total of 1.25 miles and is mostly on urban roadways with portions of this segment in the CoSA. This segment will require a PD&E Study to determine the ultimate location of the trail and / or lane configuration on West King Street. The eastern-most portion of this segment has limited available ROW and substandard sidewalks adjacent to the back of curb. The PD&E Study will require coordination with the CoSA Mobility Study that was in progress at the time of this application. The PD&E Study will ultimately provide a context-sensitive solution for this mostly urban corridor. Funding phases requested include:

- PD&E Study
- PE (Design)
- Construction
- CEI

Project 5 – King Street from US 1 (Ponce DeLeon Boulevard) to Bridge of Lions

Project 5 is a total of 1.4 miles located in the CoSA and will provide a connection from SR 5 (US 1) to the historic Bridge of Lions. This segment will require a PD&E Study to determine the ultimate location of the trail and / or lane configuration on King Street. There is limited available space within the existing ROW for a shared-use path. The PD&E Study will require coordination with the CoSA Complete King Street Mobility Study that was in progress at the time of this application. The PD&E Study will ultimately provide a context-sensitive solution for this urban corridor that has a direct connection through the CoSA and the western approach to the Bridge of Lions. Funding phases requested include:

- PD&E Study
- PE (Design)
- Construction
- CEI

Project 6 – Anastasia Boulevard from Bridge of Lions to Red Cox Drive / Old Quarry Road

Project 6 is a total of 1.4 miles located mostly on an urban roadway within the CoSA. This segment will require a PD&E Study to determine the ultimate location of the trail and / or lane configuration on SR A1A (Anastasia Boulevard). There is limited available space within the existing ROW for a shared-use path. The PD&E Study will require coordination with the CoSA Mobility Study that was in progress at the time of this application. The PD&E Study will ultimately provide a context-sensitive solution for this mostly urban corridor that has a direct connection to the eastern approach of the Bridge of Lions and CoSA. Funding phases requested include:

- PD&E Study
- PE (Design)
- Construction
- CEI

Project 7 – Anastasia Boulevard from Red Cox Drive / Old Quarry Road to Pope Road

Project 7 will provide a 2.4-mile, 12-foot-wide paved trail within the A1A Beach Boulevard ROW as well as the state-owned lands within Anastasia State Park. A1A Beach Boulevard is a rural, two-lane facility with two 12-foot-wide travel lanes and 5-foot-wide designated bicycle lanes. The trail within Anastasia State Park will use an existing fire line on the eastern-most part of the park. Posted speeds on A1A Beach Boulevard are 35 and 45 mph. The trail is planned to be on the west / south side of the roadway and cross the roadway at an existing signalized mid-block crossing before crossing into Anastasia State Park. The portion within the park is anticipated to require further study due to historic and environmental aspects within the park. Funding phases requested include:

- PE (Design)
- Construction
- CEI

Project 8 – A1A Beach Boulevard from Pope Road to SR A1A

Project 8 will provide a 2-mile, 10-foot-wide paved trail within the A1A Beach Boulevard ROW. A1A Beach Boulevard is an urban, three-lane facility with two 10-foot-wide travel lanes, 12-foot-wide center turn lane, 4-foot-wide designated bicycle lanes, and 5-foot-wide sidewalks on both sides of the roadway. Posted speed on this segment is 35 mph. The trail is planned to be behind the curb and gutter on the east side of the roadway. The trail will shift to the west side of the roadway between A Street and F Street depending upon available ROW. Portions of this segment will be limited to 8-feet wide where available space is constrained due to recent right turn lane additions. There are frequent residential and commercial driveways in this urbanized segment. Funding phases requested include:

- PE (Design)
- Construction
- CEI

Project 9 – SR A1A from A1A Beach Boulevard to SR 206

Project 9 will provide a 3.8 mile, 10- to 12-foot-wide paved trail within the SR A1A ROW. SR A1A in this segment has two distinct typical sections. The first is a rural two-lane facility with two 12-foot-wide travel lanes, 5-foot-wide paved shoulders, and a 5-foot-wide sidewalk on the east side. The second is a four-lane divided urban facility with 11-foot-wide travel lanes, 4-foot-wide designated bicycle lanes, and 5-foot-wide sidewalks on both sides. Posted speed on this segment is 45 mph. The trail is planned to be separated from the roadway and will be placed on the east side of the roadway. There are frequent residential and commercial driveways in this urbanized segment. Existing side drains and ditches will be relocated and / or piped to accommodate a new trail. This segment will connect to the CoSAB at the north end. Funding phases requested include:

- PE (Design)
- Construction
- CEI

Project 10 – SR A1A from SR 206 to Fort Matanzas

Project 10 will provide a 4.7 mile, 12-foot-wide paved trail within the SRA1A ROW. SR A1A is a rural, two-lane facility with two 12-foot-wide travel lanes, 5-foot-wide paved shoulders that are designated bicycle

lanes and a 5-foot-wide sidewalk on the west side of the roadway. Posted speeds on this segment are 40, 45, and 55 mph. The trail is planned to be separated from the roadway and will be placed on the west side of the roadway. There are frequent residential driveways and existing side drains will be relocated closer to the ROW line to accommodate a 12-foot-wide trail. The northern portion of this segment includes several commercial driveways. Funding phases requested include:

- PE (Design)
- Construction
- CEI

Project 11 – SR A1A from Fort Matanzas to St. Johns / Flagler County Line

Project 11 will provide a 3.5-mile, 12-foot-wide paved trail within the SR A1A ROW. SR A1A is a rural two-lane facility with two 12-foot-wide travel lanes and 4-foot-wide paved shoulders. Posted speeds on this segment are 45 and 55 mph. The trail is planned to be separated from the roadway and will be placed as close to the ROW line as possible on the east side of the roadway. Three bridges on this segment will require modification to accommodate a 12-foot-wide trail across the existing structures. On the northern portion of this segment the trail will switch to the west side of the roadway and a mid-block crossing may be required. Funding phases requested include:

- PE (Design)
- Construction
- CEI

Project 12 – US 1 (Ponce DeLeon Boulevard) from King Street to SR 312 (Secondary Route)

Project 12 is a total of 1.7 miles and is located mostly on urban roadways with portions of this segment in the CoSA. This segment will require a PD&E Study to determine the ultimate location of the trail and / or lane configuration on SR 5 (US 1). This segment is within a heavily traveled commercial corridor. The northern most portion has very limited available ROW for a new shared-use path. The PD&E Study would require coordination with the CoSA Mobility Study to determine the connection point on the northern end and into the city. The referenced Mobility Study was in progress at the time of this application. The PD&E Study would ultimately provide a context-sensitive solution for this mostly urban corridor. Funding phases requested include:

- PD&E Study
- PE (Design)
- Construction
- CEI

Project 13 – SR 312 from US 1 (Ponce DeLeon Boulevard) to SR A1A / A1A Beach Boulevard (Secondary Route)

Project 13 is a total of 2.75 miles and is located mostly on urban roadways with most of the segment in the CoSA. This segment will require a PD&E Study to determine the ultimate location of the trail and / or lane configuration on SR 312. This segment is within a heavily traveled commercial corridor but has available ROW for a new shared-use path. However, a PD&E Study is recommended to determine the lane configuration and / or modifications to the bridge over the Intracoastal Waterway. The PD&E Study would require coordination with the CoSA Mobility Study that was in progress at the time of this application. The PD&E Study will ultimately provide a context-sensitive solution for this mostly urban corridor. Funding phases requested include:

- PD&E Study
- PE (Design)
- Construction
- CEI

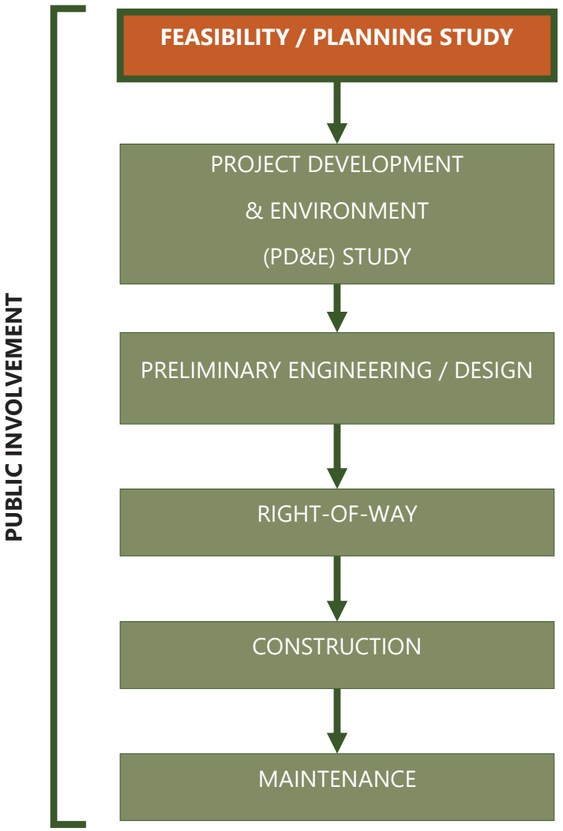
9.5 Next Steps

This Planning Study was an important first step toward closing the remaining northern 26-mile gap of the SUN Trail-SJR2C Loop. During this study, several alignment alternatives were evaluated with final and secondary routes recommended. Through agency coordination and public involvement, final and secondary routes have been determined and accepted. These routes were divided into 13 projects, and funding applications submitted to FDOT through the SUN Trail Program.

The next phase for the projects will be either PD&E Study phase or a PE phase before construction. Some projects will require a PD&E Study due to major roadway modifications necessary to accommodate a new shared-use path or coordination with ongoing studies. Projects that do not required a PD&E Study phase can move straight to the PE and design phase.

The ROW phase is typically needed for project development. However, the SUN Trail final and secondary routes were selected to avoid ROW impacts as best possible and therefore, the ROW phase is not anticipated for the 13 projects. For each project, once the PE and design phase are completed, the project can be constructed.

Finally, the trail will be maintained as described in **Section 9.3**.



The table on the following page shows a summary of the 13 projects with the next steps indicated for each project.

	Project	Begin	End	Length (Miles)	Study Segment	Jurisdiction	Next Phase
1	Allen Nease Road	Existing Trail / Vermont Boulevard	CR 214	3.64	1 - SJC-W	SJC	PE / Design
2	CR 214	Allen Nease Road	Prairie Lakes Drive	1.40	1 - SJC-W	SJC	PE / Design
3	CR 214	Prairie Lakes Drive	Holmes Boulevard	2.85	1 - SJC-W	SJC	PE / Design
4	West King Street	Holmes Boulevard	US 1 (Ponce DeLeon Boulevard)	1.25	1 - SJC-W / 2 - CoSA	SJC / CoSA	PD&E
5	King Street	US 1 (Ponce DeLeon Boulevard)	Bridge of Lions	1.40	2 - CoSA	CoSA	PD&E
6	Anastasia Boulevard	Bridge of Lions	Red Cox Drive / Old Quarry Road	1.40	2 - CoSA	CoSA	PD&E
7	Anastasia Boulevard / Anastasia State Park	Red Cox Drive / Old Quarry Road	Pope Road	2.40	2 - CoSA	SJC / FDEP	PE / Design
8	A1A Beach Boulevard	Pope Road	SR A1A	2.00	3 - CoSAB	SJC / CoSAB	PE / Design
9	SR A1A	A1A Beach Boulevard	SR 206	3.80	3 - CoSAB / 4 - SJC-S	SJC / CoSAB	PE / Design
10	SR A1A	SR 206	Fort Matanzas	4.70	4 - SJC-S	SJC	PE / Design
11	SR A1A	Fort Matanzas	St. Johns County Line	3.50	4 - SJC-S	SJC	PE / Design
12	US 1 (Ponce DeLeon Boulevard)	King Street	SR 312	1.70	2 - CoSA	SJC / CoSA	PD&E
13	SR 312	US 1 (Ponce DeLeon Boulevard)	SR A1A / A1A Beach Boulevard	2.75	2 - CoSA	SJC / CoSA	PD&E