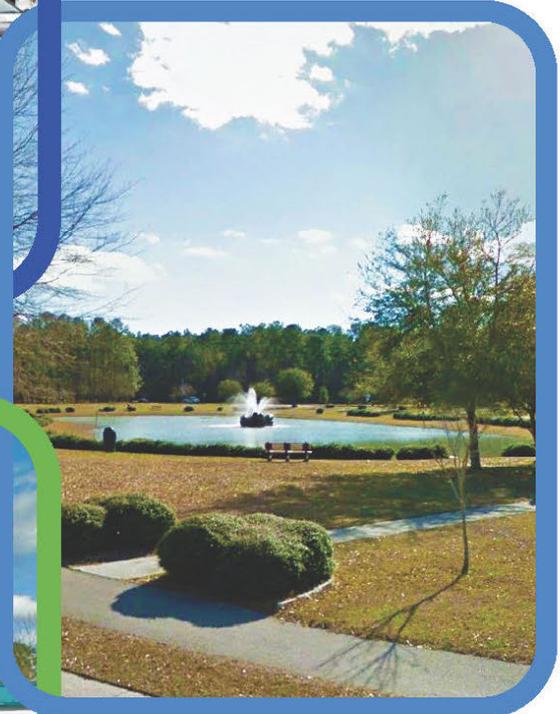


# U-5791

# Jacksonville Parkway Extension

*NC 53 (Western Boulevard) to US 17 (New Bern Highway), Widen to Multi-Lanes, Part on New Location*

## Merger Concurrence Point 2 Update Detailed Study Alternatives Carried Forward



Merger Concurrence Point Number 2 and 2A  
April 19, 2023





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# 1 Introduction

The North Carolina Department of Transportation (NCDOT) proposes to extend Jacksonville Parkway (SR 2714) from Western Boulevard (NC 53) to US 17 (New Bern Highway) as part of State Transportation Improvement Project (STIP) Project No. U-5791. The first segment of Jacksonville Parkway (south of Western Boulevard) opened in 2013. The project length for U-5791 is approximately 4 miles (1.5 miles on new location and about 2 miles of widening along Ramsey Road). Completion of the Jacksonville Parkway will provide a northern loop with a continuous cross-section from the US 17 Bypass to US 17. The proposed project is broken down into two segments:

- U-5791A – Construction of a new location four-lane roadway with partial control of access from NC 53 (Western Boulevard) to Ramsey Road.
- U-5791B – Widening of Ramsey Road from two lanes to four lanes from the new location roadway to US 17 (New Bern Highway).

Extending Henderson Drive to connect with the new section of Jacksonville Parkway is included within this project as the extension will help to alleviate congestion identified along Western Boulevard to minimize substantial intersection improvements at Jacksonville Parkway/Western Boulevard.

Due to potential impacts to the human and natural environment, STIP Project No. U-5791 will follow the Section 404/NEPA Merger Process. Coordination with the resource agencies have included:

- Start of Study Letters – October 16, 2017
- Combined Concurrence Point 1 and 2 Merger Meeting – October 20, 2021

## 1.1 Project Background

The proposed project is located in the northeast portion of the City of Jacksonville, Onslow County (**Figure 1**) and is scheduled for right-of-way acquisition in 2024 and construction letting in 2026. Completion of the Jacksonville Parkway will provide a northern loop with a continuous cross-section from the US 17 Bypass to US 17.

**Figure 2** shows the project study area. The study area includes the northern and western limits of the new location roadway and widening as well as the southern and eastern boundary of Western Boulevard and New Bern Highway (US 17).

The proposed project is included in the adopted NCDOT 2020-2029 State Transportation Improvement Program (STIP) as STIP No. U-5791. The project is also included in the Jacksonville Urban Area Metropolitan Planning Organization's (MPO) 2045 Metropolitan Transportation Plan (March 2020).

The current total project cost estimate is \$73M and includes \$17M for right of way acquisition and \$52M for construction.

- U-5791A = \$47.4M (ROW & Utility - \$8.7M / Construction - \$38.7M)
- U-5791B = \$23.9M\* (ROW & Utility - \$10.3M / Construction - \$13.6M)

\*Currently unfunded

In 2007, a Feasibility Report was completed by NCDOT (FS-0303C) (**Figure 3**) for the proposed connector “Northwest Corridor” from US 258/NC 24 to US 17. The study evaluated the feasibility of the construction of a new four-lane divided connector utilizing new location and existing sections of SR 1233 (Northwest Corridor Boulevard), SR 1470 (Western Boulevard), SR 1326 (Drummer Kellum Road), and SR 1324 (Ramsey Road). Section 2 of the project included three options – two of which connected Western Boulevard to US 17 via a new location roadway and existing Ramsey Road, and one of which connected Western Boulevard to US 17 via a new location roadway and existing Drummer Kellum Road. At the time of the study, the traffic volume for the proposed connector was estimated to range between 8,300 to 31,700 vehicles per day (vpd) in the 2035 design year. Option B was chosen as the Preferred Alternative for Section 2, which included connecting Western Boulevard to US 17 via a new location roadway and existing Ramsey Road, and subsequently became STIP Project U-5791. The estimated total cost for Section 2, Option B was \$46,000,000 in 2007.

Figure 1. Project Vicinity Map

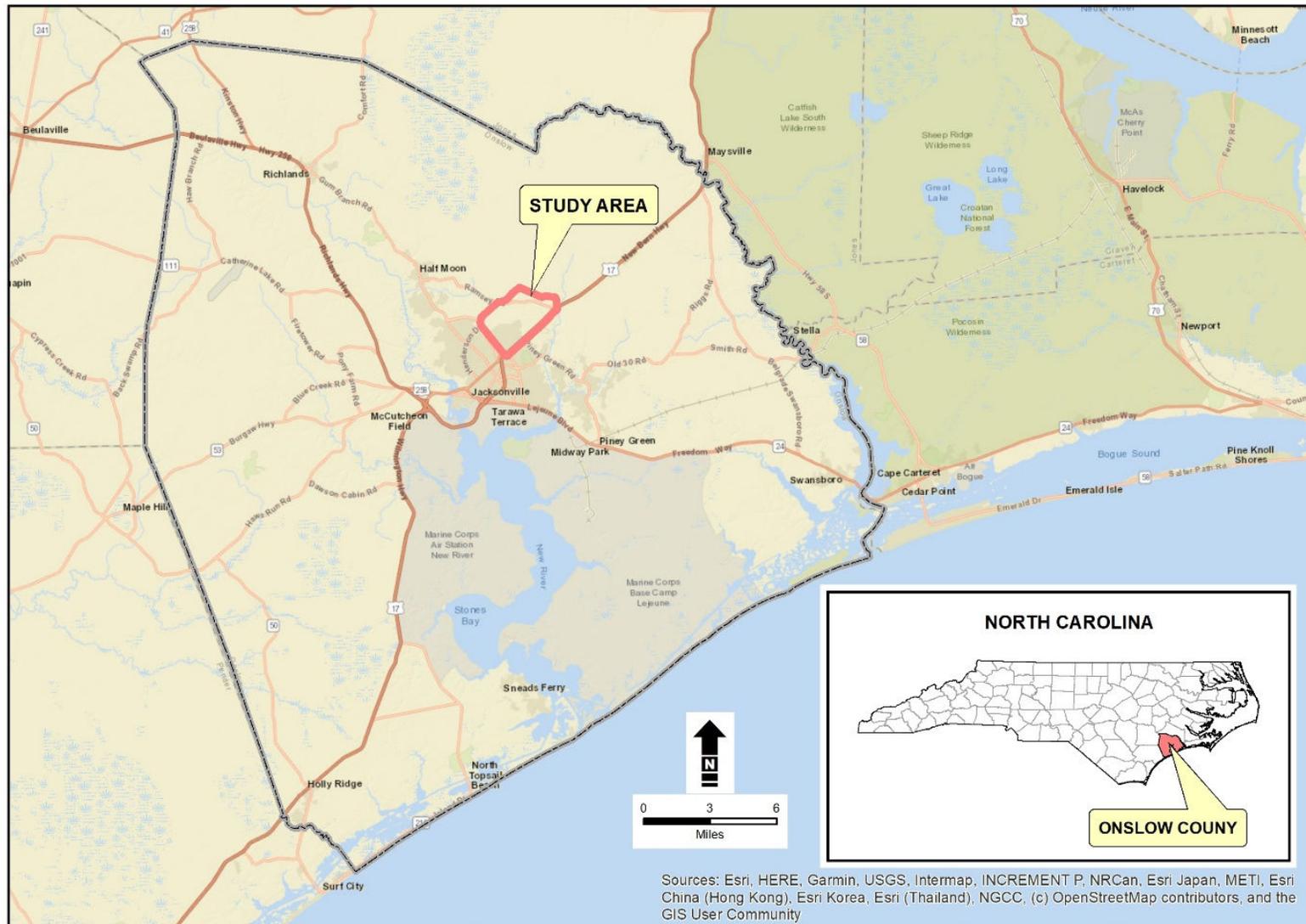
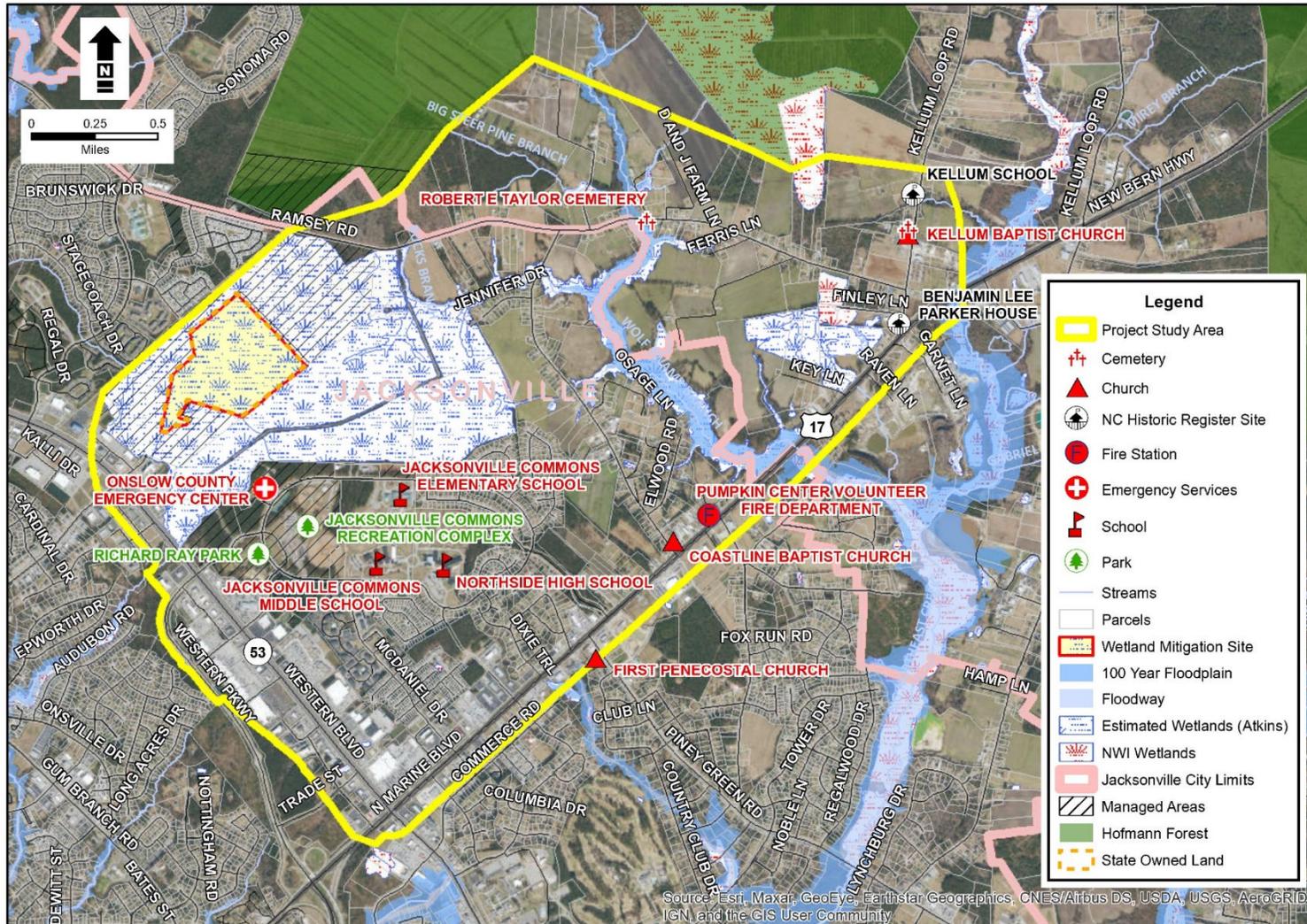
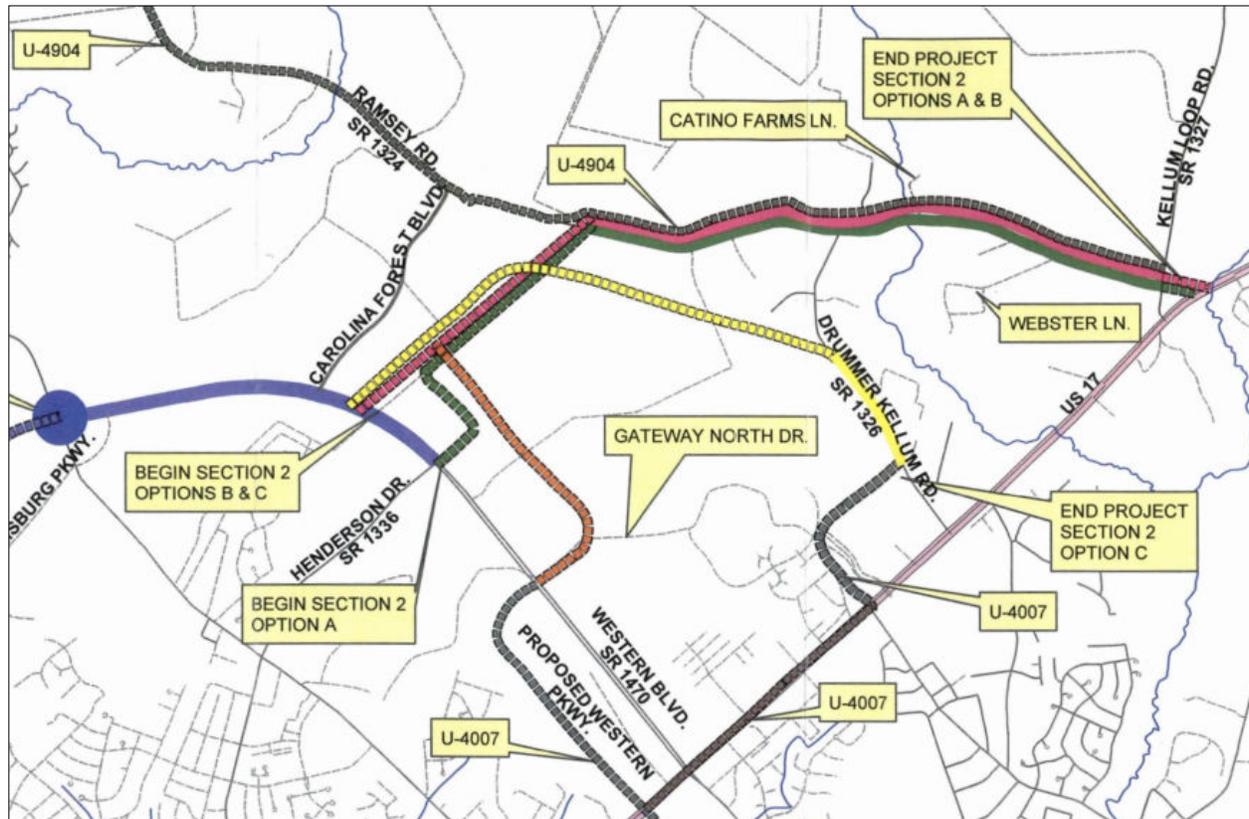


Figure 2. Project Study Area and Environmental Features Map



**Figure 3. Portion of the Proposed Northwest Connector Feasibility Study (FS-0303C)**



NOTE: This figure shows only Section 2 of the Proposed Northwest Connector Feasibility Study (FS-0303C) alternatives map (Figure 1). Section 1 of the study included a proposed connector from US 258/NC 24 to SR 1336 (Henderson Drive).

## 1.2 Project Setting

As shown in **Figure 1**, the project is located in northeast Jacksonville, which is located in Onslow County. The City of Jacksonville is the 14<sup>th</sup> largest city in North Carolina and is home to the largest Marine Corps base on the east coast, Camp Lejeune, and also to the Marine Corps Air Station New River. The project study area is located partially within the City of Jacksonville's limits and partially within unincorporated Onslow County.

The Department of Defense is one of the largest employers for the county, employing over 91,000 people. It is projected for the number of jobs to increase to 150,000 in Onslow County by 2045. Camp Lejeune is located approximately 5.5 miles southeast of the proposed project, and the Marine Corps Air Station is located approximately 4.5 miles southwest of the project.

Onslow County has an economy that is focused mainly on tourism and commercial activity geared toward Camp Lejeune. US 17 and US 258 are used as primary tourist commuter routes to coastal communities. The proposed project is located approximately 2.5 miles northeast of the New River and downtown Jacksonville. Jacksonville Commons and Richard Ray Park are two prominent recreational

resources located within the project vicinity, which increases the demand for bicycle, pedestrian, and transit facilities in the area.

According to Jacksonville Urban Area Metropolitan Planning Organization's (JUMPO) 2045 Metropolitan Transportation Plan (MTP), long-term goals for the area include congestion reduction, economic vitality, environmental sustainability, multimodal integration, safety and security, and system preservation.

### **1.3 Public Involvement**

A website for U-5791 was developed in 2018 to provide information and updates to the public about the project. A project newsletter was sent to surrounding residents, elected officials, and other local officials in October of 2018. The newsletter introduced the project to the public and provided an overall summary of the need for the project and decision-making process.

A virtual public meeting was held in August 2021 to review the purpose and need and corridor alternatives. Approximately 3,600 people viewed the public website and 129 people provided comments.

Overall, Alternatives 1A and 3 received the highest number of votes (32 and 28, respectively) from the public as being their top choices for alternatives, followed by Alternative 2b (27). Alternative 2a received the least amount of votes (1). The majority of those that chose Alternative 2b were people that live along Ramsey Road (24 out of the 27 that voted 2b as their top choice live on/close to Ramsey).

The majority of the comments received on the project confirmed that the public approves of making improvements in this area as Western Boulevard is highly congested. However, there are concerns about the impacts to residences from widening Ramsey Road as well as concerns over environmental impacts.

### **1.4 Nearby STIP Projects and Local Transportation Plans**

#### **1.4.1 Nearby STIP Projects**

The following STIP projects are located near U-5791 as listed in the 2020-2029 STIP:

- U-6081 – Upgrade NC 53 (Western Boulevard) to a superstreet from SR 1308 (Gum Branch Road) to US 17. Right-of-way acquisition is scheduled to occur in Fiscal Year (FY) 2026 with construction occurring in a future year.
- U-5903 – Upgrade SR 1336 (Henderson Road) to a superstreet from SR 1308 (Gum Branch Road) to NC 53 (Western Boulevard). Right-of-way acquisition is scheduled to occur in FY 2029 with construction occurring in a future year.
- U-5789 – Improve the intersection of NC 53 (Western Boulevard) and SR 2714 (Jacksonville Parkway). Right-of-way acquisition is currently underway, and construction is scheduled to occur in FY 2025.
- U-6200 – SR 1308 (Gum Branch Road). Williamsburg Parkway to Indian Drive. Upgrade to superstreet. Right-of-way acquisition is scheduled to occur in FY 2028 with construction occurring in a future year.

- U-4007E – NC 53. From US 17 (Marine Boulevard) to SR 2716 (Exchange Drive). Combined with U-5736 and U-5508. Right-of-way acquisition is currently underway, and construction is scheduled to occur in FY 2029.
- U-5787 – SR 2715 (Trade Street). NC 53 (Western Boulevard) to McDaniel Drive in Jacksonville. Construct roadway on new location. Right-of-way acquisition is scheduled to occur in FY 2024, and construction is scheduled to occur in FY 2026.
- U-6107 – US 17. McDaniel Drive / Workshop Lane. Upgrade Intersection. Right-of-way acquisition is scheduled to occur in FY 2025, and construction is scheduled to occur in FY 2027.
- U-5878 – Commerce Drive Extension. Commerce Drive to SR 1406 (Piney Green Road). Construct roadway on new location. Right-of-way acquisition is currently underway, and construction is scheduled to occur in FY 2022.
- U-5951 – US 17. US 17 Business (Marine Boulevard). Upgrade at-grade intersection to partial interchange. Right-of-way acquisition is scheduled to occur in FY 2027 with construction occurring in a future year.
- U-5728 – US 17 Business (Marine Boulevard). SR 1308 (Bell Fork Road) in Jacksonville. Improve intersection. Right-of-way acquisition is currently underway, and construction is scheduled to occur in FY 2025.
- U-5736 – NC 53 (Western Boulevard). US 17 (Marine Boulevard) to NC 24 (Lejeune Boulevard) in Jacksonville. Construct access management improvements. Right-of-way acquisition is currently underway, and construction is scheduled to occur in FY 2029.

## 2 Merger Concurrence Points 1 and 2

### 2.1 Concurrence Point 1

The Merger Team met and concurred on the project Purpose and Need and Study Area on October 20, 2021.

The purpose of the proposed project is to improve the transportation network within the study area by alleviating existing and future congestion along existing roadways and improving mobility.

The needs to be addressed by this project can be summarized as follows:

- There is congestion along existing roadways within the project study area (Western Boulevard and US 17) and it is projected to worsen in the future with growth and development.
- There are limited options for transportation mobility in this area of Jacksonville.

The proposed project study area was developed to address the above-stated purpose and need for U-5791. The project study area boundaries are fully depicted in **Figure 1** and **Figure 2**.

### 2.2 Concurrence Point 2

In addition to the No-Build Alternative, the Merger Team met and concurred on the following Detailed Alternatives Carried Forward on October 20, 2021.

Build Alternative 1b – New Northwestern Alignment and Symmetrical Ramsey Road Widening (Best Fit Alignment)

Build Alternative 2b – New Southeastern Alignment

#### 2.2.1 Detailed Study Alternatives Update

Since the Merger Team meeting, the project team was made aware of several proposed developments and facilities that would potentially be impacted by the proposed alternatives. These developments include:

December 2021

- A large residential development named Harvest Meadows along Drummer Kellum Road south of Jennifer Drive. The Harvest Meadows Development (96 single-family homes) is approved and currently under construction.

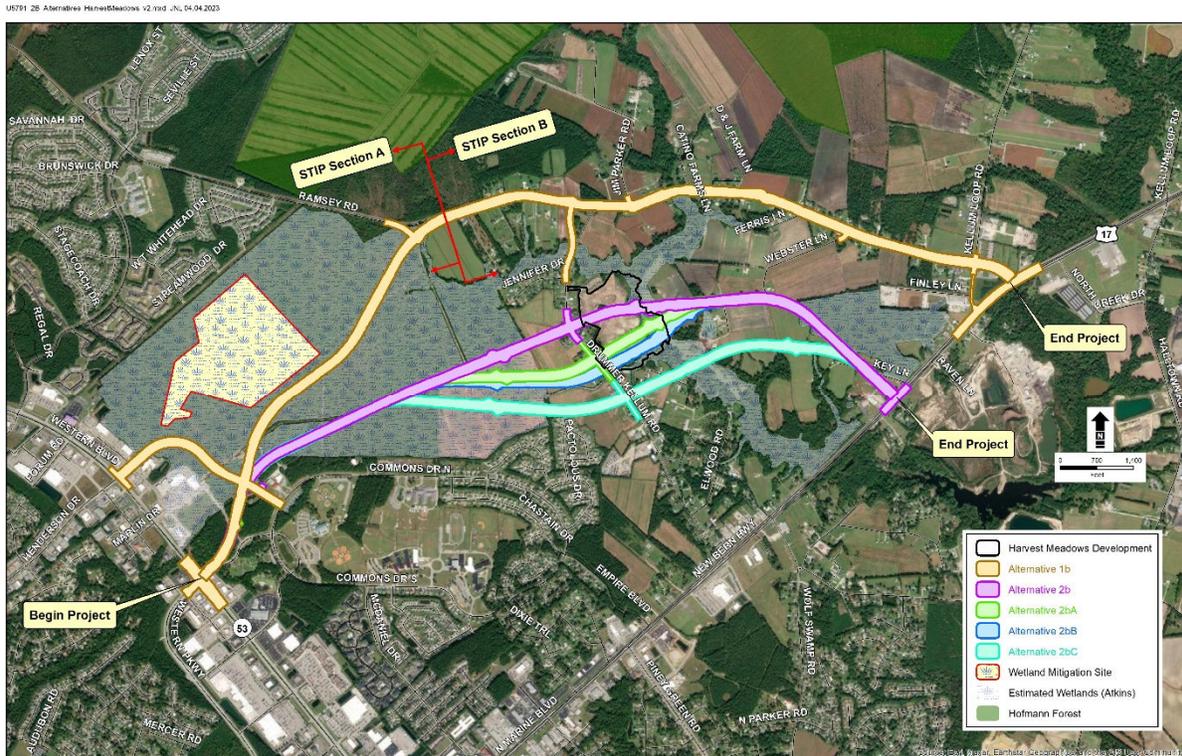
February 2022

- A relocated fire station located off of Marlin Drive, west of the proposed project.
- A commercial development (hotel) located off of Marlin drive, across from the Publix Supermarket.
- A commercial development (One Place) located on the corner of Firehouse Drive and Commons Drive.

**2.2.1.1 Harvest Meadows Residential Development (Revision #1)**

In December 2021, the project team meet with JUMPO to discuss the Harvest Meadows residential development that was within the path of Alternative 2b. The Harvest Meadows Development is approved and currently under construction. It was decided to move forward with Alternative 2b as is but to also consider new alignments located to the south that would not impact the development. Three additional alignment versions were developed (Alternative 2bA, Alternative 2bB, and Alternative 2bC) and reviewed by NCDOT (Figure 4). Alternative 1b would continue to move forward as is since it is not located in the vicinity of the new development. Impacts for the additional alignment versions are shown in Table 1.

**Figure 4. Harvest Meadows Development Avoidance/Minimization Alternatives**



**Table 1. Harvest Meadows Development Avoidance/Minimization Alternatives – Impact Summary**

	<b>2b – New Southeastern Alignment*</b>	<b>2bA</b>	<b>2bB</b>	<b>2bC</b>
Wetland Impacts (WOUS) (acres) <sup>2</sup>	35.91	35.03	35.78	32.25
Wetland Impacts (NWI)(acres)	1.08	1.73	1.08	0.47
Ponds (acres) <sup>2</sup>	0.05	0.04	0.12	0
Stream Impacts (linear ft) <sup>2</sup>	662	225	323	418
Ditches (linear ft) <sup>2</sup>	11,571	10,148	9,946	8,444
Prime Farmlands (acres)	46	49	45	48
Residential Structures	25	37	29	10
Business Structures	3	2	2	3
Recreational Areas/Parks <sup>3</sup>	2	2	2	2
Schools	0	0	0	0
Cemeteries	1	1	1	1
Churches	0	0	0	0

\*Original Alignment

NOTES: 1. Corridor width is based on conceptual designs with preliminary slope stakes plus 25 linear feet.

2. Wetland acreage determined through desktop evaluation process in coordination with the USACE.

Jurisdictional status of wetlands, streams, and ditches will be determined during field delineations of the selected alternative.

3. <http://ncnhde.natureserves.org/content/map>

NCDOT recommended that Alternatives 2b and 2bC be carried forward to the next screening, since Alternative 2b was the original alignment approved by the merger team and Alternative 2bC had the lowest impacts of the new avoidance alignments. Of the three avoidance alternatives, Alternative 2bA and 2bB had higher impacts than Alternative 2bC. Alternative 1b was retained and not revised because it was not in conflict with the Harvest Meadows development.

### 2.2.1.2 Additional Proposed Development (Revision #2)

In February 2022, new proposed facilities including a Fire Station, a commercial development named One Place, and a hotel were presented to the Division by the City of Jacksonville. These proposed facilities are located near the southern portion of the project near the Henderson Drive extension and would potentially be impacted by all alternatives. After coordination with the City of Jacksonville, it was decided to develop additional concepts to avoid or minimize impacts to these facilities.

Two additional versions of the three alternatives (1b, 2b, and 2bC) were developed to minimize and avoid impacting these facilities for a total of nine alternatives. The additional concepts would have the same design as their original counterparts except near the Henderson Drive extension.

The nine build alternatives that were created based on information received from the City of Jacksonville regarding new development are described below. After the design criteria/typical section was approved in February 2022, the designs of the original three alternatives and their additional versions were revised with cross sections, profiles, and superelevation. Anticipated impacts are shown in **Table 2**.

- Alternative 1b Concepts (**Figure 5**)
  - Alternative 1b: Alternative 1b is the original alternative that moved forward from the CP1/CP2A merger meeting that was developed prior to the design team becoming aware of the new commercial developments. Alternative 1b would impact the future site of the fire station as well as a large retention pond. This alternative would, however, avoid the site of the future hotel and One Place. Of the Alternative 1b concepts, this alternative has the second lowest impacts to environmental resources.
  - Alternative 1b-1: Alternative 1b-1 has an alignment that is slightly northwest of the original Alternative 1b, closer to the commercial shopping center. Alternative 1b-1 would impact the site of the future hotel but would avoid the sites of the fire station, One Place, and large retention pond. This alternative has the highest amount of environmental impacts of the 1b concepts.
  - Alternative 1b-2: Alternative 1b-2 has an alignment that is slightly southeast of the original Alternative 1b, closer to Jacksonville Commons. Alternative 1b-2 would impact a small retention pond and a utility property. This alternative would avoid all three new developments as well as the large retention pond. Overall, Alternative 1b-2 has the least amount of impacts of the 1b concepts, including impacts to environmental resources, properties, and farmlands.
- Alternative 2b Concepts (**Figure 6**)
  - Alternative 2b: Alternative 2b is the original alternative that moved forward from the CP1/CP2A merger meeting that was developed prior to the design team becoming aware of the new commercial developments. Alternative 2b would avoid the site of the future hotel and One Place but would impact the future site of the fire station. This alternative has the second lowest amount of impacts to environmental resources of the 2bs.
  - Alternative 2b-1: Alternative 2b-1 has an alignment that is slightly northwest of the original Alternative 2b, closer to the commercial shopping center. This alternative has the highest amount of impacts to ditches of the 2bs. Alternative 2b-1 would avoid the sites of the fire station, One Place, and large retention pond but would impact the site of the future hotel.
  - Alternative 2b-2: Alternative 2b-2 has an alignment that is slightly southeast of the original Alternative 2b, closer to Jacksonville Commons. This alternative would avoid all three new developments and large retention pond but would impact a small retention pond and a utility property. While Alternative 2b-2 is fairly comparable overall in impacts to Alternative 2b, it will impact a slightly higher number of farmlands.

- Alternative 2bC Concepts (**Figure 7**)
  - Alternative 2bC: Alternative 2bC is the alternative that was moved forward by NCDOT in March of 2022 after the design team was made aware of the new Harvest Meadows residential development. This alternative would avoid the site of the future hotel and One Place but would impact the future site of the fire station.
  - Alternative 2bC-1: Alternative 2bC-1 has an alignment that is slightly northwest of the original Alternative 2b, closer to the commercial shopping center. Alternative 2bC-1 would impact the site of the future hotel but would avoid the sites of the fire station, One Place, and large retention pond. This alternative has the highest amount of environmental impacts of the 2bc concepts.
  - Alternative 2bC-2: Alternative 2bC-2 has an alignment that is slightly southeast of the original Alternative 2bC, closer to Jacksonville Commons. Alternative 1b-2 would impact a small retention pond and a utility property. This alternative has the least amount of properties/structures affected of all alternatives and also has the second lowest amount of environmental impacts of all alternatives.

Figure 5. Alternative 1b Concept Sketches

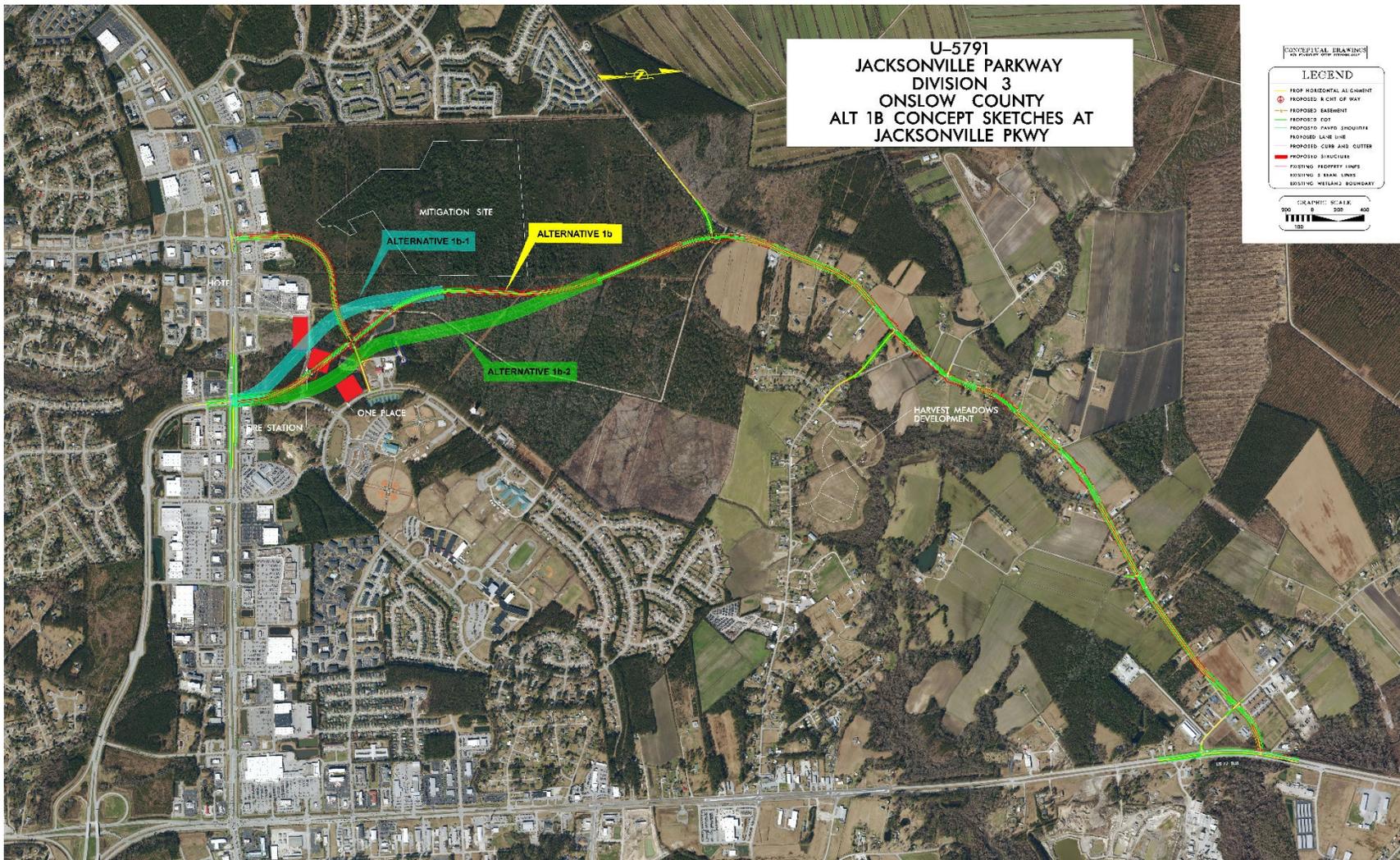


Figure 6. Alternative 2b Concept Sketches

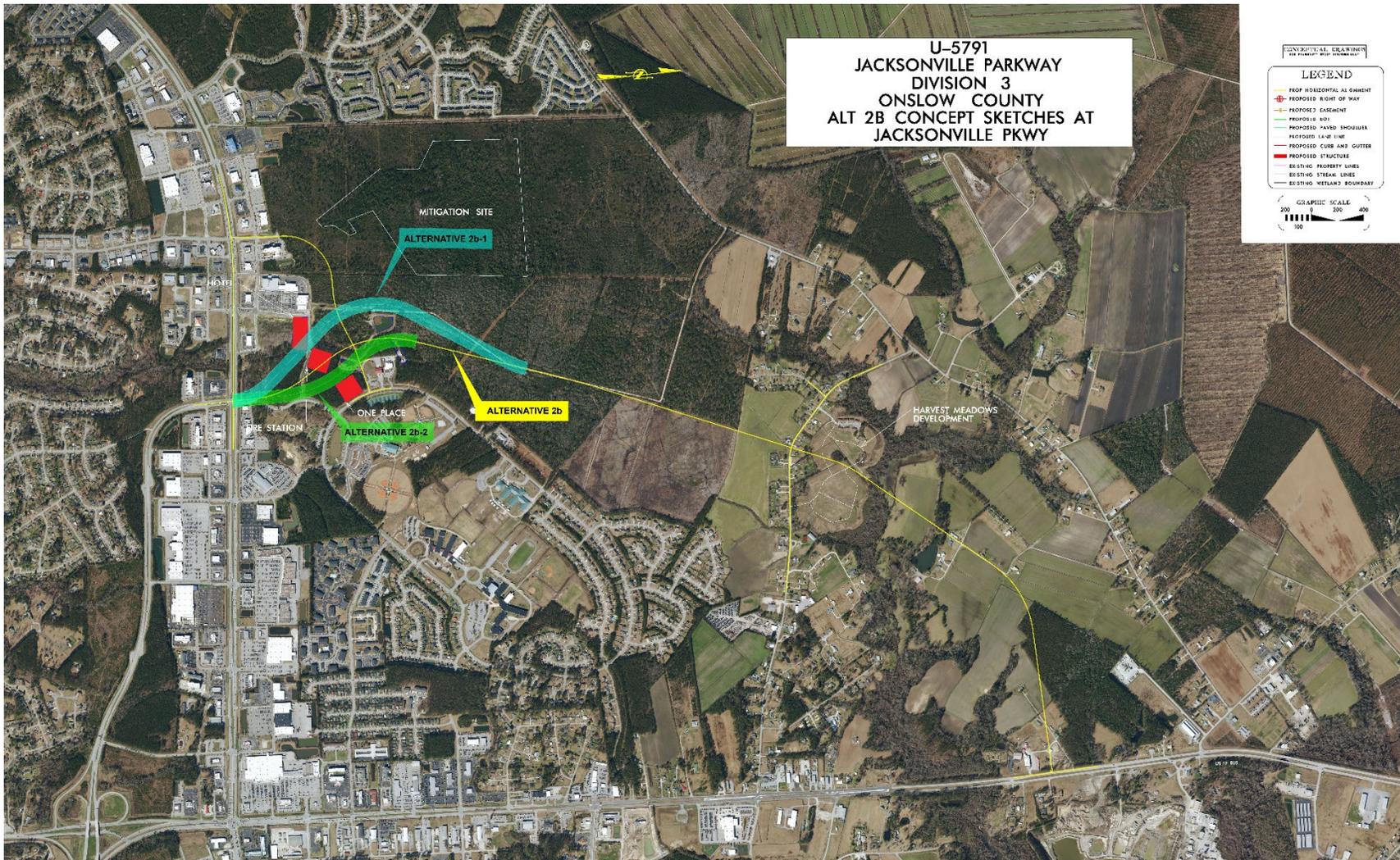
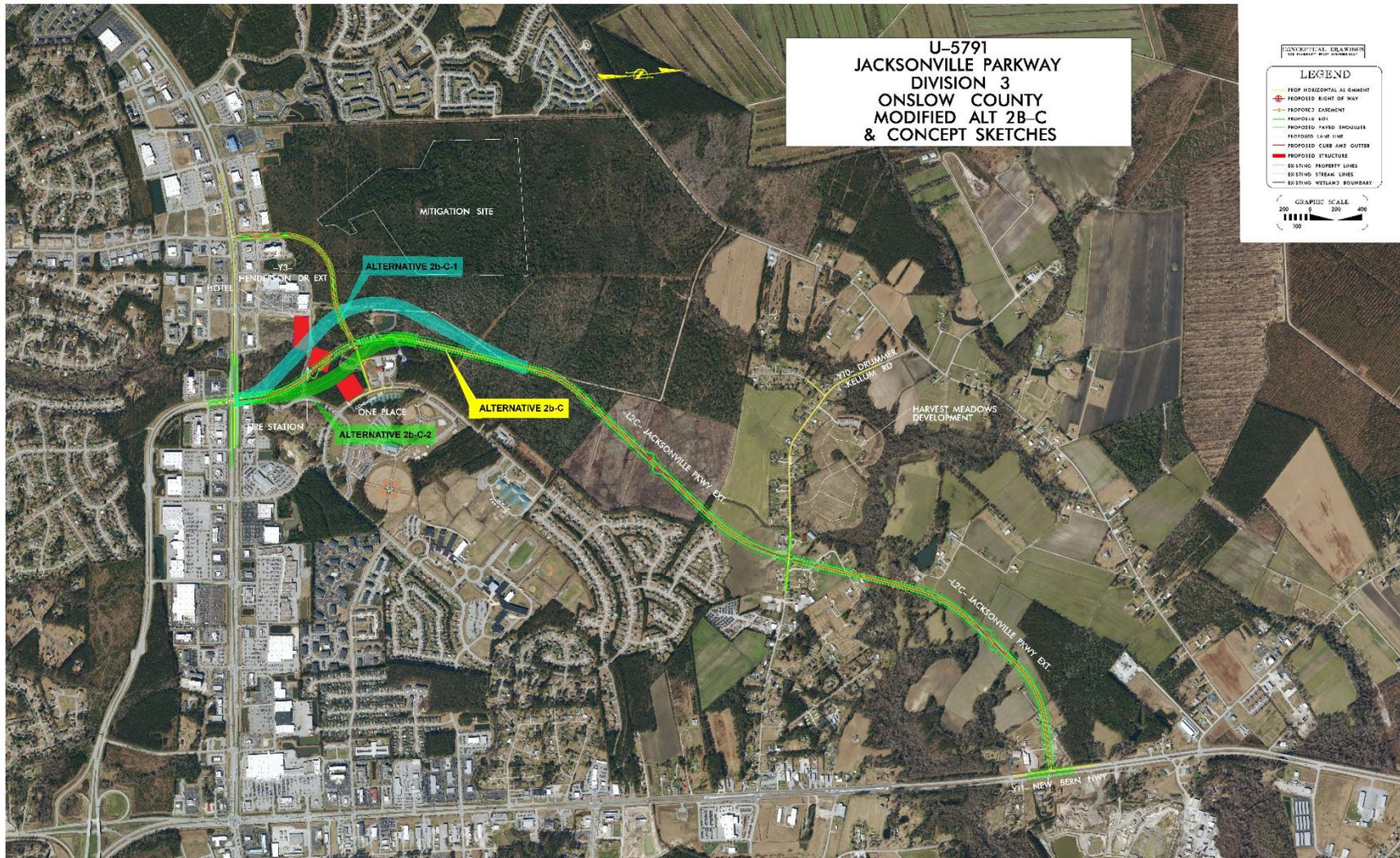


Figure 7. Alternative 2bC Concept Sketches



### 2.2.2 Detailed Study Alternatives Carried Forward Update

Based on the updated impacts shown in **Table 2** and to be consistent with previous decisions by the Merger Team, NCDOT recommends that the following two (2) additional alternatives be carried forward for detailed study.

- Alternative 1b-2 – Renamed to Alternative 1b Revised
- Alternative 2bC-2 – Renamed to Alternative 2b Revised

**Table 2. Additional Development Impact/Updated Build Alternatives Impact Summary**

	Alt 1b - New Northwestern Alignment and Symmetrical Ramsey Road Widening <sup>1</sup>	Alt 1b-1 - Northern Alignment around Fire Station <sup>1</sup>	Alt 1b-2 - Southern Alignment between Fire Station and OnePlace <sup>1</sup>	Alt 2b - New Southeastern Alignment <sup>1</sup>	Alt 2b-1 - Northern Alignment around Fire Station <sup>1</sup>	Alt 2b-2 - Southern Alignment between Fire Station and OnePlace <sup>1</sup>	Alt 2bC - Alternative to avoid/minimize impacts to Harvest Meadows development) <sup>1</sup>	Alt 2bC-1 - Northern Alignment around Fire Station <sup>1</sup>	Alt 2bC-2 - Southern Alignment between Fire Station and OnePlace <sup>1</sup>
Wetland Impacts <sup>2</sup> (WOUS) (acres)	31.26	32.83	26.34	35.91	33.75	35.4	31.87	29.31	32.3
Wetland Impacts (NWI) (acres)	0.19	0.2	0.03	1.09	1.08	0.76	0.48	0.5	0.46
Surface Water Impacts <sup>2</sup> (acres)	1.09	0.4	0.55	0.05	0.04	0.19	0	0	0.14
Stream Impacts <sup>2</sup> (linear feet)	617	629	613	656	651	520	421	395	423
Tributary (linear feet)	19,593	19,654	19,126	11,261	13,267	11,205	8,729	10,857	8,831
Potential Structure Impacts									
Residential	31	31	31	25	25	25	11	11	11
Commercial	5	5	4	3	3	2	5	5	4
<b>Number of impacted Parcels</b>	140	142	140	72	72	69	61	65	63
Prime Farmlands (acres)	73.91	73.64	68.37	46.09	45.21	46.97	49.71	49.25	50.39
Historic Properties (no.)	0	0	0	0	0	0	0	0	0
Recorded Archaeological Sites (no.)	0	0	0	0	0	0	0	0	0
Recreational Areas/Parks (no.) <sup>3</sup>	2	2	2	2	2	2	2	2	2
Schools (no.)	0	0	0	0	0	0	0	0	0
Cemeteries (no.)	1	1	1	1	1	1	1	1	1
Churches (no.)	0	0	0	0	0	0	0	0	0
NCDOT Recommendation	Eliminate	Eliminate	Carry Forward	Eliminate	Eliminate	Eliminate	Eliminate	Eliminate	Carry Forward
Alternatives Carried Forward - Renamed			Alt 1b Revised						Alt 2b Revised

NOTES: 1. Corridor width is based on conceptual designs with preliminary slope stakes plus 25 linear feet.  
 2. Wetland acreage determined through desktop evaluation process in coordination with the USACE. Jurisdictional status of wetlands, streams, and ditches will be determined during field delineations of the selected alternative.  
 3. <http://ncnhde.natureserves.org/content/map>

### 3 Revised Concurrence Point 2

The original Detailed Alternatives Carried Forward that the Merger Team met and concurred on October 20, 2021, were:

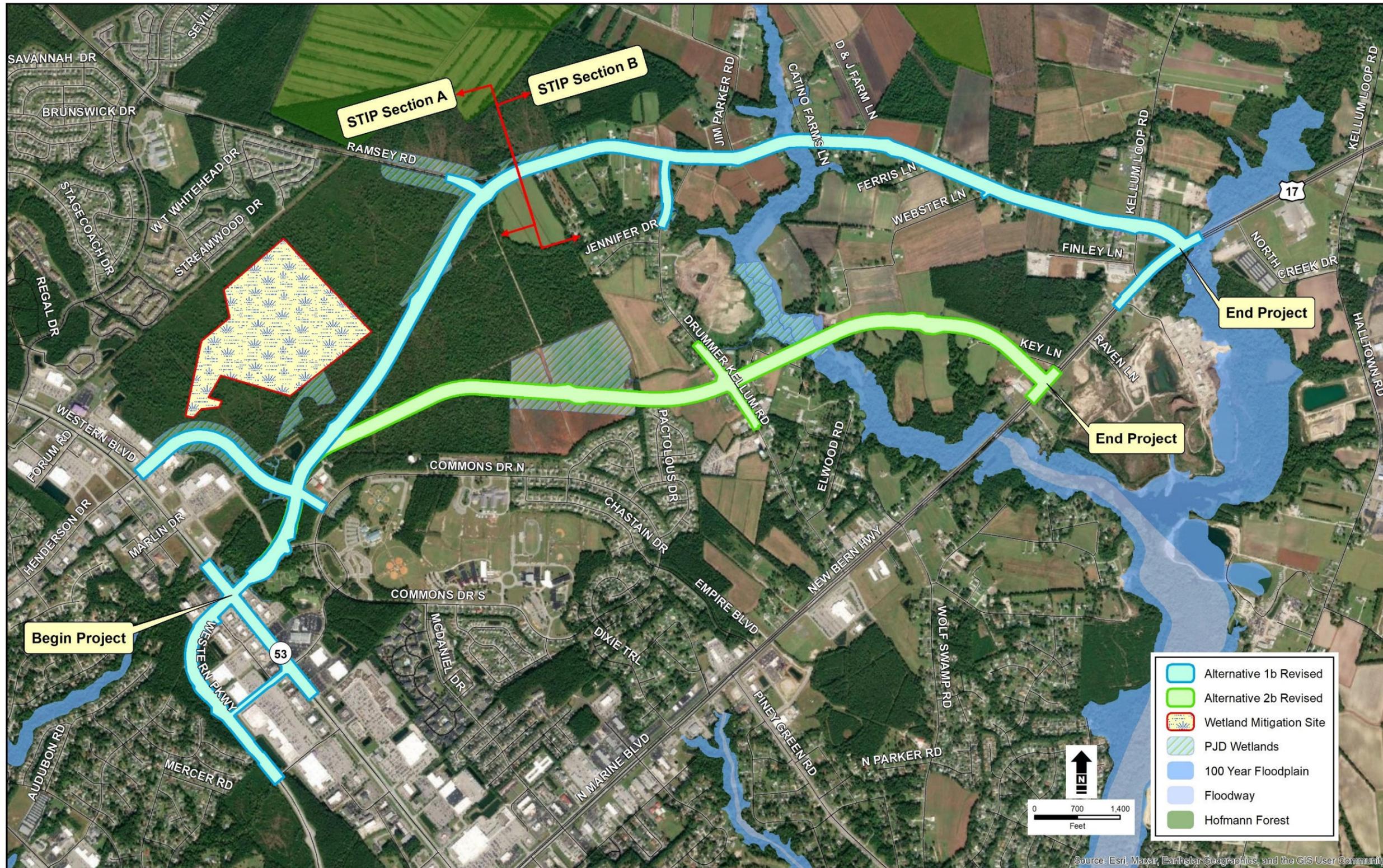
- Build Alternative 1b – New Northwestern Alignment and Symmetrical Ramsey Road Widening (Best Fit Alignment)
- Build Alternative 2b – New Southeastern Alignment

With the review of additional development and analysis of impacts, the updated Detailed Alternatives Carried Forward on April 19, 2023, are as follows (**Figure 8**):

- Build Alternative 1b Revised – New Northwestern Alignment that avoids the three new developments discussed in February 2022 and Best Fit Alignment for Ramsey Road Widening.
- Build Alternative 2b Revised – New Southeastern Alignment that avoids the three new developments and the Harvest Meadows residential development.

Updated CP2 forms are located in Appendix A.

Figure 8. Detailed Alternatives Carried Forward



## 4 References

North Carolina Department of Transportation (NCDOT)

NCDOT 2020-2029 State Transportation Improvement Program (STIP)

NCDOT Crash Data Reports (2016-2021)

NCDOT Feasibility Study for Jacksonville Bypass Extension

NCDOT FS-0303C Proposed Connector (Northwest Corridor) From US 258/NC 24 to US 17 (November 2007)

NCDOT FS-1003A: NC 53 (Western Boulevard) from US 17 to NC 24 (June 2016)

### **MPO Documents**

JUMPO Jacksonville Bicycle and Pedestrian Transportation Plan (June 2008)

Jacksonville Urban Area Metropolitan Planning Organization (JUMPO) 2045 Metropolitan Transportation Plan (March 2020)

JUMPO Western Boulevard (NC 53) Corridor Study (January 2015)

### **Local Plans and Documents**

MCB Camp Lejeune/MCAS New River Transportation Demand Management Plan (June 2011)

Onslow County Comprehensive Plan (CAMA Core Land Use Plan) (Oct 2009)

### **Socio-Economic Data Sources**

US Census Bureau American Community Survey (ACS) 5-Year Estimate (2011-2015)

US Census Bureau 2000, 2010

NC Office of State Budget and Management

## 5 Supporting Documentation

2018, August	Traffic Forecast for U-5791 (SR 2714 (Jacksonville Parkway Extension) from NC 24 to US 17) and U-6081 (NC 53 (Western Boulevard) Improvements) Onslow County. Prepared by Patriot Transportation Engineering.
2019, August	NCDOT Alternatives Analysis Meeting Minutes. Prepared by Atkins.
2022, November	Traffic Forecast for U-5791 (SR 2714 (Jacksonville Parkway Extension) from NC 24 to US 17), Alternative 2b/ 2b Revisited, Onslow County
2023, January	Draft Natural Resources Technical Report. Prepared by Atkins
2023, February	Draft Hydraulic Planning Report. Prepared by Atkins

## Appendix A. Updated CP2 Form

**Section 404/NEPA Merger Team Meeting Agreement**

**Concurrence Point No. 2**

**Detailed Study Alternatives Carried Forward**

**Project Name/Description:** Extension of Jacksonville Parkway (SR 2714) from Western Boulevard (NC 53) to New Bern Highway (US 17) in Onslow County.

**WBS No. 44363.1.1, STIP Project No. U-5791A and U-5791B.**

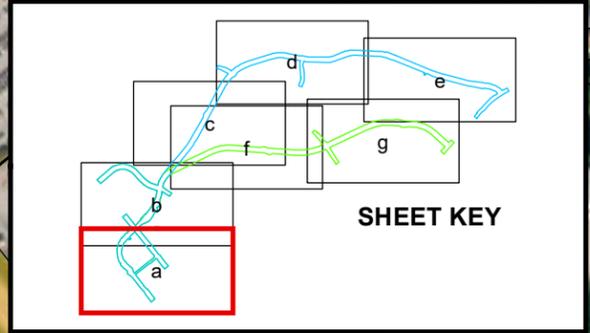
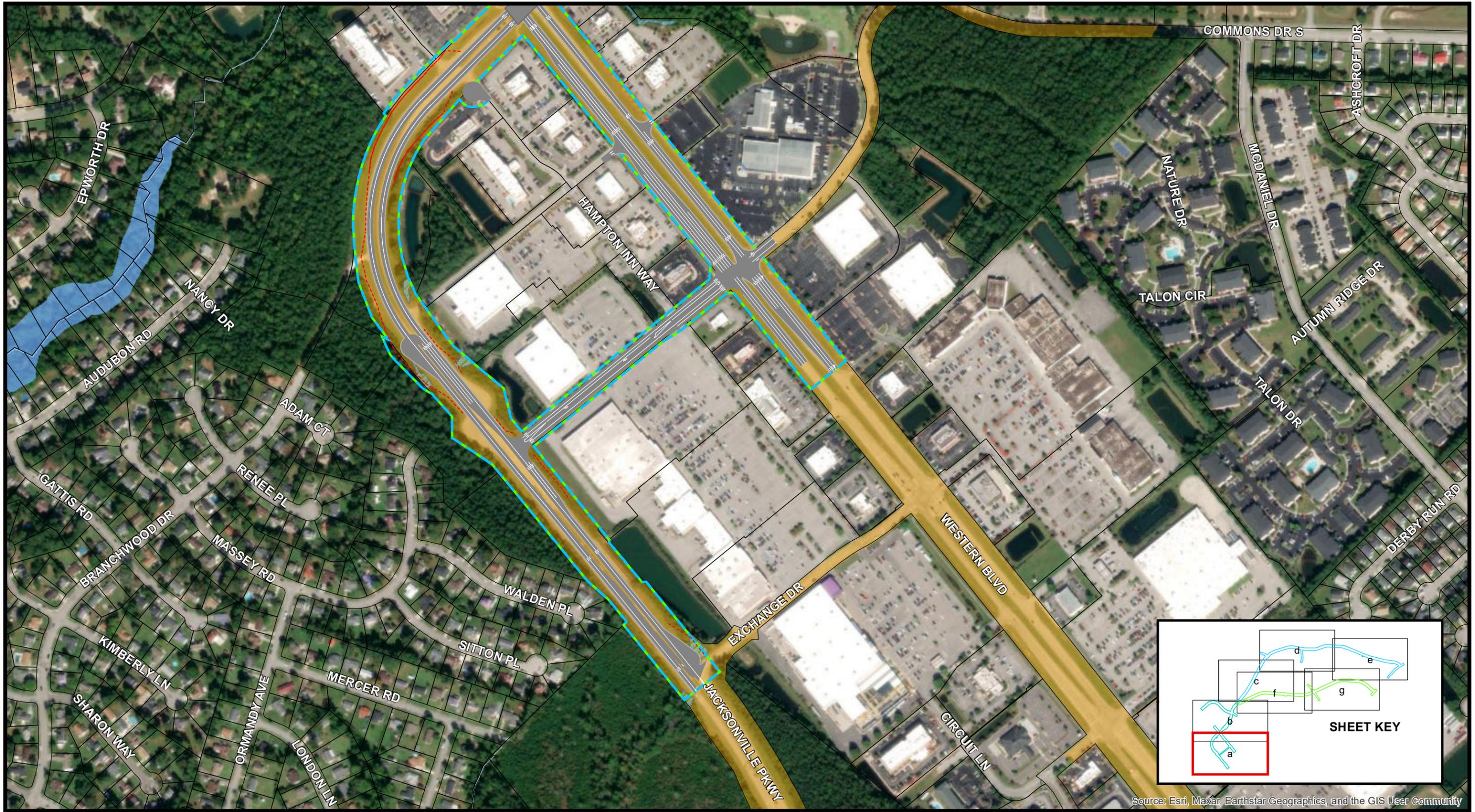
**Alignment Alternatives Carried Forward:**

- \_\_\_\_\_ Alternative 1b – New Northwestern Alignment and Symmetrical Ramsey Road Widening (Best Fit Alignment)
- \_\_\_\_\_ Alternative 1b-1 - New Northern Alignment around Fire Station and Symmetrical (Best Fit Alignment) Ramsey Road Widening
- \_\_\_\_\_ Alternative 1b-2 (Alt 1b Revised) – New Southern Alignment between Fire Station and One Place and Symmetrical (Best Fit Alignment) Ramsey Road Widening
- \_\_\_\_\_ Alternative 2b – New Southeastern Alignment to US 17
- \_\_\_\_\_ Alternative 2b-1 – New Northern Alignment around Fire Station to US 17
- \_\_\_\_\_ Alternative 2b-2 – New Southern Alignment between Fire Station and One Place to US 17
- \_\_\_\_\_ Alternative 2bC – New Southeastern Alignment to avoid/minimize impacts to Harvest Meadows to US 17
- \_\_\_\_\_ Alternative 2bC-1 – New Northern Alignment around Fire Station and avoid/minimize impacts to Harvest Meadows to US 17
- \_\_\_\_\_ Alternative 2bC-2 (Alt 2b Revised) – New Southern Alignment between Fire Station and One Place and avoid/minimize impacts to Harvest Meadows to US 17

The Merger Team members have concurred, on this date of April 19, 2023, on the above identified detailed study alternatives to be carried forward for STIP Project U-5791.

USACE _____	NCDOT _____
USEPA _____	NCHPO _____
USFWS _____	JUMPO _____
NCDWR _____	
NCWRC _____	
NCDCM _____	

## Appendix B. Alternatives Map Book



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



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Feet

Source: ESRI, NCDOT, Onslow County, NCOneMap, City of Jacksonville.  
Aerial Photo: [http://goto.arcgisonline.com/maps/World\\_Imagery](http://goto.arcgisonline.com/maps/World_Imagery)

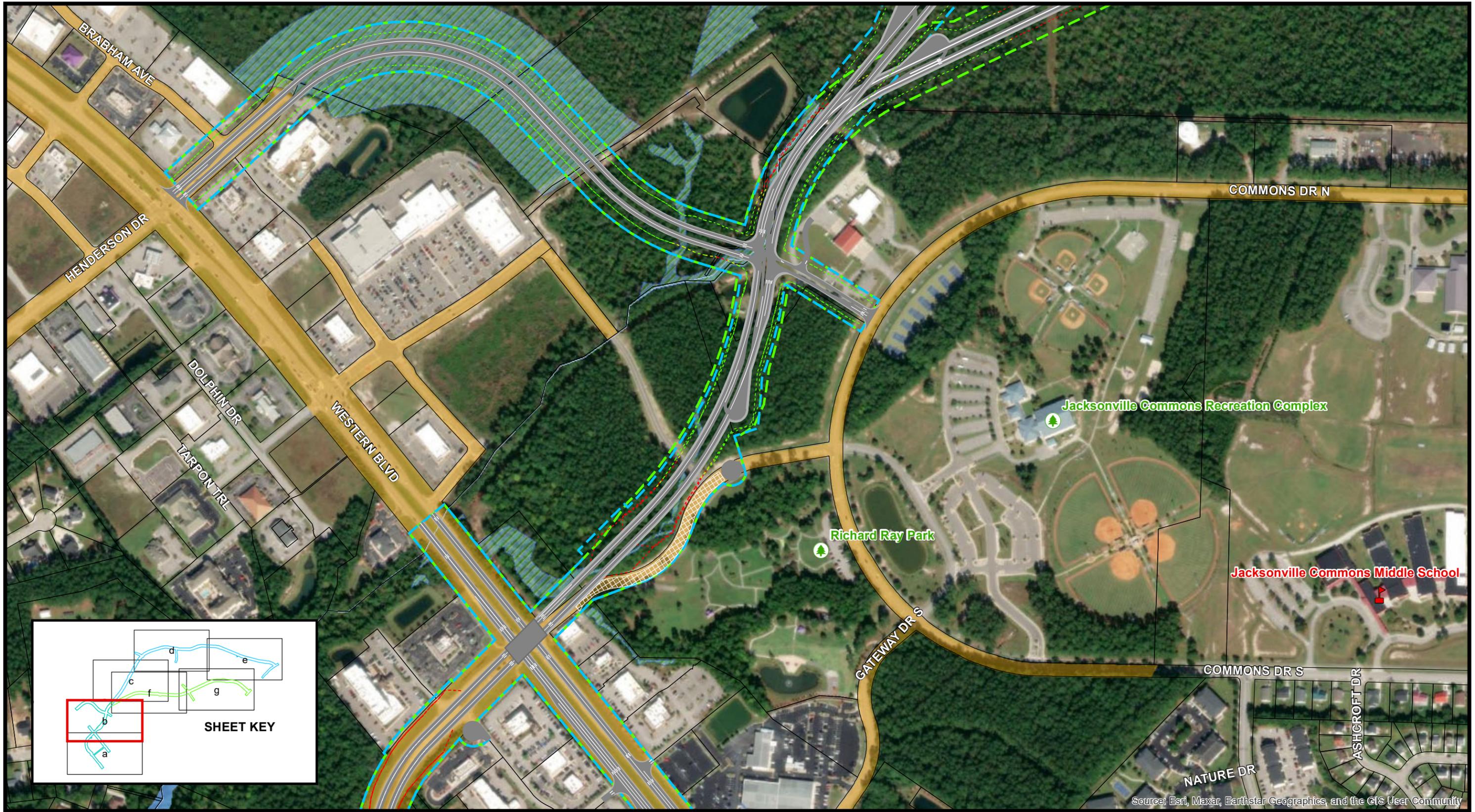
**LEGEND**

- |                  |                         |                     |                  |                         |
|------------------|-------------------------|---------------------|------------------|-------------------------|
| Church           | Alternative 1b Revised  | Streams             | Slopestake Lines | Lane Lines              |
| State Owned Land | Alternative 2b Revised  | 100 Year Floodplain | Cut Slope        | Proposed Edge of Travel |
| School           | Parcels                 | Floodway            | Fill Slope       | Proposed Paved Shoulder |
| Park             | Wetland Mitigation Site | PJD Wetlands        | Transition Line  | Existing Right-of-way   |

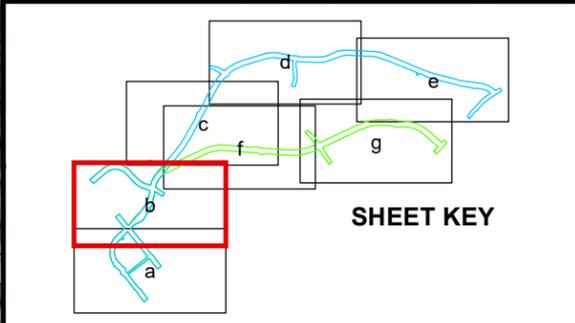
**ALIGNMENT ALTERNATIVES**

JACKSONVILLE PARKWAY EXTENSION  
NC 53 (WESTERN BLVD.) TO US 17  
STIP PROJECT  
NO. U-5791

**SHEET**  
**1a**



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



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Feet

Source: ESRI, NCDOT, Onslow County, NCOneMap, City of Jacksonville.  
Aerial Photo: [http://goto.arcgisonline.com/maps/World\\_Imagery](http://goto.arcgisonline.com/maps/World_Imagery)

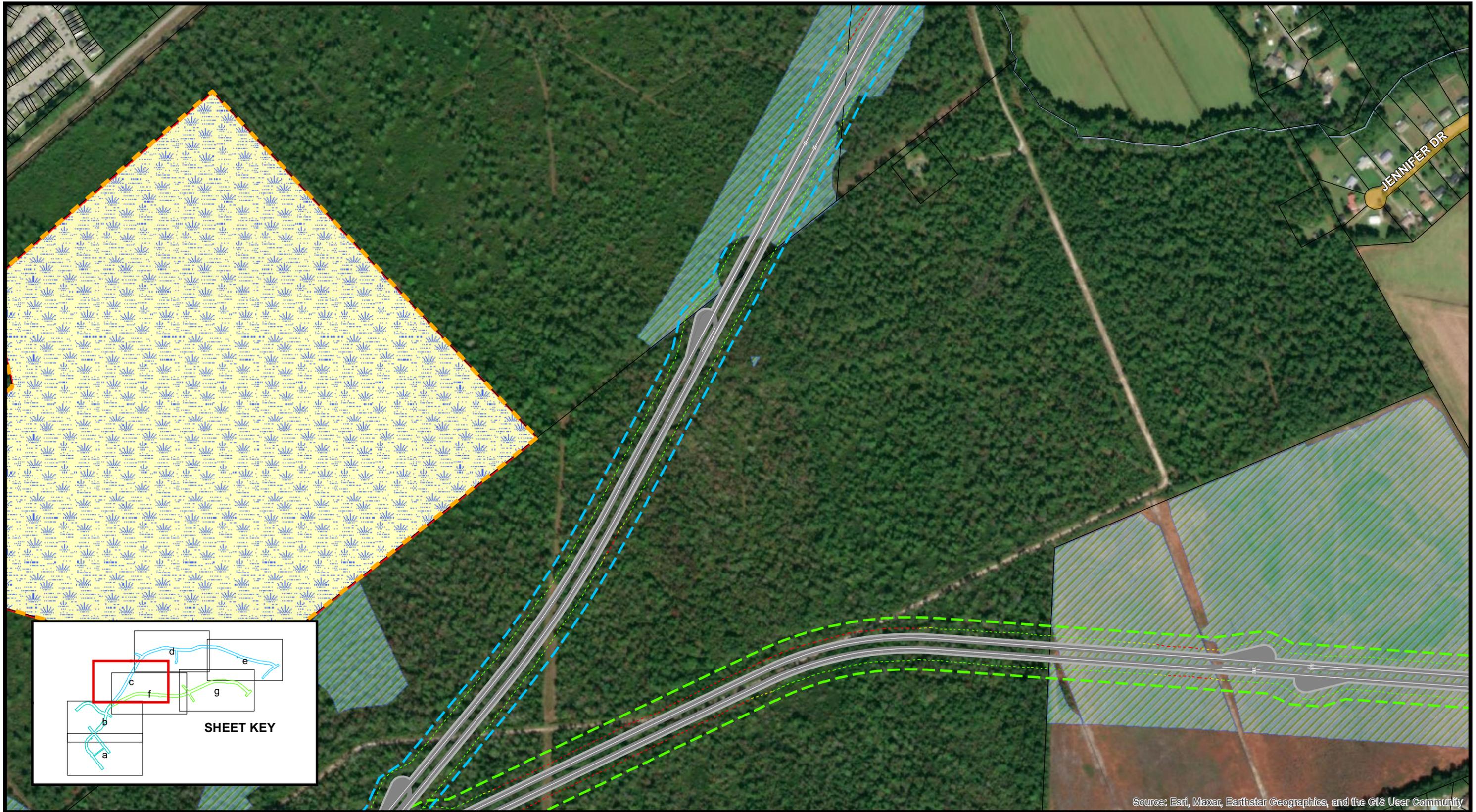
LEGEND

- Church
- State Owned Land
- School
- Park
- Alternative 1b Revised
- Alternative 2b Revised
- Parcels
- Wetland Mitigation Site
- Streams
- 100 Year Floodplain
- Floodway
- PJD Wetlands
- Slopestake Lines  
Cut Slope
- Fill Slope
- Transition Line
- Lane Lines
- Proposed Edge of Travel
- Proposed Paved Shoulder
- Existing Right-of-way

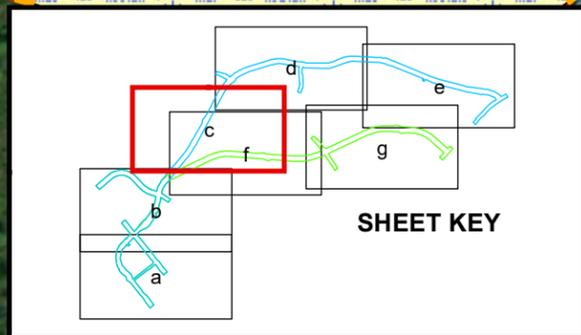
**ALIGNMENT ALTERNATIVES**

JACKSONVILLE PARKWAY EXTENSION  
NC 53 (WESTERN BLVD.) TO US 17  
STIP PROJECT  
NO. U-5791

**SHEET  
1b**



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



0 200 400  
Feet

Source: ESRI, NCDOT, Onslow County, NCOneMap, City of Jacksonville.  
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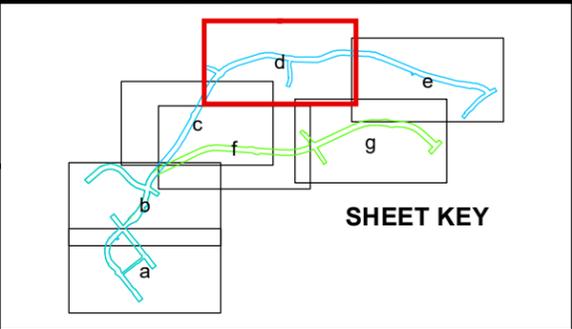
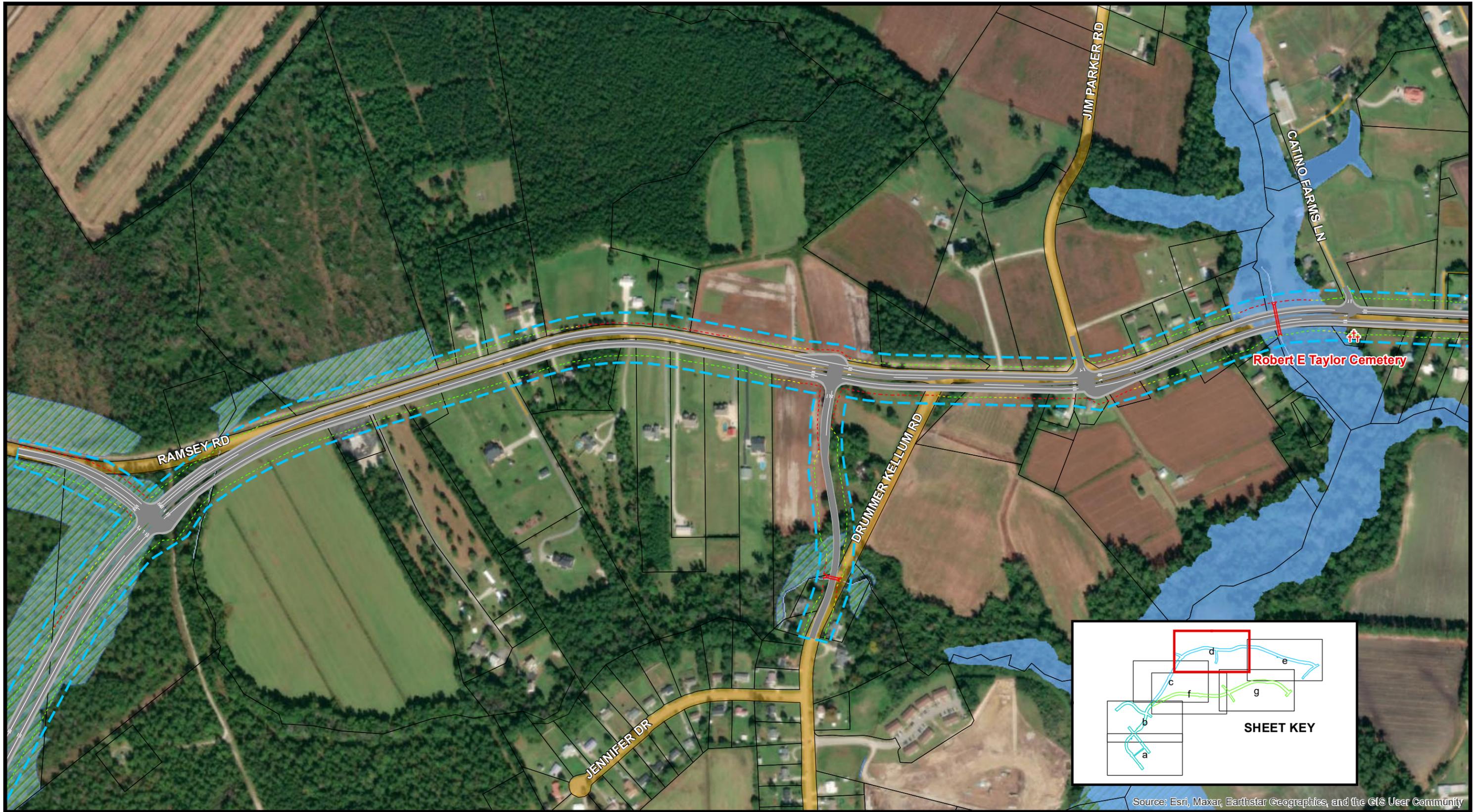
**LEGEND**

- Church
- State Owned Land
- School
- Park
- Alternative 1b Revised
- Alternative 2b Revised
- Parcels
- Wetland Mitigation Site
- Streams
- 100 Year Floodplain
- Floodway
- PJD Wetlands
- Slopestake Lines**
- Cut Slope
- Fill Slope
- Transition Line
- Lane Lines
- Proposed Edge of Travel
- Proposed Paved Shoulder
- Existing Right-of-way

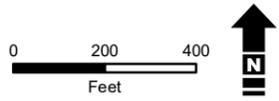
**ALIGNMENT ALTERNATIVES**

JACKSONVILLE PARKWAY EXTENSION  
NC 53 (WESTERN BLVD.) TO US 17  
STIP PROJECT NO. U-5791

**SHEET 1c**



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Source: ESRI, NCDOT, Onslow County, NCOneMap, City of Jacksonville. Aerial Photo: [http://goto.arcgisonline.com/maps/World\\_Imagery](http://goto.arcgisonline.com/maps/World_Imagery)

**LEGEND**

- Church
- State Owned Land
- School
- Park
- Alternative 1b Revised
- Alternative 2b Revised
- Parcels
- Wetland Mitigation Site

- Streams
- 100 Year Floodplain
- Floodway
- PJD Wetlands

- Slopestake Lines**
- Cut Slope
  - Fill Slope
  - Transition Line

- Lane Lines
- Proposed Edge of Travel
- Proposed Paved Shoulder
- Existing Right-of-way

- Proposed Culvert
- Proposed Bridge

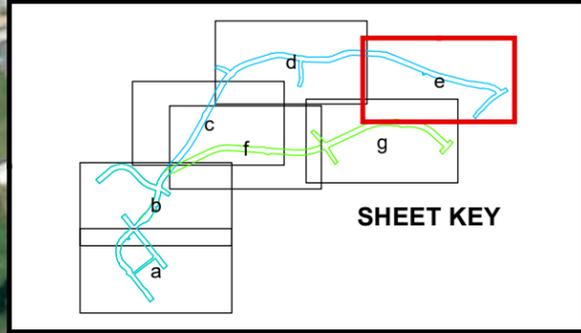
**ALIGNMENT ALTERNATIVES**

JACKSONVILLE PARKWAY EXTENSION  
 NC 53 (WESTERN BLVD.) TO US 17  
 STIP PROJECT NO. U-5791

**SHEET 1d**



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



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Feet

Source: ESRI, NCDOT, Onslow County, NCOneMap, City of Jacksonville.  
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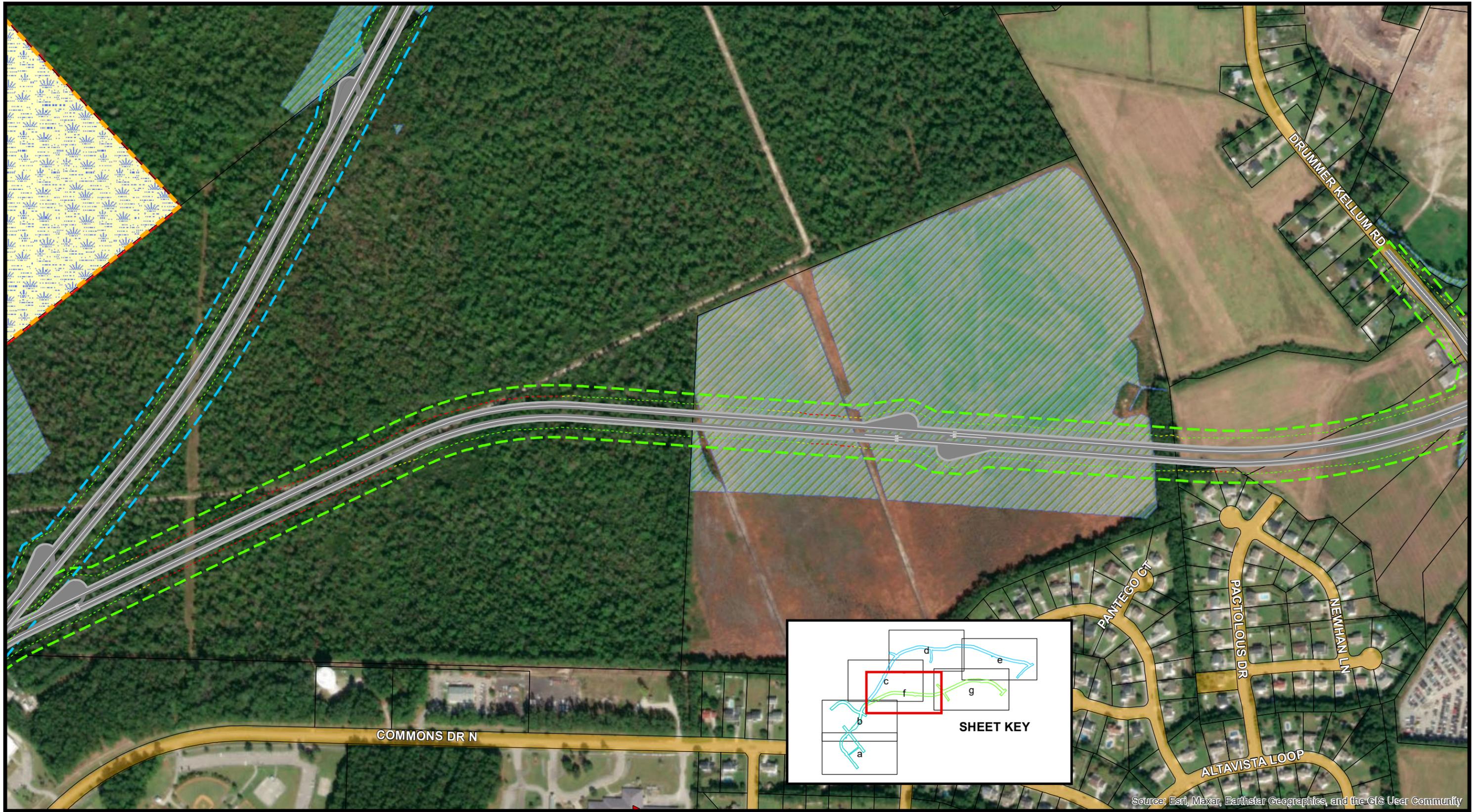
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- State Owned Land
- School
- Park
- Alternative 1b Revised
- Alternative 2b Revised
- Parcels
- Wetland Mitigation Site
- Streams
- 100 Year Floodplain
- Floodway
- PJD Wetlands
- Slopestake Lines**
- Cut Slope
- Fill Slope
- Transition Line
- Lane Lines
- Proposed Edge of Travel
- Proposed Paved Shoulder
- Existing Right-of-way

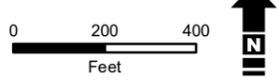
**ALIGNMENT ALTERNATIVES**

JACKSONVILLE PARKWAY EXTENSION  
NC 53 (WESTERN BLVD.) TO US 17  
STIP PROJECT  
NO. U-5791

**SHEET**  
**1e**



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Source: ESRI, NCDOT, Onslow County, NCOneMap, City of Jacksonville. Aerial Photo: [http://goto.arcgisonline.com/maps/World\\_Imagery](http://goto.arcgisonline.com/maps/World_Imagery)

**LEGEND**

- Church
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- School
- Park
- Alternative 1b Revised
- Alternative 2b Revised
- Parcels
- Wetland Mitigation Site

- Streams
- 100 Year Floodplain
- Floodway
- PJD Wetlands

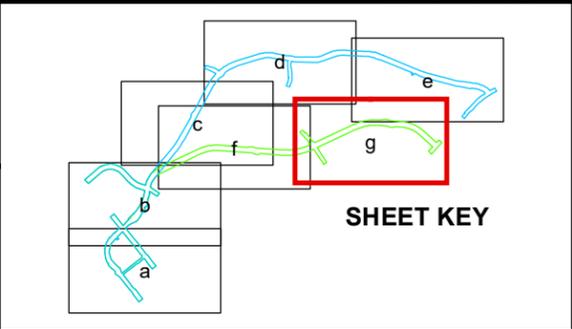
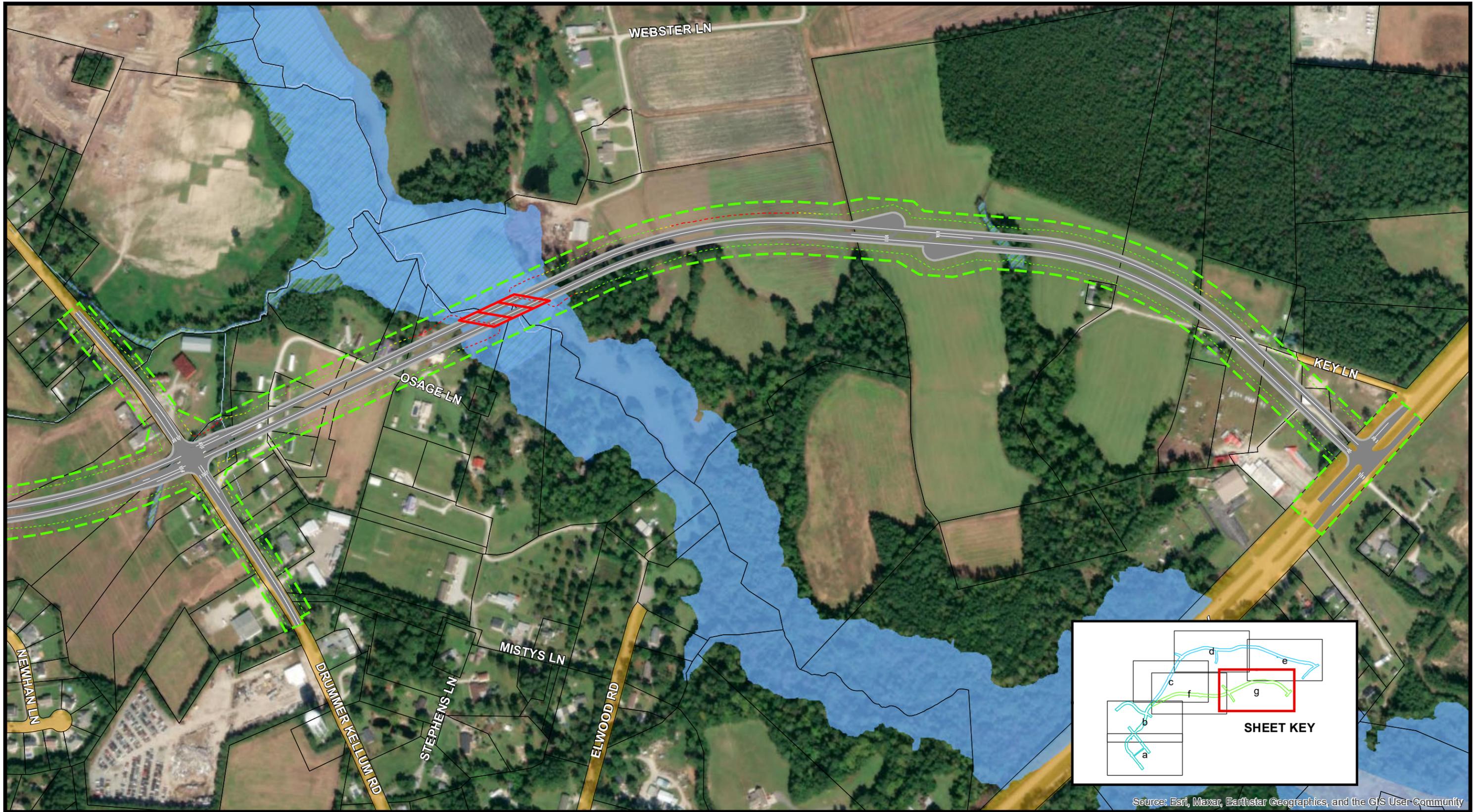
- Slopestake Lines**
- Cut Slope
  - Fill Slope
  - Transition Line

- Lane Lines
- Proposed Edge of Travel
- Proposed Paved Shoulder
- Existing Right-of-way

**ALIGNMENT ALTERNATIVES**

JACKSONVILLE PARKWAY EXTENSION  
 NC 53 (WESTERN BLVD.) TO US 17  
 STIP PROJECT NO. U-5791

**SHEET**  
**1f**



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



0 200 400  
Feet

Source: ESRI, NCDOT, Onslow County, NCOneMap, City of Jacksonville.  
Aerial Photo: [http://goto.arcgisonline.com/maps/World\\_Imagery](http://goto.arcgisonline.com/maps/World_Imagery)

**LEGEND**

- |                  |                         |                     |                         |                         |                  |
|------------------|-------------------------|---------------------|-------------------------|-------------------------|------------------|
| Church           | Alternative 1b Revised  | Streams             | <b>Slopestake Lines</b> | Lane Lines              | Proposed Culvert |
| State Owned Land | Alternative 2b Revised  | 100 Year Floodplain | Cut Slope               | Proposed Edge of Travel | Proposed Bridge  |
| School           | Parcels                 | Floodway            | Fill Slope              | Proposed Paved Shoulder |                  |
| Park             | Wetland Mitigation Site | PJD Wetlands        | Transition Line         | Existing Right-of-way   |                  |

**ALIGNMENT ALTERNATIVES**  
 JACKSONVILLE PARKWAY EXTENSION  
 NC 53 (WESTERN BLVD.) TO US 17  
 STIP PROJECT NO. U-5791

**SHEET 1g**

# U-5791

# Jacksonville Parkway Extension

*NC 53 (Western Boulevard) to US 17 (New Bern Highway), Widen to Multi-Lanes, Part on New Location*

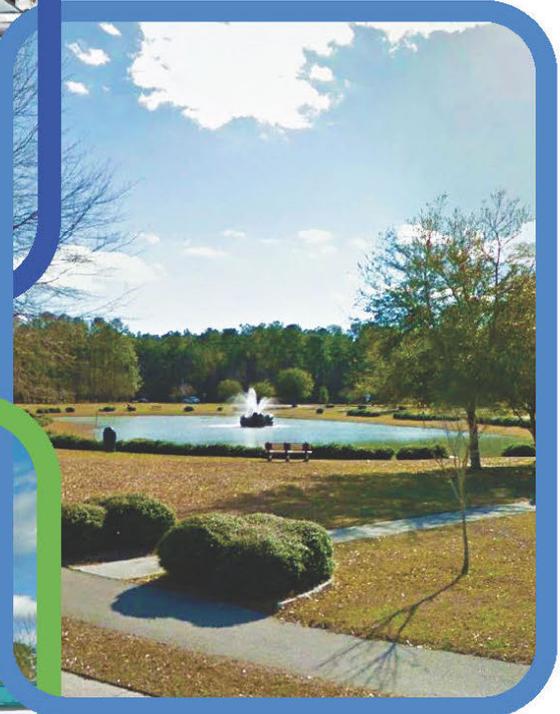


# U-5791

# Jacksonville Parkway Extension

*NC 53 (Western Boulevard) to US 17 (New Bern Highway), Widen to Multi-Lanes, Part on New Location*

## Merger Concurrence Point 2a Bridging Decisions and Alignment Review



Merger Concurrence Point Number 2 and 2A  
April 19, 2023





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# 1 Merger Concurrence Point 2a

Concurrence Point 2a entails Bridging Decisions and Alignment Review. This includes the identification of bridge locations and approximate lengths and a review of the preliminary alignment for each alternative.

## 1.1 Water Resources

Jurisdictional streams and wetlands are located in the study area and are shown in the appended Draft Natural Resource Technical Report figures (Appendix A). Seventeen streams were identified within the study area and included three named streams: Northeast Creek, Wolf Swamp Upper, and Wolf Swamp Lower. The remainder are unnamed tributaries (UTs) to these streams. These streams are considered jurisdictional surface waters under Section 404 of the Clean Water Act. All jurisdictional streams have been designated as warm water streams for the purposes of mitigation. Stream information are found in **Table 1**.

There are no designated Outstanding Resource Waters (ORW) identified within study area. There are no designated High-Quality Waters (HQW) or water supply watersheds (WS-I or WS-II) within, or within 1.0 mile downstream, of the study area. The North Carolina 2022 Final 303(d) list of impaired waters identifies no streams within the study area as an impaired water (NCDEQ, 2022).

Thirty-four wetlands were identified within the study area (**Table 2**). The location of these wetlands is shown in Appendix B. All wetlands in the study area are located within the White Oak River basin USGS Hydrologic Unit 03020302. USACE wetland determination forms and NCWAM forms for each site are included in a separate Jurisdictional Determination Package.

Forty-two surface waters were identified in the study area (**Table 3**).

The project study area is not located within a trout watershed, primary nursery area, or an area with an anadromous fish moratorium (NCDEQ, 2022).

Streams identified within the study area are located within the White Oak River Basin, which does not contain buffer rules administered by NCDWR. None of the streams within the U-5791 study area have been designated by the USACE as a Navigable Water under Section 10 of the Rivers and Harbors Act.

There is one Coastal Area Management Act (CAMA) Areas of Environmental Concern (AEC) identified in the study area. Northeast Creek is a designated Public Trust Water. There are no Coastal Barrier Resources System (CBRS) units within the study area.

**Table 1. Characteristics of Jurisdictional Streams in the Study Area**

Stream Name	Figure No.	Map ID	NCDWR Index Number	Best Usage Classification	Bank Height (ft)	Bankfull Width (ft)	Depth (in)	Length (ft)	Classification	Compensatory Mitigation Required	River Basin Buffer
UT1 to Wolf Swamp	Appendix B	SA	19-16-1	C; NSW	2.5	4	2	498	Intermittent	Yes	Not Subject
UT2 to Wolf Swamp	Appendix B	SB	19-16-1	C; NSW	5	6	2	595	Intermittent	Yes	Not Subject
UT3 to Wolf Swamp	Appendix B	SC	19-16-1	C; NSW	5	5	6	2,868	Perennial	Yes	Not Subject
UT4 to Wolf Swamp	Appendix B	SD	19-16-1	C; NSW	2	6	5	553	Perennial	Yes	Not Subject
UT5 to Wolf Swamp	Appendix B	SE	19-16-1	C; NSW	1.5	4	2	501	Intermittent	Yes	Not Subject
UT6 to Wolf Swamp	Appendix B	SF	19-16-1	C; NSW	4	2	4	230	Intermittent	Yes	Not Subject
UT7 to Wolf Swamp	Appendix B	SG	19-16-1	C; NSW	2.5	6	6	678	Perennial	Yes	Not Subject
UT8 to Wolf Swamp	Appendix B	SH	19-16-1	C; NSW	10	6	18	761	Intermittent	Yes	Not Subject
Northeast Creek	Appendix B	Northeast Creek	19-16-(0.5)	SC; NSW	5	30	1.5	1,249	Perennial	Yes	Not Subject
Wolf Swamp – Upper	Appendix B	Wolf Swamp – Upper	19-16-1	C; NSW	4	6	1	456	Perennial	Yes	Not Subject
Wolf Swamp – Lower	Appendix B	Wolf Swamp – Lower	19-16-1	C; NSW	4	6	1	2,570	Perennial	Yes	Not Subject
UT1 to Mill Creek	Appendix B	SAW-2021-0362 SA	19-9	SC; NSW	2.5	3.5	3	125	Perennial	Yes	Not Subject
UT2 to Mill Creek	Appendix B	SAW-2021-0362 SB	19-9	SC; NSW	1	2	1	96	Intermittent	Yes	Not Subject
UT3 to Mill Creek	Appendix B	SAW-2021-0362 SC	19-9	SC; NSW	0.5	1.5	0	52	Intermittent	Yes	Not Subject
UT4 to Mill Creek	Appendix B	SAW-2015-00746 SA	19-9	SC; NSW	2.5	3.5	2	1,086	Perennial	Yes	Not Subject
UT5 to Mill Creek	Appendix B	SAW-2015-00746 SB	19-9	SC; NSW	4.5	8	12	92	Perennial	Yes	Not Subject
UT6 to Mill Creek	Appendix B	SAW-2015-00746 SC	19-9	SC; NSW	2	3	33	129	Intermittent	Yes	Not Subject

**Table 2. Characteristics of Jurisdictional Wetlands in the Study Area**

Map Id	Figure Number	NCWAM Classification	NCWAM Rating	Hydrologic Classification	Area (ac) in Study Area
WA	Appendix B	Pine Flat	High	Non-Riparian	11.83
WB	Appendix B	Pine Flat	High	Non-Riparian	25.72
WC	Appendix B	Pine Flat	Medium	Non-Riparian	6.68
WD	Appendix B	Pine Flat	Medium	Non-Riparian	3.30
WE	Appendix B	Pine Flat	Low	Non-Riparian	0.47
WF	Appendix B	Pine Flat	Low	Non-Riparian	12.24
WG	Appendix B	Pine Flat	Low	Non-Riparian	39.13
WH	Appendix B	Bottomland Hardwood Forest	High	Riparian	0.90
WI	Appendix B	Bottomland Hardwood Forest	High	Riparian	0.27
WJ	Appendix B	Bottomland Hardwood Forest	High	Riparian	0.13
WK	Appendix B	Headwater Forest	Medium	Riparian	0.15
WL	Appendix B	Bottomland Hardwood Forest	Low	Riparian	2.47
WM	Appendix B	Bottomland Hardwood Forest	Low	Riparian	9.51
WN	Appendix B	Headwater Forest	Low	Riparian	0.29
WO	Appendix B	Bottomland Hardwood Forest	High	Riparian	0.38
WP	Appendix B	Bottomland Hardwood Forest	High	Riparian	0.16
SAW-2010-00362 WA	Appendix B	Headwater Forest	Low	Riparian	0.12
SAW-2010-00362 WB	Appendix B	Headwater Forest	Medium	Riparian	0.05
SAW-2010-00362 WC	Appendix B	Headwater Forest	Medium	Riparian	0.07
SAW-2010-00362 WD	Appendix B	Headwater Forest	Low	Riparian	0.06
SAW-2010-00362 WE	Appendix B	Headwater Forest	Low	Riparian	0.06
SAW-2014-01338 WA	Appendix B	Pine Flat	High	Non-Riparian	6.13
SAW-2015-00746 WA	Appendix B	Bottomland Hardwood Forest	Low	Riparian	0.08
SAW-2015-00746 WB	Appendix B	Bottomland Hardwood Forest	Low	Riparian	0.001
SAW-2015-00746 WC	Appendix B	Bottomland Hardwood Forest	Low	Riparian	0.01
SAW-2015-00746 WD	Appendix B	Bottomland Hardwood Forest	High	Riparian	1.12
SAW-2015-00746 WD-1	Appendix B	Headwater Forest	Medium	Riparian	0.34
SAW-2015-00746 WE	Appendix B	Headwater Forest	Medium	Riparian	0.20
SAW-2015-00746 WF	Appendix B	Headwater Forest	High	Riparian	0.13
SAW-2018-02190 WA	Appendix B	Headwater Forest	Low	Riparian	0.01
SAW-2018-02190 WB	Appendix B	Headwater Forest	Low	Riparian	0.03
SAW-2018-02190 WC	Appendix B	Bottomland Hardwood Forest	Low	Riparian	6.89

Map Id	Figure Number	NCWAM Classification	NCWAM Rating	Hydrologic Classification	Area (ac) in Study Area
SEGi-2022 WA	Appendix B	Headwater Forest	High	Riparian	2.18
SEGi-2022 WB	Appendix B	Pine Flat	Medium	Non-Riparian	7.46
SEGi-2022 WC	Appendix B	Headwater Forest	High	Riparian	0.02
				<b>Total</b>	<b>136.99</b>

**Table 3. Characteristics of Surface Waters in the Study Area**

Surface Water	Map ID of Connection	Area (ac) / Linear Feet (lf) in Study Area
PA	Northeast Creek	0.35 ac
PB	Wolf Swamp-Lower	2.90 ac
PC	Mill Creek	1.29
PD	Mill Creek	0.07 ac
PE	Mill Creek	0.14 ac
PF	Mill Creek	0.20 ac
PG	Mill Creek	0.06 ac
TA*	SB	390 lf
TB*	SB	1,091 lf
TC	SC	1,308 lf
TD	SE	595 lf
TE	Wolf Swamp-Upper	224 lf
TF	Wolf Swamp-Upper	213 lf
TG	PB	324 lf
TH*	SH	497 lf
TI*	PB	1,078 lf
TJ*	PB	1,068 lf
TK*	PB	872 lf
TL*	PB	766 lf
TM*	PB	327 lf
TN*	PB	247
TO*	SH	615 lf
TP*	WN	105 lf
TQ	Wolf Swamp-Lower	588 lf
TR	Northeast Creek	252 lf
TS	Northeast Creek	254 lf
TT*	Wolf Swamp-Lower	41 lf
SEGi 2022 TA*	SEGi 2022 WA	4,931 lf
SEGi 2022 TB*	SEGi 2022 WA	5,098 lf
SEGi 2022 TC	SEGi 2022 WA	242 lf
SEGi 2022 TD*	SEGi 2022 WA	366lf
SEGi 2022 TE*	SEGi 2022 WA	693 lf
SEGi 2022 TF	SEGi 2022 WA	512 lf
SEGi 2022 TG*	SEGi 2022 WA	865 lf
SEGi 2022 TH*	SEGi 2022 WA	305 lf
SEGi 2022 TI*	SEGi 2022 WA	749 lf
SEGi 2022 TJ*	SEGi 2022 WA	210 lf
SEGi 2022 TK*	SEGi 2022 WA	518 lf
SEGi 2022 TL*	SEGi 2022 WA	445 lf
SEGi 2022 TM*	SEGi 2022 WA	193lf
SEGi 2022 TN*	SEGi 2022 WA	370 lf
SEGi 2022 TO	SD	220 lf

\* Tributary that occurs within a hydric soil series

Ponds may be part of existing NPDES 402 Permit

Total impacts by build alternatives for streams and wetlands are shown in **Table 4**.

**Table 4. Total Potential Impacts to Streams and Wetlands by Build Alternative**

Resource	Alternative 1b Revised <sup>1</sup>	Alternative 2b Revised <sup>1</sup>
Streams (lf)	888	798
Wetlands (ac)	18.12	18.52
Tributary (lf)	457	767
Surface Waters (ac)	0.21	0.21

NOTES: 1. Alternatives based on preliminary design with preliminary slope stakes plus 25 linear feet.

Jurisdictional areas identified during original field investigations were verified by Brad Shaver of the U.S. Army Corps of Engineers (USACE) and Hannah Sprinkle of the NC Division of Water Resources (NCDWR) on June 1, 2022. The Preliminary Jurisdictional Determination (PJD) was approved by the USACE on October 21, 2022.

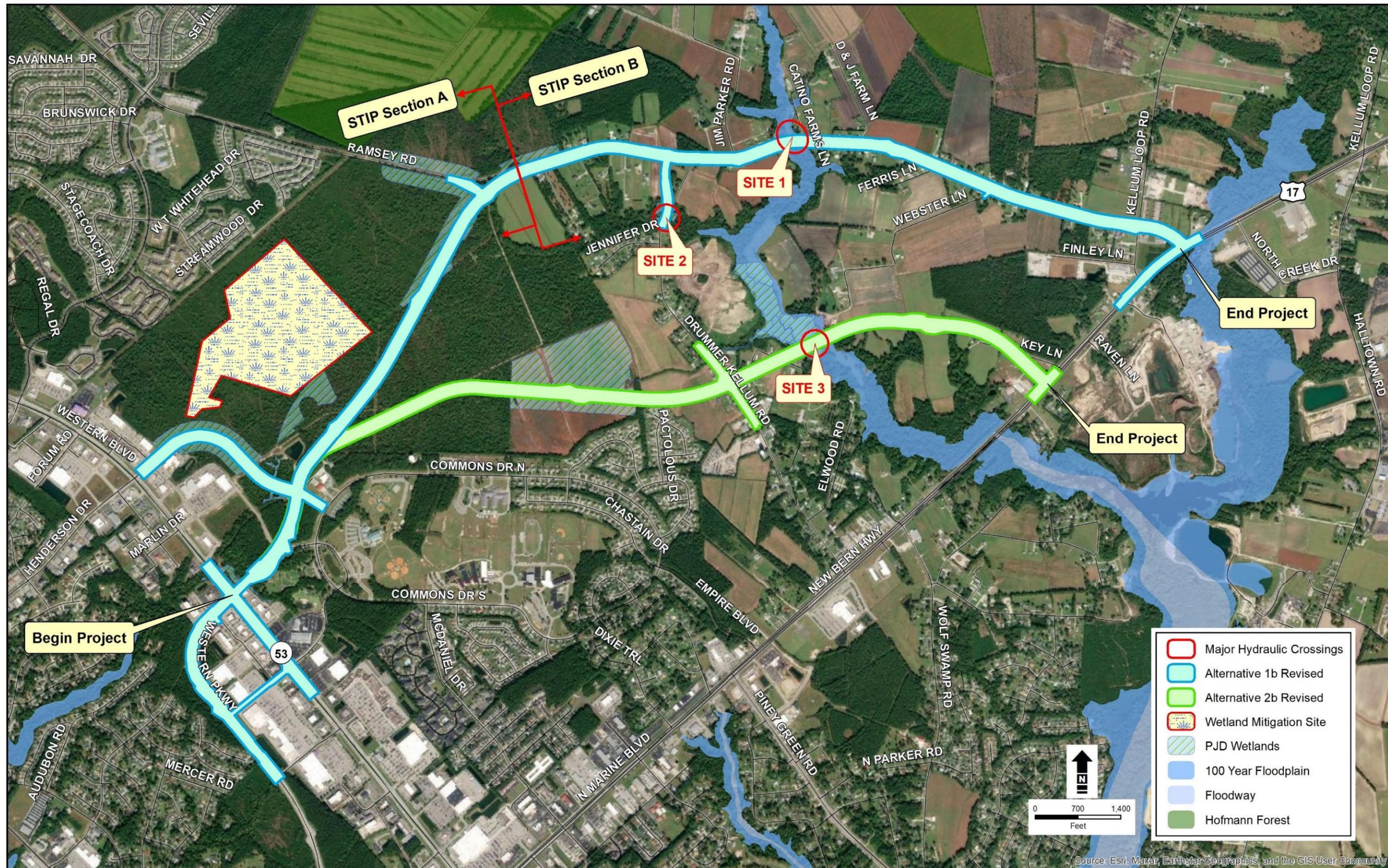
## 2 CP2A: Major Hydraulic Crossings

Major hydraulic crossings are those with a contributing drainage area requiring conveyance greater than a 72-inch pipe. A total of three (3) potential major hydraulic crossings were identified for the proposed project (**Figure 1**). These structures are described in **Table 5** and additional information including the site map and individual site plan and photographs are included in Appendix B.

**Table 5. Major Hydraulic Structures Recommendations, Cost Estimate, and Potential Impacts by Alternative**

Site Number	Route	Stream Name	NRTR Map ID	NCDWR Stream Index Number	Stream/Wetland Size (ft / ac)	Stream Class	Drainage Area (Mi <sup>2</sup> )	Existing Structure	Alternative 1b Revised			Alternative 2b Revised		
								Number, Size, Structure Type	Recommended Structure	Cost Estimate	Potential Stream/Wetland Impact	Recommended Structure	Cost Estimate	Potential Stream/Wetland Impact
1	Ramsey Road	Wolf Swamp Upper	Wolf Swamp Upper	19-16-1	456 linear feet of stream	C; NSW	2.79	155"x90" Aluminum Pipe Arch	155"x90"x132' Aluminum Pipe Arch	\$400,000	137 linear feet of stream			
2	Drummer Kellum	Bucks Branch (UT4 to Wolf Swamp)	SD	19-16-1	553 linear feet of stream / 1.3 acres of wetlands	C; NSW		103"x71" Pipe Arch	103"x71"x60' Pipe Arch	\$130,000	78 linear feet of stream / 0.34 acres of wetlands			
3	Jacksonville Parkway Extension	Wolf Swamp Lower / WM	Wolf Swamp Lower	19-16-1	2,570 linear feet of stream / 9.51 acres of wetland	C; NSW	4.66	None				270' 3-Span 54" Prestressed concrete girders (1@90', 1@100', 1@80'), 35-degree skew	\$3.7M (Based on \$150 a square foot)	0.55 acres of wetlands

Figure 1. Major Hydraulic Structures



## 3 References

North Carolina Department of Transportation (NCDOT)

NCDOT 2020-2029 State Transportation Improvement Program (STIP)

NCDOT Crash Data Reports (2016-2021)

NCDOT Feasibility Study for Jacksonville Bypass Extension

NCDOT FS-0303C Proposed Connector (Northwest Corridor) From US 258/NC 24 to US 17 (November 2007)

NCDOT FS-1003A: NC 53 (Western Boulevard) from US 17 to NC 24 (June 2016)

### **MPO Documents**

JUMPO Jacksonville Bicycle and Pedestrian Transportation Plan (June 2008)

Jacksonville Urban Area Metropolitan Planning Organization (JUMPO) 2045 Metropolitan Transportation Plan (March 2020)

JUMPO Western Boulevard (NC 53) Corridor Study (January 2015)

### **Local Plans and Documents**

MCB Camp Lejeune/MCAS New River Transportation Demand Management Plan (June 2011)

Onslow County Comprehensive Plan (CAMA Core Land Use Plan) (Oct 2009)

### **Socio-Economic Data Sources**

US Census Bureau American Community Survey (ACS) 5-Year Estimate (2011-2015)

US Census Bureau 2000, 2010

NC Office of State Budget and Management

## 4 Supporting Documentation

2018, August	Traffic Forecast for U-5791 (SR 2714 (Jacksonville Parkway Extension) from NC 24 to US 17) and U-6081 (NC 53 (Western Boulevard) Improvements) Onslow County. Prepared by Patriot Transportation Engineering.
2019, August	NCDOT Alternatives Analysis Meeting Minutes. Prepared by Atkins.
2022, November	Traffic Forecast for U-5791 (SR 2714 (Jacksonville Parkway Extension) from NC 24 to US 17), Alternative 2b/ 2b Revisited, Onslow County
2023, January	Draft Natural Resources Technical Report. Prepared by Atkins
2023, February	Draft Hydraulic Planning Report. Prepared by Atkins

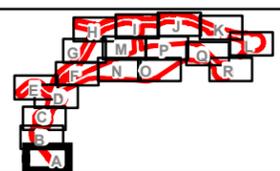
**Appendix A. NRTR Maps**



Prepared By:

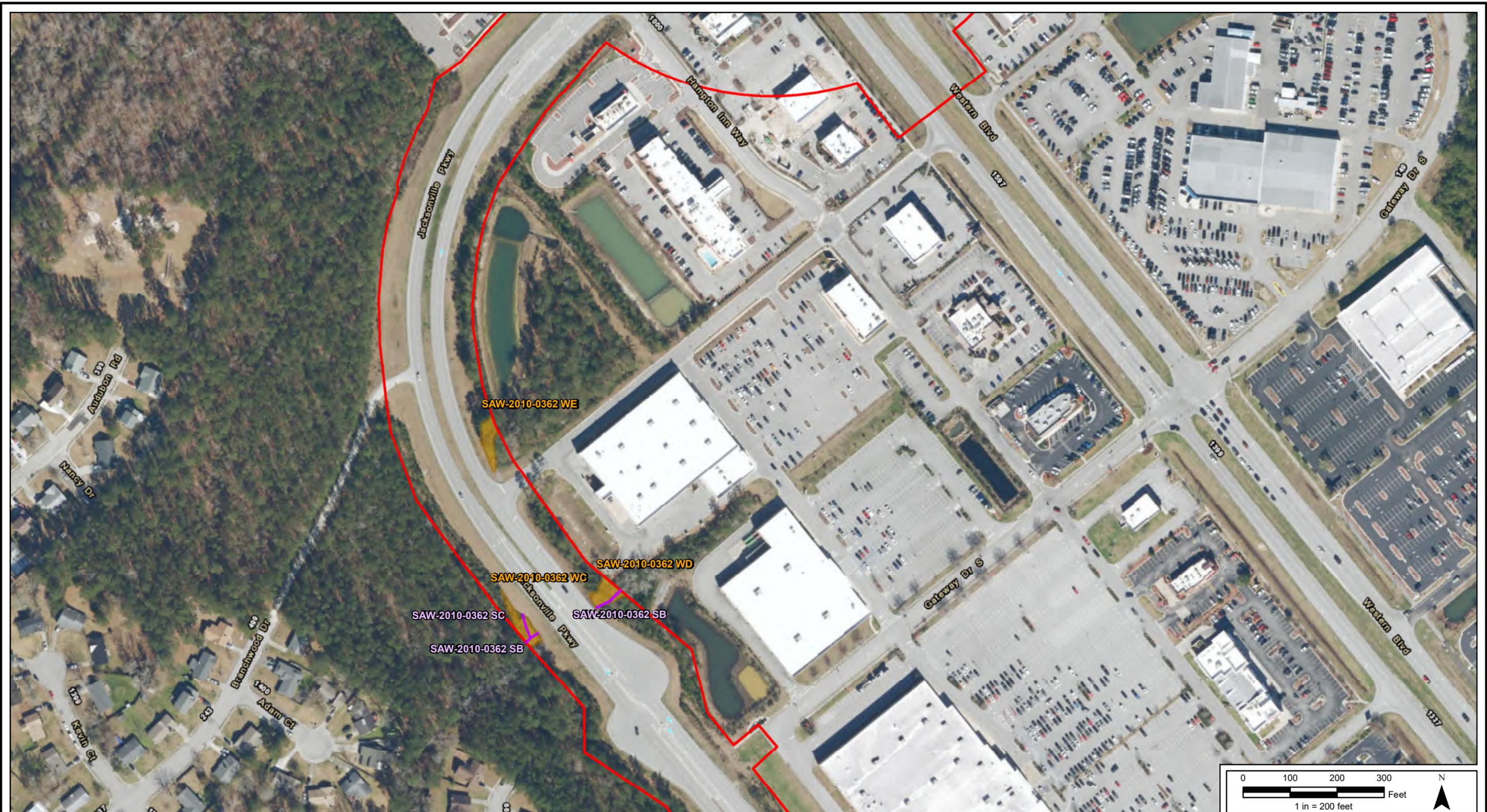
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| Potential Non-Wetland Waters of the US (Perennial Streams)    | Potential Wetland Waters of the US (Atkins)    |
| Potential Non-Wetland Waters of the US (Intermittent Streams) | Potential Wetland Waters of the US (By Others) |
| Potential Non-Wetland Waters of the US (Tributaries)          | Variable Width Drainage Effect (By Others)     |
| Potential Non-Wetland Waters of the US (By Others)            | Data Form Locations                            |
| Potential Non-Wetland Waters of the US (Ponds)                | Study Area                                     |



**Water Resources Map**  
**Jacksonville Parkway Extension**  
**Project U-5791**  
 ONSLOW COUNTY, NORTH CAROLINA

Dwn By:	RLG	<b>FIGURE</b> <b>4A</b>
Ckd By:	BEC	
Date:	1/25/2023	
Project No.:	100056600	



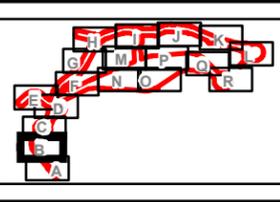
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Prepared For:



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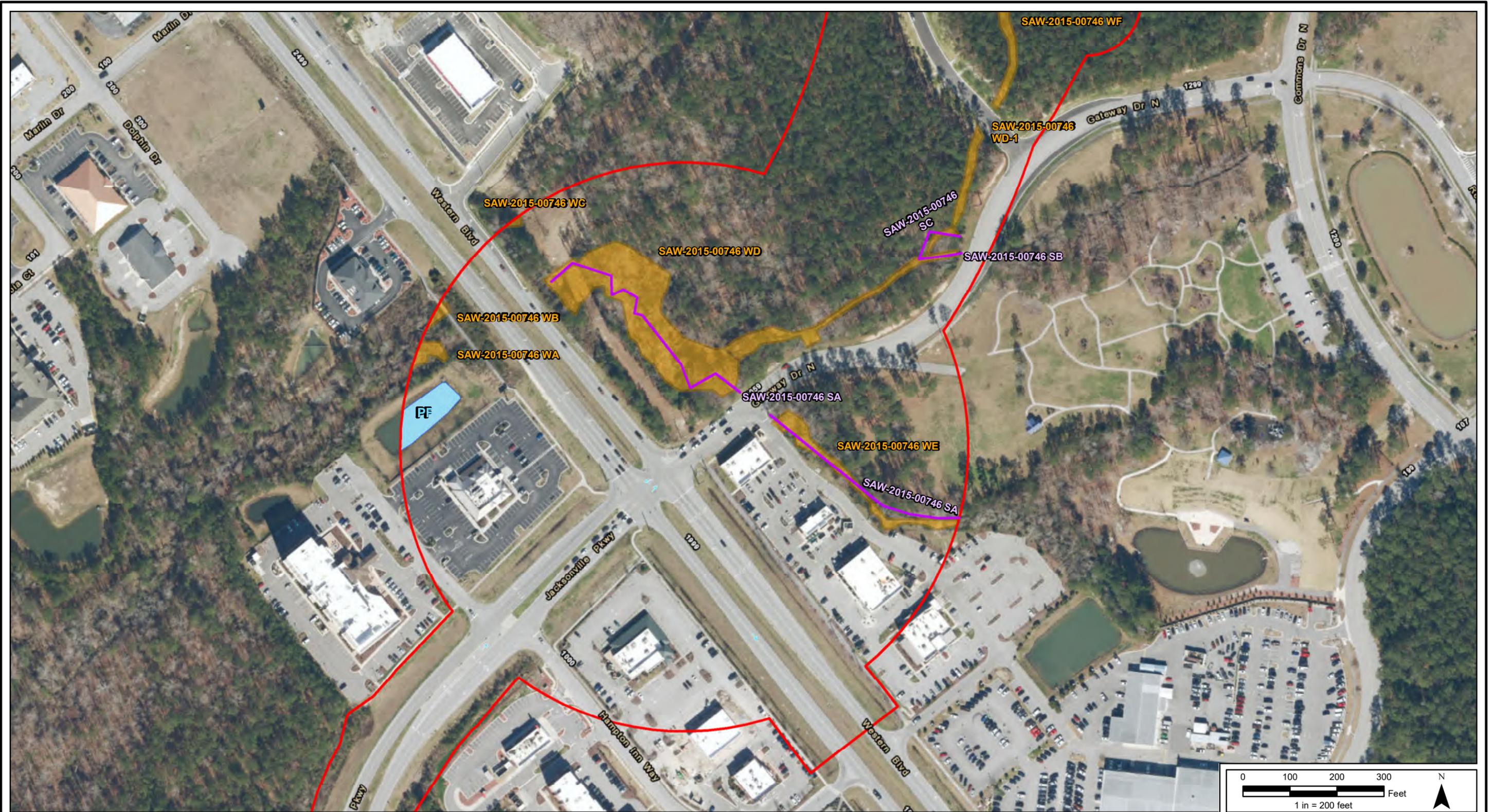


### Water Resources Map

**Jacksonville Parkway Extension  
Project U-5791**

ONSLOW COUNTY, NORTH CAROLINA

Dwn By:	RLG	FIGURE
Ckd By:	BEC	4B
Date:	1/25/2023	
Project No.:	100056600	



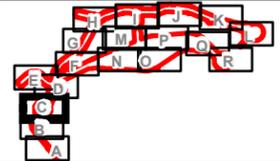
Prepared By:



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**Water Resources Map**  
**Jacksonville Parkway Extension**  
**Project U-5791**  
 ONSLOW COUNTY, NORTH CAROLINA

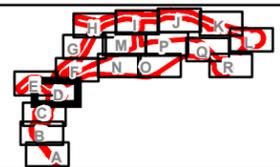
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Ckd By:	BEC	4C
Date:	1/25/2023	
Project No.:	100056600	



Prepared By:

Prepared For:

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**Water Resources Map**  
**Jacksonville Parkway Extension**  
**Project U-5791**  
 ONSLOW COUNTY, NORTH CAROLINA

Dwn By:	RLG	4D
Ckd By:	BEC	
Date:	1/25/2023	
Project No.:	100056600	



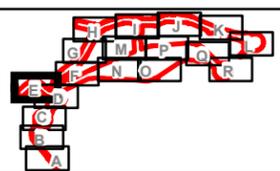
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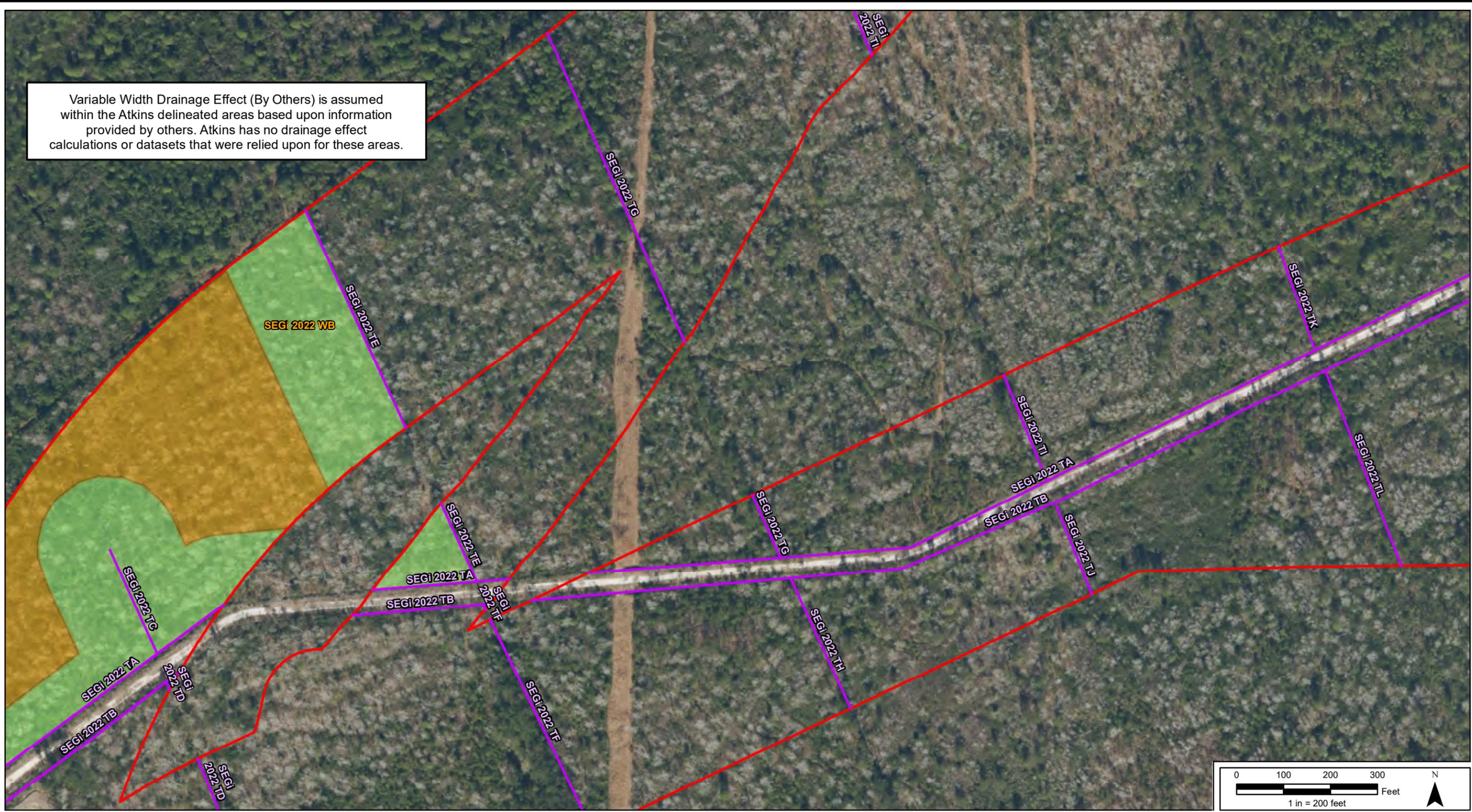
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**Jacksonville Parkway Extension**  
**Project U-5791**  
 ONSLOW COUNTY, NORTH CAROLINA

Dwn By:	RLG	FIGURE
Ckd By:	BEC	4E
Date:	1/25/2023	
Project No.:	100056600	

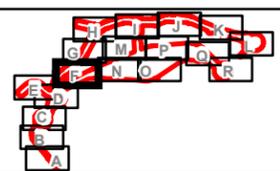
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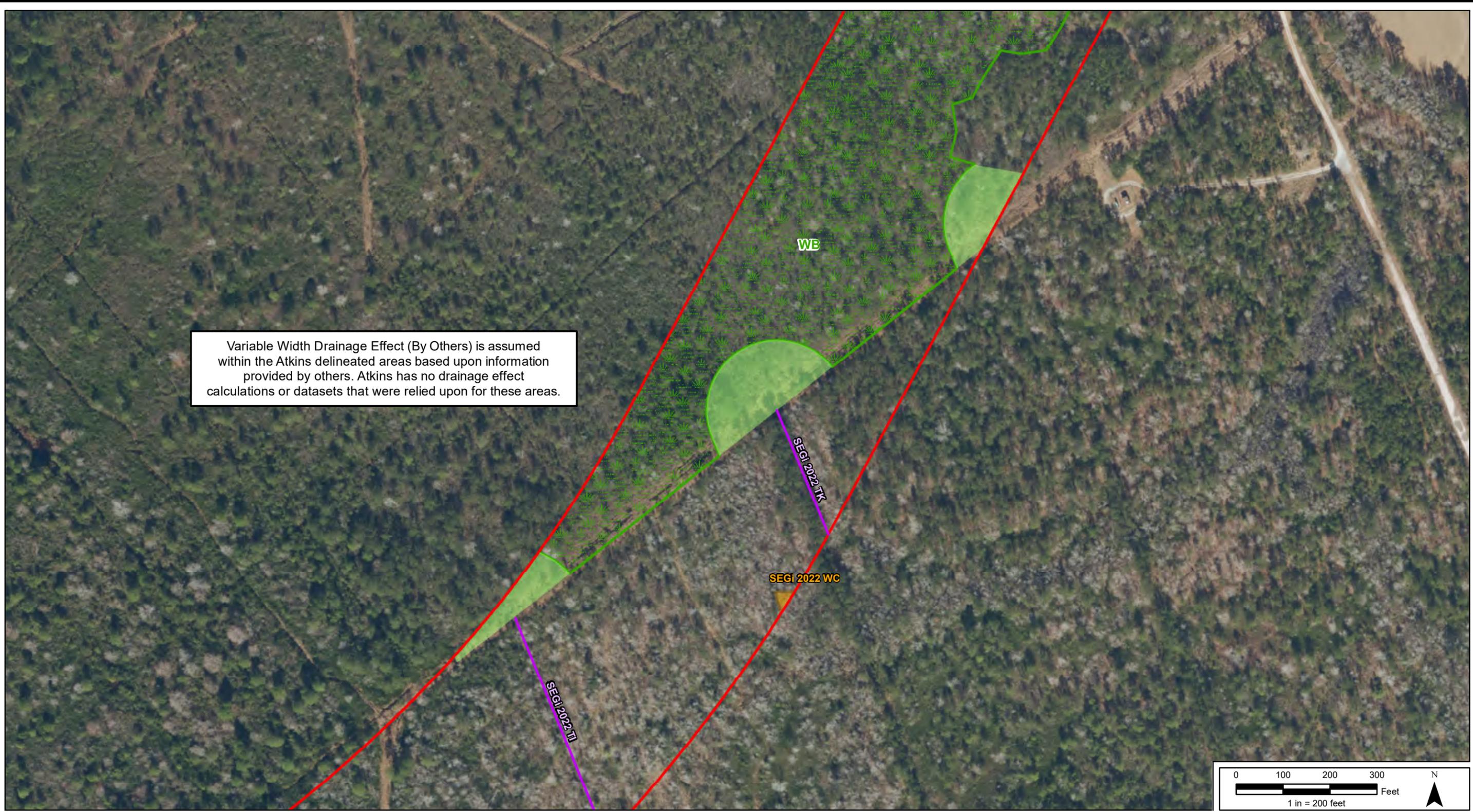
Prepared For: **STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**

- Potential Non-Wetland Waters of the US (Perennial Streams)
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 ONSLOW COUNTY, NORTH CAROLINA

Dwn By:	RLG	FIGURE
Ckd By:	BEC	4F
Date:	1/25/2023	
Project No.:	100056600	



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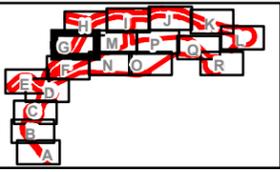
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Prepared For:



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**Jacksonville Parkway Extension**  
**Project U-5791**  
 ONSLOW COUNTY, NORTH CAROLINA

Dwn By:	RLG	FIGURE
Ckd By:	BEC	4G
Date:	1/25/2023	
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Prepared By:



Prepared For:



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**Water Resources Map**  
**Jacksonville Parkway Extension**  
**Project U-5791**  
 ONSLOW COUNTY, NORTH CAROLINA

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Ckd By:	BEC	4H
Date:	1/25/2023	
Project No.:	100056600	



Prepared By:

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**Water Resources Map**  
**Jacksonville Parkway Extension**  
**Project U-5791**  
 ONSLOW COUNTY, NORTH CAROLINA

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Ckd By:	BEC
Date:	1/25/2023
Project No.:	100056600

FIGURE  
41



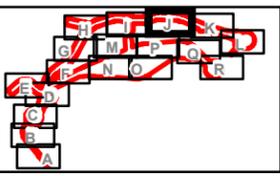
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 ONSLOW COUNTY, NORTH CAROLINA

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Ckd By:	BEC
Date:	1/25/2023
Project No.:	100056600

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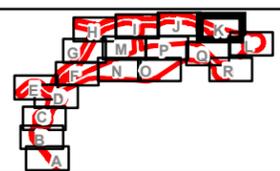
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 ONSLOW COUNTY, NORTH CAROLINA

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Date:	1/25/2023	
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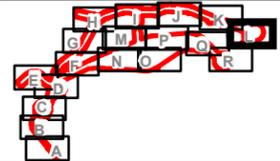
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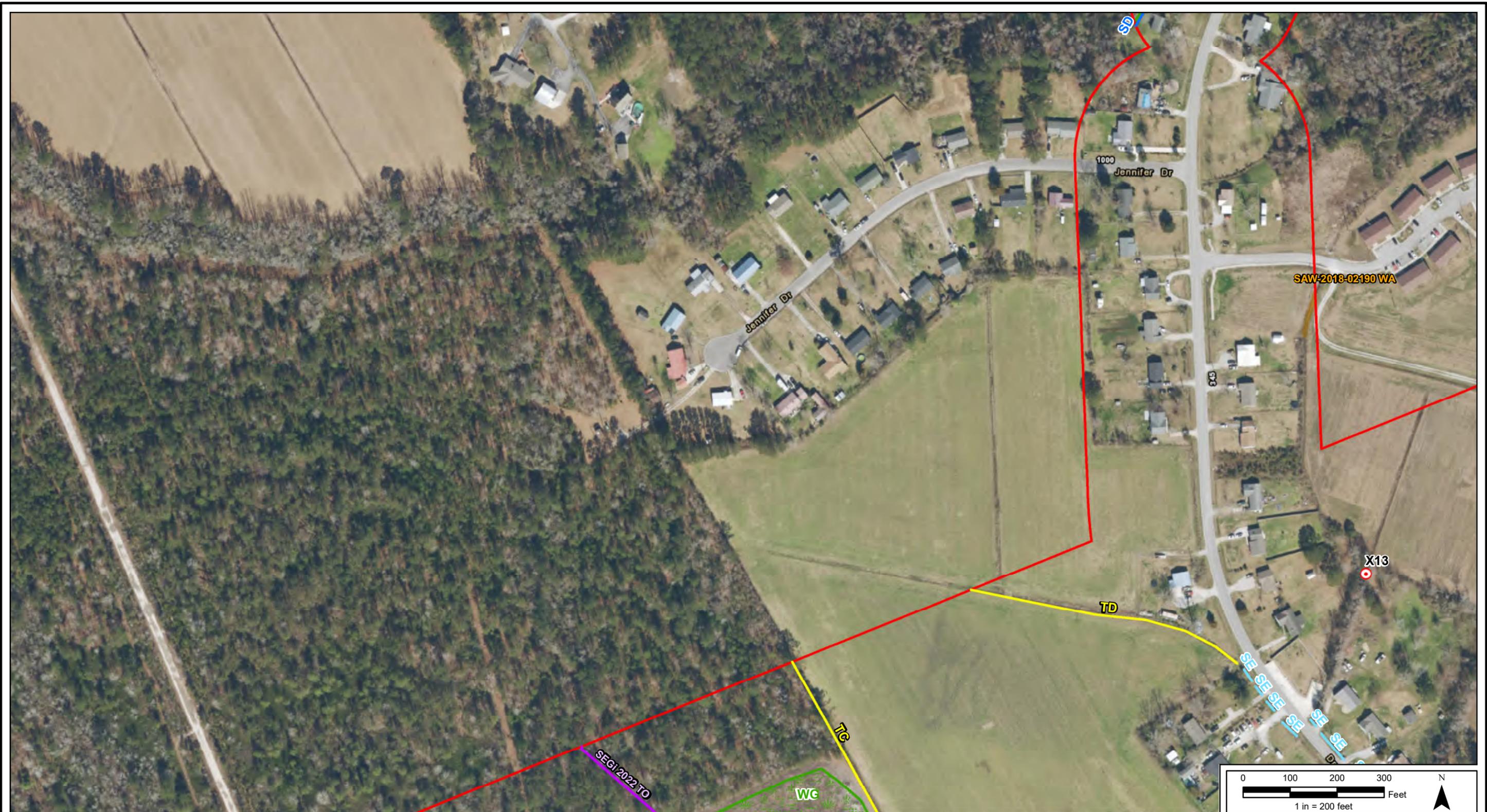


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 ONSLOW COUNTY, NORTH CAROLINA

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Ckd By:	BEC	4L
Date:	1/25/2023	
Project No.:	100056600	



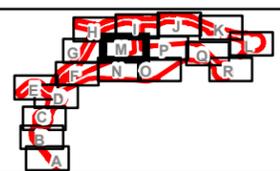
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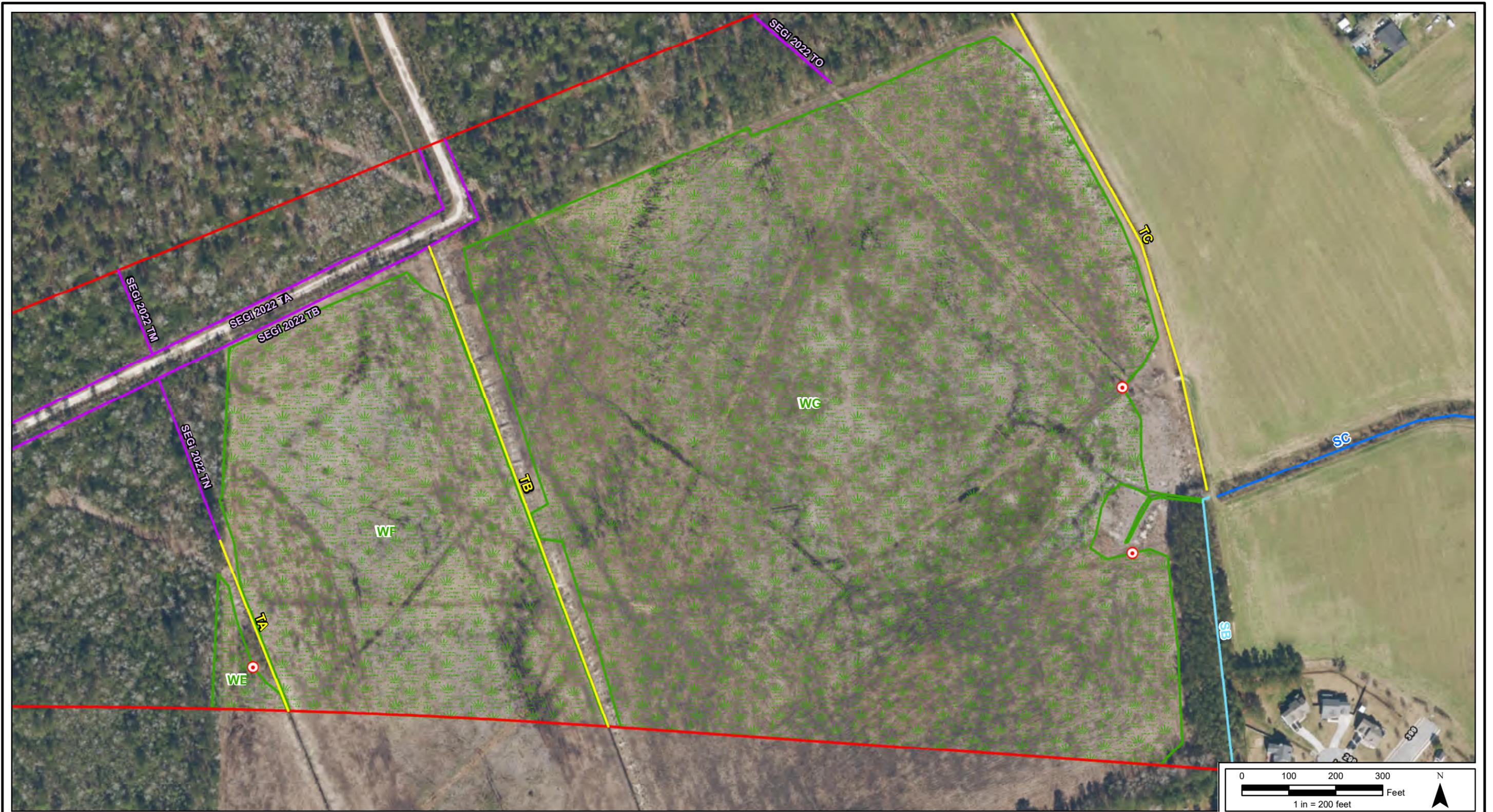


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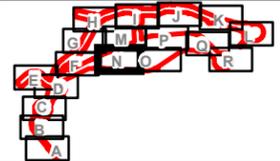


**Water Resources Map**  
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 ONSLOW COUNTY, NORTH CAROLINA

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Ckd By:	BEK	4M
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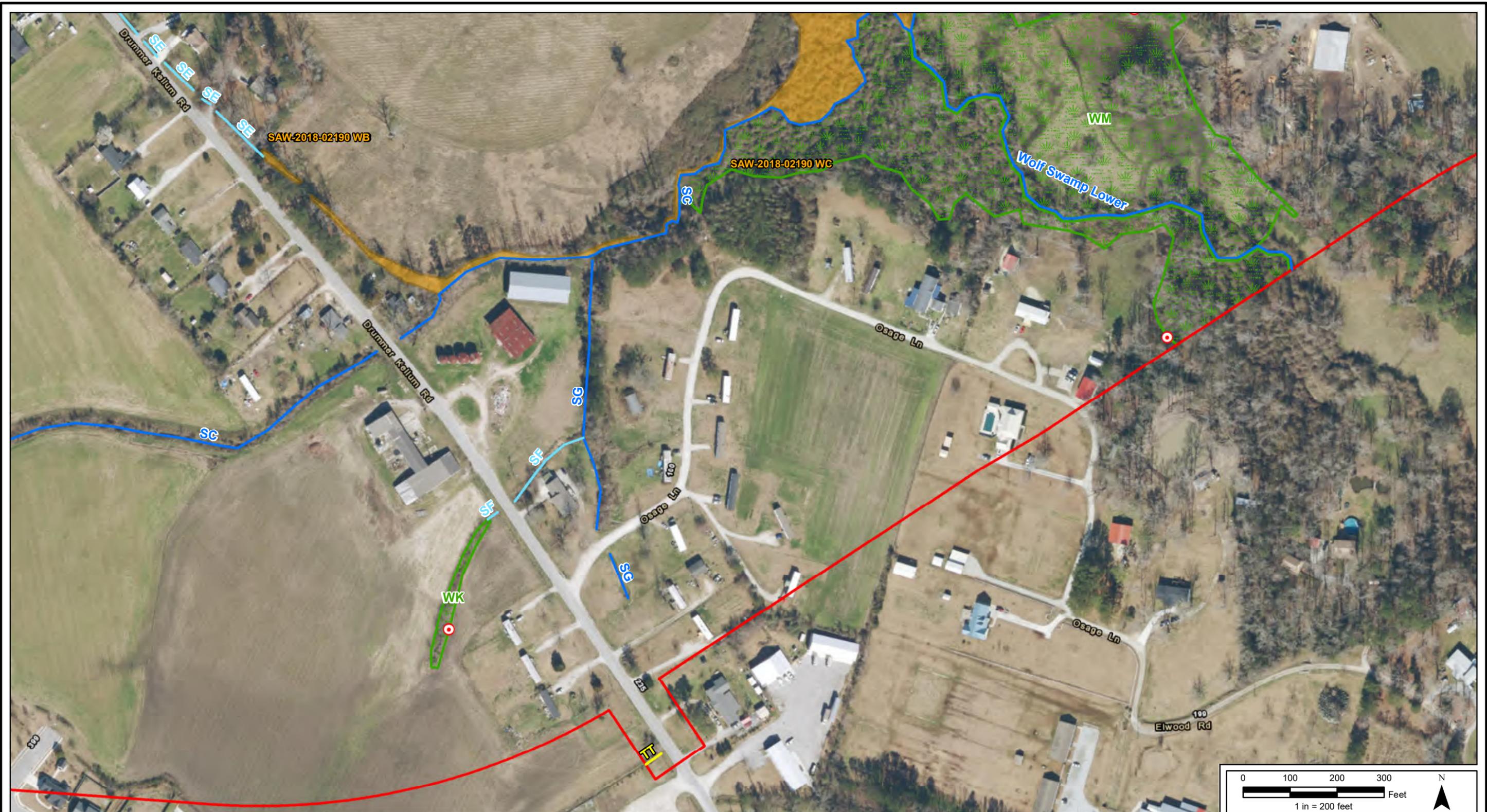
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 ONSLOW COUNTY, NORTH CAROLINA

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Ckd By:	BEC	
Date:	1/25/2023	
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FIGURE



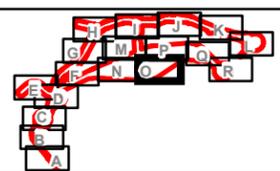
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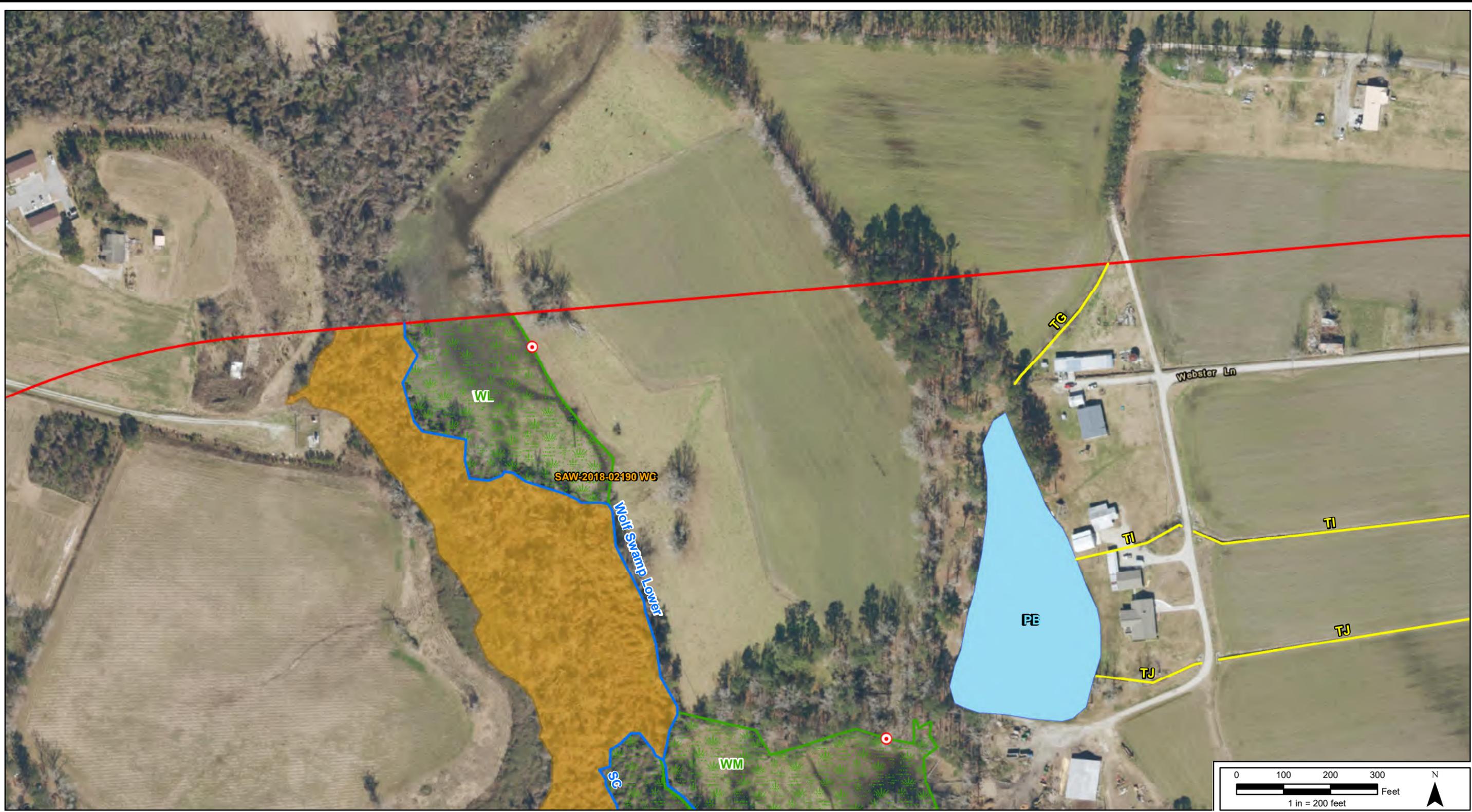


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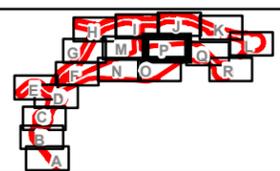
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Prepared By:

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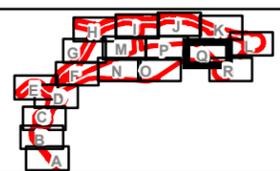
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Date:	1/25/2023	
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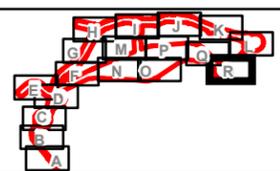
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Dwn By:	RLG	FIGURE
Ckd By:	BEC	4R
Date:	1/25/2023	
Project No.:	100056600	

## Appendix B. Information from Hydraulic Planning Report

DA = 2.79 sqmi

U-5791

SITE 1

0' 400' 2000'  
Scale: 1"= 2000'



# QUAD MAP - SITE 1

TIP NO. U-5791

JACKSONVILLE PARKWAY EXTENSION FROM  
SR 2701 (WESTERN BOULEVARD) TO SR 2714 (RAMSEY ROAD)

ONSLOW COUNTY

**EXISTING STRUCTURE**

Str. #:	E2404	Latitude:	34.81119	Longitude:	-77.37534	<a href="#">Google Maps</a>	Stream:	Wolf Swamp
Structure Type:	CMP	Yr Built:	2010	Skew:	90		River Basin:	White Oak
Exist. Str. Info:	155" x 90" single barrel pipe arch, wingwalls							
Bed to Crown (ft):	14.5	Clear Roadway (ft):	25	Water Depth (ft):	0.5		OAL (ft):	65
Existing Structure Notes:	Good condition; Upstream right side of culvert had a bit of scour							
ADT:	2,500	Year ADT:	2021	Scour Code(Item 113):	N/A		Prior Survey:	N/A
Flooding Info 1:	Per resident who has lived at 348 Ramsey Road since 1966: never been an overtop of the road, the channel was channelized last year, water got to a WSE of approximately 44 feet NAVD88.							
Flooding Info 2:	Per County Maintenance B. Haste, no flooding complaints along SR 1324 after culvert was replaced in 2010, with no roadway overtopping							

**CHANNEL INFORMATION**

U/S Channel Condition:	Top Width: 30 feet; Bottom Width: 8 feet; Flow Depth: 1 foot; Bank Height: 5 feet
D/S Channel Condition:	Top Width: 22 feet; Bottom Width: 10 feet; Flow Depth: 0.5 feet; Bank Height: 5 feet

**UPSTREAM FEATURE**

Str. #:	N/A	Latitude:	N/A	Longitude:	N/A	<a href="#">Google Maps</a>	Stream:	N/A
U/S Feature:	N/A	Yr Built:	N/A	Skew:	N/A		Route:	N/A
U/S Feature Info:	Headwaters							
Bed to Crown (ft):	N/A	Clear Roadway (ft):	N/A	Water Depth (ft):	N/A			

**DOWNSTREAM FEATURE**

Str. #:	660033 & 660034	Latitude:	34.79781	Longitude:	-77.36407	<a href="#">Google Maps</a>	Stream:	Wolf Swamp
D/S Feature:	RCBC	Yr Built:	1923 & 1965	Skew:	90		Route:	US-17
D/S Feature Info:	Bridge and Culvert Combination structure: 3 span bridge (31.6', 32.5', 31.8') with vertical abutments US-17 North and a Triple Barrel 12'x8' RCBC US-17 South							
Bed to Crown (ft):	20	Clear Roadway (ft):	26' and 32'	Water Depth (ft):	1.8			

**HYDROLOGY**

Drainage Area:	2.79 sq. mi.	Drainage Area Source:	Streamstats	Future % Impervious:	0%
Discharge Method:	USGS Regression Analysis	USGS Hydrologic Region:	Region 4 - Coastal Plain	Stream Gage # (if applicable):	N/A
Future Land Use/Development:	N/A				
Proposed LOS:	100 yr	Existing LOS:	100 yr	Level of Service (LOS) where roadway is open and not overtopping.	
Q Design (cfs):	572	Design Yr.:	50	Q100 (cfs):	699
				QBFE (cfs):	N/A
Has a different LOS from standard LOS been considered and why?	No				

PROJECT NUMBER: U-5791

NCDOT - HPR

DATE: 3/02/2023

WBS ELEMENT #: 44363.1.1

DESIGN FIRM: Atkins

COUNTY: Onslow

DESIGNED BY: Robert Rizzuto

DIVISION: 3

REVIEWED BY: JLR



SITE 1

FEMA

Type of FIS: Limited Detailed Study

Date of FIS: 6/2/2021

Regulatory Floodway Width: N/A (Noted in FIS)

River Station: 12755

RDWY OT @ Q100?: NO

Panel #: 3720439800J

Panel Date: 11/3/2005

Damage Potential?: Low

Could proposed structure significantly increase damages?: No

\*Buildings in Floodplain?: Yes

Explanation of Increased Damages:

List Buildings in Flood Plain w/ Location & Floor Elev.:

No insurable structures within the floodplain

CLOMR/SFC Estimate: SFC Type C

HIGHWAY & BRIDGE/CULVERT RELATED EVALUATIONS

Are there any outside features that might affect stage, discharge or frequency?:

No

ONSITE DETOUR INFORMATION

Structure Type: CMP

Detour Str. Info: 60" barrel (x2), Approximate roadway grade will be same as the main roadway

DESIGN CONCERNS

The stream appears to have a high sediment load. Sediment transport through the culvert will need to be balanced.

PRELIMINARY STRUCTURE ESTIMATE [OFFICE ESTIMATE]

Structure Type: CMP

Disclaimer - Please note if extending/widening/retaining

Proposed Structure and any grade requirements

The Ramsey Road Culvert (Alternative 1b Revised) is hydraulically sufficient. The culvert will need to be extended or replaced due to the proposed roadway typical. The backwater caused by the culvert is 1.1 feet. To get the culvert below 1 foot of backwater, the size of the culvert can be 157"x98".



SITE 1 - PHOTOS



Upstream Channel View



**SITE 1 - PHOTOS**



*Downstream Channel View*



*Upstream Culvert Face*



*Downstream Culvert Face*



**SITE 1 - PHOTOS**



*Upstream Left Floodplain*



*Downstream Left Floodplain*



*Upstream Right Floodplain*



**SITE 1 - PHOTOS**



*Downstream Right Floodplain*



*Left Approach Alignment*



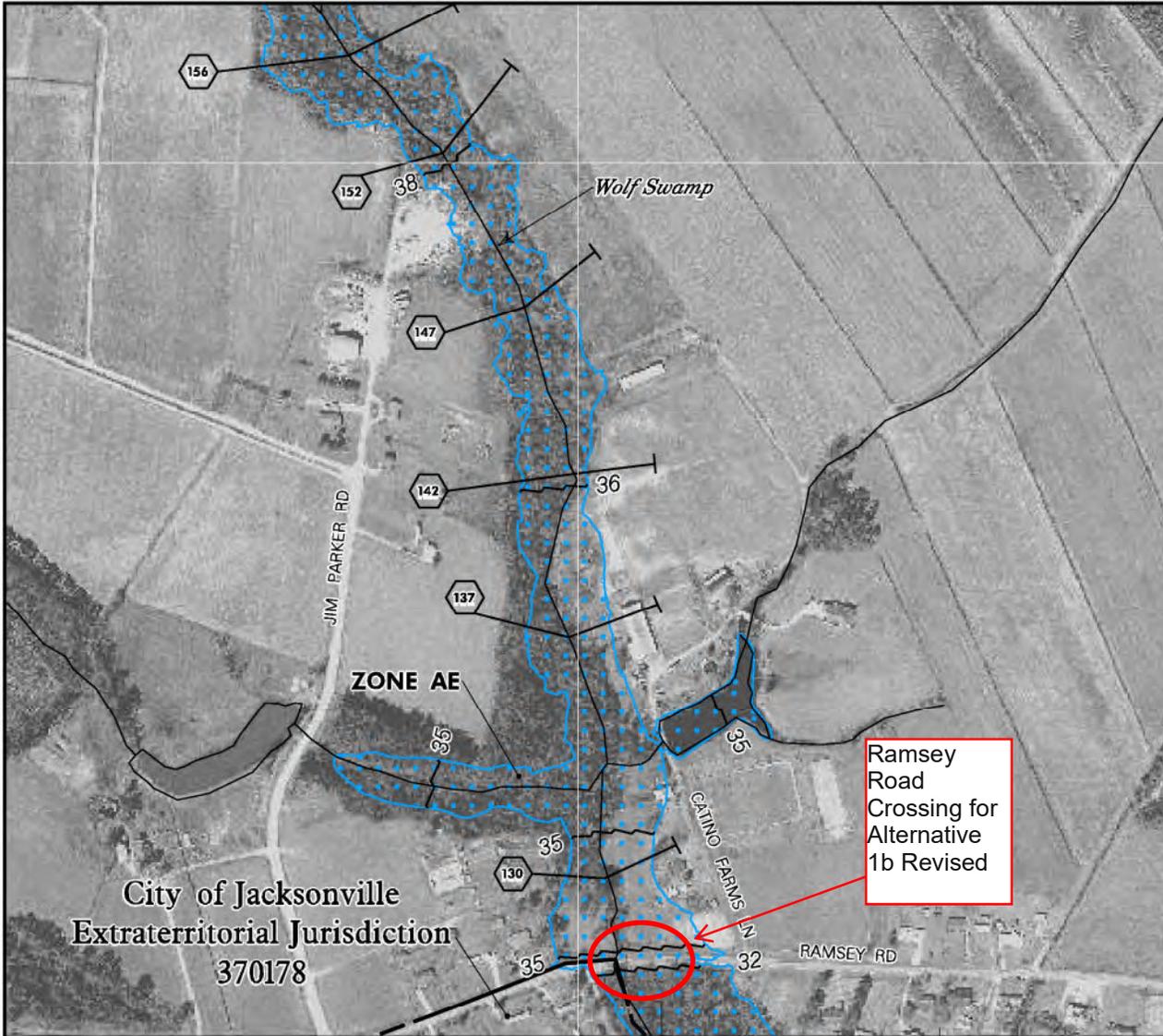
*Right Approach Alignment*



**SITE 1 - PHOTOS**

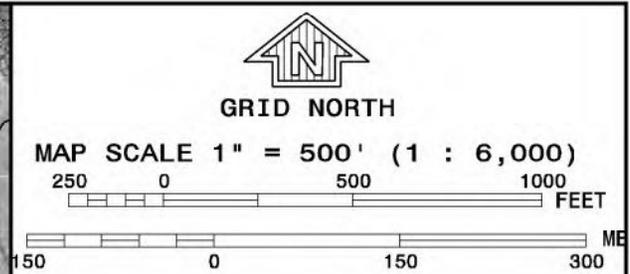


*TELCO Wire found in Upstream Right Floodplain*



77° 22' 30"

283 000 M



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 4389J

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
 NORTH CAROLINA

**PANEL 4389**

(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	CID No.	PANEL	SUFFIX
JACKSONVILLE, CITY OF	370178	4389	J
ONSLOW COUNTY	370346	4389	J

**SITE 1**

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

**EFFECTIVE DATE**  
 NOVEMBER 3, 2005

**MAP NUMBER**  
 3720438900J

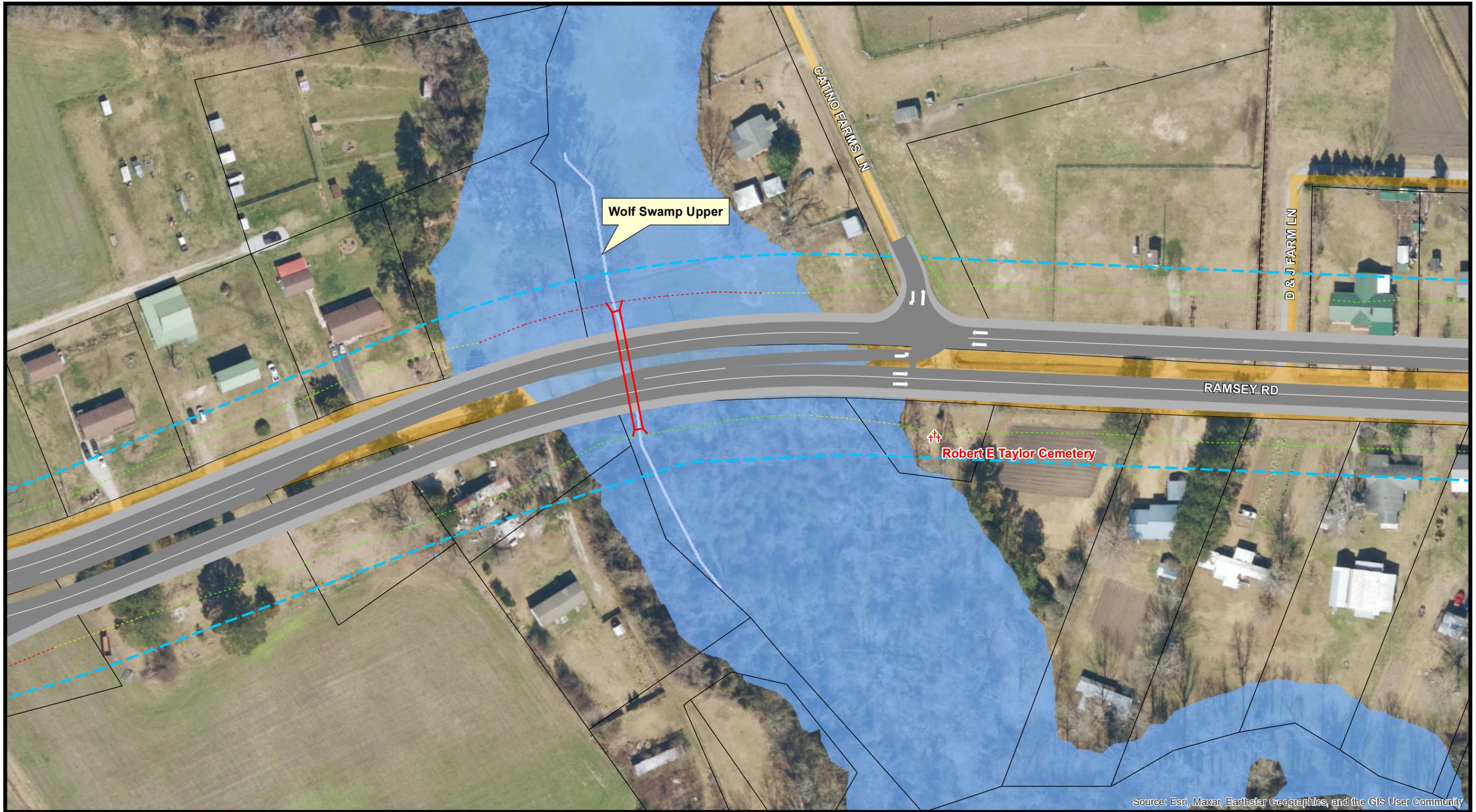


State of North Carolina  
 Federal Emergency Management Agency

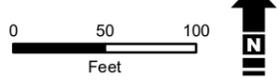
on this map, such as **corporate limits**, are based on the available at the time of publication. **Changes in the corporate** **urred since this map was published.** Map users should

An accompanying Flood Insurance St of Map Amendment (LOMA) revising FIRM may be available. Visit the **North**

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at <https://msc.fema.gov>.



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Source: ESRI, NCDOT, Onslow County, NCOneMap, City of Jacksonville. Aerial Photo: [http://goto.arcgisonline.com/maps/World\\_Imagery](http://goto.arcgisonline.com/maps/World_Imagery)

**LEGEND**

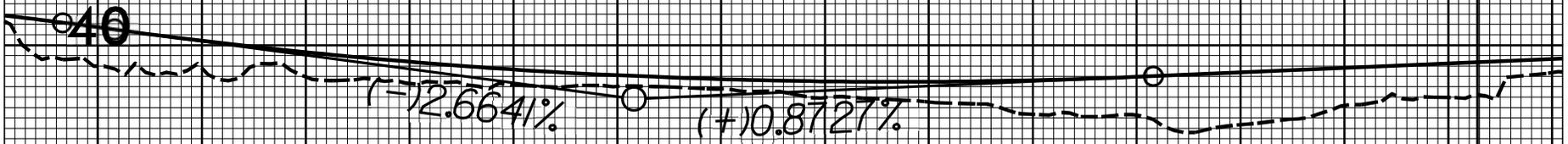
- |                  |                         |                     |                         |                         |                  |
|------------------|-------------------------|---------------------|-------------------------|-------------------------|------------------|
| Church           | Alternative 1b Revised  | Streams             | <b>Slopestake Lines</b> | Lane Lines              | Proposed Culvert |
| State Owned Land | Alternative 2b Revised  | 100 Year Floodplain | Cut Slope               | Proposed Edge of Travel | Proposed Bridge  |
| School           | Parcels                 | Floodway            | Fill Slope              | Proposed Paved Shoulder |                  |
| Park             | Wetland Mitigation Site | PJD Wetlands        | Transition Line         | Existing Right-of-way   |                  |

**HYDRAULIC CROSSING**  
 JACKSONVILLE PARKWAY EXTENSION  
 NC 53 (WESTERN BLVD.) TO US 17  
 STIP PROJECT NO. U-5791

**SITE 1**

60

PI = 163+60.00  
EL = 34.82'  
VC = 500'  
K = 141



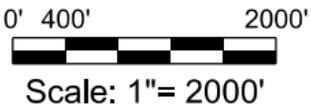
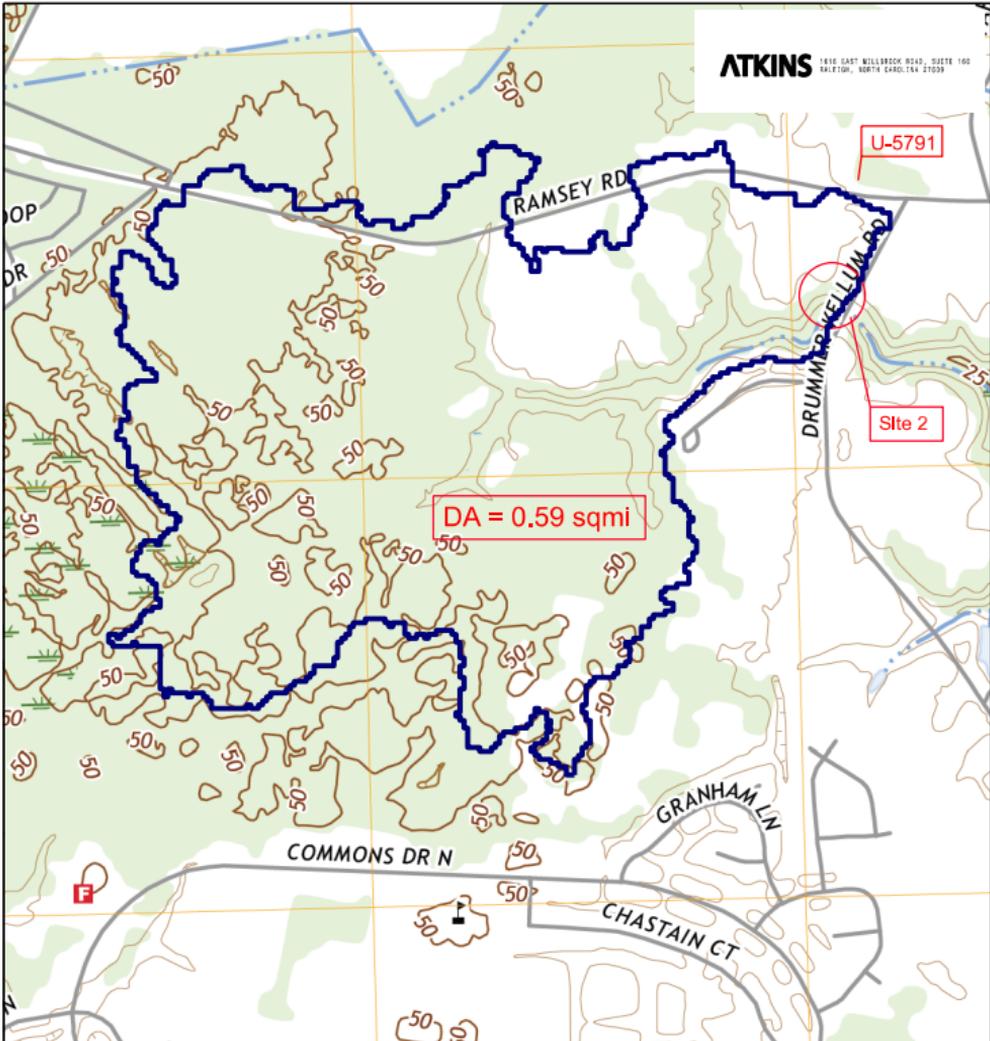
20

Ramsey Road Culvert: Single Barrel Pipe Arch (55' x 90')

161      162      163      164      165      166      167      16

**ATKINS**

1810 EAST HILLSBROOK ROAD, SUITE 100  
RALEIGH, NORTH CAROLINA 27609



**QUAD MAP - SITE 2**

TIP NO. U-5791

JACKSONVILLE PARKWAY EXTENSION FROM  
SR 2701 (WESTERN BOULEVARD) TO SR 2714 (RAMSEY ROAD)  
ONSLOW COUNTY

**EXISTING STRUCTURE**

Str. #:	E2013	Latitude:	34.80810	Longitude:	-77.38186	<a href="#">Google Maps</a>	Stream:	Bucks Branch (UT4)
Structure Type:	CMP	Yr Built:	2007	Skew:	90		River Basin:	White Oak
Exist. Str. Info:	103"x71" single barrel pipe arch with wingwalls							
Bed to Crown (ft):	10	Clear Roadway (ft):	20	Water Depth (ft):	2		OAL (ft):	52
Existing Structure Notes:								
ADT:	5,500	Year ADT:	2021	Scour Code(Item 13):	N/A		Prior Survey:	N/A
Flooding Info 1:	Per County Maintenance B. Haste, no flooding complaints along SR 1326 (Drummer Kellum Road) after culvert was replaced in 2007, with no roadway overtopping							
Flooding Info 2:	N/A							

**CHANNEL INFORMATION**

U/S Channel Condition:	Top Width: 8 feet; Bottom Width: 5 feet; Bank Height: 5 feet							
D/S Channel Condition:	Top Width: 16 feet; Bottom Width: 8 feet; Bank Height: 5 feet							

**UPSTREAM FEATURE**

Str. #:	N/A	Latitude:	N/A	Longitude:	N/A	<a href="#">Google Maps</a>	Stream:	Bucks Branch (UT4)
U/S Feature:	N/A	Yr Built:	N/A	Skew:	N/A		Route:	SR 1326 (Drummer Kellum Road)
U/S Feature Info:	Headwaters							
Bed to Crown (ft):	N/A	Clear Roadway (ft):	N/A	Water Depth (ft):	N/A			

**DOWNSTREAM FEATURE**

Str. #:	N/A	Latitude:	34.80693	Longitude:	-77.37830	<a href="#">Google Maps</a>	Stream:	Wolf Swamp
D/S Feature:	Confluence	Yr Built:	N/A	Skew:	0		Route:	N/A
D/S Feature Info:	Confluence with Wolf Swamp							
Bed to Crown (ft):	N/A	Clear Roadway (ft):	N/A	Water Depth (ft):				

**HYDROLOGY**

Drainage Area:	0.59 sq. mi.	Drainage Area Source:	Streamstats	Future % Impervious:	0%
Discharge Method:	USGS Regression Equation	USGS Hydrologic Region:	Region 4 - Coastal Plain	Stream Gage # (if applicable):	N/A
Future Land Use/Development:	N/A				
Proposed LOS:	100 yr	Existing LOS:	100 yr	Level of Service (LOS) where roadway is open and not overtopping.	
Q Design (cfs):	164	Design Yr.:	25	Q100 (cfs):	237
				QBFE (cfs):	N/A
Has a different LOS from standard LOS been considered and why?					
No					

PROJECT NUMBER: U-5791  
 WBS ELEMENT #: 44363.1.1  
 COUNTY: Onslow  
 DIVISION: 3

NCDOT - HPR

DATE: 3/02/2023  
 DESIGN FIRM: Atkins  
 DESIGNED BY: Robert Rizzuto  
 REVIEWED BY: JLR



SITE 2

FEMA

Type of FIS:  Date of FIS:  Regulatory Floodway Width:  (Noted in FIS)

River Station:  RDWY OT @ Q100?:  Panel #:  Panel Date:

Damage Potential?:  Could proposed structure significantly increase damages?:

\*Buildings in Floodplain?:  Explanation of Increased Damages:

List Buildings in Flood Plain w/ Location & Floor Elev.:

CLOMR/SFC Estimate:

HIGHWAY & BRIDGE/CULVERT RELATED EVALUATIONS

Are there any outside features that might affect stage, discharge or frequency?:

ONSITE DETOUR INFORMATION

Structure Type:

Detour Str. Info:

DESIGN CONCERNS

PRELIMINARY STRUCTURE ESTIMATE [OFFICE ESTIMATE]

Structure Type:  Disclaimer - Please note if extending/widening/retaining

Proposed Structure and any grade requirements:



SITE 2 - PHOTOS



Upstream Channel View



**SITE 2 - PHOTOS**



*Downstream Channel View*



*Upstream Culvert Face*



*Downstream Culvert Face*



**SITE 2 - PHOTOS**



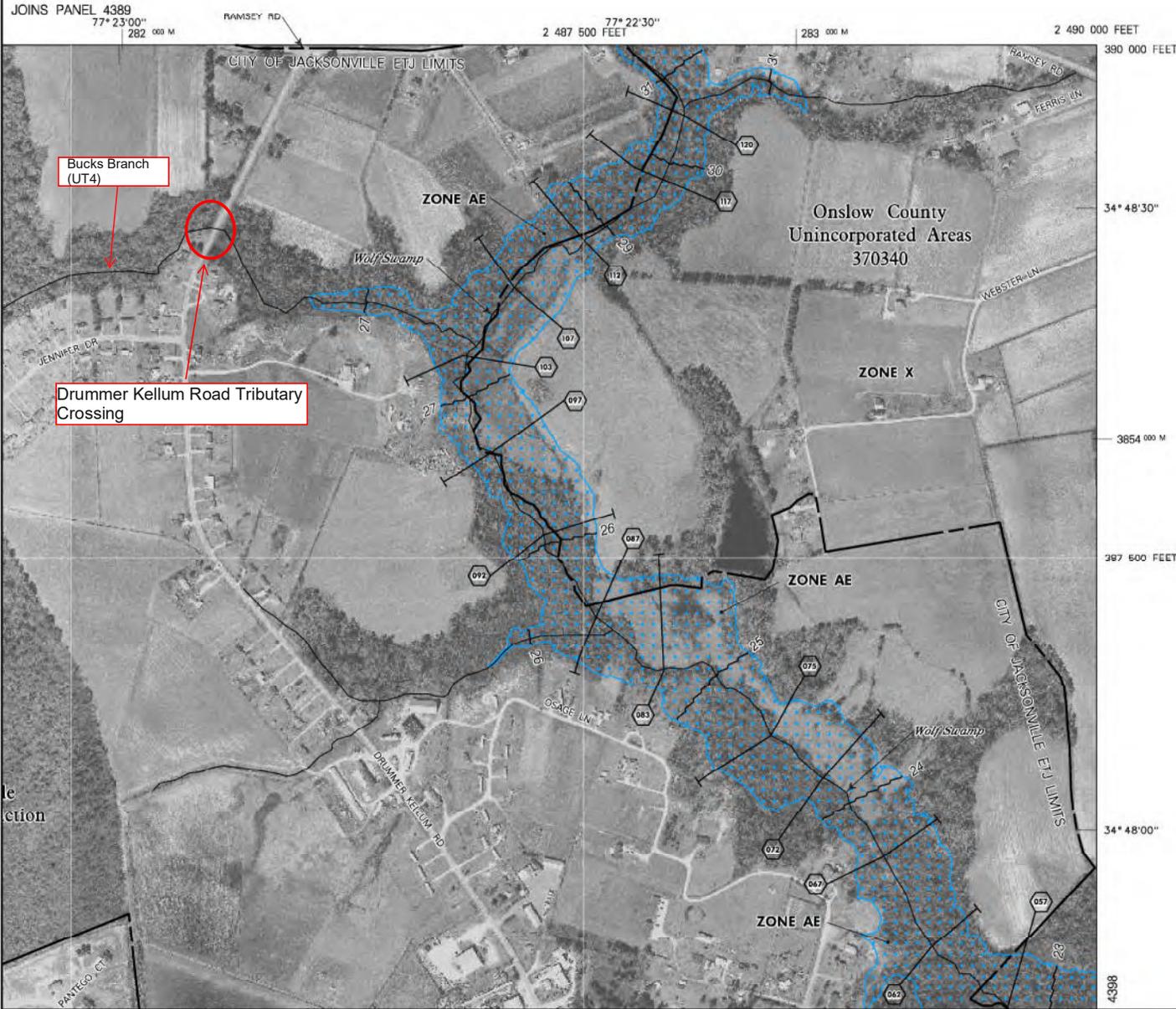
*Upstream Right Floodplain*



*Downstream Right Floodplain*

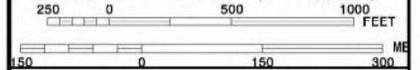


*Downstream Left Floodplain*



GRID NORTH

MAP SCALE 1" = 500' (1 : 6,000)



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 4388J

**FIRM**  
FLOOD INSURANCE RATE MAP  
NORTH CAROLINA

PANEL 4388

(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	OID NO.	PANEL	SUFFIX
JACKSONVILLE CITY OF	370340	4388	J
ONSLAW COUNTY	370340	4388	J

Notes to Join: The Map Number shown below should be used when joining map sheets. The Community Number shown above should be used or reviewed separately for the subject community.

EFFECTIVE DATE  
NOVEMBER 3, 2005

MAP NUMBER  
3720438800J



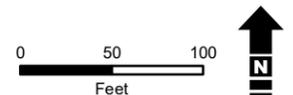
State of North Carolina  
Federal Emergency Management Agency

SITE 2

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at <https://msc.fema.gov>.



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

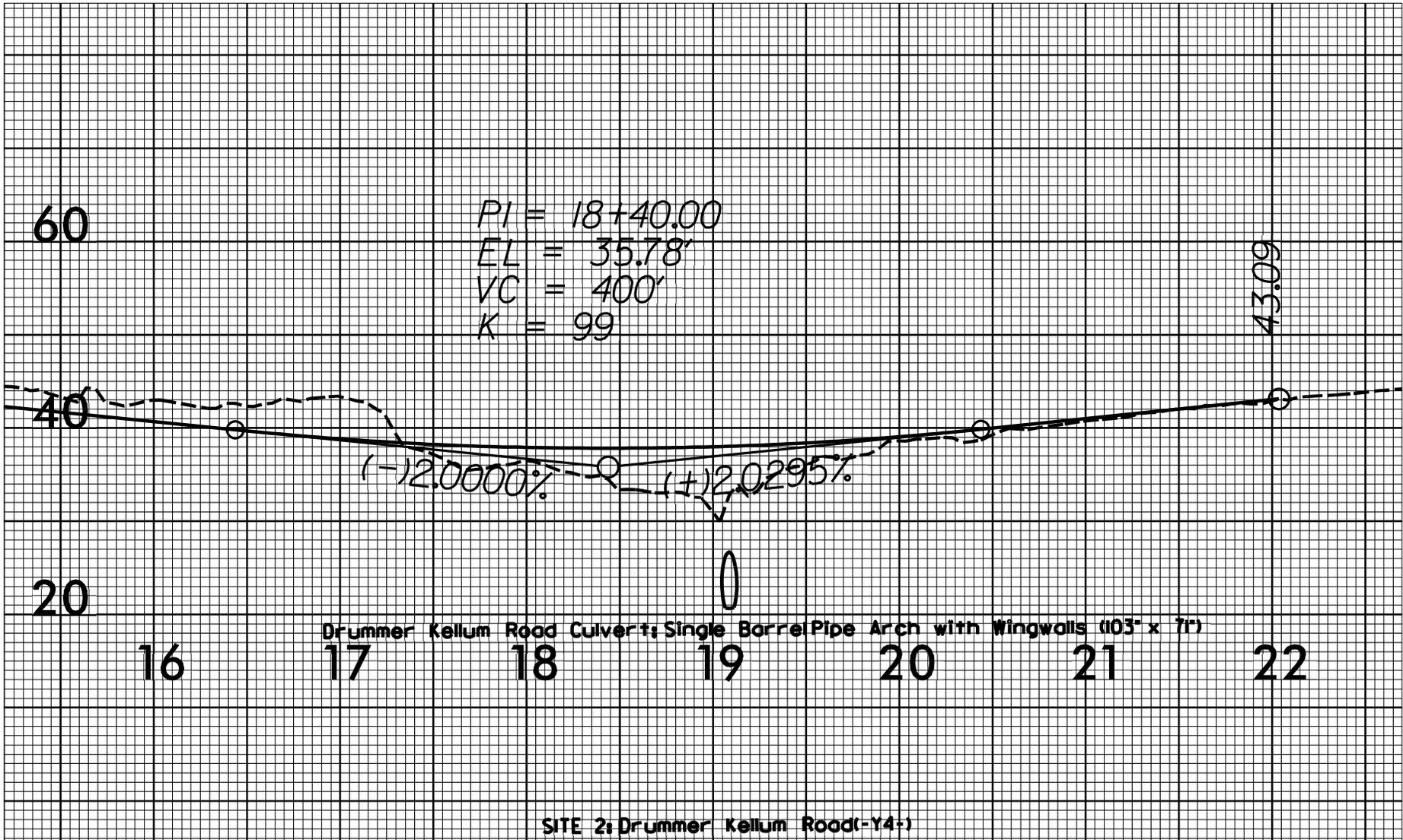


Source: ESRI, NCDOT, Onslow County, NCOneMap, City of Jacksonville. Aerial Photo: [http://goto.arcgisonline.com/maps/World\\_Imagery](http://goto.arcgisonline.com/maps/World_Imagery)

LEGEND	
	Church
	State Owned Land
	School
	Park
	Alternative 1b Revised
	Alternative 2b Revised
	Parcels
	Wetland Mitigation Site
	Streams
	100 Year Floodplain
	Floodway
	PJD Wetlands
	Slopestake Lines
	Cut Slope
	Fill Slope
	Transition Line
	Lane Lines
	Proposed Edge of Travel
	Proposed Paved Shoulder
	Existing Right-of-way
	Proposed Culvert
	Proposed Bridge

**HYDRAULIC CROSSING**  
 JACKSONVILLE PARKWAY EXTENSION  
 NC 53 (WESTERN BLVD.) TO US 17  
 STIP PROJECT NO. U-5791

**SITE 2**



DA = 4.66 sqmi

SITE 3

U-5791

0' 400' 2000'  
Scale: 1"= 2000'



QUAD MAP - SITE 3  
TIP NO. U-5791  
JACKSONVILLE PARKWAY EXTENSION FROM  
SR 2701 (WESTERN BOULEVARD) TO SR 2714 (RAMSEY ROAD)  
ONslow COUNTY

PROJECT NUMBER: U-5791	<b>NCDOT - HPR</b>	DATE: 3/02/2023
WBS ELEMENT #: 44363.1.1	<b>SITE 3</b>	DESIGN FIRM: Atkins
COUNTY: Onslow		DESIGNED BY: Robert Rizzuto
DIVISION: 3		REVIEWED BY: JLR

**EXISTING STRUCTURE**

Str. #:  Latitude:  Longitude:  [Google Maps](#) Stream:

Structure Type:  Yr Built:  Skew:  River Basin:

Exist. Str. Info:

Bed to Crown (ft):  Clear Roadway (ft):  Water Depth (ft):  OAL (ft):

Existing Structure Notes:

ADT:  Year ADT:  Scour Code(Item 1 13):  Prior Survey:

Flooding Info 1:

Flooding Info 2:

**CHANNEL INFORMATION**

U/S Channel Condition:

D/S Channel Condition:

**UPSTREAM FEATURE**

Str. #:  Latitude:  Longitude:  [Google Maps](#) Stream:

U/S Feature:  Yr Built:  Skew:  Route:

U/S Feature Info:

Bed to Crown (ft):  Clear Roadway (ft):  Water Depth (ft):

**DOWNSTREAM FEATURE**

Str. #:  Latitude:  Longitude:  [Google Maps](#) Stream:

D/S Feature:  Yr Built:  Skew:  Route:

D/S Feature Info:

Bed to Crown (ft):  Clear Roadway (ft):  Water Depth (ft):

**HYDROLOGY**

Drainage Area:  Drainage Area Source:  Future % Impervious:

Discharge Method:  USGS Hydrologic Region:  Stream Gage # (if applicable):

Future Land Use/Development:

Proposed LOS:  Existing LOS:  Level of Service (LOS) where roadway is open and not overtopping.

Q Design (cfs):  Design Yr.:  Q100 (cfs):  QBFE (cfs):

Has a different LOS from standard LOS been considered and why?

PROJECT NUMBER: U-5791  
WBS ELEMENT #: 44363.1.1  
COUNTY: Onslow  
DIVISION: 3

NCDOT - HPR

DATE: 3/02/2023

DESIGN FIRM: Atkins  
DESIGNED BY: Robert Rizzuto  
REVIEWED BY: JLR



SITE 3

FEMA

Type of FIS: Limited Detailed Study

Date of FIS: 6/2/2021

Regulatory Floodway Width: N/A (Noted in FIS)

River Station: 8093

RDWY OT @ Q100?: NO

Panel #: 3720438800J

Panel Date: 11/3/2005

Damage Potential?: Moderate

Could proposed structure significantly increase damages?: No

\*Buildings in Floodplain?: No

Explanation of Increased Damages: NA

List Buildings in Flood Plain w/ Location & Floor Elev.:

N/A

CLOMR/SFC Estimate: SFC Type A

HIGHWAY & BRIDGE/CULVERT RELATED EVALUATIONS

Are there any outside features that might affect stage, discharge or frequency?:

N/A

ONSITE DETOUR INFORMATION

Structure Type:

Detour Str. Info: N/A

DESIGN CONCERNS

There are environmental concerns due to the wetland area and the floodplain is approximately 720 feet wide perpendicular to the stream at the proposed crossing.

PRELIMINARY STRUCTURE ESTIMATE [OFFICE ESTIMATE]

Structure Type: Bridge

Disclaimer - Please note if extending/widening/retaining

Proposed Structure and any grade requirements

270' 3-Span 54" Prestressed concrete girders (1@90', 1@100', 1@80'), 35 degree skew; Minimum roadway grade is 28.9 feet (2 foot freeboard, 50-year WSE of 23.6 feet, low chord of 25.6 feet)



SITE 3 - PHOTOS



Upstream Channel View



**SITE 3 - PHOTOS**



*Downstream Channel View*



*Upstream Left Floodplain*



*Downstream Left Floodplain*



**SITE 3 - PHOTOS**



*Upstream Right Floodplain*



*Downstream Right Floodplain*



*Upstream Approach*

JOINS PANEL 4389  
77° 23' 00" W  
282 000 M

RAMSEY RD

2 487 500 FEET  
77° 22' 30" W

283 000 M

2 490 000 FEET

CITY OF JACKSONVILLE ETJ LIMITS

Onslow County  
Unincorporated Areas  
370340

ZONE AE

Wolf Swamp

ZONE X

Proposed Jacksonville Parkway  
Crossing for Alternative 2b Revised

ZONE AE

Wolf Swamp

ZONE AE

CITY OF JACKSONVILLE ETJ LIMITS

390 000 FEET

34° 48' 30"

3854 000 M

397 500 FEET

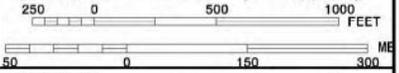
34° 48' 00"

4398



GRID NORTH

MAP SCALE 1" = 500' (1 : 6,000)



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 4388J

**FIRM**  
FLOOD INSURANCE RATE MAP  
NORTH CAROLINA

PANEL 4388

(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	OID NO.	PANEL	SUFFIX
JACKSONVILLE CITY OF	370340	4388	J
ONSLAW COUNTY	370340	4388	J

Notes to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications to the subject community.

EFFECTIVE DATE  
NOVEMBER 3, 2005

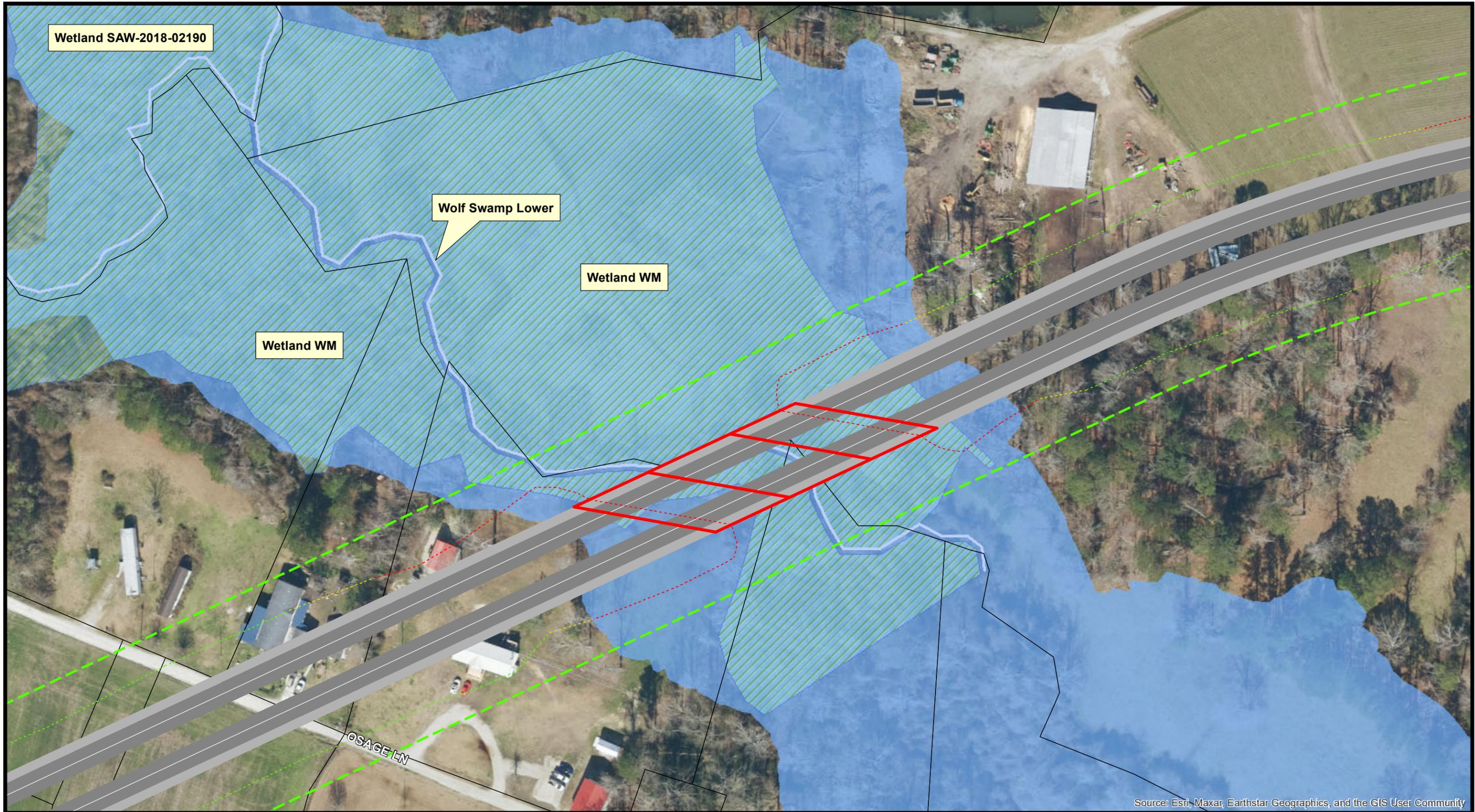
MAP NUMBER  
3720438800J



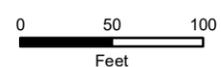
State of North Carolina  
Federal Emergency Management Agency

SITE 3

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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Source: ESRI, NCDOT, Onslow County, NCOneMap, City of Jacksonville. Aerial Photo: [http://goto.arcgisonline.com/maps/World\\_Imagery](http://goto.arcgisonline.com/maps/World_Imagery)

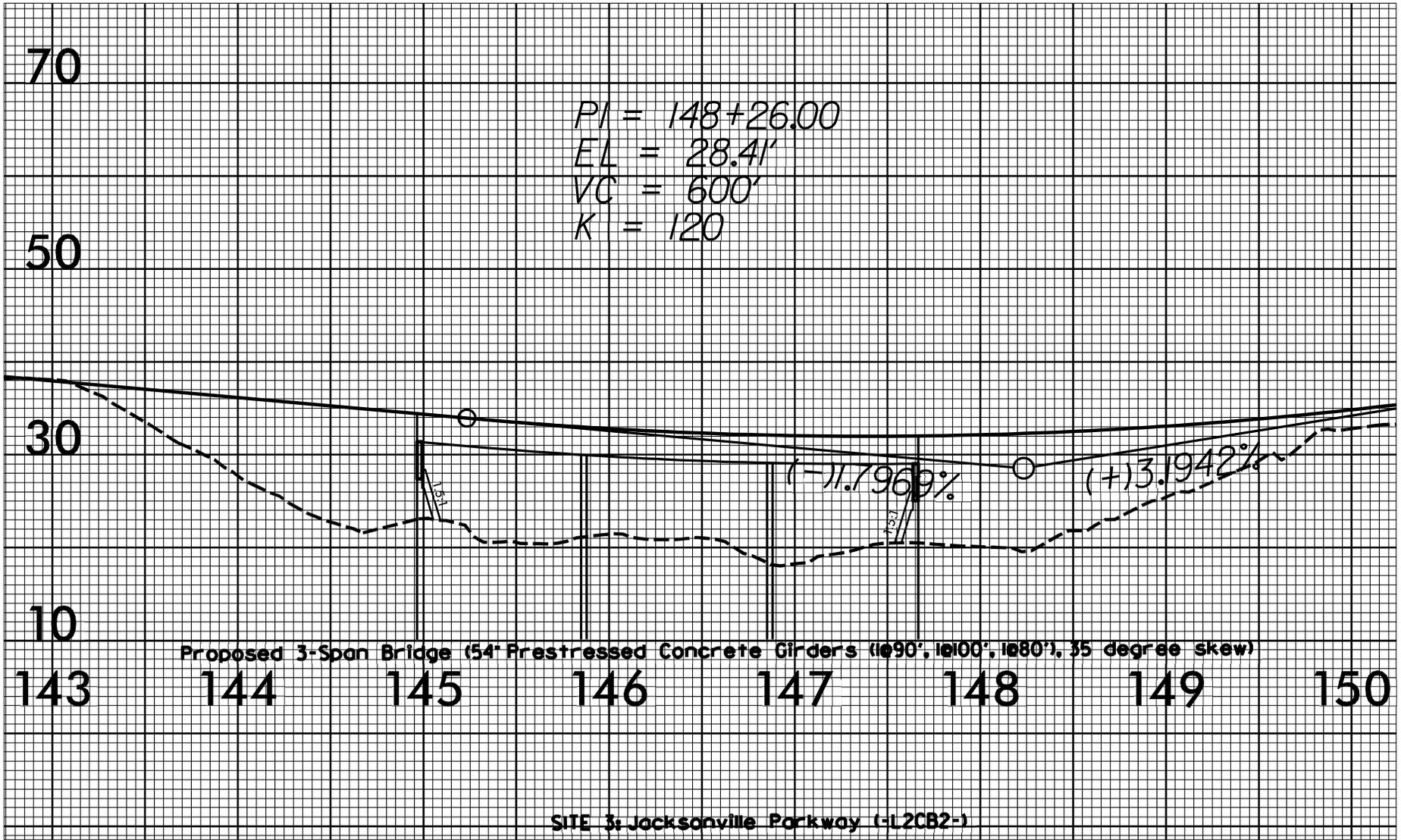
**LEGEND**

- |                  |                         |                     |                  |                         |                  |
|------------------|-------------------------|---------------------|------------------|-------------------------|------------------|
| Church           | Alternative 1b Revised  | Streams             | Slopestake Lines | Lane Lines              | Proposed Culvert |
| State Owned Land | Alternative 2b Revised  | 100 Year Floodplain | Cut Slope        | Proposed Edge of Travel | Proposed Bridge  |
| School           | Parcels                 | Floodway            | Fill Slope       | Proposed Paved Shoulder |                  |
| Park             | Wetland Mitigation Site | PJD Wetlands        | Transition Line  | Existing Right-of-way   |                  |

**HYDRAULIC CROSSING**

JACKSONVILLE PARKWAY EXTENSION  
 NC 53 (WESTERN BLVD.) TO US 17  
 STIP PROJECT NO. U-5791

**SITE**  
3



$PI = 148+26.00$   
 $EL = 28.41'$   
 $VC = 600'$   
 $K = 120$

$(- ) 1.7969\%$        $(+ ) 3.1942\%$

Proposed 3-Span Bridge (54' Prestressed Concrete Girders (100', 100', 80'), 35 degree skew)

SITE 3: Jacksonville Parkway (-L2CB2-)

**Appendix C. CP2a Form**

**Section 404/NEPA Merger Team Meeting Agreement**

**Concurrence Point No. 2a  
Bridging Decisions and Alignment Review**

**Project Name/Description:** Extension of Jacksonville Parkway (SR 2714) from Western Boulevard (NC 53) to New Bern Highway (US 17) in Onslow County.

**WBS No. 44363.1.1, STIP Project No. U-5791A and U-5791B.**

The Merger Team members have concurred, on this date of April 19, 2023, on the major hydraulics structures as shown in Table 5 of the CP2a Merger Packet for STIP Project U-5791.

USACE \_\_\_\_\_

NCDOT \_\_\_\_\_

USEPA \_\_\_\_\_

NCHPO \_\_\_\_\_

USFWS \_\_\_\_\_

JUMPO \_\_\_\_\_

NCDWR \_\_\_\_\_

NCWRC \_\_\_\_\_

NCDCM \_\_\_\_\_

# U-5791

# Jacksonville Parkway Extension

*NC 53 (Western Boulevard) to US 17 (New Bern Highway), Widen to Multi-Lanes, Part on New Location*

