Section 4(f) Resources

Florida Department of Transportation

SR 5/US 1 OVER PELLICER CREEK BRIDGE REPLACEMENT

District: FDOT District 5

County: Flagler County

ETDM Number: N/A

Financial Management Number: 447118-1-32-01

Federal-Aid Project Number: D521-060-B

Project Manager: Jeanette Maldonado-Ambler

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022 and executed by the Federal Highway Administration and FDOT. Submitted pursuant 49 U.S.C. § 303.

Table of Contents

Summary and Approval 1
Bridge #730008 2
Project-Level Attachments 7
Resource Attachments 8

Summary and Approval

Resource Name	Facility Type	Property Classification	Owner/Official with Jurisdiction	Recommended Outcome	OEM SME Action
Bridge #730008	Historic Bridge	Historic Site	State Historic Preservation Office	Programmatic	Concurrence Pending

Director of the Office of Environmental Management
Florida Department of Transportation

Bridge #730008

Facility Type: Historic Bridge

Property Classification: Historic Site

Address and Coordinates:
Address: carries southbound US 1 over Pellicer Creek at Flagler County and St. Johns County line
Latitude: 29.651369 Longitude: -81.286854

Description of Property:
Bridge #730008 is a 1927 tee beam bridge spanning Pellicer Creek at the Flagler County and St. Johns County line. The bridge carries two lanes of southbound traffic on State Route (SR) 5 / US Route 1 (SR 5/ US 1). It is approximately 68.2 m (225 ft) long with 10m (33 ft) deck width. Cantilevered post and beam concrete rails line each side of the bridge, tying into galvanized metal guardrail at each end. The seven span tee beam superstructure is comprised of continuous cast-in-place concrete and is supported by pile bent formations. Each formation features six concrete pile bents.

The bridge was altered in 1948 when it was widened by 4 m (13 ft) to its current configuration. There is no bridge plaque; however, the rail is stamped with "1948", documenting the widening. The bridge carried both north and south traffic until 1957 when bridge #7300045 was constructed parallel to bridge #730008. The construction of a second bridge was the result of US 1 becoming a divided highway. Since that time, bridge #730008 has carried southbound traffic only. Pile jackets were added to the bents ca. 1977, resulting in larger dimensions.

Bridge #730008 was evaluated as eligible for listing in the NRHP under Criteria A and C for its significance in Engineering and Transportation. The bridge is an early example of a tee beam bridge. The widening effort in 1948 did not obscure the girder and beam configurations that are distinctive with this type. Tee beam bridges were known to be cost effective and easy-to-construct bridges, providing state transportation agencies with easy solutions for the rapid emergence and expansion of the automobile age. The bridge is also representative of the early efforts of transportation engineering in Florida of which there are few examples remaining on US Route 1. Bridge #730008 is the oldest FDOT bridge in Flagler County and the second oldest in in St. Johns County. Its period of significance is 1927.

Owner/Official with Jurisdiction: State Historic Preservation Office

Recommended Outcome: Programmatic (Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges)

Describe in detail how the Section 4(f) property will be used.
Bridge #730008 was evaluated to be structurally deficient and functionally obsolete per the 2023 Bridge Development Report, located in the project file. FDOT proposes to replace the northbound and southbound bridges over Pellicer Creek. The northbound bridge, #730045, was built in 1957 and is not a Section 4(f) resource; however, the bridge's need for improvement influences the alternatives for Bridge #730008. FDOT determined that the action for the bridges would be considered as a crossing, meaning that regardless of alternative, the action at both bridges would be the same.

This section describes the Section 4(f) use of Bridge #730008 that would result from the construction of the Preferred Alternative as well as descriptions of additional alternatives considered. Some details about #730045 which are germane to the alternatives analysis are included.

Preferred Alternative (Bridge Replacement) - The structurally deficient and functionally obsolete Bridge #730008 would be demolished and replaced with one that meets current FDOT design standards. No element of Bridge #730008 would remain on this alignment and its materials will be disposed of. While the bridge is currently incorporated into a transportation facility, transportation projects that result in a finding of adverse effect to historic properties under Section 106 of the NHPA, are also considered to use the Section 4(f) resource. The Section 106 Case Study, SHPO concurrence, and the signed Memorandum of Agreement located in the project file, and attached herein, as appropriate. The new bridge is proposed as slightly wider to increase inside and outside shoulder width and would tie into the existing road geometry. Plan sheets are included in the Section 106 Case Study.

No Build, Build on a New Location, and Rehabilitation would not result in Section 4(f) use of the bridge; however, the purpose and need of the project would not be met. These alternatives are described below.

No Build - This alternative would take no action to correct the deficiencies at the crossing. Bridge #730008 would remain in situ and would continue to provide an insufficient, substandard crossing of Pellicer Creek. If the No Build alternative was selected, the integrity of the historic bridge would continue to convey the significance for which it is eligible for listing in the NHRP; however, this alternative would retain in place a "functionally obsolete" bridge beyond its service life. It would not improve the condition, including but not limited to, intolerable deck geometry of the important transportation corridor in a manner that allows safe and efficient crossing of Pellicer Creek and which meet current and predicted vehicular traffic volumes.

Build on New Location - Building new bridges in new locations would not address the deficiencies of bridge #730008. In this alternative, the bridge would likely be closed to traffic and remain in-situ. US 1/SR 5 traffic would be removed from the historic original alignment. This alternative would require FDOT to maintain a closed-to-traffic historic bridge according to the Secretary of Interior's Standards and Guidelines for the Treatment of Historic Properties (SOI Standards). Given the nature of the site and current bridge condition, it is unlikely the bridge could be used as a bicycle/pedestrian facility. The bridge would have no or limited maintenance which would not improve the condition of the bridge. Lack of maintenance would lead to eventual structural failure and collapse, resulting in demolition by neglect. The bridge site has a history of settlement affecting the ride quality and potentially impacting the existing bridges' load carrying capacity and stability. Constructing new bridges adjacent to the existing bridges could cause the existing bridges to have excessive long-term settlement and stability issues.

Additionally, the site has insufficient right of way for building new bridges in new locations. At the bridge site, both sides of the right of way are bordered by environmentally sensitive and protected lands including St. Johns River Water Management District's (SJRWMD) Pellicer Creek Conservation Area and the Guana Tolomato Matanzas National Estuarine Research Reserve. The Pellicer Creek Conservation Area provides protection over acres of regionally significant and protected lands and is actively managed by SJRWMD. The project is also located within the research reserve and is within the Pellicer Creek Aquatic Preserve. This outstanding Florida water is designated by the Florida Department of Environmental Protection (FDEP) as warranting protection due to its natural or rare characteristics. The habitats provided within these areas are essential to many federally and state listed species. Pellicer Creek adjacent to the bridge is also considered Essential Fish Habitat (EFH) which provides important protections to fisheries.

Bridge Rehabilitation - This alternative considers rehabilitation efforts that would not result in adverse effects to the bridge. The distinctive character of the tee beam bridge, including the girders and beams, would remain recognizable. The bridge rehabilitation would focus on the substructure. It would not address efflorescence and water intrusion at the standard deck. Crutch bents would be installed as a second foundation, using transverse beams to support the superstructure.

While crutch bents have been successfully used in District Five, this location presents unique increased challenges due to space limitations. There are previously abandoned timber piles within the channel that would remain in situ and the installation of additional substructure elements within the channel may constrict the flow of Pellicer Creek. These conditions would be exacerbated by the need for crutch bents at the northbound bridge. Additionally, it would retain sub-standard concrete rail in place. It would not correct the functional and geometric deficiencies. Rehabilitation would not meaningfully extend the bridge's design life and would retain a nearly 100-year-old bridge carrying traffic on one of the busiest highways in the US Highway System.

Applicability

Yes	No	
☒	☐	Does the project meet all of the following criteria?

1. The bridge is to be replaced or rehabilitated with Federal funds.
2. The project will require the use of a historic bridge structure which is on or is eligible for listing on the National Register of Historic Places.
3. The bridge is not a National Historic Landmark.
4. FDOT has determined that the facts of the project match those set forth in the sections below labeled Alternatives, Findings, and Measures to Minimize Harm.
5. Agreement among FDOT, the State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP), if participating, has been reached through procedures pursuant to Section 106 of the NHPA.

Alernatives and Findings

1. No Build: The No Build Alternative has been studied and does not meet the Section 4(f) prudent and feasible standard. The No Build Alternative is not recommended based on the following:

- **Structural Deficiencies:** The No Build Alternative does not correct the situation that causes the bridge to be considered structurally deficient or significantly deteriorated. These deficiencies can lead to eventual structural failure/collapse. Normal maintenance is not considered adequate to address these deficiencies.
- **Functional/Geometric Deficiencies:** The No Build Alternative does not correct the situation that causes the bridge to be considered functionally/geometrically deficient. These deficiencies can lead to safety hazards to the traveling public or place unacceptable restrictions on transport and travel.

2. Build on New Location Without Using the Old Bridge: This alternative has been studied and does not meet the Section 4(f) prudent and feasible standard. The New Location Alternative is not recommended based on the following:

- **Structural Deficiencies:** The New Location Alternative does not correct the situation that causes the bridge to be considered structurally deficient or significantly deteriorated. These deficiencies can lead to eventual structural failure/collapse. Normal maintenance is not considered adequate to address these deficiencies.
- **Functional/Geometric Deficiencies:** The New Location Alternative does not correct the situation that causes the bridge to be considered functionally/geometrically deficient. These deficiencies can lead to safety hazards to the traveling public or place unacceptable restrictions on transport and travel.

3. Rehabilitation Without Affecting the Historic Integrity of the Bridge: This alternative has been studied and does not meet the Section 4(f) prudent and feasible standard. The Rehabilitation Alternative is not recommended based on the following:

- **Structural Deficiencies:** The Rehabilitation Alternative does not correct the situation that causes the bridge to be considered structurally deficient or significantly deteriorated. These deficiencies can lead to eventual structural failure/collapse. Normal maintenance is not considered adequate to address these deficiencies.
- **Functional/Geometric Deficiencies:**The Rehabilitation Alternative does not correct the situation that causes the bridge to be considered functionally/geometrically deficient. These deficiencies can lead to safety hazards to the traveling public or place unacceptable restrictions on transport and travel.

4. Replacement: The Replacement Alternative has been studied and is determined to meet the Section 4(f) prudent and feasible standard. The Replacement Alternative is recommended based on the following:

- **Structural Deficiencies:**The Replacement Alternative corrects the situation that causes the bridge to be considered structurally deficient or significantly deteriorated.
- **Functional/Geometric Deficiencies:**The Replacement Alternative corrects the situation that causes the bridge to be considered functionally/geometrically deficient.

Measures to Minimize Harm

☐ For bridges that are to be rehabilitated, the historic integrity of the bridge is preserved, to the greatest extent possible, consistent with unavoidable transportation needs, safety, and load requirements;

☐ For bridges that are to be rehabilitated to the point that the historic integrity is affected or that are to be moved or demolished, FDOT ensures that, in accordance with the Historic American Engineering Record (HAER) standards, or other suitable means developed through consultation, fully adequate records are made of the bridge;

☐ For bridges that are to be replaced, the existing bridge is made available for an alternative use, provided a responsible party agrees to maintain and preserve the bridge; and

☒ For bridges that are adversely affected, agreement among the SHPO, FDOT, and ACHP (if participating in consultation) is reached through the Section 106 process of the NHPA on measures to minimize harm and those measures are incorporated into the project. This programmatic Section 4(f) evaluation does not apply to projects where such an agreement cannot be reached.

The proposed project meets all the applicable criteria set forth by the Federal Highway Administration's (FHWA) Guidance on Programmatic Section 4(f) Evaluation and Approval for FHWA Projects Which Necessitate the Use of Historic Bridges (23 CFR Part 774). All alternatives set forth in the subject programmatic evaluation were fully analyzed and the findings made are clearly applicable to this project. There are no feasible and prudent alternatives to the use of the historic bridge, and the project includes all possible planning to minimize harm.

Public Involvement Activities:

A public engagement plan/community action awareness plan was formalized on April 27, 2022.

- Stakeholder meetings were held on June 28, 2022, and March 21, 2023.
- Individual public meetings with adjacent properties were invited to participate in the March 21, 2023 stakeholders meeting.
- The public was invited to the March 21, 2023 meeting.

The 30% design plans were provided to local government stakeholders by the Design Consultant, Florida Bridge and Transportation, on June 6, 2023.

- The St. Johns County Certified Local Government (CLG) representative commented on the historic nature of the bridge. The CLG asked if it was feasible to save a bridge rail post with a date stamp. However, during the Section 106 process it was determined that the date is stamped on an element of the bridge constructed in 1948, which is outside the bridge's period of significance. Thus, the date stamp is not a significant feature of the bridge. FDOT provided this

clarification to the CLG, and they subsequently stated they have no further concerns on January 19, 2024.

- As of October 2023, the public outreach conducted by FDOT's design team in support of the design is complete.
- Coordination regarding the public engagement strategy in support of the PD&E Study was discussed between District 5 and OEM and agreed to on October 3, 2023.
- The approved PD&E engagement approach is to publish a notice of opportunity that provides the opportunity for the public to request a public hearing. The following apply to the notice of opportunity:

The notice of opportunity is anticipated to be published in August 2024, and provides 15 days for a written request to be postmarked or submitted to the FDOT PM

It will be published in the local newspaper, in the Florida Administrative Record, and on FDOT's public meeting notices website. It will also be included on cflroads on the project webpage.

At the same time that the notice is published, the Draft Section 106 Case Study and the Draft Programmatic Section 4(f) Evaluation will be made available on cflroads for public review.

The following outcomes could occur from the notice of opportunity:

If after the allotted time has lapsed no inquiries are received, no public hearing will be required, and the notice of opportunity activities will be documented.

If the District receives a minimal number of requests from individuals, the District may contact the individual and attempt to rectify the concern. When all is resolved, everything is documented, and no public hearing is required.

If multiple requests are received, the District will follow the formal PD&E process to hold a public hearing.

FDOT D5 presented initial results of the project to the SHPO and Muscogee (Creek) Nation (MCN) in a CRAS. The SHPO concurred with the CRAS on July 6, 2022, and no response was received from the MCN. FDOT D5 presented the Case Study Report to SHPO and MCN in October 2023. The Case Study Report concluded with the Adverse Effects to the bridge and proposed mitigation measures. SHPO issued concurrence on October 25, 2023 (attached). No response was received from the MCN. The process concluded with the execution of a MOA between FDOT and SHPO documenting the stipulations for mitigation resulting from the adverse effects to NR-eligible bridge #730008 on **Month Date, Year**.

OEM SME Concurrence Date: Pending

Project-Level Attachments

None

Resource Attachments

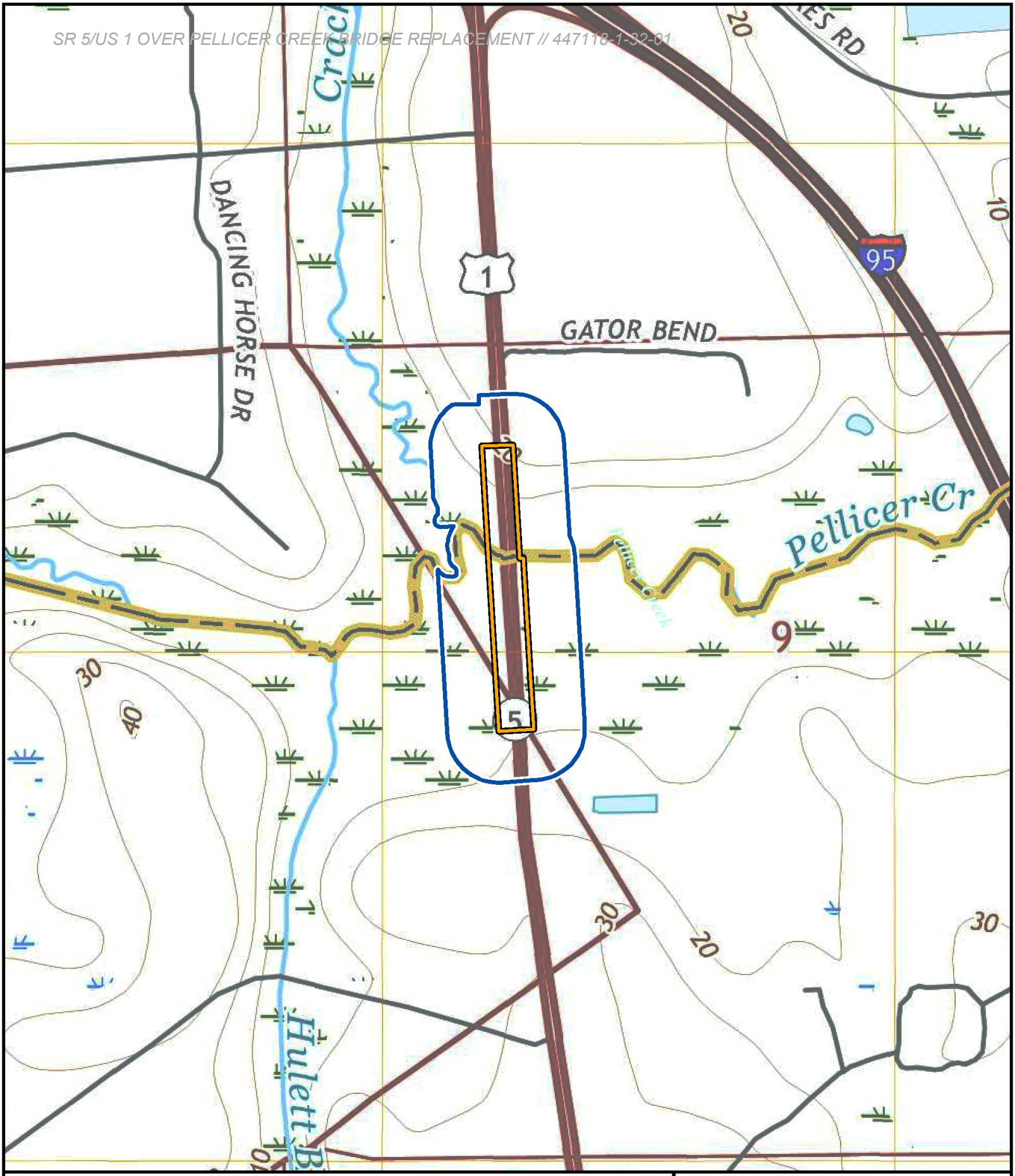
Bridge #730008

T22083_APE_Topo
Project Information Handout
Project Information Session presentation
Section 106 Case Study Report
SHPO Concurrence Letter
SHPO Section 106 Case Study Concurrence Letter
447118-1_SR5_US1_Pellicer Creek Bridge_Effects_Transmittal Letter_Muscogee Nation

Bridge #730008

Contents:

T22083_APE_Topo
Project Information Handout
Project Information Session presentation
Section 106 Case Study Report
SHPO Concurrence Letter
SHPO Section 106 Case Study Concurrence Letter
447118-1_SR5_US1_Pellicer Creek Bridge_Effects_Transmittal Letter_Muscogee Nation



Pellicer Creek Bridge Replacement APE

Pellicer Creek Bridge Replacement ROW

0 200 Meters 0 500 Feet

N

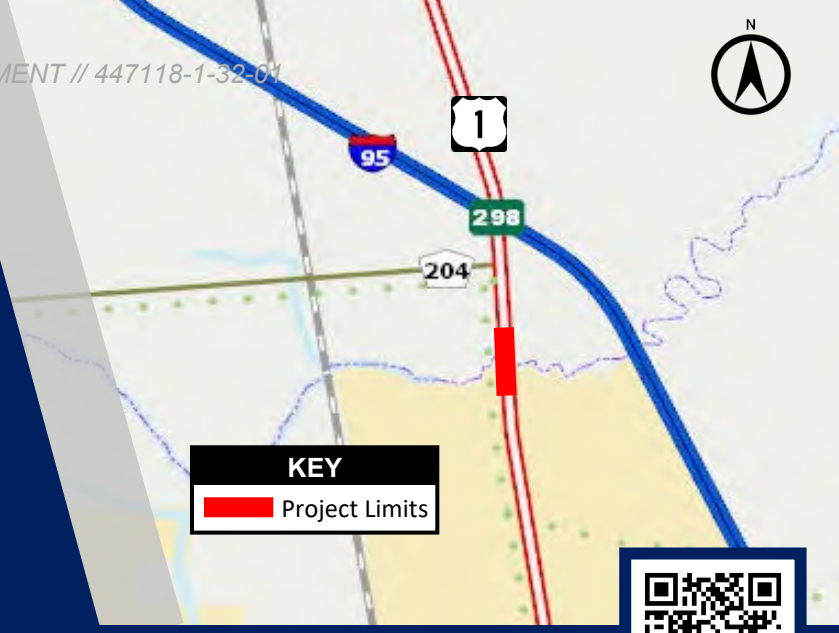
USGS 7.5' Quadrangle Map - Dinner Island (2018)

U.S. 1 Bridge Replacement

Over Pellicer Creek

Flagler County / St. Johns County

Financial Project Identification (FPID) No.: 447118-1



Project Description

The Florida Department of Transportation (FDOT) is proposing to replace the northbound and southbound U.S. 1 bridges over Pellicer Creek at the Flagler County/St. Johns County line. The existing southbound bridge was constructed in 1927, and the northbound bridge was constructed in 1957. The purpose of the project is to provide modern bridges to ensure continued safety and mobility along U.S. 1 in this area.

The proposed bridges will have two travel lanes in each direction and wider shoulders to accommodate bicyclists. The bridges will maintain similar clearance over Pellicer Creek and the bridge opening will be wider than the existing opening. Additional improvements include reconstructing the roadway at the bridge approaches and providing minor drainage improvements.

The bridges will be constructed in phases so that at least one travel lane in each direction of U.S. 1 remains open at all times.

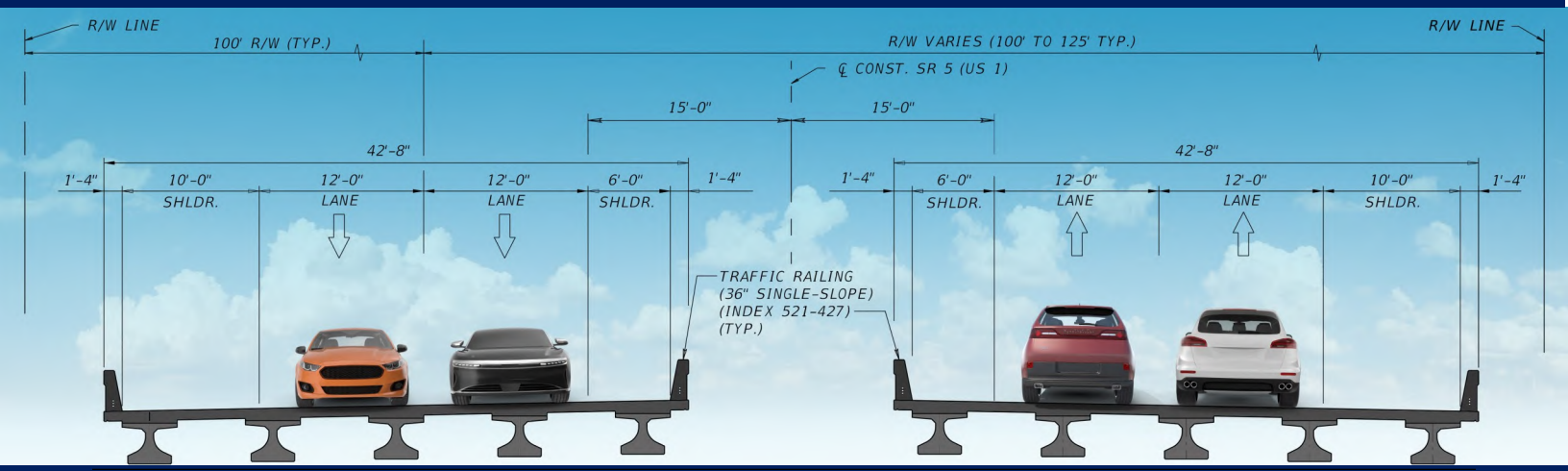
Project Status and Estimated Costs*

Design:	Ongoing - fall 2023	$ 1.7 Million
Right of Way:	Within existing	--
Construction:	Funded - summer 2026	$ 9.3 Million

*subject to change

Contact:

Shelley ChinQuee
FDOT Project Manager
386-943-5439
Shelley.ChinQuee@dot.state.fl.us



U.S. 1 Bridge Replacement over Pellicer Creek

Stakeholder Meeting

Financial Project Identification (FPID) No.: 447118-1

Flagler and St. Johns County
March 21, 2023

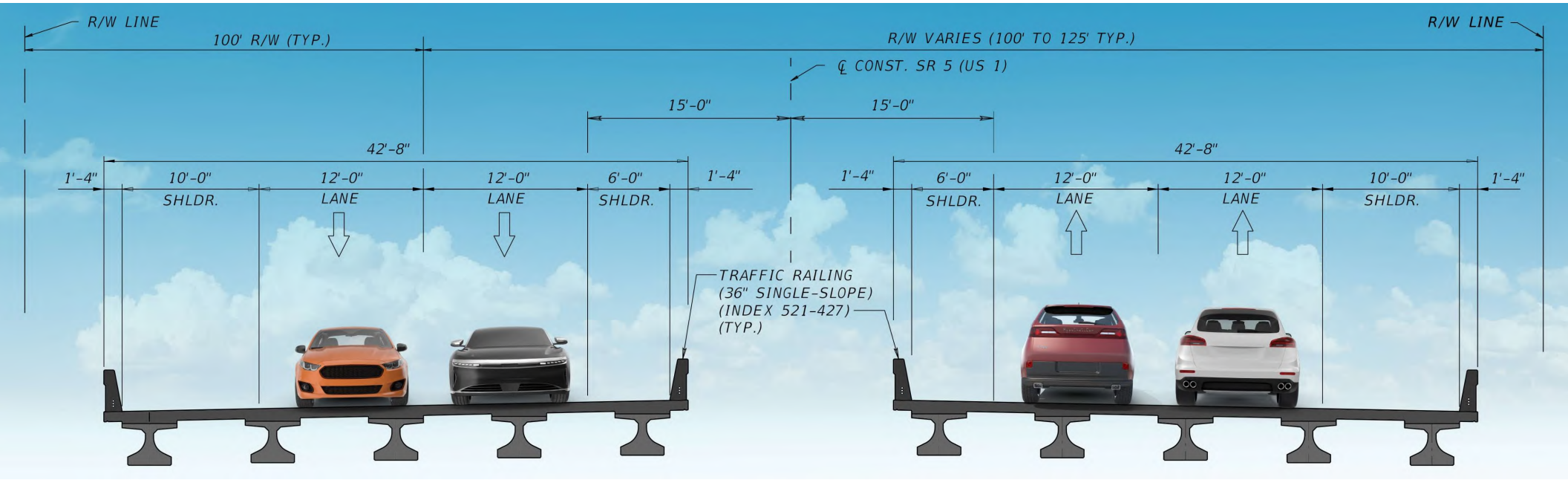
1

Project Location

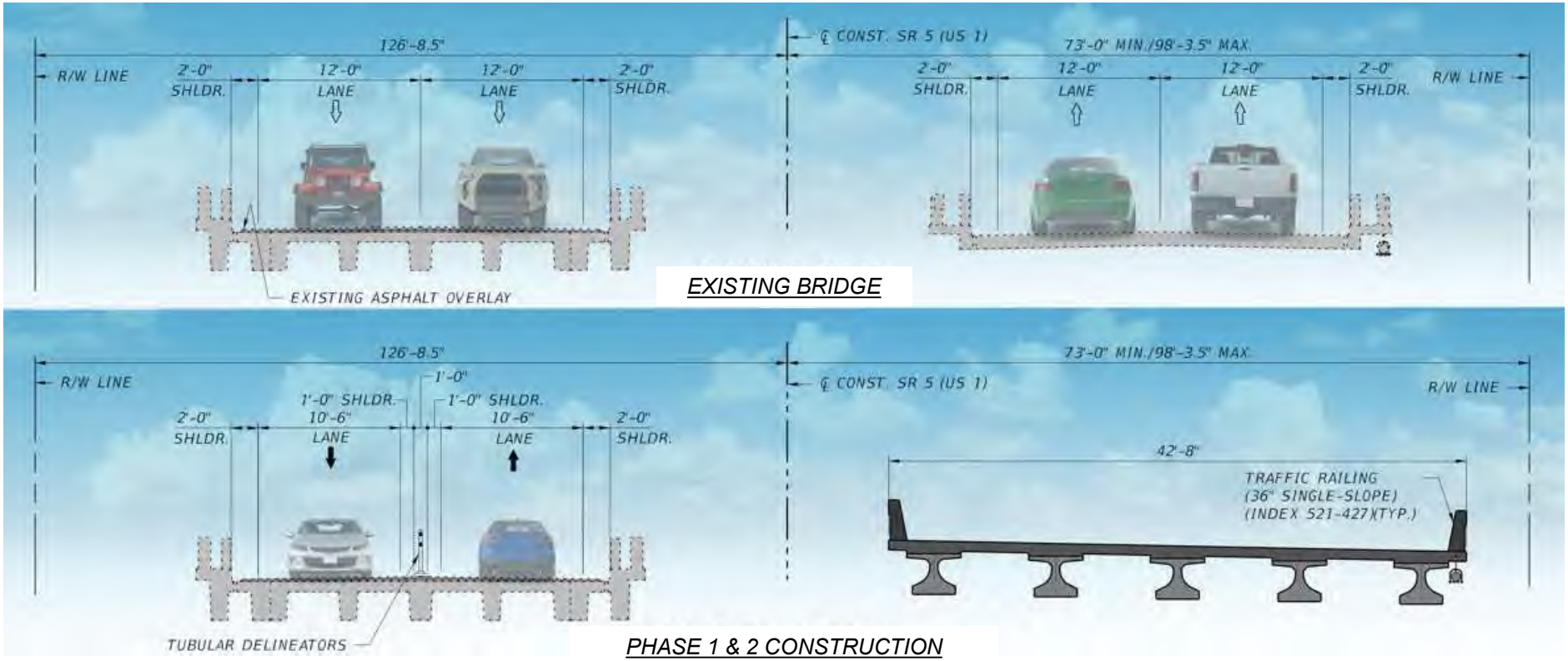
Proposed Improvements

- Replacement of SB bridge (Bridge Number 730008)
  - Built in 1927/ Widened 1948
  - 96 years old
- Replacement of NB bridge (Bridge Number 730045)
  - Built in 1957
  - 66 years old
- Roadway reconstruction at bridge approaches
- Minor drainage improvements

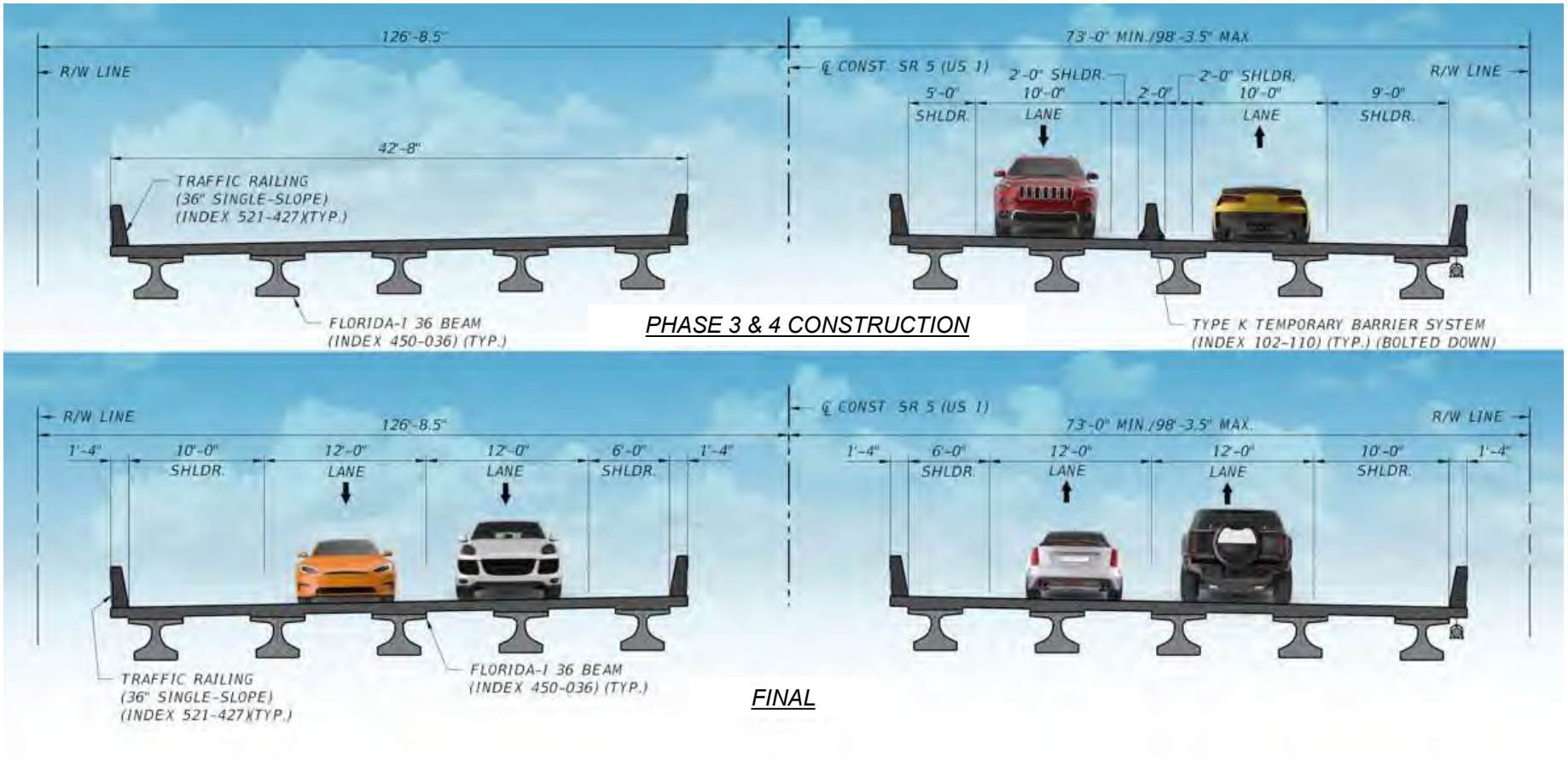
Proposed Typical Section



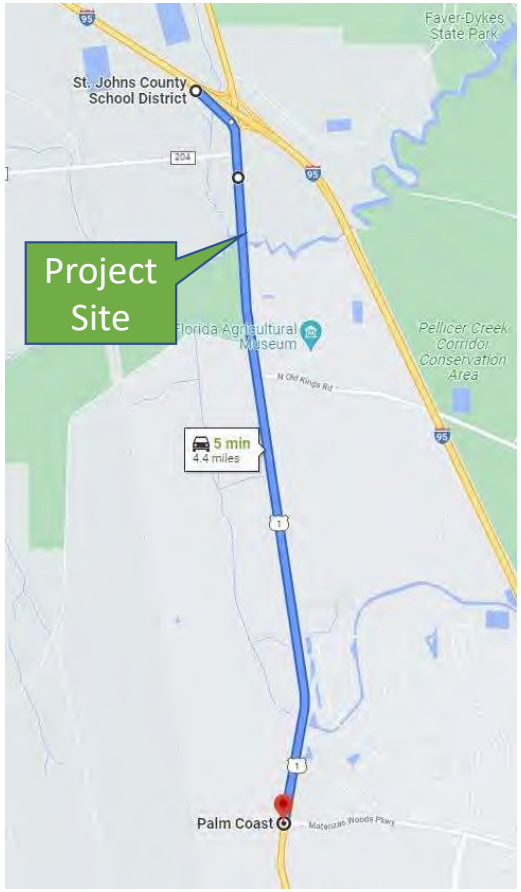
Construction Phasing

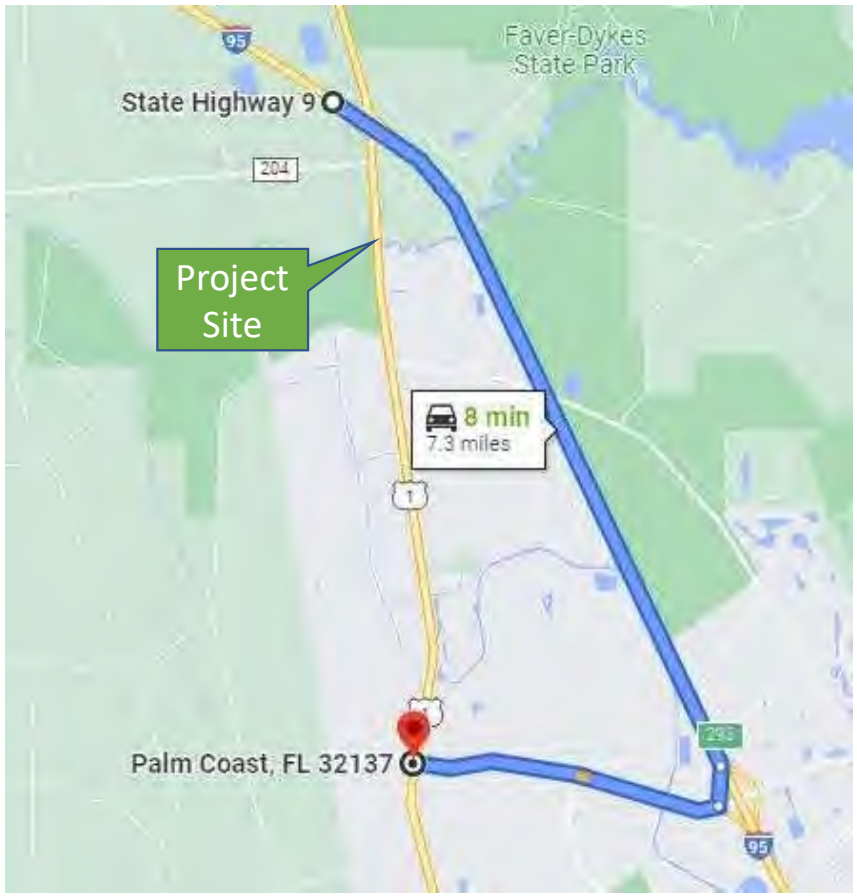


Construction Phasing



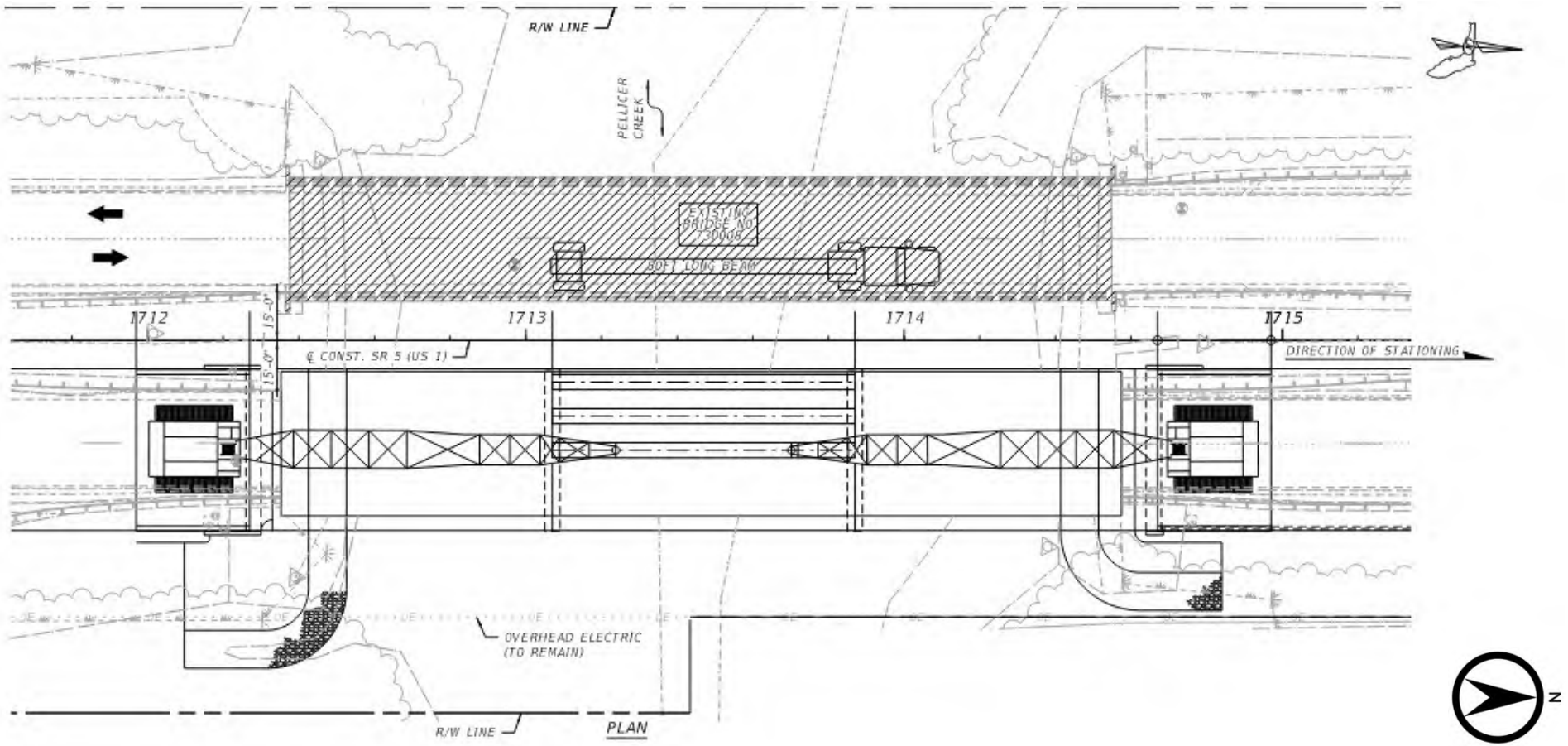
Detour Exists if Needed





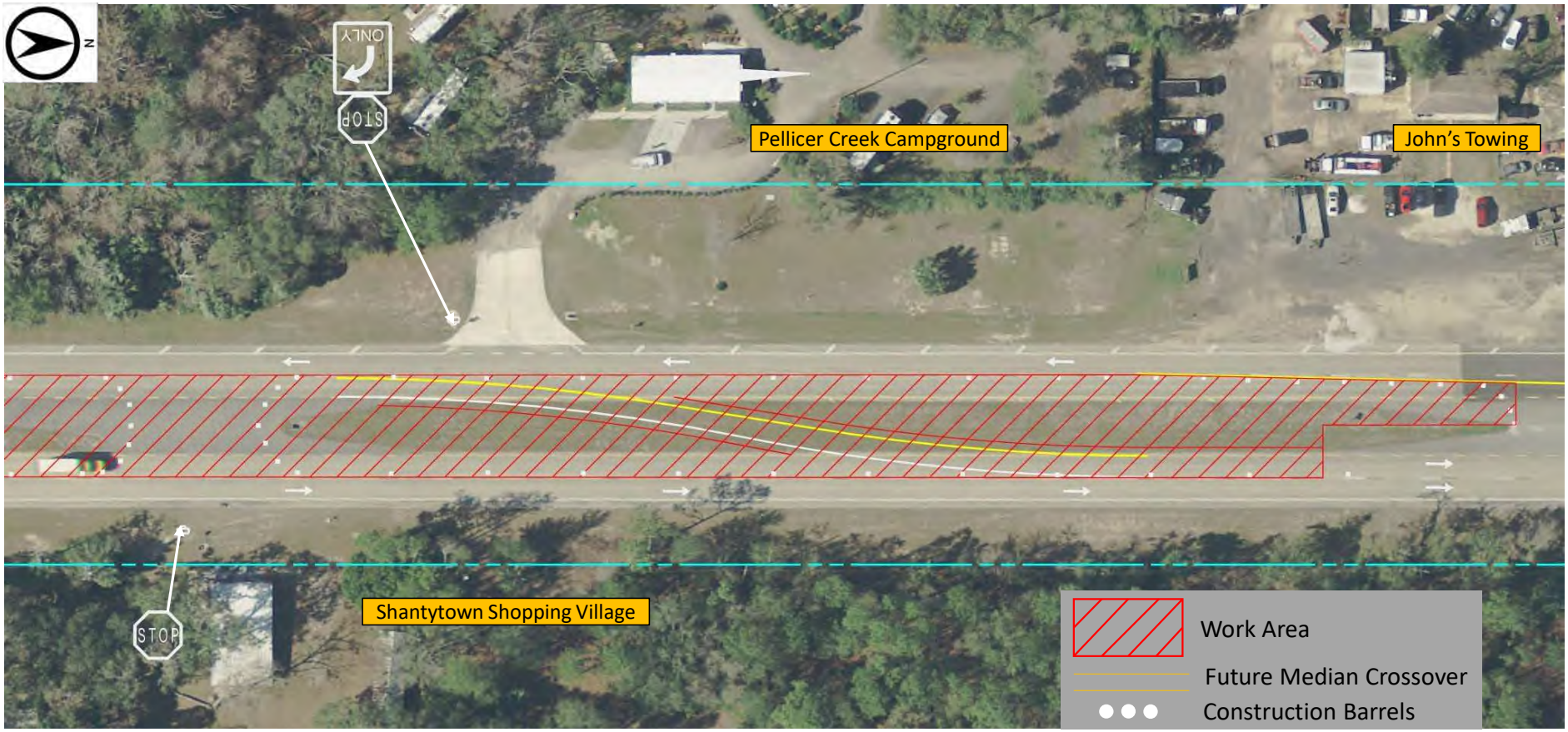
- Detour route can accommodate oversized vehicles
- Normal travel time – 5 min
- Detour travel time – 8 min
- Brief bridge closure for beam setting
- Utilizing I-95 and Matanzas Woods Parkway

Beam Setting Operations



Stakeholder Coordination

Property Access Phase I - NB Bridge Construction



- John's Towing – Access remains unchanged
- Pellicer Creek Campground – Right turn only SB, then utilize the median opening at Shantytown for U-turns NB
- Shantytown – Access remains unchanged

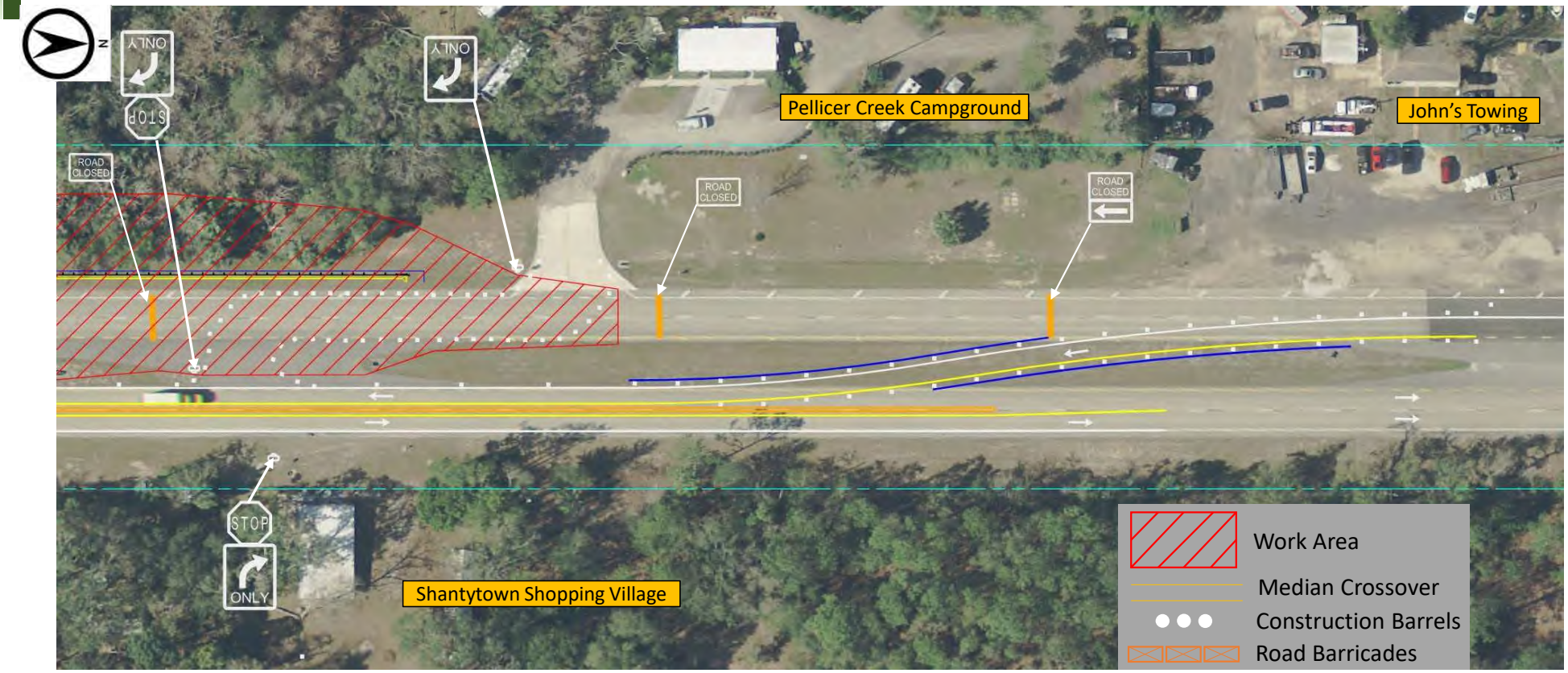
Property Access Phase 2 - NB Bridge Construction

- John's Towing – Access remains unchanged
- Pellicer Creek Campground – Right turn only SB, then utilize U-turn at opening just before Old Kings Road to head NB
- Shantytown– Right turn only NB via median crossover, then U-turn at median opening by John's Towing to head SB

Property Access Phase 3 - SB Bridge Construction

- John's Towing – Access remains unchanged
- Pellicer Creek Campground – Right turn only SB, then utilize U-turn at opening just before Old Kings Road to head NB
- Shantytown – Right turn only NB, then U-turn at median opening by John's Towing to head SB

Property Access Phase 4 - SB Bridge Construction



- John's Towing – Access remains unchanged
- Pellicer Creek Campground – Right turn only SB via median opening, then utilize U-turn at opening just before Old Kings Road to head NB
- Shantytown – Right turn only NB, then U-turn at median opening by John's Towing to head SB via median crossover

Schedule & Estimated Costs

Ways to Comment

- Submit a written comment form today
- Submit a comment on the project website www.CFLRoads.com/project/447118-1
- Contact the project manager directly:

Shelley.ChinQuee@dot.state.fl.us

719 S. Woodland Blvd., MS 542

DeLand, FL 32720

386-943-5439

Questions

SECTION 106 CONSULTATION CASE STUDY REPORT FOR THE STATE ROAD 5/US 1 BRIDGE REPLACEMENT OVER PELLICER CREEK, FLAGLER AND ST. JOHNS COUNTIES, FLORIDA

CONSULTANT:	SEARCH 3117 Edgewater Drive, Orlando, FL 32804
ARCHITECTURAL HISTORIAN AND PRINCIPAL INVESTIGATOR:	Mikel Travisano, MS
CLIENT:	Florida Bridge and Transportation, Inc. and Florida Department of Transportation, District 5
DATE:	October 2023
FINANCIAL MANAGEMENT #:	447118-1-52-01

This Section 106 case study report provides an alternatives analysis and effects assessment for the State Road (SR) 5/US 1 bridge replacement over Pellicer Creek in Flagler and St. Johns Counties, Florida (**Figures 1–2**). The Florida Department of Transportation (FDOT), District 5, is proposing to replace both bridges (FDOT Bridge Nos. 730008 and 730045) carrying SR 5/US 1 over Pellicer Creek at the Flagler and St. Johns County line. The project also includes minor roadway work limited to replacing the bridges, as well as modification of the existing drainage system as required to complete proposed roadway reconstruction work. This project will update the bridge typical section, increasing the inside and outside shoulders 2.0 feet (ft) (0.7 meters [m]) from the existing condition to 6.0 ft (1.8 m) inside shoulders and 10.0 ft (3.0 m) outside shoulders. An easement across sovereign submerged lands is required for construction. The purpose of this project is to replace these two functionally obsolete bridges (FDOT Bridge Nos. 730008 and 730045). Because rehabilitation and reuse of the structures is not possible given their current condition, their replacement will ensure safe travel and maintain connectivity along this portion of SR 5/US 1. This project is federally funded for construction in 2026.

SEARCH completed a cultural resource assessment survey (CRAS) for the preferred alternative in June 2022 (Matusik and Newton 2022). The CRAS and subsequent consultation with the State Historic Preservation Officer (SHPO) concluded that one historic property (i.e., a cultural resource listed in or eligible for listing in the National Register of Historic Places [NRHP]) is located within the project area of potential effects (APE). The SHPO concurrence letter for the 2022 CRAS is included as **Attachment A**. This effects assessment will address project-related effects relative to this NRHP-eligible resource, FDOT Bridge No. 730008 (8FL01008/8SJ08262). The second (northbound) US 1 bridge over Pellicer Creek (FDOT Bridge No. 730045) was excluded from Section 106 consideration based on the provisions of the Program Comment (Federal Register 2012:68793) regarding common post-World War II bridge types, and so was not recorded or evaluated as part of the CRAS for this project.

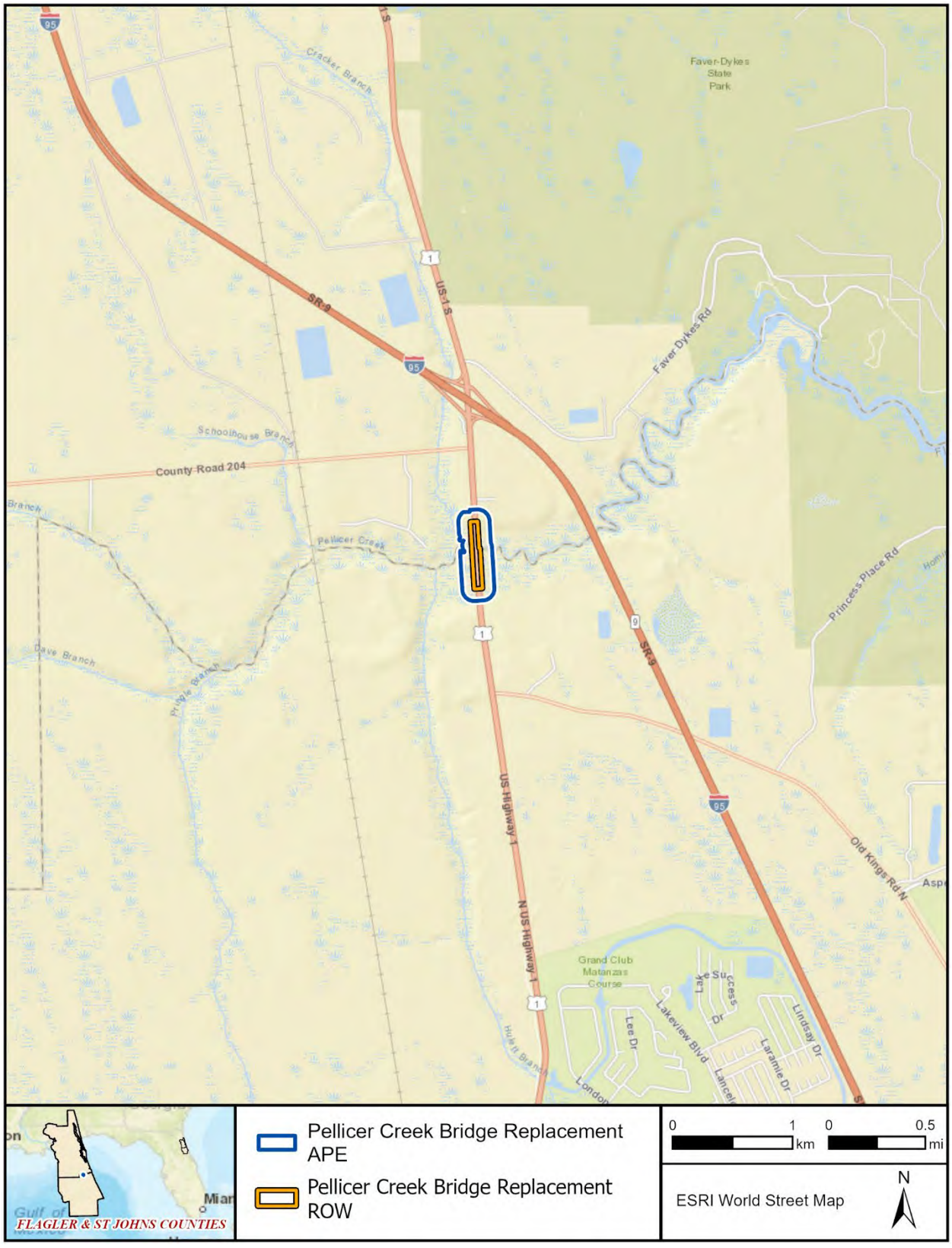


Figure 1. The Pellicer Creek bridge replacement project location in Flagler and St. Johns Counties, Florida.

Figure 2. The Pellicer Creek bridge replacement APE shown on an aerial map of Flagler and St. Johns Counties, Florida.

As a federally funded project, the CRAS and the present effects evaluation were conducted to comply with Public Law 113-287 (Title 54 US Code), which incorporates the provisions of the National Historic Preservation Act (NHPA) of 1966, as amended, and the Archeological and Historic Preservation Act of 1974, as amended. The study also meets the regulations for implementing NHPA Section 106 found in 36 Code of Federal Regulations (CFR) Part 800 (*Protection of Historic Properties*). This study also complies with Chapter 267 of the Florida Statutes and Rule Chapter 1A-46, Florida Administrative Code. SEARCH performed all work in accordance with Part 2, Chapter 8 of the FDOT's Project Development & Environment Manual (revised July 2023) and the Florida Division of Historical Resources' recommendations for such projects as stipulated in *Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals*. The principal investigator for this project meets the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 Federal Register 44716-42).

PROPOSED UNDERTAKING

Project Description

The project consists of replacing the parallel bridges (FDOT Bridge Nos. 730008 and 730045) at SR 5/US 1 over Pellicer Creek in Flagler and St. Johns Counties. This project will update the bridge typical section, increasing the inside and outside shoulders 2.0 ft (0.7 m) from the existing condition to 6.0 ft (1.8 m) inside shoulders and 10.0 ft (3.0 m) outside shoulders. The project also includes roadway work limited to replacing the bridges, as well as modification of the existing drainage system as required to complete proposed roadway reconstruction work. The recommended alternative is Alternative 1B, which was selected based on overall cost, constructability and construction time, and maintenance and right-of-way (ROW) impacts. A discussion of all alternatives considered by the project is included below.

Purpose and Need

The purpose of this project is to replace two functionally obsolete bridges that do not meet current road design standards (FDOT Bridge Nos. 730008 and 730045; Florida Bridge and Transportation, Inc. 2023). Their replacement will ensure safe travel and maintain connectivity along this portion of SR 5/US 1.

Alternatives

The Bridge Development Report (BDR) provides four alternatives that were considered, inclusive of the recommended alternative (1B) (**Attachment B**). The project engineering team also provided SEARCH with information regarding Rehabilitation and No-Build alternatives for the purposes of the present Section 106 Case Study, although this is not included in the BDR. All six alternatives are included in **Table 1**.

Table 1. Matrix Analysis of Bridge Alternatives.

Alternatives	Description of Superstructure	Bridge Length	Span Length	Number of Spans	Description of Substructure	Bridge Cost
1A	Florida I Beams	240.0 ft (73.2 m)	80.0 ft (24.4 m)	3	18.0-in PPC Piles	$6,769,679
1B	Florida I Beams	240.0 ft (73.2 m)	80.0 ft (24.4 m)	3	24.0-in PPC Piles	$7,046,555
2A	Florida Slab Beams	240.0 ft (73.2 m)	60.0 ft (18.3 m)	4	18.0-in PPC Piles	$8,303,265
2B	Florida Slab Beams	240.0 ft (73.2 m)	60.0 ft (18.3 m)	4	24.0-in PPC Piles	$8,603,803
*Rehabilitation	In-kind replacement	No Change	No Change	No Change	Rehabilitation (crutch bent installation)	$8,712,896
*No Build	No Change	No Change	No Change	No Change	No Change	NA

Source: (Florida Bridge and Transportation, Inc. 2023: 3, 20)
*Not included in the BDR.

The BDR also provides an evaluation matrix for rating four bridge alternatives, (1A, 1B, 2A, and 2B). The matrix ranks each alternative from 1-10 using a weighted score and multiplier, with 100 being the highest possible score (Florida Bridge and Transportation, Inc. 2023:23). The scores for each alternative discussed in the BDR are provided in the descriptions below.

Alternative 1A

Alternative 1A uses Florida I Beams and has three spans of 80.0 ft (73.2 m) each. Alternative 1A uses 18.0 in (457.2 mm) Precast Prestressed Concrete (PPC) Piles, while Alternative 1B (discussed below) uses 24.0 in (609.6 mm) PPC piles. While the smaller-diameter piles are easier to drive, they are not as efficient for the required length and will require preplanned pile splices that are more expensive and need a high degree of quality control during installation. The smaller-diameter piles would also likely require pile jackets in the future, while the larger-diameter piles would not. The use of Florida I Beams for Alternative 1A is preferrable for construction time as the Florida Slab Beam Alternatives 2A and 2B would require an additional intermediate bent to support the bridge structure (Florida Bridge and Transportation, Inc. 2023).

Bridge maintenance for all alternatives is similar because concrete bridges are durable with a low-maintenance record. ROW impacts are anticipated for all alternatives. The Florida Slab Beam Alternatives 2A and 2B are preferrable to Alternative 1A for having the profile of the new road and bridge meet the existing road profile; this can be completed faster because of the lower beam depth on Alternatives 2A and 2B.

The cost of Alternative 1A is estimated at $6,769,679, making it the least expensive build alternative. Given the drawbacks regarding maintenance and ROW impacts, Alternative 1A received an 87.0 score and was ranked second among the four build alternatives (Florida Bridge and Transportation, Inc. 2023: 23).

Advantages of Alternative 1A:

- Florida I Beams do not require an additional intermediate bent to support the bridge structure; and
- Least expensive of the four alternatives.

Disadvantages of Alternative 1A:

- 18.0 in (457.2 mm) PPC piles require preplanned pile splices that are more expensive and need a high degree of quality control during installation, and these smaller-diameter piles may require future maintenance (pile jackets) to extend bridge life; and
- Higher depth of Florida I Beams when compared to the Florida Slab Beam may complicate the profile of the new road and bridge meeting the existing road profile.

Alternative 1B

The constructability of Alternative 1B is similar to 1A: it uses Florida I Beams and has three spans of 80.0 ft (73.2 m). The main difference is that Alternative 1B uses 24.0 in (609.6 mm) PPC piles, while Alternative 1B uses 18.0 in (457.2 mm) PPC piles, which are smaller in diameter and easier to drive. However, they are not as efficient for the required length and will require preplanned pile splices that are more expensive and need a high degree of quality control during installation. The use of Florida I Beams for Alternative 1B is preferrable for construction time because the Florida Slab Beam Alternatives 2A and 2B would require an additional intermediate bent to support the bridge structure (Florida Bridge and Transportation, Inc. 2023).

Bridge maintenance for all alternatives is similar because concrete bridges are durable with a low-maintenance record. ROW impacts are anticipated for all alternatives. The Florida Slab Beam Alternatives 2A and 2B are preferrable to Alternative 1B for having the profile of the new road and bridge meet the existing road profile; this can be completed faster because of the lower beam depth on Alternatives 2A and 2B. However, the primary consideration for maintenance and ROW is using 24.0 in (609.6 mm) PPC piles instead of 18.0 in (457.2 mm) PPC piles because the smaller-diameter piles will require preplanned pile splices, and on the existing bridges, they already require pile jackets. Furthermore, it's anticipated that using 24.0 in (609.6 mm) PPC piles will lessen the need for future maintenance (pile jackets) and extend bridge life. Therefore, Alternative 1B has advantages relative to maintenance and ROW impacts.

The cost of Alternative 1B is estimated at $7,046,555, making it the second least expensive option. Alternative 1B received a 91.6 score and was ranked first among the four building alternatives, making it the recommended alternative (Florida Bridge and Transportation, Inc. 2023: 23).

Advantages of Alternative 1B:

- Florida I Beams do not require an additional intermediate bent to support the bridge structure;
- 24.0 in (609.6 mm) PPC piles do not need preplanned pile splices and are more durable than 18.0 in (457.2 mm) PPC piles, lessening the need for future maintenance and extending bridge life; and
- Second least expensive of the four alternatives.

Disadvantages of Alternative 1B:

- Higher depth of Florida I Beams when compared to the Florida Slab Beam may complicate the profile of the new road and bridge meeting the existing road profile.

Alternative 2A

Alternative 2A uses Florida Slab Beams and has three spans of 80.0 ft (73.2 m). Alternative 2A uses 18.0 in (457.2 mm) PPC Piles, while Alternative 2B uses 24.0 in (609.6 mm) PPC piles. While the smaller-diameter piles are easier to drive, they are not as efficient for the required length and will require preplanned pile splices that are more expensive and need a high degree of quality control. In addition, the Florida Slab Beam Alternatives 2A and 2B require an additional intermediate bent to support the bridge structure (Florida Bridge and Transportation, Inc. 2023), which would likely increase construction time when compared to Alternatives 1A and 1B.

Bridge maintenance for all alternatives is similar because concrete bridges are durable with a low-maintenance record. ROW impacts are anticipated for all alternatives. The Florida Slab Beam Alternatives 2A and 2B are preferrable to Alternatives 1A and 1B for having the profile of new road and bridge meet the existing road profile; this can be completed faster because of the lower beam depth on Alternatives 2A and 2B. However, the primary consideration for maintenance and ROW is using 24.0 in (609.6 mm) PPC piles instead of 18.0 in (457.2 mm) PPC piles because the smaller-diameter piles will require preplanned pile splices and will require pile jackets at some point in the future, while the larger diameter piles would not. Therefore, Alternative 2A is at a disadvantage with regard to maintenance and ROW impacts.

The cost of Alternative 2A is estimated at $8,303,265, making it the second most expensive option. Alternative 2A received a 72.4 score and was ranked fourth, the lowest score of all the build alternatives (Florida Bridge and Transportation, Inc. 2023: 23).

Advantages of Alternative 2A:

- Lower depth of Florida Slab Beam when compared to the Florida I Beams is preferrable to Alternatives 1A and 1B for having the profile of new road and bridge meet the existing road profile; this can be completed faster because of the lower beam depth.

Disadvantages of Alternative 2A:

- 18.0 in (457.2 mm) PPC piles require preplanned pile splices that are more expensive and need a high degree of quality control during installation, and these smaller-diameter piles may require future maintenance (pile jackets) to extend bridge life;
- Requires an additional intermediate bent to support the bridge structure; and
- Second most expensive of the four alternatives.

Alternative 2B

The constructability of Alternative 2B is similar to 2A: it uses Florida Slab Beams and has three spans of 80.0 ft (73.2 m). The main difference is that Alternative 2B uses 24.0 in (609.6 mm) PPC piles, while Alternative 2A uses 18.0 in (457.2 mm) PPC piles. While the smaller-diameter piles are easier to drive, they are not as efficient for the required length and will require preplanned pile splices that are more expensive and need a high degree of quality control.

In addition, the Florida Slab Beam Alternatives 2A and 2B require an additional intermediate bent to support the bridge structure (Florida Bridge and Transportation, Inc. 2023), which would likely increase construction time when compared to Alternatives 1A and 1B.

Bridge maintenance for all alternatives is similar because concrete bridges are durable with a low-maintenance record. ROW impacts are anticipated for all alternatives. The Florida Slab Beam Alternatives 2A and 2B are preferrable to Alternatives 1A and 1B for having the profile of new road and bridge meet the existing road profile; this can be completed faster because of the lower beam depth on Alternatives 2A and 2B. Further, it is anticipated that using 24.0 in (609.6 mm) PPC piles will lessen the need for future maintenance (pile jackets) and extend bridge life. Therefore, Alternative 2B has advantages relative to maintenance and ROW impacts.

Finally, the cost of Alternative 2B is estimated at $8,603,803, making it the most expensive option. Alternative 2B received a 78.2 score and was ranked third among the four build alternatives (Florida Bridge and Transportation, Inc. 2023: 23).

Advantages of Alternative 2B:

- Lower depth of Florida Slab Beam when compared to the Florida I Beams is preferrable to Alternatives 1A and 1B for having the profile of new road and bridge meet the existing road profile; this can be completed faster because of the lower beam depth; and
- 24.0 in (609.6 mm) PPC piles do not need preplanned pile splices and are more durable than 18.0 in (457.2 mm) PPC piles, lessening the need for future maintenance to extend bridge life.

Disadvantages of Alternative 2B:

- Requires an additional intermediate bent to support the bridge structure; and
- Most expensive of the four alternatives.

Rehabilitation Alternative

A rehabilitation alternative was not specifically included in the BDR; however, the inspection report and BDR state that FDOT Bridge No. 730008 (8FL01008/8SJ08262) over Pellicer Creek is "functionally obsolete" (**Attachment C**). This designation indicates that the bridge does not meet current road design standards due to narrow shoulder width (the current shoulder width is 2.0 ft [0.7 m], while the standard is 6.0 ft [1.8 m] for the inside shoulder and 10.0 ft [3.0 m] for the outside shoulders). At 96 years old, the bridge is already past its design life of 75 years. Furthermore, FDOT Bridge No. 730008 already has pile jackets installed to extend its service life. Replacing the pile jackets would require extensive work while trying to avoid damage to the original piles, while adding more width to the existing pile jackets would affect the hydraulic opening of the bridge over the creek. Even if repairs were to occur, the substandard shoulders would remain, which would pose a safety hazard per current FDOT standards. As such, the rehabilitation alternative is not a viable option because it does not meet the purpose and need of the project (Florida Bridge and Transportation, Inc. 2023: 23).

No-Build Alternative

A no-build alternative was not specifically included in the BDR because it would require maintaining in service a "functionally obsolete" bridge that is 21 years past its design life. A no-build option would entail no changes or construction to the existing bridge, and no structural elements would be removed or added. The no-build alternative would retain the bridge's substandard 2.0 ft (0.7 m) shoulders and piles that have already been repaired with the installation of pile jackets. As such, the no-build alternative is not a viable option and does not meet the purpose and need of the project (Florida Bridge and Transportation, Inc. 2023: 23).

CRITERIA OF ADVERSE EFFECTS

To evaluate the project-related effects posed by the preferred alternative on the NRHP-eligible historic resource, SEARCH applied the criteria of adverse effects, as described by 36 CFR 800:

(a) Assessment of Adverse Effects

> (1) *Criteria of adverse effects*. An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative.

(2) *Examples of adverse effects*. Adverse effects include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;

(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* (36 CFR part 68) and applicable guidelines;

(iii) Removal of the property from its historic location;

(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;

(vi) Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

(b) *Finding of no adverse effect*. The agency official, in consultation with the SHPO/THPO, may propose a finding of no adverse effect when the undertaking's effects do not meet the criteria of paragraph (a)(1) of this section or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the Secretary's standards for the treatment of historic properties (36 CFR part 68) and applicable guidelines, to avoid adverse effects.

NATIONAL REGISTER OF HISTORIC PLACES CONTEXT

Brief Historic Background

Bridge No. 730008 was built in 1927 and exhibits tee-beam construction. The 2012 edition of *Historic Highway Bridges of Florida* discusses historic tee-beam bridges, noting that they were commonly constructed in the 1930s and 1940s as integral cast-in-place reinforced concrete decks and beam stems (Deming et al. 2012). These types of bridges became prevalent during this period because they were relatively easy and cost-effective to build and provided long-lasting durability. While many historic tee-beam bridges were identified and evaluated during the 2012 study, Bridge No. 730008 was not included. However, with a construction date of 1927, Bridge No. 730008 is considered an early example of the type. Furthermore, few bridges from this early date along US 1 are still extant in Florida. Bridge No. 730008 underwent reconstruction in 1948, according to FDOT records. This involved widening the superstructure by 13.3 ft (4.1 m).

The existing outer railing on the bridge was also constructed at this time and is marked with the date "1948." This widening was the last major alteration to the bridge, with some additional minor work in the 1990s and 2000s, including the addition of a vertical face retrofit and the installation of pile jackets on all 18.0 in (457.2 mm) piles on the interior bents. In 1957, US 1 became a divided highway when the eastern lane and the northbound bridge (Bridge No. 730045) were constructed; afterwards, Bridge No. 730008 was utilized solely for southbound traffic.

Historic Resources

8FL01008/8SJ08262, US 1 Southbound over Pellicer Creek Bridge (FDOT Bridge No. 730008)

FDOT Bridge No. 730008 (8FL01008/8SJ08262) (**Figure 3**) is 223.8 ft (68.2 m) long and features seven main spans with no approach spans. The roadway width is 27.9 ft (8.5 m), and the complete width from edge to edge is 32.8 ft (10 m). The bridge carries two lanes of southbound traffic, and the deck and abutment are composed of cast-in-place concrete. The bridge supports feature a standard six-pile bent design. No plaques are present on the bridge, but "H-15" and "1948" are visible on the rail, the latter of which is the year of the bridge's reconstruction.

During the 2022 CRAS, Bridge No. 730008 was determined eligible for the NRHP under Criterion A for its role in Florida's transportation history. Although Bridge No. 730008 is a common bridge type, it remains an early and relatively intact example of a tee-beam bridge from the Florida boom period of the 1920s, an era from which remaining bridges are becoming increasingly rare. Due to its engineering significance as an early representation of a bridge type that was constructed across Florida due to its affordability and constructability, FDOT Bridge No. 730008 (8FL01008/8SJ08262) was also determined eligible for listing in the NRHP under Criterion C.

ASSESSMENT OF EFFECTS

The project proposes replacing FDOT Bridge No. 730008 (8FL01008/8SJ08262) over Pellicer Creek and the construction of a new bridge in its place. The BDR prepared by the project engineering consultant concluded that the only reasonable alternative would be replacement of the bridge (Florida Bridge and Transportation, Inc. 2023; see **Attachment B**). As discussed in the BDR, the bridge must be replaced due to multiple factors related to the age of the structure, the structural capacity and condition of the bridge, and the substandard roadway geometry compared to current FDOT standards.

At present, FDOT Bridge No. 730008 is 96 years old, which is well beyond the 75-year design life for the bridge. Structurally, the bridge has had pile jackets installed as a repair procedure and as a preventative measure to keep the existing piles from deteriorating further. The pile jackets themselves have spalls, voids, and exposed rebar per the most recent inspection reports. Further, the bridge has been labeled as "functionally obsolete," which means it does not meet current

Figure 3. Representative views of Resource 8FL01008/8SJ08262. Deck and roadway, facing southeast (top left); underside with girders and piers, facing southeast (top right); west side of structure, facing south (middle left); railing along east side, facing south (middle right); railing and east side, facing north (bottom left); east side and piers, facing northwest (bottom right).

road design standards due to narrow shoulder width (the current shoulder width is 2.0 ft [0.7 m], and the standard is 6.0 ft [1.8 m] for the inside shoulder and 10.0 ft [3.0 m] for the outside shoulders).

Repairing the bridge is not recommended since the structure is beyond its design life. Replacing the pile jackets would require extensive work while trying to avoid damage to the original piles, while adding more width to the existing pile jackets would affect the hydraulic opening of the bridge over the creek. Even if repairs were to occur, the substandard shoulders would remain, which would pose a safety hazard per today's standards. For these reasons, the rehabilitation and no-build alternatives were dismissed from consideration for not meeting the purpose and need for the undertaking, and the bridge is recommended for replacement.

Because rehabilitation and continued use of this historic property are not feasible given its current condition, SEARCH evaluated project-related effects posed by the four build alternatives. All four build alternatives involve removal and replacement of 8FL01008/8SJ08262, resulting in a total loss of historic fabric. As such, SEARCH recommends that implementation of any of the four build alternatives will result in an adverse effect to NRHP-eligible FDOT Bridge No. 730008 (8FL01008/8SJ08262).

CONCLUSION

This Section 106 case study report provides an alternatives analysis and effects discussion regarding the SR 5/US 1 bridge replacement over Pellicer Creek. Specifically, this document discusses project-related effects relative to NRHP-eligible FDOT Bridge No. 730008 (8FL01008/ 8SJ08262). Based on a review of the project plans and viable alternatives, it is SEARCH's opinion that the project will result in an adverse effect to the historic bridge. As such, SEARCH recommends consultation with the Florida SHPO to develop appropriate mitigation measures to resolve the adverse effect under Section 106 of the NHPA. Once mitigation methods are determined, these commitments should be presented in a Memorandum of Agreement between FDOT and the SHPO.

REFERENCES CITED

Deming, Joan, Kisa Hooks, and Elaine Lund
2012 *The Historic Highway Bridges of Florida. Florida Master Site File Survey No. 20057*. On file, Florida Division of Historical Resources, Tallahassee, and Florida Department of Transportation Environmental Management Office. Electronic document, https://www.fdot.gov/docs/default-source/environment/pubs/Historic-Highway-Bridges-of-Florida-2010-Update.pdf, accessed May, 2022.

Federal Register
2012 Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges. US Government Printing Office, Washington, DC.

Florida Bridge and Transportation, Inc.
2023 *Bridge Development Report: SR 5/US 1 over Pellicer Creek Bridge Replacement*. On file, Florida Bridge and Transportation Office, Orlando, Florida.

Matusik, Angela and Jason Newton
2022 *Cultural Resource Assessment Survey of the SR 5 Bridge Replacement over Pellicer Creek, Flagler and St. Johns Counties, Florida*. FMSF No. 28226. On file, Division of Historical Resources, Tallahassee, Florida.

ATTACHMENT A

SHPO CONCURRENCE LETTER FOR THE 2022 CRAS

Florida Department of Transportation

RON DESANTIS
GOVERNOR

719 S. Woodland Blvd.
DeLand, FL 32720

JARED W. PERDUE, P.E.
SECRETARY

June 23, 2022

Timothy A. Parsons, Ph.D.,
Director and State Historic Preservation Officer
Florida Division of Historical Resources
Florida Department of State
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

Attn: Ms. Alyssa McManus, Transportation Compliance Review Program

RE: Cultural Resource Assessment Survey
SR 5 Bridge Replacement over Pellicer Creek
Flagler and St. Johns Counties, Florida
Financial Management No.: 447118-1

Dear Dr. Parsons,

Enclosed please find one copy of the report titled *Cultural Resource Assessment Survey of the SR 5 Bridge Replacement over Pellicer Creek, Flagler and St. Johns Counties, Florida.* This report presents the findings of a CRAS conducted in support of proposed bridge replacements in Flagler and St. Johns Counties, Florida. The Florida Department of Transportation (FDOT), District 5, is proposing to replace both bridges carrying State Road (SR) 5 (US 1) over Pellicer Creek at the Flagler and St. Johns County line. The project also includes minor roadway work limited to that necessary to replace the bridges and modification of the existing drainage system as required to complete proposed roadway reconstruction work. The project includes widening of the existing shoulders from 1.2 meters (m) (4.0 feet [ft]) to 1.5 m (5.0 ft) along the roadway segment and 3.0 m (10.0 ft) outside the shoulder on the bridge. An easement across sovereign submerged lands is required to accommodate construction. This project is federally funded for construction in 2026.

The project Area of Potential Effect (APE) was defined as the existing right-of-way (ROW) from approximately 335 m (1,100 ft) south of the Flagler and St. Johns County line to 188 m (617 ft) north of the line. The APE extends to the back or side property lines of parcels adjacent to the ROW or no more than 100 m (330 ft) from the ROW line. SEARCH conducted the archaeological survey within the existing ROW and the architectural survey within the entire APE.

This CRAS was conducted in accordance with the requirements set forth in Section 106 of the National Historic Preservation Act of 1966, as amended, found in 36 CFR Part 800 (Protection of Historic Properties). The studies also comply with Chapter 267 of the Florida Statutes and Rule

Chapter 1A-46, Florida Administrative Code and Section 267.12, Florida Statutes, Chapter 1A-32. All work was performed in accordance with Part 2, Chapter 8 of FDOT's PD&E Manual (revised July 2020), FDOT's Cultural Resources Management Handbook, and the standards stipulated in the Florida Division of Historical Resources' (FDHR) *Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals*. The Principal Investigator for this project meets the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-42). This study also complies with Public Law 113-287 (Title 54 U.S.C.), which incorporates the provisions of the National Historic Preservation Act of 1966, as amended, and the Archeological and Historic Preservation Act of 1974, as amended.

The archaeological survey included the excavation of three shovel tests within the SR 5 (US 1) ROW. SEARCH identified evidence of disturbance from bridge and road construction during subsurface testing. Archaeological testing was not possible along the eastern extent of the ROW due to the presence of multiple marked buried utilities. No archaeological sites, features, or artifact occurrences were encountered during the archaeological survey. No further archaeological work is therefore recommended according to current design. If design changes occur to include areas outside of the current study, additional archaeological consideration may be required.

The architectural survey resulted in identification and evaluation of five historic resources within the Pellicer Creek Bridge Replacement APE, one of which is previously recorded and four of which are newly recorded. The previously recorded resource is a historic roadway (8FL00291/8SJ05271) that was recorded elsewhere within both Flagler and St. Johns Counties but not surveyed within the current project APE. The newly recorded resources consist of one highway bridge (8FL01008/8SJ08262), two buildings (8SJ07379 and 8SJ07380), and one resource group (8SJ07359).

The SHPO evaluated previously recorded resource US 1 (8FL00291/8SJ05271) to be ineligible for listing in the NRHP approximately 3 mi south of the current project area (SEARCH 2018). Based on the results of the current survey, it is the opinion of SEARCH that the segment of US 1 (8FL00291/8SJ05271) within the APE is also ineligible for listing in the NRHP due to loss of historic integrity.

The newly recorded historic bridge, FDOT Bridge No. 730008 (8FL01008/8SJ08262), is one of the oldest remaining bridges along the US 1 corridor in Florida. Based on the current survey, Resource 8FL01008/8SJ08262 is recommended eligible for listing in the NRHP under Criterion A for its role in Florida's transportation history. The bridge is also recommended eligible for listing in the NRHP under Criterion C as a good example of an early tee-beam highway bridge. The three remaining resources within the APE (8SJ07359, 8SJ07379, and 8SJ07380) are recommended ineligible for listing in the NRHP due to a lack of significant historic associations and architectural or landscape distinction.

Contingent upon the SHPO's concurrence with the eligibility recommendations for historic resources presented in this CRAS, a separate Section 106 case study will be prepared to evaluate

any project-related effects to the NRHP-eligible Bridge No. 730008 (8FL01008/8SJ08262). The resolution of project-related effects, if any, will be the subject of further agency consultation.

I respectfully request your concurrence with the findings of the enclosed report.

If you have any questions or need further assistance, please contact Catherine Owen, District Cultural Resource Coordinator, at (386) 943-5383 or me at (386) 943-5411.

Sincerely,

For: William G. Walsh
Environmental Manager
FDOT, District Five

The Florida State Historic Preservation Officer finds the attached Cultural Resource Assessment Survey Report complete and sufficient and ☑ concurs / ☐ does not concur with the recommendations and findings provided in this cover letter for SHPO/FDHR Project File Number 2022-4228. Or, the SHPO finds the attached document contains _____ insufficient information.

In accordance with the Programmatic Agreement among the ACHP, SHPO and FDOT Regarding Implementation of the Federal-Aid Highway Program in Florida, if providing concurrence with a finding of No Historic Properties Affected for a project as a whole, or to No Adverse Effect on a specific historic property, SHPO shall presume that FDOT may approve the project as de minimis use under Section 4(f) under 23 CFR 774.

SHPO Comments:

Kelly L. Chase, DSHPO — Digitally signed by Kelly L. Chase, DSHPO DN: cn=Kelly L. Chase, DSHPO, o, ou, email=kelly.chase@dos.myflorida.com, c=US Date: 2022.07.06 10:38:32 -04'00'

7.6.2022

Timothy A. Parsons, PhD, Director
Florida Division of Historical Resources

Date

ATTACHMENT B

2023 BRIDGE DEVELOPMENT REPORT

REDACTED

ATTACHMENT C

BRIDGE REPLACEMENT JUSTIFICATION

Florida Department of Transportation

RON DESANTIS
GOVERNOR

1650 N. Kepler Road
DeLand, Florida 32724

JARED W. PERDUE, P.E.
SECRETARY

September 28th, 2023

Shelley ChinQuee, P.E.
Consultant Project Manager
Florida Department of Transportation

Re: US-1 over Pellicer Creek Bridge Replacement Justification
Bridge Nos. 730008 & 730045
Flagler County

Dear Ms. ChinQuee,

With the US-1 over Pellicer Creek northbound bridge being posted for legal loads and the southbound bridge well past its 75-year design service life, it is the assessment of Structures Maintenance that replacement of the subject bridges is the most prudent option to promote safety and mobility on the US-1 corridor. If these structures are to remain in service, significant rehabilitation efforts would be necessary due to deficient and deteriorating bridge components. Even then, the structures would remain "Functionally Obsolete" with outdated safety features such as post-and-beam traffic railing, narrow shoulder widths, and no bicycle/pedestrian accommodations. Replacement of the structures not only eliminates repair and rehab concerns, but also affords the opportunity to upgrade these features that promote the priorities of the Florida Department of Transportation.

Attached are two documents that further support the replacement assessment from Structures Maintenance. First is a justification report explaining the history of the two structures, rehabilitation efforts to date, and the reasoning behind programming replacement. The second document is a cost estimate for three necessary rehabilitation projects should the bridges be kept in service in lieu of replacement. These rehabilitation projects total over **$8.7 million** with additional yearly repair costs expected for maintenance and upkeep of these outdated structures.

<u>US-1 Northbound over Pellicer Creek</u>	
Replacement of Superstructure	$3,754,221
Crutch Bent Installation (Substructure Rehab)	$3,032,598
<u>US-1 Southbound over Pellicer Creek</u>	
Crutch Bent Installation (Substructure Rehab)	$1,926,077

Sincerely,

Jonathan J. Jastremsky, P.E.
Engineering Section Manager

Matthew C. Hodges, P.E.
Senior Design Project Manager

Improve Safety, Enhance Mobility, Inspire Innovation
www.fdot.gov

US-1 over Pellicer Creek Justification Report

US-1 NB over Pellicer Creek (FDOT Bridge #730045) built in 1957 is a is an eleven-span, cast-in-place flat slab superstructure founded on concrete pile bents. The bridge is 34.08-ft wide and 220-ft long having a typical section that consists of two 12-ft lanes, a 2-ft outside shoulder, and a 2-ft inside shoulder.

In 2019 the Load Rating for this bridge was updated due to a FHWA directive to evaluate all interstate bridges and bridges within 1 mile of the interstate for new EV loads (Airport Emergency Vehicles) per current LRFR load rating criteria. The results of this updated load rating analysis concluded that not only did the bridge need to be load posted for the new EV2 and EV3 truck loads, but it also needed to be load posted for SU4, C4, and C5 trucks per current AASHTO and FDOT design criteria. According to the BDR for the Pellicer Creek Bridge Replacement project (FM: 447118-1), the US-1 corridor through this area has an AADT of 14,000 cars with a 17% truck volume. This indicates that this facility is heavily used by the trucking industry for the transport of goods and materials which is significantly impacted by the current load posting at this location.

In addition to being load posted, the bridge is classified as functionally obsolete due to sub-standard traffic barriers and narrow shoulders which impact the safety of the motoring public. Current design criteria call for a minimum 10-ft outside shoulder width and 6-ft inside shoulder width on bridges while there is currently 2-ft shoulder width inside and outside on the existing bridge.

This bridge is currently the only FDOT owned bridge posted for load and considering part of the fundamental mission of the FDOT is to *"provide a safe transportation system that ensures the mobility of people and goods and enhance economic prosperity*" it is a priority to restore trucking mobility through the corridor while embracing the opportunity to replace an aging bridge with outdated safety features.

Additionally, this bridge has a history of settlement affecting the ride quality and potentially impacting the effectiveness of any proposed rehabilitation. A monitoring program was instituted to measure the amount of settlement and track progression. Through that monitoring program, Structures Maintenance determined that the bridge settlement had stabilized and was no longer settling. However, should rehabilitation efforts take place on either northbound or southbound bridges, the work may cause settlement to reinitiate leading to additional rehabilitation scope and cost.

Should it be the priority to repair/retrofit in lieu of replacing the structure, the entire superstructure would need to be replaced to eliminate the need for load posting the bridge. The substructure would also need to be evaluated for rehabilitation as the original prestressed concrete piles were jacketed after significant deterioration in 1985. At the age of 66 years old, the bridge is approaching its intended design life of 75 years. Thus, rehabilitation of this magnitude is not recommended.

US-1 SB over Pellicer Creek (FDOT Bridge #730008) built in 1927 is a is a seven-span, cast-in-place inverted tee-beam superstructure founded on pile bents. The bridge is 33.17-ft wide and 217.44-ft long having a typical section that consists of two 12-ft lanes, a 2-ft outside shoulder, and a 2-ft inside shoulder. With the NB bridge requiring replacement due to Load Posting requirements of the existing structure, it was determined that it was in the Department's best interest to replace both structures simultaneously as this structure is 30 years older than the NB structure, already eclipsing its 75 year design life and exhibiting similar structural deterioration.

The exterior piles at all bents are steel H-piles with concrete jackets. The pile jackets were installed in 1977 after significant deterioration to the original H-piles was documented. Over time, the channel bed has scoured exposing the original steel piles beneath the jackets. In bent 5, pile 5-1 has significant deterioration beneath the jacket

requiring the need for a crutch bent should long-term rehabilitation be considered. Closer investigation at all steel H-pile locations would be necessary to determine the extent of additional deterioration which may necessitate installation of additional crutch bents. The concrete deck exhibits efflorescence in numerous locations indicating evidence of water intrusion and corrosion of the steel reinforcement which will continue to worsen over time. For these reasons, it is not recommended to pursue a long-term rehabilitation of a structure that has eclipsed its intended design life by over 20 years.

Photo 1: Settlement of bridge no. 730045 – US-1 Northbound over Pellicer Creek

US-1 Northbound over Pellicer Creek
Bridge no. 730045

Rehab: Replace deficient superstructure with new flat-slab superstructure

Each Span:

Description	Quantity	Unit	Unit Cost	Extended Cost
Removal of Existing Structure	684	SF	$ 51.86	$ 35,474
Class II Concrete - Superstructure (16" slab)	33.58	CY	$ 1,370.08	$ 46,007
Reinforcing Steel - Bridge Superstructure	4700	LB	$ 1.86	$ 8,754
Concrete Traffic Railing - 36" Single Slope	520	LF	$ 203.59	$ 105,866
Bridge Deck Grooving	75.78	SY	$ 10.00	$ 758
Bridge Deck Expansion Joint	34.08	LF	$ 82.51	$ 2,812
				$ 199,671

Eleven spans and two approach spans @ $199,671 each		$ 2,595,720
Mobilization	15%	$ 389,358
MOT	10%	$ 259,572
Contingency	10%	$ 259,572
Construction Cost		$ 3,504,221
Design Estimate		$ 250,000
Total Rehab Cost		$ 3,754,221

Discussion: The existing flat-slab bridge superstructure is deficient for legal loads causing the bridge to be load posted. Replacement of the superstructure is necessary. This estimate assumes replacing the superstructure with the same roadway width as existing to utilize the substructure in place, meaning this bridge would remain "Functionally Obsolete" even after reconstruction. Widening the road to provide greater shoulder widths could be explored, however this would increase construction costs.

US-1 Northbound over Pellicer Creek
Bridge no. 730045

Rehab: Crutch bents installed at the ten intermediate bents to address historic foundation settlement

Each Bent:

Description	Quantity	Unit	Unit Cost	Extended Cost
18" Prestressed Concrete Piles (100' each, 6x each bent)	600	LF	$ 172.05	$ 103,230
36" Florida I-Beam (50' each, 2x each bent)	100	LF	$ 668.61	$ 66,861
Plain Neoprene Bearing Pad (14x each bent)	0.58	CF	$ 2,414.06	$ 1,408
Class IV Substructure Concrete (pile cap, each side)	11.85	CY	$ 2,083.76	$ 24,696
Stainless Steel Reinforcing - Substructure (pile cap)	600	LB	$ 16.54	$ 9,923
				$ 206,118

Ten bents @ $206,118 per bent		$ 2,061,184
Mobilization	15%	$ 309,178
MOT	10%	$ 206,118
Contingency	10%	$ 206,118
Construction Cost		$ 2,782,598
Design Estimate		$ 250,000
Total Rehab Cost		$ 3,032,598

Discussion: A "crutch bent" is installed to act as a secound foundation, using transverse beams to support the superstructure. Crutch bents have been successfully installed around District 5. However, there are risks for this location including potential negative impacts to the stream flow due to channel constriction and risks to existing structure (during construction) due to historic structure settlement.

US-1 Southbound over Pellicer Creek
Bridge no. 730008

Rehab: Crutch bents installed at the six intermediate bents to address corroding steel H-piles.

Each Bent:

Description	Quantity	Unit	Unit Cost	Extended Cost
18" Prestressed Concrete Piles (100' each, 6x each bent)	600	LF	$ 172.05	$ 103,230
36" Florida I-Beam (50' each, 2x each bent)	100	LF	$ 668.61	$ 66,861
Plain Neoprene Bearing Pad (22x each bent)	0.92	CF	$ 2,414.06	$ 2,213
Class IV Substructure Concrete (pile cap, each side)	11.85	CY	$ 2,083.76	$ 24,696
Stainless Steel Reinforcing - Substructure (pile cap)	600	LB	$ 16.54	$ 9,923
				$ 206,923

Six intermediate bents @ $206,923 per bent		$ 1,241,539
Mobilization	15%	$ 186,231
MOT	10%	$ 124,154
Contingency	10%	$ 124,154
Construction Cost		$ 1,676,077
Design Estimate		$ 250,000
Total Rehab Cost		$ 1,926,077

Discussion: A "crutch bent" is installed to act as a second foundation, using transverse beams to support the superstructure. Crutch bents have been successfully installed around District 5. However, there are risks for this location including existing abandoned timber piles in the channel (from a previous bridge), potential negative impacts to the stream flow due to channel constriction, and risks to the parallel northbound bridge (bridge no. 730045). The northbound bridge has a history of settlement and driving new concrete piles could further damaging that structure. As such, bridge 730045 would also require crutch bents to provide a more robust foundation before rehabilitation could occur at this structure.

Florida Department of Transportation

RON DESANTIS
GOVERNOR

719 S. Woodland Blvd.
DeLand, FL 32720

JARED W. PERDUE, P.E.
SECRETARY

June 23, 2022

Timothy A. Parsons, Ph.D.,
Director and State Historic Preservation Officer
Florida Division of Historical Resources
Florida Department of State
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

Attn: Ms. Alyssa McManus, Transportation Compliance Review Program

RE: Cultural Resource Assessment Survey
SR 5 Bridge Replacement over Pellicer Creek
Flagler and St. Johns Counties, Florida
Financial Management No.: 447118-1

Dear Dr. Parsons,

Enclosed please find one copy of the report titled *Cultural Resource Assessment Survey of the SR 5 Bridge Replacement over Pellicer Creek, Flagler and St. Johns Counties, Florida.* This report presents the findings of a CRAS conducted in support of proposed bridge replacements in Flagler and St. Johns Counties, Florida. The Florida Department of Transportation (FDOT), District 5, is proposing to replace both bridges carrying State Road (SR) 5 (US 1) over Pellicer Creek at the Flagler and St. Johns County line. The project also includes minor roadway work limited to that necessary to replace the bridges and modification of the existing drainage system as required to complete proposed roadway reconstruction work. The project includes widening of the existing shoulders from 1.2 meters (m) (4.0 feet [ft]) to 1.5 m (5.0 ft) along the roadway segment and 3.0 m (10.0 ft) outside the shoulder on the bridge. An easement across sovereign submerged lands is required to accommodate construction. This project is federally funded for construction in 2026.

The project Area of Potential Effect (APE) was defined as the existing right-of-way (ROW) from approximately 335 m (1,100 ft) south of the Flagler and St. Johns County line to 188 m (617 ft) north of the line. The APE extends to the back or side property lines of parcels adjacent to the ROW or no more than 100 m (330 ft) from the ROW line. SEARCH conducted the archaeological survey within the existing ROW and the architectural survey within the entire APE.

This CRAS was conducted in accordance with the requirements set forth in Section 106 of the National Historic Preservation Act of 1966, as amended, found in 36 CFR Part 800 (Protection of Historic Properties). The studies also comply with Chapter 267 of the Florida Statutes and Rule

Chapter 1A-46, Florida Administrative Code and Section 267.12, Florida Statutes, Chapter 1A-32. All work was performed in accordance with Part 2, Chapter 8 of FDOT's PD&E Manual (revised July 2020), FDOT's Cultural Resources Management Handbook, and the standards stipulated in the Florida Division of Historical Resources' (FDHR) *Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals*. The Principal Investigator for this project meets the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-42). This study also complies with Public Law 113-287 (Title 54 U.S.C.), which incorporates the provisions of the National Historic Preservation Act of 1966, as amended, and the Archeological and Historic Preservation Act of 1974, as amended.

The archaeological survey included the excavation of three shovel tests within the SR 5 (US 1) ROW. SEARCH identified evidence of disturbance from bridge and road construction during subsurface testing. Archaeological testing was not possible along the eastern extent of the ROW due to the presence of multiple marked buried utilities. No archaeological sites, features, or artifact occurrences were encountered during the archaeological survey. No further archaeological work is therefore recommended according to current design. If design changes occur to include areas outside of the current study, additional archaeological consideration may be required.

The architectural survey resulted in identification and evaluation of five historic resources within the Pellicer Creek Bridge Replacement APE, one of which is previously recorded and four of which are newly recorded. The previously recorded resource is a historic roadway (8FL00291/8SJ05271) that was recorded elsewhere within both Flagler and St. Johns Counties but not surveyed within the current project APE. The newly recorded resources consist of one highway bridge (8FL01008/8SJ08262), two buildings (8SJ07379 and 8SJ07380), and one resource group (8SJ07359).

The SHPO evaluated previously recorded resource US 1 (8FL00291/8SJ05271) to be ineligible for listing in the NRHP approximately 3 mi south of the current project area (SEARCH 2018). Based on the results of the current survey, it is the opinion of SEARCH that the segment of US 1 (8FL00291/8SJ05271) within the APE is also ineligible for listing in the NRHP due to loss of historic integrity.

The newly recorded historic bridge, FDOT Bridge No. 730008 (8FL01008/8SJ08262), is one of the oldest remaining bridges along the US 1 corridor in Florida. Based on the current survey, Resource 8FL01008/8SJ08262 is recommended eligible for listing in the NRHP under Criterion A for its role in Florida's transportation history. The bridge is also recommended eligible for listing in the NRHP under Criterion C as a good example of an early tee-beam highway bridge. The three remaining resources within the APE (8SJ07359, 8SJ07379, and 8SJ07380) are recommended ineligible for listing in the NRHP due to a lack of significant historic associations and architectural or landscape distinction.

Contingent upon the SHPO's concurrence with the eligibility recommendations for historic resources presented in this CRAS, a separate Section 106 case study will be prepared to evaluate

any project-related effects to the NRHP-eligible Bridge No. 730008 (8FL01008/8SJ08262). The resolution of project-related effects, if any, will be the subject of further agency consultation.

I respectfully request your concurrence with the findings of the enclosed report.

If you have any questions or need further assistance, please contact Catherine Owen, District Cultural Resource Coordinator, at (386) 943-5383 or me at (386) 943-5411.

Sincerely,

For: William G. Walsh
Environmental Manager
FDOT, District Five

The Florida State Historic Preservation Officer finds the attached Cultural Resource Assessment Survey Report complete and sufficient and ☐ concurs / ☐ does not concur with the recommendations and findings provided in this cover letter for SHPO/FDHR Project File Number _____. Or, the SHPO finds the attached document contains _____ insufficient information. In accordance with the Programmatic Agreement among the ACHP, SHPO and FDOT Regarding Implementation of the Federal-Aid Highway Program in Florida, if providing concurrence with a finding of No Historic Properties Affected for a project as a whole, or to No Adverse Effect on a specific historic property, SHPO shall presume that FDOT may approve the project as de minimis use under Section 4(f) under 23 CFR 774.
SHPO Comments:
_____ _____ Timothy A. Parsons, PhD, Director Date Florida Division of Historical Resources

Florida Department of Transportation

RON DESANTIS
GOVERNOR

719 S. Woodland Blvd.
DeLand, FL 32720

JARED W. PERDUE, P.E.
SECRETARY

October 4, 2023

Alissa S. Lotane,
Director and State Historic Preservation Officer
Florida Division of Historical Resources
Florida Department of State
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

Attn: Mr. Benjamin Stewart, Transportation Compliance Review Program

RE: Section 106 Consultation Case Study Report
State Road 5/US 1 Bridge Replacement over Pellicer Creek
Flagler and St. Johns Counties, Florida
Financial Management No.: 447118-1-52-01

Dear Ms. Lotane,

Enclosed, please find one copy of the *Section 106 Consultation Case Study Report for the State Road 5/US 1 Bridge Replacement over Pellicer Creek, Flagler and St. Johns Counties, Florida.* The Florida Department of Transportation (FDOT), District 5, is proposing to replace both bridges carrying State Road (SR) 5/US 1 over Pellicer Creek at the Flagler and St. Johns County line. The project also includes minor roadway work limited to replacing the bridges and modification of the existing drainage system as required to complete proposed roadway reconstruction work. An easement across sovereign submerged lands is required to accommodate construction. The bridges are functionally obsolete, and because rehabilitation and reuse of the structures are not possible given their current condition, the project is proposing the replacement of both bridges to ensure safe travel and maintain connectivity along this portion of SR 5/US 1.

A Phase I cultural resource assessment survey for the preferred alternative was completed by SEARCH in June 2022. The cultural resource assessment survey and subsequent consultation with the State Historic Preservation Officer concluded that one National Register of Historic Places-eligible historic property is within the project area of potential effects. The effects assessment and alternatives analysis addresses project-related effects relative to this NRHP-eligible resource, FDOT Bridge No. 730008 (8FL01008/8SJ08262). Three alternatives in addition to a rehabilitation alternative and no-build alternative were considered prior to choosing the selected alternative.

As a federally funded project, the effects evaluation was conducted to comply with Public Law 113-287 (Title 54 US Code), which incorporates the provisions of the National Historic Preservation Act of 1966, as amended, and the Archeological and Historic Preservation Act of 1974, as amended. The study also meets the regulations for implementing National Historic Preservation Act Section 106 found in 36 Code of Federal Regulations Part 800 (*Protection of Historic Properties*). This study also complies with Chapter 267 of the Florida Statutes and Rule Chapter 1A-46, Florida Administrative Code. SEARCH performed all work in accordance with Part 2, Chapter 8 of the FDOT's Project Development & Environment Manual (revised July 2023) and the Florida Division of Historical Resources' recommendations for such projects as stipulated in *Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals*. The principal investigator for this project meets the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 Federal Register 44716-42).

Based on a review of the project plans, it is the district's opinion that the project will result in an adverse effect to FDOT Bridge No. 730008 (8FL01008/8SJ08262). Because construction of the selected alternative will result in an adverse effect to this historic property, FDOT proposes to prepare state equivalent Level III Historic American Engineering Record documentation for 8FL01008/8SJ08262. If your office agrees with this proposed mitigation strategy, FDOT will prepare a draft Memorandum of Agreement to memorialize this commitment and circulate for your review.

I respectfully request your concurrence with the findings of the enclosed report and the proposed mitigation strategy described above.

If you have any questions or need further assistance, please contact Catherine Owen, District Cultural Resource Coordinator, at (386) 943-5383 or me at (386) 943-5436.

Sincerely,

Casey Lyon, MS
Environmental Manager
FDOT, District Five

Ms. Lotane, SHPO
FM # 447118-1-52-01
October 4, 2023
Page 3

The Florida State Historic Preservation Officer finds the attached Section 106 Consultation Case Study Report complete and sufficient and ☑ concurs / ☐ does not concur with the recommendations and findings provided in this cover letter for SHPO/FDHR Project File Number 2023-4979B. Or, the SHPO finds the attached document contains _____ insufficient information.

In accordance with the Programmatic Agreement among the ACHP, SHPO and FDOT Regarding Implementation of the Federal-Aid Highway Program in Florida, if providing concurrence with a finding of No Historic Properties Affected for a project as a whole, or to No Adverse Effect on a specific historic property, SHPO shall presume that FDOT may approve the project as de minimis use under Section 4(f) under 23 CFR 774.

SHPO Comments:

Kelly S Arase for

Alissa S. Lotane, Director
Florida Division of Historical Resources

10.25.2023
Date

Florida Department of Transportation

RON DESANTIS
GOVERNOR

719 S. Woodland Blvd.
DeLand, FL 32720

JARED W. PERDUE, P.E.
SECRETARY

October 18, 2023

Historic and Cultural Preservation Department
Muscogee (Creek) Nation Cultural Preservation
P.O. Box 580
Okmulgee, OK 74447
section106@mcn-nsn.gov

RE: Section 106 Consultation Case Study Report
State Road 5/US 1 Bridge Replacement over Pellicer Creek
Flagler and St. Johns Counties, Florida
Financial Management No.: 447118-1-52-01

Dear Madam or Sir,

Enclosed, please find one copy of the cultural resource assessment survey (CRAS) and one copy of the *Section 106 Consultation Case Study Report for the State Road 5/US 1 Bridge Replacement over Pellicer Creek, Flagler and St. Johns Counties, Florida.* The Florida Department of Transportation (FDOT), District 5, is proposing to replace both bridges carrying State Road (SR) 5/US 1 over Pellicer Creek at the Flagler and St. Johns County line. The project also includes minor roadway work limited to replacing the bridges and modification of the existing drainage system as required to complete the proposed roadway reconstruction work. An easement across sovereign submerged lands is required to accommodate construction. The bridges are functionally obsolete, and because rehabilitation and reuse of the structures are not possible given their current condition, the project is proposing the replacement of both bridges to ensure safe travel and maintain connectivity along this portion of SR 5/US 1.

A Phase I CRAS included an archaeological survey, but no artifacts were recovered, and no archaeological sites or occurrences were identified within the project Area of Potential Effect (APE). However, the CRAS and subsequent consultation with the State Historic Preservation Officer (SHPO) concluded that one National Register of Historic Places-eligible historic property is within the project area of potential effects. The Case Study provides an effects assessment and alternatives analysis addressing project-related effects relative to this NRHP-eligible resource, FDOT Bridge No. 730008 (8FL01008/8SJ08262). Three alternatives in addition to a rehabilitation alternative and no-build alternative were considered prior to choosing the selected alternative.

As a federally funded project, the effects evaluation was conducted to comply with Public Law 113-287 (Title 54 US Code), which incorporates the provisions of the National Historic Preservation Act of 1966, as amended, and the Archeological and Historic Preservation Act of

1974, as amended. The study also meets the regulations for implementing the National Historic Preservation Act Section 106 found in 36 Code of Federal Regulations Part 800 (*Protection of Historic Properties*). This study also complies with Chapter 267 of the Florida Statutes and Rule Chapter 1A-46, Florida Administrative Code. SEARCH performed all work in accordance with Part 2, Chapter 8 of the FDOT's Project Development & Environment Manual (revised July 2023) and the Florida Division of Historical Resources' recommendations for such projects as stipulated in *Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals*. The principal investigator for this project meets the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 Federal Register 44716-42).

Based on all provided information, it is the district's opinion that the project will result in an adverse effect to FDOT Bridge No. 730008 (8FL01008/8SJ08262). Because construction of the selected alternative will result in an adverse effect to this historic property, FDOT proposes to prepare state equivalent Level III Historic American Engineering Record documentation for 8FL01008/8SJ08262. We are currently awaiting concurrence from the SHPO for this proposed mitigation strategy. Once approved, FDOT will prepare a draft Memorandum of Agreement to memorialize this commitment and circulate it for review.

We are respectfully requesting your review and opinion regarding the findings of the enclosed reports and the proposed mitigation strategy described above.

If you have any questions or need further assistance, please contact Catherine Owen, District Cultural Resource Coordinator, at (386) 943-5383 or me at (386) 943-5436.

Sincerely,

For: Casey Lyon, MS
Environmental Manager
FDOT, District Five