



Roswell Gateway/Vickery Creek Unit Access Improvements Environmental Assessment June 2025



Photograph credits:

Front cover, View of Allenbrook House, Cayley Champeau, December 1, 2021.

If you require any assistance to interpret technical content within this document, please contact Beth Wheeler at NPS Beth_Wheeler@nps.gov.

LIST OF ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
AOE	Assessment of Effect
AOI	Area of Interest
APE	Area of Potential Effect
BMP	Best Management Practice
CLI	Cultural Landscape Inventory
CFR	Code of Federal Regulations
CRNRA	Chattahoochee River National Recreation Area
CTMP	Comprehensive Trails Management Plan
DBH	Diameter at Breast Height
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESPCPs	Erosion and Sedimentation Pollution Control Plans
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GADNR	Georgia Department of Natural Resources
GDOT	Georgia Department of Transportation
GNAHRGIS	Georgia's Natural, Archaeological, and Historic Resources Geographic Information System
GMP	General Management Plan
HED	Highway Easement Deed
HUC	Hydrologic Unit Code

IPaC	Information for Planning and Consultation
IS	Intermittent Stream
MOA	Memorandum of Agreement
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
OBF	Orange Barrier Fence
PEPC	Planning Environmental and Public Comment
PI	Project Identification Number
PIOH	Public Information Open House
PS	Perennial Stream
SOF	Statement of Findings
SOI	Secretary of Interior
SFHA	Special Flood Hazard Area
SR	State Route
SUP	Special Use Permit
TIP	Transportation Improvement Program
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USC	United States Code
VCU	Vickery Creek Unit

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NOTE TO REVIEWERS

If you wish to comment on this document, you may mail comments to: Beth Wheeler, Planning, Resources, Education, Chattahoochee River National Recreation Area, 1978 Island Ford Parkway, Sandy Springs, GA, 30350, Beth_Wheeler@nps.gov.

You may also comment on this Environmental Assessment (EA) project online using the Planning, Environment, and Public Comment (PEPC) website at:

<https://parkplanning.nps.gov/RoswellHistoricGatewayEA>.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. You can ask us to withhold your personal identifying information from public review, but we cannot guarantee that we would be able to do so.

CHAPTER 1: PURPOSE AND NEED

Introduction

The National Park Service (NPS), in partnership with Georgia Department of Transportation (GDOT), Federal Highway Administration (FHWA) and the City of Roswell, is evaluating proposals for two (2) transportation improvement projects within and adjacent to the Vickery Creek Unit (VCU) in Chattahoochee River National Recreation Area (CRNRA or park). The transportation projects would require the transfer of 2.59 acres of NPS-managed lands for transportation use. The conversion of park lands to transportation use would require authorization by NPS through special use permits (SUP) and a federal Highway Easement Deed (HED) for GDOT and FHWA to construct transportation projects within CRNRA boundaries in Fulton County, Georgia.

The environmental evaluation of the proposed action is being assessed in accordance with the requirements of the National Environmental Policy Act (NEPA), as amended (42 United States Code [USC] 4321 et seq.), and the Department of the Interior NEPA regulations (43 CFR Part 46)¹; NPS' DO #12 and Handbook, *Conservation Planning, Environmental Impact Analysis, and Decision-making* (NPS 2015); and Section 106 of the National Historic Preservation Act (NHPA) of 1966 as amended, and implementing regulations (36 Code of Federal Regulations [CFR] Part 800). This ongoing NEPA review is consistent with NEPA implementing regulations at 40 CFR parts 1500-1508 for ongoing NEPA reviews.

The CRNRA was established in 1978² to provide for the preservation and the protection of the natural, scenic, recreational, and historic values of the Chattahoochee River and protect natural and geological features present in the Palisades area, primarily the cliffs created by Brevard Fault.³ The 2009 General Management Plan/Environmental Impact Statement (GMP/EIS) notes "The purpose of the CRNRA is the preservation and protection of the 48-mile Chattahoochee River corridor from

¹ Executive Order 14154, Unleashing American Energy (Jan. 20, 2025), and a Presidential Memorandum, Ending Illegal Discrimination and Restoring Merit-Based Opportunity (Jan. 21, 2025), require the Department to strictly adhere to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 et seq. Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21, 2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is a legal impossibility. The National Park Service verifies that it has complied with the requirements of NEPA, including the Department's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of the Departmental Manual, consistent with the President's January 2025 Order and Memorandum. The NPS has also voluntarily considered the Council on Environmental Quality's rescinded regulations implementing NEPA, previously found at 40 C.F.R. Parts 1500–1508, as guidance to the extent appropriate and consistent with the requirements of NEPA and Executive Order 14154.

² <https://www.nps.gov/chat/learn/management/enabling-legislation.htm>

³ 2009 Chattahoochee River National Recreation Area Final General Management Plan and EIS, Chapter 1, page 13.

Buford Dam at Lake Lanier to Peachtree Creek in Atlanta, and its associated natural and cultural resources, for the benefit and enjoyment of the people.”

The CRNRA includes 15 areas, also known as units, with an authorized boundary of approximately 10,000 acres (ac)⁴ with an estimated 5,500 acres of land tracts owned by the park. The VCU, located just south of downtown Roswell, Georgia is comprised of land originally associated with the historic Roswell Mill and Big Creek (see Figure 1, VCU CRNRA). The confluence of Big Creek with the Chattahoochee River is at the southern end of the VCU of the CRNRA. The park features natural ecological and geological features, recreational trails, archaeological sites, mill ruins, and a two-story, historic brick Plantation Plain house, known as Allenbrook. The urban area national park is accessible by the 5.2 million people residing in the metro-Atlanta region.⁵ Approximately 3.2 million visitors annually enjoy the CRNRA, mostly from the local Atlanta metro-region⁶ and 1,200 people per day utilize the VCU’s trail system.⁷

Project Background

This environmental document assesses the effects of three (3) projects consisting of two (2) transportation projects and a mitigation trails project impacting the VCU of CRNRA (Figures 1, 2, 2a, 3, and 4). Two (2) transportation projects, GDOT PI 721010- (Historic Roswell Gateway) and GDOT PI 0009640 (State Route [SR] 9 Pedestrian Bridge), sponsored by the City of Roswell, would impact NPS CRNRA lands and resources. Planning for the GDOT PI 721010- began in 2011 to improve multimodal transportation and safety along SR 9, including a proposal to remove the reversible lane system and enhance access to businesses and residences.⁸ The project aims to redesign SR 9 as a gateway to Roswell and its Historic District, aligning with the city’s planning study (2012) to balance transportation needs with the preservation of cultural and natural resources.⁹ A key element of this vision is creating pedestrian-friendly environments and enhancing connectivity to park and trail systems. Coordination with CRNRA has been conducted to identify measures that avoid or minimize impacts to NPS resources, as SR 9 borders the western boundary of the VCU. For mitigation of the

⁴ <https://www.chattahoocheeparks.org/About-Us>

⁵ Atlanta Regional Commission produces population estimates for the Atlanta Region. <https://atlantaregional.org/what-we-do/research-and-data/atlanta-region-population-estimates/#:~:text=Atlanta%20Region%202024%20Population%20Estimates,and%20the%20City%20of%20Atlanta> (accessed 1/19/25).

⁶ <https://www.doi.gov/news/pressreleases/New-National-Water-Trails-System-to-Promote-Healthy-Accessible-Rivers#:~:text=Today%2C%20Secretary%20Salazar%20also%20announced,local%20city%20and%20county%20parks> (accessed 1/19/25)

⁷ 2022 NPS CRNRA CMTP, page E-126.

⁸ <https://www.roswellgov.com/government/departments/community-development/plans-projects/historic-gateway-master-plan#:~:text=The%20primary%20goal%20of%20this,thriving%20part%20of%20our%20community>

⁹ <https://www.roswellgov.com/government/departments/community-development/plans-projects/historic-gateway-master-plan#:~:text=The%20primary%20goal%20of%20this,thriving%20part%20of%20our%20community>

This map illustrates the proposed SR 9 Pedestrian Bridge and its connection to the historic Roswell Gateway. The bridge is shown crossing the Chattahoochee River, which is labeled as a CRNRA unit. The map also identifies the Vickers Creek Unit and the Roswell Mill Shopping Center. Key roads shown include SR 9, SR 120, and various local streets like Overland Dr, Riverside Rd, and Azalea Dr. The map is sourced from Google Maps.

Roswell Gateway/Vickery Creek Unit Access Improvements
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Figure 2: Project Location Map - PI 721010- Historic Roswell Gateway

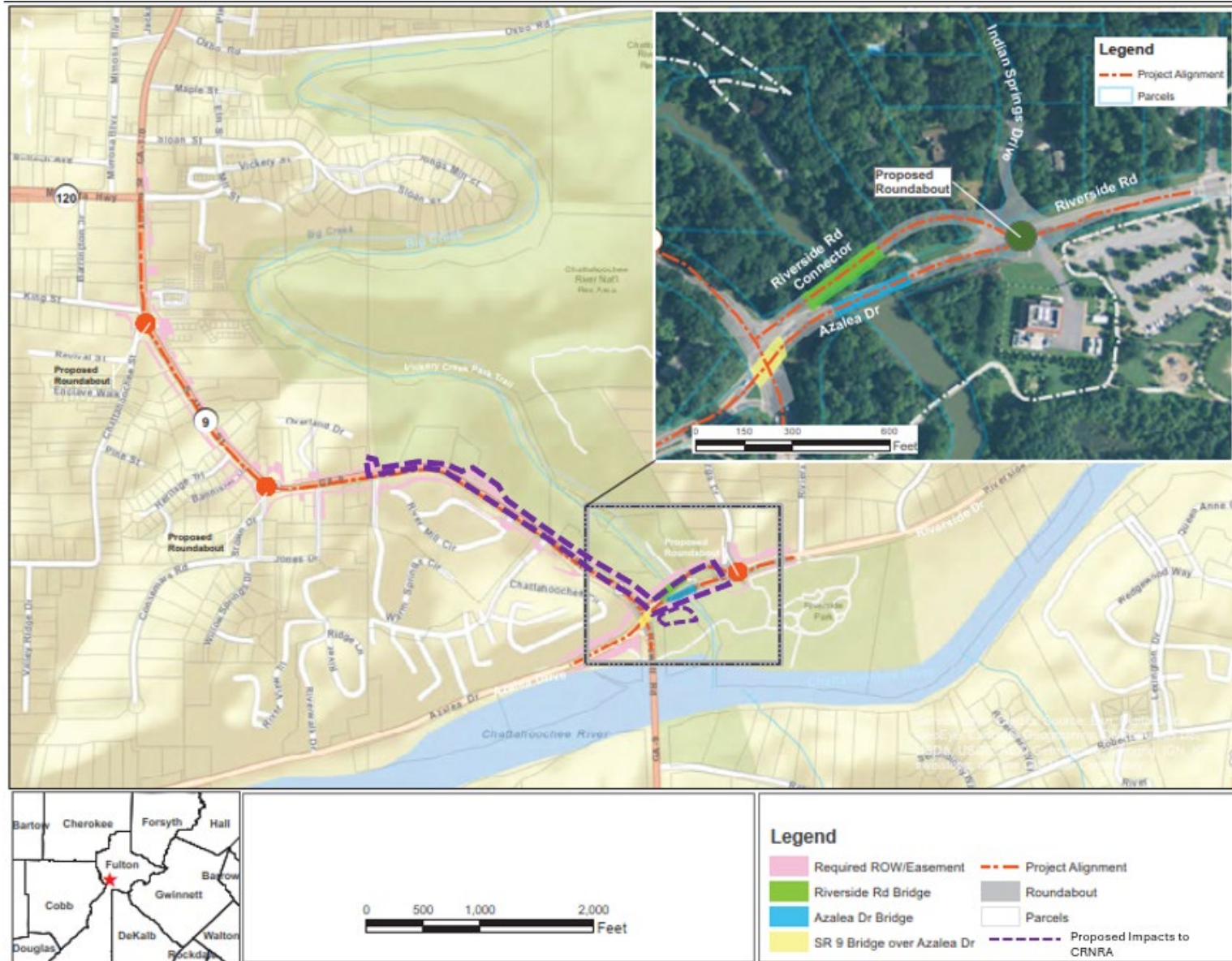
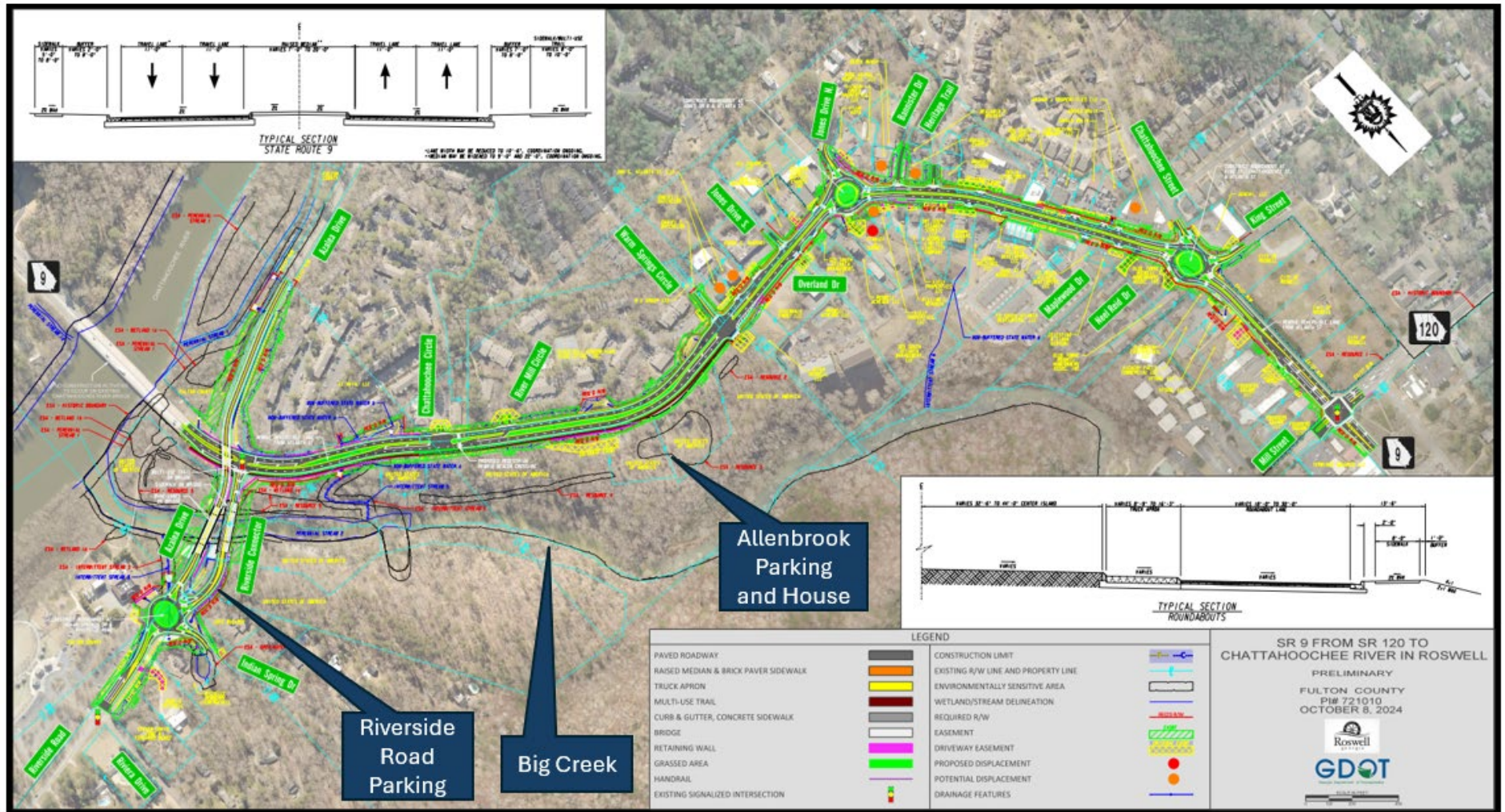


Figure 2a: Detailed Project Location Map- PI 721010 Adjacent to Vickery Creek Unit (CRNRA)



(source: Public Hearing Open House materials <https://south-atlanta-road-improvements-721010-gdot.hub.arcgis.com/> (accessed 1/5/2025) with CRNRA impacts overlaid)

Figure 3: Project Location Map- PI 0009640 SR 9 Pedestrian Bridge -Vickery Creek Unit (CRNRA

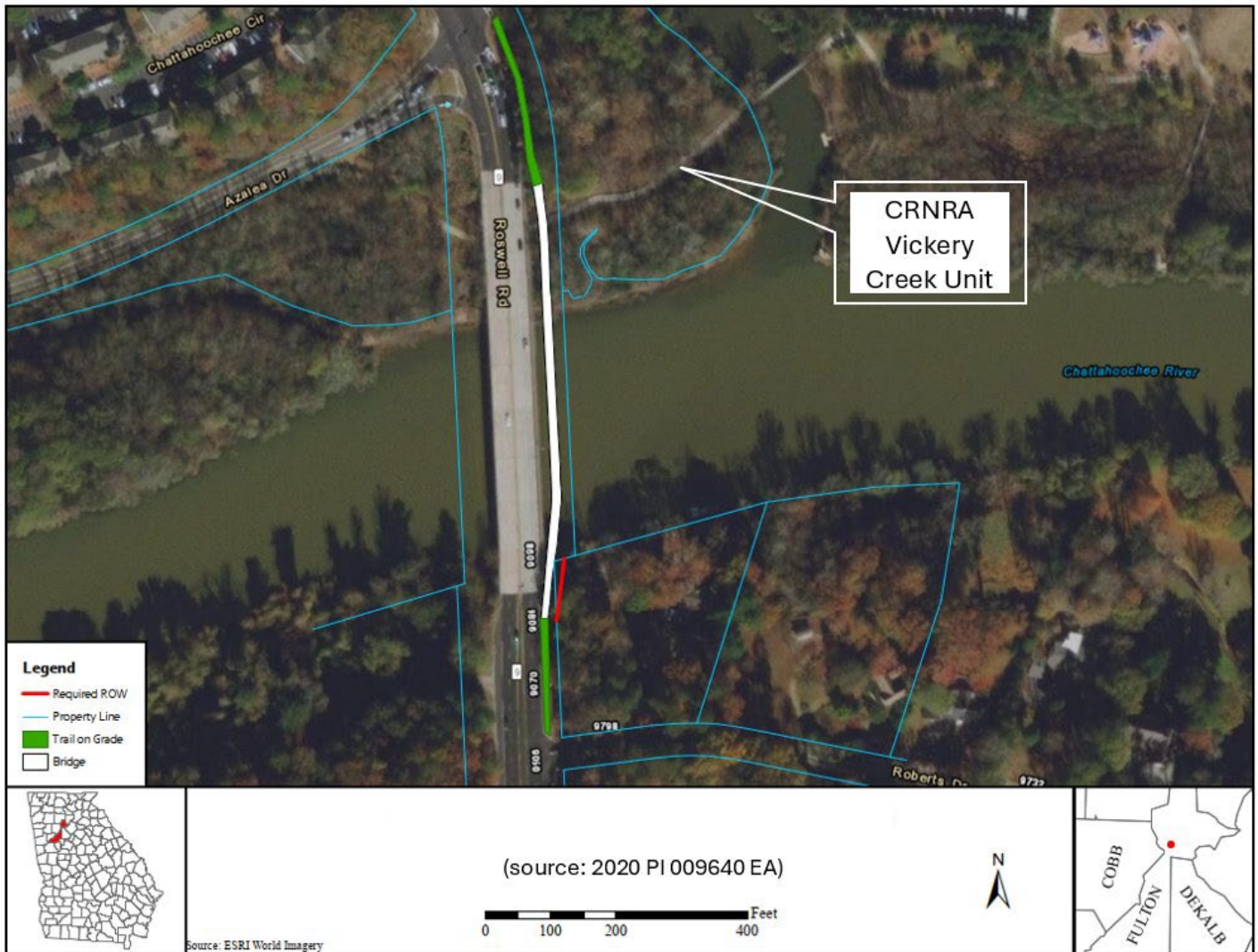
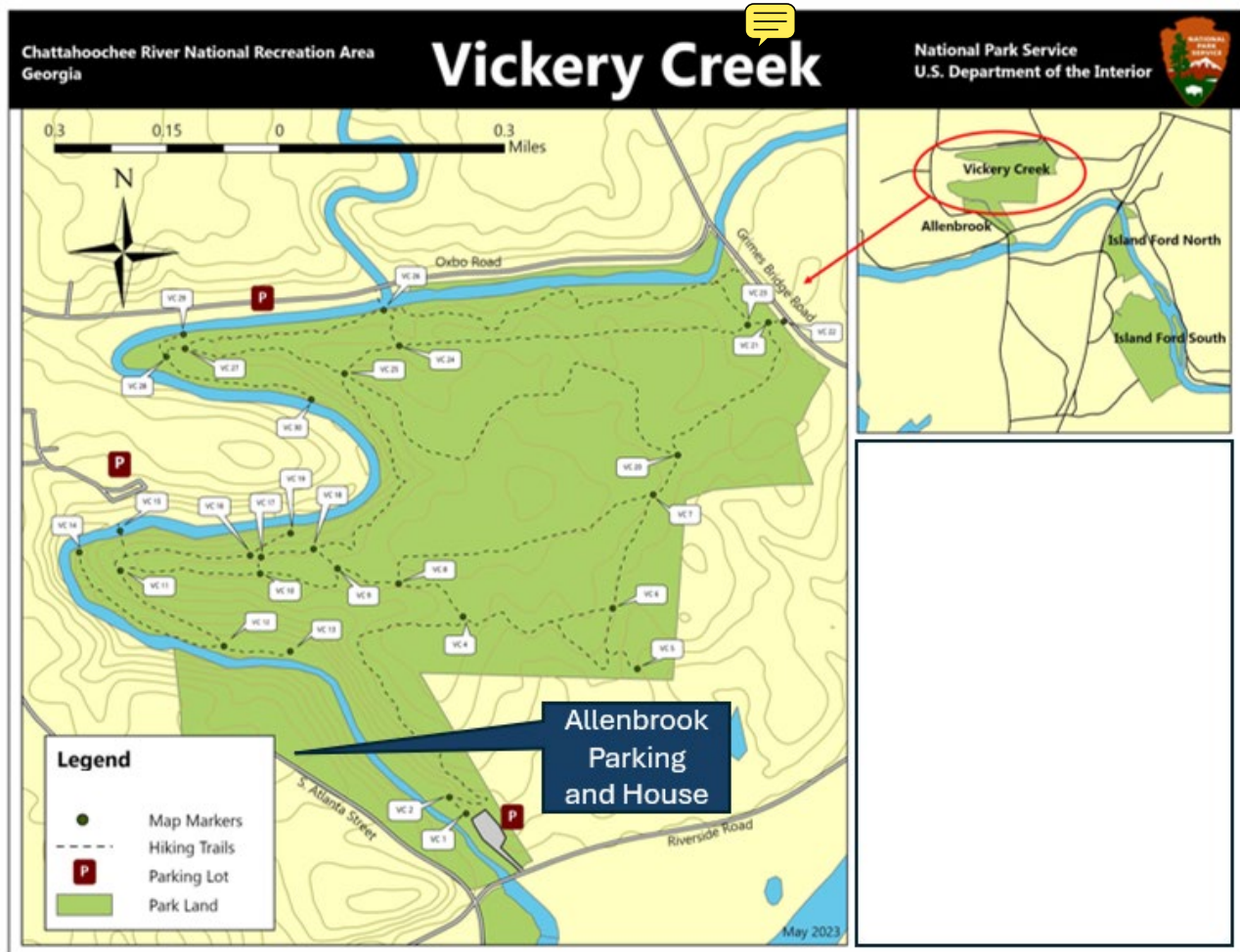


Figure 4: Project Location Map - Vickery Creek Unit, CRNRA



transportation project impacts to NPS resources, pedestrian trail improvements are proposed within the VCU, consistent with the CRNRA Comprehensive Trails Management Plan (CTMP)¹⁰, including new trails, upgrades to existing trails, and the construction of a pedestrian bridge over Big Creek to improve park connectivity.

The project commitments are documented in letters signed by GDOT, the City of Roswell, and NPS in 2018.¹¹ A NEPA document for each of the proposed transportation actions was prepared separately by GDOT for the Historic Roswell Gateway PI 721010- and SR 9 Pedestrian Bridge PI 0009640 projects. NPS concurred with the Section 4(f) impacts for Historic Roswell Gateway PI 721010- on November 9, 2018; the EA was signed by FHWA on July 31, 2024; and the Finding of No Significant Impact (FONSI) was signed by FHWA on [TO BE UPDATED WHEN AVAILABLE],

¹⁰ <https://parkplanning.nps.gov/projectHome.cfm?projectId=76722>

¹¹ Agency coordination is on file.

2025. The EA for SR 9 Pedestrian Bridge PI 0009640 was signed by FHWA on May 27, 2020; and the FONSI for PI 0009640 was signed by FHWA on May 5, 2021.

This NPS EA has been prepared to provide a singular document that includes an alternatives analysis and evaluation of the impacts of both the transportation projects as documented in the FHWA NEPA documents, plus the mitigation trails actions within the boundaries of VCU CRNRA. Because the transportation projects covered in the separate EAs noted above include areas outside the NPS boundaries, this EA highlights the transportation actions within CRNRA and identifies the mitigation actions which would be implemented by GDOT and the City of Roswell to offset the effects of the conversion of NPS lands and resources into transportation use (see Appendix C). This EA, while focused on NPS resources, cross-references the transportation projects (PI 721010- EA and the PI 0009640 EA and FONSI),¹² which are included by reference throughout and collectively form the Proposed Action of the Roswell Gateway/VCU Access Improvements.

Purpose and Need for Action

As noted above under Project Background, new pedestrian trails and access improvements in the VCU are proposed by CRNRA as mitigation for impacts from the PI 0009640 and 721010- transportation projects that are coordinated to align with the CRNRA 2022 CTMP. There is a need for improved connectivity within VCU of CRNRA, trail improvements, and improved accessibility within the park. There is currently no trail connectivity between the west (Allenbrook House) and east sides of Big Creek. The purpose of the mitigation trails and pedestrian access improvements within the VCU is to provide greater public access and connectivity within the CRNRA's recreation facilities and historic sites to previously lesser accessible areas of the park; and to correct deficiencies and safety in the current path and access point configuration. The transportation projects are needed to address safety and connectivity along SR 9:

- The Historic Roswell Gateway PI 721010- project,¹³ is needed to address deficient intersection levels of service, higher-than-average crash rates, bridge deficiency, and lack of pedestrian facilities and connectivity. This project's purpose is to provide an improved roadway that addresses safety, improves mobility, increases multi-modal access to recreational amenities, improves pedestrian access to transit, restores infrastructure, and functions as a visual gateway into Roswell. PI 721010- would remove the reversible lanes, and incorporate medians, intersection modifications, sidewalks, and multi-use trail facilities along SR 9. The continuous four-lane section and median would address the safety need that supports access management so that turning and crossing movements occur at specific locations.¹⁴ Crashes were caused by lack of a dedicated left turn lane or left turn signal on

¹² GDOT PI 0009640- EA, dated May 27, 2020; FONSI, dated May 5, 2021.

¹³ GDOT PI 721010- Environmental Assessment, dated July 31, 2024.

¹⁴ GDOT PI 721010- Environmental Assessment, dated July 31, 2024, pages 7-8 and 10.

southbound SR 9 at the Riverside Road/Azalea Drive intersection, making it difficult to turn left, which is compounded by the geometric conditions in this area which reduces drivers' sight distance. The reversible lanes can cause motorist confusion and affect operations at the intersection, resulting in high crash rates. The purpose of the proposed PI 721010- project is to improve the operational characteristics, safety, and physical condition of SR 9. The project is designed to improve safety, not to increase traffic capacity on the roadway nor increase motorized vehicle traffic in the park.

- The proposed SR 9 Pedestrian Bridge PI 0009640 project, is needed due to inadequate facilities for safe pedestrian crossing along the existing SR 9 bridges.¹⁵ Connectivity across the Chattahoochee River is currently provided by the SR 9 bridges (one bridge for northbound and a separate bridge for southbound traffic). The SR 9 pedestrian bridge would also connect to planned and programmed projects that expand the pedestrian network of sidewalks and trails throughout Roswell and Sandy Springs. The purpose of the PI 0009640 project is to provide safe pedestrian access across the Chattahoochee River for walkers, joggers, and cyclists and improve connectivity among commercial, residential, and recreational facilities.

Issues and Impact Topics Analyzed

Scoping for this EA was conducted to define the range of potential effects and to identify what relationships exist between the Proposed Action and environmental resources. During scoping, NPS identified potential issues and impacts associated with the transportation projects.^{16,17} Issues and concerns affecting this proposal were identified from past NPS planning efforts, and by state and federal agencies identified during the scoping process included the conformance of this proposal with the CRNRA CTMP,¹⁸ impacts to natural and cultural resources, and an analysis of impacts on the human environment, including economic and social elements. The following issues and concerns were identified for this project:

- Impacts to land use, vegetation, soils, and wildlife habitats
- Impacts and mitigation for impacts to NPS wetlands and floodplains.
- Impacts to cultural resources, including Ivy Mill and Allenbrook.
- Issues regarding water quality along the trails and associated with the new parking lot, potential erosion, and trail stabilization.
- Issues regarding visitor use, trails, access, and safety.

¹⁵ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020. "Although SR 9 is a designated bike route, there are no dedicated bike lanes or separate bike facilities across the bridges. The northbound and southbound lanes of SR 9 are two separate bridge structures. Raised curbing on the inside lane of each bridge prevents crossing to the opposite side while on the bridge. There are currently raised curbs on the outside of each bridge. The western outside curb is approximately two feet wide. The eastern curb contains a covered utility bay, which provides a wider, four-foot curb that is used by pedestrians to cross the bridge. However, neither of these curbs meet Americans with Disabilities Act (ADA) requirements. The raised curbs are adjacent to the traveled roadway, with vehicles traveling at posted speeds of 35 miles per hour, or greater."

¹⁶ Coordination on file.

¹⁷ Issues are "problems, concerns, conflicts, obstacles, or benefits that would result" if either the No Action Alternative or the Proposed Action/Preferred Alternative is implemented (NPS 2015).

¹⁸ 2022 NPS, CRNRA CTMP

According to DO 12¹⁹ and its accompanying handbook (NPS 2015), an EA analysis should focus on pivotal issues, while limiting discussion of issues which are not meaningful to the decision.²⁰ As required by NEPA and NPS guidelines, the description of the affected environmental resource and level of analysis should focus on the relevant information needed to understand the environmental impacts of the alternatives under consideration. The level of analysis should also be commensurate with the significance of the environmental resource, as well as the magnitude of the potential impact associated with the action.

The issues and concerns identified during scoping were used to identify impact topics listed below to be presented and analyzed in "Chapter 3: Affected Environment and Environmental Consequences". Impact topics are resources within the project area that could be affected, either beneficially or adversely, by the range of alternatives presented in this EA. Impact topics represent resources that could be affected, either beneficially or adversely, by implementing any of the proposed alternatives. The following topics are carried forward for further analysis in this EA: land use, cultural resources, vegetation, wildlife, and critical habitat, NPS wetlands, water quality, floodplains, soils, and visitor use and experience.

Impact Topics Considered but Dismissed from Further Analysis

In this EA, several topics were dismissed from further analysis because they do not exist within the project area, would not be affected by the VCU Access Improvements proposal, and/or through early coordination would not be an affected resource, and/or the likelihood of impacts are not reasonably expected, nor are a subject of contention among the public and other agencies. Topics dismissed from further analysis include greenhouse gas and climate change/resiliency, soundscapes, lightscapes, wilderness, socioeconomics, hazardous materials, geological features and processes, nonnative or exotic species, and air quality. A discussion of these topics is found in Appendix A.

¹⁹ NPS Director's Order #12 and NPS 2015. The NPS NEPA Handbook (NPS 2015) states that, generally, issues should be discussed in detail in an EA if any of the following apply: the environmental impacts associated with the issue are central to the proposal or of critical importance; a detailed analysis of environmental impacts related to the issue is necessary to make a reasoned choice between alternatives; the environmental impacts associated with the issue are a big point of contention among the public or other agencies; or there are potentially significant impacts to resources associated with the issue.

²⁰ NPS NEPA Handbook (2006)

CHAPTER 2: ALTERNATIVES

Introduction

Under NEPA regulations, federal agencies must explore a range of reasonable alternatives aimed at addressing the Need and Purpose of the Proposed Action. Reasonable alternatives must be technically and economically practical or feasible and meet the purpose and need of the project. The alternatives analyzed for the projects are based on the result of internal and agency scoping. The consideration of the action alternatives proposed by GDOT, FHWA, and the NPS in a single NPS NEPA document is important because of the interconnected nature of these initiatives within the CRNRA and it identifies effective mitigation strategies that would enhance the park. Alternatives which were deemed to be technically or economically unfeasible, failed to meet the purpose and need of the project, would create unnecessary or excessive adverse resource impacts, or would conflict with the overall management of the park were dismissed from detailed analysis and are presented below.

No Action Alternative

The No Action Alternative provides a basis for comparing present park operations with the action alternatives and their anticipated environmental consequences. Under the No Action Alternative, GDOT and FHWA would not be authorized by the NPS through SUPs or Federal HED to perform any transportation actions within the boundaries of CRNRA, and activities identified in the CRNRA CTMP would need to be addressed at a future time and under a future action. As such the No Action Alternative would not include mitigation for the GDOT PI 721010- and PI 0009640, and an alternative plan would be needed to implement the CTMP trails.

No operational and safety improvements along SR 9 and Riverside Road or new bridges over Big Creek would be constructed as part of PI 721010-; no new pedestrian bridge over the Chattahoochee River would be constructed as part of PI 0009640; no new trails enhancing connectivity within the park, no parking lot construction/deconstruction, no pedestrian bridge over Big Creek would be constructed; and no rehabilitation or decommissioning of trails would occur as part of the VCU Access Improvements. There would be no transportation or trail construction or temporary impacts. New wayfinding signage would not be installed.

GDOT PI 721010- Historic Roswell Gateway and PI 0009640- Pedestrian Bridge

Under the No Action Alternative the transportation projects would not convert 2.59 acres of NPS-managed lands to transportation use; would not provide operational, pedestrian, or safety improvements along SR 9 and Riverside Road nor construct new vehicular bridges over Big Creek

as part of PI 721010-; and would not provide connectivity improvements through a new pedestrian bridge over the Chattahoochee River as part of PI 0009640 (as indicated in Figures 2, 2a, and 3). No NPS impacts would occur.

VCU Access Improvements

Under the No Action Alternative, no new trails enhancing connectivity within the park, no parking lot construction/deconstruction, no pedestrian bridge over Big Creek would be constructed; and no rehabilitation of trails or decommissioning of existing trails would be constructed by Roswell as part of the VCU Access Improvements. New wayfinding signage would not be installed. The No Action Alternative would include the park's ongoing routine of continuing maintenance and repairs and implementation of previously approved plans.

Proposed Action/Preferred Alternative

The Proposed Action/Preferred Alternative (Preferred Alternative) for GDOT PI 721010-, PI 0009640, and the VCU Access Improvements is depicted in Figures 5, 6, 7, and 8 below. GDOT PI 721010- and PI 0009640 are two (2) separate federal transportation projects sponsored by City of Roswell to be let to construction by GDOT with FHWA as the lead federal agency. The Preferred Alternative would convert approximately 2.59 acres of NPS lands within the CRNRA to transportation use. As a result, a HED and Special Use Permit (SUP) would be required from NPS. The VCU Access Improvements is sponsored by and to be let to construction by City of Roswell with NPS as the lead federal agency. Various alternatives within similar geographic areas assessed for VCU Access Improvements alternatives are divided into "Map Units" depicted in Figure 9. Action alternatives considered but dismissed from further evaluation are included in Appendix A.

The Preferred Alternative consists of the following: the widening of SR 9 including pedestrian paved walkway, drainage structures, and retaining walls (PI 721010-); construction of a new 12-foot wide by approximately 674-foot long pedestrian bridge requiring six (6) piers in the Chattahoochee River (PI 0009640) and new 6-foot wide by 130-foot long pedestrian bridge clear spanning Big Creek (VCU Access Improvements); construction of a new 0.24-acre parking lot at Allenbrook House including 0.18 acre of emergency vehicle access (VCU Access Improvements); the existing 0.3-acre parking lot at Riverside Road and 0.2-acre parking lot at Allenbrook would be decommissioned and permanently closed; 0.69 mile of new trails would be constructed, 0.35 mile of social trails would be rehabilitated, and 0.62 mile of existing trails would be decommissioned (VCU Access Improvements); and two (2) new parallel vehicular bridges clear spanning Big Creek on Riverside Road (including bridge abutments, pedestrian walkways, and retaining walls) would replace the existing bridge over Big Creek (PI 721010-).

Vickery Creek Unit, CRNRA

Proposed New Trail - not NPS Property

Legend

- Ecology Environmental Survey Boundary
- Proposed New Trails
- Existing Trails to be Rehabilitated
- Existing Trail to be Decommissioned
- Existing Trails to Remain
- Proposed Pedestrian Bridge Design
- Existing Aerial Sewer Line over Vickery Creek
- Existing Parking Lots to be Decommissioned
- Proposed Temporary Work Bridge
- Proposed Driveway
- Proposed Parking Lot
- Proposed Boardwalk

Fulton County, GA

0 150 300 600 US Feet

N

Figure 6: Vickery Creek Unit Access Improvements Location Map in Vicinity of Allenbrook House
(see also Figure 5 larger scale for Vickery Creek Access Improvements)

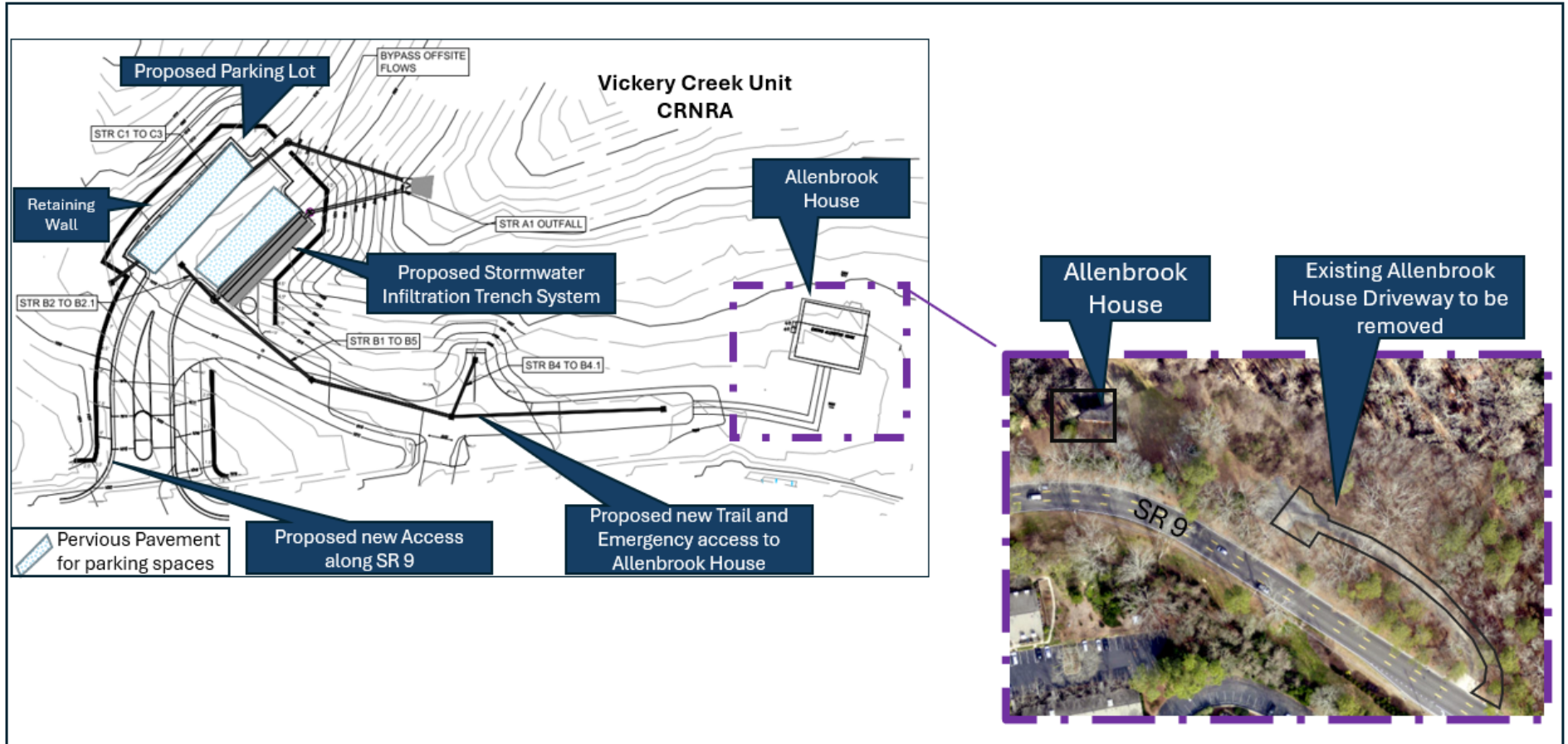


Figure 7: Preferred Alternative: PI 721010- Historic Roswell Gateway Areas of Impacts to CRNRA Vickery Creek Unit
 (see also Figure 1 larger scale for Project Location Map and Figure 5 for larger scale Preferred Alternative)



Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

Figure 8: Preferred Alternative: PI 0009640 SR 9 Pedestrian Areas of Impact to CRNRA Vickery Creek Unit

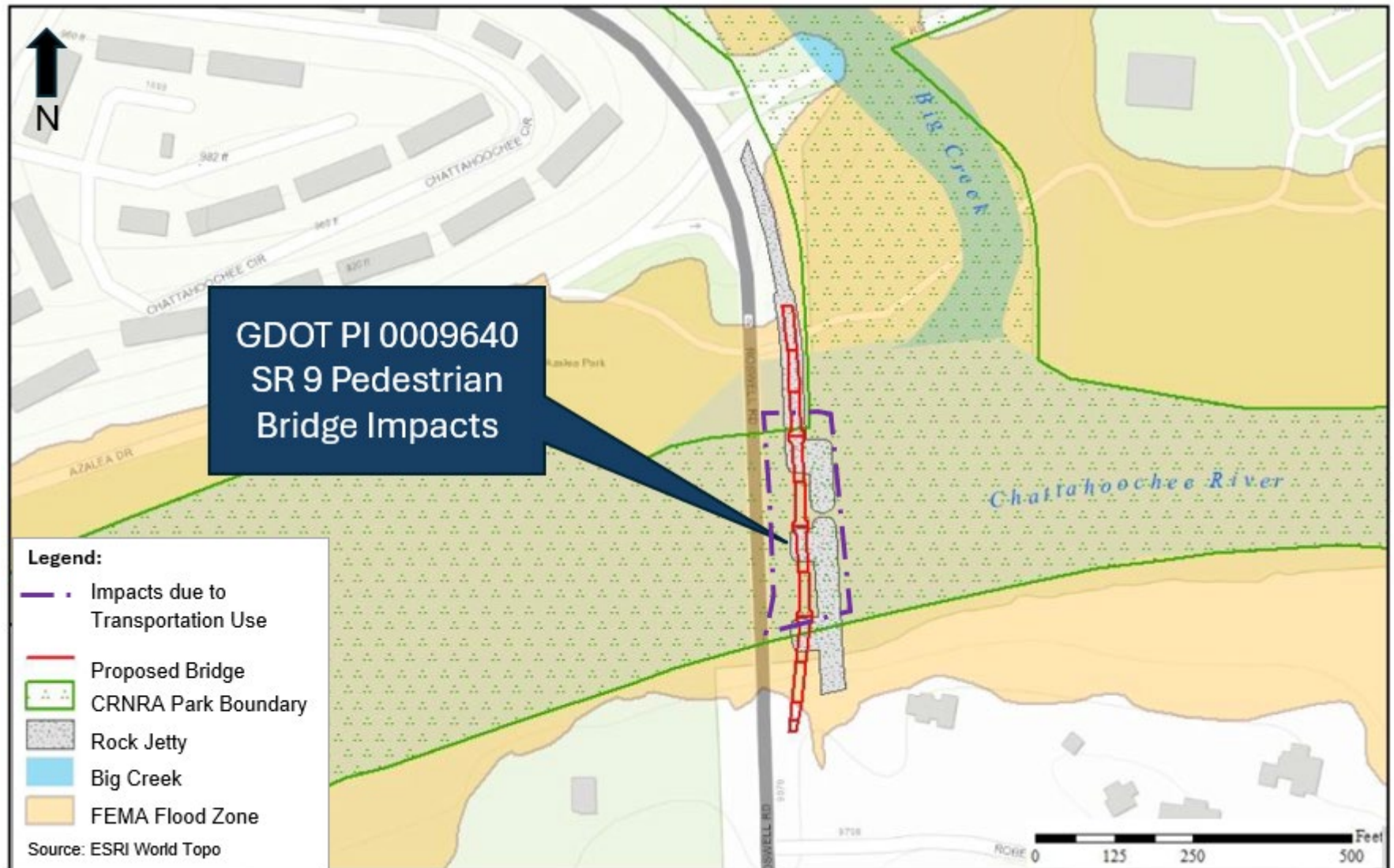
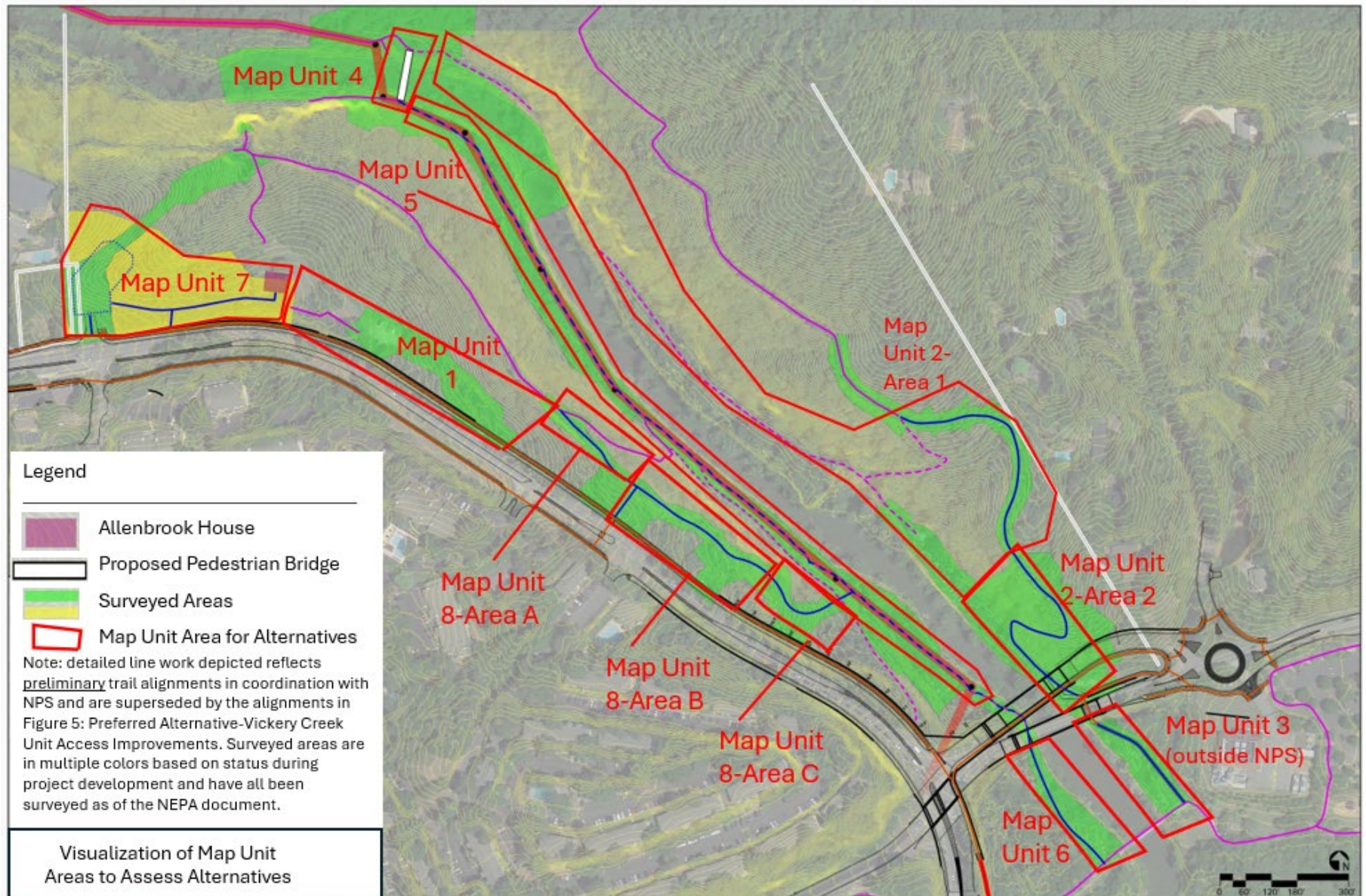


Figure 9: Areas of Impact - Index of Map Units for VCU Access Improvements



GDOT PI 721010- Historic Roswell Gateway

Under the Preferred Alternative for PI 721010- (Figures 2 and 2a), GDOT would remove the existing three-lane reversible lane system along SR 9 and construct a four-lane divided highway between the SR 9 bridge over the Chattahoochee River and SR 120/Marietta Highway for 1.1 miles, which would require 2.59 acres of lands to be authorized by the NPS for transportation use along SR 9 and Riverside Road (Figure 7).²¹ The project includes improvements to a 0.4-mile east-west segment along Azalea Drive/Riverside Road by extending Azalea Drive east under SR 9 and over Big Creek to the Riverside Road/Azalea Drive/Indian Springs Drive's new roundabout. The project would remove the existing deficient Riverside Road bridge over Big Creek and replace it with two (2), new one-way bridges at the same location. This new roadway, the Riverside Connector, would be constructed just north of and parallel to the proposed Azalea Drive extension. The proposed grade-separated Riverside Connector would include an 8-foot sidewalk. A 5-foot sidewalk would be constructed on the west side of SR 9 and a 10-foot multi-use trail would be constructed on the east side of SR 9, connecting to existing proposed trails on the south end of the project and the City of Roswell's Historic Square on the north end of the project. Retaining walls are proposed along NPS lands to minimize the impacts.

GDOT PI 0009640- SR 9 Pedestrian Bridge

Under the Preferred Alternative, GDOT would construct a multi-use trail and pedestrian bridge over the Chattahoochee River on the east side of SR 9 (Figure 5).²² The proposed pedestrian bridge would include three, 20-foot-wide refuge bulb-outs. The new 10 to 14-foot by 674 feet bridge would begin at the intersection of SR 9 and Roberts Drive and end at the intersection of SR 9 and Riverside Road (which would be outside the boundaries of CRNRA). The approach trail to the pedestrian bridge from the north bank of the river would be 12 feet wide, widening to a 14-foot width on the pedestrian bridge, and narrowing to 10 feet at the southern terminus to connect with an existing sidewalk. The approach to the bridge would be constructed with a concrete retaining wall and stamped stone finish facing the VCU of the CRNRA. The proposed SR 9 Pedestrian Bridge would provide pedestrians a safer route to access recreational facilities within the area by separating pedestrians from the narrow sidewalks currently available along the SR 9 bridge. It would not increase motorized vehicle traffic and may encourage pedestrian use for nearby residents.

²¹ GDOT PI 721010- Environmental Assessment, dated July 31, 2024.

<https://gdot.maps.arcgis.com/sharing/rest/content/items/293d64101cbf473a961d91a982d5aad6/data>

²² GDOT PI 0009640- Environmental Assessment, dated May 27, 2020; and the Finding of No Significant Impact dated May 5, 2021.

Vickery Creek Unit (VCU) Access Improvements (Mitigation Actions for Transportation projects)

Under the Preferred Alternative, GDOT and the City of Roswell would implement a series of mitigation actions required to offset the impacts of NPS-managed lands for transportation use. The Preferred Alternative within the VCU includes improving existing trails, constructing new trails, constructing trail bridges, removing unnecessary trail segments, and removing existing parking lots and constructing a new parking lot.

Under the Preferred Alternative the following categories of actions that describe the proposed work on the trails together are defined as the Vickery Creek Trail outlined in the CRNRA CTMP (2022) below are:

- Category 1- Existing trails to be rehabilitated.²³
- Category 2- Proposed new trails.
- Category 3- Existing trails or parking lots to be decommissioned.
- Category 4- Proposed new parking lot and bridge.

The Vickery Creek Access Improvements mitigation actions are broken into seven (7) geographic map units that affect the CRNRA VCU that were used for visualizing the trail areas of the park. Figure 9, Areas of Impact- Index Map of Map Units for VCU Access Improvements, provides an overview of the seven (7) areas where alternatives were evaluated for trails in each of the above categories. Also, there are two (2) crossings of Big Creek, including one (1) crossing at Riverside Road as part of the GDOT PI 721010- project and one (1) crossing within the CRNRA east of Allenbrook House as part of the VCU Access Improvements.

Under the Preferred Alternative, 3-foot-wide natural surface trails would be rehabilitated, removed or constructed to minimize impacts of trails to natural resources, while maximizing the potential for access to support conservation actions, promote and expand cultural interpretation, and provide opportunities for increased physical and mental health benefits. The redesigned trail system would take advantage of the dynamic topography while avoiding sensitive resources and fall-aligned and steep gradient trails. The proposed length of the trails by each category (Figure 9) are included in Table 1 and Table 2 which is consistent with the 2022 CRNRA Trail Management Plan.²⁴ New wayfinding signage would be installed at the proposed SR 9 and Riverside Road intersection (two

²³ According to the NPS CRNRA CTMP (2022): "Some existing trails require a significant investment in one-time rehabilitation work to establish proper drainage, correct a safety concern, or remedy an extremely poor trail condition. This one-time maintenance effort could include earthwork to establish drainage ditches, grade reversals, rock armoring, adding clean fill, and brush clearing." <https://parkplanning.nps.gov/showFile.cfm?sfid=573750&projectID=76722> , page 24 (accessed 1/5/2025)

²⁴ CRNRA Trail Management Plan, 2022

[2] signs) and at the proposed Riverside Road roundabout (two [2] signs) as well as at the new trailhead at the proposed Allenbrook parking lot.²⁵

SR 9/Allenbrook Area

The Preferred Alternative for the SR 9/Allenbrook Area is depicted in Figures 5 and 9, Map Units 1 and 7 and Table 1. The existing NPS Allenbrook entrance driveway and 0.2-acre parking lot accommodating approximately 10 spaces, currently accessed from SR 9, would be removed, and revegetated with native plantings (Category 3). A new approximately 0.24-acre paved parking lot would be constructed to accommodate 17 spaces (Category 4) north of Allenbrook House, improve visitor connectivity to Roswell, and allow emergency services access. Two (2) retaining walls (four [4] to eight [8] feet high) would be constructed to minimize the project footprint in the vicinity of the steep topography. These walls would be faced with a granite ashlar finish pattern to support context-sensitive design within the park. Between the proposed new parking lot and the Allenbrook House, a new access drive would be built for emergency (e.g., to accommodate firetrucks) and park vehicles including a gate to limit access that would connect the parking lot with the Allenbrook House trail (Category 2) and accommodate wheelchair access. This new access driveway would be 20 feet wide to meet the City of Roswell Fire Department requirements. The Preferred Alternative parking lot includes an emergency services/firetruck turnaround located along the northern portion of the lot and is curved to align best with the existing topography to limit the construction area. Replacement of the old Allenbrook parking area with a new parking lot improves accessibility to northern and western areas of the park's historic resources, safely accommodates emergency vehicles, and addresses water quality from new impervious surfaces by incorporating a new stormwater management structure as well as pervious pavers for the parking spaces. A new NPS entrance monument sign following NPS standards would be installed at the entrance of the access to the new parking lot. This trail connectivity and the new parking lot conforms with the Allenbrook Cultural Landscape Inventory (CLI). The existing 0.2-acre gravel driveway providing access from SR 9 to Allenbrook House would be removed under the Preferred Alternative. Under the Preferred Alternative, an underground water quality infiltration and detention system is proposed beneath the new parking lot to address stormwater runoff from the addition of the new paved parking lot which has been designed to include a stormwater management plan.

²⁵ Director's Order #52C

Table 1- Proposed VCU Access Improvements (Preferred Alternative)

Geographical Area (Map Unit^)	Existing Trails to Remain (feet)	Category 1: Existing Trails to be Rehabilitated (feet)	Category 2: Proposed New Trails (feet)	Category 3: Existing Trail (feet) / Parking Lot (acre) to be Decommissioned	Category 4: Proposed New parking lot (acre)/ bridge (acre)
SR 9/Allenbrook (Map Unit 1)	0	0	0	254 0.20^^ (approximately 10 parking spaces)	0
East side of Big Creek (Map Unit 2 Area 1)	0	0	625	2100	0
East side of Big Creek and Riverside Road (including existing parking lot) (Map Unit 2 Area 2)	0	0	485	0.30^^ (18 parking spaces)	0
Pedestrian Bridge at Big Creek (interior to CRNRA) (Map Unit 4)	70	37	0	25	0.02^^
Trail along Sewer Easement west of Big Creek (Map Unit 5)	127	1096	1145	629	0
South of Riverside Road Area (Map Unit 6)	95	0	385	0	0
Proposed Parking Lot Area with Trails (Map Unit 7)	0	0	115	0	0.24^^ (17 spaces)
Railroad bed area (Map Unit 8 Area A)	232	208	0	0	0
Railroad bed area (Map Unit 8 Area B)	0	159	510	0	0
Railroad bed area (Map Unit 8 Area C)	0	0	230	0	0
Outside Map Unit Areas	1415	325	130	277	0
Total (feet / mile and/or acre)	1939 feet/ 0.37 mile/ 0.13 acre	1834 feet/ 0.35 mile / 0.13 acre	3625 feet/ 0.69 mile /0.25 acre	3285 feet/ 0.62 mile / 0.23 acre (Trail) 0.50 acre (Parking)	0.29 acre

Categories outline the activity under the Preferred Alternative. ^ Map Units are depicted on Figure 9; ^^ Measurement is in acreage and reflects parking lot areas (including 0.02 acre of pervious pavers) or new 6 foot by 130-foot pedestrian bridge; Existing Trails to remain are not affected by Preferred Alternative. A total of 467 feet by 6 feet of boardwalks would be constructed in Map Units 6 and 8. Approximately 0.002 acre of impact due to piles es supporting the boardwalk would be required (2 posts spaced 8-foot on center would be approximately 116 posts). Each of the two (4 by 6 inch) posts per each of the four (4) wayfinding signs would result in two (2) square feet of ground disturbance for a total of eight (8) square feet. In addition, up to five (5) feet of temporary disturbance immediately adjacent to the proposed new trails may be needed for construction activities, which would result in an additional 18,125 square feet (0.4 acre) of temporary impacts during construction and indirectly impact terrestrial habitat in these areas.

Table 2- Summary of VCU Access Improvements (Preferred Alternative)

Trail Improvements	Length/ Area
Existing Natural Surface Trails - Vickery Creek Unit CRNRA	7.7 miles
Existing Natural Surface Trails - Vickery Creek Study Area ^	7049 feet / 1.3 miles
Proposed New Natural Surface Trails – Vickery Creek Study Area ^{^^} (action under Preferred Alternative)	3625 feet / 0.7 mile
Proposed Natural Surface Trails– Vickery Creek Study Area (action under Preferred Alternative) ^{^^^}	5450 feet / 1.0 mile
Proposed Net Natural Surface Trails– Vickery Creek Study Area (action under Preferred Alternative) ^{^^^^}	2165 feet / 0.4 mile
Proposed Natural Surface Trails– Vickery Creek Study Area (post Project Implementation) ^{^^^^^}	7389 feet / 1.4 miles
Net Change in Trails in Vickery Creek Study Area resulting from Proposed VCU Access Improvements after Project Implementation	340 feet / 0.1 mile
Proposed Total Activity in Trail Improvements - Vickery Creek ^{^^^^^^}	8735 feet / 1.7 miles
Parking Lot and Driveway/Drainage Improvements	
Existing Parking Lot areas- Vickery Creek Study Area	0.5 acre
Proposed Change Total Parking Improvements- Vickery Creek	- 0.26 acre
Proposed Emergency Services access improvements (at Allenbrook)	8076 square feet / 0.18 acre
Proposed underground detention drainage improvements (at Allenbrook)	1529 square feet / 0.04 acre
Pedestrian Bridge	
Proposed Pedestrian Bridge - Vickery Creek	0.02 acre

Note: Vickery Creek Unit (VCU) Study Area consists of Map Units 1, 2, 4, 5, 6, 7, and 8 as depicted in Figure 9. Boardwalks would be incorporated along approximately 467 feet of trail.

^ Existing trails includes the following from Table 1: Existing trails plus Category 1 (trails to be rehabilitated) plus Category 3 (decommissioning of existing trails)

^{^^} Table 1 Category 2

^{^^^} Preferred Alternative consists of Table 1 Categories 1 (rehabilitated trails) plus 2 (new trails).

^{^^^^} Preferred Alternative consists of Table 1 Categories 1 plus 2 and subtracting Category 3.

^{^^^^^} Post Implementation consists of Table 1 Existing plus Categories 1 and 2

^{^^^^^^} Includes all trail activity from Table 1, including Categories 1 (rehabilitated trails) plus 2 (new trails) plus 3 (decommissioned trails).

East side of Big Creek and Riverside Road Area

The Preferred Alternative for the east side of Big Creek and Riverside Road Area is depicted in Figures 5 and 9, Map Unit 2 Areas 1 and 2 with improvements noted in Table 1. Under the Preferred Alternative, the existing approximately 12-foot wide NPS-paved entrance driveway, and approximately 18-spaced Riverside Road parking lot on the east bank of Big Creek would be removed²⁶ (Category 3, see Figures 5 and 9). The Preferred Alternative would remove approximately

²⁶ <https://www.nps.gov/chat/planyourvisit/parking.htm> notes five (5) spaces are available on the Riverside Parking Lot. (accessed 1/5/2025); however, it appears that approximately 15 spaces for standard sized single private non-commercial vehicles could be accommodated.

0.3 acre of paved surface from the existing parking lot. The Riverside Road parking lot area would be revegetated with native plantings and a new trail and trailhead would be constructed (Category 2, Figure 9). A new trail connection to the existing trail, which would remain, would be provided (Category 3, see Figure 9). This new trail would serve as a new access point for pedestrians from Riverside Road to the CRNRA trail system on the east side of Big Creek. Proposed new sidewalks along Riverside Road as part of PI 721010- would connect pedestrians to the nearby parks and trails outside NPS to the CRNRA trail system. Several existing trails would be decommissioned as noted in Figure 5 by the dashed lines, which is consistent with the CTMP (Category 3). The proposed new trail (Category 2) and decommissioning of the existing trails (Category 3) in this area were chosen because it balanced the avoidance of tree removal with the topographic constraints of the area and includes switchbacks that balance the steep terrain and being more of a direct route to facilitate visitor experience.

Pedestrian Bridge over Big Creek (interior to park)

The Preferred Alternative for the Bridge over Big Creek in the park interior²⁷ is depicted in Figure 5 and Figure 9, Map Unit 4 with improvements noted in Table 1. Under the Preferred Alternative, a new pedestrian bridge is proposed in an interior area of the VCU away from direct access to paved roads. Currently, there is no crossing of Big Creek between the west side (SR 9 at Allenbrook House) and the east side of VCU and the new pedestrian bridge would provide an additional crossing within the park, further to the north of the current crossing of Big Creek in the vicinity of Riverside Road. The new pedestrian bridge across Big Creek in the interior of the park would provide an additional crossing in an area that currently does not have east/west connectivity allowing increased connectivity between east and west portions of the VCU to enhance visitor enjoyment of all the NPS trails. The proposed bridge would be located directly downstream of an existing sewer line. The preferred location of the bridge was chosen because it connected the sewer easement improvement trails at a logical junction to minimize potential impacts in previously undisturbed areas. Construction constraints due to extensive elevation grades in topography were factors in the preferred location selection.

The prefabricated steel truss bridge measuring 6-foot wide by 130-foot-long bridge would be used to minimize construction at the site so that multiple pieces could be assembled at Big Creek, allowing for smaller-sized construction equipment to be used to reduce the total area required for clearing

²⁷ Note to reader: there is an existing vehicular bridge over Big Creek along Riverside Road; there is a proposed SR 9 pedestrian bridge over the Chattahoochee River to be constructed as part of PI 721010-; there are two vehicular bridges over Big Creek to be constructed as part of PI 0009640; and there is a proposed pedestrian bridge over Big Creek within the park's interior to be constructed as part of the Vickery Creek Unit Access Improvements.

vegetation. The bridge would clear span Big Creek (see Figure 10). The proposed pedestrian bridge has been designed to be a dark brown weathered steel with a bow and string truss style with wood decking for consistency with other NPS bridge structures and to align with the aesthetic effect of a natural landscape (Category 4) and other historic areas of the park. The pedestrian bridge would have handrails and the concrete footers would be a tinted dark brown to blend into the landscape. Weirs and stairs are proposed to support the pedestrian nature of the user and to deter bicyclists, who are prohibited from using these pedestrian trails. A short, straight staircase with turned landings was chosen as the design because it is the simplest and most direct route that would avoid the rock outcrops and sewer crossing constraints. The bridge design was created in a context-sensitive manner using materials blending with the landscape to match the scale of visitor use in the area while minimizing its impact on the land.

The proposed pedestrian bridge would measure 10 feet from the ground to the bottom chord of the truss with 10 feet of clearance under the stairs (Figure 10). These elevations meet the bridge design requirements for clear span of the creek and meeting the 500-year flood elevation. The deck would be as narrow as possible, 2 (two) to 4 (four) feet wide, to support pedestrian usage. Safety, pedestrian usage, and visual aesthetics were three primary criteria to develop the Preferred Alternative. There would be graffiti treatment on the bridge foundations which would serve as a coating that creates a protective surface that spray paint cannot bond to. This would aid in supporting a lower-maintenance painting to reduce wear and tear on the bridge. An example rendering is shown in Figure 11.

Temporary Construction Access

In order to construct the pedestrian bridge footings and place the precast bridge, construction equipment would need to be given access to the bridge site. Under the Preferred Alternative, a temporary work bridge would be used to access and construct the bridge abutments and raise and erect the bridge, allowing for the transport of construction equipment that is required on both sides of the creek. The temporary work bridge would also provide a work area required for the construction activities associated with erecting the bridge, such as welding segments of the bridge back together. Under the Preferred Alternative, construction equipment would access the bridge site from the south on the west bank of Big Creek, moving along an existing sewer easement. This temporary crossing consisting of bottomless culverts topped with gravel that would allow stream flow during construction would be required for construction equipment to cross from the west bank to the east bank of Big Creek (see detailed alternatives analysis in Appendix B, Statement of Findings [SOF]).

Figure 10: Pedestrian Bridge Layout over Big Creek

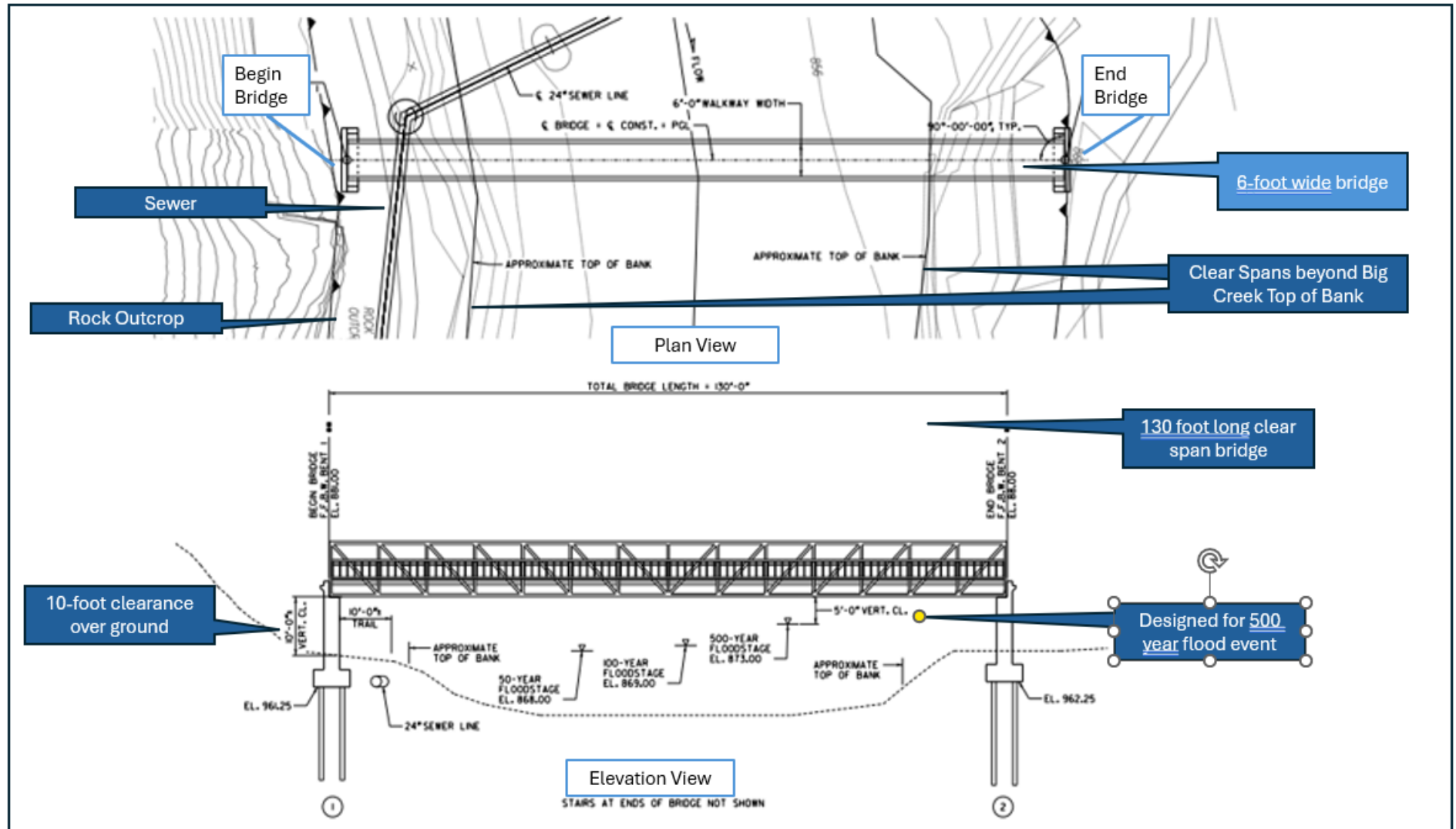


Figure 11: Example Rendering of Proposed Pedestrian Bridge over Big Creek



Trail along Sewer Easement west of Big Creek

The Preferred Alternative for the trail west of Big Creek is depicted in Figures 5 and 9, Map Unit 5. The existing trail located on the current sewer easement (west bank of Big Creek) would be rehabilitated (Category 1). This rehabilitated trail would establish a connection on the west bank of Big Creek between the proposed new pedestrian bridge and the proposed new trail (Category 2) extending southerly to the standing Ivy Mill Ruins south of Riverside Road. A boardwalk over Intermittent Stream (IS) 5 is proposed. The CRNRA trails would extend from the Ivy Mill Ruins on the south side of Riverside Connector/Azalea Road under the proposed new bridges carrying Azalea Road and Riverside Connector and continue north to trails within the CRNRA. The proposed new pedestrian bridge over Big Creek in the interior of the park would also connect trails in Map Unit 5 with an existing trail on the east side of Big Creek that extends northward to Roswell's Old Mill Park, which enhances trail connectivity within the VCU and to nearby areas.

South of Riverside Road Area

The Preferred Alternative for the south of Riverside Road Area is depicted in Figures 5 and 9, Map Unit 6. Under the Preferred Alternative, a new trail would be constructed along the west side of Big Creek (Category 2²⁸), between Riverside Road and the existing trail crossing at Big Creek. The proposed 3-foot trail would provide pedestrian connections to other destinations, including City of Roswell's Riverwalk Trail, Riverside Park, and the CRNRA VCU recreation areas north of Riverside Road and would be the most direct path that connects to the existing concrete Roswell Riverwalk trail and the proposed pedestrian bridge over Big Creek in the interior of the park at Map Unit 4. It is a straight trail and stairs would be included as needed. Helical piers would be used to support the boardwalk. The boardwalk would not require handrails for safety because the height of the boardwalk would be under 30 inches.²⁹

Railroad Area

The Preferred Alternative A for the trail in the Railroad area is depicted in Figures 5 and 9, Map Unit 8, Areas A, B, C with improvements noted in Table 1. Under the Preferred Alternative, this trail would be constructed along the abandoned railroad bed and a portion of the existing trail at Allenbrook House. The trail is located along a pre-existing graded area, historically intended to house a railroad track, and would connect to the trail along the sewer easement. The location for this trail was chosen because it follows the existing grading area, avoids a large tree that NPS wants to retain, and is the most direct route.

General Mitigation Measures and Best Management Practices used in Alternatives Development

To ensure protection of the park's fundamental resources and values, the following mitigation measures, and best management practices (BMP) would be implemented under the action alternative.³⁰ The Preferred Alternative would provide infrastructure that would lay lightly on the land. Project engineers coordinated directly with NPS officials to blend new infrastructure into the natural landscape in accordance with the CTMP³¹. All proposed trails would primarily consist of 3-

²⁸ Note: Area 3 proposes a trail along the east side of Big Creek is also proposed but is located outside NPS property and would be completed by others; therefore, is not included in this document.

²⁹ <https://codes.iccsafe.org/s/IBC2000P13/chapter-10-means-of-egress/IBC2000P13-Ch10-Sec1003.2.12> (accessed 1/7/2025)

³⁰ The NPS has the authority to implement the mitigation measures presented in this EA under the Organic Act, The National Historic Preservation Act, *NPS Management Policies 2006*, park-specific regulations, and other federal and state applicable requirements.

³¹ With the natural landscape as one of the viewshed elements providing intrinsic beauty and serving ecological function, extensive design coordination was conducted to minimize potential tree removal within the CRNRA. The project engineers walked the existing and proposed trails to identify paths that allowed a balance of the positive visitor experience from an effort standpoint (e.g., straight paths with steep or gentle slopes vs. paths with switchbacks) while reducing the need for tree removal as much as possible. Where feasible, the engineers routed trails around trees. In addition, where possible, the most direct route was chosen in order to avoid tree removal and to minimize construction in the landscape.

foot natural surface trails with wooden stairs and boardwalks to protect sensitive natural and cultural resources.

Avoidance and minimization measures were considered to the extent possible during project development with GDOT, the City of Roswell and the NPS for the permanent adverse impacts of the 2.59 acres required for the land transfer and permanent impacts from the construction of the new pedestrian bridge within the Chattahoochee River. Considerations consisted of minimizing direct physical impacts to the park by using retaining walls, switchbacks along trails, using boardwalks in sensitive areas (such as floodplains), and co-aligning improvements with previously disturbed areas to minimize new areas of disturbance; and minimizing viewshed impacts through context sensitive infrastructure that blends with the natural setting and using underground stormwater detention. Mitigation actions for the GDOT projects were developed and presented in each resource topic in Chapter 3 and Appendix C³².

General constructability considerations and commitments to mitigate the impacts are proposed under the Preferred Alternative.³³ Construction activities are proposed to be limited to the trails and immediate adjacent areas with attention to avoid and minimize impacts to vegetation, including mature trees, as well as minimizing potential for introduction of nonnative/invasive species through active adaptation management outlined in the CTMP. This would be conducted by using small sized construction equipment and clearing/installation by hand to limit disturbance. Where construction equipment access is needed (e.g., for the proposed pedestrian bridge), it would be co-aligned with the trail improvements areas, such that equipment would use the same paths as the trails to limit disturbed areas. Construction laydown areas would be located in areas that either need to be cleared for the access improvements under the Preferred Alternative, e.g., the proposed new parking lot at Allenbrook, or are already cleared, e.g., existing parking lots at Allenbrook and Riverside Road, and along the existing utility easement.

Several design considerations were incorporated to reduce potential for bicyclists to use the proposed trails in Vickery Creek Unit of CRNRA. These include the following:

- 1- Natural surface trails that discourage bicyclists.
- 2- Bike weirs at the entrance to the trails to discourage bicyclists.
- 3- Stairs at the pedestrian bridge over Big Creek to discourage bicyclists.

³² Appendix C outlines mitigation measures for the following topics: Cultural Resources, Vegetation, Wildlife and Critical Habitat, Lighting, Nonnative or Exotic Species, Wetlands, Water Quality, and Visitor Use and Experience.

³³ See Appendix C for Mitigation Measures

CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

General Methodology for Analyzing Impacts

This chapter describes both the affected environment (the existing environmental conditions of resources, including trends and ongoing and planned actions) and environmental consequences (impacts) of the Proposed Action on each resource. The No Action Alternative³⁴ consists of the current and expected future conditions of the environment where project actions would not be implemented for any of these three (3) projects. Impacts of the alternatives are described under each impact topic in terms of type, context, duration, timing, and intensity. Where appropriate, mitigating measures for adverse impacts are described and incorporated into the evaluation of impacts.

Land Use

Current trends in land use are outlined in Roswell's *Recreation, Parks, Historic & Cultural Affairs 5-Year Master Plan (2022-2026)*³⁵ or the CRNRA CTMP (2022).³⁶ Land uses adjacent to VCU consists primarily of local parks. Growth is constrained by the Chattahoochee River, and the majority of parcels near CRNRA VCU are already developed in this heavily urbanized area. Although there are development pressures in the urban area, there is one reasonably foreseeable future land use change along SR 9 or Riverside Road adjacent to the VCU, e.g., the lot adjacent to the proposed Allenbrook parking lot, and no near term or long-term state or federally funded GDOT or local transportation projects identified abutting the park.

Existing Conditions

PI 721010-³⁷ Land uses in the project area are classified as Residential and Downtown Mixed Use, Single Family Small Lot, Parks, and Recreation (including VCU CRNRA), Civic/Institutional, and Downtown Shopfront, all within the Historic Area Town Center/Downtown Character Area. Other existing land uses in the project area include Residential Multi-Family, Residential Townhouse, Downtown Residential, and Single-Family Suburban.

³⁴ The No Action conditions serve as the baseline for understanding the resources that could be impacted by implementing the Proposed Action/Preferred Alternative.

³⁵ 2022 City of Roswell's *Recreation, Parks, Historic, and Cultural Affairs 5-Year Master Plan (2022-2026)*. (<https://www.roswellgov.com/home/showpublisheddocument/8069/638005652658670000>), accessed 6/23/2024) a

³⁶ 2022 NPS CRNRA CTMP

³⁷ GDOT PI 721010- Environmental Assessment, dated July 31, 2024.

PI 0009640³⁸- Land uses in the project vicinity consist of the Chattahoochee River riverine habitat, managed under CRNRA that provides recreational opportunities such as fishing, rafting, canoeing, kayaking, and paddle boarding. A boat launch is located west of the project area and the proposed SR 9 bridge. The Chattahoochee River is bordered on the north by Riverside Park, managed by the City of Roswell. The south side of the river in Sandy Springs is bordered by single family homes and undeveloped wooded buffer consisting of various mixed hardwood/pine species.

VCU Access Improvements- The VCU is designated for the preservation and protection of natural and cultural resources for the benefit and enjoyment of present and future generations³⁹ (NPS 2017) and as a Historic Resource Zone west of Big Creek and Rustic Zone east of Big Creek within the park boundaries.⁴⁰ The VCU is heavily wooded with mixed pine and hardwood forests. Based on the CLI, the cotton industry was extensive within the VCU and in a 1938 aerial photo early successional areas from farming to forest is notable.⁴¹ Photographic evidence supports the indication that current forested land uses are less than approximately 100 years old. Modern intrusions consist of a 24-inch Fulton County sewer easement, 2.9 acres of historic Ivy Mill ruins, the Allenbrook Historic House, 2.0 acres of Allenbrook House landscape, and 0.5 acre of parking lots along Riverside Road with 18 parking spaces and information boards and along SR 9 at Allenbrook House with approximately 10 parking spaces,⁴² SR 9 bridge over the Chattahoochee River. There are 7.7 miles of existing natural surface hiking trails within VCU (see Table 1). There is one (1) identified ongoing development on the north side of VCU at the proposed Allenbrook parking lot.

Impacts of the No Action Alternative

Under the No Action Alternative land use would remain the same as under the existing condition and no conversion of NPS lands to transportation use would occur. Under the No Action Alternative, the indirect effects of continued use of undesignated social trails and trails to be decommissioned resulting in land use impacts due to increased erosion would continue to occur. The No Action Alternative would not support the local planning basis for the actions. As such, while there would be no physical adverse effect to NPS-managed lands under the No Action Alternative, the No Action Alternative is inconsistent with the CTMP; activities identified in the CTMP would need to be addressed at a future time and under a future action.

³⁸ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020; Finding of No Significant Impact, dated May 5, 2021.

³⁹ <https://nps.history.com/publications/foundation-documents/chat-fd-2017.pdf>

⁴⁰ CRNRA Final General Management Plan/Environmental Impact Statement (2009), Chapter 2, Part 3, page 68 (accessed 1/12/2025) and 2022 NPS CRNRA CTMP, page 32.

⁴¹ 2018 Cultural Landscape Inventory

⁴² 2018 Cultural Landscape Inventory

Impacts of the Preferred Alternative

PI 721010- The project proposes to convert approximately 2.59 acres of NPS-administered property within the CRNRA to transportation use along the SR 9 and Riverside Drive corridors. Due to the need to convert NPS lands to transportation use required by PI 721010., a HED and SUP are required from NPS. The conversion of NPS land to transportation use is compatible with current and future land use planning, and the effects would be small because the proposed project would account for just 2.59 acres of the total CRNRA land which covers over approximately 5,500 acres.⁴³ The proposed project is not expected to induce future land use changes as the area is already built out with potential for minor redevelopment impacts, consistent with the Roswell 2040 Comprehensive Plan, would be anticipated.⁴⁴

PI 0009640- The project would result in no direct or indirect impacts to NPS-managed terrestrial lands, but would impact NPS aquatic lands.⁴⁵ The effects of the conversion of NPS land to transportation use are compatible with current and future land use in the area and would be minor as both permanent and temporary impacts for the construction of the pedestrian bridge account for a small portion of the over 5,500 acres of the CRNRA.

VCU Access Improvements- The Preferred Alternative would result in approximately 0.69 mile or 10,875 square feet (0.25 acre, Table 3) of permanent forest impacts to NPS-managed lands due to new trails (Category 2 in Table 1) and 0.4 acre of temporary impact due to construction of proposed new trails. There would be 0.46 acre of impact to wooded areas due to the proposed new Allenbrook parking lot, the emergency services access, underground water quality infiltration feature and the 0.02 ac of impact due to the proposed pedestrian bridge over Big Creek (Category 4, Table 1, and Table 3). The proposed decommissioning of 0.23 acre of existing trails and 0.5 acre of parking lots at Riverside Road and Allenbrook would be seeded with native vegetation to regenerate and return to a natural setting (Category 3, Table 1).⁴⁶ These land use changes would remain recreational which is consistent with the VCU land use plan.

The proposed new pedestrian bridge would result in 0.12 acre of temporary impacts to Big Creek for a construction work bridge (see also Proposed Action/Preferred Alternative section above and NPS Wetlands section below) that would temporarily impact Big Creek with the installation of bottomless

⁴³ <https://www.nps.gov/subjects/lwcf/acreagereports.htm> (accessed 2/5/2025)

⁴⁴ GDOT PI 721010- Environmental Assessment, dated July 31, 2024.

⁴⁵ As documented in Appendix B, SOF, 0.002 acre of permanent impacts to the Chattahoochee River due to placement of six (6) bridge piles and 0.001 acre of permanent impacts due to fill within Wetland 4 (which is considered land use [e.g., terrestrial]). Additionally, the project proposes to temporarily impact 0.442 acre of the Chattahoochee River for placement of rock jetties and 0.13 acre of fill and clearing within Wetland 4 (see NPS Wetlands section below).

⁴⁶ <https://www.nps.gov/subjects/transportation/revegetation.htm>, accessed 2/12/25.

culverts to carry construction equipment across the creek for approximately three (3) to six (6) months (see also Water Quality section below).

The Preferred Alternative would not be anticipated to spur land development changes because growth is constrained and in the urban area, and there are no reasonably foreseeable land use changes along SR 9 or Riverside Road adjacent to the VCU, except for the lot adjacent to the proposed Allenbrook parking lot, that may result in direct or indirect impacts to the NPS-managed lands.

The Preferred Alternative would align with the 2022 CTMP to provide improved connectivity between the Vickery Creek Trail and Magnolia Loop Trail portions of the VCU on the south and north side, respectively (see also Visitor Use and Experience below). A summary of permanent land use impacts is found in Table 3 below.

Table 3: Summary of Land Use Impacts Under Preferred Alternative

	Area (acre)
PI 721010-	
Transportation Use	2.59
PI 0009640	
Transportation Use	0.001
VCU Access Improvements	
New Trails	0.25
New Allenbrook Parking Lot	0.24
New Emergency Vehicle access	0.18
New Underground Water Quality System	0.04
Total	3.301

Table summarizes permanent impacts to NPS lands. Refer also to Table 1, Proposed VCU Access Improvements (Preferred Alternative) and footnote 45.

Summary- Direct impacts under the Preferred Alternative would result in conversion of 3.3 acres of unimproved wooded areas to transportation use and trails (Table 3) and previous impacts to land use within the Study area of the Preferred Alternative include 0.5 acre of parking lots (to be removed under the Preferred Alternative) plus 0.36 acre of trails to remain/be decommissioned (Table 1), 2.9 acres of a historic mill complex and 2.0 acres around the Allenbrook House.⁴⁷ Land uses in the area consisted of urban growth in metro-Atlanta, which resulted in an increased number of visitors coming to/from and parking at VCU and using the park facilities.

⁴⁷ 2018 Cultural Landscape Inventory.

Although there are development pressures in the urban area, the Preferred Alternative would not be anticipated to spur land development changes because growth is constrained by the Chattahoochee River and there is low potential for new development, but redevelopment could occur within previously disturbed areas. Based on the combination of past land use impacts, mitigation, and lack of foreseeable future land use changes, there would be minor long-term adverse impacts to land use on NPS lands.

Mitigation Measures and Best Management Practices

Design of the trails include minimization measures to reduce impacts on soils consisting of boardwalks to minimize soil disturbance over sensitive features. Bridges proposed over Big Creek would clear span the stream, avoiding permanent impacts. Decommissioned trails and parking would be restored with native vegetation. Retaining walls along SR 9 and Riverside Road would be installed to minimize impacts on NPS-managed lands. In addition, orange barrier fence (OBF) would be installed along the NPS boundary along the transportation projects to delineate areas accessible to contractors and prevent unauthorized disturbance of NPS-managed lands.

Conclusion

The Preferred Alternative would result in both temporary and permanent footprint impacts on NPS-managed lands. GDOT and FHWA would convert 2.59 acres of wooded natural areas out of 5,500 acres of NPS-managed lands to transportation use. The VCU Access Improvements would result in 3.3 acres of new impacts (Table 3) while removing 0.5 acre of parking (Table 1, Category 3 [Allenbrook and Riverside Road and Table 2), and decommissioning 0.23 acre of trails resulting in a net change of 2.57 acres of impact. Even with including avoidance, minimization, and mitigation, long-term adverse impacts to features and attributes of VCU would occur; however, this long-term effect of 0.05 percent of land use impact is considered minor relative to the total size of the VCU area, as well as being offset by the long term benefits enhancing safety, operational, and roadway improvements; multi-modal access; and trail connectivity within the park and between NPS and non-NPS trails to support the local health and well-being and infrastructure of the residents and visitors.

Cultural Resources

The National Historic Preservation Act of 1966 (NHPA), NEPA, the 1916 NPS Organic Act, *NPS Management Policies 2006*, and NPS-28 require Federal agencies to consider the effects of their Proposed Actions on archaeological and historic resources within an undertaking's area of potential

effects (APE).⁴⁸ The APE, as defined in 36 Code of Federal Register (CFR) 800.16(d), is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties. Based on the nature and the scope of these undertakings, the APE consists of areas within the proposed limits for each project and the surrounding viewshed. There is special consideration of impacts given to those resources either listed in or eligible for listing in the National Register of Historic Places (NRHP). Cultural resources are considered archaeological sites, cultural landscapes, ethnographic resources, museum collections, and historic structures.

Existing Conditions

PI 721010- Within the project limits that overlap with the NPS jurisdiction, several cultural resources have been identified.⁴⁹

[Roswell and Expanded Roswell Historic District](#)

The original Roswell Historic District was listed in the NRHP in 1974 and featured a variety of houses, a town square, industries, a store, churches, and cemeteries.⁵⁰ In 2017 the NRHP-listed Roswell Historic District was expanded due to the presence of both aboveground historic properties and archaeological sites within and near the district, and the resulting eligible resource is known as the Expanded Roswell Historic District.⁵¹ The district possesses significance under all four NRHP Criteria. In a memorandum dated October 21, 2021, the boundary was further revised to capture the full extent of the boundary for contributing resource Ivy Mill/Site 9FU228. Within the Expanded Roswell Historic District and NPS jurisdiction, Allenbrook House/Site 9FU286, Ivy Mill/Site 9FU228 and Railroad Bed/Site 9FU6 are located within the APE of the proposed project. The NRHP-eligible boundary of the Expanded Roswell Historic District corresponds to the original listed boundary (which comprises approximately 120-ac.), lying east and west of Mimosa Boulevard and north of Barrington Hall, and the expanded section, which is bound by SR 9, the Chattahoochee River, and the east bank of Big Creek.

[Allenbrook House/Site 9FU286](#)

The Allenbrook House/Site 9FU286 is a two-story, brick Plantation Plain house and associated landscape located on the west bank of Big Creek and was originally constructed between 1851 and

⁴⁸ Agency coordination is on file.

⁴⁹ GDOT PI 721010- Environmental Assessment, dated July 31, 2024.

⁵⁰ GDOT PI 721010- Environmental Assessment, dated July 31, 2024. See EA for additional information on level of significance, areas of significance, and applicable Criteria.

⁵¹ GDOT PI 721010- Environmental Assessment, dated July 31, 2024. See EA for Agency coordination.

1856. The Allenbrook House/Site 9FU286 is significant for its association with James Roswell King, who constructed the house as his office and residence due to its proximity with Ivy Mill. It serves as the most intact cultural resource within the CRNRA VCU. The Allenbrook House has been determined eligible repeatedly in Section 106 consultation and a Determination of Eligibility for the Allenbrook House/Site 9FU286 received concurrence from the Georgia SHPO on September 26, 1991. Most recently, Allenbrook House/Site 9FU286 was documented in a 2018 CLI, prepared in coordination with NPS for PI 721010- Historic Roswell Gateway (see Mitigation Measures section below). The site possesses state-level significance for its association with the Civil War and establishment of industry in Roswell (Criterion A). It remains the best example of a property associated with James Roswell King's productive life (Criterion B). The building is a rare example of an intact brick Plantation Plain type and therefore conveys significance in the area of architecture (Criterion C). The site associated with Allenbrook (9FU286) has the potential to yield information on important research questions in history and therefore has the potential to yield significant archaeological information on mid-19th to early 20th century industry (Criterion D).

Ivy Mill/Site 9FU228

Ivy Mill/Site 9FU228 is a historic site complex located at the confluence of Big Creek and the Chattahoochee River. The cultural landscape consists of approximately 2.90 acres of a historic mill complex and includes 19th century woolen mill ruins, raceway, earthen and stone dam, and associated artifact midden scatter. The mill ruins are located at the southeast quadrant of the intersection of SR 9/Roswell Road and Riverside Road. The site boundary extends north of Riverside Road to include the mill raceway and earthen and stone dam on Big Creek.

Ivy Mill/Site 9FU228 was determined eligible for listing under Criteria A, B, C, and D in Section 106 consultation for a FHWA project by the SHPO on June 12, 1992. Additional archaeological investigations in 1997, 2004, and 2016 expanded the site boundary to include additional features north of Riverside Road, including a large portion of the mill race, building foundations, and an earthen and stone dam. A CLI was completed through coordination with NPS to accurately inventory, map, and assess all features associated with the Ivy Mill site/9FU228, to support its long-term preservation (see also Chapter 4 below).

Ivy Mill/Site 9FU228 possesses state-level significance for its association with the Civil War and establishment of industry in Roswell (Criterion A). It is associated with the Roswell King family, the first founders of the community of Roswell (Criterion B). The building ruins and engineered landscape embody distinctive characteristics of a period of construction as a mid-19th to early 20th century mill complex that utilized waterpower (Criterion C). Because the site has intact features and

buried intact archaeological deposits, it has the potential for yielding significant archaeological information on mid-19th to early 20th century industry (Criterion D).

Railroad Bed/Site 9FU6

Railroad Bed/Site 9FU6 is located along a narrow ridge along the side slope of the western Big Creek valley. The site is a reported Woodland period village site and historic railway bed. However, background research suggests that the precontact site is located southwest of the railroad bed, on the west side of SR 9 (discontinuous with the railroad and outside of the APE). The railroad bed is oriented southeast to northwest and is approximately 255 meters in length. The railroad bed is currently utilized as a pedestrian trail and has been cleared of vegetation. Portions of the stone retaining wall below the railbed remain intact and the railroad likely retains important data associated with the earliest commercial enterprises of the City of Roswell. Site 9FU6 was recommended eligible for the NRHP under Criterion D (see Chapter 4)

PI 0009640- The Expanded Roswell Historic District including Ivy Mill/Site 9FU228 is located adjacent to SR 9 on the north side of the Chattahoochee River, within the VCU. No additional cultural resources were identified within the project's APE.⁵²

VCU Access Improvements- The Expanded Roswell Historic District including Allenbrook House/Site 9FU286, Ivy Mill/Site 9FU228 and Railroad Bed/Site 9FU6, and one (1) additional archaeological site (Lover's Leap/Site 9FU108) are located within the VCU of the CRNRA and the APE of the Access Improvements project. Additional resources identified within NPS jurisdiction but outside of the proposed project APE include Lover's Leap II/Site 9FU109 and Site 9FU784.

Lover's Leap/Site 9FU108

Site 9FU108 is multicomponent, precontact period rock shelter located above the south bank of Big Creek. The site consists of a large, stepped granite schist overhang containing Archaic to Protohistoric components, as well as several smaller adjoining shelters. The site was recorded as an occupation zone with lithic tools, work stage debitage, charcoal, cord marked ceramics, and faunal material. The site was evaluated for listing in the NRHP and recommended eligible under Criterion D in the VCU Access Improvements Assessment of Effects (AOE) report.⁵³ The site possesses a state level of significance for its association with Early to Middle Woodland through

⁵² GDOT PI 0009640- Environmental Assessment, dated May 27, 2020; Finding of No Significant Impact, dated May 5, 2021.

⁵³ Note, the VCU Access Improvements are referenced in the Cultural Resources documentation as Mitigation Trails. The activities associated with the Preferred Alternative are consistent, with only the naming convention changed. Therefore, in this document, Mitigation Trails are the VCU Access Improvements.

Early Mississippian period rock shelters. The NRHP-eligible boundary of the property corresponds to the known current site boundary and contains approximately 0.026 ac. In a letter dated March 6, 2023, SHPO recommended the site eligibility as unknown.

Impacts of the No Action Alternative

Under the No Action Alternative historic and archaeological resources would not be directly impacted. However, this project provides mitigation for GDOT roadway projects PI 721010- and 0009640, and if there is no transportation infrastructure action, then the VCU Access Improvements project which serves as mitigation for these projects would not be implemented. Without removal and reconstruction of the parking lot at Allenbrook House, the park would not implement the recommendations for smooth-surface access that would support handicapped visitors access to the building as put forth in the Allenbrook Historic Structure Report (2004).⁵⁴ Without project implementation there would be no trail connectivity between the Roswell Riverwalk and Riverside Road that connects northward into the NPS trail system as outlined in the CRNRA CTMP.⁵⁵ Without the PI 721010- Historic Roswell Gateway project, impacts to Ivy Mill would not occur. Therefore, under the No Action Alternative, there would be no direct impact to cultural resources within NPS jurisdiction. Although cultural resources are located in close proximity to human activity in this urban setting, indirect effects may have limited potential to occur as Allenbrook and Ivy Mill are already recognized cultural resources and accessible if people were interested to learn more.

Impacts of the Preferred Alternative

PI 721010- Project implementation would result in a finding of adverse effect to Expanded Roswell Historic District, including Ivy Mill/Site 9FU228.⁵⁶ While project implementation would result in the removal of archaeological data associated with Ivy Mill/Site 9FU228, with the implementation of mitigation measures as described in the Memorandum of Agreement (MOA), the impacts on the Expanded Roswell Historic District and Ivy Mill/Site 9FU228 would be minor.

PI 0009640- Project implementation would result in a finding of no adverse effect to the Expanded Roswell Historic District, including Ivy Mill/Site 9FU228.⁵⁷ Since project activities are limited to the existing ROW along SR 9, the impacts to the aforementioned resources would be minor.

⁵⁴ <https://www.nps.gov/places/allenbrook-house.htm> , page 76 (accessed 6/23/24)

⁵⁵ 2022 NPS CRNRA CTMP

⁵⁶ GDOT PI 721010- Environmental Assessment, dated July 31, 2024.

⁵⁷ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020; Finding of No Significant Impact, dated May 5, 2021.

VCU Access Improvements- A summary of impacts under the Preferred Alternative is provided below.

Expanded Roswell Historic District

A finding of No Adverse Effect was recommended for the Expanded Roswell Historic District, provided that the stipulations outlined in the AOE are met. Allenbrook House/Site 9FU286, Ivy Mill/Site 9FU228, and Railroad Bed/Site 9FU6 are considered contributing resources to the Expanded Roswell Historic District. Construction activities within this historic district include the construction of proposed new trails and the rehabilitation of specific existing trails. The new trails would primarily consist of 3-foot-wide natural surface trails with wooden stairs and 3- to 5-foot-wide boardwalks to protect sensitive areas. Minor grading and tree removal (trees 12 in. or smaller Diameter at Breast Height (DBH) is anticipated because of trail construction. A prefabricated truss pedestrian bridge would be constructed over Big Creek, connecting the Sewer Easement Trail to the existing trails across Big Creek (outside of the Expanded Roswell Historic District). Access for construction of the bridge would require additional coordination with the contractor later in project planning; several conditions are proposed for this consultation to maintain a finding of no adverse effect (see Proposed Conditions for No Adverse Effect in AOE). Ground disturbance is anticipated for the Preferred Alternative however only 0.9 acre would be required from within areas of contributing resources. Effects to contributing features associated with those resources are not anticipated by the physical construction of the project. Effects to the physical features within the property's setting that contribute to its historic significance, visual and indirect effects were also considered. A finding of No Adverse Effect was concurred with by SHPO on March 6, 2023. While there would be physical destruction, including construction of new trails and a parking lot, tree removal, and temporary access requirements for the truss bridge within the Expanded Roswell Historic District, with the implementation of the Proposed Conditions for No Adverse Effect, the overall impacts would be minor.

Lover's Leap/Site 9FU108

A finding of No Adverse Effect was recommended for Lover's Leap/Site 9FU108. Due to its distance from the project area, physical destruction to all or part of the property would not occur. In addition, project implementation would not result in a change in the character of the physical features within the site's setting that contributes to its historic significance, nor would it result in the introduction of visual elements that diminish the integrity of the property's significant historic features. Indirect effects are not anticipated, though the proposed project has the potential to alter existing access to the site, it would not be considered adverse. A finding of No Adverse Effect was concurred with by

SHPO on March 6, 2023. Due to the distance of the proposed project activities from the site, the impacts would be minor.

Summary- Previous impacts to Ivy Mill, Allenbrook, and Expanded Roswell Historic District have occurred with suburban and previous roadway development pressures. Direct impacts from GDOT PI 721010- and GDOT PI 0009640 include physical impacts to contributing resources to the Expanded Roswell Historic District. Potential indirect effects of the proposed project would be limited to encroachment-alteration effects of lands immediately adjacent to the project impacts due to the proximity of cultural resources within a setting accessible to human disturbance.⁵⁸ Development pressures on NRHP eligible and listed resources may occur outside the NPS boundary as noted under the Land Use section above; however, given their location within the City of Roswell, these resources are subject to the Historic District Master Plan and Regulating Plan Map with a preservation-focused master plan for the historic district and a commitment to preserving local identity.⁵⁹ The City of Roswell is committed to creating a trail system throughout the Historic District that connects different areas to each other and to the CRNRA. The proposed projects are consistent with and build upon the existing trails and historic district master planning to benefit and provide consistency with local vision. Based on the above, the combination of past cultural resources impacts, cultural resources mitigation, and lack of foreseeable future land use changes, there would be minor long-term adverse impacts to cultural resources resulting from the Preferred Alternative.

Mitigation Measures and Best Management Practices

PI 721010- In the area of Ivy Mill/Site 9FU228, avoidance and minimization measures for the project included an alignment shift, a design variance to reduce the footprint of the proposed bridge over Big Creek, and the installation of a retaining wall for slope reduction. In addition, a Secretary of Interior (SOI) qualified archaeologist would conduct monitoring during ground-disturbing activities within the site boundary (Appendix C). Minimization measures were also included for Allenbrook House/Site 9FU286. In this area, design shifted the proposed alignment as southerly as possible and eliminated a retaining wall to limit encroachment into VCU and preserve the vegetative screen along SR 9. In addition, a CLI was completed in partnership with NPS to document and map contributing features at Ivy Mill/Site 9FU228 (Appendix C). Allenbrook House/Site 9FU286 was included in this effort because of its association with Ivy Mill (Appendix C). Under Section 106 of the NHPA, to mitigate the adverse effect to archaeological deposits at Ivy Mill/Site 9FU228, Phase III data recovery would be conducted on the portions of the site that would be impacted (Appendix C).

⁵⁸ <https://environment.transportation.org/wp-content/uploads/2021/05/ph12-2.pdf>

⁶⁰ 2006 NPS Management Policies

The data recovery would include a public involvement/outreach component (Appendix C). The sites would be designated as Environmentally Sensitive Areas with OBF on design plans (Appendix C).

PI 0009640- The proposed project was intentionally designed within existing ROW to avoid impacts to Ivy Mill/Site 9FU228. OBF would be placed along the site boundary to further protect the site from inadvertent damage (Appendix C).

VCU Access Improvements- Through design and coordination, the proposed project has avoided effects to Site 9FU784 by shifting the alignment of the proposed new trail north (Railroad Bed area, Map Unit 8, Area B) away from the cultural resource boundary, and OBF was added along the limits of construction to prevent inadvertent damage to the site. In the area of Lover's Leap/Site 9FU108, project activities associated with a new connecting trail from the proposed parking lot near Allenbrook House to the site were removed from the Preferred Alternative; thereby discouraging access to this sensitive cultural resource as well as this steep terrain that benefits the safety of visitors. Near Allenbrook House, multiple design measures have been taken to reduce the visibility of improvements (including needed safety improvements for emergency vehicle access) and to ensure sensitivity to the historic setting. The measures include locating the new proposed parking lot deeper within the CRNRA, down a slope into a lower lying area, to create a buffer between the lot and Allenbrook House. Proposed retaining walls within the parking lot are designed to be as minimal as possible and would feature a stacked Tennessee fieldstone veneer. An open water detention pond was removed from the design and an underground stormwater infiltration system was added, reducing visual impacts to the landscape. The placement of OBF along the limits of construction and in other areas, such as around Allenbrook House and Site 9FU286, was designed to prevent damage to structures (Allenbrook House and standing ruins associated with Ivy Mill) and vegetation, as well as prevent access to archaeological sites.

In the area of the Ivy Mill standing ruins to the south of Riverside Road, the proposed trail would be on boardwalk. The boardwalk would manage visitor circulation, discouraging visitors from leaving the trail and exploring the ruins, through use of railings in designated areas. This would balance visitors' ability to learn about the cultural resource but with access management to protect the resource. In addition, the proposed boardwalk would provide consistency with the existing boardwalk trails (as well as limiting fill within the resource and floodplain with helical piles).

The pedestrian bridge over Big Creek was also designed to minimize its visual and physical effect on the landscape within the Expanded Roswell Historic District. The bridge is proposed to be dark brown (weathered steel), including wooden decking for flooring instead of concrete, and the bridge foundations would also feature dark brown tinted concrete to blend the infrastructure into the

landscape (Appendix C). To minimize construction impacts, the prefabricated version was selected so that multiple pieces could be assembled at Big Creek, allowing for smaller-sized construction equipment to be used to reduce the total area required for clearing vegetation. The location of the crossing was selected to align with an existing modern intrusion in the park which is the sewer line; thereby, aligning infrastructure in the same general area and avoiding modern intrusions in previously undisturbed areas of the park. The location would also tie into existing trails on the north side of the park and allow the visitor another option to connect to trails on the east side of Big Creek.

Conclusion

The Preferred Alternative associated with the GDOT PI 721010- Historic Roswell Gateway, the GDOT 0009640 Pedestrian Bridge and VCU Access Improvements would result in both temporary and permanent direct adverse impacts to cultural resources. Within the boundary of Ivy Mill/Site 9FU228, the proposed PI 721010- project would require ROW and permanent easement for widening and bridge construction over Big Creek (Table 4).

Table 4: Summary of Effects to Cultural Resources Under Preferred Alternative

Project	Resource	NHPA Effect Finding
PI 721010- (Historic Roswell Gateway)	<i>Expanded Roswell Historic District</i>	Adverse Effect
	Ivy Mill/ Site 9FU228	
PI 0009640 (SR 9 Pedestrian Bridge)	<i>Expanded Roswell Historic District</i>	No Adverse Effect
	Ivy Mill/ Site 9FU228	
VCU Access Improvements	<i>Expanded Roswell Historic District</i>	No Adverse Effect
	Allenbrook/ Site 9FU286	
	Ivy Mill/ Site 9FU228	
	Railroad Bed/ Site 9FU6	
	<i>Lover's Leap/ Site 9FU108 (CHAT0019)</i>	No Adverse Effect

Note: Ivy Mill/Site 9FU228, Allenbrook/Site 9FU286, and Railroad Bed/Site 9FU6 are considered contributing resources to the larger Expanded Roswell Historic District.

These adverse effects would be mitigated through Phase III data recovery as outlined in a MOA with the SHPO on portions of the site that would be impacted by the proposed transportation project. There would be no adverse effects to cultural resources due to project implementation of PI 0009640. Construction of the VCU Access Improvements would result in a finding of No Adverse Effect to the Expanded Roswell Historic District and Lover's Leap/Site 9FU108, provided that the proposed conditions described in the AOE are met during construction. These commitments include

coordination with the contractor on access routes for construction equipment and its staging, particularly near areas of contributing features related to archaeological sites.

Vegetation

The *NPS Management Policies 2006*⁶⁰ requires protection of park resources, including vegetation, to protect parks' scenery, natural and historic objects, and the processes and conditions that sustain them. Vegetation within the CRNRA is diverse, and the park contains the largest areas of native vegetation in the Atlanta area.

Existing Conditions

Current trends include threats to vegetation in the CRNRA such as the spread of invasive nonnative plants, trampling from visitor-created social trails (which tend to disturb native vegetation and contribute to erosion), increased development including infrastructure expansion, and trail widening as a result of trail users seeking to avoid muddy or flooded trail segments, all of which contribute to long-term adverse trends in vegetation within the park. Additionally, unauthorized biking, infrastructure expansion, and forest pests further impact native vegetation. Adverse impacts to vegetation within the CRNRA would be mitigated through implementation of NPS' 2013 resource stewardship strategy in addition to mitigation measures outlined in the 2022 CRNRA CTMP. Within the area for the Preferred Alternative, the potential vegetation includes species as found in Table 5; however, not all of the species are found within the VCU.

PI 721010-⁶¹ The majority of the vegetation within the project area consists of mowed and maintained grass lawns and upland hardwood pine forest. No federally protected vegetation species have been documented within the environmental survey boundary according to the Information for Planning and Consultation (IPaC) species list from the United States Fish and Wildlife Service (USFWS).

PI 0009640⁶²- Plant species represented on the project are the same as those listed under Table 5 due to proximity of the projects. No federally protected vegetation species are documented within the survey boundary according the IPaC for USFWS species list within this project area.

VCU Access Improvements- No state or federal species or critical habitat would be impacted by the proposed project.

⁶⁰ 2006 NPS Management Policies

⁶¹ GDOT PI 721010- Environmental Assessment, dated July 31, 2024.

⁶² GDOT PI 0009640- Environmental Assessment, dated May 27, 2020; Finding of No Significant Impact, dated May 5, 2021.

Table 5: Vegetation Potentially Occurring within the Preferred Alternative

Canopy Tree Stratum ¹	Mid/Understory Vegetation	Herbaceous Vegetation	Nonnative Invasive Species
green ash (<i>Fraxinus pennsylvanica</i>), box elder (<i>Acer negundo</i>), red maple (<i>Acer rubrum</i>), river birch (<i>Betula nigra</i>), sycamore (<i>Platanus occidentalis</i>), water oak (<i>Quercus nigra</i>), willow oak (<i>Quercus phellos</i>), iron wood (<i>Carpinus caroliniana</i>), black walnut (<i>Juglans nigra</i>), black willow (<i>Salix nigra</i>), sugarberry (<i>Celtis laevigata</i>) sweetgum (<i>Liquidambar styraciflua</i>), Basswood (<i>Tilia heretophylla</i>),	elderberry (<i>Sambucus canadensis</i>), Carolina laurel cherry (<i>Prunus caroliniana</i>), red mulberry (<i>Morus rubra</i>) pink ladyslipper (<i>Cypripedium acaule</i>)*, bay star-vine (<i>Schisandra glabra</i>)*, Georgia aster (<i>Symphyotrichum georgianum</i>)*, tulip tree saplings, (<i>Liriodendron tulipifera</i>) false nettle (<i>Boehmeria cylindrica</i>), trumpet creeper (<i>Campsis radicans</i>), poison ivy (<i>Toxicodendron radicans</i>) American hornbeam (<i>Carpinus caroliniana</i>) Chinese privet (<i>Ligustrum sinense</i>) Rubus species, dwarf sumac/Michaux's sumac (<i>Rhus michauxii</i>) *(F)	arrowleaf tearthumb (<i>Polygonum sagittatum</i>), swamp smartweed (<i>Polygonum hydropiperoides</i>), woolly rosette grass (<i>Dichanthelium scabriusculum</i>), Virginia wild rye (<i>Elymus virginicus</i>), calico aster (<i>Symphyotrichum lateriflorum</i>), greater bladder sedge (<i>Carex intumescens</i>), three-way sedge (<i>Dulichium arundinaceum</i>), hairy leafcup (<i>Smallanthus uvedalius</i>), pokeweed (<i>Phytolacca americana</i>), jewelweed (<i>Impatiens capensis</i>), common boneset (<i>Eupatorium perfoliatum</i>), soft rush (<i>Juncus effusus</i>), river oats (<i>Chasmanthium latifolium</i>), greenbrier (<i>Smilax rotundifolia</i>), Virginia creeper (<i>Parthenocissus quinquefolia</i>), sensitive fern (<i>Onoclea sensibilis</i>), Muscadine (<i>Vitis rotundifolia</i>), white fringeless orchid/ monkeyface orchid (<i>Platanthera integrilabia</i>) *(F), pool sprite/snorkelwort (<i>Gratiola amphiantha</i>) *(F), black-spored quillwort (<i>Isoetes melanospora</i>) *(F)	Chinese privet (<i>Ligustrum sinense</i>), Japanese honeysuckle (<i>Lonicera japonica</i>), kudzu (<i>Pueraria montana</i>), English ivy (<i>Hedera helix</i>), Japanese stilt grass (<i>Microstegium vimineum</i>) leatherleaf mahonia (<i>Mahonia bealei</i>) mimosa (<i>Albizia julibrissin</i>) thorny olive (<i>Elaeagnus pungens</i>) multiflora rose (<i>Rosa multiflora</i>) Chinese holly (<i>Ilex cornuta</i>), Chinese wisteria (<i>Wisteria sinensis</i>), monkey grass (<i>Liriope muscari</i>) marsh dayflower (<i>Murdannia keisak</i>)

¹ The canopy stratum consists of 25- to 80-year-old trees. The understory consists of saplings of the canopy species. The herbaceous vegetation is fairly dense, especially in sunny locations. In addition to the native vegetation, there are also a number of nonnative invasive species.

*(S) According to GNAHRGIS Ecology module, two (2) occurrences of state protected pink ladyslipper, three (3) occurrences of state protected bay star-vine, and three (3) occurrences of state protected of Georgia aster were identified within 3 miles of the project area. There were no records of these species occurring within the area of the VCU Access Improvements based on the GNAHRGIS letter. Field surveys were conducted in the areas of suitable habitat for the VCU Access Improvements, and no element occurrences were identified.

*(F) Federally listed species potentially occurring within the project area include the endangered dwarf sumac (Michaux's sumac), threatened white fringeless orchid, black-spored quillwort and pool sprite; no potential suitable habitat or individuals were documented within the survey area where new trails would be constructed or restored according to the IPaC species list from the USFWS. There are no critical habitats within the environmental survey area; therefore, no critical habitat for protected species would be impacted under the Preferred Alternative.

Impacts of the No Action Alternative

Under the No Action Alternative, there would continue to be a maintenance regime within the park's designated trail system. Visitors would continue to use existing/create social trails resulting in vegetation trampling and contributing to drainage issues resulting in erosion that degrades and channelizes areas near these social trails.⁶³ The parking area at Riverside Road would continue to experience usage in undesignated areas, compacting soils, pooling water along the driveway, and limiting the potential for vegetation to regrow in these areas making it subject to increased velocities of water runoff and potential for increasing sedimentation in Big Creek. Therefore, the No Action Alternative would also result in an adverse long-term effect on vegetation.

Impacts of the Preferred Alternative

PI 721010- Construction would require approximately 2.59 acres of easement from within the boundary of the CRNRA including both landscaped and wooded areas.

PI 0009640- The project would require approximately 0.18 acre of temporary construction easement, and 0.02 acre of additional right-of-way for construction which would impact landscaped and vegetated areas from residential property on the south side of the river and avoid land-side impacts to VCU CRNRA. The proposed project would have no effect on the federally protected shinyrayed pocketbook or dwarf sumac (Michaux's sumac).

VCU Access Improvements- Clearing of 0.46 acre would be required for the proposed new Allenbrook parking lot, emergency vehicle access, and new water quality detention infiltration structure (Table 2 above), resulting in the removal of 93 trees ranging from 4 to 48 inches DBH as outlined in Table 6 below. Proposed bridge construction at Big Creek would result in 0.12 acre of impacts to vegetated areas. The Preferred Alternative would have no effect on the following federally listed species including: dwarf sumac (Michaux's sumac); white fringeless orchid/monkeyface orchid; black-spored quillwort; and pool sprite/snorkelwort.

Summary- As noted under Land Use above, direct impacts under the Preferred Alternative would result in conversion of 3.3 acres of vegetation to transportation use and trails (Table 3). Indirect

⁶³ Per the 2022 CRNRA CTMP (page 63), vegetation trampling activities could lead to long-term adverse indirect effects to vegetation within the VCU of CRNRA, including changes in species composition, biomass, and spread of nonnative plants along linear trail corridors. One example includes the impact to the vegetated banks and buffer of PS 2 (Big Creek) that would continue to occur with visitors crossing at the sewer line on the existing social trail in this location. Trampling vegetation resulting from human disturbance has the potential to increase sedimentation in the stream adversely impacting aquatic and buffer vegetation that supports the bank stability and regrowth along the stream banks.

Table 6: Tree Removal Impacts

Tree Size (Inches of DBH)	Number¹ of Trees - Allenbrook Parking Lot	Number¹ of Trees- New Trails East of SR 9	Number¹ of Trees- New Trails Between SR 9 and Big Creek, north of the new Riverside Connector	Number¹ of Trees- New Trails South of Riverside Connector along Proposed Boardwalk	Number¹ of Trees- New Trails East of Riverside Parking Lot	Number¹ of Trees- Sewer Easement
1					1	
3					1	
4	10				5	
5	7				4	
6	12				1	1
7	3					
8	6	1	2		1	1
10	11			1		
12	11	1		2	2	1
15	4					
18	11		1	3	1	
20			1			
24	9					
30	4					
36	4					
48	1					
Total	93	2	4	6	15	3

¹ Estimated number of trees to be impacted under proposed alternative.

*DBH- diameter at breast height

vegetation impacts are limited to encroachment-alteration effects of lands immediately adjacent to the project impacts. The proposed vegetation clearing would be mitigated by the removal of 0.5 acre of parking lot pavement to be seeded with native vegetation, which is considered a minor adverse impact when related to the approximately 5,500-acre CRNRA. Based on the combination of past vegetation impacts that introduced farming and natural ecological succession, mitigation, and lack of foreseeable future land use changes, there would be minor long-term adverse vegetation impacts from the Preferred Alternative.

Mitigation Measures and Best Management Practices

Within NPS-managed lands to be converted to transportation use, roadside vegetation would be preserved beyond the limits of construction wherever possible with OBF to minimize impacts. Reseeding areas adjacent to roadways would be conducted in accordance with GDOT Standard Specification Section 700–Grassing (Appendix C). This GDOT Standard Specification provides lists

of native grasses that can be used for reseeding. Any disturbed areas within NPS-managed lands under the Preferred Alternative would be restored with native vegetation in accordance with NPS “Native Seed and Plant Sources.” Native seeds would be used for temporary stabilization and erosion control. Revegetation depends on site specific conditions, but can take anywhere from one to three years for initial establishment and five to ten years for a stable plant community.⁶⁴

The 0.46 acre of vegetation impact due to the construction of the new parking lot, emergency vehicle access, and water quality infiltration system would be offset by restoration of the 0.5 acre of two (2) existing parking lots that would be seeded with native vegetation upon construction completion. Adaptive management may require the use of herbicides to control the spread and infestations of nonnative vegetation.⁶⁵ Avoidance of tree and vegetation clearing (specifically avoiding the removal of mature trees) was a key element in choosing the Preferred Alternative. Originally, the path was planned to be four (4) to five (5) feet wide, but NPS requested a maximum width of three (3) feet to minimize impacts.

Construction impacts for the proposed pedestrian bridge at Big Creek would be minimized by using a clear span prefabricated metal-truss bridge, which reduces the construction limits required to assemble the bridge and avoids additional tree impacts. This bridge can be broken into multiple smaller segments and reassembled at Big Creek. This allows for smaller construction equipment to be used and minimizes the access route disturbances on the natural and cultural resources.

Conclusion

The Preferred Alternative, including the implementation of mitigation measures, would have “no effect” on federally protected dwarf sumac (Michaux’ sumac) or white fringeless orchid/monkeyface orchid. The Preferred Alternative would result in both temporary and permanent direct impacts on woody vegetation. Approximately 93 trees would be removed due to the new parking, emergency vehicle access and water quality infiltration system at Allenbrook with an additional approximately 30 trees to be removed for new trails and rehabilitated trails (Table 6). In addition to the 3.3 acres of

⁶⁴ [Revegetation - Transportation \(U.S. National Park Service\),
https://www.nps.gov/subjects/transportation/revegetation.htm](https://www.nps.gov/subjects/transportation/revegetation.htm) (accessed 2/12/25)

⁶⁵ 2022 NPS CRNRA CTMP, page 24. The actions would include the use of hand tools or mechanized equipment to remove the vegetation and may include the use of NPS-approved herbicide to control a population and prevent the establishment and spread of the species (see also Appendix A). Only a Georgia-certified pesticide applicator would apply herbicide under appropriate environmental conditions and meeting the NPS Integrated Pest Management standards. The herbicide used would vary depending on the target species and would be appropriate for the environmental conditions (e.g., certified aquatic safe when working in wetlands) and stream buffers. Staff would monitor and control nonnative invasive species in disturbed areas created by new trail construction, areas with new amenities for trails (i.e., parking lots), and areas of trail restoration and would utilize early detection and rapid response to remove new occurrences of nonnative species.

permanent land use impacts (Table 3), 0.4 acre of temporary impacts to vegetation would occur along the proposed new trails that would be restored to pre-construction conditions using native vegetation upon construction completion.

Trail alignments were evaluated to reduce potential removal of mature trees and minimize adverse effects to established overstory habitats within the VCU. The decommissioned trails, parking lots, and entrance would be seeded with native vegetation to naturally regenerate these areas. Removal of multiple existing impervious surfaces (parking lots and entrance) to consolidate parking into one area of impact within the CRNRA VCU would be a long-term beneficial effect on vegetation. Impacts on vegetation would occur from the proposed project; however, the overall impacts of these projects would be mitigated due to the re-establishment of native vegetation at the end of construction and within decommissioned facilities. The Preferred Alternative would have a long-term adverse effect on vegetation that would be removed for new construction, and a short-term adverse effect on shrubs and herbaceous vegetation.

Wildlife and Critical Habitat

In compliance with the Endangered Species Act (ESA) of 1973, the lead federal agency must identify the presence of proposed (P) or listed threatened (T) and endangered (E) species and proposed or designated Critical Habitat, as well as evaluate impacts to these resources. Species that are candidates (C) for listing under the ESA are also considered. The following sources were used to compile a list of protected species potentially occurring within the project vicinity: GNAHRGIS, IPaC website and USFWS Hydrologic Unit Code (HUC) 10 Watershed Reports⁶⁶ and the CTMP.

NPS Management Policies 2006 states the NPS will survey for, protect, and strive to recover all species native to national park system units that are listed under the ESA. The NPS is mandated to inventory, monitor, and manage state and locally listed species in a manner similar to its treatment of federally listed species to the greatest extent possible. DO 41: Wildlife Protection⁶⁷ outlines the NPS's approach to wildlife management, including protection, research, and public education.

The Georgia Endangered Wildlife Act prohibits the capture, killing, or selling of protected species and protects the habitat of these species on public lands and provides for designation of and

⁶⁶ Agency coordination on file.

⁶⁷ Director's Order #41. NPS policy focuses on maintaining healthy wildlife populations and habitats while balancing visitor experiences.

protection of plant species that are rare, unusual, or in danger of extinction. State protected species with occurrences within three (3) miles of the project or within the HUC 10 watershed are considered.

All bats are protected under Georgia state law (Official Code of Georgia § 27-1-28), and some species have additional protections under the federal ESA of 1973. Bridges and culverts are often potential bat roosting locations and forested areas can serve as roosting and foraging habitats for bat species. Signs of bat roosts include visual, audible and olfactory identification, presence of guano, or staining from guano or body oils. On September 13, 2022, the USFWS issued a proposed rule to list the tri-colored bat (*Perimyotis subflavus*) as endangered under protections of the ESA. Formal protections under the ESA are not legally mandated until the effective date announced in the final, published rule (generally 30 days after publication of the final rule in the Federal Register). Upon the effective date of the final listing rule, prohibitions against jeopardizing its continued existence and “take” would apply.

Existing Conditions

Trends for wildlife and critical habitat include the primary threat of habitat fragmentation caused by development, trails, and human encroachment, which reduces biodiversity and alters habitat conditions. Additional threats include biking disturbances and plant disease affecting the habitats that wildlife occupy. A summary of wildlife potentially occurring in the VCU is outlined in Table 7.

Table 7: Wildlife Potentially Occurring in Vickery Creek Unit

Mammals	Birds	Herptiles
white-tailed deer (<i>Odocoileus virginianus</i>) coyotes (<i>Canis latrans</i>) common gray fox (<i>Urocyon cinereoargenteus</i>) red fox (<i>Vulpes vulpes</i>) common raccoon (<i>Procyon lotor</i>) rabbits (<i>Sylvilagus</i> spp.) chipmunks (<i>Tamias striatus</i>) beavers (<i>Castor canadensis</i>) tri-colored bat (<i>Perimyotis subflavus</i>) several species of bats* ⁶⁸	barn swallow (<i>Hirundo rustica</i>) ** eastern phoebe (<i>Sayornis phoebe</i>)** songbirds raptors waterfowl shorebirds	turtles snakes lizards frogs salamanders

* Inspections of bridges and culverts for evidence of roosting bats were conducted within the project corridor on 11/3/2014 and 10/23/2020. While roosting structures were identified, no roosting bats were present during the surveys, and no evidence of bat roosting was observed within the survey area. Suitable roosting and foraging habitat was also identified in the mixed pine-hardwood forest areas within and adjacent to the project corridor.

** Existing bridges within the project corridor were inspected for evidence of nesting migratory birds in 2012, 2014, and 2020. Evidence of nesting migratory birds, including barn swallow and eastern phoebe was observed on Riverside Road bridge over Perennial Stream (PS) 2 (Big Creek) in the 2012 and 2014 surveys, but no evidence of nesting migratory birds was observed during the 2020 survey.⁶⁹

⁶⁸ CRNRA, Final General Management Plan/Environmental Impact Statement (2009).

⁶⁹ GDOT PI 721010- Environmental Assessment, dated July 31, 2024.

PI 721010- No federal or state protected species have been recorded within the survey area by the USFWS or the Georgia Department of Natural Resources (GADNR), and no protected species were identified during the field surveys in 2012, 2014, 2017, and 2020. There is no critical habitat within the project area. The maintained grass, forest communities, upland hardwood/pine, bottomland hardwood, and shrub community communities adjacent to the proposed project corridor are somewhat less disturbed than surrounding forest habitats, providing some potentially suitable foraging and nesting habitat for wildlife species. However, these habitats adjacent to the project area are subject to encroachment effects (e.g., fragmentation) from the existing roadway and bridges. Other wildlife species are likely to occur adjacent to the project corridor within the CRNRA, but no wildlife species were observed during field surveys. Existing noise levels are under the Noise Abatement Criteria (NAC) of 67 dBA for the CRNRA.⁷⁰ Streetlights are adjacent to the CRNRA along SR 9 and Riverside Road (see Appendix A).

PI 0009640- No federal or state protected species have been recorded within the survey area by the USFWS or the GADNR, and no protected species were identified during the field surveys. There is no critical habitat within the project area. Other wildlife species may occur within the CRNRA, but no wildlife species were observed during field surveys. Common mammals, birds, and herptiles that have potential to occur in the VCU area are listed in Table 7.⁷¹ No temporary isolated pools important for amphibian species are located within or immediately adjacent to the proposed impact areas. Portions of the wetland located adjacent to SR 9 are considered highly disturbed with low potential for suitable habitat for wildlife species due to compacted soils and infestations of invasive species that reduce the biotic functions and wildlife value.

VCU Access Improvements- The GNAHRGIS Ecology module, CRNRA CTMP (2022), and USFWS IPaC were used to compile a list of protected species potentially occurring within the VCU Access Improvements survey area. The following federally protected species were identified as potentially occurring within the project area are identified in Table 8 below.

⁷⁰ GDOT PI 721010- Environmental Assessment, dated July 31, 2024. page 74.

⁷¹ 2022 NPS CRNRA CTMP

Table 8: Protected Species Potentially Occurring in the Vickery Creek Unit*

Species (Latin name)	Federal (F) / State (S) Protected
monarch butterfly (<i>Danaus plexippus</i>)	F
tri-colored bat (<i>Perimyotis subflavus</i>)	F ¹
Gulf moccasinshell (<i>Medionidus penicillatus</i>)	F
black-spored quillwort (<i>Isoetes melanospora</i>)	F
Etowah darter (<i>Etheostoma etowahae</i>)	F
shinyrayed pocketbook (<i>Hamiota subangulata</i>)	F
Chattahoochee crayfish (<i>Cambarus howardi</i>)	S (within 3 miles)
bluestripe shiner (<i>Cyprinella callitaenia</i>)	S (within 3 miles)
highscale shiner (<i>Notropis hypsilepis</i>)	S (within 3 miles)
delicate spike (<i>Elliptio arcata</i>)	S (within 3 miles)
bald eagle (<i>Haliaeetus leucocephalus</i>)	S (within 3 miles)

*White fringeless orchid, dwarf sumac (Michaux' sumac), black-spored quillwort, and pool sprite/snorkelwort, pink ladyslipper, Georgia aster, and bay star-vine are discussed under Vegetation section above. There is no critical habitat for federally protected species within the proposed project area based on GNAHRGIS and IPaC. ¹ Tri-colored bat is not federally listed as 'endangered' or 'threatened' as of this writing; however, coordination with USFWS is underway and considerations for addressing the species are outlined in the *Impacts of the Action Alternative* section.

Wetlands and streams provide habitat for aquatic species for anglers within the CRNRA, such as shoal bass (*Micropterus cataractae*). Although no species were observed within the NPS wetlands or forested habitats during field surveys, shoal bass has been documented as present in Big Creek.⁷²

Impacts of the No Action Alternative

Under the No Action Alternative wildlife would remain the same as the existing condition. No temporary construction impacts would occur, no erosion control or water quality BMPs would be needed, and no temporary disturbances to wildlife would occur. However, continued use of the social trails could adversely affect wildlife as the fall-aligned trails could displace wildlife through human physical activity and introduce nonnative vegetation, resulting in increased habitat fragmentation and destabilized and eroded areas intended for wildlife. Therefore, the No Action Alternative would result in an adverse indirect effect to wildlife habitat.

For the VCU Access Improvements, no new noise generation would occur with the existing pedestrian trails that would affect wildlife. Under the No Action Alternative, traffic generated noise such as stop and go traffic, tires, and horns would continue. Under the No Action Alternative, the predicted noise levels within habitats adjacent to the roadway corridors would be under the NAC of 67 dBA for the CRNRA park in 2051, which is not considered adverse as they do not approach the NAC for parks.⁷³ Riverside Road and Allenbrook parking lots would generate noise as under the

⁷² NPS, Taylor and Long, 2018

⁷³ GDOT PI 721010- Environmental Assessment, dated July 31, 2024, page 74.

existing condition since they would remain open. Under the No Action Alternative, there would be no temporary noise impacts during construction. Therefore, the No Action Alternative would not result in direct or indirect effects on wildlife and habitat due to noise.

The existing street lighting under the No Action Alternative would continue along the SR 9 corridor see Appendix A and the older light fixtures would be less efficient and may have already influenced predator/prey dynamic per NPS studies and adversely affect wildlife.⁷⁴ Therefore, the No Action Alternative would result in continued adverse indirect effects to wildlife due to existing lightscapes.

Impacts of the Preferred Alternative

Federally listed species within the project area include the endangered tricolored bat. There are no critical habitats within the environmental survey area; therefore, no critical habitat would be impacted. The temporary construction access in Big Creek would result in direct impacts to aquatic species. Introducing human activity in areas previously without trails could introduce temporary noise and disruption to some wildlife. The project would have a potential short-term adverse effect on wildlife during construction activities. The Preferred Alternative would contribute to temporary water quality effects within aquatic habitats; however, the contribution of the Preferred Alternative would be minimal due to the limited footprint of proposed increases in impervious surfaces, improvements and stabilization of existing trails to be restored, and grading/site locations of new trails, while being offset by the proposed temporary and permanent erosion and sediment control BMPs.

PI 721010- Construction of the Preferred Alternative would impact approximately 2.59 acres of wooded areas adjacent to the existing roadway corridor, permanently impacting suitable nesting, roosting, and foraging habitat for birds, bats, and other wildlife in these areas and 0.042 acre of aquatic habitat (intermittent stream [IS] 5 and Wetland 2a).⁷⁵ No adverse noise impacts were identified within CRNRA.⁷⁶ Proposed replacement of the vehicular bridge over PS 2 (Big Creek) could potentially adversely disturb nesting migratory birds or roosting bats directly if they were occupying the affected structure. Environmental considerations for the protection of migratory birds and bats are specified in GDOT Special Provision 107.23H (Appendix C), and include but are not limited to, time of year restriction or barriers and preconstruction bridge surveys to check for the presence of migratory birds or roosting bats prior to construction or demolition. The project would be eligible for the 2023 Bat Programmatic Agreement with no tree clearing restrictions for the GDOT

⁷⁴ <https://www.nps.gov/articles/000/grte-outdoor-lighting.htm> (accessed 2/1/25)

⁷⁵ Appendix B, SOF

⁷⁶ GDOT PI 721010- Environmental Assessment, dated July 31, 2024. page 74

contracts; however, the project would pay into the conservation fund for protecting habitats for bats to offset the impacts of tree-clearing (Appendix C).

Under the Preferred Alternative, the predicted build (2051) noise levels are under the NAC of 67 dBA for the CRNRA park, indicating no adverse effect would occur due to traffic generated noise along the adjacent roadways.⁷⁷ Congestion and delays during construction would be temporary, intermittent and short-term, and it is anticipated that construction activities would be carried out on weekends and during off-peak periods to minimize disruption and delays to the traveling public. Construction would occur during daylight hours, eliminating potential noise disturbance during nighttime hours⁷⁸ that would affect nocturnal wildlife. Construction noise control strategies may be implemented, including time constraints (e.g., prohibiting work during sensitive nighttime hours), sequencing of construction activities (performing noisier work during less sensitive time periods), or other appropriate source control methods. Therefore, temporary adverse effects would occur to wildlife in the vicinity of traffic generated noise, but the effects would not be significantly adverse.

The artificial lighting incorporated into the PI 721010- project would be a safety measure to support visibility during dark hours to be implemented after sunset; however, lighting could have adverse effects on nocturnal wildlife. Effects on wildlife can be seen hundreds of meters away from light sources in places there were thought to be undisturbed forests.⁷⁹ One adverse effect is that insects, bats, and migratory birds could mistake bright lights for stars and circle toward them wasting energy.

Indirect effects include temporary, daytime construction activities (approximately 24 months) have the potential to impact adjacent terrestrial and aquatic habitats via soil erosion, contamination from construction equipment (e.g., wash water, petroleum products), and introduction of invasive species. With implementation of contract provisions and minimization measures, no degradation of adjacent habitats during construction is expected (see Mitigation below). Indirect effects on water quality, such as temporary increases in sedimentation during bridge construction, could affect habitat for aquatic species living in stream and NPS wetlands downstream of the project corridor (see Mitigation Measures below). The project would deconstruct the existing bridge over PS 2 (Big Creek), removing four (4) bridge piers from within the Big Creek channel with two (2) piers from the bank, to reduce potential for erosion. The proposed project would construct two (2) new bridges that would clear span the stream, avoiding adverse impacts to stream flows and aquatic species.

⁷⁷ GDOT PI 721010- Environmental Assessment, dated July 31, 2024. page 74

⁷⁸ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020. page 23.

⁷⁹ <https://www.nps.gov/articles/000/grte-outdoor-lighting.htm> (accessed 2/1/25)

PI 0009640- The proposed permanent impacts of the pedestrian bridge project consist of the small footprint needed for the six (6) bridge piles which require 0.002 acre of fill within the Chattahoochee River and 0.001 acre of fill in Wetland 4; therefore, permanent effect to biotic functions would be minimal. Wildlife could also be impacted by temporary noise increases during construction. However, this would be a minor adverse impact and noise levels would decrease following the approximate 24 months to complete construction activities.

VCU Access Improvements- The USFWS coordination letters and responses from April and November 2023 confirmed this project has met the obligations under Section 7 of the ESA of 1973, as amended.⁸⁰ New permanent impacts to wildlife habitat under the Preferred Alternative are outlined in Table 2 above. The Preferred Alternative would have no effect on the following federally listed species including: Gulf moccasinshell; Etowah darter; shinyrayed pocketbook; and Cherokee darter. Based on the scope of the Preferred Alternative and distribution of the monarch butterfly, USFWS determined the project was not likely to jeopardize the continued existence of this species. Suitable habitat for the tri-colored bat occurs throughout the project area and impacts to suitable habitat are unavoidable as tree clearing is required for the proposed project. Seasonal restrictions would be implemented such that no tree clearing would occur during the non-volant pup season from May 1 through July 15 or during the winter hibernation season from December 15 through February 15⁸¹. If tree clearing is completed prior to final listing for tri-colored bat as endangered under Section 7 of the ESA, USFWS would concur with a determination of “not likely to jeopardize” and the informal conference would be complete. However, if tree clearing is completed subsequent to the final listing, USFWS would concur with a “not likely to adversely affect” determination, and consultation would be complete.

Construction and improvements of the 0.69 mile (0.25 acre) of the proposed new mitigation trails would not increase impervious surfaces within the CRNRA as the trails would consist of natural surface native soils requiring limited grading for stabilization; thereby minimizing impacts to terrestrial and aquatic species habitats. Approximately 0.23 acre of existing trails would be decommissioned and allowed to naturalize and regenerate back to wildlife habitat which would be a small long-term indirect benefit of the Preferred Alternative. All trails would avoid direct impacts to wetland habitat.

The Preferred Alternative would deconstruct the existing Riverside Road and Allenbrook parking lots, removing 0.5 acre of impervious surfaces, and would be revegetated with native vegetation to

⁸⁰ Agency coordination is on file.

⁸¹ Appendix C, please note that for the GDOT PI 721010- and 0009640, there are no seasonal tree clearing restrictions.

restore wildlife habitat. Parking would be consolidated into a new parking lot on the north side of Allenbrook House, requiring the removal of 0.46 acre of wildlife habitat for the construction of the new 17-space paved parking lot (with pervious pavement) and entrance road, emergency vehicle access, and underground water quality detention. There would be a net reduction of 0.04 acre of impervious surfaces and impacts to wildlife habitat under the Preferred Alternative. Temporary increases in noise during the approximately 24 months construction may have a minor adverse effect on wildlife. However, following construction, noise levels are expected to return to levels under existing conditions.

Short-term adverse impacts to Big Creek due to the construction of the pedestrian bridge would occur. This temporary work bridge would consist of bottomless culverts required for construction equipment to cross Big Creek and maintain stream flows (Appendix B), resulting in minor short-term impacts on the stream's habitat for aquatic species, such as shoal bass. The proposed bridge would clear span the stream avoiding impacts to aquatic habitat. Stream conditions are expected to return to normal following removal of the temporary work bridge.

The VCU Access Improvements project would have no impacts to state protected species or species of interest to anglers due to construction occurring outside of shoal bass spawning season in April to June (see Mitigation Measures below).

Potential indirect effects of the proposed project would be limited to encroachment-alteration effects of lands immediately adjacent to the project. The potential indirect effect of water quality degradation due to construction activities can result in erosion and sedimentation in the NPS wetlands would have the potential to increase overland flow water volumes and velocities, adversely affecting vegetation and terrestrial habitats while contributing to sedimentation in aquatic wildlife habitats. These potential indirect effects would be mitigated through erosion control measures (Mitigation below, Appendix C).

Summary- Ecological succession introduced different habitat types over the past 100 years resulting in changes in associated wildlife communities.⁸² Proposed activities include temporary construction access in Big Creek, temporary water quality effects, and a potential short-term adverse effect on wildlife during construction activities resulting in disruption to some wildlife. However, the contribution of these projects would be minimal due to the previous ecosystem community changes, limited

⁸² <https://www.treesatlanta.org/news/forest-succession-in-the-urban-forest/#:~:text=Oaks%20and%20other%20hardwoods%20overcome,trees%20form%20a%20mid%2Dstory> (accessed 2/12/25)

footprint of proposed increases in impervious surfaces, improvements and stabilization of existing trails to be restored, and grading/site locations of new trails, while being offset by the proposed temporary and permanent erosion and sediment control BMPs. Based on the above, the combination of past ecological successional impacts, mitigation, and lack of foreseeable future land use changes, there would be minor long-term adverse impacts to wildlife resulting from the Preferred Alternative.

Mitigation Measures and Best Management Practices

For GDOT projects to avoid impacts to migratory birds, a standard specification 107.23G would be included in the construction contract.⁸³ The OBF would be installed along the construction zone to prevent disturbance outside of designated areas. Considerations included in the project design to minimize impacts on wildlife consist of minimizing tree clearing, including walls where possible to minimize trail footprint and grades to reduce potential for drainage volumes and velocities resulting in erosion issues, and routing trail alignments around trees with a large DBH. Enhanced Erosion and Sedimentation Pollution Control Plans (ESPCPs) would be implemented in accordance with the practices set forth in the Manual for Erosion and Sedimentation Control in Georgia in compliance with state and local stormwater regulations for the protection of aquatic habitat (Appendix C). The OBF and erosion control devices would be installed by hand from the construction side of the easement (Appendix C), avoiding additional impacts to the wetland. Removal of the OBF and erosion control devices would be by hand to further minimize impacts (Appendix C). Temporary wetland impacts would be replanted with native wetland/riparian vegetation (Appendix C). Construction would be limited to daytime hours to avoid impacts to nocturnal wildlife, and lighting would be downward facing and shielded, and limited to roadway ROW and easements to limit overspill into the park (Appendix A and Appendix C).

Additionally, seasonal restrictions are proposed for the protection of tri-colored bat, such that no tree clearing would occur during the non-volant pup season from May 1 through July 15 or during the winter hibernation season from December 15 through February 15 (Appendix C). For the protection of shoal bass and other aquatic species during spawning season, seasonal restrictions for in-water work in Big Creek are proposed where no in-water work would occur between April to June.

⁸³ Per GDOT Specification 107.23G : The demolition of existing bridge and culvert, the extension of existing culvert, and bridge maintenance activities on the underside of the bridge deck shall take place outside of the breeding and nesting season of phoebes, swallows and other migratory birds, which begins April 1 and extends through August 31, unless exclusionary barriers are put in place to prevent birds from nesting."

Conclusion

The Preferred Alternative associated with the GDOT PI 721010-, the GDOT 0009640, and VCU Access Improvements would result in both temporary and permanent direct adverse impacts to terrestrial and aquatic wildlife habitats within the park. The total permanent loss of terrestrial wildlife habitat across all projects would be 3.3 acres with an additional 0.4 acre of temporary impact to terrestrial habitat due to a potential additional five (5) feet of area immediately adjacent to the proposed new trails needed for construction. The total permanent loss of aquatic habitat across all projects would be 0.045 acre with an additional 0.752 acre of temporary impact (Appendix B). Temporary impacts to aquatic habitats would result from construction access in Big Creek and temporary rock jetties and permanent pedestrian bridge piles in the Chattahoochee River.

The Preferred Alternative, including the implementation of mitigation measures, would have “no effect” on federally protected Gulf moccasinshell; black-spored quillwort; Etowah darter; shinyrayed pocketbook; Cherokee darter; and pool sprite/snorkelwort; and is “not likely to jeopardize” monarch butterfly; and would be “not likely to jeopardize” or “not likely to adversely affect” tri-colored bat (depending on the final status under the ESA). There is no designated critical habitat within the survey area; therefore, there would be no effect to critical habitat under the Preferred Alternative.

Additionally, introducing human activity in areas previously without trails could introduce temporary noise and disruption to some wildlife resulting in potential short-term adverse effect on wildlife during the approximately 24 months of construction activities. The proposed projects would contribute to temporary water quality effects within aquatic habitats; however, the contribution of these projects would be minimal due to the limited footprint of proposed increases in impervious surfaces, improvements and stabilization of existing trails to be restored, and grading/site locations of new trails, as well as the proposed temporary and permanent erosion and sediment control BMPs.

There would be both minor adverse long-term effects due to new construction of trails that would impact potential suitable tri-colored bat habitat and beneficial long-term effects due to the consolidation of parking lots, upgrading of currently undesignated trails, and decommissioning of some trails which would be allowed to regenerate and stabilize to reduce erosion and siltation into NPS waters, while also providing additional wildlife habitat within the NPS jurisdiction.

Wetlands

Regulatory context for protection of wetlands consists of Executive Order (EO) 11990⁸⁴ and Director Order 77-1 Wetland Protection DO 77-1 as well as the Clean Water Act. Federal agencies are required to avoid actions that would lead to the destruction or degradation of wetlands unless there are no practicable alternatives. In addition to DO-77-1, activities that involve the discharge of dredged or fill material into wetlands or other “Waters of the United States” (WOTUS) must also comply with Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act (33 CFR 320-331). Section 404 of the CWA regulates the placement of dredged or fill material into WOTUS, which includes navigable interstate waterways as well as wetlands, lakes, streams, rivers, estuaries, and certain other types of waters with surface connections to those interstate waters.⁸⁵ The limits of each of the three projects (see Figures 5 and 7) were surveyed for wetland features and impacts to the wetlands and their functions were assessed using criteria outlined in the current version of NPS DO 77-1 with resource delineations documented in a SOF in accordance with DO 77-1 (Appendix B).

Existing Conditions

General trends for wetlands resources include threats that affect acreage of impacts and quality of resources. The primary threat to wetlands is ongoing and increasing development, which reduces hydrological function and degrades water quality. Additional impacts from infrastructure expansion contribute to long-term wetland degradation, with mitigation efforts planned to minimize but not eliminate adverse effects.

PI 721010-⁸⁶ Four (4) NPS wetlands were identified within the project area including PS 2 (Big Creek)⁸⁷ (in areas where the depth is less than 2.5 meters below low water), IS 5, Wetland 2a, and Wetland 1b (see Figure 7: Historic Roswell Gateway- Wetlands and Table 9 in Appendix B). General

⁸⁴ EO 11990: Wetland Protection aims to protect and preserve the nation’s wetlands, recognizing their vital role in the environment and ensuring that wetlands are preserved. Federal agencies are required to avoid actions that would lead to the destruction or degradation of wetlands unless there are no practicable alternatives. Agencies must assess the potential impacts of their Proposed Actions on wetlands and consider alternatives that would minimize harm.

⁸⁵ The goal of Section 404 of the CWA is to avoid and minimize losses to wetlands and other waters and to compensate for unavoidable loss through mitigation and restoration. NPS wetland definitions differ from Corps wetland definitions as NPS does not use the 1987 Corps of Engineers Wetland Delineation Manual. Because of this difference in definition, mitigation for wetland impacts may vary between NPS and Corps assessments, even if both regulatory jurisdictions apply. Due to the narrower definition of WOTUS, the Section 404 permit program may not meet the wetland protection directives of EO 11990 for wetlands managed by NPS. As a result, some projects may trigger NPS wetland compliance which would not otherwise require a USACE 404 permit.

⁸⁶ GDOT PI 721010- Environmental Assessment, dated July 31, 2024.

⁸⁷ Classification of Wetlands and Deepwater Habitats of the United States, 2013, Federal Geographic Data Committee.

Table 9- Impacted NPS Wetlands Under Preferred Alternative

Project	Water Feature	Temporary Impact Area	Permanent Impact Area
Historic Roswell Gateway (PI 721010-)	Perennial Stream 2^ (Big Creek)	40 linear feet / 0.06 acre due to temporary cofferdams	0.0 acre
	Intermittent Stream 5	0.00 acre	133 linear feet / 0.025 acre due to fill and rip rap material
	Wetland 2a	0.0 acre	0.017 acre due to fill and clearing
SR 9 Pedestrian Bridge (PI 0009640)	Perennial Stream 2 (Chattahoochee River)	0.442 acre due to placement of temporary rock jetties	0.002 acre due to 6 bridge piles
	Wetland 4	0.13 acre of temporary fill and clearing	0.001 acre
VCU Access Improvements	Perennial Stream (Big Creek)	0.12 acre of temporary fill for temporary work bridge	0.0 acre
Totals		0.752 acre	0.045 acre

Designations for the Historic Roswell Gateway, VCU Access Improvements, and SR 9 Pedestrian Bridge projects are from Ecology Reports prepared by consultants for the Georgia Department of Transportation. Please note Perennial Stream 2 (Chattahoochee River) and Perennial Stream (Big Creek) are characterized as NPS wetlands, although these are noted as deepwater habitats of the US where depth is greater than 2.5 meters below low water.

^Note- reference documentation for PS 2 (Chattahoochee River) is found in PI 721010- and PS 2 (Big Creek) is found in PI 0009640.

values and benefits of the wetlands identified include minor groundwater recharge, wildlife habitat, dissipation of erosive force, minor sediment and nutrient retention, and water quality improvement. Wetlands within the project area provide both terrestrial and aquatic habitat for plant and animal species. They are typical of undeveloped areas found along the Chattahoochee River (PS 2) in this region. Portions of the wetlands closest to the roadways are highly disturbed with compacted soils and invasive species infestations, particularly Chinese privet, which reduces the biotic functions and value to wildlife in these areas. Non-riverine wetlands in the project area function as flood water storage while riverine wetlands reduce flood impacts from heavy rain events by conveying flood waters into the Chattahoochee River (PS 2). The Chattahoochee River (PS 2) and the existing multi-use trail running parallel to the river through Wetland 1b provide recreational opportunities for visitors to the CRNRA. In addition to the natural and economic functions and benefits, portions of Wetland 1b south of Riverside Road are located within the Ivy Mill archaeological site (9FU228), and the riverine wetlands were important to Native American cultures and the historic economic development of Roswell (Appendix B).

PI 0009640⁸⁸- Two (2) wetlands were identified within the project area including PS 2 (Chattahoochee River) (in areas where the depth is less than 2.5 meters below water) and Wetland 4 (see Figure 9: SR 9 Pedestrian Bridge - Wetlands and Table 9 in Appendix B). Under the existing conditions, these wetlands provide the same function and value as outlined above for PI 721010-.

VCU Access Improvements- Four (4) wetlands were identified within the project limits including, PS 2 (Big Creek) (in areas where the depth is less than 2.5 meters below water), IS 5, Wetland 2a, and Wetland 1b (see Figure 8: Mitigation Trails - Wetlands and Table 9 in Appendix B). Under the existing conditions, these wetlands provide the same function and value as outlined above for PI 721010-.

Impacts of the No Action Alternative

Under the No Action Alternative there would be no construction activities, and therefore, no temporary or permanent impacts to NPS wetlands within the project area. Conditions would remain nearly the same as the existing conditions. NPS wetlands would continue to be impacted by the existing Riverside Road bridge piles within PS 2 (Big Creek) potentially affecting wetland function. In addition, roadway runoff from surrounding residential and commercial development would continue to adversely impact NPS wetlands. For example, there is an ongoing development upstream of CRNRA with potential to increase sedimentation. In addition, the deterioration of PS 2 (Big Creek) would occur with visitors crossing at the sewer line on the social trail that result in human disturbance to bring sedimentation that has potential to adversely affect hydrological, aesthetic, and biological wetland functions. Otherwise, there is not anticipated to be substantial new or redevelopment in the area upstream of the VCU study area that could affect wetland function. Therefore, the No Action Alternative would result in continued minor adverse direct and indirect adverse effects to wetlands.

Impacts of the Preferred Alternative

Both permanent and temporary impacts to wetlands would occur and are presented in Appendix B and in Table 9.

PI 721010- The Preferred Alternative would include both permanent and temporary impacts to three (3) NPS wetlands within the project area. A total of 40 linear feet (0.06 acre) of temporary, short-term impact due to the use of cofferdams for removal of existing bridge columns in PS 2 (Big Creek)

⁸⁸ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020; Finding of No Significant Impact, dated May 5, 2021.

would occur (Table 9). The cofferdams would be in place for less than one (1) year until the existing bridge columns are removed.⁸⁹ Once the cofferdams are removed, wetland functions would be restored. Permanent impacts to PS 2 (Big Creek) are avoided with bridges clear spanning the creek. The proposed project also includes 0.005 acre of permanent fill and 0.012 acre of permanent clearing within Wetland 2a for construction of the bridge over PS 2 (Big Creek) and 133 linear feet (0.03 ac) of permanent fill within IS 5 for installation of a new 36-inch reinforced concrete pipe (RCP) and placement of riprap at the culvert outflow to minimize erosion (Table 9).

PI 0009640- The Preferred Alternative would include both temporary and permanent impacts to two (2) NPS wetlands within the project area. Direct impacts would include a total of 88 linear feet (0.442 acre) of temporary impacts for the placement of rock jetties (one from each bank, to be removed following construction) to facilitate the construction of the SR 9 pedestrian bridge and 20 linear feet (0.002 acre) of permanent impacts for construction of bridge piles for the pedestrian bridge in PS 2 (Chattahoochee River) (Table 9 and Appendix B). Jetty construction would be staged, with each jetty staying in place for approximately nine (9) months.⁹⁰ The proposed project also includes 0.001 acre of permanent fill impact to Wetland 4 for construction of trail approaches to the bridge and 0.13 acre of temporary fill (0.046 acre) and temporary clearing (0.084 acre) impacts to Wetland 4 for the construction of a temporary rock jetty to aid in bridge construction and provide access to the river for construction of the bridge approach trail. Indirect effects of the pedestrian bridge include increased use by pedestrians but this would not adversely impact wetlands since the Chattahoochee River would be bridged and Wetland 4 would be filled in the area of impact.

VCU Access Improvements- The Preferred Alternative would result in temporary impacts to one (1) perennial stream channel identified as PS 2 (Big Creek) (Table 9) and also identified as a WOTUS per United States Army Corps of Engineers (USACE) standards. The proposed temporary impact is due to a temporary work bridge to be placed in Big Creek to accommodate the construction of the pedestrian bridge, resulting in 0.12 acre temporary fill for up to six (6) months. The temporary work bridge is required to access and construct the bridge abutments and raise and erect the pedestrian bridge allowing for the transport of construction equipment required on both sides of the creek. The temporary work bridge would also provide a work area required for the construction activities associated with erecting the bridge, such as welding segments of the bridge back together. The

⁸⁹ PI 721010- 2021 Ecology AOE Addendum, on file. Cofferdams are temporary construction tools used to create a watertight enclosure and allow sites to be de-watered. Dewatering the site would impact wetland functions including but not limited to hydrologic, geomorphological, biological, recreational, and aesthetic.

⁹⁰ As noted in PI 0009640 Anticipated Temporary Access Construction Method Analysis, impacts permitted as permanent impacts due to timing for both (April 2020 Memo II to ERSOER, on file).

temporary work bridge would be removed following construction of the pedestrian bridge, and conditions within the stream would be allowed to return to pre-construction conditions.

The Preferred Alternative would minimize construction impacts by the use of a clear span prefabricated metal truss bridge, which is beneficial because it minimizes the construction limits required to assemble the bridge at Big Creek and avoids additional impacts to NPS wetlands/waters.⁹¹

Construction of new trails and improvements to existing trails would have no impact to wetlands. No wetlands were identified in the areas where proposed new trails or trails proposed for improvements are located. A boardwalk over IS 5 is proposed to clear span and avoid impacts to this feature.

Summary- Present actions include both permanent and temporary impacts to NPS wetlands described above. Once the approximately 18 months of temporary construction impacts caused by cofferdams/dewatering in the Chattahoochee River and six (6) months of temporary work bridge impacts in Big Creek are completed, wetland functions would be restored. Impacts to NPS wetlands and floodplains are mitigated as noted in the SOF in Appendix B. The Preferred Alternative would not be anticipated to spur future land development changes that may further impact wetlands because adjacent land uses consist of local parks; growth in these areas is constrained by the Chattahoochee River, and the majority of parcels adjacent to CRNRA VCU are already developed in this heavily urbanized area. Based on the combination of past NPS wetland impacts, mitigation, and lack of foreseeable future NPS wetland impacts in VCU, there would be long-term adverse impacts to wetlands under the Preferred Alternative.

Mitigation Measures and Best Management Practices

Minimization

The proposed project has been designed to minimize impacts to NPS wetlands, including the following methods: perpendicular crossings, clear spanning of NPS wetlands such as Big Creek pedestrian bridge and proposed two (2) new vehicular bridges, and removal of bridge piers from the floodway of the existing Riverside Road bridge over Big Creek. The proposed project would remove existing bridge piles within PS 2 (Big Creek), which would benefit long-term wetland function, such as hydrology. The sizing of the Intermittent Stream 5 culvert would accommodate projected water flows and the placement of riprap at the culvert outflow is included to minimize erosion. Minimization

⁹¹ See also Chapter 2, Pedestrian Bridge over Big Creek (interior to park) for more details.

measures for the pedestrian bridge over Big Creek were considered (Appendix B), rip rap and pipe culverts that would have the potential to result in more permanent riverbed impacts or additional fill were removed from further consideration. As part of the VCU Access Improvements boardwalks would be installed over IS 5 to minimize and avoid impacts, and no boardwalk piles would be placed within these delineated resources. Removal of the OBF and erosion control devices would be conducted by hand to further minimize impacts (Appendix C).

The proposed Riverside Road improvements have been designed to minimize impacts, address safety, and include the narrowest lane widths and shoulders allowed by current design standards for the posted speed, sloped shoulders, and guardrail where appropriate. However, given the location of Wetland 2a, regardless of the proposed improvements, impacts to the wetland cannot be avoided and other designs would not provide the operational efficiency or safety required for the volume of vehicles that are anticipated to use the roadway.

NPS Mitigation

Impacts to NPS wetlands and floodplains are mitigated as noted in the SOF (Appendix B). Impacts to wetlands within the CRNRA are increasingly a regular occurrence as a result of local, state, and federally funded projects within and around the Atlanta Metropolitan area. Due to the number of projects for which impacts must be mitigated in compliance with DO 77-1 and other NPS policies, the management staff at CRNRA developed a strategy to mitigate impacts by focusing on the enhancement of a single wetland system, rather than identifying a separate wetland system for mitigation for individual projects. The CRNRA staff has identified a palustrine wetland system within the Cochran Shoals Unit totaling approximately 17 acres that is the focus of mitigation projects.

The first phase of the restoration would remove 240 feet of the roadbed at the northeastern side of the restoration site. As identified by CRNRA management, the first phase of restoration to this wetland system would use funds from two sources. The first source is from the local sponsor for the three projects, the City of Roswell. The City would contribute \$152,673.00 as mitigation for impacts on NPS property resulting from the construction of the Historic Roswell Gateway, VCU Access Improvements, and SR 9 Pedestrian Bridge projects. The second source of funds to complete this first phase would come from Federal Lands Recreation Enhancement Act funds. No funds prohibited under Section 5.2.3 of PM 77-1 for wetland projects would be used for mitigation of the wetland system.

In general, in-kind mitigation is preferable to out-of-kind mitigation because it is most likely to compensate for the functions and services lost at the impact site. However, in the case of the impacted Riverine Wetlands (0.649 acre) from the SR 9 Pedestrian Bridge, VCU Access Improvements, and the Historic Roswell Gateway projects, it was decided that additional/enhanced Palustrine Wetland would adequately compensate for the lost functions and services of the temporary and permanent impacts to the Riverine Wetlands as it would mitigate for the loss of flood water storage and wildlife habitat lost by the three projects. In order to assess the wetland functional improvements of removing the roadbed, the Freshwater Wetland Qualitative Assessment from the Savannah District USACE was completed. The current Water Storage Functional Score for the Cochran Shoals wetland is low. The removal of the roadbed (a structure obstructing hydrologic flows) increases the Water Storage Functional Score to Moderate. Additionally, wildlife habitat would be improved in the Cochran Shoals wetland with the roadbed removal because it would provide a corridor for aquatic organisms to transverse between the upstream and downstream portions of the wetland.

USACE Mitigation

All impacts to WOTUS would require mitigation if stream impacts exceed 100 linear feet (0.01 acre of stream channel) or wetland impacts exceed 0.10 ac, per the USACE, Savannah District's Standard Operating Procedure for Compensatory Mitigation.

PI 721010- For GDOT PI 721010-, stream and wetland credits would be obtained from a USACE approved mitigation bank serving HUC 03130001 for impacted waters.⁹²

PI 0009640- For GDOT PI 0009640, stream and wetland credits would be obtained from a USACE approved mitigation bank serving HUC 03130001 for impacted waters.⁹³

VCU Access Improvements- No mitigation credits are required for the pedestrian bridge over Big Creek due to the temporary impacts being under the mitigation thresholds. However, 0.12 acre of Big Creek would be impacted temporarily due to the temporary work bridge culvert crossing required for constructability of the bridge.

Conclusion

The Preferred Alternative would result in both temporary and permanent direct adverse impacts on NPS wetlands, consisting of 0.752 acre of temporary and 0.045 acre of permanent impacts.

⁹² GDOT PI 721010- EA.

⁹³ GDOT PI 0009640 FONSI.

Proposed mitigation in accordance with NPS's "no net loss" policy as outlined in DO 77-1 (see NPS Mitigation above) would offset adverse impacts to affected streams and wetlands impacted through these projects. In addition, 404 mitigation through USACE permitting would be required for impacts under Section 404 of the CWA. The overall impacts to wetlands and streams from project actions would be minimal due to the temporary nature of the work and clear spanning of streams with bridges to the maximum extent possible. Proposed impacts to the non-riverine wetlands would occur in highly disturbed areas that have a reduced biotic function due to compacted soils and infestations of invasive species. The proposed minor impacts to these wetlands would not have a significant impact on their hydrologic, geomorphological, biological, recreational, and aesthetic functions (Appendix B).

Water Quality

The 1972 Federal Water Pollution Control Act, as amended by the CWA of 1977, aims to restore and maintain the chemical, physical, and biological integrity of the nation's waters; enhance the quality of water resources; and prevent, control, and abate water pollution. *NPS Management Policies 2006* provide direction for the preservation, use, and quality of water originating, flowing through, or adjacent to park boundaries. The project area is located in the Upper Chattahoochee Watershed HUC 03130001 and has been designated as priority watershed by the Environmental Protection Agency (EPA).

Existing Conditions

The nearest US Geological Survey (USGS) stream data to the project location is within the VCU upstream of the proposed pedestrian bridge over Big Creek just below the confluence of Hog Wallow Creek and Big Creek at station 02335757 which measures gage height and discharge, in cubic feet per second, data.⁹⁴ ⁹⁵ Based on 20 water years of record, the minimum daily discharge occurred in 2009 with 59.0 cubic feet per second and a maximum of 537 cubic feet per second in 2023 with a mean of 173 cubic feet per second.⁹⁶ Based on 19 water years of record the daily gage height minimum measurement occurred in 2009 at 2.52 feet and a maximum of 4.35 feet in 2023 with a

⁹⁴ <https://waterdata.usgs.gov/nwis/uv/> (accessed 2/10/2025)

⁹⁵ Discharge and peak flows have been used to evaluate trends in water quality.

https://www.epa.gov/sites/default/files/2016-05/documents/tech_notes_3_dec2013_surface_flow.pdf (accessed 2/12/25)

⁹⁶ https://waterdata.usgs.gov/nwis/uv?cb_00060=on&cb_00065=on&format=gif_stats&site_no=02335757&legacy=1&period=&begin_date=2025-02-03&end_date=2025-02-10 (accessed 2/11/2025)

mean of 3.2 feet.⁹⁷ Of the nine (9) recent crests of Big Creek occurring between 2000-2024, four (4) occurred since 2020.⁹⁸ For this portion of Big Creek mitigation actions occur at 9 feet, minor flooding occurs at 10 feet, moderate flooding occurs at 14 feet, and major flooding occurs at 17 feet.⁹⁹

Section 303(d) of the CWA requires the identification of waters that do not meet water quality standards to establish limits for pollutants that waterbodies can receive to meet water quality standards. The Chattahoochee River and Big Creek in Roswell are both listed on the 303(d) list of impaired waters meaning they do not meet the water quality standards and require a total maximum daily load (TMDL)¹⁰⁰ to address the impairment. In the most recent 303(d) report in 2024, Chattahoochee River is identified as 'not supporting' drinking water, fishing, and recreation uses likely due to urban runoff/storm sewers for Escherichia Coli (E. coli) and polychlorinated biphenyls.¹⁰¹ In the most recent 303(d) report in 2024, Big Creek is identified as 'not supporting' drinking water and fishing uses likely due to urban runoff/storm sewers for E. coli and lead.^{102 103}

One influencer of water quality trends in urban areas is impervious surfaces. The drainage area measured at Hog Wallow Creek is approximately 103 square miles¹⁰⁴ with approximately 30% of the area considered an impervious surface that prevents water from infiltrating the ground, which is considered a substantial impact in this priority watershed.¹⁰⁵ In 2003, the Big Creek Watershed was identified as substantially impacted because of high levels of impervious cover.¹⁰⁶ The receiving waters for this watershed flow through VCU. While watersheds can sustain some impervious surface

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https://waterdata.usgs.gov/nwis/uv?cb_00060=on&cb_00065=on&format=gif_stats&site_no=02335757&legacy=1&period=&begin_date=2025-02-03&end_date=2025-02-10 (accessed 2/11/2025)

⁹⁸ <https://water.noaa.gov/gauges/rwsg1> (accessed 2/11/2025)

⁹⁹ <https://water.noaa.gov/gauges/rwsg1> (accessed 2/11/2025)

¹⁰⁰ According to the EPA: "A TMDL or [Total Maximum Daily Load](#) is the calculation of the maximum amount of a pollutant allowed to enter a waterbody so that the waterbody will meet and continue to meet water quality standards for that particular pollutant. A TMDL determines a pollutant reduction target and allocates load reductions necessary to the source(s) of the pollutant. Sometimes referred to as a "pollution diet" for a waterbody." https://mywaterway.epa.gov/plan-summary/21GAEPD/GAR4_22_12_12 (accessed 2/1/25).

¹⁰¹ Chattahoochee River is identified by State Waterbody ID: GAR031300011114 at <https://mywaterway.epa.gov/waterbody-report/21GAEPD/GAR031300011114/2024> (accessed 2/9/2025)

¹⁰² Big Creek is identified by State Waterbody ID: GAR031300011009 at <https://mywaterway.epa.gov/waterbody-report/21GAEPD/GAR031300011009/2024> (accessed 2/9/2025)

¹⁰³ Big Creek Watershed Improvement Plan, 2007, page 20. Fecal coliform and E. coli bacteria enter streams from both anthropogenic and non-anthropogenic sources, including sanitary sewer overflows, leaking sewer lines, failing septic systems, and pet/wildlife waste. Impacts from high stormwater velocities from impervious surfaces result from increased erosive forces, sedimentation, and chemical inputs which degrade habitats, fish communities, and benthic macroinvertebrate communities.

¹⁰⁴ <https://waterdata.usgs.gov/monitoring-location/02335757/#dataTypeId=continuous-00065-0&period=P7D&showMedian=false> (accessed 2/9/2025)

¹⁰⁵ <https://storymaps.arcgis.com/collections/f60598f6c6b24777a38f40d400ae17b8?item=5> Lower Big Creek Mean Percent Effective Impervious Area of 31.60 (accessed 2/5/2025)

¹⁰⁶ Big Creek Watershed Improvement Plan, 2007

before water quality impairments are observed, a literature review (Paul and Meyer 2001), found that the threshold was between 10 and 20% impervious surface.¹⁰⁷ Runoff from urbanized surfaces correlate to declines in algal, invertebrate, and fish communities.¹⁰⁸

The GA EPD administers and enforces laws to protect waters of the State and ensure consistency with water quality standards. Based on the Big Creek Watershed Improvement Plan (WIP, 2007), the goal of a WIP is to restore streams to meet designated uses and improve water quality.¹⁰⁹

PI 721010-¹¹⁰ There is approximately 3.1 acres of impervious surface along SR 9 and Riverside Road abutting VCU within the proposed project area under the existing condition. The effective impervious area of the lower Big Creek watershed is 31.60.¹¹¹ Runoff from SR 9 and Riverside Road within the project area flows into CRNRA and Big Creek. The existing Riverside Road bridge over Big Creek contains scuppers to allow water to drain off the bridge deck and into Big Creek. The CRNRA floodplains support the filtration of nutrients and contaminants from runoff into the ground prior to flowing into surface water streams.

PI 0009640¹¹²- The existing roadway bridge adjacent to the proposed SR 9 pedestrian bridge is composed of approximately 0.98-acre impervious surface. The impervious surface contributes to water quality concerns via runoff into the Chattahoochee River during and after storm events. As the existing bridge crosses the Chattahoochee River, there is no vegetative buffer along the existing bridge and any runoff flows off the road bridge directly into the river.

VCU Access Improvements- Existing impervious surfaces include the 0.5-acre Allenbrook gravel parking lot and paved Riverside Road parking lots and an existing 0.03-acre impervious trail at Allenbrook connecting to parking. The existing 0.49 acre of existing trails (remain, to be decommissioned, and to be rehabilitated, Table 1) are pervious and comprised of natural surface.

Impacts of the No Action Alternative

Under the No Action Alternative, no direct impacts on water quality would occur due to transportation projects and no conversion of park to transportation use would occur. As indicated above, the Big

¹⁰⁷ Paul, M.J. and J.L. Meyer 2001 pp 333-365.

¹⁰⁸ Paul, M.J. and J.L. Meyer 2001 p 333.

¹⁰⁹ Big Creek Watershed Improvement Plan, 2007, page 21; Methods to achieve the stream restoration may include restoration, buffer enhancement, riparian preservation and park inclusion to decrease sedimentation, improve habitats, and increase stormwater filtration adjacent to streams.

¹¹⁰ GDOT PI 721010- Environmental Assessment, dated July 31, 2024.

¹¹¹ <https://storymaps.arcgis.com/collections/f60598f6c6b24777a38f40d400ae17b8?item=5> Lower Big Creek Mean Percent Effective Impervious Area of 31.60 (accessed 2/5/2025)

¹¹² GDOT PI 0009640- EA, dated May 27, 2020; FONSI, dated May 5, 2021.

Creek Watershed is considered a priority watershed and is impacted due to high levels of impervious surfaces associated with development. The threat of continued water quality impacts due to ongoing human activities upstream of the VCU would continue to result in erosion along the banks of Big Creek and increase sedimentation. In particular, there is a new condominium development just north of and adjacent to the proposed Allenbrook parking lot that would occur with or without the project that could increase and channelize runoff compared to the previous condition where the land was undeveloped. Additionally, the impact of the vegetative banks and buffer of PS 2 (Big Creek) would continue to occur with visitors crossing at the sewer line on the social trail, resulting in human disturbance to bring sedimentation and adversely impact water quality within NPS wetlands. Therefore, the No Action Alternative would result in continued adverse indirect effects of human activities in the vicinity of the CRNRA's urban setting that have potential to affect NPS water quality.

The parking at Riverside Road experiences levels of usage exceeding its capacity, such that there are indications of NPS efforts to restrict parking along the side of the driveway access in undesignated areas. Parking in undesignated areas results in compacting of soils, pooling of water along the driveway, and limiting the potential for vegetation to regrow in these areas; thereby, making it subject to increased velocities of water runoff and potential for increasing sedimentation in Big Creek located just west (less than 20 feet) from the driveway access. Therefore, the No Action Alternative would result in continued adverse indirect effects on NPS water quality due to parking in undesignated areas.

Impacts of the Preferred Alternative

PI 721010- Under the Preferred Alternative, 2.59 acres of NPS land would be converted to transportation use. Impervious surfaces would increase by approximately 7.1 acres due to through lanes, turn lanes, bridges, sidewalks, and shoulders due to this project.¹¹³ Permanent water quality BMPs have been identified as part of the project and include eight (8) bioretention areas to reduce impacts from the proposed project on water quality. Temporary erosion control measures would be implemented during construction (see Mitigation below).

PI 0009640- Under the Preferred Alternative, the proposed pedestrian bridge would increase impervious surfaces by approximately 0.25 acre (due to the 14-foot by 674-foot bridge and abutments) within the project area and result in impacts to NPS wetlands as noted in Table 9 above. By nature of the bridge allowing bicycle and pedestrian, e.g., non-vehicular access, water runoff from

¹¹³ GDOT PI 721010- Environmental Assessment, dated July 31, 2024, page 58.

the bridge would not result in oils, grease, and chemicals which would occur from vehicle use of roadways, thereby, minimizing the water quality concerns associated with the small increase in impervious surface with this project (see Mitigation below).

VCU Access Improvements-

Under the Preferred Alternative, the proposed pedestrian bridge would increase impervious surfaces by approximately 0.02 acre (due to the 6- foot wide by 130-foot long proposed bridge) within the project area and result in impacts to NPS wetlands as noted in Table 9 above due to constructability considerations (Appendix B). Water quality was considered in the alternatives analysis of the construction of the new VCU Access Improvements pedestrian bridge (see Appendix B). Silt fence would be used throughout construction to protect the stream and its 25-foot state buffer as per the Official Code of Georgia Annotated (O.C.G.A. 391-3-7.05) to support water quality.

Water quality was considered in the development of the trails. Trail construction would be sustainable by incorporating switchbacks and avoiding the fall-aligned and steep gradient trails to minimize potential for erosion that could contribute to increased sedimentation that adversely affects Big Creek's water quality. The proposed mitigation trails would utilize natural and pervious materials to minimize runoff, increasing the potential for runoff to be absorbed as it continues as overland flow, and minimizing the sediment and siltation that could occur in the receiving waters. In addition, the Preferred Alternative was developed to minimize the number of trees to be cleared for the construction of new trails. Also, the CTMP incorporates the maintenance of existing trails which reduces the potential for additional clearing needed for trails. The proposed trails take advantage of co-locating with existing social trails currently in use, which would minimize the need for new location trail impacts, while still meeting the project's need and purpose. Lastly, boardwalks are proposed in sensitive areas and would use helical piers to support the boardwalk affecting approximately 0.003 acre of soil. The total impervious surface of the boardwalk would be approximately 0.06 acre (467 feet by 5 feet wide with posts would measure approximately 2800 ft²).

The existing approximately 0.2-acre gravel parking lot at Allenbrook House and 0.3-acre asphalt parking lot at Riverside Road would be removed and vegetated with native species seed mix. A new parking lot (with approximately 0.02 ac of pervious pavers for parking spaces) and emergency vehicle access extending from the new parking lot to Allenbrook House would add 0.40 acre of impervious surface. Net impervious surfaces due to parking lots would be reduced by 0.10 acre which would benefit water quality. Removal of the impervious surface associated with the Riverside

Road parking lot and revegetation of the area in the floodplain would enhance floodplain functionality and support long term water quality in Big Creek.

The new parking lot would consolidate parking for the VCU and vehicular fluids and other water quality concerns associated with the parking lot would be managed by the construction of a new subsurface water quality infiltration system (see Mitigation Measures section below). An underground infiltration system is proposed to minimize the footprint and the visual impact of the water quality BMP. The new water quality BMP also adheres to City of Roswell and Georgia Stormwater Management standards and has been completed in consultation with NPS. Stormwater guidelines address the 100-year flood event with the water quality infiltration system and if a greater than 100-year flood event were to occur, there would be sufficient water storage. Several considerations in the vicinity of the new Allenbrook parking lot were considered to address water quality measured by reduction in total suspended solids and runoff reduction that would meet several objectives, including: using a minimal footprint, a low-maintenance BMP, address the influx of water volume originating from outside the NPS boundary, minimize tree removal, accommodate impervious surface of the emergency vehicle access lane, and be comprised of natural materials. The driveway would be paved impervious surface under the Preferred Alternative, while the proposed parking spaces would be constructed with permeable materials, such as pavers or permeable concrete which would result in a pervious surface for the parking spots. In addition, the new drainage system at the Allenbrook parking lot would capture and treat 0.98 acre of on-site storm water runoff.

To remove water from the back of the proposed wall on the northern border of the new Allenbrook parking lot and avoid additional channelization of runoff from upstream developments, a level spreader would be used to dissipate upstream water that enters NPS-managed lands from off-site and direct the water to infiltrate a vegetated swale on the back side of the proposed retaining wall, which would provide water quality on NPS lands as well as carry water away from the wall. There would also be an inlet in case some water bypasses this swale. The proposed outfalls extend to the existing topographic contours and would utilize river rock to slow water velocities. The drainage pattern within the park would remain the same as under the existing condition.

Although vegetation may temporarily be cleared during construction of the trails, new parking lot, and entrance improvements, erosion control measures would be put into place to minimize impacts to water quality (Appendix C). Once the new parking lot is constructed, the existing Allenbrook and Riverside Road parking lots would be demolished and seeded with native vegetation (Appendix C).

Post-construction, water quality could be affected by stormwater runoff because of parking lot expansion, where contaminants such as grease, oil, and antifreeze could be flushed into waterways by rainfall events; therefore, post-construction permanent stormwater BMPs have been identified. Stormwater runoff from the new 0.24-acre parking lot would be captured using a subsurface infiltration system as it is the most reliable runoff reduction approach. Stormwater would flow into the subsurface infiltration system, collect in the void space underneath the parking lot and slowly infiltrate into surrounding soil.

Summary- Present actions include conversion of NPS lands for transportation use, pedestrian use, and parking lot resulting in an increase of impervious surfaces, runoff, and potential water quality impacts. As noted under mitigation below, water quality BMPs, bioretention areas, proper drainage conveyance, siltation control, and erosion control would be applied to reduce impacts from the proposed project on water quality. Within the watershed, independently of the Preferred Alternative, there have been continuing trends of development upstream that would add impervious surface and increase surface water velocities and volumes into the receiving waters draining to Big Creek. Based on the combination of past water quality impacts in the watershed, water quality BMPs as mitigation, and foreseeable future land use changes in the broader watershed, there would be long-term adverse impacts to water quality to NPS-managed resources under the Preferred Alternative.

Mitigation Measures and Best Management Practices

Due to the impacts, a National Pollutant Discharge Elimination System (NPDES) permit would be obtained during construction for the GDOT PI 721010- project in compliance with Section 402 of the Clean Water Act that outlines discharges, monitoring, and reporting requirements to ensure water quality standards are met (Appendix C).

Although there is a net reduction in impervious surface as part of the VCU access improvements as noted above; an underground biofiltration system is proposed to address water quality resulting from the addition of new impervious surface with the Allenbrook parking lot as well as off-site runoff.

As part of PI 0009640, an on-site monitoring system that documents unacceptable levels of sediment build- up during temporary jetty placement, removal, and construction activities is included as an environmental commitment. This on-site monitoring would be conducted as part of the water quality standards for the project and would include any issues that arise requiring corrective actions would be documented in the monitoring reports (Appendix C). Monitoring would be conducted on the opposite bank and downstream to identify any erosion. Daily records would be kept, and

sedimentation limits and a description of the mitigation actions would be prepared (Appendix C).

The project would comply with the Georgia Erosion and Sedimentation Act. Measures to minimize harm to wetlands, water quality, wildlife, and fish and game habitat include (Appendix C):

1. Preservation of roadside vegetation beyond the limits of construction where possible.
2. Early revegetation of disturbed areas so as to minimize soil erosion.
3. The use of slope drains, detention/retention structures, surface, sub-surface and cross drains, designed as appropriate or needed, so that discharge would occur in locations and in such a manner that surface and sub-surface water quality would not be affected (the outlets may require aprons, bank protection, silt basins and energy dissipaters).
4. Inclusion of construction features for the control of predicted erosion and water pollution in the plans, specifications and control pay items (GDOT Standard Specification 715 identifies the pollution control measures which may be used).
5. The dumping of chemicals, fuels, lubricants, bitumens, raw sewage, or other harmful wastes into or alongside streams or impoundments, or into natural or man-made channels leading thereto, would be prohibited.

Temporary erosion control measures would be implemented during construction, and may include the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods, as applicable (Appendix C).

Conclusion

The Preferred Alternative associated with the GDOT PI 721010-, the GDOT 0009640, and VCU Access Improvements would result in both temporary and permanent direct impacts on water quality. Under the Preferred Alternative, impervious surfaces would increase by 7.46 acres over the existing condition as depicted in Table 10, which could contribute to higher velocities, lower permeability into the ground and increasing volumes of runoff into waterways affecting water quality.

Table 10: Change in Impervious Surface Under Preferred Alternative

Project Component	Contribution to Impervious Surface (acre)
GDOT PI 721010- Transportation infrastructure	7.1 ¹
GDOT PI 0009640- Pedestrian Bridge	0.25 ²
VCU Access Improvements- Pedestrian Bridge	0.18 ³
VCU Access Improvements- Boardwalk	0.06 ⁴
VCU Access Improvements- New Parking Lot	0.22 ⁵
VCU Access Improvements- Emergency Vehicle access	0.18 ⁶
VCU Access Improvements- Removal of Existing Parking lots and impervious trail at Allenbrook	-0.53 ⁷
Net Impervious Surface Total	7.46

¹ 721010- Environmental Assessment; ² 0009640 Environmental Assessment; ³ Proposed pedestrian bridge measures 12 feet wide by 674 feet long for an estimated 0.18 acre of surface area. ⁴ Proposed boardwalk measures approximately 6 feet wide by 467 feet long for an estimated 0.06 acre of surface area. ⁵ Reference in Table 1. ⁶ Reference in Table 3.

⁷ Reference in Table 1. A total of 1148 square feet of trail at Allenbrook would be removed due to access changes.

Efforts to mitigate the increase of impervious surfaces on water quality would include the use of temporary, during construction erosion control and permanent water quality BMPs, use of pervious natural surface trails, erosion control measures, removal of impervious parking lot from within the Big Creek riparian zone, and rehabilitate unstable trails that contribute to erosion and siltation in receiving waters. The subsurface infiltration system at the proposed Allenbrook parking lot would mitigate adverse effects that the new impervious parking lot would have on water quality. Additionally, areas within the NPS jurisdiction would be demolished and/or decommissioned and seeded with native vegetation and benefit water quality due to preventing erosion of soils.

Removing impervious surfaces and incorporating water quality BMPs for impervious surfaces in the VCU would help support the water quality in Big Creek and the Chattahoochee River. Therefore, the Preferred Alternative would result in short-term adverse effects to water quality during construction activities, as well as long-term adverse effects due to increased impervious surfaces associated with the roadway improvements and construction of the pedestrian bridge.

Floodplains

Executive Order (EO) 11988, Floodplain Management, requires federal agencies, such as the NPS and other agencies, to evaluate the potential impacts of actions in floodplains. NPS guidance on compliance with EO 11988 is found in NPS DO 77-2: Floodplain Management.¹¹⁴ DO 77-2 directs the NPS to protect and preserve the natural resources and functions of floodplains and to avoid the long- and short-term effects associated with the occupancy and modifications of floodplains. Additionally, the NPS is directed to restore, when practicable, natural floodplain values previously affected by land use activities within floodplains. When it is not practicable to locate or relocate development or inappropriate human activities to a site outside and not affecting the floodplain, the NPS has prepared a SOF (Appendix B), in accordance with procedures described in PM 77-2: Floodplain Management; and take all reasonable actions to minimize the impact to the natural resources of floodplains; and use non-structural measures as much as practicable to reduce hazards to human life and property; and ensure that structures and facilities are designed to be consistent with the intent of the standards and criteria of the National Flood Insurance Program (NFIP).

Because the City of Roswell is a member of the NFIP, the design of this project is being developed in compliance with provisions of EO 11988 for the protection of Federal Emergency Management

¹¹⁴ NPS Procedural Manual 77-2 Floodplain Management. https://www.nps.gov/subjects/policy/upload/DO_77-2_9-8-2003.pdf (accessed 6/30/2024)

Agency (FEMA) -designated Special Flood Hazard Areas (SFHAs). The NFIP floodplain management criterion as described in Title 44 of the CFR Section 60.3(d)(3) notes that encroachments within the regulatory floodway shall not result in an increase in flood levels during the base flood event. The regulatory floodway is a part of the floodplain subject to flooding during rain events. Therefore, maintaining the floodway during a rain event helps manage and mitigate flood risks, by allowing water to move efficiently downstream and reducing the risk of water backing up and causing higher flood levels in the floodplain.¹¹⁵ Evaluation and discussion of the practicability of alternatives has taken place, as is required per 23 CFR § 650.111.

Floodplains are the low-lying ground adjacent to rivers, formed mainly of river sediment and subject to flooding. Floodplains can offer several valuable functions including flood storage and retention, groundwater recharge, nutrient removal, and wildlife habitat. The amount of natural vegetation cover present within a floodplain determines the degree of retention or effective function a floodplain can provide. The project area is adjacent to and within two (2) 100-year floodplains located within the proposed project corridor, including one floodplain associated with the Chattahoochee River and one associated with Big Creek, therefore the NPS has prepared a SOF (Appendix B). Both floodplains are classified as a FEMA Zone AE as a regulatory floodway (Figure 4: Historic Roswell Gateway Flood Zone¹¹⁶, Figure 6: SR 9 Pedestrian Bridge- Flood Zone¹¹⁷ and Figure 5: Mitigation Trails- Flood Zone in Appendix B¹¹⁸).

Existing Conditions

The Chattahoochee River within CRNRA flows along the Brevard Fault within the Gainesville Ridges District. This district is characterized by a series of northeast-trending, low, linear, parallel ridges separated by narrow valleys, which drives the localized surface water hydrology of the Chattahoochee River watershed. Flooding of the Chattahoochee River is controlled through releases from Buford Dam by the USACE. However, during heavy rainfall events over short periods of time, flooding is more likely downstream of the dam as a result of the narrow corridor created by geologic features described previously. Along Big Creek within VCU of CRNRA the floodplain (also known as a Special Flood Hazard Area [SFHA]) is designated as a floodway, with a high and moderate risk of flooding, including 1% (100-year) and 0.2% (500-year) chance of flooding, respectively. In addition, the general trend of urban sprawl along much of the river has increased impervious surfaces in the

¹¹⁵ https://www.epa.gov/sites/default/files/2015-08/documents/flood_resilience_guide.pdf (accessed 2/8/2025).

¹¹⁶ Appendix B, SOF

¹¹⁷ Appendix B, SOF

¹¹⁸ Appendix B, SOF

watershed, contributing to the frequency and height of floodplain overflows. The high visitor usage results in compacting of floodplain soils at the Riverside Road parking lot would contribute to floodplain impairment and inability to support full floodplain functionality, and potential for increasing sedimentation in Big Creek. The Riverside Road 0.3-acre parking lot located in the floodplain which limits the Big Creek floodplain storage and filtration functionality. The trail facilities support high visitor use that are expected to result in continued pedestrian use of social trails within the floodplain leading to continued impacts to floodplain vegetation. Impacts to floodplain vegetation deteriorates the quality of the floodplain functionality by compacting soils, increasing potential for erosion and runoff. Visitors use the unimproved trails located on steep slopes especially located on the eastern side of the Big Creek floodplain, which would continue to threaten stabilization of these trails with high visitor use. Detailed information about the floodplains is found in the SOF (Appendix B) with a summary below.

PI 721010- Floodplains within the area are associated with Big Creek and the Chattahoochee River. The primary function of these floodplains is wildlife foraging and cover habitat, with a minor function as storing floodwaters to reduce the impact of flooding downstream, also known as flood attenuation (see Appendix B for more details on vegetation). Under the existing condition, there are two (2) transverse crossings of the 100-year floodplain associated with the proposed alternative for this project.

PI 0009640- Floodplains within the area are associated with the Chattahoochee River and contain 25 to 80-year-old tree stratum with dense understory and herbaceous plant species. This floodplain primarily functions as wildlife foraging and cover habitat, with some minor functions for flood attenuation.

VCU Access Improvements- The primary functions of the Big Creek floodplains within the VCU include buffering overland water flows, slowing down runoff and preventing further erosion, and wildlife habitat. Additional ecological functions include processing organic wastes, filtering nutrients and impurities from runoff to support water quality, groundwater recharge, and moderating water temperature through shading. The floodplains provide a broad area for overflow to spread out and temporarily store floodwaters, reducing flood peaks and velocities.

The parking lot at Riverside Road experiences levels of usage exceeding its capacity, such that there are indications of parking along the side of the driveway access in undesignated areas, resulting in compacting of soils, pooling of water along the driveway, and limiting the potential for

vegetation to regrow in these areas; thereby, making it subject to increased velocities of water runoff and potential for increasing sedimentation in the Big Creek FEMA floodplain.

Impacts of the No Action Alternative

Under the No Action Alternative, floodplains would remain the same as under the existing condition and avoid 9,273 cubic yards of fill and 29,135 square feet of direct impacts to floodplains, leaving safety and connectivity unchanged from the existing condition. Contour improvements along proposed trails with switchbacks and grade reversals would not result in trails that are more stabilized and located outside the floodplain. The removal of 1480 feet of streamside trails within the floodplain would not occur, allowing for the continuation of degradation of these areas in the floodplain and loss of floodplain function. The continued impacts would contribute to diminishing floodplain capacity in the park and not achieve long-term sustainability of the floodplain function in the ecosystem. Therefore, the No Action Alternative would result in continued adverse direct and indirect impacts due to visitor usage impacting floodplains that make floodplains less functional and susceptible to erosion and instability.

Impacts of the Preferred Alternative

PI 721010- The proposed project would place 8,979 cubic yards of fill material in a Zone AE floodplain. The proposed project would result in an increase in 7.1 acres of impervious surface, which may result in the indirect effect of increasing stormwater runoff and flood levels.

The Preferred Alternative includes avoidance and minimization measures to help reduce any adverse fill impacts to the extent feasible. Proposed road bridges would clear-span most of the floodplain, and any other impacts from construction activities are considered minor and would not adversely change the function of the floodplain. In general, impacts at floodplain crossings are associated with roadway construction, deconstruction, and culvert removal and/extension. These impacts have been minimized to the extent possible by utilizing the existing roadway alignment where possible as well as utilizing bridges to cross Big Creek and realigning intersecting roadways. Hydrology studies of impacts from the project have determined that the project would not increase the 100-year flood elevations, floodway elevations, and floodway widths on the Big Creek.¹¹⁹ As a result of these findings an engineering “No Rise” certification is applicable for the project and no further action for NPS would be required.¹²⁰ A “No Rise” certification means that a project in a

¹¹⁹ GDOT PI 721010- Environmental Assessment, dated July 31, 2024. page 67.

¹²⁰ GDOT PI 721010- Environmental Assessment, dated July 31, 2024. page 67.

floodway has undergone an engineering analysis and concluded that the project would not increase flood heights during the base (100-year) flood event.^{121 122} For NPS-managed lands, the results of this No Rise certification indicate that the Preferred Alternative would not impact the pre-project base flood elevations, floodway elevations, or floodway data widths, which means that areas up and downstream would not experience higher flood levels due to the projects and would not negatively impact flood risks for the areas.¹²³

PI 0009640- Permanent impact to the floodplain from construction activity would be negligible. The portion of the multi-use trail constructed on fill would be located within the SR 9 ROW and outside designated flood zones. The pedestrian bridge would require placement of bridge support piles in the floodplain with permanent impacts of approximately 26 linear feet of impacts within the Chattahoochee River impacts would include six (6) concrete and rebar columns. The columns range in diameter from four (4) to five (5) feet.

Adverse and short-term temporary impacts to the floodplain would occur during construction, resulting from the temporary rock jetties and cofferdams to drill bridge support piles. Temporary rock jetties would be placed into the Chattahoochee River from each bank. Also, temporary cofferdams would be constructed in the river to allow drilling of bridge piles. Impacts within the floodplain for construction of the SR 9 Pedestrian Bridge are detailed in Appendix B and include:

- Rock Jetties – Approximately 29,135 square feet. Two temporary rock jetties, one constructed from each bank. Jetties would not be constructed at the same time. Each would remain in place approximately 10 months.
- Forms for Drilled Shafts – Approximately 27 linear feet which includes one (1) casing for each of the six (6) bridge supports within the river channel.

Hydrology studies of impacts from the project have determined that the project would not increase the 100-year flood elevations, floodway elevations, and floodway widths for the Chattahoochee River.¹²⁴ As a result of these findings an engineering “No Rise” certification is applicable for the project and no further action for NPS would be required¹²⁵ indicating that no additional flooding on NPS-managed lands would occur as a result of the Preferred Alternative.

¹²¹ Federal Emergency Management Administration (FEMA), <https://www.fema.gov/about/glossary/no-rise-certification-floodways>, accessed 2/8/25.

¹²² <https://semspub.epa.gov/work/10/500004410.pdf>

¹²³ <https://semspub.epa.gov/work/10/500004410.pdf>

¹²⁴ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020, page 18.

¹²⁵ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020, page 18.

Fill material for the project would not alter the flood capacity of the 100-year floodplain of the Chattahoochee River. Proposed bridge piles to support bridge piers for the bridge structure in the floodplain would not affect flood storage capacity. No FEMA mitigation is required.

VCU Access Improvements- Direct impacts to floodplains include construction of approximately 690 feet of new trails and 1,834 feet of upgraded trails measuring three (3) feet wide, requiring approximately 278 cubic yards of fill in the Big Creek floodplain. The decommissioning of approximately 1480 feet of existing trails would be removed from the floodplain. Some locations of the new and rehabilitated trails are located within floodplain areas of Big Creek and the Chattahoochee River, but the use of natural surfaces in place of impervious material is anticipated to minimize runoff and avoid contributions to increased surface water velocities that lead to sedimentation in receiving waters. Indirect effects of approximately 3450 square feet of vegetation clearing within the floodplain would be required along the approximately 690 feet of new trails, but these activities are not anticipated to have permanent, long-term impacts to floodplain function as areas would be reseeded with vegetation to regenerate and support floodplain function. Other trails associated with the VCU Access Improvements have been designed outside floodplains.

The proposed pedestrian bridge has been designed to accommodate over a 500-year flood stage. Impacts to floodplains would occur due to installation of stairs for the proposed pedestrian bridge over Big Creek. The fill amount resulting from the construction of stairs for the pedestrian bridge over Big Creek would be approximately 16 cubic yards. However, the amount of fill for the stairs and trails is considered a minimal impact. Since the trails are at grade, stairs are being built for the pedestrian bridge over Big Creek and would be open enough to allow water to flow through during a flood event. A “No Rise” certification is not required, indicating that no additional flooding on NPS-managed lands would occur as a result of the Preferred Alternative. Additional fill to create access roads for construction activities are not anticipated at this time.

Under the proposed alternative a temporary work bridge would cause temporary impacts to Big Creek for up to six (6) months. The temporary work bridge is required to access and construct the bridge abutments and raise and erect the bridge. If a high-water event would occur during construction, Big Creek would overtop the temporary work bridge. For safety and security of equipment, monitoring of high-water events would be required by the contractor (Appendix C). Specifically, the temporary work bridge allows for the transport of construction equipment that is required on both sides of the creek and is not proposed for storage of equipment. The temporary work bridge would also provide a work area required for the construction activities associated with

erecting the bridge, such as welding segments of the bridge back together. The locating of the proposed bridge at the existing utility easement would limit the introduction of physical impacts to a previously undisturbed areas in the park.

Decommissioning the Riverside Road parking lot would remove 0.3 acre of fill within the floodplain and restore this area's natural floodplain functionality.

To minimize runoff impacts within the floodplains, the proposed trails would be of natural surfaces and require clearing of some ground vegetation but would not include impervious surfaces such as asphalt or concrete. In addition, within the floodplain associated with the Chattahoochee River and Big Creek confluence, the proposed trails would be constructed along boardwalk to minimize floodplain impacts. While up to 1630 square feet of vegetation clearing may be required to install the boardwalks, these activities are not anticipated to have permanent, long-term impacts to floodplain function.

Summary- Construction of numerous projects upstream of the project within the urban area has resulted in modifications to floodplains over the past 50 years.¹²⁶ Because the estimated increase in floodplain water surface elevations is minimal (0.04 feet or less) based on the GDOT PI 721010-project, the proposed projects' contribution to the overall effect on previous floodplain impacts are minor and would not be considered adverse. In addition, the City of Roswell has adopted FEMA Flood Insurance Rate Maps (FIRM) into their flood ordinance, which regulates development in floodplains. Since the Upper Chattahoochee River base has more than 50% developed land cover, and Lower Big Creek has a mean effective impervious area of 31.6, there may be future additional development pressures in this basin that adds pressure to floodplains within the project area; however, the City of Roswell includes regulations of development in floodplains to ensure safety, access, and floodplain management areas are addressed prior to any construction; therefore, further encroachment is not expected to result in adverse impacts to floodplains.

The Preferred Alternative would not be anticipated to spur land development changes because the land uses in adjacent parcels consists of local parks, growth in these areas is constrained by the Chattahoochee River, and the majority of parcels adjacent to CRNRA VCU are already developed in this heavily urbanized area. As the project vicinity has largely been built out, future planned development would likely have limited future additional impacts on floodplains; however, upstream of the project within the watershed, there have been continuing trends of development which may

¹²⁶ <https://www.historicaerials.com/viewer> (accessed 2/1/25)

add pressure to floodplains. There are no reasonably foreseeable future actions along SR 9 or Riverside Road adjacent to the park, and no near term or long-term state or federally funded or local transportation projects planned. Based on the combination of past floodplain impacts in the watershed, water quality BMPs as mitigation, and foreseeable future land use changes in the broader watershed, there would be long-term adverse impacts to NPS-managed floodplains under the Preferred Alternative.

Mitigation Measures and Best Management Practices

One floodplain impact minimization measure consisted of a robust bridge study that considered six (6) different designs for the SR 9 pedestrian bridge to minimize impacts to floodplains associated with Wetland 4 and PS 2 (Chattahoochee River). As a result, the proposed bridge design would be constructed on piers instead of using fill material within the floodplain and Wetland 4 to support the structure; the approach trail to be constructed on fill would be outside the 100-year floodplain; and in areas requiring fill, retaining walls are included to minimize construction slopes and project limits.

As depicted in Figure 5 and Appendix B, the proposed pedestrian bridge would align with the existing sewer crossing to avoid impacts to floodplain functions in previously undisturbed areas of the VCU. Proposed new trails in the Chattahoochee River floodplain would be constructed on boardwalk to minimize impact to floodplain functions. Proposed new trails and the new Allenbrook parking lot are located outside the floodplain on the east side to avoid new impacts to floodplain functions. Many of the trails on the east side of Big Creek's floodplain would be decommissioned and allowed to regenerate with natural seeds to increase vegetation; thereby supporting floodplain functionality of wildlife habitats, flood attenuation, groundwater recharge, filtering nutrients to support water quality, and flood storage. Rehabilitation of social trails would stabilize the existing footprint of trails within floodplain to reduce further impacts on floodplain functionality.

In order to further minimize the impact of the temporary work bridge for the proposed Big Creek pedestrian bridge, bottomless culverts would be utilized to permit the passage of fish and other aquatic species during construction and to avoid unnecessary constriction of the channel width. Additionally, for all alternatives considered, all in-water work within Big Creek would be limited to take place outside of shoal bass spawning season (Appendix C).

Conclusion

The Preferred Alternative associated with the GDOT PI 721010-, the GDOT 0009640, and VCU Access Improvements would result in both temporary and permanent direct impacts on floodplain

values and function. Under the Preferred Alternative 9,273 cubic yards of permanent fill impacts within floodplains would occur. Temporary forms for drilled shafts measuring approximately 27 linear feet (for approximately 10 months) including one casing for each of six (6) bridge supports would be placed within the Chattahoochee River channel for PI 0009640. Permanent impacts to the floodplain for bridge piles would be approximately 26 linear feet and would be considered a minor impact because they would be localized and unlikely to cause substantial effects. The construction of new trails and improvements to existing trails incorporate natural surfaces to avoid an increase in impervious surface in the floodplain to support drainage, groundwater recharge and reduce the overland flow velocities that contribute to high volumes of fast flowing water in nearby creeks, while the decommissioning of approximately 4440 square feet of existing trails would be removed from the floodplain and 5502 square feet of social trails improvements would occur within the floodplain. Removal of the Riverside Road parking lot would remove 0.3 acre of impervious surface and restore the low-lying Big Creek floodplain. Overall, the Preferred Alternative is expected to result in minimal short- and long-term effects on floodplain values and functions. The localized nature of the impacts, combined with the planned mitigation efforts, suggests that the overall integrity of the floodplain would be maintained.

Soils

NPS Management Policies 2006 (NPS 2006) state that the NPS will strive to understand and preserve the soil resources of park units and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources. These policies further state that “[m]anagement action will be taken by superintendents to prevent or at least minimize adverse, potentially irreversible impacts on soils.” Soils exhibiting similar characteristics and falling within certain defined limits are classified together as a soil series.

Existing Conditions

General trends to soils include threats such as erosion, compaction, social trails, and increasing development, which degrade soil stability and contribute to erosion, especially in steep areas. Ongoing and future development projects, including trail, road, and utility expansions, would continue to degrade soil quality and disrupt ecosystems. The Natural Resources Conservation Service (NRCS) Web Soil Survey database indicates that soils within the project area consist of eight (8) soil

mapping units, which provides descriptions of the soils (USDA-NRCS 2016).¹²⁷ The soil map units within the project area are listed in Table 11, Soil Characteristics Within the Project Area. An Area of Interest (AOI) covers the Preferred Alternative.

Impacts of the No Action Alternative

Under the No Action Alternative, impacts on soils would remain the same as under the existing condition and the park would continue managing the existing trail system and pursuing efforts to close social trails. Some of the trails proposed for decommissioning include undesignated and unmaintained routes, while others are official trails that are less sustainable compared to the proposed new alignments. Continued visitor use of these segments, totaling approximately 3,285 feet (0.62 miles), would likely contribute to ongoing resource degradation in these areas. Many trails to be decommissioned and the parking lot along Riverside Road are located on steep slopes that have the higher K factor relative to other soils in the AOI, meaning these areas are more susceptible to erosion.

The No Action Alternative would not adversely affect soils through the 2.59 acres of new transportation impacts to NPS-managed lands by the PI 721010- and 0009640 transportation projects. There would be no construction activities or temporary impacts, and no temporary construction disturbances to soils would occur. No pedestrian bridges over the Chattahoochee River and Big Creek would disturb NPS-managed riverine soils and would avoid 0.752 acre of temporary impacts due to cofferdams and a work bridge and 0.045 acre of permanent impacts due to bridge piers in the Chattahoochee River.

Riverside Road and Allenbrook parking lots would be expected to remain under the existing condition and no new Allenbrook parking lot would be constructed; therefore, 0.5 acre of compacted soils in parking lots at Riverside Road and Allenbrook parking lot would continue to be less pervious surfaces within the park and would not be restored with native vegetation. The proposed new Allenbrook parking lot, underground detention, and emergency vehicle access would not impact 0.46 acre of soils. The parking at Riverside Road experiences levels of usage exceeding its capacity, such that there are indications of parking along the side of the driveway access in undesignated areas, resulting in compacting of soils, pooling of water along the driveway, and limiting the potential for vegetation to regrow in these areas; thereby, making it subject to increased velocities of water runoff and potential for increasing sedimentation in Big Creek located just west (approximately 20

¹²⁷ Figures available on file. Based on the Archaeology surveys, the soils within the area of the Preferred Alternative are underlain by bedrock.

Table 11: Soil Characteristics Within the Project Area

Map Unit Symbol	Mapping Unit Name	Drainage Characteristics	K Factor*	Percent within Preferred Alternative	Location	Parent Material	Depth to a Root Restrictive Layer	Water Movement in Most Restricted Layer	Depth of Available Water
BaA	Buncombe loamy sand, 0 to 3 percent slopes, occasionally flooded, not ponded	Excessively drained	0.10	5.4%	Floodplains	Loamy alluvium deposits	>80 inches	High to very high	Low to a depth of 80 inches (or restricted depth)
CaA	Cartecay-Toccoa complex, 0 to 2 percent slopes, occasionally flooded, not ponded	Somewhat poorly drained	0.15	12.8%	Floodplains	Coarse-loamy alluvium deposits	>80 inches	High	Moderate to a depth of 9-20 inches (or restricted depth)
GaE	Grover-Mountain Park complex, 10 to 20 percent slopes, stony, not flooded, or ponded	Well drained	0.17	6.7%	Hills	Residuum weathered from mica schist deposits	>80 inches	Moderately high to high	Moderate to a depth of 80 inches (or restricted depth)
GaF	Grover-Mountain Park complex, 20 to 60 percent slopes, stony, not flooded, or ponded	Well drained	0.10	17.6%	Hills	Residuum weathered from mica schist deposits	>80 inches	Moderately high to high	Moderate to a depth of 80 inches (or restricted depth)
MdC2	Madison-Bethlehem complex, 6 to 10 percent slopes, moderately eroded, not flooded, or ponded,	Well drained	0.17	6.6%	Hills	Residuum weathered from igneous and metamorphic rock and/or residuum weathered from mica schist deposits	>80 inches	Moderately high to high	Moderate to a depth of 80 inches (or restricted depth)
ReE	Rion sandy loam, 15 to 25 percent slopes, not flooded or ponded	Well drained	0.15	7.4%	Hills	Residuum weathered from granite and gneiss deposits	>80 inches	Moderately high to high	Moderate to a depth of 80 inches (or restricted depth)
RoF	Rion-Louisburg complex, 20 to 35 percent slopes, boulder, not flooded or ponded	Well drained	0.17	27.7%	Hills	Residuum weathered from granite and gneiss deposits	>80 inches	Moderately high to high	Moderate to a depth of 80 inches (or restricted depth)
UmC2	Urban land-Madison-Bethlehem complex, 2 to 10 percent slopes, moderately eroded, not flooded, or ponded	Well drained	----	5.5%	Hills	Residuum weathered from mica schist and/or residuum weathered from igneous and metamorphic rock deposits	>80 inches	Moderately high to high	Moderate to a depth of 80 inches (or restricted depth)

Source: USDA-NRCS 2016; note Wickman Sandy Loam is within the AOI but outside the proposed project area. The remaining 10.3% of the AOI is water. *K Factor represents erodibility of soil with higher values indicating more susceptibility to erosion. Soil K Factors in the AOI range from 0.10 to 0.17, indicating a relatively low susceptibility to erosion.

feet) from the driveway access. Therefore, the No Action Alternative would result in an adverse long-term effect on soils.

Impacts of the Preferred Alternative

PI 721010- The Preferred Alternative would impact 2.59 acres of NPS-managed terrestrial soils; 0.042 acre of permanent impacts to Big Creek, IS 5, and Wetland 2a; and 0.06 acre of temporary impact to Big Creek soils during construction. The majority of affected soils under the Preferred Alternative are in RoF soils which are well drained (Table 11).

PI 0009640- Within NPS-managed lands, this project would impact 0.002 acre of permanent and 0.442 acre of temporary impact to Chattahoochee River riverbed soils and 0.001 acre of permanent and 0.13 acre of temporary impact to Wetland 4. The 0.001 acre of permanent impacts to Wetland 4 would occur in Buncombe loamy sand that is noted as occasionally flooded at the confluence of Big Creek and the Chattahoochee River.

VCU Access Improvements- The majority of the trails would occur in well drained or excessively well drained soils. The proposed parking lot improvements at Allenbrook and removal of the existing Allenbrook parking would occur within the Rion sandy loam soil and Rion-Louisberg complex. The removal of the Riverside Road parking lot would restore soils in the Rion-Louisburg complex soils. The proposed pedestrian bridge would be constructed in the Cartecay-Toccoa soils.

Approximately 10,875 square feet (approximately 0.25 acre) of permanent soil disturbance would occur within NPS-managed lands due to the proposed new trails (Table 12). Each of the 4x6 inch posts per each of the four (4) wayfinding signs would result in one (1) square foot of ground disturbance for a total of eight (8) square feet (total for all four wayfinding signs).

Indirect temporary effects would consist of impacts during construction. There may be up to five (5) feet of temporary disturbance due to construction activities immediately adjacent to the trails, which would result in an additional 18,125 square feet (0.4 acre) of temporary soil impacts for trails during construction, which would be restored with native vegetation.

Of the 0.69 mile of proposed new trails, approximately 467 feet by six (6) feet of boardwalks would be constructed, including three (3) to five (5) foot trails with six (6) inches on each side of the boardwalk for the posts which equals a total of six (6) feet of area for the boardwalk. The boardwalks would comprise a total surface area of 0.06 acre along three (3) areas within the park (see Figure 5) and remove 0.06 acre of impact of soils from the total impact of trails. Boardwalks would be

Table 12- Soils Impacted Under Preferred Alternative

Map (Symbol)	Unit	PI 721010- Soils Impact (acre)	PI 0009640 Soils Impact (acre)	VCU Access Improvements Soils Impact (acre)	
Buncombe (BaA)	-	0.001	0.001	New Trails	0.029
				Decommissioned Trails	0.045
				Rehabilitated Trails	0.089
				New Parking Lot and Access	-
				Decommissioned Parking Lots	-
Cartecay-Toccoa (CaA)	0.4	-	-	New Trails	0.073
				Decommissioned Trails	-
				Rehabilitated Trails	0.065
				New Parking Lot and Access	-
				Decommissioned Parking Lots	-
Grover-Mountain Park Complex (GaE)	0.8	-	-	New Trails	0.049
				Decommissioned Trails	-
				Rehabilitated Trails	-
				New Parking Lot and Access	-
				Decommissioned Parking Lots	0.091
Grover-Mountain Park Complex (GaF)	-	-	-	New Trails	0.004
				Decommissioned Trails	0.076
				Rehabilitated Trails	-
				New Parking Lot and Access	-
				Decommissioned Parking Lots	0.020
Madison- Bethlehem Complex (MdC2)	-	-	-	New Trails	0.047
				Decommissioned Trails	0.005
				Rehabilitated Trails	-
				New Parking Lot and Access	-
				Decommissioned Parking Lots	-
Rion (ReE)	0.7	-	-	New Trails	-
				Decommissioned Trails	0.014
				Rehabilitated Trails	0.022
				New Parking Lot and Access	0.441
				Decommissioned Parking Lots	0.200
Rion-Loiusburg Complex (RoF)	0.5	-	-	New Trails	0.045
				Decommissioned Trails	0.085
				Rehabilitated Trails	0.024
				New Parking Lot and Access	0.019
				Decommissioned Parking Lots	0.195
Urban land- Madison- Bethlehem Complex (UmC2)	0.1	-	-	New Trails	-
				Decommissioned Trails	-
				Rehabilitated Trails	0.001
				New Parking Lot and Access	-
				Decommissioned Parking Lots	-

*Note figures on file. Proposed transportation work would occur within CaA soils (0.4 ac; 15.4% of the 721010- impact area), GaF soils (0.8 ac, 30.8% of the PI 721010- impact area), ReE sandy loam (0.7 acre, 26.9% of the PI 721010- impact area), RoF (0.5 acre, 19.2% of the PI 721010- impact area), and UMC2 (0.1 acre, 3.8% of the PI 721010- impact area). The remaining 0.1 acre (3.8% of the PI 721010- impact area) is water.

constructed over IS 5, floodplains, and the Ivy Mill area south of Riverside Road to serve as a measure to minimize harm to resources. No piles for boardwalk construction would be placed within these delineated resources.

A total of 0.65 acre of soil impacts due to trails (including 0.71 acre of new permanent soil impacts [0.25 acre due to new trails and 0.46 acre due to parking, emergency access, and the water quality BMP at Allenbrook, Table 1] minus the 0.06 acre of soil impacts avoided by the boardwalk [Table 1]) would occur under the Proposed VCU Access Improvements. Improvements to 0.5 acre of soils would occur by removing existing parking lots at Riverside Road and Allenbrook and the decommissioning of 9855 square feet (0.23 acre) of trails that prevent soils from being further impacted. Therefore, the permanent change in soils impacts would be a net improvement of approximately 0.08 acre of soils impacts due to VCU Access Improvements (0.065 acre minus 0.5 acre at parking lots to be decommissioned minus 0.23 acre of trails to be decommissioned, Table 1).

Summary- In the past, impacts to soils in VCU occurred due to cotton farming, natural ecological succession, historic mill usages, sewer line easement, and bridges. The current impacts to soils are due to trail and visitor access. Beyond the inclusion of the PI 721010- or PI 0009640 projects, and the developing parcel on the north side of VCU near the proposed new Allenbrook parking lot, there are no reasonably foreseeable ground disturbing activities in VCU-managed lands. Based on the combination of past soil use and disturbance, mitigation, and lack of foreseeable future land use changes, there would be long-term adverse impacts to soils.

Mitigation Measures and Best Management Practices

Design of the trails include minimization measures to reduce impacts on soils consisting of boardwalk to minimize soil disturbance over sensitive features such as floodplains and NPS wetlands. Removing the 0.06 acre of soils impacts due to installation of the boardwalk would minimize permanent soil disturbance due to proposed trails. With proposed new trails, visitors would use these trails instead of creating social trails or going off the trails and cause more impacts and damage to areas off the trails.

Switchbacks and stairs are included to reduce the slopes on the trails and reduce potential for erosion. Pervious natural surface trails would be maintained and—therefore lessen potential for increased water velocities as compared to other surfaces. Previously impacted soils associated with the parking lots at Allenbrook and Riverside Road and decommissioned trails would be restored with

native vegetation. OBF would be installed along the NPS boundary of the transportation projects to delineate the area accessible to contractors and prevent unauthorized disturbance of NPS-managed lands. Erosion, Sedimentation, and Pollution Control Plans would be implemented in accordance with the practices set forth in the Manual for Erosion and Sedimentation Control in Georgia. The erosion control plans specify the type and placement of control measures, steps for monitoring, repairing, and replacing control measures as necessary. Erosion control devices would be installed from the construction side of the NPS-managed lands, avoiding additional adverse soil impacts. Removal of the erosion control devices would be conducted by hand to minimize impacts.

Conclusion

The Preferred Alternative associated with the GDOT PI 721010-, the GDOT 0009640, and VCU Access Improvements would result in permanent direct impacts on soils. There would be 3.3 acres of permanent effects to soils within NPS-managed lands associated with the Preferred Alternative (see Table 3, Summary of Land Use Impacts, including 2.59 acres for the PI 721010- project and 0.762 acre from VCU Access Improvements). Relative to the approximately 5,500 acres of the park these impacts would be less than 0.05 percent of the total area of the CRNRA and while adverse would not be considered a significant adverse impact. The ability of soils to be maintained in VCU supports the growth of vegetation and forested areas that support not only ecosystem function but natural views for the visitors.

Visitor Use and Experience

As stated in the *NPS Management Policies 2006*¹²⁸ and the guidance contained in DO #50B Occupational Safety and Health Program, #50C Public Risk Management Program, #58 Structural Fire Management, and #83 Public Health and their associated reference manuals outline that NPS would strive to identify and prevent injuries from recognizable threats to the safety and health of persons and to the protection of property by applying nationally accepted codes, standards, engineering principles. *NPS Management Policies 2006* states that enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks and that the NPS is committed to providing appropriate, high-quality opportunities for the public to enjoy parks. Upgraded and maintained trails promote health and wellness for visitors support these directives.

¹²⁸ NPS Management Policies.

The CRNRA was established in 1978 to preserve and protect the natural, scenic, recreational, historic, and other significant values of a 48-mile segment of the Chattahoochee River. The 15 units within CRNRA park is used as a valuable outdoor recreation resource by approximately 5.2 million people¹²⁹ located within the 9-county metropolitan Atlanta area as well as visitors from around the world (CRNRA CTMP [2022]). Approximately 5,000 acres of the park's authorized lands are under NPS ownership, as well as more than 2,000 acres of riverbed and tributaries and features America's first designated National Water Trail.¹³⁰ The CRNRA provides abundant opportunities to recreate, connect with nature, discover diverse cultural resources, and even experience solitude for one of the largest urban populations in the United States.

The primary purpose of the CRNRA was to recognize the unique geological features associated with the Palisades area south of Johnson Ferry. The cliffs in the area were formed by geological processes (continental drift) associated with the Brevard Fault. The park included an area primarily in the vicinity of these cliffs, which form an imposing rampart overlooking the Chattahoochee River. The cliffs, together with the surrounding native forested uplands and river bottom areas along the 48-mile river corridor, were determined to be a unique resource worthy of national park status.

The CRNRA contains an abundance of natural resources, and the park's green space provides a variety of outdoor recreation opportunities as well as cultural and educational activities. The broad range of cultural resources include a Native American rock shelter, Civil War sites, and industrial mill sites. The CRNRA's greenspace and the river improve the quality of life by serving as a sanctuary and by providing a variety of outdoor recreation opportunities such as hiking, nature viewing, paddling, bicycling, boating, and fishing. The CRNRA provides a scenic river corridor with opportunities for natural solitude and seclusion within relatively undisturbed forests, wetlands, bluffs, ravines, and open water areas in the midst of an urban landscape which is accessible by the 5.2 million people in the metro-Atlanta region.¹³¹ Approximately 3.2 million visitors annually enjoy the

¹²⁹ Atlanta Regional Commission produces population estimates for the Atlanta Region. <https://atlantaregional.org/what-we-do/research-and-data/atlanta-region-population-estimates/#:~:text=Atlanta%20Region%202024%20Population%20Estimates,and%20the%20City%20of%20Atlanta> (accessed 1/19/25).

¹³⁰ <https://www.doi.gov/news/pressreleases/New-National-Water-Trails-System-to-Promote-Healthy-Accessible-Rivers#:~:text=Today%2C%20Secretary%20Salazar%20also%20announced,local%20city%20and%20county%20parks> (accessed 1/19/25)

¹³¹ Atlanta Regional Commission produces population estimates for the Atlanta Region. <https://atlantaregional.org/what-we-do/research-and-data/atlanta-region-population-estimates/#:~:text=Atlanta%20Region%202024%20Population%20Estimates,and%20the%20City%20of%20Atlanta> (accessed 1/19/25).

CRNRA, mostly from the local Atlanta metro-region¹³² and 1,200 people per day utilize the VCU's trail system.¹³³ Out of the 15 units in CRNRA, VCU has the second highest estimate of current trail use (people per day) within the CRNRA park.¹³⁴ The opportunity for enjoying recreational trails, archaeological sites, mill ruins, and the historic Allenbrook house is enhanced by the proximity to a major metropolitan area.

Existing Conditions

According to the visitation trends, the CRNRA has increased visitors approximately 28 percent over the past 20 years, which contributes to the visitors experiencing crowding and congestion within the park. There is a need to decrease congestion and separate use types for trails management and avoiding of conflicts of multiple uses.¹³⁵ General trail management trends throughout CRNRA include adding more miles of trails, improve visitor access, and add infrastructure for multiple visitor uses. The number of visitors exceeds capacity of available parking lots where vehicles park along the side of the driveways in undesignated areas.

PI 721010-¹³⁶ Safety is a concern under the existing condition as documented in the public involvement input and EA (see also Purpose and Need for Action above). Vehicles and bicyclists currently use SR 9 and there are intermittent and disconnected sidewalks for pedestrians. In addition to the NPS CRNRA recreation area, there are nearby City of Roswell parks along Riverside Road. Pedestrians use a discontinuous narrow four to five-foot sidewalk or well-worn foot path along SR 9. The multiple modes of travel, e.g., pedestrians, bicycles, and vehicles do not have separated facilities to promote safety and connectivity to area parks, e.g., a continuous dedicated sidewalk and a multi-use trail to improve connectivity and interactions with vehicles.

Portions of the existing roadway provide access to the VCU of the CRNRA. Visitors can travel the existing roadway to access parking along SR 9 at Allenbrook House with approximately 10 parking spaces and along Riverside Road with approximately 18 parking spaces, trails, and historic and scenic attractions (including the natural forest, waterfall, covered bridge, Ivy Mill ruins and Allenbrook house) within the park. The parking spaces at Allenbrook are limited and when filled, visitors would need to access the park through Riverside Road, as there is no street parking along SR 9. The

¹³² <https://www.doi.gov/news/pressreleases/New-National-Water-Trails-System-to-Promote-Healthy-Accessible-Rivers#:~:text=Today%2C%20Secretary%20Salazar%20also%20announced,local%20city%20and%20county%20parks> (accessed 1/19/25)

¹³³ 2022 NPS CRNRA CMTMP, E-126.

¹³⁴ 2022 NPS CRNRA CTMP, E-126.

¹³⁵ 2022 NPS CRNRA CTMP, page 64.

¹³⁶ GDOT PI 721010- Environmental Assessment, dated July 31, 2024.

parking at Riverside Road experiences usage such that there are indications of undesignated parking along the side of the driveway access in undesignated areas. There is an existing concrete multi-use greenway trail (Roswell Riverwalk Trail) that extends from Riverside Park to Azalea Drive under the existing SR 9 bridge that serves to connect visitors to trails along the Chattahoochee River, accommodating various activities, including biking, jogging, and walking. Currently, no access is provided between the Riverwalk Trail and VCU CRNRA trails. There are sidewalks along Azalea Drive west of SR 9; there are crosswalks for pedestrians at the SR 9 and Azalea Drive/Riverside Road intersection; there are no sidewalks along Riverside Road between SR 9 and just east of Indian Springs Drive, where the Roswell Riverwalk Trail extends along Riverside Road. Along SR 9 approximately 430 feet north of Riverside Road, sidewalk extends along the east side of SR 9 northward along the NPS-managed lands.

PI 0009640¹³⁷ - There are inadequate pedestrian or bicycle facilities along the existing SR 9 bridge over the Chattahoochee River limiting multi-modal connectivity and access to parks/recreation areas between Sandy Springs and Roswell. As noted above in the Purpose and Need section, there is an existing raised four (4) foot sidewalk on the northbound side of the road along the existing SR 9 bridge used by pedestrians to cross the bridge and there is no physical separation or buffer between vehicles traveling at posted speeds of 35 miles per hour. Pedestrians and bicyclists may use the existing sidewalk (which does not meet Americans with Disabilities Act [ADA] requirements) on the SR 9 bridge and road for access, but multiple travel modes do not have separated accommodations which is a safety concern based on public input received in 2011 and 2013 public outreach activities.¹³⁸ There is no direct CRNRA trail connectivity between the existing SR 9 sidewalks to the south side of the Chattahoochee River at Sandy Springs. Potential access to the VCU CRNRA trails is available from SR 9 to the Riverside Road parking lot; however, there are no continuous dedicated pedestrian or bicycle facilities.

VCU Access Improvements- There are 7.7 miles of existing recreational trails located within the VCU, including 1.3 miles in this VCU Study Area (Figure 5). According to the CRNRA CTMP, VCU trail use increases over the weekends approximately by three (3) times weekday use.¹³⁹ The VCU CRNRA recreational trails provide opportunities for recreation, hiking, running, walking (including with dogs on leashes) nature viewing, relaxation, climbing, and access to historic ruins (e.g., Ivy Mill

¹³⁷ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020; Finding of No Significant Impact, dated May 5, 2021.

¹³⁸ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020, PIOH response letter dated December 23, 2013.

¹³⁹ NPS CRNRA CTMP, Appendix E, page E-122.

and Allenbrook) and rustic natural scenic areas (e.g., waterfalls, cliffs, and wooded areas) within the park as outlined in the CRNRA CTMP.¹⁴⁰ The trails are open year-round and are actively visited.

The two (2) proposed trail names within this unit include the *Vickery Creek Trail* in the vicinity of SR 9/Riverside Road and Big Creek and *Magnolia Loop Trail* east of Big Creek. The approximate 4-mile loop trail on the north and east side of Big Creek referred to as the Magnolia Loop, is used for hiking, walking, running, and observing nature and scenery. To the south side and west of Big Creek there are more cultural sites including Allenbrook house and Ivy Mill and climbing at Lover's Leap, which are accessible by the trail referred to as the Vickery Creek Trail. Several trails have debris piles or rebar hazards¹⁴¹ and are unsustainable due to location on contours. Several trails have a need to be rehabilitated, which could introduce instability in the trail and reduce the quality of the overall visitor experience. Visitors to the VCU are using undesignated areas as trails causing destruction of these unimproved areas resulting in concerns with visitor safety due to utility pipe crossings, cliffed-out trails, and steep, slick unmaintained trails which could be addressed through trail restoration and reroutes.

The two (2) parking lots to access the existing VCU trails are located at Allenbrook House and the trailhead on Riverside Road. As noted in the CRNRA Trail Management Plan,¹⁴² there is a need to expand the parking lots, which is limited to the 18 spaces at Riverside Road parking lot and the 10 parking spaces at Allenbrook. There is limited access to the north side of VCU near Allenbrook House. The current parking lot is difficult to find because of the trees limiting visibility of the driveway, high SR 9 travel speeds that reduce a driver's comfort in turning, and the lack of signage indicating the park access. The Preferred Alternative would improve VCU parking access and manage parking by allowing NPS visitors to use nearby Roswell parking lots.

The parking at Riverside Road experiences levels of usage exceeding its capacity. There are indications of parking in undesignated areas, resulting in compacting of soils, pooling of water along the driveway, and limiting the potential for vegetation to regrow in these areas; thereby, making it subject to increased velocities of water runoff and potential for increasing sedimentation in Big Creek. This results in overall degradation of the parking facility that has potential to adversely affect the user experience.

¹⁴⁰ NPS CRNRA CTMP, Appendix B, page B-76.

¹⁴¹ NPS CRNRA CTMP, Appendix B, page B-76.

¹⁴² NPS CRNRA CTMP, Appendix B, page B-76.

There is an existing utility easement along the west side of Big Creek within the park and an associated utility crossing of Big Creek (Figure 5).

Impacts of the No Action Alternative

Under the No Action Alternative, impacts on visitor use and experience would remain the same with approximately 1,200 visitors per day, as under the existing condition with potential for increased usage due to the desirability of the amenities. The trail system management would remain unchanged. The Visitor Trends outlined in the CRNRA CTMP note that overall visitor experience is expected to deteriorate with increased numbers of people if needs not addressed.¹⁴³

Currently unsafe activities that park visitors are conducting may continue. For example, visitors would be anticipated to continue to access undesignated social trails in the areas, which could result in a safety concern due to the steep grades, instability of trails, and localized erosion in undesignated areas used by visitors as well as intermittent trail closures. The park would continue to implement temporary trail closures as needed to protect visitor safety and park resources in accordance with the provisions of 36 CFR 1.5.

In addition, unauthorized crossings of Big Creek at the sewer crossing would be expected to continue and be an unsafe option for park visitors. Safety issues along Big Creek, including pipe crossings, cliffed-out trails, and steep, slick trails would not be addressed through trail restoration and reroutes. The continued increases in visitation would likely result in long-term adverse impacts to visitor use and experience as increased trail erosion, reactive closures, parking issues, over-crowding, and congestion would cause the quality of the visitor experience to decline and could threaten visitor access to some areas as facilities become overwhelmed. Also, under the existing condition bicyclists use trails; however, the combination of bicyclists and pedestrian usage on trails could cause conflicts resulting in safety concerns between these visitors and adversely affecting the visitor experience.¹⁴⁴

There would continue to not be trail connectivity within CRNRA and to Roswell trails and Sandy Springs, but the Allenbrook House parking at approximate 10 spaces and Riverside parking at approximately 18 spaces would continue to provide visitor access to the VCU at CRNRA under the No Action Alternative; however, the need for expanding the parking lot as identified in the 2022 CRNRA Trail Management Plan would not be met. As part of the visitor trends, trailhead parking fills

¹⁴³ NPS CRNRA CTMP, page 62.

¹⁴⁴ NPS CRNRA CMTP, Appendix E, page E-139. According to the 2022 CTMP, bicycles are not authorized in VCU trails. The NPS Bicycle Rule (36 CFR 4.30) describes regulations to manage bicycle use within NPS units. Under 77 FR 39927, the Bicycle Rule gave park superintendents greater flexibility to determine where bikes can be allowed in a park.

up and visitors could face uncertainty in finding parking that prevents them from visiting VCU.¹⁴⁵ Although access to the Chattahoochee River, NPS-managed resource, is signed at Riverside Park, the shift of vehicle parking for VCU CRNRA trails from the CRNRA's Riverside Road parking lot to the City of Roswell Riverside Park parking lot would be expected to continue under the No Action Alternative. However, since the VCU CRNRA trailhead parking along Riverside Road would not be closed under the No Action Alternative, it would be expected that people would try to park at the NPS parking lot based on availability and there would be less usage of Roswell parking lot.

No additional connectivity for pedestrians, or increased community cohesion would occur under the No Action Alternative if the Historic Roswell Gateway and SR 9 Pedestrian Bridge projects are not developed; therefore, the No Action Alternative would not address the goals in the 2022 CRNRA CTMP, the Inter-agency Consultation or the Transportation Improvement Program (TIP). Additionally, safety improvements for pedestrians by separating modes of travel would not occur under the No Action Alternative.

Under the No Action Alternative, no additional signage at trail heads or new trail markers would be installed and therefore, no support for visitor education about basic rules and regulations or delineation for visitors to realize they are entering an NPS site would be installed. Existing wayfinding and signage could result in safety concerns. None of the trails would be modified to address the rehabilitation or safety considerations and trails would remain in poor condition and potentially affect visitors' safety and result in injury. Removal of debris piles would not be completed.¹⁴⁶

The intensity of impact of the No Action Alternative is not at the level of prohibiting visitors from enjoyment, but the No Action Alternative would not attain planning goals for NPS or the local and state transportation plans, and would not enhance the visitor parking, overall trail experience, or increasing accessibility to the park. One objective of the VCU CRNRA is to address visitor capacity management, which indicates the unit is frequently visited and may need strategies to manage peak visitor times that benefit the visitor experience. In summary, the No Action Alternative would result in long-term adverse effects on visitor use and experience within the project areas.

Impacts of the Preferred Alternative

PI 721010- Under the Preferred Alternative, approximately 2.59 acres of permanent easement would be converted to transportation use; however, the required easement would not adversely affect the

¹⁴⁵ NPS CRNRA CMTP, page 64.

¹⁴⁶ NPS CRNRA CMTP

recreational activities and features of the CRNRA, as there are no hiking trails or other features/amenities in the location of required easement. There would be temporary effects on motorists during construction activities due to lane closures and slower speeds within the project corridor, which could adversely affect visitors to the VCU during the construction. The Preferred Alternative would also improve the operation and reduce crash frequency. Users of the roadway would benefit from the pedestrian and vehicular safety and operational improvements. After construction is completed, the project is anticipated to increase community cohesion, promote connectivity to surrounding businesses, city parks and Roswell's Historic Town Square, improve bicyclist and pedestrian safety and improve traffic flow in surrounding areas. Lighting proposed as part of this project would benefit the safety of users along the roadway. The proposed lighting along SR 9 (Appendix A) is not expected to affect the NPS visitor experience because the park is closed to visitors and would not be operating during nighttime hours when the lighting is operational. Therefore, there would be no adverse effect to the visitor experience.

PI 0009640- The proposed construction of the bridge over the Chattahoochee River would increase pedestrian safety and connectivity between Sandy Springs and Roswell and would directly improve the pedestrian experience by allowing visitors to cross the Chattahoochee River between Sandy Springs and Roswell in a leisurely pace to enjoy the Chattahoochee River's natural intrinsic beauty without walking adjacent to motorized traffic. The proposed pedestrian bridge would safely connect the residents in Sandy Springs and Roswell and contribute to increased community cohesion and connectivity in the area and to the VCU. Visually, the arches of the pedestrian bridge would align with the existing SR 9 roadway bridge arches to be aesthetically aligned when viewing the bridge from either CRNRA, Ivy Mill historic viewshed, or by watercraft from the Chattahoochee River. Thirteen (13) proposed lights spaced at 70-foot intervals along the pedestrian bridge support multi-modal travel options for visitors of the park. There would be no traffic-generated noise resulting from the project;¹⁴⁷ however, there would be short term construction noise. Construction would occur during daylight hours, eliminating potential noise disturbance during nighttime hours.¹⁴⁸ Construction noise is not anticipated to be significant enough to alter or prevent recreational activities from occurring in the park or along the Chattahoochee River.¹⁴⁹ The Chattahoochee River would remain open for recreationalists during construction since the jetties would not fully constrict river activities, rather allow kayakers, boating, fishing, and other recreationalists to enjoy the river. There would be

¹⁴⁷ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020, (on file).

¹⁴⁸ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020, (on file).

¹⁴⁹ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020, page 23 (on file)

minor short-term impacts on visitors who may be recreating on or near the Chattahoochee River due to visual and noise impacts from construction equipment and temporary jetties within the Chattahoochee River to construct the pedestrian bridge. Other visitors hiking on trails away from the river would not be as affected by the work along Riverside Road, the Chattahoochee River, and SR 9. If visitors are not able to enjoy the park in areas of construction, there are alternate trails in the park that can be used instead.

Public access to the bridge construction site, including land access to the rock jetties would be restricted by fencing and locked gates. Warning signs would be posted on jetties that public recreational activities on and adjacent to the jetties are prohibited. A Public Safety Plan prior to jetty construction would be prepared. A Storm Evacuation Plan would be prepared prior to jetty construction and would be reviewed/approved by NPS and coordinated with FEMA/USACE prior to construction.

VCU Access Improvements- One of the goals of the park's CTMP¹⁵⁰ is to "enhance or enable appropriate connectivity with existing or planned regional trail networks." The new trails and parking would improve access, number of miles of trail, and enhance connectivity to areas within and outside the VCU of CRNRA. In addition, the Preferred Alternative would accommodate the higher visitation numbers that the park has experienced over the 20 years addressing the visitation trends outlined in the CTMP. For example, the VCU of CRNRA south of Riverside Road is proposed to be connected to the park on the north side of Riverside Road and the trails from Allenbrook and the parking lot on the west side of Big Creek would be connected to the trails on the east side of Big Creek. The proposed trail system would extend an in-park user experience for visitors who may already be accessing trails in Roswell such as the Roswell Riverwalk Trail that connects to Riverside Park as well as access to proposed sidewalks along SR 9 under GDOT PI 721010-. The increased mileage of trails also offers a way to distribute visitors throughout the park and would reduce concentration of visitors in certain areas and lessen resource impacts. The increased number of access points with another trail head at the proposed Allenbrook parking lot would increase the number of routes the visitors can take so the park can be more sustainable and meet new trail standards.

The proposed construction of the new trails which were identified in the CTMP would consolidate parking by removing the Riverside Road and Allenbrook parking area and create a new 17 space parking area north of Allenbrook House providing a single parking area access point into VCU. The

¹⁵⁰ NPS CRNRA CTMP, page 270.

consolidation of two parking lots would limit areas where pedestrian and motorized vehicles interact within the park that facilitate safer access to the extensive trail system. The entrance improvements along SR 9 include a new wider entrance and parking lot directly across from Warm Springs Circle to support vehicle circulation, driver expectations, and safety accessing the park along SR 9. In addition, a new monument sign that serves as a gateway for visitors into the VCU would provide improved access and placemaking that would enhance the visitor use and experience consistent with this goal. There would be notification of the prohibition of bicycles in VCU to support the avoidance of pedestrian and bicycle conflicts. An inlet to the proposed water quality detention system would be visible in parking lot areas flush with the asphalt of the parking lot, but the infiltration system would be underneath the new Allenbrook parking lot outside of the visitor's view.

The proposed project would construct new trails, upgrade existing trails, and improve the entrance to the VCU of the CRNRA for a variety of recreational use types, ranging from casual with access for relaxing walkers and fishing in Big Creek to fitness-oriented runners. The new trail system would be designed to provide recreationists with longer experiences that create the illusion of being on a larger land unit for an enhanced visitor experience. The 0.69 mile of new trails would provide additional longer recreational experiences to attract visitors to the park by reducing junctions and enhance the nature of backcountry-style experience. Redevelopment of the trail system to include contour-aligned routes with switchbacks that take advantage of the dynamic topography for a variety of streamside and elevated views, while avoiding sensitive resources and steep gradient trails would enhance the visitor experience. Improvements also include the restoration of the 0.35 mile of existing trails and decommissioning of 0.62 mile of unstable trails that better connect visitors with the rustic and historic contexts within CRNRA. These improvements in the trail system support a variety of hikers with a range of difficulties ranging from casual to moderate to hard; supports trail runners with a fitness-oriented trail; and supports improved access for other recreational uses, such as fishing. Construction of new recreational trails would improve the safety of visitors to the park, keeping visitors off of unimproved areas within the park and preventing visitors from crossing Big Creek in the interior of the park along the existing sewer easement.

Additionally, the proposed trails improvements would increase the awareness of the sustainable, manageable trail system as a long-term benefit. Trailheads and signage are included as part of the proposed project. A new kiosk with interpretive information would be constructed at the new Allenbrook parking lot to direct and educate visitors about the park. There would be a new NPS entrance monument following NPS standards installed at the entrance of the access to the new

parking lot at Allenbrook. In addition to the wayfinding trail head at Allenbrook, the City of Roswell would construct four (4) wayfinding signs, including two (2) at the proposed intersection of SR 9 and Riverside Road and two (2) at the proposed Riverside Road roundabout to support wayfinding for visitors would be provided in the vicinity of the bridge replacement over Big Creek at Riverside Connector. This would help address access, safety, and orientation to improve comfort and the visitor experience. The City of Roswell would allow NPS visitors to use the parking area in Riverside Park for access to the VCU trailhead to enhance parking to CRNRA.

Access improvements and circulation north and south of Riverside Road would be enhanced under the Preferred Alternative. The CRNRA trails would extend from the Ivy Mill Ruins on the south side of Riverside Connector/Azalea Road extend under the bridges carrying Azalea Road and Riverside Connector and continue north to trails within the CRNRA.

The proposed pedestrian bridge over Big Creek would be dark brown (weathered steel), include wooden decking for flooring instead of concrete, and dark brown tinted concrete bridge foundations to blend the infrastructure into the landscape. The natural color scheme and the locating of the proposed bridge at the existing utility easement would limit the introduction of visual impacts to the natural viewshed within the park which currently includes a sewer line as a modern intrusion within an undisturbed area in the park. This alignment of the bridge and sewer lines in close geographic proximity minimizes the number of areas in the park with modern intrusions to enhance the visitor experience.

Temporary impacts to visitor experience and access to recreation resources within the project area may occur due to some trails experiencing temporary closures during construction and visitors directed to open trails. During construction activities, there would be some short-term adverse effects on visitor use and experience during construction activities, such as increased travel time along roads due to approximately 24 months of construction activities in the area potentially reducing speeds along roads to visit the park, construction personnel and equipment presence and noise, and access changes, such as redirecting visitors to certain trails while other trails are under construction. However, these adverse effects would be mitigated by the overall beneficial effects of these projects to park visitors and the community, including increased community cohesion and connectivity, improved access to the park, and additional recreational opportunities within the park.

Summary- Land uses in the area have supported urban growth in metro-Atlanta, which resulted in increased visitors coming to/from and parking at VCU and the increased number of visitors using the park facilities. The Preferred Alternative would increase variety, experience, and overall number

of visitors with more trails, connectivity, safety, alleviating the parking pressures on the VCU, and parking management which allows NPS visitors to use nearby Roswell parking lots. Replacement of the old parking area with a new consolidated parking lot improves accessibility to western areas of the park's historic context, safely accommodates emergency vehicles, and improves water quality from impervious surfaces. The proposed SR 9 Pedestrian Bridge would provide pedestrians a safer route to access recreational facilities within the area by separating pedestrians from the narrow sidewalks currently available along the SR 9 bridge. It would not increase motorized vehicle traffic and encourages pedestrian use for nearby residents. Based on the combination of past visitor impacts, trails mitigation, and lack of foreseeable future land use changes which solidifies the park/recreational area connectivity, there would be long-term positive impacts to visitor use and experience.

Mitigation Measures and Best Management Practices

Mitigation for human health and safety includes several measures including: decommissioning and avoiding construction of new paths along steep slopes which might increase the likelihood of slipping and falling along the path; improving paths currently being used socially to reduce potential for erosion and run concurrently along existing sewer easement that allow for consistency in accessibility but also take advantage of prior disturbed areas and popular trails; and introduction of emergency vehicle access at Allenbrook House for improved responses to safety issues. Additionally, boardwalks are utilized in areas experiencing erosion to ensure that the path remains stable for visitors. The NPS would reduce or remove known hazards and apply other appropriate measures, including trail closures.

The Preferred Alternative consists of the most direct and user-friendly route that increases visitor satisfaction while avoiding tree removal and minimize construction in the landscape to achieve a balance of visitor experience with preserving VCU resources. With the natural landscape as one of the viewshed elements providing intrinsic beauty and serving ecological function, extensive design coordination was conducted to minimize potential tree removal within the CRNRA. The project engineers walked the existing and proposed trails to identify paths that allowed a balance of the positive visitor experience from an effort standpoint (e.g., straight paths with steep or gentle slopes vs. paths with switchbacks) while reducing the need for tree removal as much as possible. Where feasible, the engineers routed trails around trees to retain the natural scenery and visitor experience.

The introduction of new signage and education about the park would help visitors navigate the trails and aid in improvement of the overall visitor experience and safety to set visitor expectations. In

doing so, the NPS' preferred actions would be those that have the least impact on park resources and values. New signage and education about the park would help visitors navigate the trails and aid in improvement of the overall visitor experience. It is further noted that the project would not impose park-specific visitor safety prescriptions but rather the means by which public safety concerns are to be addressed would be left to the discretion of superintendents and other decision-makers at the park level who must work within the limits of funding and staffing. The construction of the trails is anticipated to beneficially impact visitors by providing improved paths and walking surfaces.

The introduction of walls, bridges, and structures and other visible constructed features would be designed with a context sensitive nature (Appendix C). In particular the concrete retaining wall associated with the PI 0009640 bridge that would be visible from CRNRA Ivy Mill would include stamped stone finish facing to reduce the modern intrusion into the historic viewshed and support a context sensitive view for the visitors.

During construction of the PI 0009640 pedestrian bridge, temporary rock jetties would be required for cranes to set bridge piles and decking. Two separate jetties would be constructed to minimize effects to recreational activities on the river during construction and reduce impact to river flow. One jetty would be constructed at a time, and the second jetty would not be installed until the first jetty would be removed.¹⁵¹

Parking lots proposed to be decommissioned would remain until the new parking lot is constructed to maintain continuity of visitor access to VCU.

Conclusion

The Preferred Alternative associated with the GDOT PI 721010-, the GDOT 0009640, and VCU Access Improvements would result in both temporary and permanent direct impacts on visitor use. Under the Preferred Alternative there would be a beneficial long-term effect on the visitor experience by adding 0.69 mile of new trails, 0.35 mile of rehabilitated trails, and decommissioning 0.62 mile of trails that would enhance the existing trail network within VCU of CRNRA and improve connectivity within the NPS-managed lands as well as Roswell area recreational areas. Connectivity between destinations in Sandy Springs with parks and recreation along Riverside Drive, VCU in CRNRA and beyond into Roswell parks would enhance accessibility to recreational areas and improved access to different parks may provide an increase in the types of recreational experiences for CRNRA and

¹⁵¹ GDOT PI 0009640- Environmental Assessment, dated May 27, 2020, page II-2, on file.

non-CRNRA visitors. Connectivity within CRNRA and Roswell areas is consistent with goals in the CTMP.¹⁵² The VCU Access Improvements would construct a new 0.24 acre parking area and entrance and accessibility, enhance signage with four (4) new wayfinding signs, construct a new context-sensitive pedestrian bridge, promote improved connectivity within the CRNRA and local area parks. Also, the VCU Access Improvements would support visitor safety and orientation to the park by consolidating parking, limiting interactions between pedestrians and motorized vehicles, incorporating lighting along roadways to enhance visibility for safety, and improving the entrance for the park, which also benefits safety by aligning with a Warm Springs Circle as a side street to benefit driver expectations along the SR 9 VCU access point. Also, kiosks and signage improvements would support orientation for visitors to plan their experience and set expectations about prohibiting bikes in the VCU. The enhancements to trails bring visitors more access to VCU's history, natural beauty, and offer recreational activities for the urban area.

PI 721010- would also improve the operations and reduce crash frequency along existing SR 9. Users would benefit from pedestrian and vehicular safety and operational improvements and enhanced community cohesion. The PI 0009640 pedestrian bridge would increase connectivity and provide a safe multi-modal facility that separates pedestrians from motorized vehicular traffic while crossing the Chattahoochee River. Therefore, the Preferred Alternative would have a long-term beneficial effect on visitor use and safety with trail improvements that support restored natural surface trails along contours to maintain high levels of visitor use.

Under the Preferred Alternative, the VCU Access Improvements would represent a long-term beneficial impact to visitor use and experience. Most adverse impacts would be relatively minor construction activities (compared to the approximately 5,500 acres of the CRNRA) lasting for only a short time, affecting a small number of visitors, relating to a small geographic fraction of the park while other trails and park amenities would be open during parts of construction, and are consistent with the CTMP. These impacts would generally be outweighed by related beneficial impacts.

¹⁵² NPS CRNRA CTMP, page B-74

CHAPTER 4: CONSULTATION AND COORDINATION

This chapter describes the public engagement and agency consultation to guide NPS during the preparation of this EA.

PLANNING AND PUBLIC INVOLVEMENT

PI 721010- The City of Roswell and GDOT provided four public information meetings held on March 3, 2011; May 19, 2011; September 22, 2011; and December 1, 2011. The City of Roswell hosted these meetings to keep the public informed throughout the project development process and to get comments about the project alternatives. The City of Roswell staff advertised each public meeting via electronic mail and posted meeting information on the city's project webpage. A Public Information Open House (PIOH) was held for the proposed project on April 26, 2012. The purpose of the open house was to inform the community and gather input regarding project alternatives. A public notice of the PIOH was published in local papers on April 4 and April 18, 2012. A second PIOH was held for the proposed project on December 11, 2018, and advertised in the county legal organ. The purpose of the second PIOH was to update the community on the status of the project, review the project history to-date, and present the layout of the preferred alternative. A Public Hearing Open House (PHOH) was held for the project in person on October 8, 2024, as well as live virtual event on October 10, 2024. Notification of availability of the EA and the comment period was advertised four weeks and two weeks prior to the meeting in the Fulton County Legal paper. The public comment period was open from September 6, 2024 – October 22, 2024.¹⁵³

PI 0009640- The PHOH was held virtually between September 16, 2020, and October 10, 2020, with an opportunity for an in-person meeting by request. Two ads notified the public of the opportunity to hold a PHOH and the availability of the EA, which were placed in the local newspaper, the Neighbor Newspapers, on September 16, 2020, and on September 23, 2020. A notice was also sent to a rowing club representative for distribution to the various clubs and rowers inviting participation in the outreach event. On October 29, 2013, a PIOH following guidelines and practices established by GDOT was held for the proposed project. Notification of the meeting was provided by a legal advertisement in the local newspapers of both Roswell and Sandy Springs and a 10-day public comment period was provided. Two meetings were held with public stakeholders on October 6, 2011, in Roswell, and October 11, 2011, in Sandy Springs.¹⁵⁴

¹⁵³GDOT PI 721010- Environmental Assessment, dated July 31, 2024, pages 60-62.

¹⁵⁴GDOT PI 0009640- Environmental Assessment, dated May 27, 2020.

VCU Access Improvements- NPS conducted internal scoping with GDOT and FHWA regarding project actions. Project engineers coordinated directly with NPS officials to blend new infrastructure into the natural landscape in accordance with the CTMP. The VCU Access Improvements were made available for public review through the preparation of the 2022 CRNRA CTMP. The public would be notified of the NPS VCU Access Improvements EA during the public review process. The EA would be available on the NPS Planning, Environment and Public Comment (PEPC) website for a 30-day public review.

AGENCY CONSULTATION

The NPS initiated coordination for this EA with relevant agencies and stakeholders in letters dated October 31, 2017.¹⁵⁵ Recipients included: the Chattahoochee Riverkeeper; River Through Atlanta; Trust for Public Land, Sierra Club – Georgia Chapter; High Country Outfitters, Atlanta Whitewater Club; Upper Chattahoochee Chapter of Trout Unlimited; Georgia Conservancy; St. Andrew Rowing Club; Georgia Power; Chattahoochee Nature Center; Atlanta Rowing Club; Atlanta Junior Rowing Club; Bike Roswell; Georgia Canoe Association; USFWS; GADNR; Atlanta Regional Commission; Georgia SHPO; Advisory Council on Historic Preservation; USACE; and the EPA.

The following federally-recognized tribes were coordinated with via letters dated October 31, 2017: Mississippi Band of Choctaw; Jena Band of Choctaw Indians; Absentee-Shawnee Tribe of Indians of Oklahoma; Eastern Shawnee Tribe of Oklahoma; Alabama-Quassarte Tribal Town; Alabama-Coushatta Tribe of Texas; Eastern Band of Cherokee Indians; Muscogee (Creek) Nation; Muscogee (Creek) Nation National Council; Poarch Band of Creek Indians; Thlopthlocco Tribal Town; and the United Keetoowah Band of Cherokee Indians. Additional agency consultation for each project is discussed below.

U.S. Fish and Wildlife Service

PI 721010- Section 7 coordination was sent to the USFWS by GDOT on November 17, 2016; July 8, 2021; and March 14, 2023. The USFWS responded November 21, 2016; and March 30, 2018.

PI 0009640- Section 7 coordination was sent to USFWS by GDOT on June 28, 2012; and January 29, 2015. Responses from USFWS were received on August 23, 2012; and February 17, 2015.

VCU Access Improvements- Coordination documenting that NPS has conducted consultation with USFWS pursuant to the ESA and NPS management practices has been completed. A list of

¹⁵⁵ Agency coordination is on file.

protected species and critical habitat protected under the ESA with potential to be affected by the project was screened through IPaC and provided to USFWS in correspondence dated October 31, 2017. Section 7 consultation under ESA was initiated on April 27, 2023, and a response was received April 28, 2023. Section 7 follow up consultation included a request for conference was submitted to USFWS November 20, 2023, with responses received November 28, 2023, and December 7, 2023. The Service acknowledged receipt of the correspondence, acknowledged the finding of no effect on federally listed species, and noted USFWS does not consult on 'no effect' determinations under section 7 of the ESA, but has no objection to the determination, and that the project has met obligations under section 7 of the ESA of 1973, as amended.

State Historic Preservation Office

PI 721010- A Section 106 Notification letter was sent to the Georgia SHPO May 23, 2012, and a response was received May 30, 2012. The Historic Resources Survey Report was provided to SHPO May 5, 2014, and received concurrence on May 12, 2014. The Phase I Archaeology report was provided to SHPO May 17, 2016, and received concurrence June 13, 2016. On February 15, 2017, a reevaluation memo detailing the revised boundary for the Roswell Historic District was provided to SHPO and concurrence was received February 28, 2017. In August 2017, an Addendum Phase I Archaeology report documenting project changes outside the CRNRA was provided to SHPO and concurrence was received August 28, 2017. A Cultural Resources AOE documenting the adverse effect to the Expanded Roswell Historic District including site 9FU228 was provided to SHPO and received concurrence June 5, 2019. A MOA between FHWA, GDOT, SHPO, and City of Roswell was developed to stipulate measures required to mitigate impacts to the Expanded Roswell Historic District, including the Ivy Mill archaeology site. The MOA was signed on March 14, 2025 by GDOT, May 15, 2025, by the City of Roswell, March 26, 2025, by SHPO, and March 21, 2025 by NPS. FHWA intends to sign the MOA after public review of the EA. FHWA notified the Advisory Council on Historic Preservation (ACHP) of the adverse effect determination on September 17, 2019, and the ACHP notified FHWA of its decision not to participate in consultation October 1, 2019.

PI 0009640- A Section 106 Notification letter was sent to the Georgia SHPO July 9, 2012, and a response was received July 17, 2012. The Historic Resources Survey Report was provided to SHPO May 2, 2013, and received concurrence May 15, 2013. On December 4, 2012, an Archaeology Short Form for Negative Findings was provided to SHPO, and an Addendum Phase I Archaeology report was sent to SHPO in September 2015. The Negative Findings report did not require SHPO concurrence and SHPO concurred with the Addendum Archaeology Report September 25, 2015.

On December 3, 2013, a No Historic Properties Affected Report was transmitted to SHPO and SHPO concurred December 18, 2013. In 2020, an AOE Addendum Report was provided to SHPO, and concurrence with the no adverse effect finding was received April 20, 2020.

VCU Access Improvements- A Notification letter and Phase I Archaeological Resources report were sent by CRNRA to SHPO to initiate Section 106 in October 2017 and a response was received December 15, 2017. On June 7, 2021, NPS, SHPO, and AECOM held a meeting to discuss cultural resources. A CLI was completed in 2018 through coordination with NPS to inventory, map, and assess features associated with the Ivy Mill site/9FU228, to support long-term preservation. The SHPO concurred with the CLI August 21, 2019. The Cultural Resources AOE for VCU Access Improvements was sent to SHPO February 2, 2023, and received concurrence March 6, 2023.

Tribal Consultation

PI 721010- Tribal consultation included transmittal of the Section 106 Notification letter and Archaeology Resource Reports to all tribal governments with interest in the project area. The following tribes were consulted with: Alabama-Coushatta Tribe of Texas, Alabama-Quassarte Tribal Town, Cherokee Nation of Oklahoma, Coushatta Tribe of Louisiana, Kialegee Tribal Town, Muscogee Creek Nation, Muscogee Creek Nation, Poarch Band of Creek Indians, Seminole Nation of Oklahoma, Seminole Tribe of Florida, and the Thlopthlocco Tribal Town.

PI 0009640- Tribal consultation included transmittal of the Section 106 Notification letter and Archaeology Resource Report to all tribal governments with interest in the project area. The following tribes were consulted with: Alabama-Coushatta Tribe of Texas, Muscogee (Creek) Nation, Muscogee (Creek) Nation National Council, Poarch Band of Creek Indians, Seminole Tribe of Florida, and the Thlopthlocco Tribal Town.

VCU Access Improvements- Tribal coordination letters were provided to 12 federally recognized tribes (see above for list of recipients) in October 2017. Tribal consultation for impacts to cultural resources associated with the VCU Access Improvements project was conducted by NPS separate from the GDOT PIs 721010- and 0009640. No responses were received.

US Army Corps of Engineers

PI 721010- Coordination with the USACE for the Section 404 permit is forthcoming. A Regional Permit (RP) 34 is anticipated due to permanent fill and clearing with Waters of the U.S.

PI 0009640- Coordination with the USACE for the Section 404 permit is forthcoming. A Nationwide Permit 14 is anticipated due to unavoidable stream and wetland impacts.

VCU Access Improvements- Coordination with the USACE for the Section 404 permit is forthcoming. A RP 32 or Nationwide Permit for temporary impacts to Big Creek would be obtained.

CHAPTER 5: LIST OF SUPPORTING PERSONNEL

Chattahoochee River National Recreation Area

Annie Couch, Hydrologist

Bill Cox, Superintendent (former)

Terri Fish, NPS/GDOT Liaison (former)

Ann Honious, Superintendent

Allyson Read, Biologist (former)

Alex Troutman, NPS/GDOT Liaison

Beth Wheeler, Chief of Planning, Resources, and Education

NPS Region 2

Tim Bemisferder, NPS Coordination (former)

Sabrina Henry, NEPA Specialist

Steve Wright, NEPA Specialist (former)

Mark Ford, Wetlands Section (former)

Byron Tsang, Wetlands Ecologist

AECOM

Jade Bilyeu, NEPA Planner

Carolyn Bryan, Ecologist

Beth Chance, Archaeologist

Cayley Champeau, Cultural Resources

Laura Dawood, NEPA Planner

Gabrielle Edwards, NEPA Planner

Lauren Falvey, Cultural Resources

Emery Hartz, NEPA Planner

Catherine Henry, NEPA Planner

John Hightower, Design

Emma Keethler, Cultural Resources

Ray Magsanoc, NEPA Planner

Mickey O'Brien, PM and Design

Nelson Tyer Jones, NEPA Planner

Will Smith, Ecologist

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people.

The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

**Appendix A- Topics and Action Alternatives
Considered and Dismissed from Further Analysis**

Topics Dismissed from Further Evaluation

Greenhouse Gas and Climate Change/Resiliency

As of this writing, there are no active Executive Orders to address greenhouse gas and climate change. Greenhouse gas and climate change would not be applicable.

Soundscapes

The NPS Management Policies 2006 state that NPS will preserve, to the greatest extent possible, the natural soundscapes of parks and will restore to the natural condition wherever possible those soundscapes that have become degraded by unnatural sounds (noise).

Under the No Action alternative, impacts on soundscape factors would remain the same as under the existing condition.

Noise levels associated with GDOT PI 721010- would increase by a negligible amount (3.7-decibels) which has been determined by the Federal Highway Administration (FHWA) to be barely perceptible to the human ear. Noise levels may also increase as a result of construction, but this impact would be temporary and noise levels would return to normal following project implementation. Construction of the Proposed Action Alternative would have temporary, intermittent noise impacts. To minimize construction noise impacts, construction noise control strategies may be implemented, including time constraints (e.g., prohibiting work during sensitive nighttime hours), sequencing of construction activities (performing noisier work during less sensitive time periods), or other appropriate source control methods. Temporary adverse effects would occur, but the effects would not be permanent. Therefore, this impact topic was dismissed from further analysis in this EA.

Lightscapes

The NPS Management Policies 2006 state that NPS will preserve, to the greatest extent possible, the natural lightscapes of parks, which are natural resources and values that exist in the absence of human-caused light. Artificial lighting will be restricted to areas where it is necessary for human safety and security and will use minimal-impact lighting techniques.

Under the No Action alternative, lightscape conditions would remain the same as under existing conditions. No new lighting would be introduced by the project, and therefore no direct lighting impacts would occur. However, indirect minor impacts may result from nearby urban development, including a new residential project north of the VCU. The surrounding area is largely composed of long-established parks and residential development, which would limit the extent of change to natural lightscapes.

Under the Proposed Action alternative, permanent lighting would be introduced as part of GDOT PI 721010- and PI 0009640 projects to enhance pedestrian and roadway safety. However, this lighting would be mitigated in the following manners.

This includes installation of downward-facing LED acorn-style fixtures consistent with the City of Roswell's historic district lighting standards. Lighting would be installed along Riverside Road and SR 9, including pedestrian lights, streetlights, and bridge lighting.

Lighting would operate only after sunset and would not impact visitors, as CRNRA areas are closed during nighttime hours. However, indirect effects to nocturnal wildlife and migratory birds may occur in areas where lighting is visible from natural habitats, particularly near SR 9 and Chattahoochee Circle. Light overspill into NPS-managed lands is expected to be minimized and mitigated due to the use of shielded downward facing light fixtures that would be 2700K along SR 9 and the pedestrian bridge over the Chattahoochee River. Proposed lighting over Big Creek would consist of smaller lights in the parapet. These strategies align with NPS goals for resource conservation and sustainable outdoor lighting.

A commitment in Appendix C is included such that GDOT/Roswell would provide an inventory of where the fixtures were installed with the specific fixture and lightbulb used to help the NPS monitor lighting and notify NPS upon construction completion and when the lights are activated.

Through the use of context-sensitive lighting design and best management practices, lighting impacts would be mitigated and are considered consistent with NPS management policies. NPS policies and principles on lighting are found here: <https://www.nps.gov/subjects/night skies/outdoor-lighting-principles.htm>. Therefore, this impact topic was dismissed from further analysis in this EA.

Wilderness

The CRNRA Vickery Creek Unit and the study area have been used as recreational areas since 1978 and have not been limited or protected from human activities. The project is located in an urban setting. No impacts to wilderness areas are anticipated. Under the No Action alternative, impacts on wilderness areas would remain the same. The Proposed Action alternative would not have any impact on wilderness areas. Therefore, this impact topic has been dismissed from further analysis in this EA.

Socioeconomics

The overall contribution of these projects to a socioeconomic effect would be minor and beneficial as these three proposed projects cumulatively contribute to infrastructure that supports the community recreation and socioeconomic goals outlined in the Roswell Recreation, Parks, Historic & Cultural Affairs 5-Year Master Plan (2022-2026).

Under the No Action alternative, impacts to a socioeconomic effect would remain the same as under the existing condition.

Implementation of the Proposed Action would add to the existing trails and enhance trail connectivity in the area, resulting in beneficial socioeconomic effects for the NPS CRNRA including increased accessibility and community cohesion. The Proposed Action alternative would have minor contribution to a socioeconomic effect for the CRNRA. Therefore, this topic was dismissed from further evaluation.

Hazardous Materials

Where trails are proposed in disturbed or previously developed areas of the park, considerations and verification of hazardous materials or contaminated conditions should be included. If any hazardous materials or contaminated conditions exist on the proposed site, a determination of impact and trail alignment options would need to be developed to address the conditions present. There are no hazardous materials or contaminated conditions located within the environmental

area of potential effect for the Proposed Action within the CRNRA. Under the No Action Alternative, impacts on hazardous materials would remain the same as under the existing condition. The Proposed Action would not have any impact on hazardous materials. Therefore, this impact topic has been dismissed from further analysis in this EA.

Geological Features and Processes

The Proposed Action is not anticipated to impact natural geological processes due to the minimal land disturbing activities. Under the No Action alternative, impacts on geological features and processes would remain the same as under the existing condition. The Proposed Action Alternative would have a negligible effect on soils due to construction activities within the proposed and existing ROW, and areas of trails. The existing ROW is already comprised of disturbed soils. Some erosion may occur during construction activities, but this would be offset due to the requirement to implement and maintain temporary and permanent erosion and sediment control BMPs. Therefore, this impact topic was dismissed from further analysis in this EA.

Nonnative or Exotic Species

Executive Order 13112, *Safeguarding the Nation from the Impacts of Invasive Species*, and the Federal Noxious Weed Act of 1974, as amended (7 U.S.C. 2801 et seq.), require Federal agencies to prevent the introduction of invasive species, provide for their control, and to minimize the economic, ecological, and human health impacts that invasive species cause. NPS Management Policies 2006 state exotic species will not be allowed to displace native species if displacement can be prevented, and will be managed and eradicated if already present if they do not meet an identified park purpose. The Service uses an integrated pest management (IPM) approach to address pest issues and reduce risks to the public, park, and environment. This includes managing the introduction, spread, and removal of nonnative and invasive species. Pest management is conducted according to the IPM processes in DO #77-7: Integrated Pest Management. Treatment of and avoidance of additional nonnative species is an aspect of the project alternatives, not an impacted resource.

The Proposed Action would have the same impacts to nonnative or exotic species as under the existing conditions. Active adaptation management has been identified in the CTMP. New construction and restoration actions would employ mitigating actions to avoid the spread of these types of species are reasons that this impact topic would have minimal adverse impacts from project actions and could be dismissed from the EA. During the construction process, the Contractor and GDOT would take measures to prevent or minimize the spread of nonnative or invasive species as appropriate for the time of year. The Contractor would adhere to GDOT Standard Specifications Section 201, Clearing and Grubbing of Right-of-Way which includes restrictions and requirements for preventing the spread of nonnative or invasive species (Appendix C).

Within proposed right-of-way areas, cleared areas would be replanted using native seeds for temporary stabilization and erosion control as well as permanent revegetation. Reseeding of right-of-way areas would be done in accordance with GDOT Standard Specification Section 700 – Grassing. This Standard Specification provides lists of native grasses that can be used for reseeding. The CRNRA has a list of “Native Seed and Plant Sources” which should be used in conjunction with GDOT Standard Specification Section 700 to select native grass species.

The nonnative or invasive species identified within the project area include Chinese privet, Japanese honeysuckle, leatherleaf mahonia (*Mahonia bealei*), mimosa (*Albizia julibrissin*), kudzu,

thorny olive (*Elaeagnus pungens*), multiflora rose (*Rosa multiflora*), Chinese holly (*Ilex cornuta*), Chinese wisteria (*Wisteria sinensis*), English ivy, Japanese stilt grass, monkey grass (*Liriope muscari*), and marsh dayflower (*Murdannia keisak*). The largely urbanized nature of the project vicinity has contributed to the introduction and spread of nonnative and invasive species due to the proximity of landscaped areas and risk of humans facilitating dispersal within the project area simply through recreational use of park facilities.

Air Quality

The NPS Management Policies 2006 state that the NPS has a responsibility to protect air quality under both the 1916 Organic Act and the Clean Air Act (CAA), as amended (42 U.S.C. 7401 et seq.). The project site is located within Fulton County, which has been determined by the EPA to be in attainment designated as maintenance for criteria pollutants (i.e., pollution levels are above the minimum levels established by the EPA). NPS policy states that in cases of doubt as to the impacts of existing or potential air pollution on park resources, NPS would err on the side of protecting air quality and related values for future generations. However, while construction vehicles would produce some emissions during construction, this impact would be temporary and negligible. The nature of the proposed pedestrian trail would not result in an increase in traffic volumes or increased emission levels and no impact to air quality is reasonably anticipated.

Under the No Action alternative, impacts on air quality would remain the same. The Proposed Action alternative would not have any impact on air quality. Therefore, this impact topic was dismissed from further analysis in this EA.

Environmental Justice

As of this writing, there are no active Executive Orders to address environmental justice. Environmental justice would not be applicable.

Action Alternatives Considered and Dismissed from Further Consideration

For purposes of this project, a compilation of action alternatives considered but not advanced for design were considered. The rationale for dismissing the action from further analysis is described below and in specific map units of a project area that constitutes the Proposed Action (e.g., GDOT PI 721010-, PI 0009640, and Vickey Creek Unit Access Improvements) consistent with DO-12 dismissal reasons.

GDOT 721010- Historic Roswell Gateway

Additional alternatives were considered for the Roswell Historic Gateway project.¹ Several different concept alternatives for addressing the deficiencies in the system were presented for public review and shortlisted during a public process, including a pair of one-way roads, a conventional divided median, partial new alignment, and road diet. Of these alternatives, only the road diet and partial new location would avoid impacts on NPS-managed lands. The road diet alternative was not advanced because it would not address the congestion transportation need or replacement of the deficient bridge over Big Creek. The partial new location alternative would not address the Big Creek deficient bridge and would have the largest number of required displacements. Because both the road diet and partial new location alternatives would not address the transportation need and purpose, these were removed from further consideration.

GDOT PI 0009640 SR 9 Pedestrian Bridge

For the 0009640 SR 9 Pedestrian Bridge, a bridge parallel and to the west was considered but was not selected due to increased utility conflicts, safety concerns for pedestrians crossing from the west side of SR 9 over the river, and the lack of connectivity to the CRNRA trails. Comparable impacts to NPS lands/resources would have occurred under this alternative.² Due to the conflict with the statement of safety need and purpose and increased costs, the alternative to the west was removed from further consideration.

VCU Access Improvements

SR 9/Allenbrook Area

Map Units 1 and 7 are located in the vicinity of SR 9/Allenbrook Area. Map Unit 1 consists of an existing gravel parking lot off of SR 9 servicing access to Allenbrook House. Consideration was

¹ GDOT PI 721010- Environmental Assessment, dated July 31, 2024. page 19.

² GDOT PI 0009640 Environmental Assessment, May 2020 (on file at GDOT OES, available upon request).

given to provide a trail connection in this location, but this location was not compatible with the Allenbrook Master Plan, so this option was dismissed from further evaluation.

Map Unit 7 is the location of the proposed main parking lot area and the access route to the historic Allenbrook House. For the purpose of the alternatives analysis, the access route and parking area were originally separated into unique features. There were three (3) parking lot configuration alternatives analyzed and eight (8) access trail alternatives evaluated. The access trail originally was configured to connect the Allenbrook House to the parking lot and to the trail to Lover's Leap in the vicinity of Map Unit 4. When the Lover's Leap Trail was removed from the project, the eight (8) access route alternatives were dismissed from further consideration because they were no longer necessary.

Two (2) additional parking lot alternatives were considered. Both would align along the western property line and would not curve into the park. These were dismissed from further consideration because they were not consistent with the Allenbrook Master Plan.

Water Quality

In Map Unit 7, due to the addition of new impervious surface with the Allenbrook parking lot, several drainage alternatives were evaluated to address the water quality from the new impervious surface of the parking lot as well as the new development adjacent and upstream to the western NPS-managed lands parcel boundary at the Allenbrook site to address and mitigate storm drainage runoff a Stormwater Management Plan was developed. Alternatives to benefit downstream water quality in the vicinity of the proposed new parking lot were evaluated including, construction of a traditional stormwater detention basin with a box level spreader at the outfall to regulate water velocity and volume, walls, fencing, and construction of riprap lined channels. The alternative was considered to be a potential educational opportunity and amenity; however, there would be extensive tree clearing and fencing that would have been out of context with the character of the site, and since it would be inconsistent with the NPS plans, it was removed from consideration as a feasible alternative. Rip rap was removed from consideration because it would not align with the natural context of the park's setting.

East side of Big Creek and Riverside Road Area

Map Unit 2 consists of the trail connection from Riverside Road to the existing trail east of Big Creek on the north side of Riverside Road. Two (2) alternatives in addition to the Preferred Alternative were considered for Map Unit 2- Area 2. One alternative would utilize stairs to be the

most direct route because of the steep terrain in the area; however, the stairs would increase trail difficulty and accessibility and thus was dismissed as not meeting the project need. The second alternative would utilize switchbacks to even the trail grade and increase accessibility, but this would be a more circuitous and longer route that would heavily impact a larger number of trees on this steep slope, and thus as an environmentally more damaging alternative, was dismissed in favor of the Preferred Alternative, discussed above.

Pedestrian Bridge at Big Creek (interior to park)

Map Unit 4 consists of the proposed pedestrian bridge over Big Creek. There were multiple options for Map Unit 4, divided into the north side and south side of the existing sewer easement, which was a variable influencing the alignment. Additional variables influencing not only the site selection, but design of the bridge and access to the bridge include the rock wall and steep terrain just west of the creek, which limits access and constructability in the area; the elevation of the bridge walking surface and 100- and 500- year flood elevations; as well as the sewer easement and connectivity to the existing trail on the east side of Big Creek. Siting the pedestrian bridge at a different location may have allowed other constructability alternatives instead of the temporary work bridge impact; however, based on the proposed bridge crossing near the utility line which has the rock outcrop considerations, the temporary impacts would be required.

On the south side of the bridge, two (2) of the alternatives were dismissed from further consideration because they would require the construction of a wall and were at an increased risk of requiring blasting for construction and environmentally more damaging. A third alternative included a boardwalk with a staircase similar to the Preferred Alternative, however, this option was dismissed because NPS and the City of Roswell preferred the staircase configuration of the Preferred Alternative.

On the north side of the bridge, three (3) alternatives were considered for this section. Two (2) alternatives were dismissed from further consideration because they required complex stair routing to provide access to the pedestrian bridge rendering this alternative more technically infeasible.

Pedestrian Bridge Design and Location

A suspension rope bridge was considered for the project; however, was dismissed as an alternative because it would not address safety standards. Construction of a bridge on site was also considered; however, dismissed as an alternative because of the larger footprint of on-site

work, construction equipment, and tree clearing and therefore, result in more environmental impacts.

An alternative to the Preferred Alternative to the location of the pedestrian bridge over Big Creek was to co-locate the bridge with the sewer line so that it would hover over the aerial sewer line where it crosses Big Creek. The benefit would be to take advantage of previously disturbed areas and avoid impacts to a new stream crossing. This idea was dismissed from further evaluation because the bridge would limit access for maintenance of the sewer line. Additionally, the design would not have provided a visual advantage because the sewer line would be visible from the sides of the banks and introduce more of the modern intrusion instead of the park context.

Temporary Construction Access

To avoid and minimize impacts to environmental resources to the maximum extent practicable, alternatives were considered for temporary construction access for the pedestrian bridge, footings, and placement of the precast bridge. Sub-alternatives for temporary construction crossings of Big Creek were included in Alternatives 1 (Preferred Alternative) and 2 (see Appendix B, SOF Table 2 for additional details).

South of Riverside Road Area

Map Unit 6 is Ivy Mill, the connection from Riverside Park to Riverside Road (south of Riverside Road and Big Creek). In addition to the Preferred Alternative, two (2) alternatives were dismissed from further consideration because they included more meandering routes that would require handrails for safety.

Railroad Area

Map Unit 8 is the trail in the railroad area. It was divided into three (3) geographic portions. The primary influencers of the alternatives considered in this area were minimizing footprint within the constraints of topography, minimizing clearing of trees, and reducing potential for walls required due to terrain.

Three (3) similar configurations were considered for the western portion. Two (2) alternatives were dismissed from further consideration because they involved greater limits of environmental disturbance than the Preferred Alternative.

The eastern portion of Map Unit 8 identified five (5) alternative configurations. One (1) alternative was dismissed from further consideration as it was the least direct route resulting in more

environmental impacts. Four (4) alternatives were similar to the Preferred Alternative but were dismissed from further consideration due to topographical constraints and technical infeasibility.

**COMBINED STATEMENT OF FINDINGS FOR
FLOODPLAINS AND WETLANDS**

- 1) SR 9 from SR 120 to the Chattahoochee River,**
- 2) Mitigation Trails for the SR 9 from SR 120 to the Chattahoochee River
Project, and**
- 3) SR 9 Pedestrian Bridge and Multi-Use Trail**

Fulton County, Georgia

For

Chattahoochee River National Recreation Area

June 2025

Recommended:

Ann Honious, Superintendent
Chattahoochee River National Recreation Area

Date

Certified for Technical Accuracy and Servicewide Consistency:

Grant Hildebrand, Acting Water Resources Division Chief

Date

Approved:

Darrell L. Echols, Acting Regional Director NPS, Region 2

Date

1. Introduction

Executive Order (EO) 11988, *Floodplain Management*, requires federal agencies, such as the National Park Service (NPS) and other agencies, to evaluate the potential impacts of actions in floodplains. Executive Order 11990, *Protection of Wetlands* requires federal agencies, including the NPS, to minimize the destruction, loss, or degradation of wetlands, preserve and enhance the natural and beneficial values of wetlands, and avoid direct or indirect support of new construction in wetlands unless there are no practicable alternatives, and the proposed action includes all practicable measures to minimize harm to wetlands. This Combined Statement of Findings (SOF) for Floodplains and Wetlands has been prepared in compliance with EO 11988 and EO 11990, and in general accordance with the outline presented in the *NPS Procedural Manual 77-1: Wetland Protection* (Reissued June 2016) and *NPS Procedural Manual 77-2: Floodplain Management* (NPS 2011).

Three projects are discussed in this SOF; 1) State Route (SR) 9 between SR 120 and the Chattahoochee River (i.e., Historic Roswell Gateway), 2) trail mitigation related to the SR 9 between SR 120 and the Chattahoochee River project (i.e., Mitigation Trails), and 3) SR 9 Pedestrian Bridge and Multi-Use Trail (i.e., SR 9 Pedestrian Bridge). Each project has separate funding and construction schedules. However, all three projects are located adjacent to or impact the Chattahoochee River National Recreation Area (CRNRA). Therefore, all three projects have been included in one SOF document. The impacts to the CRNRA from the Historic Roswell Gateway and SR 9 Pedestrian Bridge projects result in development of the mitigation trails. In each section of the SOF, the projects are discussed separately under the following headings.

- Historic Roswell Gateway
- Mitigation Trails
- SR 9 Pedestrian Bridge

2. Project Area Description

All three projects are located in an area consisting of single and multi-family development, commercial property, and recreational use areas. Figure 1 depicts the locations of all three projects.

Historic Roswell Gateway

Adjacent land use to the project area includes single family and apartment home complexes on the west side of the corridor and Vickery Creek Unit on the east and south ends of the corridor. On the north end of the project, there are commercial properties, churches, retail, and restaurants. South of the project, in addition to Vickery Creek Unit, other recreational uses include the Chattahoochee River, Riverside Park, Azalea Park, and Riverwalk Multi-Use Trail.

Mitigation Trails

The area proposed for mitigation trails is entirely within the boundary of the Vickery Creek Unit. Vickery Creek Unit consists of several miles of unpaved hiking trails, with the only improvements being the hiking trails, the historic Allenbrook House, an access driveway from Riverside Road, and a parking lot with information waysides. The project would include a combination of improvement to existing trails, construction of new trails, a mitigation trails pedestrian bridge over Big Creek, and decommissioning of some trails. The location of the mitigation trails extends from the historic Allenbrook House to the Chattahoochee River, and between SR 9/South Atlanta Road and Big Creek (also known as Vickery Creek).

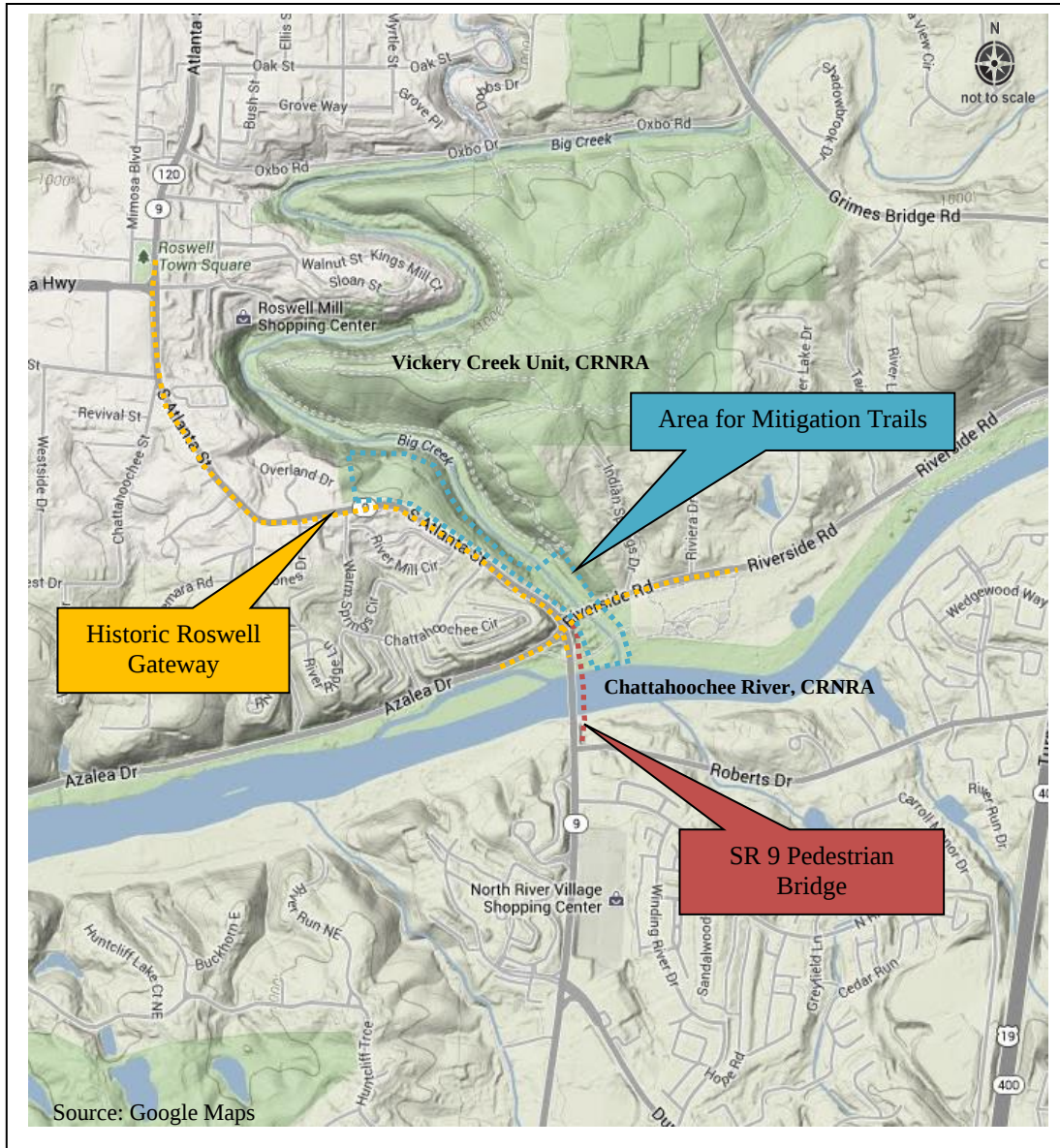


Figure 1 – Project Location

SR 9 Pedestrian Bridge

In the vicinity of the proposed project, the Vickery Creek Unit is adjacent to the east side of SR 9 and north of Riverside Road. The SR 9 pedestrian bridge would cross the Chattahoochee River, managed as part of the CRNRA. The river provides recreational opportunities such as fishing, rafting, canoeing, kayaking, and paddle boarding. A boat launch is located west of the project areas and the SR 9 bridge. The Chattahoochee River in the project area is bordered on its north side by Riverside Park, a local recreational facility managed by the City of Roswell. The south side of the river is bordered by single family homes and an undeveloped wooded buffer consisting of various pine and mixed hardwood species.

3. Proposed Actions

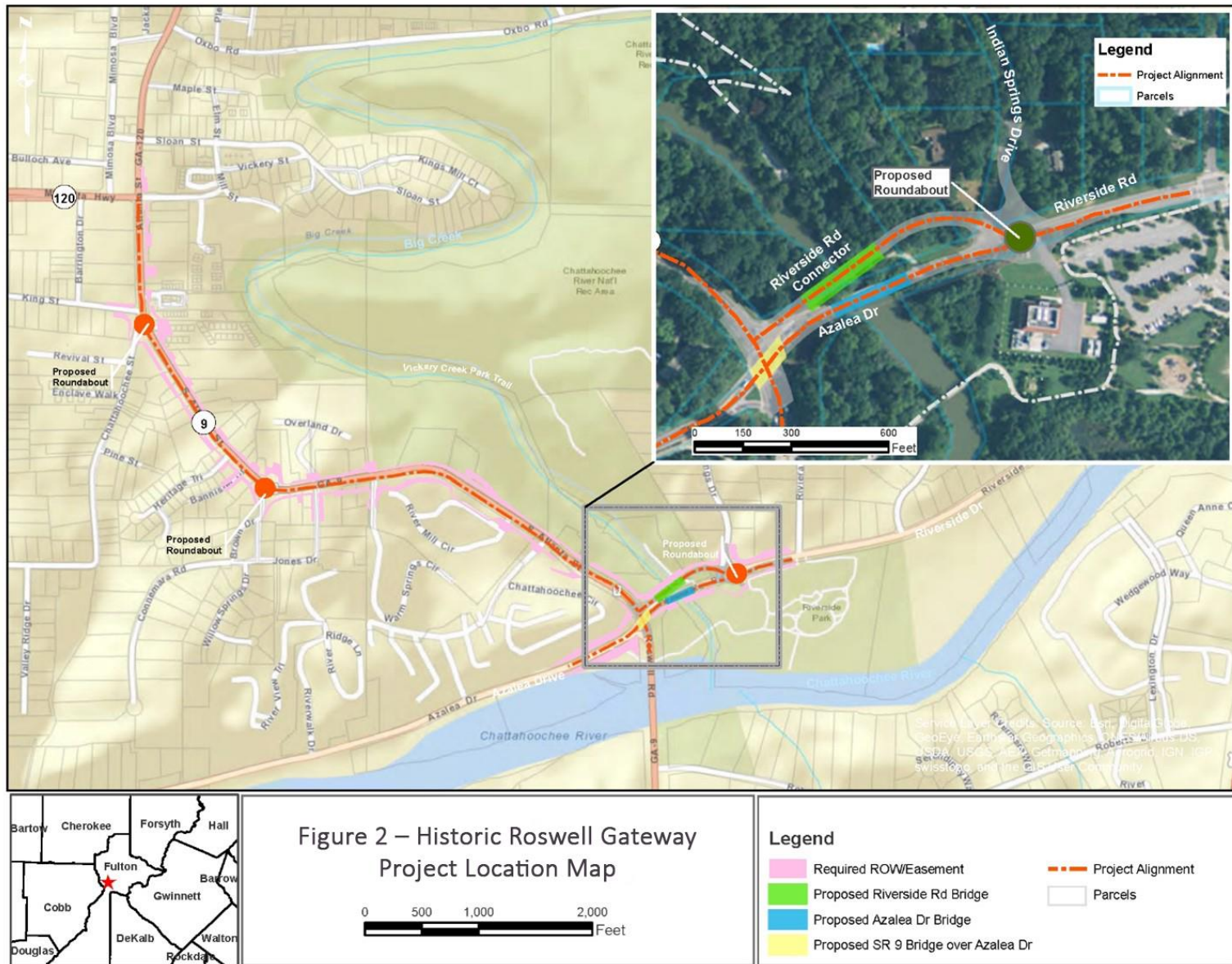
Historic Roswell Gateway

The preferred alternative would remove the existing three-lane reversible lane system along SR 9/South Atlanta Street and construct a four-lane divided highway between the SR 9 bridge over the Chattahoochee River and SR 120/Marietta Highway. The length of these improvements is approximately 1.1 miles. This four-lane section of SR 9 would connect to the existing four-lane sections south of Riverside Road/Azalea Drive and north of SR 120/Marietta Highway. The project also includes improvements to a 0.4-mile east-west segment along Azalea Drive/Riverside Road from just west of SR 9 to Riviera Road. The total project length is approximately 1.5 miles. Figure 2 depicts the Historic Roswell Gateway project.

The proposed four-lane divided roadway would include two dual-lane roundabouts on SR 9 at the intersections with Jones Drive and with Chattahoochee Street/King Street/Neel Reid Drive. The project would add an additional northbound left turn lane from SR 9 onto westbound SR 120 (making dual left turn lanes) at the north end of the project. The proposed project would extend Azalea Drive east under SR 9 and over Big Creek to Indian Springs Drive and continue east as Riverside Road past the intersection with Indian Springs Drive. A new roadway, the Riverside Connector, would be constructed just north of and parallel to the proposed Azalea Drive extension and would include a separate new bridge over Big Creek. The Riverside Connector would carry traffic between SR 9 and the Riverside Road/Azalea Drive/Indian Springs Drive intersection. A single-lane roundabout on Riverside Road would be constructed at Azalea Drive/Indian Springs Drive/proposed Riverside Connector. The project would grade-separate the intersection of SR 9 over Riverside Road/Azalea Drive and replace the existing deficient bridge on Riverside Road over Big Creek with two new bridges as described previously in this paragraph: one along the Azalea Drive Extension alignment and one along the new Riverside Connector alignment. Sidewalks and a multi-use trail would be constructed on both sides of SR 9 for the length of the project, connecting to existing trails and trails proposed in other, different projects from the Historic Roswell Gateway on the south end of the project, and the City of Roswell's Historic Square on the north end of the project.

The proposed typical section for SR 9 between Warm Springs Circle and SR 120 (north section) would include four 11-foot travel lanes (two in each direction) with a seven-foot raised median, including one-foot striped buffers, and six-inch vertical curbs. Eight-foot-wide continuous sidewalks would be constructed on both sides of SR 9 and would include a varied two to eight-foot grassed buffer (from the back of curb and gutter to the sidewalk) and a one-foot buffer strip along the sidewalk's outer edge. The proposed typical section for SR 9 between the Riverside Road/Azalea Drive and Warm Springs Circle (south section) intersections would include four 11-foot travel lanes (two in each direction) with a 20-foot raised median, including one-foot striped buffers and six-inch vertical curbs. A 10-foot-wide multi-use trail would be constructed along the east side of SR 9 and would include a seven-foot grassed buffer (from the back of curb and gutter to the trail) and a one-foot buffer strip along the trail's outer edge. A five-foot sidewalk would be constructed on the west side of SR 9 and would include a two-foot grassed buffer (from the back of curb and gutter to the sidewalk) and a one-foot buffer strip along the sidewalk's outer edge. The proposed right-of-way along SR 9 would vary between 80 to 186 feet.

The proposed typical section for Riverside Road/Azalea Drive would include two 11-foot travel lanes with an 8-foot shoulder, 2 feet of which would be paved. The Riverside Connector would include a total of three 11-foot travel lanes, consisting of two westbound lanes and one eastbound lane between SR 9 and the east end of the Big Creek bridge and changing to one westbound lane and two eastbound lanes approaching the Riverside Road/Azalea Drive/Indian Springs Drive roundabout. An 8-foot-wide sidewalk would be constructed along the eastbound lane of the Riverside Connector to the proposed Riverside



Road/Azalea Drive/Indian Springs Drive roundabout. At the proposed roundabout, the sidewalk would connect to the existing Riverwalk Trail near the parking lot at Riverside Park and would then turn back to the west and follow alongside Azalea Drive, continuing under the two proposed bridges to connect again to the existing Riverwalk Trail, as well as CRNRA trails.

Mitigation Trails

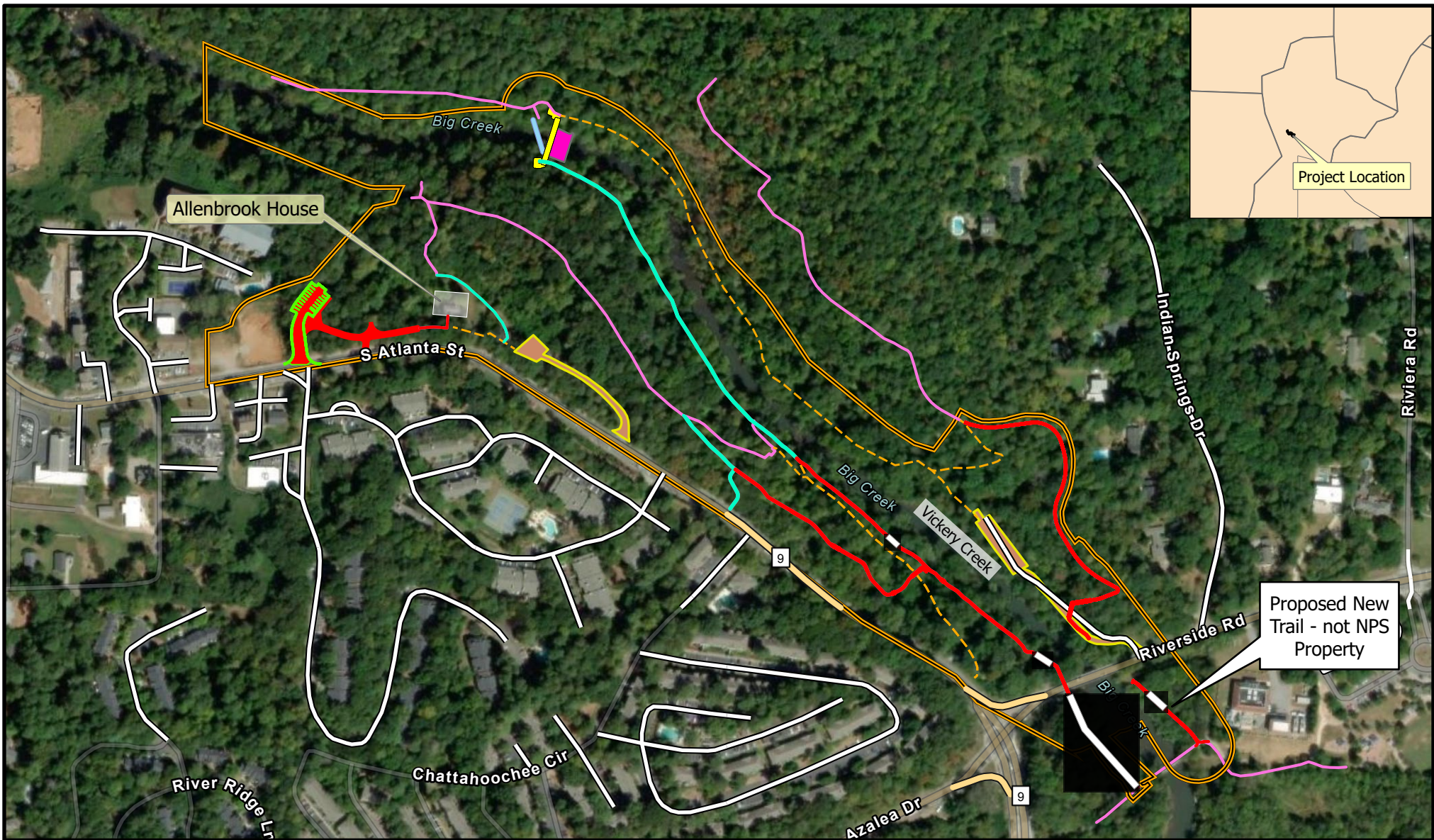
As a requirement for issuance of the Highway Easement Deed for impacts to NPS land as part of the Historic Roswell Gateway project and impacts to the Chattahoochee River from the SR 9 Pedestrian Bridge project requiring a Special Use Permit, mitigation is proposed to offset these impacts due to conversion into transportation use. The proposed mitigation includes a number of proposed actions for the Vickery Creek Unit including the construction of new trails (approximately 3,625 feet), upgrading existing trails (approximately 1,825 feet), decommissioning of some trails (approximately 3,285 feet), new parking lots, and entrance improvements. See Figure 3 for proposed changes.

The trails are intended to provide greater public access to the CRNRA's recreation facilities and the historic Allenbrook House as well as enhance the visitor experience on the trails and upgrade the current trails and access point configurations. The project would consist of three main trail categories: existing trails to be decommissioned, existing trails to be improved, and proposed new trails. The new trails would primarily consist of 3-foot natural surface trails with wooden stairs. Boardwalks would be installed over an intermittent stream (Intermittent Stream 5) and two wetlands (Wetlands 2a and 1b) to minimize and avoid impacts. No piles for boardwalk construction would be placed within these delineated resources. As part of the Mitigation Trails project, a prefabricated bow string truss mitigation trails pedestrian bridge is proposed over Big Creek. The trail from the proposed parking lot to the Allenbrook House would be the only paved trail associated with the project. Minor grading and tree removal are anticipated as a result of trail construction. Two existing gravel parking lots would be decommissioned and revegetated. An existing trail that fails to provide the desired connectivity would be decommissioned. Both new proposed trails and existing trails would be maintained by the NPS. A stone entrance sign and a new paved parking lot are proposed just west of the Allenbrook House at the SR 9 intersection. Grading activities, wall construction, implementation of drainage structures, paving, and planting are proposed as part of the parking lot construction. The mitigation trails proposed are consistent with the NPS CRNRA Comprehensive Trails Management Plan which received the approved National Environmental Policy Act (NEPA) Finding of No Significant Impact (FONSI) decision on January 24, 2023.

SR 9 Pedestrian Bridge

The CRNRA would undertake a federal action in issuing a Special-Use Permit to GDOT to construct a 674-foot-long SR 9 pedestrian bridge across the Chattahoochee River between the cities of Roswell and Sandy Springs. The SR 9 pedestrian bridge would support a multi-use trail and be constructed adjacent to, but detached from, the SR 9 road bridge. The trail would vary in width from 10 to 20 feet, with the 10-foot width on the north end of the project to connect to existing sidewalks. The 20-foot widths are refuge areas that would bulb out from the trail to allow pedestrians a place to stop and rest and enjoy the river scenery out of the path of more active users along the trail. The approach sections to the bridge would be constructed on fill, with a concrete retaining wall and stamped stone finish facing. The limits of the project would be Riverside Road on the north and Roberts Drive on the south. Figure 1 depicts the project location.

The NPS's regulatory authority applies up to the Ordinary High Water Mark of the Chattahoochee River in this area and therefore the bridge would be within CRNRA jurisdiction. Bridge construction would require the placement of six support piers within the Chattahoochee River.



Service Layer Credits: Hybrid Reference Layer: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS World Imagery: Maxar

Roswell NPS Mitigation Trail Project - Figure 3: Project Vicinity

Fulton County, GA

Legend

- | | |
|---------------------------------------|---|
| Ecology Environmental Survey Boundary | Existing Aerial Sewer Line over Vickery Creek |
| Proposed New Trails | Existing Parking Lots to be Decommissioned |
| Existing Trails to be Rehabilitated | Proposed Temporary Work Bridge |
| Existing Trail to be Decommissioned | Proposed Driveway |
| Existing Trails to Remain | Proposed Parking Lot |
| Proposed Pedestrian Bridge Design | Proposed Boardwalk |

0 150 300 600
US Feet



Additionally, temporary rock jetties would be required to support cranes necessary for construction. Two rock jetties would be constructed, one from each side of the river. The jetty placement would be phased so that only one jetty is within the river at a time. The rock jetties would be removed after approximately 18 months. The existing SR 9 bridge is currently the only available option for pedestrians to cross the river at this location. The bridge does not contain features to support safe pedestrian crossing, such as dedicated bike lanes or sidewalks separated from the traveled roadway by distance or vegetated buffer.

The purpose of the proposed project is to provide a safe alternative for pedestrians to cross the Chattahoochee River, connecting existing pedestrian facilities on both sides and improving access to recreational and entertainment opportunities, business offices, and residential areas within the communities of Roswell and Sandy Springs. Multi-use trails, playgrounds, a boat ramp, and rafting and rowing opportunities can be found within Riverside Park on the north side of the river. The Vickery Creek Unit of the CRNRA is also located on the north side of the river, northeast of SR 9. Business parks, restaurants, and shopping can be accessed from existing sidewalks on the south side of the river.

3.1 No Action Alternative

Historic Roswell Gateway

If the No Action Alternative were selected for the Historic Roswell Gateway, no roadway or pedestrian improvements would occur to improve operational efficiency along SR 9 or at the intersection of SR 9 and Riverside Road/Azalea Drive. With the No Action Alternative, no wetlands or floodplains would be disturbed. No land from within the CRNRA would be required for construction.

Mitigation Trails

With the No Action Alternative for the Historic Roswell Gateway project, no land would be required from within the Vickery Creek Unit, and no SR 9 Pedestrian Bridge impacts to the Chattahoochee River would be required, and therefore, no trail improvements would occur as a result of these transportation projects.

SR 9 Pedestrian Bridge

Under the No Action Alternative, the proposed trail and bridge would not be constructed, and no wetlands would be disturbed. There would be no safe pedestrian alternative to crossing the Chattahoochee River to connect residential areas and recreational opportunities on both sides of the river.

4. Floodplains

In general, floodplains can offer several valuable functions including flood storage and retention, groundwater recharge, nutrient removal, and wildlife habitat. The amount of natural vegetation cover present within a floodplain determines the degree of retention or effective function a floodplain can provide. The more vegetation that is present within the floodplain, the better the floodplain can protect the surrounding area from soil erosion, floodwater expanse, and strong water movements. The ecological value of a floodplain also increases when it is heavily vegetated because it provides a more suitable habitat for wildlife.

The Chattahoochee River within the CRNRA flows along the Brevard Fault within the Gainesville Ridges District. This district is characterized by a series of northeast-trending, low, linear, parallel ridges separated by narrow valleys, which drive the localized surface water hydrology of the Chattahoochee

River watershed. Flooding is controlled somewhat through releases from Buford Dam by the US Army Corps of Engineers (USACE). However, during heavy rainfall events over short periods of time, flooding is more likely downstream of the dam as a result of the narrow corridor created by geologic features described previously. In addition, urban sprawl along much of the river has increased impervious surfaces in the watershed, contributing to the frequency and height of floodplain overflows.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Fulton County, Georgia (Panel No. 13121C0063G), dated September 18, 2013, was referenced for floodplain information for all three projects.

Historic Roswell Gateway

The proposed project is within or adjacent to floodplains associated with Big Creek and the Chattahoochee River (see Figure 4). Within the area for construction of the proposed project, the tree stratum consists of 25 to 80-year-old species, including green ash (*Fraxinus pennsylvanica*), box elder (*Acer negundo*), red maple (*Acer rubrum*), river birch (*Betula nigra*), sycamore (*Platanus occidentalis*), water oak (*Quercus nigra*), willow oak (*Quercus phellos*), iron wood (*Carpinus caroliniana*), black walnut (*Juglans nigra*), black willow (*Salix nigra*), and sugarberry (*Celtis laevigata*).

The understory consists of saplings of the canopy species, as well as elderberry (*Sambucus canadensis*), Carolina laurel cherry (*Prunus caroliniana*), and red mulberry (*Morus rubra*).

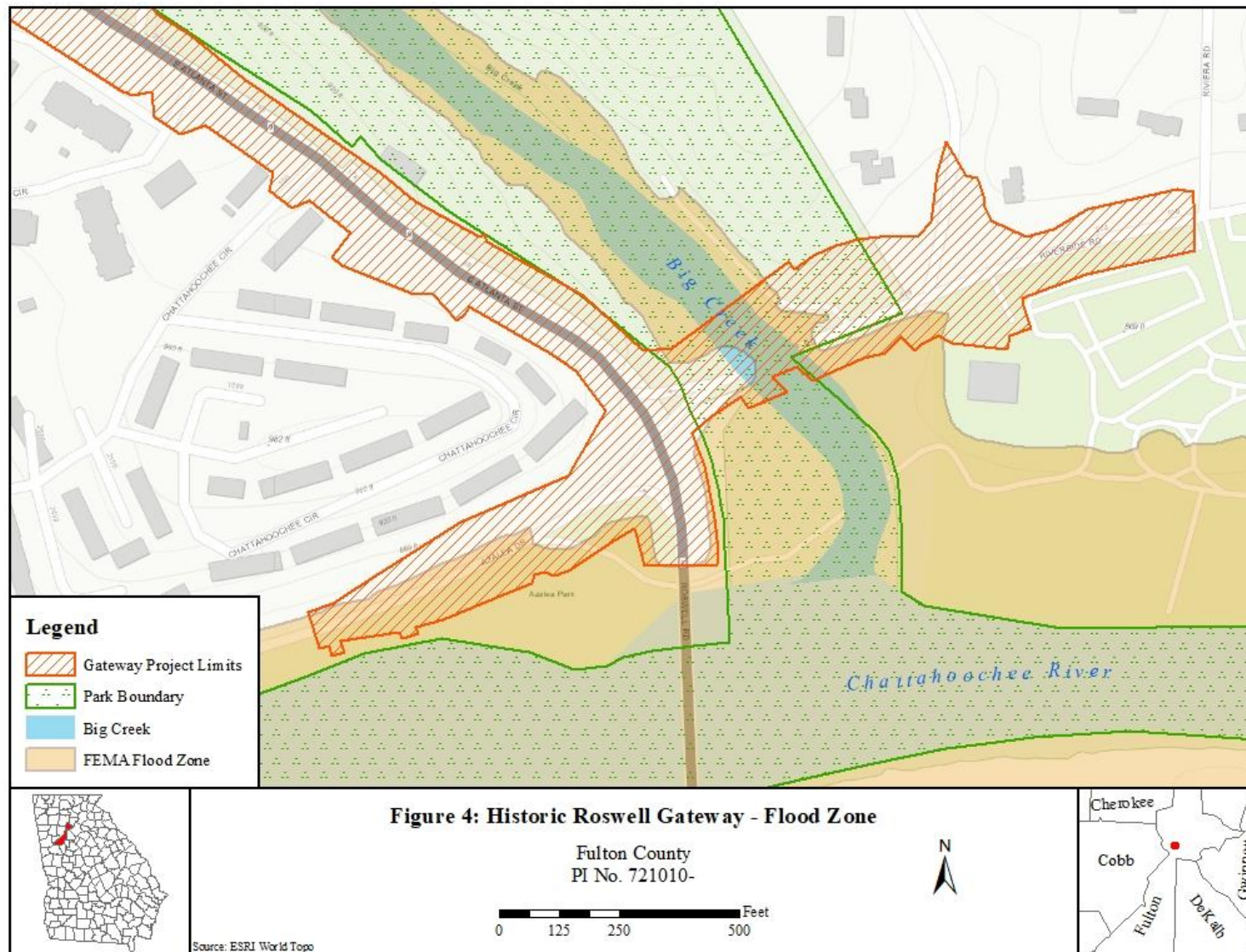
The herbaceous vegetation was fairly dense, especially in sunny locations, and consisted primarily of arrowleaf tearthumb (*Polygonum sagittatum*), swamp smartweed (*Polygonum hydropiperoides*), woolly rosette grass (*Dichanthelium scabriusculum*), Virginia wild rye (*Elymus virginicus*), calico aster (*Symphyotrichum lateriflorum*), greater bladder sedge (*Carex intumescens*), three-way sedge (*Dulichium arundinaceum*), hairy leafcup (*Smallanthus uvedalius*), pokeweed (*Phytolacca americana*), jewelweed (*Impatiens capensis*), common boneset (*Eupatorium perfoliatum*), soft rush (*Juncus effusus*), and river oats (*Chasmanthium latifolium*).

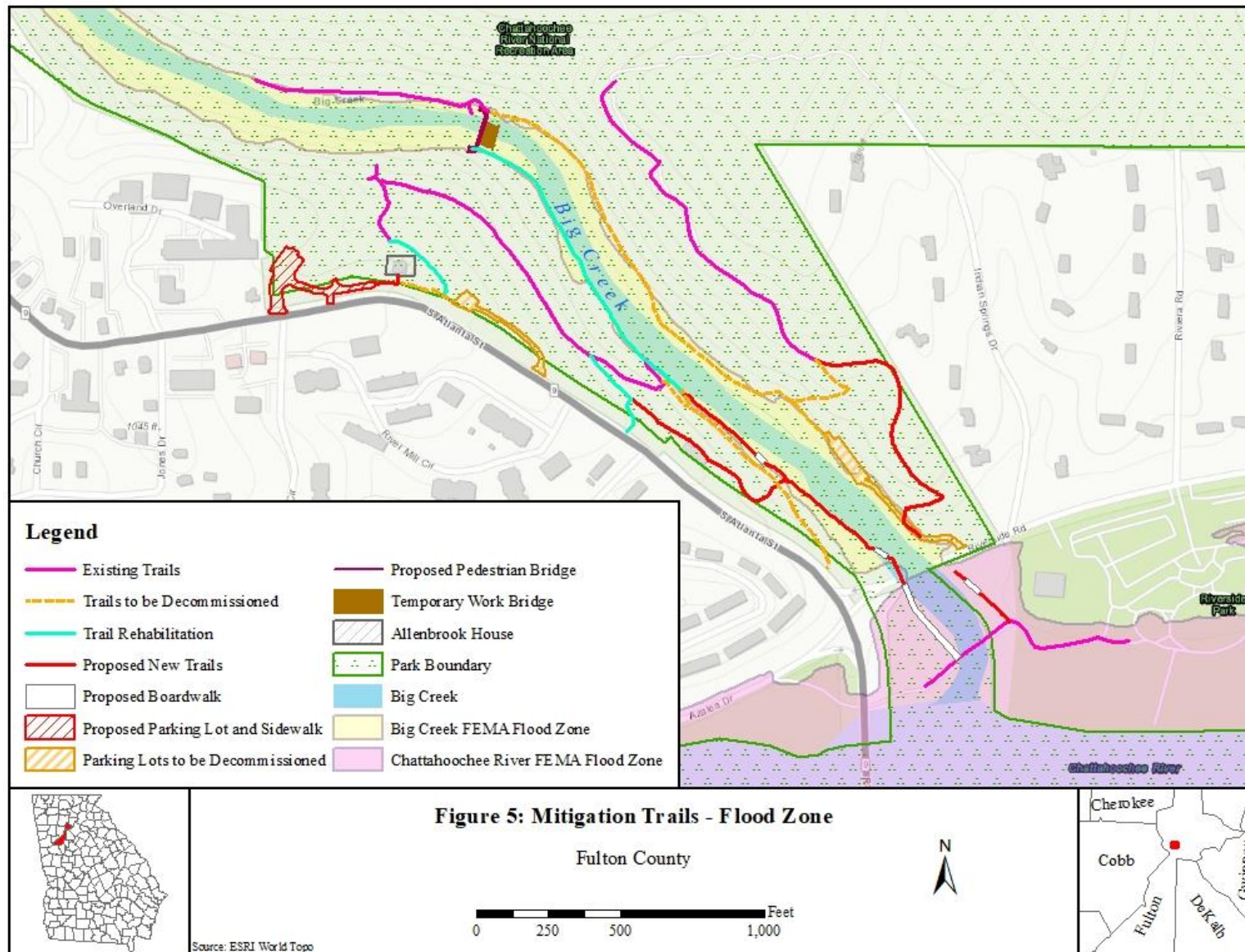
In addition to the native vegetation observed, there was also a significant amount of non-native invasive species within the area, such as Chinese privet (*Ligustrum sinense*), Japanese honeysuckle (*Lonicera japonica*), leatherleaf mahonia (*Mahonia bealei*), mimosa (*Albizia julibrissin*), kudzu (*Pueraria montana*), thorn olive (*Elaeagnus pungens*), multiflora rose (*Rosa multiflora*), Chinese holly (*Ilex cornuta*), Chinese wisteria (*Wisteria sinensis*), English ivy (*Hedera helix*), Japanese stilt grass (*Microstegium vimineum*), and monkey grass (*Liriope muscari*).

As a result of the density and diversity of plant species and visible signs of various terrestrial mammal, reptile, and bird species, the primary function of floodplains within the Historic Roswell Gateway project area is wildlife foraging and cover habitat, with a minor function being flood attenuation.

Mitigation Trails

Some segments of the new and upgraded trails are located within the 100-year floodplain (FEMA zone AE) (see Figure 5). The first floodplain area, located on either side of Big Creek and north of Riverside Road, is comprised of a sandy loamy clay substrate and consists of an overstory of river birch (*Betula nigra*), box elder (*Acer negundo*), water oak (*Quercus nigra*), red maple (*Acer rubrum*), a midstory of Chinese privet (*Ligustrum sinense*), tulip tree saplings (*Liriodendron tulipifera*), and an understory of pokeweed (*Phytolacca americana*), false nettle (*Boehmeria cylindrica*), trumpet creeper (*Campsis radicans*), poison ivy (*Toxicodendron radicans*), Japanese honeysuckle (*Lonicera japonica*), greenbrier





(*Smilax rotundifolia*), Virginia creeper (*Parthenocissus cinquefolia*), *Rubus spp.*, and English ivy (*Hedera helix*).

The second floodplain, located along the north bank of the Chattahoochee River and south of Riverside Road, is comprised of a sandy substrate and exhibits an abundance of Chinese privet (*Ligustrum sinense*) and several old growth hardwoods with an overstory of river birch (*Betula nigra*), box elder (*Acer negundo*), black walnut (*Juglans nigra*), sweetgum (*Liquidambar styraciflua*), basswood (*Tilia heretophylla*), a midstory of Chinese privet (*Ligustrum sinense*), pokeweed (*Phytolacca americana*), American hornbeam (*Carpinus caroliniana*), and an understory of Virginia creeper (*Parthenocissus cinquefolia*), sensitive fern (*Onoclea sensibilis*), *Rubus spp.*, and muscadine (*Vitis rotundifolia*).

As a result of the dense vegetation, the primary functions of the floodplains include buffering overland flows, slowing down runoff and preventing further erosion, and habitat for local wildlife. Additional ecological functions include processing organic wastes, filtering nutrients and impurities from runoff, groundwater recharge, and moderating water temperature through shading. The floodplains provide a broad area for overflow to spread out and temporarily store floodwaters, reducing flood peaks and velocities and the potential for bank erosion.

SR 9 Pedestrian Bridge

The SR 9 Pedestrian Bridge project is within and adjacent to the floodplain associated with the Chattahoochee River (see Figure 6). Due to the proximity of the Historic Roswell Gateway and SR 9 Pedestrian Bridge projects, the plant species and functions are similar. Floodplains within the area proposed for the SR 9 pedestrian bridge and trails contain 25 to 80-year-old tree stratum with dense understory and herbaceous plant species.

The floodplain associated with the SR 9 pedestrian bridge project primarily functions as wildlife foraging and cover habitat, with some minor functions for flood attenuation.

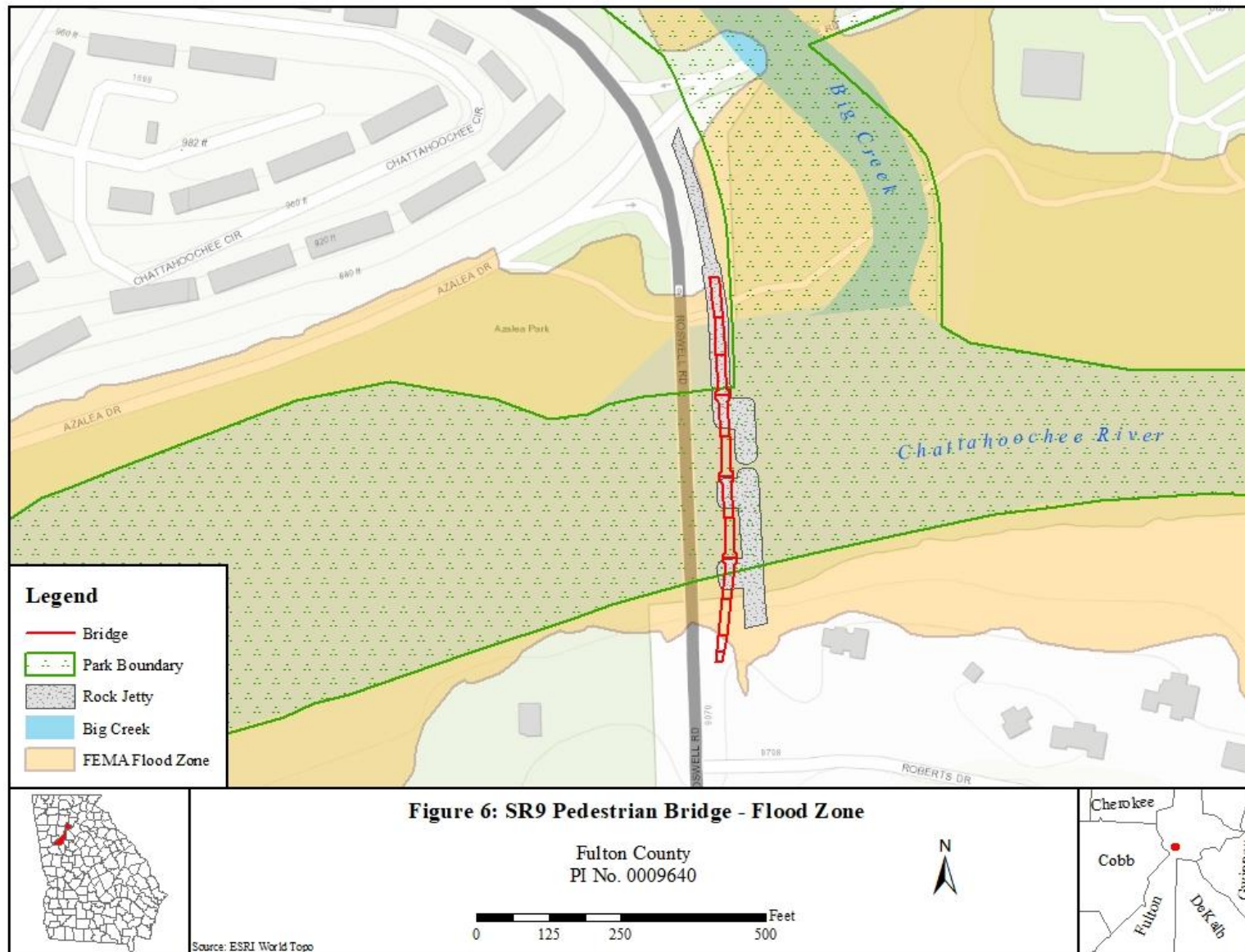
4.1 Floodplain Risk and Disturbance

Flood potential in the area of the proposed projects is influenced primarily by either stormwater runoff or hydroelectric power releases from Buford Dam.

The stretch of the Chattahoochee River below the Buford Dam traverses through suburban and urban areas containing residential, commercial, and linear transportation development. While development adjacent to the river is restricted to some extent by local requirements and state legislation, such as the Metropolitan Rivers Protection Act, stormwater runoff can be a major contributor to flooding due to the expanse of impervious surfaces near the river, especially during large, localized storm events.

Hydropower releases of water from Buford Dam can result in water level increases of up to 8 feet above average immediately below the dam. However, downstream of the dam, the height of water level change decreases with distance from the dam and along wider sections of the river. Although effects of water discharge from Buford Dam are felt throughout the entire 48-mile river stretch of the CRNRA and tributaries, water flow slows as the distance from the dam increases. The approximate time for the river to rise at Azalea Park after release from Buford Dam is approximately 10.5 hours (CRNRA website). However, given the distance of the project areas from the dam, release is not likely to be the primary cause of flooding.

Flooding of the Chattahoochee River at SR 9 occurs throughout the course of a calendar year, most often as a result of runoff from pervious surfaces or from dam release from Buford Dam due to heavy rainfall



events. Flooding outside the banks of the Chattahoochee River at this location typically only lasts several days, with most of the flooding occurring along the north bank of the river. The southern bank of the river is at a higher elevation and flood waters rarely extend outside the banks on the south side of the river. On the north side, the flooding usually extends up to Azalea Drive and Riverside Road. Although overtop of these roads has occurred, flood waters usually only impact the existing trail and parks along the river in the area. Therefore, flooding is typically short-term and only impacts recreational activities. While there may be some erosion, flooding rarely occurs to the degree that infrastructure (i.e., roads and bridges) or residential property is permanently damaged.

The US Geologic Survey (USGS) uses flood stages for events defined by the National Weather Service:

Action Stage - Water may cause minor impacts and be a nuisance to persons near the stream. Local governments or agencies may take actions to reduce property damage and danger to life.

Minor Flood Stage – Some property flooding and public threat may occur. Roadways, trails, park land, and private property near the stream may become flooded.

Moderate Flood Stage – Flooding of structures and main roadways may occur. Residences and numerous roadways near the stream may become flooded. Evacuations may be necessary. Disruptions to daily life.

Major Flood Stage - Extensive flooding of structures, main roadways, and other critical infrastructure may occur. Schools, hospitals, police stations, fire stations, residences, businesses, and roadways may become flooded. Evacuations may be necessary. Significant disruptions to daily life.

Available data from the USGS for a five year period between May 2019 and May 2024 indicate numerous instances where the flood stage was considered in an Action Stage and five instances in a Minor Flood Stage. There were no instances in this year five year period in the Moderate or Major Flood Stage categories.

Historic Roswell Gateway

In general, impacts at floodplain crossings are associated with roadway construction and culvert removal and/or extension. These impacts have been minimized to the extent possible by utilizing the existing roadway alignment where possible, as well as utilizing bridges to cross Big Creek and realigning intersecting roadways. The proposed project would result in the placement of approximately 8,979 cubic yards of fill within FEMA designated Zone AE floodplain with Regulatory Floodway. Hydrology studies of impacts from the project have determined that the project would not increase the 100-year flood elevations, floodway elevations, and floodway widths on Big Creek. As a result of these findings engineering No-Rise certifications were prepared for the project on May 11, 2016, and June 21, 2017.

Mitigation Trails

Construction of features associated with the mitigation trails would have minimal impact to floodplains. Direct impacts to the floodplain are the construction of new walking trails and the new mitigation trails pedestrian bridge over Big Creek. The trails would be natural surfaces and require clearing of some ground vegetation but would not include impervious surfaces such as asphalt or concrete. The trails in the floodplain would be approximately 3 feet wide and total approximately 690 feet of new and 1,834 feet of upgraded trails, requiring approximately 278 cubic yards of fill. Other trails associated with the mitigation trails have been designed outside floodplains. Impacts to the Big Creek floodplain would occur as a result of the construction of stairs for the mitigation trails pedestrian bridge over Big Creek. The fill amount

would be approximately 16 cubic yards. However, the amount of fill for the stairs and trails is considered a minimal impact since the trails are at grade. Stairs are part of the structure being built for the mitigation trails pedestrian bridge and would be open enough to allow water to flow through. A no-rise certification is not required. Additional fill to create access roads for construction activities are not anticipated at this time.

Under the proposed alternative a temporary work bridge would cause temporary impacts to Big Creek for up to six (6) months. The temporary work bridge is required to access and construct the bridge abutments and raise and erect the mitigation trails pedestrian bridge. Specifically, the temporary work bridge allows for the transport of construction equipment that is required on both sides of the creek. The temporary work bridge would also provide a work area required for the construction activities associated with erecting the bridge, such as welding segments of the bridge back together.

SR 9 Pedestrian Bridge

Permanent impact to the floodplain from construction activity would be negligible. The portion of the multi-use trail constructed on fill would be located within the SR 9 right-of-way and outside designated flood zones. The SR 9 pedestrian bridge would require the placement of bridge support piles in the floodplain.

Temporary impacts to the floodplain would occur during construction, resulting from the temporary rock jetties and cofferdams to drill bridge support piles. Temporary rock jetties would be placed into the Chattahoochee River from each bank. Also, temporary coffer dams would be constructed in the river to allow the drilling of bridge piles. Impacts within the floodplain for construction of the SR 9 Pedestrian Bridge project include:

Temporary Impacts

- **Rock Jetties** – Approximately 29,135 square feet. Two temporary rock jetties, one constructed from each bank. Jetties would not be constructed at the same time. Each would remain in place for approximately 9 months. Construction to extend jetties would occur from on top of jetties.
- **Forms for Drilled Shafts** – Approximately 27 linear feet. The area includes one casing for each of the six bridge supports within the river channel. Each form would be slightly wider than the shaft diameter.

Permanent Impacts

- **Bridge Pile** - Approximately 26 linear feet. The length is the diameter of six concrete and rebar columns. The columns range in diameter from four to five feet.

Hydrology studies of impacts from the project have determined that the project would not increase the 100-year flood elevations, floodway elevations, and floodway widths for the Chattahoochee River. As a result of these findings, an engineering No-Rise certification was prepared for the project on November 15, 2013.

5. Wetlands

The limits of each of the three projects were surveyed for wetland features using criteria outlined in the current version of NPS *Director's Order #77-1: Wetland Protection* (January 2016). NPS uses the Cowardin et al. (1979) wetland classification system as the NPS standard for defining, classifying, and inventorying wetlands per P.M. #77-1. Based on this classification, "the boundary between wetland and deepwater habitat in the Riverine and Lacustrine Systems lies at a depth of 2 meters (6.6 feet) below low water...". Using this classification system, Big Creek (identified in the SOF as Perennial Stream 2 (PS 2)

for the Historic Roswell Gateway and Mitigation Trails projects) and the Chattahoochee River (identified in the SOF as Perennial Stream 2 (PS 2) for the SR 9 Pedestrian Bridge project), in areas where the depth is less than 2 meters, are considered riverine wetlands by NPS. This clarification will be included with discussions about Big Creek and the Chattahoochee River, but the identification number will remain PS 2 as this identifier has been reviewed and approved by other federal agencies in documents prepared for the projects.

Any wetlands identified using the Cowardin classification system exhibited one or more of the following attributes:

- At least periodically, the land supports predominantly hydrophytic vegetation.
- Predominantly undrained hydric soil.
- The substrate is saturated with water or covered by shallow water during the growing season of each year.

Surveys were conducted by experienced wetland ecologists from consulting firms WSP for the Historic Roswell Gateway project, AECOM for the mitigation trails, and Edwards-Pitman Environmental for the SR 9 Pedestrian Bridge project (see the attachment ecologist qualifications, and reports in the Reference section of the document). Findings from the Historic Roswell Gateway and SR 9 Pedestrian Bridge project were included in reports submitted to GDOT to comply with requirements of the Federal Highway Administration (FHWA) for federal aid projects. Results from the mitigation trails survey are included in the Environmental Assessment being prepared for the NPS by AECOM.

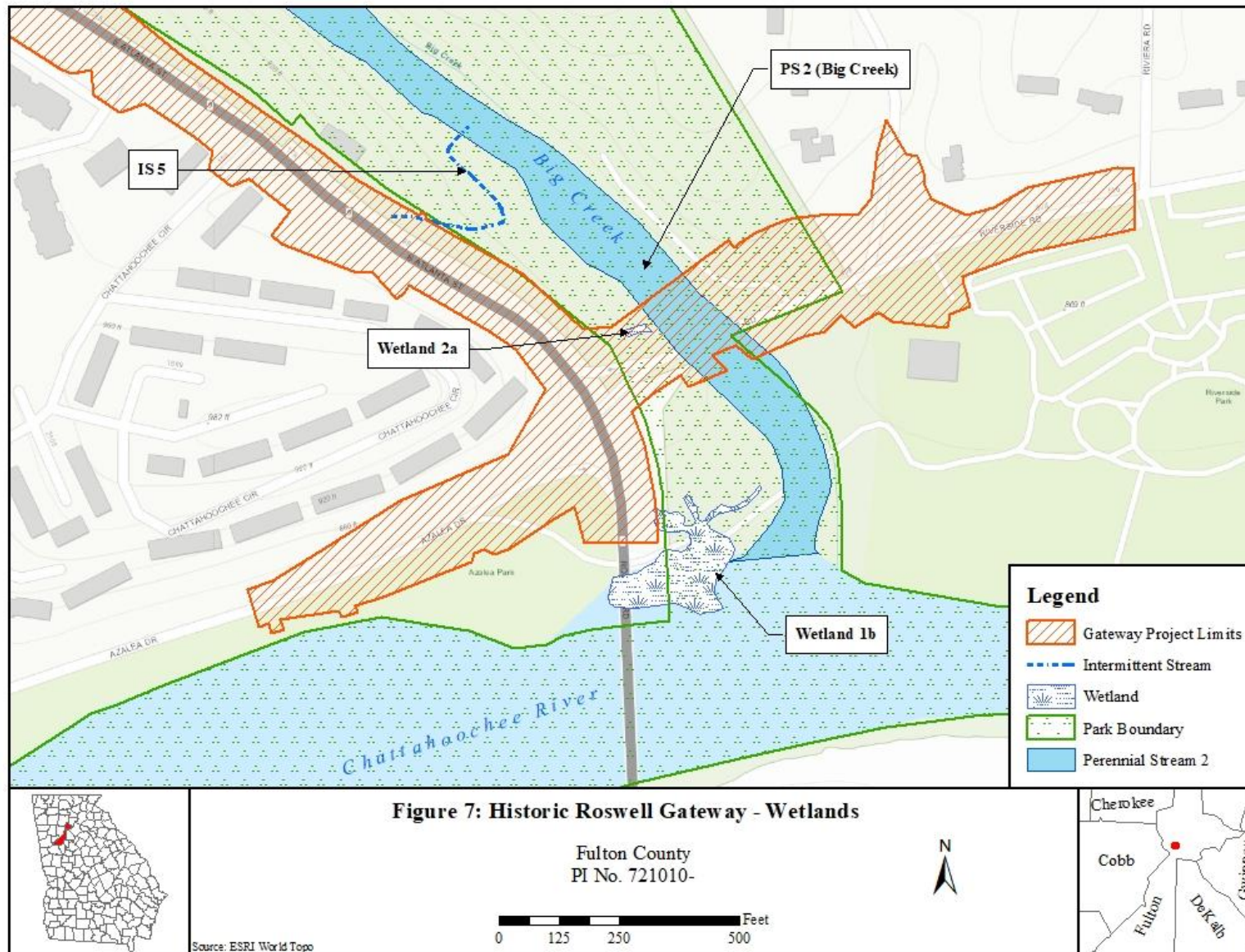
According to the US Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), soil survey data for Fulton County, the soils found within the survey areas that have a hydric component are Cartecay-Toccoa complex. The Cartecay-Toccoa complex is occasionally flooded and comprised of three components: Cartecay, Toccoa, and Weehadkee as a minor component. The Weehadkee component is the only component rated as hydric, and the USDA NRCS describes the Weehadkee series as consisting of very deep, poorly drained, and very poorly drained soils on floodplains along streams that drain from the mountains and piedmont.

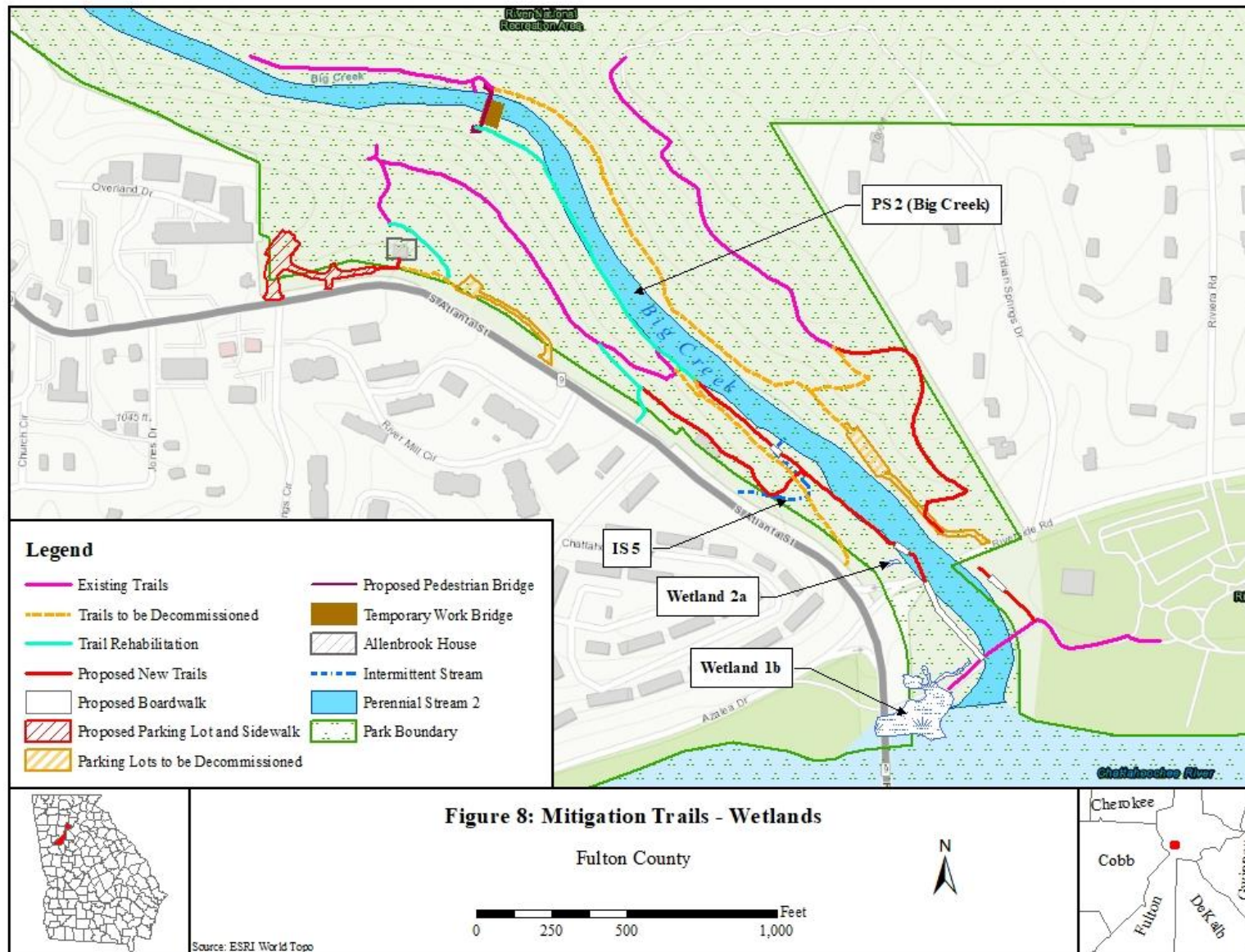
Historic Roswell Gateway

Four wetlands were identified within the project limits (see Figure 7). However, only three wetlands, PS 2 (Big Creek), Intermittent Stream 5, and Wetland 2a, are within the boundary of the CRNRA and would be impacted with proposed project improvements. PS 2 (Big Creek) is located east of SR 9 and flows generally north to south into the Chattahoochee River. Intermittent Stream 5 is conveyed under SR 9 by a culvert, with the outflow on the east side of SR 9 within the CRNRA. The stream flow is to the east toward PS 2 (Big Creek). Wetland 2a is located north of Riverside Road and east of SR 9. The wetland receives water from roadway runoff and overflow from Big Creek. The wetland has low plant species diversity, dominated by invasive plant species. The wetland is considered a low-quality wildlife habitat.

Mitigation Trails

Four wetlands were identified within the project limits (see Figure 8). However, only one wetland was identified within are within the boundary of the CRNRA and would be impacted with proposed project. PS 2 (Big Creek) is located east of SR 9 and flows generally north to south into the Chattahoochee River.





SR 9 Pedestrian Bridge

Two wetlands were identified are within the boundary of the CRNRA and would be impacted with proposed project improvements (see Figure 9). PS 2 (Chattahoochee River) flows east to west in the project area. Wetland 4 is located south of Riverside Road and east of SR 9. The wetland receives water from roadway runoff and overflow from Big Creek. The wetland has low plant species diversity, dominated by invasive plant species. The wetland is considered a low-quality wildlife habitat.

5.1 Wetland Function and Value

General values and benefits of the wetlands identified include minor groundwater recharge, wildlife habitat, dissipation of erosive force, minor sediment and nutrient retention, and water quality improvement. Wetland function and value as listed in DO 77-1 are included below.

5.1.1 Flora

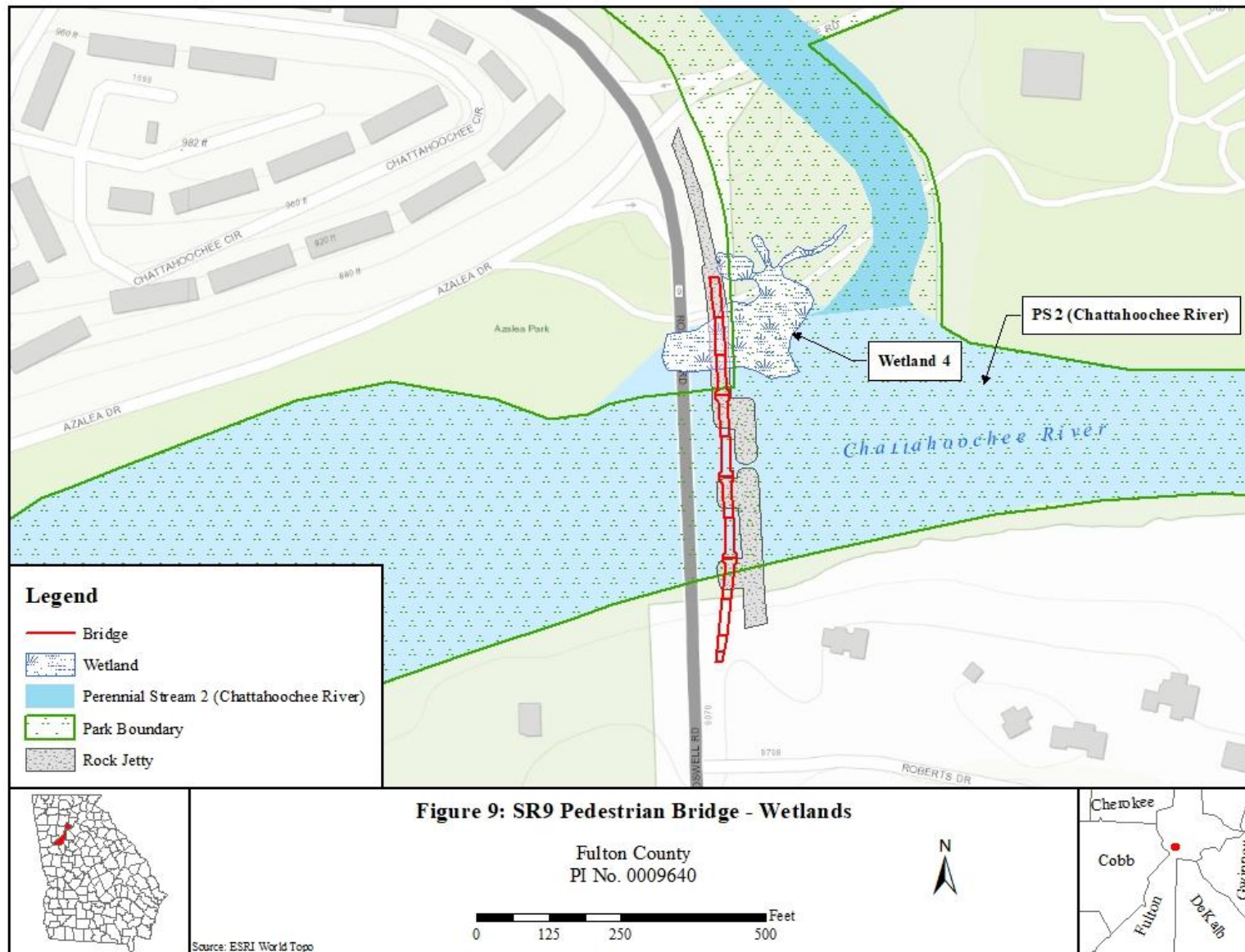
The non-riverine wetlands consist of a layered strata of an overstory of trees, an understory of young trees or shrubs, and an herbaceous layer. Overstory and understory vegetation consist of trees of various ages, including river birch, sugarberry, red maple, box elder, and sycamore. Herbaceous low or ground cover includes Chinese privet (*Ligustrum sinense*), false nettle (*Boehmeria cylindrica*), soft rush (*Juncus effusus*), common boneset (*Eupatorium perfoliatum*), smartweeds (*Polygonum spp.*), American hornbeam (*Carpinus caroliniana*), jewelweed (*Impatiens capensis*), marsh dayflower (*Murdannia keisak*), groundnut (*Apios Americana*), mondo grass (*Ophiopogon japonicas*), and crossvine (*Bignonia capreolata*). Invasive plant species are predominant. Within the riverine wetland systems, due to the mud, silt, and pebble substrates very little vegetation is present.

5.1.2 Fauna

A wide diversity of fauna is present within the CRNRA and potentially use the riverine and non-riverine wetlands identified for habitat and food sources. However, no species were observed within the wetlands during the period the wetlands were delineated in the field, but this is due primarily to the relatively short period of time the field surveys were conducted. Aquatic surveys were conducted of PS 2 (Chattahoochee River), as the wetland exhibited potential habitat for federally protected mussel species. No federally protected fish or mussel species were identified from the survey. PS 2 (Big Creek) did not provide suitable habitat for federally protected aquatic species, and no survey was conducted.

5.1.3 Biotic Functions

Overall, the non-riverine wetlands are typical of the undeveloped areas along the Chattahoochee River in this region. No federal or state-protected species that would use wetlands as habitat have been recorded within the survey area by the US Fish and Wildlife Service (USFWS) or the Georgia Department of Natural Resources (GADNR) and no protected species were identified during the field surveys. No temporary isolated pools important for amphibian species are located within or immediately adjacent to the proposed impacted areas. Portions of the wetlands located adjacent to the existing SR 9 bridge and roadway are considered highly disturbed. These areas are mostly associated with compacted soils and infestations of invasive species, such as Chinese privet, which reduce the biotic functions and wildlife value. The impacts to non-riverine wetlands from the Historic Roswell Gateway and SR Pedestrian Bridge projects would occur mostly within the areas of diminished biotic function.



In addition, the permanent impacts from these two projects to non-riverine wetlands consist of the small footprint needed for the SR 9 pedestrian bridge piles and the fill of the small wetland from proposed roads, and therefore, permanent effects to biotic functions would be minimal. Erosion, Sedimentation, and Pollution Control Plans would be implemented in accordance with the practices set forth in the Manual for Erosion and Sedimentation Control in Georgia and temporary wetland impacts would be replanted with native wetland/riparian vegetation. The erosion control plans would specify in detail the type and placement of control measures, and steps for monitoring, repairing, and replacing devices as necessary. Like orange barrier fence (obf) discussed in Section 5.1.7, the erosion control devices would be installed from the construction side of the right-of-way, avoiding additional impacts to the wetland. Removal of the obf and erosion control devices would be conducted by hand to further minimize impacts.

The riverine wetlands provide habitat and food sources, but similar to impacts to non-riverine wetlands impacts are temporary and the biotic function of both PS 2 (Big Creek) and PS 2 (Chattahoochee River) would recover to their preconstruction condition, or permanent impacts are small in comparison to the overall size of the riverine wetlands that permanent adverse impairment of biotic function would not occur.

5.1.4 Hydrologic Functions

The non-riverine wetlands in the project area function as flood water storage and wildlife habitat. There is no significant hydrologic function of the wetland north of Riverside Road due to its small size. Impacts to the hydrologic function of the wetland south of Riverside Road have been significantly reduced by the construction of the existing SR 9 bridge and roadway and its associated runoff. The permanent impacts associated with this project are only associated with the small footprint from the bridge piles; therefore, the permanent effects to hydrologic functions would be minimal.

The riverine wetlands provide a more important hydrologic function than the non-riverine wetlands. Based on topography PS 2 (Big Creek) conveys flood waters from rain events into the PS 2 (Chattahoochee River) reducing flood impacts from heavy rain events. Similarly, PS 2 (Chattahoochee River) receives floodwater from heavy rain events upstream and downstream of the CRNRA, as well as dam releases from Buford Dam. The width and course of the river of PS 2 (Chattahoochee River) through the metropolitan Atlanta are important factors in rapidly conveying increased water volumes from heavy rain events. To minimize impacts from flash flooding or heavy storm events, GDOT would conduct regular inspections of fill and rock jetties to monitor and abate sediment buildup. The GDOT would be responsible for mitigation required at the SR 9 Pedestrian Bridge project site or downstream within PS 2 (Chattahoochee River) as a result of a storm event.

5.1.5 Economic Factors

The primary economic factor associated with the riverine and non-riverine wetlands is recreational use and visitor enjoyment. However, this is primarily a consideration for Wetland 4 south of Riverside Road due to the multi-use trail running parallel with the river, and through the wetland, and PS 2 (Chattahoochee River) as kayakers, rafters, and paddle boarders could use the bank to access the river. There are designated facilities for this purpose at Azalea Park located west of the SR 9 bridge, so use as a landing area is minimal. During construction, connectivity from the trail would be temporarily disrupted due to the rock jetty and the SR 9 right-of-way to be used as a staging area for construction materials. Use and access to parks on both sides of SR 9, including the Vickery Creek Unit of CRNRA, would not be affected during construction. Once the projects are complete, recreational use of the trail would resume, without any permanent, long-term effects, and new and improved access, parking, and trails are proposed from both the Historic Roswell Gateway and Mitigation Trails projects. The support piles for the SR 9 pedestrian bridge are designed to allow the existing alignment of the trail to remain.

PS 2(Chattahoochee River) is used as a recreational resource for rowers, kayakers, canoers, and tube floating. Construction of the temporary rock jetties would impede the use of the entire river through the construction area. However, the phased construction of the jetties (constructing only one jetty at a time) would allow access to approximately half the river width even when jetties are present. The support piles for the SR 9 pedestrian bridge would align with the existing road bridge structures so that the SR 9 pedestrian bridge would not permanently affect recreational use on the river.

5.1.6 Social and Cultural Functions

The southern end of Vickery Creek Unit contains the ruins of the Ivy Mill archaeological site, located south of Riverside Road and east of SR 9. Portions of the Wetland 4 south of Riverside Road are located within the Ivy Mill archaeological site. The multi-use trail that is located parallel to the river and within the Vickery Creek Unit includes interpretive signs related to Ivy Mill. Access within the mill site is not permitted other than on the trail. The Ivy Mill site has been subject to previous archaeological studies, and the site is listed in the National Register of Historic Places. Due to disturbance from the construction of the SR 9 bridge in the past, limits of the archaeological site have been defined as the SR 9 right-of-way. Because the SR 9 pedestrian bridge would be constructed totally within the SR 9 right of way ROW, and access to the Ivy Mill site and the riverine and non-riverine wetland portions in the area are limited to the multi-use trail, no permanent impacts to social and cultural functions would occur from the SR 9 Pedestrian Bridge project.

Construction of the Historic Roswell Gateway project would result in land disturbance of approximately 6,800 square feet within the eligible boundary of the archaeology site south of Riverside Road, resulting in the loss of significant archaeological data associated with the site. Impacts within the site boundary are a result of the construction of bridges associated with the grade separation of SR 9 and Riverside Road. To mitigate the adverse effect on archaeological deposits at Ivy Mill, Phase III data recovery excavations would be conducted on impacted portions of the site. The archaeological data recovery at the site would also include a public education/outreach component. Learning activities would also be created to supplement the video, and an interpretive sign of Ivy Mill would also be created and installed at the site location.

The riverine wetlands PS 2 (Big Creek) and PS 2 (Chattahoochee River) were important to Native American cultures as well as the historic economic development of Roswell, and thus have played important contributions in the culture and history of the area. Construction of all three projects would temporarily and permanently impact minor areas of both riverine wetlands, but these impacts would not adversely affect the social and cultural contributions and connection the riverine wetlands have to area around the CRNRA.

5.1.7 Existing Technology Factors

Considerable evaluation was conducted to develop designs and alignments that considered constructability options to provide a sound engineering design that was cost-effective and minimized impacts to environmental resources.

The design of the proposed one-way pair road for Riverside Road was minimized to the extent that safety was not compromised. The non-riverine Wetland 2a north of the existing Riverside Road would be within the alignment of the westbound one-way pair of Riverside Road. However, other designs would not provide the operational efficiency or safety required for the volume of vehicles that are anticipated to use the roadway.

Relating to the Wetland 4 and PS 2 (Chattahoochee River) south of Riverside Road engineers conducted a bridge study that considered six different designs for the SR 9 pedestrian bridge. While clear spanning the

river may have the least impact from its footprint, this option was cost-prohibitive because it exceeded the funds available for the project. There were also engineering and material problems resulting from spanning the width of the river in the area. Other designs would have required more support within both riverine and non-riverine wetlands. The proposed bridge design would be constructed on piers instead of using fill material within the floodplain and Wetland 4 to support the structure. For sections of the approach trail constructed on fill, these areas are outside the 100-year floodplain and wetlands identified. In addition, in areas requiring fill, retaining walls are included in the design to minimize fill limits and construction slopes.

Construction alternatives were also included in the bridge study for the SR 9 pedestrian bridge. Construction techniques considered included a floating work barge, a sunken work barge, construction from the existing SR 9 road bridge, and rock jetties. The use of a floating work barge would require a constant flow of PS 2 (Chattahoochee River) at a certain level for an extended period of time. This would require coordination and agreement from the USACE for release from Buford Dam. Sinking a work barge for construction would require securing its location for extended periods of time and relocating and sink the barge several times to provide access for bridge construction due to the width of PS 2 (Chattahoochee River). There would also have to be consideration of how to transport cranes and equipment from the shore to the barge. A sunken barge would also affect recreational uses on PS 2 (Chattahoochee River) for several years while the SR 9 pedestrian bridge is under construction. Construction of the SR 9 pedestrian bridge from the SR 9 road bridge would require the closure of at least two of the four lanes of traffic for several years. Although not quantifiable in terms of dollar amount, given the volume of traffic using SR 9 every day and the extensive delays this would cause commuters, this alternative was not considered by GDOT. The temporary rock jetties necessary for construction equipment have been designed to the minimal footprint possible within PS 2 (Chattahoochee River). Given the size and weight of the cranes necessary to set the bridge supports, reducing the size of the jetties would risk contractor safety.

Construction and staging would be limited within the existing SR 9 right-of-way. Demarcation of the limits of construction would be through the placement of obf at the right-of-way. No construction, staging of equipment, or other work would be allowed beyond the obf. The obf would be installed by hand by driving steel rebar stakes to support the obf. The stakes are less than one inch in diameter. Erosion control devices would also be installed by hand, minimizing impacts to wetlands.

Impacts to PS 2 (Big Creek) from both the Historic Roswell Gateway and Mitigation Trails projects also considered several alternatives including use of bridge designs to clear span versus including supports within PS 2 (Big Creek), narrowing the typical section of proposed road improvements, and minimizing use of fill material. The new bridges for the Historic Roswell Gateway project on Riverside Road would clear span PS 2 (Big Creek), minimizing impacts. Similarly, impacts to PS 2 (Big Creek) from the Mitigation Trails project were minimized using a clear span bridge.

5.1.8 Scientific Values

Similar types and functioning wetlands non-riverine wetlands to be impacted by the environmentally preferred alternatives occur along the PS 2 (Chattahoochee River) at various locations within the 48-mile stretch of the CRNRA. The non-riverine wetlands that would be impacted from the Historic Roswell Gateway and SR 9 Pedestrian Bridge projects do not offer unique scientific value. Due to the commonality of the wetland and minimal permanent impact, the effect to scientific value would be considered negligible.

With regard to the riverine wetlands PS 2 (Big Creek) and PS 2 (Chattahoochee River) impacts to these wetlands would either be temporary and the wetlands would return to their preconstruction value, or permanently impacted in such a small area that their scientific value would not be adversely compromised.

5.2 Wetland Risk and Disturbance

Historic Roswell Gateway

Construction of the proposed project would result in temporary and permanent impacts to wetlands within areas managed by the CRNRA. Temporary impacts would occur within PS 2 (Big Creek) as a result of coffer dams required to remove existing bridge supports of the Riverside Road bridge. Permanent impacts to Intermittent Stream 5 would occur as a result of the extension of the existing culvert under SR 9, and the placement of riprap at the outflow of the culvert extension to minimize erosion. Finally, Wetland 2a is within the construction limits of the proposed westbound Riverside Road. Construction of the road would result in permanent impacts to the wetland. Table 1 summarizes impacts within the CRNRA as a result of the proposed Historic Roswell Gateway project.

Table 1

Project	Water Feature	Temporary Impact Area	Permanent Impact Area
Historic Roswell Gateway	PS 2 (Big Creek)	40 linear feet / 0.06 acre due to temporary cofferdams	0.0 acre
	Intermittent Stream 5	0.00 acre	133 linear feet / 0.025 acre due to fill and rip rap material
	Wetland 2a	0.0 acre	0.017 acre due to fill and clearing

Mitigation Trails

Construction of new trails and improvements to existing trails would temporarily impact one wetland within the CRNRA. Temporary fill impacts would occur with PS 2 (Big Creek) for placement of a temporary work bridge to construct the mitigation trails pedestrian bridge. Table 2 summarizes impacts within the CRNRA as a result of the proposed Mitigation Trails project.

Table 2

Project	Water Feature	Temporary Impact Area	Permanent Impact Area
Mitigation Trails	PS 2 (Big Creek)	0.12 acre of temporary fill for temporary work bridge	0.0 acre

SR 9 Pedestrian Bridge

Construction of the proposed project would result in temporary and permanent impacts to wetlands within areas managed by the CRNRA. Clearing and filling for construction of the SR 9 pedestrian bridge approaches would temporarily impact Wetland 4. Temporary and permanent impacts would occur within the PS 2 (Chattahoochee River) from the construction of temporary coffer dams and the drilled supports for the SR 9 pedestrian bridge. Temporary impacts would also occur from the placement of rock jetties within the river to facilitate construction. Table 3 summarizes impacts within the CRNRA as a result of the proposed SR 9 Pedestrian Bridge project.

Table 3

Project	Water Feature	Temporary Impact Area	Permanent Impact Area
SR 9 Pedestrian Bridge	PS 2 (Chattahoochee River)	0.442 acre due to placement of temporary rock jetties	0.002 acre due to 6 bridge piles
	Wetland 4	0.13 acre of fill and clearing	0.001 acre of fill

6.0 Justification for use of the Floodplain and Wetlands

The designs for the Historic Roswell Gateway, Mitigation Trails, and SR 9 Pedestrian Bridge projects have been prepared to minimize environmental impacts, achieve the stated need and purpose of each project, and meet currently acceptable design and safety standards.

Historic Roswell Gateway

The amount of fill in the floodplain required for the project has been minimized to the extent possible to safely construct the project. Fill impacts to the floodplain are primarily limited to the bridge approaches over Big Creek. Based on hydrology studies, a No-Rise certification has been prepared, indicating the required fill would not alter the capacity of the floodplain.

Wetland 2a, located north of Riverside Road, would be impacted regardless of an alternative that would safely accommodate future traffic volumes projected for the area. Riverside Road requires improvement to operate efficiently and safely for future traffic volumes and proposed improvements at the intersection with SR 9. The proposed Riverside Road improvements have been designed to minimize impacts and include the narrowest lane widths and shoulders allowed by current design standards for the posted speed, sloped shoulders, and guardrail where appropriate. However, given the location of the wetland, regardless of the proposed improvements, impacts to the wetland cannot be avoided.

Improvements to SR 9 cross Intermittent Stream 5 perpendicularly. Due to horizontal curves in SR 9 between the Chattahoochee River and SR 120, shifting the proposed alignment west to avoid impacts would require a longer section of the road than just at the crossing. Particularly to the south at the intersection of SR 9 with Azalea Drive/Riverside Road a shift would conflict with the intersection, and the existing SR 9 bridges over the Chattahoochee River, which are not being replaced or improved.

However, the culvert extension would be sized to accommodate projected flows, and riprap placement at the outflow would aid in preventing erosion downstream of the outlet.

Impacts to PS 2 (Big Creek) from the cofferdams would be temporary, to remove existing bridge bents. No permanent impacts to its function are anticipated.

Mitigation Trails

Some locations of the new and improved trails are within floodplain areas of Big Creek and the Chattahoochee River, but the use of natural surfaces in place of impervious material is anticipated to minimize runoff. Some vegetation clearing may be required, but these activities are not anticipated to have permanent, long-term impacts to floodplain function.

Because impacts to PS 2 (Big Creek) are temporary, the stream would be anticipated to recover and eventually revert to its pre-impact condition and functionality. In addition, the project designs have minimized impacts and represent an alternative that balances the benefit of the mitigation trails pedestrian bridge with natural environmental impacts, as discussed in the remainder of this section for mitigation trails.

Bridge Overview

The mitigation trails pedestrian bridge over Big Creek is part of the overall mitigation trails project and has been designed for consistency with other NPS bridge structures to align an aesthetic effect with the landscape. The bridge is proposed to be dark brown (weathered steel), including wooden decking for flooring instead of concrete, and the bridge foundations would also feature dark brown tinted concrete to blend the infrastructure into the landscape.

Impacts

The Mitigation Trails project would result in temporary impacts to PS 2 (Big Creek). The proposed temporary impact is due to the use of a temporary work bridge, which would be placed in Big Creek to accommodate the construction of the mitigation trails pedestrian bridge. No permanent impacts are anticipated.

Alternatives Analysis

The alternatives analysis for the bridge siting and design, constructability, and construction access is complex. The proposed mitigation trails pedestrian bridge site is located in a remote area of the CRNRA park away from direct access to disturbed areas.

One baseline assumption of the mitigation trails pedestrian bridge is that construction impacts are minimized by the use of a clear span prefabricated metal truss bridge, which is beneficial because:

- 1) this bridge minimizes the construction limits required to assemble the bridge at Big Creek and avoids additional wetlands/waters, rock, and tree impacts; and
- 2) this bridge can be broken into multiple segments and reassembled at Big Creek. This allows for smaller pieces to be carried through the park using smaller pieces of construction equipment that minimize the access route disturbances on the park's natural and cultural resources.

A second baseline assumption of the mitigation trails pedestrian bridge is its location. Siting the mitigation trails pedestrian bridge at a different location may have allowed for other alternatives to the temporary work bridge impact. Currently, the only crossing to the west side of Big Creek is along Riverside Road, and the new mitigation trails pedestrian bridge would provide an additional crossing within the park, further to the north of the current crossing. The new mitigation trails pedestrian bridge would provide an additional crossing in an area with no current access connecting the east and west portions of the park to enjoy the NPS trails and provide additional access to the Roswell Old Mill Park and Vickery Creek trailhead.

Proposed Alternative: Temporary Work Bridge

Under the proposed alternative a temporary work bridge would cause temporary impacts to Big Creek for up to 6 months. The temporary work bridge is required to access and construct the bridge abutments and raise and erect the bridge.

Specifically, the temporary work bridge allows for the transport of construction equipment that is required on both sides of the creek. The temporary work bridge would also provide a work area required for the construction activities associated with erecting the bridge, such as welding segments of the bridge back together.

Three (3) alternatives to avoid temporary impacts to Big Creek were considered but removed from further consideration.

Avoidance Alternative 1: Matting in Big Creek

Lining the streambed with heavy-duty matting for the construction equipment to travel across the stream was considered. However, this alternative was removed from further consideration for two reasons. First, a land bridge with fill material would be required to bring the construction equipment down the steep grade from the incised stream bank to the streambed which is not feasible. Second, frequent flash flooding of this portion of Big Creek would risk washing the matting downstream and would increase the likelihood of flipping or damaging the construction equipment.

Avoidance Alternative 2: Temporary Clear Span Work Bridge

A temporary clear-span work bridge was considered but dismissed from further consideration because the topography of the site and rock outcroppings in the area made launching a temporary clear-span bridge infeasible. Similarly, this is a contributing reason as to why the pedestrian clear-span bridge will need to be reassembled in segments.

Avoidance Alternative 3: Pile Driven Temporary Work Bridge

A temporary work bridge on piles was considered in order to minimize the impacts to Big Creek. However, this alternative was removed from further consideration because bedrock in the streambed would not allow for piles to be driven in this area.

Temporary Work Bridge Minimization Efforts

The footprint of the temporary work bridge has been minimized to the greatest extent possible in order to accommodate the anticipated load needed for equipment. Through coordination in 2022 with NPS temporary work bridge options were considered, including pipe culverts, rip rap, and gravel.

Minimization Alternative A: Rip Rap

Rip rap and gravel would have the potential for downstream deposits during the previously noted flash flooding events which would require additional temporary fill, there would be impacts to stream flow, and would not be a stable option.

Minimization Alternative B: Pipe Culverts

Pipe culverts were considered, but due to the bedrock, these culverts would require additional impacts to the streambed.

Proposed Minimization Alternative: Bottomless Culverts

In order to further minimize the impact of the temporary work bridge, bottomless culverts would be utilized to permit the passage of fish and other aquatic species during construction and to avoid unnecessary constriction of the channel width. Additionally, for all alternatives considered, all in-water work within Big Creek would be limited to take place outside of shoal bass spawning season, which is typically between April to June.

The bottomless culvert size, design, and number would be determined from the means and methods of the contractor's design used to construct the project. Typically, culvert construction utilizes a combination of aggregate sizes to provide for a stable roadbed that properly distributes the loads to the culvert. The sizes and quantity of culverts would depend on the market availability and the design the contractor's engineer provides. Preliminary hydraulic scenarios utilizing a variety of sizes and quantities of culverts using a 2-year storm event showed that the contractor's engineer should be able to identify a solution that allows the stream to continue to flow without causing detrimental impacts upstream of the temporary crossing. The 2-year storm event seems an appropriate design storm with a reduced probability of storm events given that it provides for a 50% yearly chance of occurrence and that the estimated lifetime of the temporary crossing is six months. To further reduce risks, the contractor should coordinate construction time during the dry season. To help reduce the velocities through the temporary culvert and to keep the changes in water surface elevations to a minimum, it is suggested that the temporary crossing be allowed to overtop during the 2-year storm event. Allowing overtopping should facilitate a design solution that would keep the majority of the anticipated storm events below the FEMA published 100-year storm elevations.

SR 9 Pedestrian Bridge

Construction of the trail would be perpendicular to the floodplain, minimizing the area of impact. In addition, the bridge would be constructed on piers as opposed to fill, which would result in less permanent impact.

In assessing alternative locations for the SR 9 pedestrian bridge and approaches, two primary factors were considered; 1) proximity to the existing SR 9 road bridge to minimize aesthetic and visual impacts, and 2) connectivity to existing recreational facilities and infrastructure. Although the attachment of the SR 9 pedestrian bridge to the existing SR 9 road bridge was not possible due to the need to maintain the structural integrity of the road bridge, placing the SR 9 pedestrian bridge as close as possible would provide a view of a singular structure across the river. Furthermore, the placement of piers for the SR 9 pedestrian bridge would align with support structures for the road bridge, providing a uniform view of the river.

With these two primary considerations in mind, there were two potential locations for the SR 9 pedestrian bridge: upriver, or east, of the SR 9 bridge, and downriver, or west, of the SR 9 bridge. The environmentally preferred alternative on the east side of the SR 9 bridge provides a location within or close to other recreation uses in the area including the Vickery Creek Unit, Riverside Park, Azalea Park, and the existing multi-use trail along the north bank of the river. In addition, this location would connect with a planned multi-use trail to be constructed for the Historic Roswell Gateway project that would extend north from the river, on the east side of SR 9. It also connects with the City of Sandy Springs planned sidewalk and pedestrian improvements south of the river.

Locating the alignment west of the SR 9 bridge would provide a connection to Riverside Park but would require the construction of additional infrastructure to connect to other recreational uses and planned and existing pedestrian facilities on both sides of the river. Additionally, due to overhead power lines on the west side of the SR 9 road bridge, the west alignment would be constructed further from the bridge and not provide the perception of a single structure across the river.

With regards to environmental impacts, because the wetland systems identified are parallel with the river, the alignment for the proposed trail would result in impacts regardless of location. While the area of impact may be slightly different between the two alignments, both locations would require a permit from the USACE. Due to the width of the river in the area, the construction and design of the bridge would be the same and require the placement of the same number of piers in the river to support the structure.

Because the proposed trail and bridge are to be constructed within the SR 9 right-of-way, disturbance of the wetland within the SR 9 right-of-way would not result in impacts to the Ivy Mill site. Fencing would be located along the right-of-way to identify limits for construction activities. All construction, staging, and activity would occur within the SR 9 right-of-way.

The area of permanent impact is small, and effects to the aesthetic value are considered negligible. Natural revegetation is anticipated to occur rapidly after construction and supports for the SR 9 pedestrian bridge would align with the road bridge structures providing minimal change in the setting of the wetland.

7. Mitigation

7.1 Floodplains

Historic Roswell Gateway

Fill material for the project would not alter the flood capacity of the 100-year floodplain of the Chattahoochee River and Big Creek. Proposed bridges would clear-span most of the floodplain, and any other impacts are considered minor and would not adversely change the function of the floodplain. No mitigation is required for floodplain impacts.

Mitigation Trails

Although fill material for construction of new trails or improvement to existing trails is required within the floodplain of Big Creek, the fill would not alter the flood capacity of the 100-year floodplain. Trail construction would utilize natural surfaces, and the fill necessary for trail construction and upgrade would be throughout a large area and not impact flood storage capacity or function. The fill required for steps to the permanent mitigation trails pedestrian bridge is minor and would not alter the flood capacity of the floodplain. The fill necessary for the work bridge for the construction of the mitigation trails pedestrian

bridge is temporary and would be removed after construction. No mitigation is required for floodplain impacts.

SR 9 Pedestrian Bridge

Fill material for the project would not alter the flood capacity of the 100-year floodplain of the Chattahoochee River. Proposed bridge piles to support bridge piers for the bridge structure in the floodplain would not affect flood storage capacity. No mitigation is required.

7.2 Wetlands

Temporary and permanent impacts to wetlands would occur from the three projects within areas under the jurisdiction of the NPS within the CRNRA. Mitigation for these impacts is discussed in Section 7.2.1.

Historic Roswell Gateway

Temporary and permanent impacts to wetlands would result from the implementation of the proposed project. Temporary impacts would occur to PS 2 (Big Creek) resulting from coffer dam placement, and permanent impacts to Intermittent Stream 5 due to fill and riprap placement for erosion control. Permanent impacts to Wetland 2a would result from the placement of fill material and clearing to construct road approaches to a bridge over Big Creek. Total impacts include 0.06 acre of temporary and 0.042 acre of permanent impacts.

Mitigation Trails

Construction of new trails and improvement to existing trails would result in 0.12 acre of temporary fill withing PS 2 (Big Creek) for the construction of a temporary work bridge to aid in the construction of the mitigation trails pedestrian bridge.

SR 9 Pedestrian Bridge

Temporary and permanent impacts to wetlands would result from the implementation of the proposed project. Drilling of support piles would result in permanent impacts from pile construction, and temporary impacts from drill shafts, within the PS 2 (Chattahoochee River). Temporary rock jetties would be required within the PS 2 (Chattahoochee River) to facilitate the construction of the SR 9 pedestrian bridge. A total of 0.572 acre of temporary impacts and 0.003 acre of permanent impact would occur.

7.2.1 Wetland Mitigation Plan

The project design emphasis for all three projects has been to avoid and minimize impact to wetland resources to the largest extent possible. A total of 0.752 acre of temporary impact and 0.045 acre of permanent impact would occur from the Historic Roswell Gateway, Mitigation Trails, and SR 9 Pedestrian Bridge projects. The total impacts to wetlands within the CRNRA from all three projects are summarized in Table 4.

Table 4

Project	Water Feature ¹	Temporary Impact Area	Permanent Impact Area
Historic Roswell Gateway	PS 2 (Big Creek)	40 linear feet / 0.06 acre due to temporary cofferdams	0.0 acre
	Intermittent Stream 5	0.00 acre	133 linear feet / 0.025 acre due to fill and rip rap material
	Wetland 2a	0.0 acre	0.017 acre due to fill and clearing
Mitigation Trails	PS 2 (Big Creek)	0.12 acre of temporary fill for temporary work bridge	0.0 acre
SR 9 Pedestrian Bridge	PS 2 (Chattahoochee River)	0.442 acre due to placement of temporary rock jetties	0.002 acre due to 6 bridge piles
	Wetland 4	0.13 acre of temporary fill and clearing	0.001 acre
Totals		0.752 acre	0.045 acre

¹Designations for the Historic Roswell Gateway, Mitigation Trails, and SR 9 Pedestrian Bridge projects are from Ecology Reports prepared by consultants for the Georgia Department of Transportation.

Impacts to wetlands within the CRNRA are increasingly a regular occurrence as a result of local, state, and federally funded projects within and around the Atlanta Metropolitan area. Due to the number of projects for which impacts must be mitigated in compliance with DO 77-1 and other NPS policies, the management staff at CRNRA has developed a strategy to mitigate impacts by focusing on the enhancement of a single wetland system, rather than identifying a separate wetland system for mitigation for individual projects. The staff of the CRNRA has identified a palustrine wetland system within the Cochran Shoals Unit totaling approximately 17 acres that would be the focus of mitigation projects (see Figure 10).

Palustrine wetlands occur within the floodplains of the Chattahoochee River, tributary streams, and associated sloughs. These wetlands provide important habitats for wildlife, protect the water quality of the river by stabilizing the stream and riverbanks, help control flooding, provide recreational birding opportunities, and produce plant material that helps support the adjacent aquatic ecosystem. An old roadbed currently bisects the wetland at Cochran Shoals.

Two deteriorating culverts transport the flow between the two wetland segments (approximately 785 feet long and 14.5 feet wide). The roadbed effectively acts as a dam resulting in altered wetland hydrology by requiring a higher stage to pass an equivalent discharge, so the water-level fluctuation during a storm is large and the wetland's hydro pattern is altered (see Photo 1). Additionally, debris commonly obstructs the culvert's inflow and beavers dam the inflow which increases the problem. The decreased flow rates cause increased sediment deposition in the upstream wetland. In addition to restricting flow, the road reduces the ability of aquatic organisms to transverse between the upstream and downstream portions of the wetland. The hydrologic restoration would require the excavation of the old roadbed material from the wetland along with the associated culvert and re-grading the site to its natural condition.

CRNRA management has identified the removal of the road as a high priority for the park and plans to complete the restoration in phases. The first phase of the restoration would remove 240 feet of the roadbed at the northeastern side of the restoration site. As identified by CRNRA management, the first phase of restoration to this wetland system would use funds from two sources. The first source is from the local sponsor for the three projects, the City of Roswell. The City would contribute \$152,673.00 as mitigation for impacts on NPS property resulting from the construction of the Historic Roswell Gateway, Mitigation Trails, and SR 9 Pedestrian Bridge projects. The second source of funds to complete this first phase would come from Federal Lands Recreation Enhancement Act funds. No funds prohibited under Section 5.2.3 of PM 77-1 for wetland projects would be used for mitigation of the wetland system.

In general, in-kind mitigation is preferable to out-of-kind mitigation because it is most likely to compensate for the functions and services lost at the impact site. However, in the case of the impacted Riverine Wetlands (0.649 acre) from the SR 9 Pedestrian Bridge, Mitigation Trails, and the Historic Roswell Gateway projects, it was decided that additional/enhanced Palustrine Wetland would adequately compensate for the lost functions and services of the 0.622 acre of temporary impacts and the 0.027 acre of permanent impacts to the Riverine Wetlands as it would mitigate for the loss of flood water storage and wildlife habitat lost by the three projects. In order to assess the wetland functional improvements of removing the roadbed, the Freshwater Wetland Qualitative Assessment from the Savannah District USACE was completed. The current Water Storage Functional Score for the Cochran Shoals wetland is low. The removal of the roadbed (a structure obstructing hydrologic flows) increases the Water Storage Functional Score to Moderate. Additionally, wildlife habitat would be improved in the Cochran Shoals wetland with the roadbed removal because it would provide a corridor for aquatic organisms to transverse between the upstream and downstream portions of the wetland.

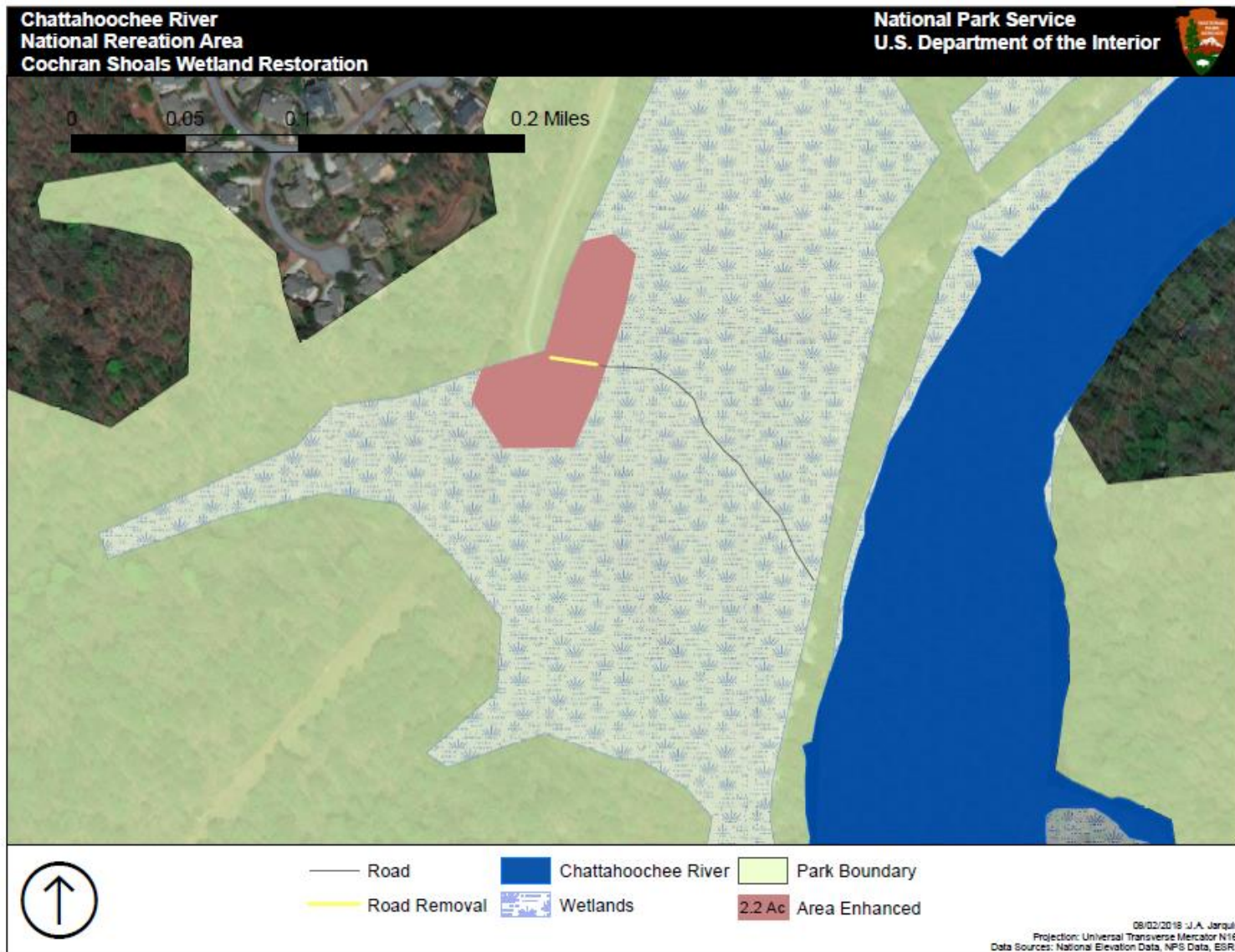


Figure 10 – Wetland Mitigation Site



Photo 1 – Roadbed Dam

With the removal of 240 linear feet of roadbed, 0.080 acre of wetland would be created (240 linear foot length x 14.5 linear foot width). The ratio of wetlands created to permanently impacted 1.775:1 (0.080 acres created: 0.045 acres lost), which is consistent with the NPS no-net-loss wetland policy. Additionally, the roadbed removal would enhance 5.197 acres of wetlands. Since the removal of the wetlands would be entire roadbed would enhance the entire 17-acre wetland, the removal of a portion of the roadbed (240 linear feet of road removed/785 linear feet of total road) would proportionally enhance the wetland (17 acres wetland x 30.6% enhanced). The ratio of wetland-enhanced to temporarily impacted wetlands would be 6.912:1 (5.197 acres enhanced: 0.752 acre temporarily impacted). The final ratio of mitigated wetlands to total wetlands impacts is 6.622:1 (5.277 acres mitigated: 0.797 acres impacted), which again is consistent with the NPS no-net-loss wetland policy. This project also fulfills the objects of Call to Action 22 by promoting conservation to support healthy ecosystems.

Additionally, best management practices would be implemented during the construction of the Historic Roswell Gateway, Mitigation Trails, and SR 9 Pedestrian Bridge projects to help reduce impacts to wetlands during construction. These Best Management Practices include:

- Equipment would be inspected for leaks of oil, fuels, or hydraulic fluids before and during use to prevent soil and water contamination. Contractors would be required to implement a plan to promptly clean up any leaks or spills from equipment, such as hydraulic fluid, oil, fuel, or antifreeze.
- Equipment would be washed and cleaned of mud and debris that may transport unwanted pests before being brought on-site to prevent the transportation of exotic invasive plants and animal species.
- Fueling and maintenance of equipment would occur off-site to prevent the risk of spills.

- Actions would be taken to minimize effects on site hydrology and fluvial processes, including flow, circulation, water level fluctuations, and sediment transport. Take care to avoid any rutting caused by vehicles or equipment.
- Measures would be employed to prevent or control spills of fuels, lubricants, or other contaminants from entering wetland areas if a spoil occurred. Action would be consistent with state water quality standards and Clean Water Act Section 401 certification requirements.
- Temporarily impacted areas would be restored to their pre-construction condition using native vegetation.
- Appropriate erosion and siltation controls would be maintained during construction in accordance with an approved Erosion, Sedimentation, and Pollution Control Plan.

Phase 1 - Mitigation Success Criteria

The mitigation would be considered successful if the following conditions are realized at the end of the 5-year monitoring program:

- Hydrologic connectivity between the two wetlands is established and maintained,
- Erosion is not occurring around the mitigation site,
- Wildlife species are utilizing the established corridor,
- 70% coverage of hydrophytic vegetation

A schedule of the monitoring program is provided in Table 5.

Table 5

Mitigation Activity	Due Date
Remove Road/Re-grading the Site	Fall/Winter 2024
Time-Zero Monitoring Report	April 2025
First Monitoring Report	April 2026
Second Monitoring Report	April 2027
No monitoring would be done after the third and fourth growing season	2028-2029
Final Monitoring Report (after fifth growing season)	April 2030

Phase 1 - On-Site Monitoring Methodology:

Monitoring would be conducted for the mitigation site, beginning immediately after the mitigation (after the roadbed removal and re-grading), which would be designated as time-zero or the beginning of the mitigation time period. Monitoring surveys would be done by qualified CRNRA personnel after the first growing

season or approximately one year. Monitoring surveys would include vegetation surveys, aquatic macroinvertebrate surveys, and the deployment of wildlife cameras for 1 month in the area of the old roadbed. If needed, supplemental work would be completed, and another monitoring survey would be done after the second growing season. A final monitoring survey would be done after the fifth growing season.

Status/documentation of vegetation, photographs, wildlife, and general weather would be documented at the mitigation site. All reports will be kept on file at CRNRA headquarters. Any issues that arise or corrective action that needs to be taken will also be included in the monitoring reports.

Monitoring Reports

Monitoring reports would be prepared by CRNRA resource management staff. These reports would provide documentation of the success of the mitigation program and the general condition of the enhanced area.

Monitoring reports will consist of the following information:

- Narrative description of the enhancement activities performed since the last report,
- Explanation of maintenance work to be conducted over the next year,
- Narrative description of the site hydrology,
- List of wildlife species observed on the wildlife camera,
- Results of vegetative monitoring, listing percent cover of hydrophytic vegetation
- Photographs taken at photo station locations on compass points,
- General weather description, and
- Description of any remedial action recommendations (if necessary).
- These reports will be submitted to the CRNRA Chief of Planning, Resources, and Education for review and filed at CRNRA.

8. Compliance

8.1 Floodplains

The fill required for Historic Roswell Gateway, Mitigation Trails, and SR 9 Pedestrian Bridge projects have been minimized to the extent possible while still allowing for an engineering design that meets currently required engineering standards. Although fill would be required within the floodplains of both Big Creek and the Chattahoochee River, fill material would not be within the regulatory floodways. Based on hydrology studies for both projects, the fill material and piles required for the SR 9 and mitigation trails pedestrian bridges would not change the floodplain storage capacity or alter flood elevations. The structures associated with the proposed SR 9 and mitigation trail pedestrian bridges would meet the requirements of the National Flood Insurance Program (44 CFR Part 60). Engineering No-Rise certifications have been prepared for the projects. The projects would not represent a significant risk to life or property and would not have a significant impact on natural and beneficial floodplain values.

8.2 Wetlands

In addition to complying with NPS policy and guidance in this SOF, compliance with Section 404 of the Clean Water Act would require a Nationwide or Regional permit obtained by the GDOT from the USACE, Savannah District for impacts to wetlands and streams on the Historic Roswell Gateway, Mitigation Trails, and SR 9 Pedestrian Bridge projects. The permits would be obtained prior to letting the projects for construction.

8.3 Metropolitan Rivers Protection Act

The Metropolitan Rivers Protection Act (MRPA) (1973) was passed by the state of Georgia in response to growing concerns about impacts to the Chattahoochee River from adjacent development. It established a 2000-foot corridor along both banks of the river for 48 miles between Buford Dam and Peachtree Creek. An amendment to the act in 1998 extended the corridor an additional 36 miles to the downstream limits of Fulton and Douglas counties. The act requires the Atlanta Regional Commission (ARC) to adopt a plan to protect the Chattahoochee River corridor and to review development proposals for consistency with the plans. The act requires local governments along the corridor to implement the plan. Under the act, land-disturbing activity in the corridor must comply with the adopted plan to be legal. The cities of Roswell and Sandy Springs are the local authorities ensuring projects comply with the MRPA. Based on the types of projects the Historic Roswell Gateway, Mitigation Trails, and the SR 9 Pedestrian Bridge projects are in compliance with the MRPA.

9. Public Comment

(To include dates of public review, summary of comments, and any responses).

10. References

Executive Order (EO) 11988, *Floodplain Management*, (1977)

EO 11990, *Protection of Wetlands*, (1977)

National Park Service (NPS) Procedural Manual 77-2 *Floodplain Management*, (2011)

NPS Procedural Manual 77-1 *Wetland Protection*, (Reissued June 21, 2016)

NPS Chattahoochee River National Recreation Area (CRNRA) *Final General Management Plan/Environmental Impact Statement*, (2009).

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Fulton County, Georgia (Panel No. 13121C0063G), dated September 18, 2013

FEMA National Flood Insurance Program, (44 CFR Part 60), *Criteria for Land Management Use*, (1979)

United States Army Corps of Engineers, *Wetlands Delineation Manual*, (1987)

U.S. Fish and Wildlife Service (USFWS) *Classification of Wetlands and Deepwater Habitats of the United States* Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe, (1979)

United State Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) *Soil Survey of Fulton County, Georgia* (2008)

Heath and Lineback Engineers, *SR 9/Chattahoochee River Bridge Pedestrian Improvements, Project Location and Bridge Type Study* (2011)

U.S. Environmental Protection Agency (USEPA) Clean Water Act of 1972, 33 U.S.C. § 1251 et seq. (1972)

Georgia Department of Transportation (GDOT) *Ecology Resource Survey and Assessment of Effects Report for PI No. 0009640* (2016), Edwards-Pitman Environmental, Inc.

GDOT *Ecology Memorandum I to Ecology Resource Survey and Assessment of Effects Report for PI No. 0009640* (2018), Edwards-Pitman Environmental, Inc.

GDOT *Ecology Memorandum II to Ecology Resource Survey and Assessment of Effects Report for PI No. 0009640* (2020), Edwards-Pitman Environmental, Inc.

GDOT *Ecology Assessment of Effects Report for PI No. 721010-* (2016), WSP

GDOT *Ecology Addendum I to the October 2016 ERS-AOE Report for PI No. 721010-* (2018), WSP

GDOT *Ecology Addendum II to the October 2016 ERS-AOE Report for PI No. 721010-* (2021), WSP

Roswell Trails National Park Service Mitigation, Ecology Summary of Findings, (2017), AECOM

National Park Service, Chattahoochee River National Recreation Area, *Comprehensive Trail Management Plan/Environmental Assessment* (2022), CRNRA

Memorandum of Agreement Among Federal Highway Administration, Georgia Department of Transportation, Georgia State Historic Preservation Officer, and City of Roswell for GDOT Project STP00-9496-00(001), PI No. 721010, HP No. 120529-003 (2020)

Attachment
Wetland Ecologist Resumes



CALEB SULLIVAN, PWS

Senior Environmental Scientist



CAREER SUMMARY

Caleb Sullivan is a professional wetland scientist with experience in performing natural resources investigations and permitting for a variety of transportation, utility, and commercial facilities. His experience includes contributing to the preparation of Clean Water Act Section 404/401 permit documents. Mr. Sullivan has regulatory wetlands permitting experience in the mid-Atlantic and southeastern United States, at both the federal and state levels. His experience includes jurisdictional wetland and stream delineations, Section 404 permitting, vegetation inventories, protected species studies and U.S. Fish and Wildlife Service consultation, stream and water quality monitoring, soil profiling and infiltration testing, soil and water sampling, asbestos and lead paint sampling, and Phase I ESAs. He also has experience using software such as ArcGIS.

EDUCATION

B.S. Environmental & Natural Resource Economics, West Virginia University 2011

Years with the firm

6

Years total

12

Professional qualifications

*Professional Wetland Scientist (No. 3198),
Certified Wetland Hydrologist (No. 3041),
Certified Hydric Soil Investigator (No. 2057)*

PROFESSIONAL MEMBERSHIPS

Society of Wetland Scientists
North Carolina Association of Environmental Professionals

PROFESSIONAL TRAINING

North Carolina Stream Identification Method, 2023
Bats in Bridges Training, Georgia Department of Natural Resources (GDNR), 2019
North Carolina Stream Assessment Method (NC SAM) Training and Certification, North Carolina Association of Environmental Professionals, 2019
North Carolina Wetland Assessment Method (NC WAM) Training and Certification, North Carolina Association of Environmental Professionals, 2018
Field Identification of Winter Trees, Swamp School, LLC, 2015
Wetland Delineation & Regional Supplement Training, Swamp School, LLC, 2014

PROFESSIONAL EXPERIENCE

- I-85 Widening, Phase 3, Jackson and Banks Counties, GA, (GDOT). 2022-Present. Permitting Lead. Mr. Sullivan was responsible for the Clean Water Act Section 404 permitting associated and Stream Buffer Variance Application for the 13 mile road widening project along I-85.
- CATS Silverline, Mecklenburg County, NC, (City of Charlotte). 2021-Present. Senior Environmental Scientist. Mr. Sullivan was responsible for the delineation and functional assessments of jurisdictional waters of the U.S. (WOTUS), protected species habitat assessments and surveys, and classification of terrestrial



CALEB SULLIVAN, PWS

Senior Environmental Scientist

communities in the approximately 1,773 acre study area. After completion of fieldwork, he lead the ArcGIS mapping and the production of the figures for the project.

- Wilmington Rail Realignment, Brunswick & New Hanover Counties, NC (AECOM). 2020-Present. Environmental Scientist. Mr. Sullivan was responsible for the preliminary jurisdictional delineation of wetlands and waters in the approximately 183 acre study area. He collected field data by documenting conditions with a Trimble GPS unit, data forms, and photos. After completion of fieldwork, he led the ArcGIS mapping for the project.
- Caldwell Station Tributary Greenway, Mecklenburg County, NC (Alta Planning + Design). 2020-Present. Senior Environmental Scientist. Mr. Sullivan was responsible for the preliminary jurisdictional delineation of wetland and waters associated with the one-mile long greenway project in Cornelius, NC. The project proposes to connect the existing Caldwell Station Creek Greenway to the Northern Region Recreation Center (currently under construction) and includes a 10-foot wide greenway trail and two culvert crossings with in-stream stabilization and enhancement measures to address significant channel erosion concerns. Mr. Sullivan also worked on the preparation of a Preliminary Jurisdictional Determination request, preparation of a pre-construction notification for a Nationwide Permit, and threatened and endangered species surveys.
- Cross-Charlotte Trail Tryon Street to Orr Road (Hidden Valley), Mecklenburg County (Alta Planning + Design). 2020-Present. Senior Environmental Scientist. Mr. Sullivan is responsible for the preliminary jurisdictional delineation of wetland and waters associated with the two-mile long greenway project in Charlotte, NC. Mr. Sullivan was also responsible for preparation of a Preliminary Jurisdictional Determination request, preparation of a pre-construction notification for a Nationwide Permit, and threatened and endangered species surveys. WSP also provided structural engineering for boardwalks designed to avoid and minimize impacts to jurisdictional resources.
- SR 79 at Broad River Bridge Replacement, Lincoln & Elbert Counties, GA (GDOT). 2019-2021 Environmental Scientist. Mr. Sullivan was responsible for the preliminary jurisdictional delineation of wetlands and waters and the protected species surveys. He collected field data by documenting conditions with data forms, and photos. After completion of fieldwork, he led the ArcGIS mapping for each project and writing of the natural resource memos.
- The Proposed State Route 40 Widening, Charlton & Camden Counties, GA (GDOT). 2019 – Present. Environmental Scientist. Mr. Sullivan was responsible for the field verification of previously delineated wetlands and waters and terrestrial surveys for Floodplain Tickseed and Corkwood.
- Metcalf Bottoms/Wears Valley Connector Road & Recreation Development Concept Plan Update/Feasibility Study, Great Smoky Mountains National Park, TN (NPS). Lead Delineator. Mr. Sullivan was responsible for leading the delineation of wetlands and waters in the approximately 900 acre study area in the national park. He collected field data by documenting conditions with a Trimble GPS unit, data forms, and photos.
- US 301 & SC 33 Intersection Improvement and Bridge Replacement, Orangeburg County, SC, (SCDOT). Environmental Scientist. Mr. Sullivan was responsible for the Clean Water Act Section 404 permitting.

COLLIN T. LANE
Ecology Group Manager

EDUCATION:

- M.S. Science/Soil and Waters Science (2002)
University of Florida
- B.S. Biology (1999)
Presbyterian College

CONTINUING EDUCATION:

- Biotic Consultants – Piedmont Wetland Plant Identification Course
- Watershed Hydrology Consultants – Identification of Ephemeral, Intermittent, and Perennial Streams
- Nutter and Associates – Piedmont Wetland Delineation Course
- The North Carolina Division of Water Quality – Identification of Ephemeral, Intermittent, and Perennial Streams
- Problem and Atypical Wetland Delineation – Duncan and Duncan Wetland and Endangered Species Training
- Georgia Department of Natural Resources – Bats in Bridges Training



EXPERIENCE:

Mr. Lane currently serves as the Ecology Group Manager for Edwards-Pitman Environmental, Inc. Mr. Lane has over 20 years of experience and is responsible for the delineation of wetland and non-wetland waters of the United States, writing ecological reports, conducting biological assessments for threatened and endangered species, development and submittal of Section 404 Nationwide and Individual Permit applications, and construction monitoring in protected species habitats. He is also responsible for the preparation of natural resource sections of NEPA and GEPA environmental documents and accompanying graphics and tables. Additionally, Mr. Lane manages project workflow, budgets, and provides technical assistance to internal staff and teaming partners as needed.

Mr. Lane has been involved with consultation with the US Army Corps of Engineers (USACE), US Fish and Wildlife Services (USFWS), National Oceanic and Atmospheric Administration (NOAA) Fisheries, National Park Service (NPS), Federal Energy and Regulatory Commission (FERC), Federal Highway Administration (FHWA), Georgia Department of Natural Resources (GADNR) Wildlife Resources Division (WRD), Environmental Protection Division (EPD), and Coastal Resource Division (CRD) in association with field surveys, document production, environmental permitting, and other concerns on both public and private sector projects.

Some of the trail projects Mr. Lane has been involved with are listed below:

- **Atlanta Beltline Northeast Multi-Use Trail – Fulton County, Georgia** – Completed field surveys for waters of the US, state and federally protected species, and state buffered waters associated with an approximately 2.7 mile long segment of the Atlanta Beltline Northeast multi-use trail project. This trail consists of a 12-foot multi-use path with multiple bridge segments. Future responsibility will include USACE Section 404 permitting and EPD buffer variances. Work was conducted under contract with Heath and Lineback Engineers.
- **Noonday Creek Trail Extension – Cherokee and Cobb Counties, Georgia** – Completed field surveys for waters of the US, state and federally protected species, state buffered waters and upon final design completed all USACE Section 404 permitting, and EPD buffer variance activities associated with an approximately 1.76 mile long Noonday Creek multi-use trail extension. This trail consisted of a 10-foot multi-use path with multiple culverted stream and wetland crossings. Work was conducted under contract with Heath and Lineback Engineers.
- **Chattahoochee Greenway – Cobb County, Georgia** - Completed field surveys for waters of the US, state and federally protected species, state buffered waters and upon final design completed all USACE Section 404 permitting and EPD buffer variance activities associated with the Chattahoochee River Greenway project. This project consisted of the construction of approximately 1.3 miles of a combination of variable width, paved, unpaved, and boardwalk multi-use trails. Work was conducted under contract with Gresham Smith Partners.
- **US 21 Bridge over Harbor River, Beaufort County, SC** - Evaluated Essential Fish Habitat (EFH) in the area of the US 21 Bridge over the Harbor River. Field surveyed existing conditions, conducted background research, and coordinated with the design engineers (HDR) and SC Department of Transportation. Prepared an EFH Assessment detailing existing habitat and its quality, proposed construction, analysis of potential adverse effects from the project to EFH and managed species, and conducted an in-depth analysis to develop avoidance,

COLLIN T. LANE
Ecology Group Manager

minimization, and mitigation measures as appropriate.

- **SR 404 Spur/US 17 over the Back River, Chatham County, GA and Jasper County, SC** - Field delineated waters of the US, prepared a US Army Corps of Engineers (USACE) Section 404 Individual Permit, South Carolina Critical Area Permit, coordinated with Georgia Environmental Protection Division (GAEPD) – Coastal Resource Division on delineation of the Marsh Jurisdiction Line, and prepared a GAEPD Stream Buffer Variance.
- **SR 140 over Little River Bridge Replacement Project, Cherokee and Fulton County, GA** - Conducted field surveys for threatened and endangered species and field delineated waters of the US and state waters. Produced an Ecology Addendum, coordinated with the US Fish and Wildlife Service (USFWS) on Informal Section 7 for federally protected species impacts, and acquired a USACE Nationwide Permit 14 for impacts to waters of the US.
- **I-75 Managed Lanes – Henry and Clayton County, GA** – Led a team of ecologists in completing the delineation of wetlands and streams along a 17-mile corridor for the proposed project, performed threatened and endangered species studies, and prepared all ecology reporting on behalf of GDOT. Additionally, on behalf of GDOT, completed reviews of the USACE Section 404 permits and GAEPD stream buffer variances prepared by the design-build team. All permits were successfully acquired from the agencies.
- **Spout Springs Road Widening and Reconstruction, Hall County, GA** - Completed ecology field surveys for waters of the US, state jurisdictional waters, and protected species and worked with other ecologists on the documentation of these findings in the Ecology Resource Survey Report. Completed an Assessment of Effects Report, USACE Individual Permit, and GAEPD Stream Buffer Variance.

Appendix C- Environmental Commitments and Mitigation Measures

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
Historic and Archaeological Resources	The GDOT contractor would ensure that no construction-related activities or access occur beyond the Orange Barrier Fencing (OBF) for the Expanded Roswell Historic District (including Allenbrook/Site 9FU286, Ivy Mill/Site 9FU228, and Site 9FU6) and Lover's Leap/Site 9FU108.	Resources are labeled on plan sheets	GDOT and Contractor
NPS Lands – Chattahoochee River National Recreation Area	The GDOT contractor would ensure that no construction-related activities or access occur beyond the OBF delineating the Vickery Creek Unit of the Chattahoochee River National Recreation Area	Resources are labeled on plan sheets	GDOT and Contractor
Threatened/Endangered Species and species of concern	Include Special Provision (SP) 107.23H for the protection of the state protected delicate spike (<i>Elliptio arctata</i>), Chattahoochee crayfish (<i>Cambarus howardi</i>), and highscale shiner (<i>Notropis hysilepis</i>). Seasonal restrictions would be implemented such that no tree clearing would occur during the non-volant pup season from May 1 through July 15 or during the winter hibernation season from December 15 through February 15. Based on the status of GDOT coordination with USFWS, the project would be eligible for the 2023 Bat Programmatic Agreement where there would be no tree clearing restrictions for the GDOT PIs 721010- and 0009640; and the project would pay into the conservation fund for protecting habitats for bats to offset the impacts of tree-clearing. However, for the trails construction, these tree clearing restrictions would be in effect. For the protection of shoal bass and other aquatics, seasonal restrictions for in-water work are proposed such that no in-water work in Big Creek would occur for the construction of the pedestrian bridge during spawning season between April to June.	The contractor shall adhere to SP 107.23H (Feb. 4, 2021) and SP 107.23G during construction.	GDOT and Contractor

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
	Standard Specification 107.23G would be applicable for the protection of migratory birds under the transportation projects. Construction would be limited to daytime hours to avoid impacts to nocturnal wildlife.		
Invasive Species	During the construction process, the Contractor and GDOT would take measures to prevent or minimize the spread of invasive species as appropriate for the time of year.	The Contractor shall adhere to Georgia Standard Specification Section 201, Clearing and Grubbing of ROW.	GDOT and Contractor
Enhanced Erosion Control- NPS Lands	The project would incorporate enhanced erosion control measures in areas within the State required right of way and easements that have the potential to impact land under the management of the NPS.	Per the commitment letter between NPS and GDOT (8/8/2018)	GDOT
Enhanced Erosion Control- NPS Lands	GDOT PI Nos. 721010- and 0009640 and documented in the NPS EA would incorporate enhanced erosion control measures in areas that have the potential to impact lands under the management of the National Park Service. GDOT Standard Specification 715 identifies the pollution control measures which may be used. Preservation of roadside vegetation beyond the limits of construction where possible Early revegetation of disturbed areas so as to minimize soil erosion The use of slope drains, detention/retention structures, surface, sub-surface and cross drains, designed as appropriate or needed, so that discharge would occur in locations and in such a manner that surface and sub-surface water quality would not be affected (the outlets may require aprons, bank protection, silt basins and energy dissipaters).	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
	Supplemental Specification 107 prohibits construction waste or debris from bridge construction or demolition to fall or be placed into wetlands, streams, rivers or lakes. The contract would also require the contractor to exercise every reasonable precaution during construction to prevent the pollution of streams in the project vicinity, require temporary erosion control measures, and prohibit the dumping of chemicals, fuels, lubricants, bitumen, raw sewage, or other harmful wastes into or alongside streams or impoundments, or natural or manmade channels.		
Erosion and Sedimentation	For PI 0009640, Roswell is committed to ensure creation and implementation of an on-site monitoring system that documents unacceptable levels of sediment build-up during temporary jetty placement, removal, and related construction activities. Monitoring would be conducted on the opposite bank from construction and downstream for evidence of erosion due to construction activities. Records would be kept daily of sediment and erosion conditions and provided to the NPS on a monthly basis. The plan would identify sedimentation limits and include a description of the mitigation actions to be taken should sediment buildup exceed the established limits. In addition, the City of Roswell would partner with GDOT who would ensure on-site monitoring is included in the project's Environmental Commitment Table, Green Sheet, Erosion Sedimentation Pollution Control Plan, and Special Provisions.		GDOT, City of Roswell, and Contractor
Flood event	High-water events would be monitored and equipment would be stored outside the floodplain. To minimize impacts from flash flooding or heavy storm events, GDOT would conduct regular inspections of fill and rock jetties to monitor and abate sediment buildup.		City of Roswell Contractor GDOT Contractor
NPS Lands – Chattahoochee River National Recreation Area	All bridges, walls, and structures, including supporting devices such as piers, pillars, and other visible constructed features that potentially affect the view shed from the CRNRA property would be designed to complement the park setting, such as ashlar finish. The GDOT would coordinate with NPS on the design of these elements.	Per commitment letters between NPS and GDOT (8/8/2018) and NPS and the	GDOT and City of Roswell

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
	The City of Roswell would ensure appropriate consultation with NPS occurs.	City of Roswell (10/12/2018)	
NPS Lands – Chattahoochee River National Recreation Area	GDOT would complete and apply for a Special Use Permit to the NPS-CRNRA for project areas that are or would be designated as permanent easements. The City of Roswell would complete and apply to secure a Special Use Permit from the CRNRA for any other construction related actions within the CRNRA. No construction activity would occur on NPS managed lands prior to approval and coordination of Special Use Permit.	Per commitment letters between NPS and GDOT (8/8/2018) and NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell
NPS Lands – Chattahoochee River National Recreation Area	The NPS would issue the Special Use Permit to GDOT to establish access to NPS managed lands for temporary construction related activities. The NPS would issue Special Use Permits to the City of Roswell for the mitigation projects that occur outside of the respective GDOT project boundaries of GDOT PI Nos. 721010- and 0009640 as identified in the City of Roswell commitment letter. The approval of NPS Special Use Permits is contingent on execution of a signed decision document (FONSI) for EAs associated with GDOT PI Nos. 721010 and 0009640 and the NPS EA being prepared by Roswell on its behalf.	Per commitment letter between NPS and GDOT (8/8/2018) and between NPS and the City of Roswell (10/12/2018)	GDOT, City of Roswell, and NPS
NPS Lands – Chattahoochee River National Recreation Area	The NPS would issue a Highway Easement Deed (HED) to establish approximately 2.59 acres of NPS managed land as a permanent easement for transportation use.	Per the commitment letter between NPS and GDOT (8/8/2018)	GDOT, City of Roswell, and NPS
NPS Lands	The City of Roswell would prepare an independent NPS EA and associated studies on behalf of NPS to satisfy the requirements under the National Environmental Policy Act of 1969. The EA would cover the commitments expressed in the	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
	10/12/18 commitment letter regarding the proposed mitigation actions and include a summary of GDOT PI Nos. 721010 and 0009640.		
Ivy Mill	The City of Roswell would prepare a Cultural Landscape Inventory (CLI) for the Ivy Mill Ruins historic site. The City of Roswell would coordinate with the NPS and GDOT to prepare the CLI to meet NPS standards and submit the document to all agencies and consulting parties for its approval.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell
NPS Lands – Chattahoochee River National Recreation Area	The City of Roswell would complete a Phase I archeological survey for NPS property associated with the GDOT PI No. 721010 and related projects. The City of Roswell would coordinate with the NPS and GDOT to prepare the archeological survey to meet NPS standards and submit the document to all agencies and consulting parties for its approval.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell
NPS Lands – Chattahoochee River National Recreation Area	The City of Roswell would remove the existing NPS Vickery Creek Unit entrance drive and parking lot on Riverside Road. The disturbed area would be restored with native vegetation. A portion of the disturbed area would be converted to a trail, which would extend to and along the abandoned roadbed at the eastern edge of the NPS Vickery Creek Unit property, connecting to an existing trail at the point of the extent of NPS' intended later trail decommissioning action. A trailhead that includes an NPS entrance sign, and an NPS wayfinding sign, would be provided in the vicinity of the two proposed one-way vehicle bridges over Vickery Creek. The City of Roswell would coordinate with NPS on all design and construction details and secure written approval from the CRNRA before construction.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell
NPS Lands – Chattahoochee River National Recreation Area	The City of Roswell would construct a new trail outside of the GDOT right of way along the eastern side of Vickery Creek between the existing concrete multi-use path in Riverside Park, near the existing pedestrian bridge over Vickery Creek, and the proposed sidewalk underneath the two proposed one-way vehicle bridges over Vickery Creek. The City of Roswell would coordinate with the NPS on the	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
	precise location of the new trails and secure written approval of the trail alignment and construction methods prior to construction.		
NPS Lands – Chattahoochee River National Recreation Area	The City of Roswell would construct a new trail, or upgrade where already existing, outside of the GDOT right of way along the western side of Vickery Creek generally along the existing Fulton County sewer easement between the Ivy Mill Ruins historic site and the proposed pedestrian bridge over Vickery Creek. The City of Roswell would coordinate with the NPS and GDOT on the precise location of the new trails and secure written approval from NPS on the trail alignment and construction methods prior to construction.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell
NPS Lands – Chattahoochee River National Recreation Area	The City of Roswell would construct a new trail, potentially with boardwalk application, at the Ivy Ruins historic site outside of the GDOT right of way along the western side of Vickery Creek from the existing boardwalk at the southern edge of the Ivy Mill Ruins historic site, near the existing pedestrian bridge over Vickery Creek, extending underneath the two proposed one-way vehicle bridges over Vickery Creek. The City of Roswell would coordinate with the NPS and GDOT on the precise location of the new trails and waysides and secure written approval from NPS on the trail alignment and construction methods prior to construction.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell
Ivy Mill	A Secretary of Interior (SOI) qualified archaeologist would conduct monitoring during ground-disturbing activities within the site boundary		GDOT and City of Roswell
NPS Lands – Chattahoochee River National Recreation Area	The City of Roswell would commit to the inclusion of four (4) wayfinding signs (two [2] at proposed intersection of SR 9 and Riverside Road, and two [2] at proposed Riverside Road roundabout).	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell
Historic Resource – Allenbrook Historic Site	The City of Roswell would remove the existing NPS entrance drive and parking lot and close the curb cut on SR 9 for Allenbrook Historic Site. The City of Roswell would restore the affected area with native vegetation. The City of Roswell would coordinate with NPS on all design and construction details and secure written approval from the CRNRA before construction.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
NPS Lands	The City of Roswell would donate approximately 0.082 acres located at 275 S. Atlanta Street, Roswell, Georgia to the NPS.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell
Historic Resource – Allenbrook Historic Site	The City of Roswell would construct a new 15-20 space parking area on land managed by the NPS near the Allenbrook Historic Site. The City of Roswell would construct an entrance sign like the Island Ford Unit at the parking lot entrance drive. The City of Roswell would coordinate with NPS on all design and construction details and secure written approval from the CRNRA before construction.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell
Historic Resource – Allenbrook Historic Site	The City of Roswell would construct a paved pedestrian trail capable of supporting administrative emergency fire support vehicles connecting the new parking lot to the SR 9 pedestrian walkway and Allenbrook House. An NPS wayfinding sign would be provided in the vicinity of the connection to the SR 9 pedestrian walkway. The City of Roswell would coordinate with NPS on all design and construction details and secure written approval from the CRNRA before construction.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell
NPS Lands – Chattahoochee River National Recreation Area – Vickery Creek	The City of Roswell would design and construct a new pedestrian bridge across Vickery Creek. The City of Roswell would coordinate with NPS on all design and construction details and secure written approval from the CRNRA before construction.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell
NPS Lands	The GDOT and the City of Roswell would consult with the NPS regarding any anticipated damage directly or indirectly associated with the project caused by the GDOT contractor, including those that extend beyond project limits. If damages are documented, the GDOT and/or the city of Roswell, and the NPS would meet within five (5) days to agree on the nature and extent of the damage and proposed mitigation. All mitigation would be approved by the CRNRA superintendent and completed by the GDOT and/or the city of Roswell. All costs associated with the mitigation would be the responsibility of the GDOT and/or the City of Roswell.	Per the commitment letter between NPS and GDOT (8/8/2018) and NPS and the City of Roswell (10/12/2018)	GDOT and City of Roswell

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
Ivy Mill	Phase III data recovery would be conducted on portions of Ivy Mill that would be impacted by the proposed project.	Per MOA Stipulation I	GDOT and City of Roswell
Ivy Mill	Sites would be designated as Environmentally Sensitive Areas with OBF on design plans.		GDOT and City of Roswell
Ivy Mill	A video documentary that captures the data recovery at Ivy Mill would be developed, along with supplemental learning activities.	Per MOA Stipulation I. The content of the video would be developed in consultation with GDOT, FHWA, GASHPO, City of Roswell, the CRNRA/NPS, federally recognized tribes, and other consulting parties, including review and approval of the outline, script, and video. The format and content of the accompanying learning activities would be developed in coordination with GDOT, FHWA, GASHPO, City of Roswell, the CRNRA/NPS, federally recognized tribes, and other consulting parties as appropriate, including review of draft products.	GDOT and City of Roswell
Ivy Mill	A one-panel interpretive sign of Ivy Mill would be designed, fabricated and installed at the site. The panel design and construction should conform to the standards of the NPS Wayside Guide and be developed in consultation with Section 106 consulting parties, including NPS interpretive specialists.	Per MOA Stipulation I. The panel design and construction should conform to the standards of the	GDOT and City of Roswell

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
		NPS Wayside Guide, as applicable, and be developed, including review of draft products, in consultation with GDOT, FHWA, GASHPO, City of Roswell, the CRNRA/NPS, federally recognized tribes, and other consulting parties as appropriate, including NPS interpretive specialists.	
Historic Resource: Expanded Roswell Historic District	Per MOA Stipulation II: A certified arborist(s) would develop a tree planting and maintenance plan for the South Atlanta Street corridor between Azalea Drive and Mill Street, within GDOT right-of-way. The tree planting and maintenance plan would be submitted to GASHPO for review, comment, and acceptance prior to the initiation of construction. The tree planting and maintenance plan would be incorporated into the final plans.	Per MOA Stipulation II	GDOT and City of Roswell
Historic Resource: Expanded Roswell Historic District	Per MOA Stipulation II: GDOT and City of Roswell would enter into a mowing and maintenance agreement and the City of Roswell would be responsible for maintenance of the landscaping and implementing the tree planting and maintenance plan.	Per MOA Stipulation II	GDOT and City of Roswell
Historic Resource: Expanded Roswell Historic District	Prior to construction, the relocated stone retaining wall and steps at 373 South Atlanta Street would be constructed using four-inch split face granite veneer laid in an ashlar pattern to replicate the appearance of the historic wall. A design drawing illustrating the proposed retaining wall and steps would be submitted to GASHPO for review, comment, and acceptance prior to the initiation of construction. The reconstruction of the retaining wall and steps	Per MOA Stipulation II	GDOT and City of Roswell

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
	would be incorporated into the final plans for implementation during construction.		
Maintenance and Lighting	The GDOT would be responsible for operations and maintenance of all transportation infrastructures, including pavement, within the GDOT right of way excluding trails and wayfinding signs. In addition, the GDOT would enter a Mowing & Maintenance Agreement (MMA), Signal Maintenance Agreement, and Local Government Lighting Project Agreement (LGLPA) with the City of Roswell to maintain these operations. The mowing and maintenance plan would be limited to GDOT's existing ROW and newly acquired ROW as part of 721010. Lighting would be shielded and downward facing and limited to roadway ROW and easements to limit overspill into the park. GDOT/Roswell would provide an inventory of where the fixtures were installed with the specific fixture and lightbulb used to help the NPS monitor lighting and notify NPS upon construction completion and when the lights are activated.	Per the commitment letter between NPS and GDOT (8/8/2018)	GDOT
NPS Lands – Chattahoochee River National Recreation Area – Vickery Creek Unit trailhead	The City of Roswell would allow NPS visitors to use the parking area in Riverside Park for access to the Vickery Creek Unit trailhead.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	The City of Roswell
NPS Lands	The NPS would be responsible for the maintenance of all infrastructure constructed by the City of Roswell on NPS managed lands unless otherwise documented in a subsequently developed partnership agreement.	Per the commitment letter between NPS and the City of Roswell (10/12/2018)	GDOT, City of Roswell, and NPS
NPS Wetlands	The two new bridges crossing Perennial Stream 2 (Big Creek/Vickery Creek) in the Chattahoochee River National Recreation Area would free span the entire waterway.	Per commitment letter between NPS and GDOT (8/8/2018)	GDOT

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
NPS Wetlands	Buffer Variances would be obtained for Perennial Stream 1, Intermittent Stream 3, Open Water 4, and Intermittent Stream 5 prior to project implementation. The need for Buffer Mitigation Credits would be determined prior to applying for the Buffer Variances needed.	GDOT prepares and submits the BV applications.	GDOT
NPS Wetlands	A 404 Regional Permit 34 shall be obtained from the USACE prior to commencement of permitted construction activities due to stream impacts of 451 linear feet and wetland impacts of 0.317 acre.	GDOT prepares and submits PCN.	GDOT
NPS Wetlands	365 stream credits (2,729 Grandfathered credits) and 0.31 wetland credits (2.48 Grandfathered credits) would be withdrawn from a USACE approved mitigation bank serving HUC 03130001 for 451 linear feet of stream impacts and 0.317 acres of wetland impacts. Credits would be obtained by GDOT.	Credits would be obtained by GDOT.	GDOT
NPS Wetlands	Temporary access would be restored after the project; native seeding/plantings would be implemented.		GDOT; contractor requirements.
Water Quality	The Office of Bidding and Construction Contractor would submit a Notice of Intent (NOI) to the NPDES General Permit following the award of the contract but prior to construction activities.	Contractor to prepare the NOI for GDOT PI 721010- and submit prior to construction activities.	Contractor with oversight by GDOT
NPS Constructability Considerations	1. Avoidance of vegetation and large diameter trees. 2. Small sized construction equipment to limit construction footprint 3. Co-align construction access along proposed trail improvements 4. Laydown areas would be in areas that need to be cleared or are already cleared, e.g. proposed a new parking lot at Allenbrook, existing parking lot at Allenbrook/Riverside Road, and along existing utility easement areas. 5. Limit footprint no greater than 8 feet wide along trail (including construction footprint) 6. Hand work where feasible 7. Prefabricated truss bridge with weathered brown and wooden decking to blend into the landscape 8. Prefabricated truss bridge used to bring materials in to limit footprint of construction path		City of Roswell design; contractor requirements.

Area of Impact	Mitigation Commitment	Notes	Party Responsible for Implementing Mitigation
NPS Water Quality	1. Prepare Stormwater Management Plan to address water quality in the area of the proposed new parking lot near Allenbrook House 2. River rock would be used to slow water velocities in the vegetated swale behind the retaining wall at the proposed new parking lot.		City of Roswell design; contractor requirements.
NPS Visitor Use Recreation	The Chattahoochee River would remain open for recreationalists during construction and Allenbrook and Riverside Road parking lots would remain available for parking until the new Allenbrook parking lot is constructed.		GDOT contractors for PIs 0009640 and 721010-